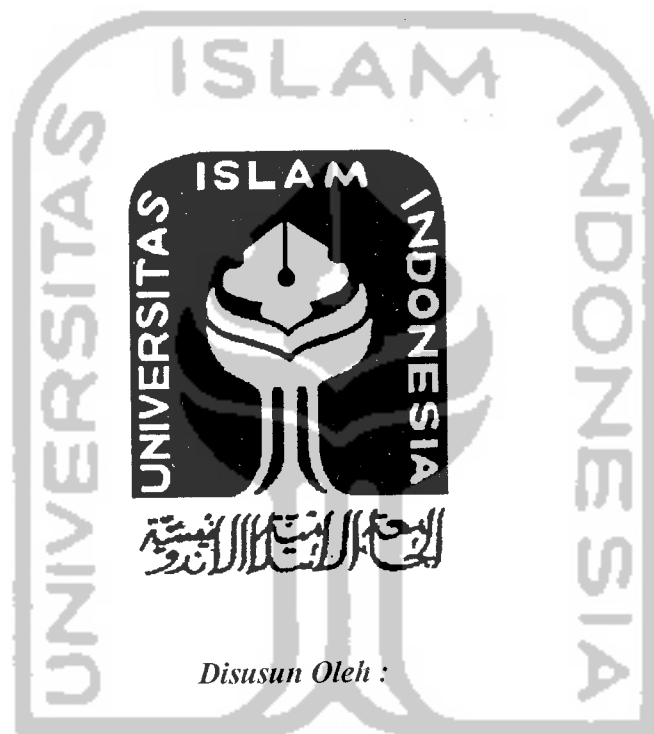


**TUGAS AKHIR**

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UNIVERSITAS GADJAH MADA  
YOGYAKARTA**

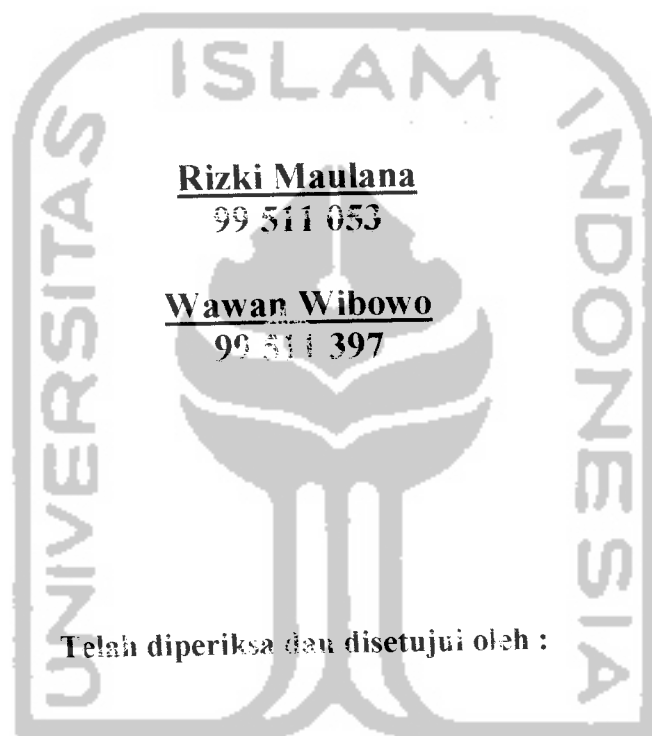


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**JURUSAN TEKNIK SIPIL  
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN  
UNIVERSITAS ISLAM INDONESIA  
YOGYAKARTA  
2003**

**LEMBAR PENGESAHAN  
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**PERENCANAAN ULANG STRUKTUR  
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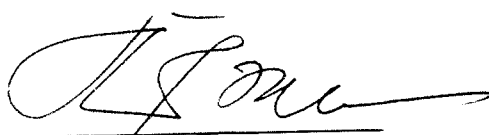
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Tanggal : 30-12-2003



*Tugas Akhir ini aku persembahkan untuk :*

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*w-one "si tukang insinyur"*

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"Segala puji bagi Allah, Tuhan semesta alam, yang telah melimpahkan rahmat, hidayah dan inayahnya..."

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w-one "si tukang insinyur"

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## DAFTAR NOTASI

### 1. Perencanaan atap

- a : Jumlah sagrod dalam satu bentang
- A : Luas profil baja
- Ag : Luasan bruto profil
- Anetto : Luasan bersih profil
- Aeffektif : Luasan netto efektif
- B : Lebar pelat kuda-kuda
- bf : Lebar sayap
- b : Lebar sayap
- C<sub>1</sub> : Gaya angin tekan
- C<sub>2</sub> : Gaya angin hisap
- Cc : Perbandingan kelangsingan yang menjadi batas antara tekuk elastis dan tekuk inelastic
- D : Diameter
- E : Modulus elastisitas baja
- Fa : Tegangan ijin pada luas bruto dalam kondisi beban bekerja
- fa : Tegangan tarik yang terjadi
- fbx : Tegangan lentur arah x
- fby : Tegangan lentur arah y
- f'c : Kuat desak beton
- Fs : Faktor keamanan

Fu	: Kuat tarik baja
fy	: Tegangan leleh baja
Ix	: Inersia arah X
Iy	: Inersia arah Y
K	: Koefisien kelangsingan
l	: Panjang batang yang ditinjau
L	: Panjang pelat kuda-kuda
Lb	: Jarak antar gording
M <sub>L</sub>	: Momen tegak lurus sumbu batang
M//	: Momen sejajar sumbu batang
n	: Jumlah baut
P	: Gaya tekan yang bekerja
P//	: Gaya tekan sejajar sumbu batang
q <sub>L</sub>	: Beban merata tegak lurus sumbu batang
q//	: Beban merata sejajar sumbu batang
r	: Jari-jari inersia = i
Ss	: Jarak beban sagrod
Sx	: Modulus elastis tampang arah sumbu x
Sy	: Modulus elastis tampang arah sumbu y
T	: Gaya tarik yang bekerja
tw	: Tebal badan profil
tp	: Tebal pelat

$W$  : Berat profil  
 $A$  : Sudut kemiringan atap  
 $\delta_{\perp}$  : Lendutan tegak lurus sumbu batang  
 $\delta_{//}$  : Lendutan sejajar sumbu batang  
 $\delta$  : Resultante lendutan  
 $\mu$  : Faktor reduksi luas netto

## 2. Perencanaan pelat lantai

$A_s$  : Luas tulangan  
 $a$  : Tinggi blok tegangan persegi ekuivalen  
 $b$  : Panjang memanjang pelat  
 $c_{lx}$  : Koefisien momen lapangan arah x  
 $c_{tx}$  : Koefisien momen tumpuan arah x  
 $c_{ly}$  : Koefisien momen lapangan arah y  
 $c_{ty}$  : Koefisien momen tumpuan arah y  
 $d$  : Jarak dari sisi tekan terluar ke pusat tulangan tarik  
 $f'_c$  : Kuat desak beton  
 $f_y$  : Tegangan leleh baja  
 $h$  : Tinggi pelat  
 $l_y$  : Panjang plat arah panjang  
 $l_x$  : Panjang plat arah pendek  
 $m$  : Perbandingan isi dari tulangan memanjang dari bentuk tertutup  
 $M_{ulx}$  : Momen ultimit arah lapangan x  
 $M_{utx}$  : Momen ultimit arah tumpuan x



$M_{uly}$	: Momen ultimit arah lapangan y
$M_{uty}$	: Momen ultimit arah tumpuan y
$M_u$	: Momen ultimit
$M_n$	: Momen nominal
$q_D$	: Beban mati merata
$q_L$	: Beban hidup merata
$q_U$	: Beban merata rencana
$R_n$	: Koefisien tahanan untuk perencanaan kuat
$\rho$	: Rasio tulangan
$\rho_b$	: Rasio tulangan pada keadaan seimbang
$\Phi$	: Koefisien reduksi kekuatan

### 3. Perencanaan balok

$A_s$	: Luas tulangan tarik
$A_s'$	: Luas tulangan desak
$b$	: Lebar balok
$d$	: Jarak dari sisi tekan terluar ke pusat tulangan tarik
$d'$	: Jarak dari sisi tekan terluar ke pusat tulangan desak
$E$	: Modulus elastisitas beton
$f'_c$	: Kuat desak beton
$f_y$	: Tegangan leleh baja
$h$	: Tinggi balok
$I$	: Momen inersia balok
$L$	: Panjang penampang

$m$	: Perbandingan isi dari tulangan memanjang dari bentuk tertutup
$M_n$	: Momen nominal balok
$M_u$	: Momen ultimit balok
$P_D$	: Beban mati terpusat
$P_L$	: Beban hidup terpusat
$P_u$	: Beban ultimit terpusat
$R_n$	: Koefisien tahanan untuk perencanaan kuat
$V_u$	: Gaya geser rencana
$V_c$	: Kuat geser beton
$V_s$	: Tegangan geser nominal yang disebabkan oleh tulangan
$\beta_1$	: Konstanta yang berdasarkan mutu beton
$\rho$	: Rasio tulangan tarik
$\rho'$	: Rasio tulangan tekan
$\Phi$	: Faktor reduksi kekuatan

#### 4. Perencanaan kolom

$a$	: Tinggi blok tegangan persegi ekuivalen
$A_s$	: Luas tulangan tarik
$A_s'$	: Luas tulangan desak
$A_{st}$	: Luas tulangan total
$A_g$	: Luas bruto penampang
$b$	: Lebar penampang kolom
$C_c$	: Gaya tekan pada beton
$C_s$	: Gaya pada tulangan tekan

$C_m$	: Faktor untuk perbesaran momen
$d$	: Jarak dari sisi tekan terluar ke pusat tulangan tarik
$d'$	: Jarak dari sisi tekan terluar ke pusat tulangan desak
$e$	: Eksentrisitas aktual
$e_b$	: Eksentrisitas pada keadaan seimbang
$E_c$	: Modulus elastisitas beton
$E_g$	: Modulus elastisitas balok
$E_s$	: Modulus elastisitas baja tulangan
$f'_c$	: Kuat desak beton
$f_s$	: Tegangan tulangan tarik
$f'_s$	: Tegangan tulangan tekan
$f_y$	: Tegangan leleh baja
$h$	: Tinggi penampang kolom
$h_n$	: Panjang bersih kolom
$I_c$	: Momen inersia kolom
$I_{cr}$	: Momen inersia balok
$I_g$	: Momen inersia dari penampang bruto balok
$k$	: Faktor panjang efektif
$L$	: Panjang balok
$l_n$	: Panjang bersih balok
$m$	: Perbandingan isi dari tulangan memanjang dari bentuk tertutup
$M_b$	: Momen akibat beban tetap
$M_{1b}$	: Momen faktor terbesar pada ujung komponen akibat beban tetap

$M_{2b}$	: Momen faktor terbesar pada ujung komponen akibat beban sementara
$M_D$	: Momen akibat beban mati
$M_E$	: Momen akibat beban gempa
$M_L$	: Momen akibat beban hidup
$M_n$	: Momen nominal
$M_{nx}$	: Momen nominal yang bekerja pada sumbu x
$M_{ny}$	: Momen nominal yang bekerja pada sumbu y
$M_S$	: Momen akibat beban sementara
$M_u$	: Momen ultimit kolom
$M_{u,kx}$	: Momen ultimit kolom arah x
$M_{u,ky}$	: Momen ultimit kolom arah y
$P_c$	: Beban tekuk euler
$P_D$	: Gaya tekan akibat beban mati
$P_E$	: Gaya tekan akibat beban gempa
$P_L$	: Gaya tekan akibat beban hidup
$P_n$	: Gaya tekan nominal
$P_{u,k}$	: Gaya tekan ultimit kolom
$r$	: Jari-jari girasi penampang
$T_s$	: Gaya pada tulangan tarik
$\delta_b$	: Faktor pembesaran momen untuk rangka yang ditahan terhadap goyangan kesamping

- $\delta_s$  : Faktor pembesaran momen untuk rangka yang tidak ditahan terhadap goyangan kesamping
- $\rho$  : Rasio tulangan
- $\beta_1$  : Faktor tinggi blok tekanan ekivalen
- $\beta_d$  : Nilai perbandingan momen beban mati rencana terhadap momen total rencana yang besarnya kurang atau sama dengan satu.
- $\psi$  : Faktor kekangan ujung
- $\emptyset$  : Faktor reduksi kekuatan
- $\sum P_c$  : Penjumlahan beban tekuk euler pada kolom satu tingkat/lantai
- $\sum P_u$  : Penjumlahan beban tekuk ultimit pada kolom satu tingkat/lantai
- 5. Perencanaan gempa**
- $A_g$  : Luas bruto penampang
- $A_{jh}$  : Luas tulangan total efektif tulangan geser horizontal
- $A_{jv}$  : Luas tulangan geser join vertikal
- $A_{sc}$  : Luas tulangan longitudinal tarik
- $A_{sc}'$  : Luas tulangan longitudinal tekan
- $b_j$  : Lebar efektif join
- $C$  : Koefisien gempa dasar
- $C_{ki}$  : Gaya tekan tulangan arah kiri
- $F_x$  : Beban horisontal tiap lantai pada arah x
- $f_y$  : Tegangan leleh baja
- $f'_c$  : Kuat desak beton
- $F_y$  : Beban horisontal tiap lantai pada arah y

$h_x$	: Tinggi gedung arah x
$h_y$	: Tinggi gedung arah y
$h_k$	: Tinggi kolom bruto
$h'_k$	: Tinggi kolom netto
$h_c$	: Tinggi total penampang kolom dalam arah geser yang ditinjau
$h_w$	: Tinggi bangunan
$I$	: Faktor keutamaan struktur
$K$	: Faktor jenis struktur
$L_b$	: Panjang balok
$L_{k_i}$	: Panjang balok bruto sebelah kiri kolom yang ditinjau
$L_{k_i}'$	: Panjang balok netto sebelah kiri kolom yang ditinjau
$L_{k_a}$	: Panjang balok bruto sebelah kanan balok yang ditinjau
$L_{k_a}'$	: Panjang balok netto sebelah kanan balok yang ditinjau
$L_n$	: Bentang bersih balok
$L_w$	: Lebar bangunan
$M_{D,b}$	: Momen lentur balok portal akibat beban mati tak berfaktor
$M_{D,k}$	: Momen lentur kolom portal akibat beban mati tak berfaktor
$M_{E,b}$	: Momen lentur balok portal akibat beban gempa tak berfaktor
$M_{E,k}$	: Momen lentur kolom portal akibat beban gempa tak berfaktor
$M_{L,b}$	: Momen lentur balok portal akibat beban hidup tak berfaktor
$M_{L,k}$	: Momen lentur kolom portal akibat beban hidup tak berfaktor
$M_{kap,b}$	: Momen kapasitas balok
$M_{nak,b}$	: Kuat momen lentur nominal aktual balok

$M_{kap}$	: Momen kapasitas di sendi plastis pada satu ujung atau bidang muka kolom.
$M_{kap}'$	: Momen kapasitas untuk ujung lainnya
$M_{u,b}$	: Momen ultimit balok
$M_{u,k}$	: Momen ultimit kolom
$n$	: Jumlah lantai tingkat di atas kolom yang ditinjau
$N_{E,k}$	: Gaya akibat beban gempa pada pusat kolom
$N_{g,k}$	: Gaya aksial akibat beban gravitasi terfaktor pada pusat joint
$N_{u,k}$	: Gaya aksial ultimit kolom
$P_{cs}$	: Gaya permanen gaya prategang yang terletak di sepertiga bagian tengah tinggi kolom
$q$	: Beban terbagi merata
$R_v$	: Faktor reduksi berdasarkan banyak tingkat
$T$	: Gaya tarik yang terjadi
$V_b$	: Gaya gempa dasar
$V_{bx}$	: Gaya gempa dasar arah x
$V_{by}$	: Gaya gempa dasar arah y
$V_{ch}$	: Gaya geser strat beton diagonal yang melewati daerah tekan ujung joint arah horisontal
$V_{cv}$	: Gaya geser strat beton diagonal yang melewati daerah tekan ujung joint arah vertikal
$V_D$	: Gaya geser balok akibat beban mati
$V_{D,k}$	: Gaya geser kolom akibat beban mati

$V_E$	: Gaya geser balok akibat beban gempa
$V_{E,K}$	: Gaya geser kolom akibat beban gempa
$V_g$	: Gaya geser balok akibat berat sendiri dan beban gravitasi
$V_{jh}$	: Gaya geser horisontal
$V_L$	: Gaya geser balok akibat beban hidup
$V_{L,K}$	: Gaya geser kolom akibat beban hidup
$V_{kol}$	: Gaya geser kolom
$V_{sh}$	: Gaya geser pada daerah tarik join dengan mekanisme panel rangka arah horisontal
$V_{sv}$	: Gaya geser pada daerah tarik join dengan mekanisme panel rangka arah vertikal
$V_{u,b}$	: Gaya geser ultimit balok
$V_{u,k}$	: Gaya geser ultimit kolom
$W_t$	: Berat total keseluruhan gedung
$W_y$	: Berat tiap lantai pada arah y
$W_x$	: Berat tiap lantai pada arah x
$Z_{ka}$	: Lengan momen kanan
$Z_{ki}$	: Lengan momen kiri
$\rho$	: Rasio tulangan tarik
$\rho'$	: Rasio tulangan desak
$\rho_b$	: Rasio tulangan pada keadaan seimbang
$\omega_d$	: Koefisien pembesaran dinamis
$\alpha_k$	: Faktor distribusi momen dari kolom yang ditinjau



## 6. Perencanaan pondasi

$a$	: Tinggi blok tekan
$b_k$	: Lebar penampang kolom
$b_o$	: Keliling penampang kritis pada pelat dan pondasi
$B_x$	: Panjang pondasi telapak
$B_y$	: Lebar pondasi telapak
$d$	: Jarak dari sisi tekan terluar ke pusat tulangan tarik
$e_x$	: Eksentrisitas gaya terhadap sumbu x
$e_y$	: Eksentrisitas gaya terhadap sumbu y
$f_c$	: Kuat desak beton
$f_y$	: Tegangan leleh baja
$h$	: Tebal pondasi
$h_k$	: Panjang penampang kolom
$M_x$	: Momen terhadap sumbu x
$M_y$	: Momen terhadap sumbu y
$M_u$	: Momen ultimit
$M_n$	: Momen nominal
$m_1$	: Jarak geser dari tepi pondasi terhadap sumbu x
$m$	: Perbandingan isi dari tulangan memanjang dari bentuk tertutup
$n_1$	: Jarak geser dari tepi pondasi terhadap sumbu y
$P$	: Gaya tekan yang bekerja
$P_b$	: Selimut beton
$P_n$	: Gaya tekan nominal

- $Q_{\text{terjadi}}$  : Tegangan kontak yang terjadi di dasar pondasi
- $R_n$  : Koefisien tahanan untuk perencanaan kuat
- $V_c$  : Kuat beton menahan geser
- $x$  : Panjang bidang geser kritis
- $y$  : Lebar bidang geser kritis
- $\rho$  : Rasio tulangan
- $\rho_b$  : Rasio tulangan dalam keadaan seimbang
- $\beta_1$  : Rasio antara sisi panjang terhadap sisi pendek pondasi
- $\beta_c$  : Rasio sisi panjang terhadap sisi pendek dari beban terpusat



## ABSTRAKSI

Perencanaan merupakan langkah awal dari suatu pembangunan fisik yang merupakan gabungan antara unsur seni dan ilmu pengetahuan yang membutuhkan keahlian dalam mengolahnya. Untuk menjadi seorang sarjana teknik sipil yang berkualitas maka harus mampu menerapkan kemampuan teoritisnya di lapangan. Oleh karena itu penyusun mengambil tugas akhir tentang Perencanaan Ulang Struktur Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta agar dapat merencanakan suatu bangunan sebagai bekal mempersiapkan diri dalam dunia konstruksi yang sebenarnya.

Perencanaan ulang ini merupakan perhitungan struktur bangunan dari atas sampai bawah yang meliputi perencanaan : rangka atap kuda-kuda baja, pelat lantai dan talang, balok dan kolom, pondasi telapak beton bertulang serta perencanaan tangga.

Untuk rangka atap digunakan mutu baja BJ 37 dengan  $f_y = 240$  MPa dan  $F_u = 370$  MPa, sedangkan untuk sambungan dipakai mutu baut A325 non full draat dengan  $f_y = 205$  MPa dan  $F_u = 825$  MPa. Perencanaan struktur menggunakan mutu beton dengan  $f'_c = 25$  Mpa, dan baja tulangan polos untuk  $\phi \leq 12$  mm dengan  $f_y = 240$  Mpa, serta baja tulangan ulir untuk  $\phi > 12$  mm dengan  $f_y = 400$  Mpa.

Desain struktur rangka atap baja menggunakan metode ASD (*Allowable Stress Design*) dari AISC, dan untuk struktur rangka beton bertulang digunakan metode perencanaan kekuatan batas (*ultimate strength design method*) berdasarkan SK SNI T-15-1991-03. Sedangkan analisis portal menggunakan program SAP 2000 secara 3 dimensi, dengan memperhitungkan beban gempa yang terjadi di wilayah Yogyakarta (wilayah gempa 3).

Secara garis besar, dari hasil perhitungan struktur pada Perencanaan Ulang Struktur Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta ini diperoleh :

- a. Rangka atap kuda-kuda baja  
Untuk kuda-kuda dipakai profil 2L 60x60x6 dan gording menggunakan profil *Light Lip Channel* 100x50x20x2,3.
- b. Pelat  
Pada pelat lantai dipakai tulangan pokok  $\phi 10$  mm dan tulangan bagi  $\phi 8$  mm, sedangkan pelat talang digunakan tulangan pokok dan bagi  $\phi 8$  mm.
- c. Tangga  
Menggunakan tulangan pokok  $\phi 13$  mm dan tulangan bagi  $\phi 8$  mm.
- d. Balok  
Tulangan pokok balok induk dipakai  $\phi 22$  mm, balok anak dan *sloof* menggunakan  $\phi 16$  mm, sedangkan tulangan geser digunakan  $\phi 10$  mm.
- e. Kolom  
Tulangan pokok yang digunakan  $\phi 22$  mm dan tulangan geser  $\phi 10$  mm.
- f. Pondasi  
Menggunakan tulangan pokok  $\phi 22$  mm dengan tulangan bagi  $\phi 12$  mm.

# BAB I

## PENDAHULUAN

### 1.1 Latar Belakang

Perkembangan ilmu pengetahuan dan teknologi merupakan salah satu hasil kreatifitas manusia yang diiringi dengan kemajuan dalam dunia pendidikan. Perguruan tinggi sebagai pusat penelitian dan pengembangan ilmu pengetahuan merupakan salah satu tempat untuk mencetak manusia-manusia yang tanggap terhadap tuntutan pembangunan dan kemajuan jaman dengan cara membekali mahasiswanya dengan ilmu pengetahuan. Dengan bekal ilmu pengetahuan tersebut diharapkan setelah terjun di dalam masyarakat kelak dapat mengembangkan ilmu pengetahuan yang dimilikinya demi kemajuan bangsa dan negara tanpa harus meninggalkan identitas dan kepribadian bangsa.

Oleh karena itu, untuk mewujudkan sumber daya manusia yang siap pakai diperlukan sarana dan prasarana yang memadai dengan berbagai fasilitas penunjang untuk menuju proses kegiatan belajar mengajar seperti yang diharapkan. Diantaranya berupa Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta.

Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada yang berlokasi di Bulaksumur Yogyakarta dengan menempati areal seluas  $\pm 3000 \text{ m}^2$ , merupakan proyek jangka panjang dari Rencana Induk ( *Master Plan* ) Fakultas Hukum Universitas Gadjah Mada Yogyakarta. Sehingga diharapkan dapat tercipta

suatu kampus yang memenuhi kebutuhan , persyaratan serta tujuan akhir dari Universitas Gadjah Mada Yogyakarta.

## 1.2 Maksud dan Tujuan

Perencanaan ulang ( *redesign* ) Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta ini dimaksudkan untuk mendapatkan alternatif lain desain yang efektif dan efisien dengan tingkat keamanan sesuai dengan yang diisyaratkan.

Sedangkan tujuan perencanaan ulang ini adalah untuk menerapkan atau mengaplikasikan ilmu dalam bidang teknik sipil yang diperoleh dari bangku kuliah, sehingga dapat dijadikan bekal dalam menghadapi dunia kerja di bidang konstruksi.

## 1.3 Batasan Perencanaan

Sebagai batasan ruang lingkup dalam perencanaan ulang ( *redesign* ) Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta pada penyusunan Tugas Akhir ini, adalah sebagai berikut :

1. Obyek perencanaan ulang adalah Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta, yang meliputi :
  - a. Perencanaan atap
  - b. Perencanaan pelat lantai
  - c. Perencanaan balok dan kolom
  - d. Perencanaan tangga
  - e. Perencanaan pondasi

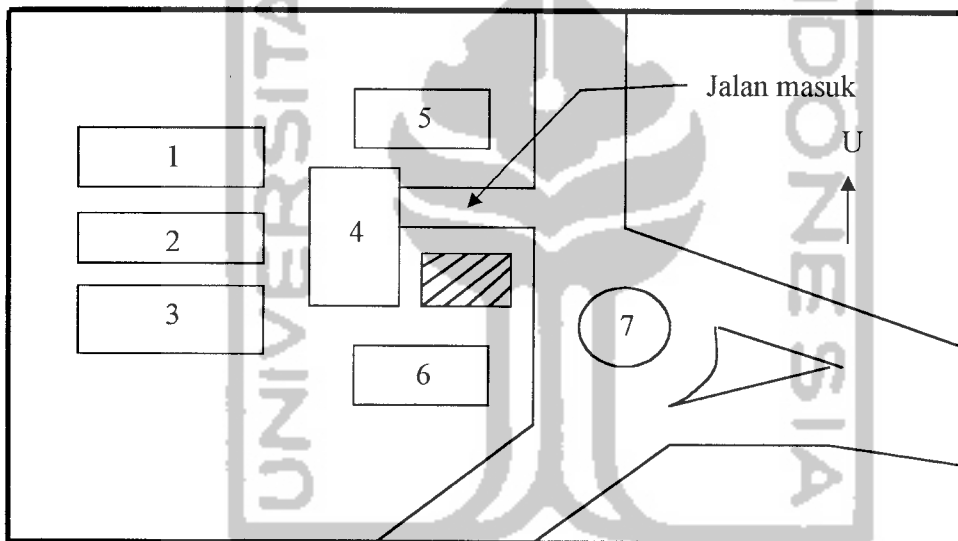
2. Perencanaan ulang ini meliputi perhitungan struktur bangunan dari atas sampai bawah, tetapi tidak termasuk Rencana Anggaran Biaya (RAB).
3. Perencanaan atap menggunakan mutu baja profil BJ 37 dengan tegangan leleh ( $f_y$ ) = 240 Mpa dan tegangan putus ( $F_u$ ) = 370 Mpa. Dan dipakai mutu baut non fullrat dari AISC A325N, dengan tegangan leleh ( $f_y$ ) = 205 Mpa dan tegangan putus ( $F_u$ ) = 825 Mpa.
4. Perencanaan struktur menggunakan mutu beton dengan kuat desak rencana ( $f'_c$ ) = 25 Mpa. Dan digunakan baja tulangan polos (BJTP) untuk diameter  $\leq 12$  mm dengan tegangan leleh ( $f_y$ ) = 240 Mpa, sedangkan baja tulangan ulir (BJTD) untuk diameter  $> 12$  mm dengan tegangan leleh ( $f_y$ ) = 400 Mpa.
5. Perencanaan pondasi diperhitungkan berdasarkan data karakteristik tanah yang ada dengan menggunakan jenis pondasi telapak beton bertulang.
6. Analisa mekanika struktur dengan menggunakan program SAP 2000.
7. Perencanaan konstruksi baja berdasarkan metode *Allowable Stress Design* (ASD) dari AISC.
8. Analisa output portal menggunakan aplikasi *Microsoft Excel*.
9. Secara keseluruhan struktur beton direncanakan menggunakan tingkat daktilitas penuh dengan nilai  $K = 1$ .

### 1.4 Lokasi Proyek

Proyek Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada terletak di Bulaksumur Yogyakarta.

Secara geografis Proyek Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada ini dibatasi (lihat gambar 1.1) :

1. Sebelah Utara : Gedung Magister Hukum UGM
2. Sebelah Selatan : Gedung Fakultas Filsafat UGM
3. Sebelah Barat : Gedung Fakultas Ilmu Sosial dan Politik UGM
4. Sebelah Timur : Areal Parkir



Gambar 1.1 Denah Lokasi

Keterangan:

- 1 . Gedung Fakultas Pertanian UGM
- 2 . Gedung Fakultas Ilmu Sosial dan Politik UGM
- 3 . Gedung Fakultas Ilmu Sosial dan Politik UGM
- 4 . Lokasi Proyek

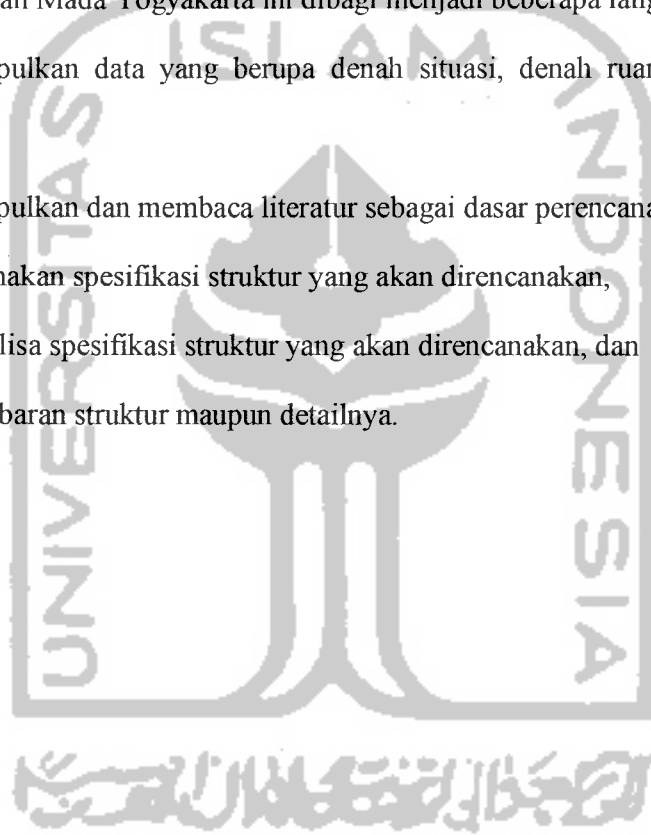
- 5 . Gedung Magister Hukum UGM
- 6 . Gedung Fakultas Filsafat UGM
- 7 . Bundaran Bulaksumur UGM

Daerah arsiran = areal parkir

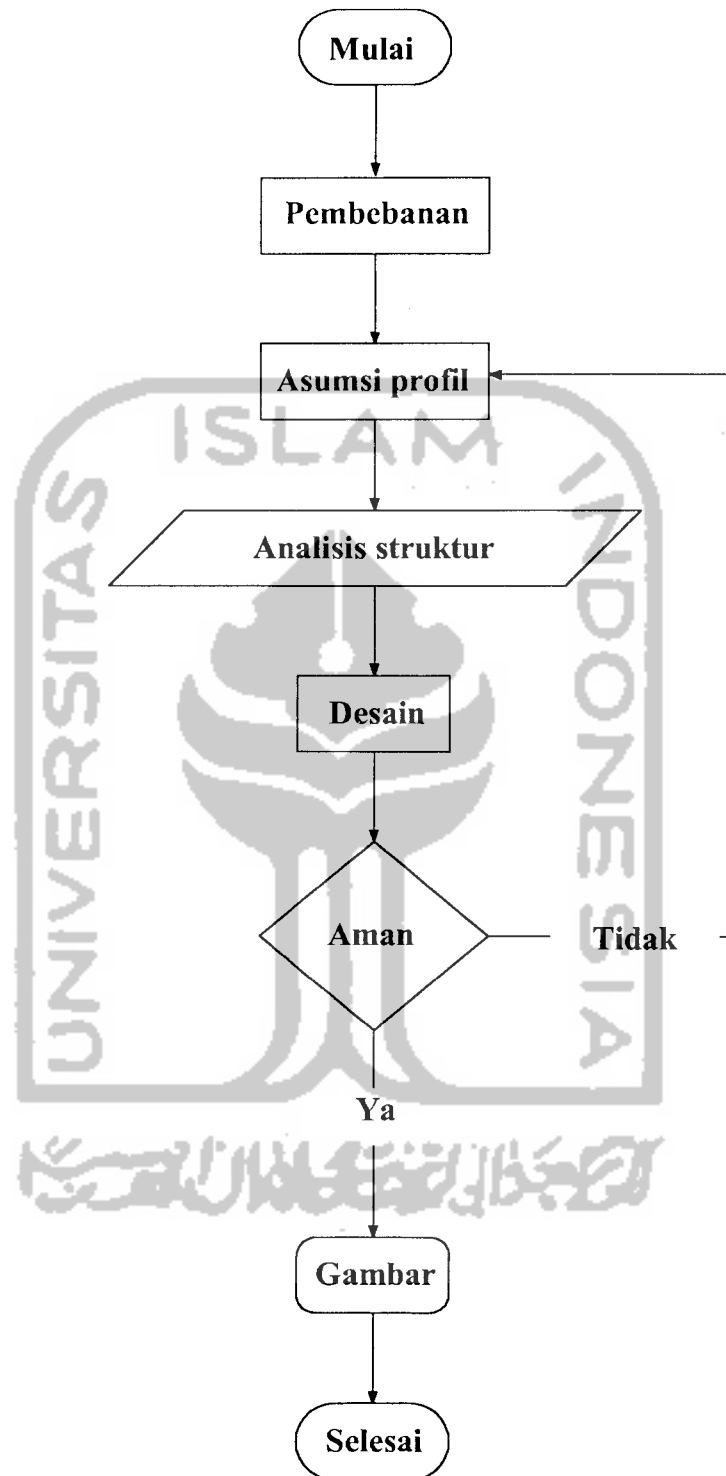
### 1.5 Metode Perencanaan

Dalam perencanaan ulang Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta ini dibagi menjadi beberapa langkah :

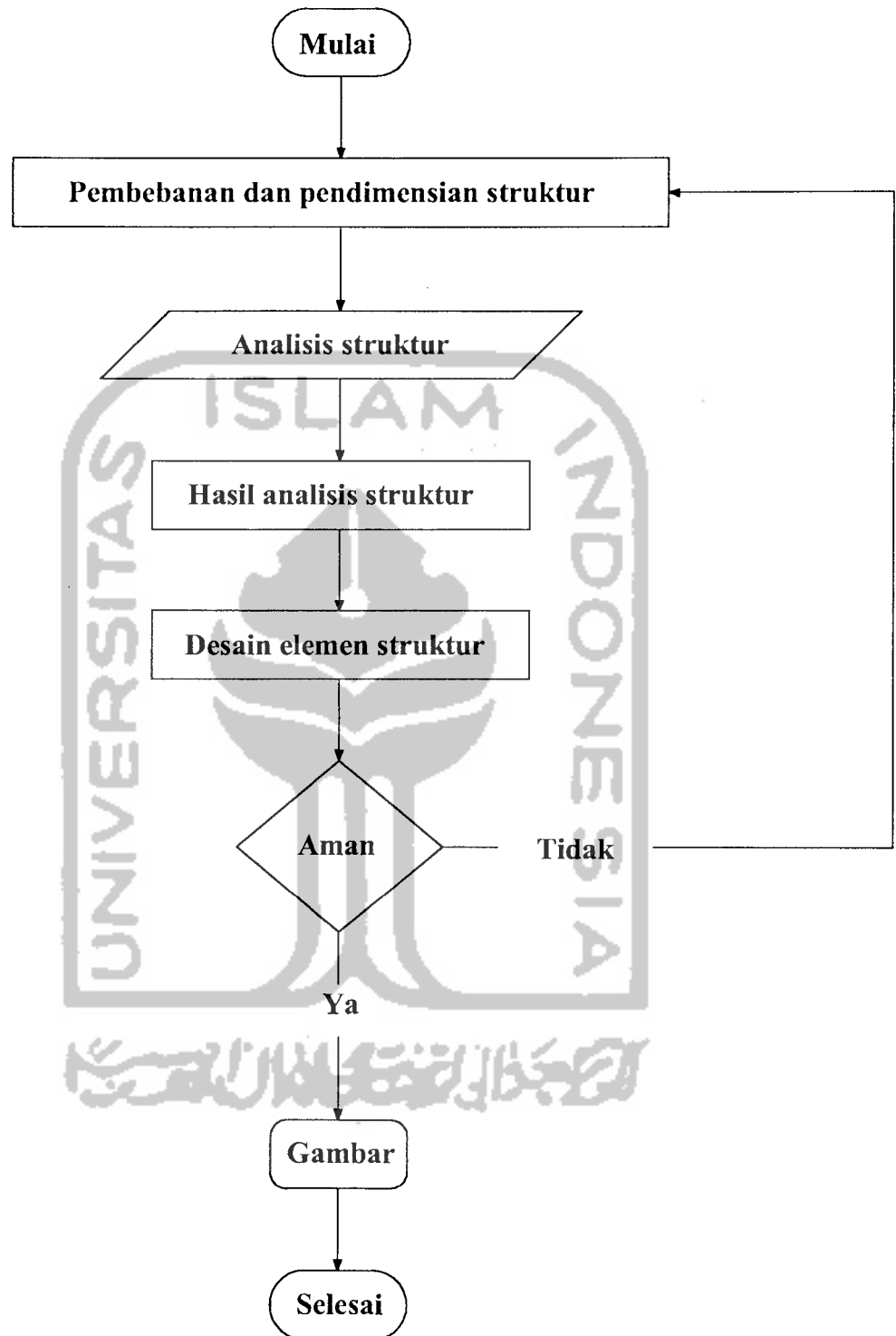
1. Mengumpulkan data yang berupa denah situasi, denah ruang dan data tanah,
2. Mengumpulkan dan membaca literatur sebagai dasar perencanaan,
3. Merencanakan spesifikasi struktur yang akan direncanakan,
4. Menganalisa spesifikasi struktur yang akan direncanakan, dan
5. Penggambaran struktur maupun detailnya.







**Gambar 1.2** Flow chart perhitungan rangka atap



Gambar 1.3 Flow chart analisis portal

## BAB II

### TINJAUAN PUSTAKA

#### 2.1 Pendahuluan

Perencanaan merupakan langkah awal dari suatu pembangunan fisik berupa penuangan ide atau keinginan dari pemilik yang dijadikan suatu pedoman oleh perencana agar didapatkan suatu hasil yang sesuai dengan yang diinginkan.

Proses perencanaan tersebut merupakan gabungan antara unsur seni dan sains yang membutuhkan keahlian dalam mengolahnya. Proses ini dibedakan dalam dua bagian, *pertama*, desain umum yang merupakan peninjauan umum secara garis besar keputusan – keputusan desain. Tipe struktur dipilih dari berbagai alternatif yang mungkin. Tata letak struktur, geometri atau bentuk bangunan, jarak antar kolom, tinggi lantai, dan material bangunan telah ditetapkan dengan pasti dalam tahap ini. Tahap *kedua*, desain terinci yang antara lain meninjau tentang penentuan besar penampang lintang balok, kolom, tebal pelat, dan elemen struktur lainnya.

(L. Wahyudi dan Syahril, 1997)

#### 2.2 Struktur Bawah

Yang dimaksud dengan struktur bawah (*sub structure*) adalah bagian bangunan yang berada di bawah permukaan tanah. Yang berfungsi untuk meneruskan beban yang berada di atas permukaan tanah ke dalam tanah. Pada

perencanaan ulang Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta ini meliputi pondasi dan *sloof*.

### 2.2.1 Pondasi

Pondasi umumnya berlaku sebagai komponen struktur pendukung bangunan yang terbawah, dan telapak pondasi berfungsi sebagai elemen terakhir yang meneruskan beban ke tanah, sehingga telapak pondasi harus memenuhi persyaratan untuk mampu dengan aman menyebarkan beban – beban yang diteruskannya sedemikian rupa sehingga kapasitas atau daya dukung tanah tidak terlampaui. (*Istimawan, 1994*)

### 2.2.2 Sloof

*Sloof* merupakan suatu bagian dari konstruksi yang memiliki fungsi untuk membuat beban yang bekerja pada *sloof* tersebut menjadi beban terbagi merata sepanjang *sloof*. Dengan menjadi beban terbagi merata maka beban yang dipikul tiap satuan luas akan menjadi lebih kecil dibandingkan dengan beban yang bekerja merupakan beban titik/terpusat. Selain itu *sloof* juga berfungsi untuk membuat kekakuan lateral pada konstruksi sehingga stabilitas struktur menjadi lebih baik. Kekakuan ini juga berfungsi untuk menjaga konstruksi dari guling/puntir, pergeseran maupun penurunan.

### 2.3 Struktur Atas

Struktur atas (*upper- structure*) adalah struktur bangunan yang berada di atas permukaan tanah. Struktur ini memberikan bentuk yang permanen pada suatu bangunan. Selain itu juga ada bangunan non struktural yaitu partisi yang berupa pasangan bata.

Pada perencanaan ulang Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta ini meliputi : atap, pelat, kolom, balok, portal dan tangga.

### **2.3.1 Atap**

Atap adalah elemen struktur yang berfungsi melindungi bangunan beserta apa yang ada didalamnya dari pengaruh panas dan hujan. Bentuk atap tergantung dari beberapa faktor misalnya ; iklim, arsitektur, utilitas bangunan, dan sebagainya. Atap harus disesuaikan dengan rangka bangunan atau bentuk denah agar dapat menambah indah dan anggun serta menambah nilai dari harga bangunan.

### **2.3.2 Pelat**

Pelat merupakan panel – panel beton bertulang yang mungkin tulangnya dua arah atau satu arah saja, tergantung sistem strukturnya. Kontinuitas penulangan pelat diteruskan ke dalam balok – balok dan diteruskan ke dalam kolom. Dengan demikian, sistem pelat secara keseluruhan menjadi satu kesatuan membentuk rangka struktur bangunan kaku statis tak tentu yang sangat kompleks, sehingga mengakibatkan timbulnya momen, gaya geser, dan lendutan. *(Istimawan, 1994)*

Berdasarkan perbandingan antara bentang panjang dan bentang pendek, pelat dibedakan menjadi dua, yaitu : pelat satu arah dan pelat dua arah.

#### **1. Pelat satu arah**

Pelat satu arah adalah pelat yang didukung pada dua tepi yang berhadapan saja, sehingga lendutan yang timbul hanya satu arah saja

yaitu pada arah yang tegak lurus terhadap arah dukungan tepi. Atau dengan kata lain pelat satu arah adalah pelat yang mempunyai perbandingan antara sisi panjang terhadap sisi pendek yang saling tegak lurus lebih besar dari dua, dengan lendutan utama pada sisi yang lebih pendek. (*Istimawan, 1994*)

## 2. Pelat dua arah

Pelat dua arah adalah pelat yang didukung sepanjang keempat sisinya dengan lendutan yang akan timbul pada dua arah yang saling tegak lurus, atau perbandingan antara sisi panjang dan sisi pendek yang saling tegak lurus kurang dari dua. (*Istimawan, 1994*)

### 2.3.3 Kolom

Menurut SK SNI-T15-1991-03, definisi kolom adalah komponen struktur bangunan yang tugas utamanya menyangga beban aksial desak vertikal dengan bagian tinggi yang tidak ditopang paling tidak tiga kali dimensi lateral terkecil.

Kolom adalah batang tekan vertikal dari rangka (*frame*) struktur yang memikul beban dari balok induk, maupun balok anak. Kolom meneruskan beban dari elevasi atas ke elevasi yang lebih rendah hingga akhirnya sampai ke tanah melalui pondasi. (*Sudarmoko, 1996*)

Kolom merupakan elemen vertikal yang memikul sistem lantai struktural. Elemen ini merupakan elemen yang mengalami tekan dan pada umumnya disertai dengan momen lentur. (*Edward G. Nawy, 1985*)

Keruntuhan pada suatu kolom merupakan lokasi kritis yang dapat menyebabkan runtuhnya (*collapse*) lantai yang bersangkutan dan juga runtuh total

(*total collapse*) seluruh struktur. Oleh karena itu yang perlu diperhatikan adalah tinggi kolom perencanaan, beban rencana yang digunakan serta mutu beton dan baja yang digunakan.

#### **2.3.4 Balok**

Balok adalah bagian struktur yang berfungsi sebagai pendukung beban vertikal maupun horisontal. Beban vertikal berupa beban mati dan beban hidup yang diterima pelat lantai, berat sendiri balok dan berat dinding penyekat diatasnya. Sedangkan beban horisontal berupa beban angin dan beban gempa.

Balok merupakan bagian struktural bangunan yang penting, bertujuan untuk memikul beban transversal yang dapat berupa beban lentur, geser maupun torsi. Oleh karena itu perencanaan balok yang efisien, ekonomis, cepat dan aman sangat penting. (*Sudarmoko, 1996*)

Balok adalah batang struktural yang hanya menerima beban – beban tegak saja dan dapat dianalisa dengan lengkap apabila diagram geser dan diagram momennya telah didapatkan. (*Istimawan, 1994*)

Dari beberapa definisi diatas, balok juga dapat dibagi menjadi balok induk dan balok anak. Yang dinamakan balok induk adalah balok yang menumpu pada kolom, sedangkan balok anak adalah balok yang menumpu pada balok induk.

#### **2.3.5 Portal**

Portal adalah suatu rangka struktur pada bangunan yang harus mampu menahan beban – beban yang bekerja, baik beban mati, beban hidup, maupun beban sementara. Portal merupakan suatu sistem struktur kerangka yang terdiri

dari rakitan elemen struktur yang berupa beton bertulang, elemen balok, kolom, atau dinding geser. Terdapat dua jenis portal, yaitu portal tak bergoyang (*braced frame*) dan portal bergoyang .

#### 1. Portal tak bergoyang (*braced frame*)

Portal tak bergoyang didefinisikan sebagai portal dimana tekuk goyangan dicegah oleh elemen – elemen topangan struktur tersebut dan bukan oleh portal itu sendiri. (*Salmon & Jhonson, 1996*)

Portal tak bergoyang mempunyai sifat :

- a. Portal tersebut simetris dan bekerja beban simetris.
- b. Portal yang mempunyai kaitan dengan konstruksi lain yang tidak dapat bergoyang.

#### 2. Portal bergoyang

Suatu portal dikatakan bergoyang, jika :

- a. Beban yang tidak simetris yang bekerja pada portal yang simetris atau tidak simetris.
- b. Beban simetris yang bekerja pada portal yang tidak simetris.

#### 2.3.6 Tangga

Tangga adalah jalur bergigi (mempunyai trap–trap) yang menghubungkan satu lantai dengan lantai di atasnya, sehingga berfungsi sebagai jalan untuk naik dan turun antar tingkat. (*Benny Puspantoro, 1987*)



## 2.4 Pembebanan

### 2.4.1 Macam – macam pembebanan

Perencanaan suatu struktur untuk keadaan – keadaan stabil, kekuatan batas dan kemampuan layan harus memperhitungkan pengaruh – pengaruh dari aksi – aksi sebagai akibat dari beban – beban berikut ini menurut Pedoman Perencanaan Pembebanan Untuk Rumah dan Gedung :

#### 1. Beban mati (DL)

Beban mati adalah berat dari semua bagian dari suatu gedung yang bersifat tetap, termasuk segala unsur tambahan tetap yang merupakan bagian tak terpisahkan dari gedung itu.

#### 2. Beban Hidup (LL)

Beban hidup adalah semua beban yang terjadi akibat penghunian atau penggunaan suatu gedung, termasuk beban – beban yang berasal dari barang – barang yang berpindah – pindah.

#### 3. Beban Angin (WL)

Beban angin adalah semua beban yang bekerja pada gedung yang disebabkan oleh selisih dari tekanan udara, yang nilainya dikalikan dengan koefisien angin (c). Untuk perencanaan dalam Tugas Akhir ini menggunakan atap segitiga majemuk dengan kriteria sebagai berikut :

– Untuk bidang – bidang atap dipihak angin ( $c_1$ ),

$$\alpha < 65^\circ \quad (0,2 \alpha - 0,4) \quad \dots\dots\dots(2.1)$$

– Untuk semua bidang atap dibelakang angin ( $c_2$ ),

$$\text{untuk semua } \alpha = -0,4 \quad \dots\dots\dots(2.2)$$

dengan  $c_1$  adalah koefisien angin tiup,  $c_2$  adalah koefisien angin hisap dan  $\alpha$  adalah sudut kemiringan atap.

#### 4. Beban Gempa (EL)

Beban gempa adalah semua beban statik ekuivalen yang bekerja pada gedung yang menirukan pengaruh dari gerakan tanah akibat gempa.

#### 5. Pengaruh-pengaruh khusus

Adalah semua pengaruh terhadap bangunan atau unsur bangunan yang diakibatkan oleh selisih suhu, pemasangan, penurunan pondasi, susut, beban berulang dan pengaruh khusus lainnya.

#### 2.4.2 Kombinasi pembebanan

Pada perencanaan ulang pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta dipakai beberapa kombinasi pembebanan dengan memperhitungkan kuat perlu (U) dari struktur tersebut (SNI T-15-1991-03) :

1. Untuk kondisi beban mati (D) dan beban hidup (L)

$$U = 1,2 D + 1,6 L \quad \dots\dots\dots(2.3)$$

2. Bila beban angin (W) turut diperhitungkan, maka pengaruh kombinasi beban mati (D), beban hidup (L) dan beban angin (W) berikut ini harus dipilih untuk menentukan nilai kuat perlu (U) terbesar.

$$U = 0,75 ( 1,2 D + 1,6 L + 1,6 W ) \quad \dots\dots\dots(2.4)$$

Dengan beban hidup (L) yang kosong, turut pula diperhitungkan untuk mengantisipasi kondisi bahaya sehingga :

$$U = 0,9 D + 1,3 W \quad \dots\dots\dots(2.5)$$

3. Bila ketahanan struktur terhadap beban gempa (E) turut diperhitungkan, maka :

$$U = 1,05 ( D + L_R \pm E ) \quad \dots\dots\dots(2.6)$$

atau

$$U = 0,9 ( D \pm E ) \quad \dots\dots\dots(2.7)$$

Dengan U adalah kuat perlu,  $L_R$  adalah beban hidup tereduksi,

D adalah beban mati, E adalah beban gempa.

#### 2.4.3 Faktor reduksi kekuatan ( $\Phi$ )

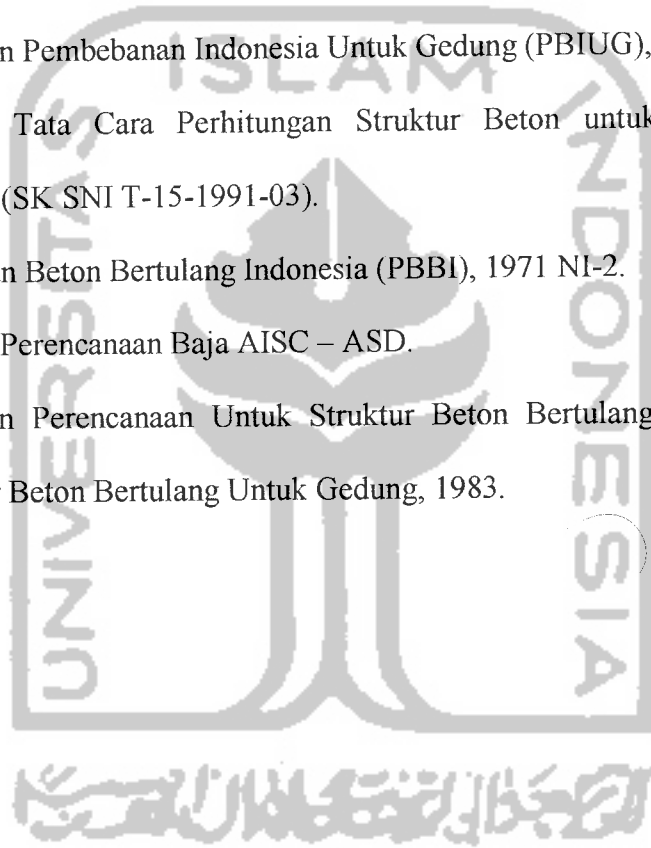
Ketidakpastian kekuatan bahan terhadap pembebanan dianggap sebagai faktor reduksi kekuatan ( $\Phi$ ). Menurut SKSNI T-15-1991-03, faktor reduksi ( $\Phi$ ) ditentukan sebagai berikut

Gaya yang bekerja	Nilai ( $\Phi$ )
1. Lentur tanpa beban aksial	0,8
2. Aksial tarik dan aksial tarik dengan lentur	0,8
3. Aksial tekan, dan aksial dengan lentur :	
dengan tulangan spiral	0,7
dengan tulangan sengkang ikat	0,65
4. Geser dan torsi	0,6
5. Tumpuan pada beton	0,7

## 2.5 Dasar – Dasar Perencanaan

Peraturan – peraturan / standarisasi yang digunakan dalam Pada perencanaan ulang Pembangunan Gedung Fakultas Hukum Universitas Gadjah Mada Yogyakarta adalah :

1. Peraturan Perencanaan Tahan Gempa Indonesia Untuk Gedung (PPTGIUG), 1983.
2. Peraturan Pembebanan Indonesia Untuk Gedung (PBIUG), 1983.
3. Standar Tata Cara Perhitungan Struktur Beton untuk Bangunan Gedung (SK SNI T-15-1991-03).
4. Peraturan Beton Bertulang Indonesia (PBBI), 1971 NI-2.
5. Metode Perencanaan Baja AISC – ASD.
6. Pedoman Perencanaan Untuk Struktur Beton Bertulang Biasa Dan Struktur Beton Bertulang Untuk Gedung, 1983.



## BAB III

### LANDASAN TEORI

#### 3.1 Perencanaan Atap

Perencanaan atap baja menggunakan metode perencanaan tegangan kerja (*working stress design*) dari AISC, yang meliputi :

##### 3.1.1 Perencanaan gording

Dalam perencanaan gording harus memenuhi syarat-syarat antara lain :

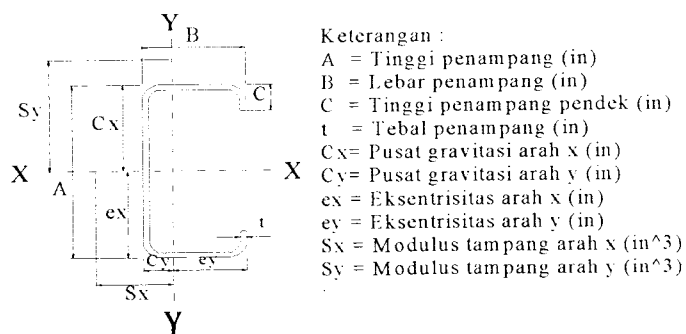
###### 1. Tegangan

$$\frac{fbx}{0,66fy} + \frac{fby}{0,75fy} \leq 1,0 \quad \dots\dots\dots(3.1)$$

$$fbx = \frac{M_{\perp} \cdot \max}{S_x} \quad \dots\dots\dots(3.2)$$

$$fby = \frac{M_{\parallel} \cdot \max}{S_y} \quad \dots\dots\dots(3.3)$$

- Dimana :
- fbx = tegangan lentur arah sumbu x (ksi)
  - fby = tegangan lentur arah sumbu y (ksi)
  - fy = tegangan leleh baja (ksi)
  - Sx = modulus elastis tampang arah sumbu x (in<sup>3</sup>)
  - Sy = modulus elastis tampang arah sumbu y (in<sup>3</sup>)
  - M<sub>⊥</sub> = momen tegak lurus arah sumbu batang (k.in)
  - M<sub>∥</sub> = momen sejajar sumbu batang (k.in)



**Gambar 3.1** Propertis penampang gording

## 2. Lendutan

$$\delta_{\perp} = \frac{5}{384} \frac{q_{\perp} \cdot L^4}{EI_x} \leq \frac{L}{360} \quad \dots\dots\dots (3.4)$$

$$\delta_{//} = \frac{5}{384} \frac{q_{//} \cdot L^4}{EI_y} \leq \frac{L}{360} \quad \dots\dots\dots (3.5)$$

$$\delta = \sqrt{\delta_{\perp}^2 + \delta_{//}^2} \leq \frac{L}{360} \quad \dots\dots\dots (3.6)$$

Dimana :  $\delta$  = resultan lendutan (mm)

$\delta_{\perp}$  = lendutan tegak lurus sumbu batang (mm)

$\delta_{//}$  = lendutan sejajar sumbu batang (mm)

$E$  = modulus elastis baja ( 29000 ksi )

$I_x$  = Inersia arah sumbu x (mm<sup>4</sup>)

$I_y$  = Inersia arah sumbu y (mm<sup>4</sup>)

### 3.1.2 Perencanaan sagrod

Dalam perencanaan sagrod dipakai :

$$P = 0,33 \cdot F_u \cdot A_{sagrod} \quad \dots\dots\dots (3.7)$$

Beban yang digunakan adalah beban arah sejajar sumbu (P//) :

$$P_{//} = P \cdot \sin \alpha \cdot S_s \quad \dots\dots\dots (3.8)$$

Sehingga luas tampang sagrod :

$$A_{sagrod} = \frac{P}{0,33 \cdot F_u} = \frac{1}{4} \cdot \pi \cdot D^2_{sagrod} \quad \dots\dots\dots (3.9)$$

$$D_{sagrod} = \sqrt{\frac{(4 \cdot P)}{(0,33 \cdot F_u \cdot \pi)}} \quad \dots\dots\dots (3.10)$$

$$D_{pakai} = D_{sagrod} + 3 \text{ mm} \quad \dots\dots\dots (3.11)$$

Dimana :  $P$  = gaya yang bekerja (kips)

$P//$  = gaya sejajar sumbu batang (kips)

$F_u$  = kuat tarik baja (ksi)

$S_s$  = jarak beban sagrod (in)

$D$  = diameter sagrod (in)

$A$  = luas penampang sagrod ( $\text{in}^2$ )

### 3.1.3 Perencanaan tierod

Gaya batang  $T = P// \cdot \cos \alpha$  .....(3.12)

$$T = 0,33 \cdot F_u \cdot A_{\text{tierod}} \quad \text{.....(3.13)}$$

Sehingga :

$$A_{\text{tierod}} = \frac{T}{0,33 F_u} = \frac{1}{4} \cdot \pi \cdot D^2_{\text{tierod}} \quad \text{.....(3.14)}$$

$$D_{\text{tierod}} = \sqrt{\frac{(4 \cdot T)}{(0,33 \cdot F_u \cdot \pi)}} \quad \text{.....(3.15)}$$

$$D_{\text{pakai}} = D_{\text{tierod}} + 3 \text{ mm} \quad \text{.....(3.16)}$$

Dimana :  $T$  = tegangan yang bekerja (kips)

$F_u$  = kuat tarik baja (ksi)

$D$  = diameter tierod (in)

$A$  = luas penampang tierod ( $\text{in}^2$ )

### 3.1.4 Perencanaan batang tarik

Langkah-langkah perencanaan batang tarik :

1. Menentukan angka kelangsingan ( $\lambda = L/r$ )

Angka kelangsingan maksimum yang dapat diterima untuk

batang tarik :

Untuk elemen/batang utama..... $\lambda = L/r \leq 240$

Untuk elemen/batang sekunder/bracing..... $\lambda = L/r \leq 300$

Sehingga untuk elemen/batang utama, diperoleh :

$$r_{\min} = \frac{L}{240} \quad \dots\dots\dots(3.17)$$

2. Menentukan luas bruto ( $A_g$ ), luas netto ( $A_n$ ) dan luas efektif ( $A_{eff}$ ) :

$$A_{g1} = \frac{T}{0,6 \cdot f_y} \quad \dots\dots\dots(3.18)$$

$$A_{g2} = \frac{T}{0,5 \cdot F_u \cdot \mu} + \left( \frac{1''}{8} + \phi_{baut} \right) \cdot tp \cdot n \quad \dots\dots\dots(3.19)$$

Dipakai profil yang luasannya ( $A$ ) lebih besar dari nilai  $A_g$  terpakai :

$$A_{netto} = A_{bruto} - \left( \frac{1''}{8} + \phi_{baut} \right) \cdot tp \cdot n \quad \dots\dots\dots(3.20)$$

$$A_{effektif} = \mu \cdot A_{netto} \quad \dots\dots\dots(3.21)$$

Dimana :  $L$  = panjang batang (in)

$T$  = gaya tarik (kips)

$r$  = jari-jari inersia terkecil profil (in)

$A_{netto}$  = luas bersih penampang (in<sup>2</sup>)

$A_g$  = luas kotor penampang (in<sup>2</sup>)

$n$  = jumlah baut

$\phi$  = diameter baut (in)

$tp$  = tebal pelat (in)

$\mu$  = faktor reduksi luas netto, dengan kriteria :

- a. lebar sayap  $\geq \frac{2}{3}x$  kedalaman, sambungan pada sayap – sayap minimal 3 ikatan pergaris dalam garis tekanan

$$\mu = 0,90$$



- b. minimum 3 ikatan perbaris tekanan yang tidak sama dengan kriteria diatas  $\mu = 0,85$
- c. 2 ikatan pergaris tekanan  $\mu = 0,75$
3. Kontrol tegangan tarik yang terjadi

a. Tampang tanpa lubang :  $f_a = \frac{T}{A_{profil}} \leq 0,6.f_y$  .....(3.22)

b. Tampang ada lubang :  $f_a = \frac{T}{A_{effektif}} \leq 0,5.F_u$  .....(3.23)

Dimana :  $f_a$  = Tegangan tarik yang terjadi (ksi)

### 3.1.5 Perencanaan batang desak

Langkah-langkah perencanaan batang desak :

1. Menentukan profil

Pada prinsipnya sama dengan proses penentuan profil batang tarik.

2. Kontrol terhadap tekuk dan kelangsingan

Setelah profil baja didapat, dilakukan terlebih dahulu dengan mengontrol tekuk setempat (*local buckling*) :

$$\frac{bf}{tw} \leq \frac{76}{\sqrt{f_y}} \quad (f_y \text{ dalam ksi}) \quad \dots\dots\dots(3.24)$$

dan kontrol kelangsingan :

$$\frac{KL}{r} \leq C_c = \sqrt{\frac{2 \cdot \pi^2 \cdot E}{f_y}} = \frac{756}{\sqrt{f_y}} \quad (f_y \text{ dalam ksi}) \quad \dots\dots\dots(3.25)$$

$$\leq C_c = \frac{6440}{\sqrt{f_y}} \quad (f_y \text{ dalam kg/cm}^2)$$

$$\leq C_c = \frac{1987}{\sqrt{f_y}} \quad (f_y \text{ dalam MPa})$$

$$F_s = \frac{5}{3} + \frac{3 \cdot (KL/r)}{8 \cdot C_c} - \frac{1 \cdot (KL/r)^2}{8 \cdot C_c^2} \quad \dots\dots\dots(3.26)$$

$$F_a = \frac{f_y}{F_s} \left( 1 - 0,5 \left( \frac{Kl}{C_c} \right)^2 \right) \dots\dots\dots(3.27)$$

Tetapi jika  $\frac{Kl}{r} > C_c$ , maka :

$$F_a = \frac{12}{23} \frac{\pi^2 E}{(Kl/r)^2} \dots\dots\dots(3.28)$$

dimana :  $F_a$  = tegangan ijin pada luas bruto dalam kondisi beban kerja (ksi)

$Kl/r$  = angka kelangsingan elemen desak

$F_s$  = faktor keamanan

### 3. Kontrol beban

$$T = F_a \cdot A_{total} > P \dots\dots\dots(3.29)$$

dimana :  $T$  = beban ijin

$P$  = beban yang terjadi

## 3.1.6 Perencanaan sambungan

### 1. Menghitung kekuatan 1 baut

$$P_{tumpu} = t_p \cdot D_{baut} \cdot 1,2 \cdot F_{upelat} \cdot N \dots\dots\dots(3.30)$$

$$P_{geser} = A_{baut} \cdot F_v \cdot 2N = \frac{1}{4} \pi \cdot D^2 \cdot F_v \cdot 2N \dots\dots\dots(3.31)$$

dengan  $F_v = 0,22 \cdot F_{ubaut}$ , untuk baut non fulldrat

$F_v = 0,17 \cdot F_{ubaut}$ , untuk baut fulldrat

### 2. Menghitung jumlah baut

$$N = \frac{P_{terjadi}}{P_{baut}} \dots\dots\dots(3.32)$$

## 3.2 Perencanaan Beton Bertulang

### 3.2.1 Perencanaan pelat dua arah

#### 1. Menentukan tebal minimum pelat (h)

Pada SK SNI T-15-1991-03 pasal 3.2.5 butir 3.3 memberikan pendekatan empiris mengenai batasan defleksi dilakukan dengan tebal pelat minimum sebagai berikut :

$$h \geq \frac{Ln \left( 0,8 + \frac{f_y}{1500} \right)}{36 + 5\beta \cdot \left[ \alpha_m - 0,12 \left( 1 + \frac{1}{\beta} \right) \right]} \quad (\text{mm}) \quad \dots\dots\dots (3.33)$$

tetapi tidak boleh kurang dari :

$$h \geq \frac{Ln \left( 0,8 + \frac{f_y}{1500} \right)}{36 + 9\beta} \quad (\text{mm}) \quad \dots\dots\dots (3.34)$$

dan tidak perlu lebih dari :

$$h \leq \frac{Ln \left( 0,8 + \frac{f_y}{1500} \right)}{36} \quad (\text{mm}) \quad \dots\dots\dots (3.35)$$

Dalam segala hal tebal minimum pelat tidak boleh kurang dari harga berikut :

- Untuk  $\alpha_m < 2,0$  digunakan nilai h minimal 120 mm.
- Untuk  $\alpha_m \geq 2,0$  digunakan nilai h minimal 90 mm.

dimana :

$Ln$  = bentang terkecil pada pelat dihitung dari as kolom (mm)

$\alpha_m$  = rasio kekakuan balok terhadap pelat

$\beta$  = rasio panjang terhadap lebar bentang pelat

## 2. Menentukan momen lentur terjadi

Perencanaan dan analisis dengan menggunakan *metode koefisien momen*. Besar momen lentur dalam arah bentang panjang :

$$M_{tx} = -0,001 \cdot q_u \cdot L_x^2 \cdot c_{tx} \quad \dots\dots\dots(3.36)$$

$$M_{lx} = 0,001 \cdot q_u \cdot L_x^2 \cdot c_{lx} \quad \dots\dots\dots(3.37)$$

$$M_{ty} = -0,001 \cdot q_u \cdot L_x^2 \cdot c_{ty} \quad \dots\dots\dots(3.38)$$

$$M_{ly} = 0,001 \cdot q_u \cdot L_x^2 \cdot c_{ly} \quad \dots\dots\dots(3.39)$$

dimana :

$q_u$  = beban merata (KN/m<sup>2</sup>)

$M_{tx}$  = momen tumpuan arah sumbu x (KNm)

$M_{lx}$  = momen lapangan arah sumbu x (KNm)

$M_{ty}$  = momen tumpuan arah sumbu y (KNm)

$M_{ly}$  = momen lapangan arah sumbu y (KNm)

$c_{tx}$  = koefisien momen tumpuan arah x

$c_{lx}$  = koefisien momen lapangan arah x

$c_{ty}$  = koefisien momen tumpuan arah y

$c_{ly}$  = koefisien momen lapangan arah y

$L_x$  = panjang pelat arah sumbu x / bentang pendek (m)

$L_y$  = panjang pelat arah sumbu y / bentang panjang (m)

Nilai koefisien momen (c) diambil dari tabel 13.3.1 dan 13.3.2 PBI 1971

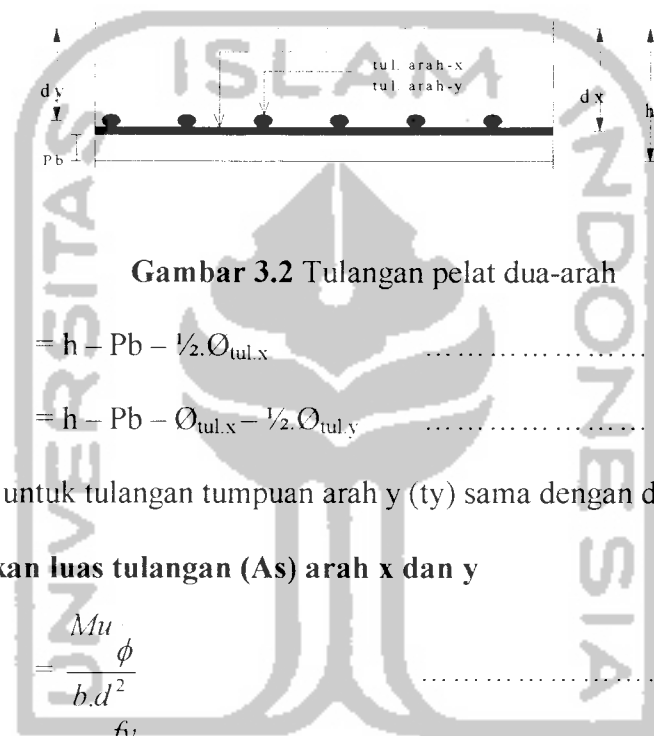
## 3. Menentukan tinggi manfaat (d) arah x dan y

$$\rho_b = \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) \quad \dots\dots\dots(3.40)$$

$$\rho_{maks} = 0,75 \cdot \rho_b \quad \dots\dots\dots(3.41)$$

$$\rho_{\min} = \frac{1,4}{f_y} \dots\dots\dots(3.42)$$

Pada pelat dua arah, tulangan momen positif untuk kedua arah dipasang saling tegak lurus. Karena momen positif arah bentang pendek (x) lebih besar dari bentang panjang (y), maka tulangan bentang pendek diletakkan pada lapis bawah agar memberikan d (tinggi manfaat) yang besar.



**Gambar 3.2** Tulangan pelat dua-arah

$$dx = h - Pb - \frac{1}{2} \cdot \phi_{tul.x} \dots\dots\dots(3.43)$$

$$dy = h - Pb - \phi_{tul.x} - \frac{1}{2} \cdot \phi_{tul.y} \dots\dots\dots(3.44)$$

dy untuk tulangan tumpuan arah y (ty) sama dengan dx

#### 4. Menentukan luas tulangan (As) arah x dan y

$$Rn = \frac{Mu \cdot \phi}{b \cdot d^2} \dots\dots\dots(3.45)$$

$$m = \frac{f_y}{0,85 \cdot f'c} \dots\dots\dots(3.46)$$

$$\rho_{ada} = \frac{1}{m} \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot Rn}{f_y}} \right] \dots\dots\dots(3.47)$$

a) Jika  $\rho_{ada} > \rho_{maks}$  ; maka tebal minimum (h) harus diperbesar

b) Jika  $\rho_{min} < \rho_{ada} < \rho_{maks}$  ; dipakai nilai :  $\rho_{pakai} = \rho_{ada}$

c) Jika  $\rho_{ada} < \rho_{maks} < \rho_{min}$  : • 1,33.  $\rho_{ada} > \rho_{min}$  ; dipakai :  $\rho_{pakai} = \rho_{min}$

• 1,33.  $\rho_{ada} < \rho_{min}$  ; dipakai :  $\rho_{pakai} = 1,33 \cdot \rho_{ada}$

Setelah didapatkan nilai  $\rho_{pakai}$ , maka :

$$As_{perlu} = \rho_{pakai} \cdot b \cdot d \geq As_{tul \text{ bagi/susut}} = 0,002 \cdot b \cdot h \dots\dots\dots(3.48)$$

Nilai lebar pelat (b), diambil tiap 1 meter (1000 mm).

$$\text{Jarak antar tulangan : } s \leq \frac{A_1 \cdot b}{A_{s_{pakai}}} \dots\dots\dots(3.49)$$

$$s \leq 2 \cdot h \dots\dots\dots(3.50)$$

$$s \leq 250 \text{ mm} \dots\dots\dots(3.51)$$

Diambil nilai jarak antar tulangan (s) yang terkecil, sehingga didapatkan nilai  $A_{s_{ada}}$  :

$$A_{s_{ada}} = \frac{A_1 \cdot b}{s} \dots\dots\dots(3.52)$$

### 5. Kontrol kapasitas lentur pelat yang terjadi

$$a = \frac{A_{s_{ada}} \cdot f_y}{0,85 \cdot f'_c \cdot b} \dots\dots\dots(3.53)$$

$$M_n = A_{s_{ada}} \cdot f_y \cdot \left(d - \frac{a}{2}\right) \geq \frac{M_u}{\phi} \dots\dots\dots(3.54)$$

Bila  $\rho_{perlu} = 1,33 \cdot \rho_{ada}$ , maka :

$$M_n = A_{s_{ada}} \cdot f_y \cdot \left(d - \frac{a}{2}\right) \geq 1,33 \frac{M_u}{\phi} \dots\dots\dots(3.55)$$

### 3.2.2 Perencanaan balok

Langkah-langkah perencanaan elemen balok adalah sebagai berikut :

#### 1. Menentukan mutu beton dan baja tulangan

Faktor blok tegangan beton ( $\beta_1$ ), sama dengan : (SK SNI T-15-1991-03 pasal 3.3.2 butir 7.3)

$$f'_c \leq 30 \text{ MPa} \rightarrow \beta_1 = 0,85$$

$$f'_c > 30 \text{ MPa} \rightarrow \beta_1 = 0,85 - 0,008 \cdot (f'_c - 30) \geq 0,65 \dots\dots\dots(3.56)$$

## 2. Menentukan nilai rasio tulangan ( $\rho$ )

$$\rho_b = \frac{0,85 \cdot f'c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) \dots\dots\dots(3.57)$$

$$\rho_{maks} = 0,75 \cdot \rho_b \dots\dots\dots(3.58)$$

$$\rho_{min} = \frac{1,4}{f_y}$$

Dalam perencanaan dipakai nilai  $\rho$  :  $\rho_{rencana} = 0,5 \cdot \rho_{maks} > \rho_{min} \dots\dots(3.59)$

dimana :

$\rho_b$  = rasio tulangan terhadap luas beton efektif dalam keadaan seimbang

$\rho_{maks}$  = rasio tulangan maksimum

$\rho_{min}$  = rasio tulangan minimum

$\rho_{rencana}$  = rasio tulangan yang dipakai dalam perencanaan

## 3. Menentukan tinggi efektif (d) dan lebar (b) penampang beton

$$m = \frac{f_y}{0,85 \cdot f'c} \dots\dots\dots(3.60)$$

$$R_n = \rho \cdot f_y \cdot (1 - 1/2 \cdot \rho \cdot m) \dots\dots\dots(3.61)$$

$$b \cdot d^2 = \frac{M_u / \phi}{R_n} \dots\dots\dots(3.62)$$

Tentukan b, didapat  $d_{perlu}$

*Jika nilai  $d_{diketahui} \geq d_{perlu}$ , maka digunakan tulangan sebelah*

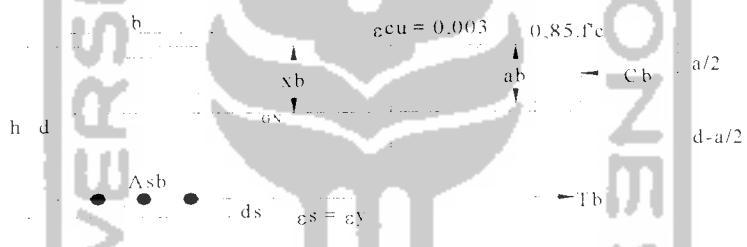
*Jika nilai  $d_{diketahui} < d_{perlu}$ , maka digunakan tulangan rangkap*

$$d_{diketahui} = h_{diketahui} - P_b - \emptyset_{senggang} - 1/2 \cdot \emptyset_{tulangan\ rencana}$$

dimana :

- m = perbandingan isi dari tulangan memanjang dari bentuk yang tertutup
- Rn = koefisien tahanan untuk perencanaan kuat (MPa)
- d = tinggi efektif penampang, diukur dari serat atas ke pusat tulangan tarik (mm)
- Mu = momen lentur ultimit akibat beban luar (Nmm)
- φ = faktor reduksi kekuatan, diambil nilai 0,80 (lentur tanpa aksial)
- h = tinggi total penampang beton (mm)

**a) Perencanaan balok penampang persegi menahan lentur tulangan sebelah**



**Gambar 3.3** Tampang, regangan dan tegangan balok persegi  
Balok lentur tulangan sebelah direncanakan, jika nilai  $d_{diketahui}$

$\geq d_{perlu}$  Langkah-langkah perencanaannya sebagai berikut :

- Menentukan  $\rho_{baru}$  dan  $Rn_{baru}$

$$Rn_{baru} = \frac{Mu}{b \cdot d_{diketahui}^2} \cdot \phi \dots \dots \dots (3.63)$$

$$\rho_{baru} = \frac{Rn_{ada}}{Rn} \cdot \rho > \rho_{min} \dots \dots \dots (3.64)$$

- Menentukan luas tulangan (As)

$$As = \rho_{baru} \cdot b \cdot d_{diketahui} \dots \dots \dots (3.65)$$

$$n = \frac{As}{A_{1\phi}} ; n \text{ bilangan bulat \& } n \geq 2 \text{ batang} \dots \dots \dots (3.66)$$



$$A_{s_{ada}} = n \cdot A_{10} > A_s \dots\dots\dots(3.67)$$

dimana :

$A_s$  = luas tulangan tarik longitudinal ( $mm^2$ )

$n$  = jumlah tulangan yang dipakai (buah)

$A_{s_{ada}}$  = luas tulangan tarik longitudinal yang ada ( $mm^2$ )

$A_{10}$  = luas tampang satu buah tulangan ( $mm^2$ )

$\rho_{baru}$  = rasio tulangan berdasarkan perhitungan luas penampang beton

$R_{n_{baru}}$  = koefisien tahanan untuk perencanaan kuat (MPa)

• **Kontrol kapasitas lentur yang terjadi**

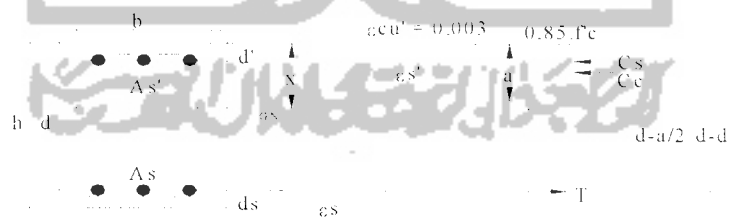
$$a = \frac{A_{s_{ada}} \cdot f_y}{0,85 \cdot f'_c \cdot b} \dots\dots\dots(3.68)$$

$$M_n = A_{s_{ada}} \cdot f_y \cdot \left( d_{diketahui} - \frac{a}{2} \right) > \frac{M_u}{\phi} \dots\dots\dots(3.69)$$

dimana :  $a$  = tinggi blok tegangan persegi ekuivalen (mm)

$M_n$  = kapasitas lentur nominal yang terjadi (Nmm)

**b) Perencanaan balok penampang persegi menahan lentur tulangan rangkap**



**Gambar 3.4** Tampang, regangan dan tegangan balok persegi

Balok lentur tulangan rangkap direncanakan, jika nilai  $d_{diketahui} < d_{perlu}$ . Langkah-langkah perencanaannya sebagai berikut :

• **Menentukan  $A_{s1}$  dan  $M_{n1}$**

$$A_{s1} = \rho_1 \cdot b \cdot d_{diketahui} \dots\dots\dots(3.70)$$

diambil  $\rho_1 = \rho_{awal} = 0,5\rho_{maks}$

$$a = \frac{A_{s1} \cdot f_y}{0,85 \cdot f'c \cdot b} \dots\dots\dots(3.71)$$

$$Mn_1 = A_{s1} \cdot f_y \cdot \left( d_{diketahui} - \frac{a}{2} \right) < \frac{Mu}{\phi} \dots\dots\dots(3.72)$$

• **Menentukan Mn<sub>2</sub>**

$$\frac{Mu}{\phi} \leq Mn = Mn_1 + Mn_2 \rightarrow Mn_2 = \frac{Mu}{\phi} - Mn_1 \dots\dots\dots(3.73)$$

dimana :

Mn<sub>1</sub> = kuat momen pasangan kopel gaya beton tekan dan tulangan baja tarik (Nmm)

Mn<sub>2</sub> = kuat momen pasangan kopel tulangan baja tekan dan baja tarik tambahan (Nmm)

• **Menentukan As' = As<sub>2</sub> dan As**

Tegangan baja desak ;

$$fs' = 600 \cdot \left\{ 1 - \frac{0,85 \cdot f'c \cdot \beta_1 \cdot d'}{(\rho - \rho') \cdot f_y \cdot d_{diketahui}} \right\} \dots\dots\dots(3.74)$$

Jika  $fs' \geq fy$ , maka baja desak sudah leleh, sehingga dipakai :

$$fs' = fy$$

Jika  $fs' < fy$ , maka baja desak belum leleh, sehingga dipakai :

$$fs' = fs'$$

$$As' = \frac{Mn_2}{fs' \cdot (d_{diketahui} - d')} \dots\dots\dots(3.75)$$

$$n' \geq \frac{As'}{A_{i\phi}} ; n \text{ bilangan bulat}$$

$$n \geq 2 \text{ batang}$$

$$A_s = A_{s1} + A_{s'}, A_{s'} = A_{s2} \dots\dots\dots(3.76)$$

$$n \geq \frac{A_s}{A_{1\phi}} ; n \text{ bilangan bulat}$$

$$n \geq 2 \text{ batang}$$

dimana :

$\rho_1$  = rasio tulangan yang dipakai dalam perencanaan

$A_{s1}$  = luas penampang tulangan baja tarik ( $\text{mm}^2$ )

$A_{s2}$  = luas penampang tulangan baja tarik tambahan ( $\text{mm}^2$ )

$A_{s'}$  = luas penampang tulangan baja tekan ( $\text{mm}^2$ )

$n'$  = jumlah tulangan desak yang dipakai (buah)

$n$  = jumlah tulangan tarik yang dipakai (buah)

- **Kontrol kapasitas lentur yang terjadi**

$$\rho = \frac{A_s}{b \cdot d_{diketahui}} \dots\dots\dots(3.77)$$

$$\rho' = \frac{A_{s'}}{b \cdot d_{diketahui}} \dots\dots\dots(3.78)$$

Tegangan baja desak

$$f_s' = 600 \cdot \left\{ 1 - \frac{0,85 \cdot f'c \cdot \beta_1 \cdot d'}{(\rho - \rho') \cdot f_y \cdot d_{diketahui}} \right\} \leq f_y \dots\dots\dots(3.79)$$

$$a = \frac{A_s \cdot f_y - A_{s'} \cdot f_s'}{0,85 \cdot f'c \cdot b} \dots\dots\dots(3.80)$$

$$M_n = M_{n1} + M_{n2}$$

$$= (A_s \cdot f_y - A_{s'} \cdot f_s') \left( d_{dik} - \frac{a}{2} \right) + (A_{s'} \cdot f_s') (d_{dik} - d') \dots\dots(3.81)$$

### c) Perencanaan geser balok

Langkah-langkah perencanaan tulangan geser pada balok, sebagai berikut :

- **Menentukan tegangan geser beton ( $V_c$ )**

Tegangan geser beton biasa dinyatakan dalam fungsi dari  $\sqrt{f'_c}$  dan kapasitas beton dalam menerima geser menurut SK SNI T-15-1991-03 adalah sebesar :

$$V_c = \left( \frac{1}{6} \sqrt{f'_c} \right) . b . d \quad (\text{Newton}) \quad \dots\dots\dots(3.82)$$

Sedangkan kekuatan minimal tulangan geser vertikal menahan geser, dinyatakan dalam :

$$V_{s_{\min}} = 1/3 . b . d \quad (\text{Newton}) \quad \dots\dots\dots(3.83)$$

- **Menentukan jarak sengkang**

Berdasarkan kriteria jarak sengkang pada SK SNI T-15-1991-03, adalah sebagai berikut :

➤ Bila  $V_u \leq 0,5 \phi V_c$  .....(3.84)

Geser tidak diperhitungkan

➤ Bila  $0,5 . V_c < \frac{V_u}{\phi} \leq V_c$  .....(3.85)

Perlu tulangan geser kecuali untuk struktur sebagai berikut :

struktur pelat (lantai, atap, pondasi), balok  $h \leq 25$  cm, atau

$h \leq 2,5 h_f$ .

Tulangan geser dengan jarak :

$$s \leq \frac{A_v \cdot f_y \cdot d}{V_{s_{\min}}} \dots\dots\dots(3.86)$$

$$\leq \frac{d}{2} \dots\dots\dots(3.87)$$

$$\leq 600 \text{ mm}$$

➤ Bila  $V_c < \frac{V_u}{\phi} \leq (V_c + V_{s_{\min}})$  .....(3.88)

Maka perlu tulangan geser, dengan jarak sengkang :

$$s \leq \frac{A_v \cdot f_y \cdot d}{V_{s_{\min}}}$$

$$\leq \frac{d}{2}$$

$$\leq 600 \text{ mm}$$

➤ Bila  $(V_c + V_{s_{\min}}) < \frac{V_u}{\phi} \leq 3 \cdot V_c$  .....(3.89)

Maka perlu tulangan geser, dengan jarak sengkang :

$$s \leq \frac{A_v \cdot f_y \cdot d}{\left(\frac{V_u}{\phi} - V_c\right)} \dots\dots\dots(3.90)$$

$$\leq \frac{d}{2}$$

$$\leq 600 \text{ mm}$$

➤ Bila  $3 \cdot V_c < \frac{V_u}{\phi} \leq 5 \cdot V_c$  .....(3.91)

Maka perlu tulangan geser, dengan jarak sengkang :

$$s \leq \frac{A_v \cdot f_y \cdot d}{\left(\frac{V_u}{\phi} - V_c\right)}$$

$$\leq d/4 \quad \dots\dots\dots(3.92)$$

$$\leq 600 \text{ mm}$$

➤ Bila  $V_u/\phi > 5.V_c$  .....(3.93)

Maka ukuran balok diperbesar

dimana :

$V_{s_{min}}$  = kuat geser nominal tulangan geser minimal (N)

$V_c$  = tegangan ijin geser beton (MPa)

$V_u$  = gaya geser berfaktor akibat beban luar (N)

$\phi$  = faktor reduksi kekuatan, diambil nilai 0,60

$A_v$  = luas penampang tulangan geser ( $\text{mm}^2$ )

#### d) Perencanaan geser dan torsi balok

Langkah-langkah perencanaan geser dan torsi balok adalah sebagai berikut :

- **Identifikasi jenis torsi**

➤ Untuk struktur statis tertentu : torsi keseimbangan

Pengaruh torsi diperhitungkan apabila momen torsi terfaktor :

$$T_u \geq \phi \cdot \left( \frac{1}{20} \cdot \sqrt{f'_c} \cdot \Sigma x^2 \cdot y \right) \quad \dots\dots\dots(3.94)$$

➤ Untuk struktur statis tak tentu : torsi komabilitas

Pengaruh torsi diperhitungkan apabila momen torsi terfaktor :

$$T_u \geq \phi \cdot \left( \frac{1}{9} \cdot \sqrt{f'_c} \cdot \Sigma x^2 \cdot y \right) \quad \dots\dots\dots(3.95)$$

- Menentukan kuat momen torsi nominal ( $T_n$ )

Kontrol kuat momen torsi yang terjadi :

$$T_u \geq \phi \cdot T_n$$

$$T_n = T_c + T_s \dots\dots\dots(3.96)$$

➤ Bila puntir murni :

$$T_c = \left( \frac{1}{15} \cdot \sqrt{f'c} \cdot \Sigma x^2 \cdot y \right) \dots\dots\dots(3.97)$$

➤ Bila puntir murni + geser :

$$T_c = \frac{\left( \frac{1}{15} \cdot \sqrt{f'c} \cdot \Sigma x^2 \cdot y \right)}{\sqrt{1 + \left( \frac{0,4 \cdot V_u}{C_t \cdot T_u} \right)^2}} \dots\dots\dots(3.98)$$

$$C_t = \frac{b \cdot w \cdot d}{\Sigma x^2 \cdot y} \dots\dots\dots(3.99)$$

$$V_c = \frac{\frac{1}{6} \cdot \sqrt{f'c} \cdot b \cdot w \cdot d}{\sqrt{1 + \left( 2,5 \cdot C_t \cdot T_u / V_u \right)^2}} \dots\dots\dots(3.100)$$

➤ Bila puntir murni + geser + gaya aksial :

$$T_c = \frac{\left( \frac{1}{15} \cdot \sqrt{f'c} \cdot \Sigma x^2 \cdot y \right)}{\sqrt{1 + \left( \frac{0,4 \cdot V_u}{C_t \cdot T_u} \right)^2}} \cdot \left( 1 + 0,3 \cdot \frac{N_u}{A_g} \right) \dots\dots\dots(3.101)$$

$$V_c = \frac{\frac{1}{6} \cdot \sqrt{f'c} \cdot b \cdot w \cdot d}{\sqrt{1 + \left( 2,5 \cdot C_t \cdot T_u / V_u \right)^2}} \cdot \left( 1 + 0,3 \cdot \frac{N_u}{A_g} \right) \dots\dots\dots(3.102)$$

- Jika  $Tu/\phi \leq Tc \rightarrow$  torsi diabaikan
- Jika  $Tu/\phi > Tc \rightarrow$  perlu tulangan torsi

Untuk torsi keseimbangan :

$$T_s = Tu/\phi - T_c \dots\dots\dots(3.103)$$

Untuk torsi kompatibilitas :

$$T_s = \left( \frac{1}{9} \sqrt{f'c} \cdot \Sigma x^2 \cdot y \cdot \frac{1}{3} \right) - T_c \dots\dots\dots(3.104)$$

- Jika  $Tu/\phi > 4 \cdot Tc \rightarrow$  tampang diperbesar

dimana :

$T_n$  = kekuatan nominal tampang torsi (Nmm)

$T_u$  = kekuatan torsi terfaktor akibat beban geser (Nmm)

$T_s$  = kekuatan baja nominal menahan torsi (Nmm)

$T_c$  = kekuatan beton nominal menahan torsi (Nmm)

$N_u$  = gaya aksial terfaktor, (+) untuk tekan, (-) untuk tarik(N)

$A_g$  = luas tampang beton ( $mm^2$ )

- Menghitung perbandingan luas tulangan torsi dan jarak sengkang

$$\frac{A_t}{s} = \frac{T_s}{\alpha_t \cdot x_1 \cdot y_1 \cdot f_y} \dots\dots\dots(3.105)$$

$$\alpha_t = \frac{1}{3} \left( 2 + \frac{y_1}{x_1} \right) \leq 1,5 \dots\dots\dots(3.106)$$



- **Menentukan tulangan geser + torsi**

Bila  $V_c < V_u/\phi$ , maka diperlukan tulangan geser.

$$V_s = V_u/\phi - V_c \quad \dots\dots\dots(3.107)$$

Perbandingan antara luas tulangan geser dan jarak :

$$\frac{A_v}{s} = \frac{V_s}{f_y.d} \quad \dots\dots\dots(3.108)$$

Luas total sengkang (tulangan torsi + geser)

$$\frac{A_{vt}}{s} = \frac{2.A_t}{s} + \frac{A_v}{s} \geq \frac{b_w.s}{3.f_y} \quad \dots\dots\dots(3.109)$$

- **Menentukan tulangan torsi memanjang**

$$A_{l1} = 2.A_t \left( \frac{x_1 + y_1}{s} \right); \text{ atau} \quad \dots\dots\dots(3.110)$$

$$A_{l1} = \left[ \frac{2,8.x.s}{f_y} \left( \frac{T_u}{T_u + V_u/3.C_t} \right) - 2.2t \right] \left( \frac{x_1 + y_1}{s} \right) \quad \dots\dots\dots(3.111)$$

Nilai  $A_{l1}$  diambil yang terbesar, tetapi nilai  $A_{l1}$  tidak lebih dari :

$$A_{l2} = \left[ \frac{2,8.x.s}{f_y} \left( \frac{T_u}{T_u + V_u/3.C_t} \right) - \frac{b_w.s}{3.f_y} \right] \left( \frac{x_1 + y_1}{s} \right) \quad \dots\dots\dots(3.112)$$

dimana :

$A_v$  = luas sengkang menahan geser ( $\text{mm}^2$ )

$A_t$  = luas sengkang menahan torsi ( $\text{mm}^2$ )

$A_l$  = luas tulangan memanjang tambahan pada torsi ( $\text{mm}^2$ )

- **Kriteria tulangan geser dan torsi**

- Jarak tulangan sengkang  $s \leq \frac{x_1 + y_1}{4}$  ..... (3.113)

$$\leq 300 \text{ mm.}$$

- Tulangan memanjang disebar merata ke semua sisi dengan jarak tulangan memanjang  $\leq 300$  mm.

- $\phi$  tulangan memanjang  $\geq 12$  mm

- $f_y$  tulangan torsi  $\leq 400$  MPa

- Tulangan torsi harus ada paling tidak sejauh  $(b+d)$  dari titik ujung teoritis torsi yang diperlukan.

### 3.2.3 Perencanaan kolom tunggal

#### 1. Perencanaan kolom pendek

Perencanaan kolom pendek diawali dengan penentuan dimensi kolom, secara lengkap. Langkah-langkah perencanaan kolom pendek sebagai berikut :

a) Menentukan propertis penampang kolom ( $b$ ,  $h$ ,  $f'c$ ,  $f_y$ ,  $d'$ ,  $d$ ).

b) Menghitung kapasitas kolom pendek

$$P_n = 0,85 \cdot f'c \cdot (A_g - A_{st}) + A_{st} \cdot f_y \quad \dots\dots\dots (3.114)$$

- Untuk sengkang biasa :

$$\phi \cdot P_n = 0,8 \cdot P_n = 0,8 \cdot (0,85 \cdot f'c \cdot (A_g - A_{st}) + A_{st} \cdot f_y) \quad \dots\dots\dots (3.115)$$

Karena  $P_u \leq \phi \cdot P_n$ , maka untuk kolom diperoleh  $A_{g\text{perlu}}$  :

$$A_{g\text{perlu}} = \frac{P_u}{0,8 \cdot (0,85 \cdot f'c \cdot (1 - \rho_g) + f_y \cdot \rho_g)} \quad \dots\dots\dots (3.116)$$

• Untuk sengkang spiral :

$$\phi.P_n = 0,85.P_n = 0,8.(0,85.f'_c.(A_g - A_{st}) + A_{st}.f_y) \dots\dots(3.117)$$

Karena  $P_u \leq \phi.P_n$ , maka untuk kolom diperoleh  $A_{g\text{perlu}}$  :

$$A_{g\text{perlu}} = \frac{P_u}{0,85.(0,85.f'_c.(1 - \rho_g) + f_y.\rho_g)} \dots\dots(3.118)$$

Shingga setelah nilai  $A_{g\text{perlu}}$  diperoleh, panjang dan lebar sisi kolom persegi atau diameter kolom bulat dapat ditentukan

$$A_g = b.h = \frac{1}{4}.\pi.l^2 \dots\dots(3.119)$$

$$A_{st} = n\%.A_g = A_s + A_{s'} \dots\dots(3.120)$$

$$A_{s'} = A_s = \frac{A_{st}}{2} \dots\dots(3.121)$$

dimana :  $P_u$  = gaya aksial terfaktor (N)

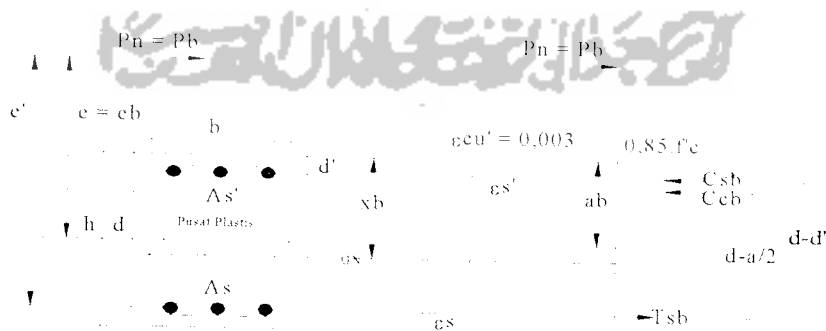
$P_n$  = kuat desak aksial pada eksentrisitas tertentu (N)

$A_{st}$  = luas tulangan total pada kolom ( $\text{mm}^2$ )

$A_{s'}$  = luas tulangan tekan pada kolom ( $\text{mm}^2$ )

$A_s$  = luas tulangan tarik pada kolom ( $\text{mm}^2$ )

c) Kapasitas kolom dengan beban eksentrisitas



Gambar 3.5 Tampang, regangan dan tegangan kolom persegi

$$x_b = \frac{600}{600 + f_y}.d \rightarrow d = h - d' \dots\dots(3.125)$$

$$f_s' = \frac{\lambda b - d'}{\lambda b} \cdot 600 \quad \dots\dots\dots(3.126)$$

$$f_s' > f_y \rightarrow f_s' = f_y$$

$$f_s' < f_y \rightarrow f_s' = f_s'$$

Gaya tekan beton pada kondisi seimbang ditentukan dari :

$$C_{cb} = 0,85 \cdot f'_{c,b} \cdot \lambda \cdot b \cdot \beta \quad \dots\dots\dots(3.127)$$

Gaya tekan baja pada kondisi seimbang ditentukan dari :

$$C_{sb} = A_s \cdot (f_s' - 0,85 \cdot f'_{c,b}) \quad \dots\dots\dots(3.128)$$

Gaya tarik baja pada kondisi seimbang ditentukan dari :

$$T_{sb} = A_s \cdot f_y \quad \dots\dots\dots(3.129)$$

$$P_{nb} = C_{cb} + C_{sb} - T_{sb} \quad \dots\dots\dots(3.130)$$

$$M_{nb} = C_{cb} \cdot \left( \frac{h}{2} - \left( \frac{\beta \cdot \lambda b}{2} \right) \right) + C_{sb} \cdot \left( \frac{h}{2} - d' \right) + T_{sb} \cdot \left( d - \frac{h}{2} \right) \quad \dots\dots\dots(3.131)$$

$$e_b = \frac{M_{nb}}{P_{nb}} \quad \dots\dots\dots(3.132)$$

$$e = \frac{M_u}{\phi \cdot N_u} \quad \dots\dots\dots(3.133)$$

$e > e_b \rightarrow$  kolom mengalami patah tarik.

$e < e_b \rightarrow$  kolom mengalami patah desak.

Kontrol Tegangan :

- Patah tarik

$$P_n = 0,85 \cdot f'_{c,b} \cdot b \cdot d \cdot \left[ \left( -\rho \right) + 1 - \frac{e'}{d} + \sqrt{\left( 1 - \frac{e'}{d} \right)^2 + 2 \cdot \rho \cdot \left[ (m-1) \left( 1 - \frac{d'}{d} \right) \right] + \frac{e'}{d}} \right] \quad \dots\dots\dots(3.134)$$

$$e' = e + \left(d - \frac{h}{2}\right) \quad \dots\dots\dots(3.135)$$

$$e = \frac{Mu}{Pu} \quad \dots\dots\dots(3.136)$$

$$\rho = \frac{As}{bd} \quad \dots\dots\dots(3.137)$$

- Patah desak

$$P_n = \frac{As' f_y}{e + 0,5(d - d')} + \frac{b \eta f'_c}{3 \eta e + 1,18 d^2} \quad \dots\dots\dots(3.138)$$

$$e = \frac{Mu}{Pu} \quad \dots\dots\dots(3.139)$$

dimana :

Mnb = kapasitas lentur kolom dalam keadaan seimbang  
(Nmm)

Pnb = kuat desak aksial kolom dalam keadaan seimbang  
(N)

eb = eksentrisitas gaya pada kolom dalam keadaan seimbang (mm)

fs' = tegangan leleh baja tulangan yang terjadi (MPa)

Xb = jarak serat terluar beton ketitik ditinjau keadaan seimbang (mm)

x = jarak serat terluar beton ketitik ditinjau (mm)

As = luasan tulangan baja tarik (mm<sup>2</sup>)

## 2. Perencanaan kolom langsing

Tahap-tahap perencanaan kolom langsing adalah sebagai berikut :

a) Menentukan tingkat kelangsingan kolom

$$\text{Kelangsingan} = \frac{kL}{r} \rightarrow r = \sqrt{\frac{I}{A}} \dots\dots\dots(3.140)$$

- Untuk kolom tampang persegi dengan lebar b dan tinggi h :

$$r = \sqrt{\frac{I_x}{A}} = \sqrt{\frac{(bh^3)/12}{bh}} = 0,288.h = 0,3 h$$

- Untuk kolom bulat dengan diameter D :

$$r = \sqrt{\frac{(\pi.D^4)/64}{(\pi.D^2)/4}} = 0,25.h$$

dimana :

k = faktor panjang efektif

lu = panjang bersih kolom (m)

r = jari - jari girasi (m)

I = inersia tampang (m<sup>4</sup>)

A = luas tampang (m<sup>2</sup>)

Nilai k ditentukan dengan memperhatikan kondisi kolom :

- Untuk kolom lepas

Kedua ujung sendi, tidak tergerak lateral; k = 1,0

Kedua ujung sendi; k = 0,5

Satu ujung jepit, ujung yang lain bebas k = 2,0

Kedua ujung jepit, ada gerak lateral k = 1,0

- Faktor panjang efektif merupakan fungsi dari faktor kekekangan ujung  $\psi_A$  dan  $\psi_B$  untuk masing-masing titik ujung

atas dan bawah yang didefinisikan sebagai :

$$\psi = \frac{\sum \left( \frac{E_c I_c}{L_c} \right)}{\sum \left( \frac{E_g I_g}{L_g} \right)} \dots \dots \dots (3.141)$$

dimana

$E_c$  = Modulus elastis pada kolom (MPa)

$E_g$  = Modulus elastis pada balok (MPa)

$I_c$  = Inersia kolom ( $m^4$ )

$I_g$  = Inersia balok ( $m^4$ )

$L_c$  = Panjang kolom (m)

$L_g$  = Panjang balok (m)

Kemudian nilai  $\psi$  diplotkan ke dalam grafik *nomogram* atau grafik *alignment*.

Batasan-batasan kolom disebut langsing, adalah :

$$\frac{k \cdot l}{r} < 34 - 12 \cdot \frac{M_{1b}}{M_{2b}}, \text{ untuk rangka dengan pengaku lateral (tak bergoyang)}$$

$$< 22, \text{ untuk rangka / portal bergoyang}$$

$M_{1b}$  dan  $M_{2b}$  adalah momen-momen ujung terfaktor pada kolom yang posisinya berlawanan ( $M_{1b} \leq M_{2b}$ ). Sedangkan  $l$  merupakan panjang bersih kolom,  $k$  adalah faktor panjang efektif dan  $r$  adalah jari-jari girasi kolom.

#### b) Pembesaran momen

$$M_c = \delta_b \cdot M_{u1} + \delta_s \cdot M_{u2} \dots \dots \dots (3.142)$$

$$\delta_b = \frac{C_m}{1 - \left( \frac{P_u}{\phi P_c} \right)} \geq 1 \quad \dots\dots\dots(3.143)$$

$$\delta_s = \frac{C_m}{1 - \left( \frac{\Sigma P_u}{\phi \Sigma P_c} \right)} \geq 1 \quad \dots\dots\dots(3.144)$$

$$P_c = \frac{\mu^2 EI}{(kL)^2} \text{ (rumus Euler)} \quad \dots\dots\dots(3.145)$$

Dalam peraturan SK-SNI T-15-1991-03 pasal 3.3.11 ayat 5.2, memberikan ketentuan untuk memperhitungkan EI sebagai berikut:

$$EI_1 = \frac{1}{5} \frac{(E_c I_g) + E_s I_{se}}{1 + \beta d} \quad \dots\dots\dots(3.146)$$

$$EI_2 = \frac{0,4 E_c I_g}{1 + \beta d} \quad \dots\dots\dots(3.147)$$

dimana :

$\delta_b$  = Pembesaran momen dengan pengaku pada pembebanan tetap

$\delta_s$  = Pembesaran momen tanpa pengaku pada pembebanan sementara

$M_{u1}$  = Momen terfaktor terbesar pada ujung komponen tekan akibat pembebanan tetap (KNm)

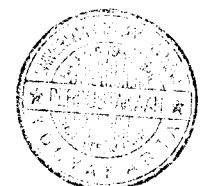
$M_{u2}$  = Momen terfaktor terbesar disepanjang komponen tekan akibat pembebanan sementara (KNm)

$P_u$  = Beban aksial kolom akibat gaya luar (KN)

$\phi$  = 0,6 = Faktor reduksi

$P_c$  = Beban tekuk (KN)

$E_s$  = Modulus elastis baja tulangan =  $2.10^5$  MPa





$$\beta.d = \frac{\text{momen.akibat.beban.mati.rencana}}{\text{momen.akibat.beban.total}}$$

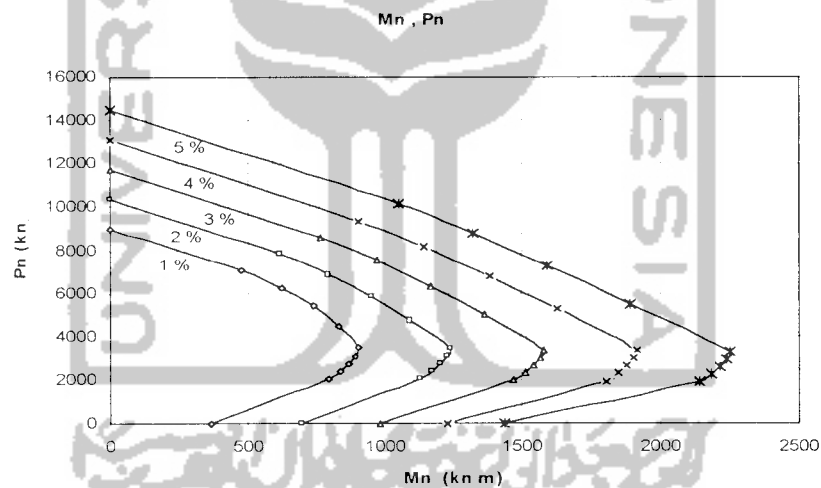
$\Sigma P_u$  dan  $\Sigma P_c$  = Penjumlahan gaya tekan dari semua kolom dalam satu tingkat (KN)

c) **Momen rencana**

$$P_n = \frac{P_u}{\phi} \dots\dots\dots(3.148)$$

$$M_n = \frac{M_u}{\phi} \dots\dots\dots(3.149)$$

Dari nilai tersebut dimasukkan ke dalam diagram tegangan regangan kolom untuk mendapatkan luas tulangan rencana.



**Gambar 3.6** Diagram Mn-Pn

**3.3 Perencanaan Beban Gempa**

Perencanaan struktur portal dengan daktilitas penuh. Pembebanan gempa menurut Pedoman Ketahanan Gempa untuk Rumah dan Gedung (PPKGURDG, 1987) dinyatakan dalam :

$$V = C.I.K.W_t \dots\dots\dots(3.150)$$

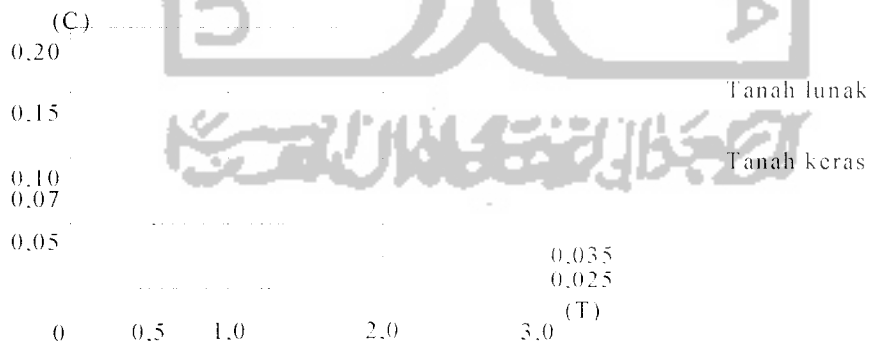
Gaya geser yang harus dibagi pada masing-masing lantai tingkat dapat dihitung dengan rumus :

$$F_i = \frac{W_i H_i}{\sum W_i H_i} V \dots\dots\dots(3.151)$$

dimana :

- V = gaya geser dasar horizontal total akibat gempa (Ton)
- C = koefisien gempa dasar
- I = faktor keutamaan struktur
- K = faktor jenis struktur
- $W_i$  = berat kombinasi beban mati dan beban hidup yang direduksi(Ton)
- H = tinggi bangunan (m)
- $F_i$  = gaya geser tiap tingkat (Ton)

Koefisien gempa dasar untuk wilayah gempa 3 ditentukan dengan menggunakan waktu getar alami struktur seperti pada gambar berikut ini :



**Gambar 3.7** Koefisien gempa dasar C (3)

Waktu getar alami struktur (T) untuk portal beton ditentukan dengan persamaan,  $T = 0,06.H^{3/4}$  .....(3.152)

dimana : H adalah tinggi struktur (m)

### 3.4 Perencanaan Struktur Rangka Dengan Daktilitas Penuh

#### 3.4.1 Perencanaan balok portal terhadap beban lentur

Kuat lentur perlu balok portal ( $M_{u,b}$ ) harus ditentukan berdasarkan kombinasi pembebanan tanpa atau dengan beban gempa sebagai berikut ini :

$$M_{u,b} = 1,2.M_{D,b} + 1,6.M_{L,bR} \dots\dots\dots(3.153)$$

$$M_{u,b} = 1,05.(M_{D,b} + M_{L,bR} + M_{E,b}) \dots\dots\dots(3.154)$$

$$M_{u,b} = 0,9.M_{D,b} + M_{E,b} \dots\dots\dots(3.155)$$

dimana :

$M_{D,b}$  = momen lentur balok portal akibat beban mati tak berfaktor

$M_{L,b}$  = momen lentur balok portal akibat beban hidup tak berfaktor dengan memperhitungkan reduksinya sehubungan dengan peluang terjadinya pada lantai tingkat yang ditinjau, sesuai dengan *Tata Cara Pembebanan untuk Rumah dan Gedung 1987*

$M_{E,b}$  = momen lentur balok portal akibat beban gempa tak berfaktor

Dalam perencanaan kapasitas balok portal, momen tumpuan negatif akibat kombinasi beban gravitasi dan beban gempa balok boleh didistribusikan dengan menambah atau mengurangi dengan prosentase yang tidak melebihi :

$$q = 30 \cdot \left\{ 1 - \frac{4}{3} \frac{\rho - \rho'}{\rho_b} \right\} \% ; \quad \rho - \rho' < 0,5\rho_b \dots\dots\dots(3.156)$$

dimana :  $\rho$  = rasio tulangan tarik

$\rho'$  = rasio tulangan tekan

$\rho_b$  = rasio tulangan tarik dalam keadaan seimbang (*balance*)

Perencanaan kuat lentur nominal balok harus dihitung dengan persamaan,

$$OM_{nak,b} \geq M_{ub} \quad \dots\dots\dots(3.157)$$

dimana :

$M_{nak,b}$  = kuat lentur nominal balok berdasarkan tulangan terpasang

Khusus untuk portal dengan daktilitas penuh perlu dihitung kapasitas lentur sendi plastis balok yang besarnya ditentukan sebagai berikut :

$$M_{kap,b} = O_0 \cdot M_{nak,b} \quad \dots\dots\dots(3.158)$$

$$M'_{kap,b} = O_0 \cdot M'_{nak,b} \quad \dots\dots\dots(3.159)$$

dimana :

$M_{kap,b}$  = kapasitas lentur aktual balok pada pusat pertemuan balok kolom dengan memperhitungkan luas tulangan tarik terpasang (KNm)

$M'_{kap,b}$  = kapasitas lentur aktual balok pada pusat pertemuan balok kolom dengan memperhitungkan luas tulangan tekan terpasang (KNm)

$M_{nak,b}$  = kuat lentur nominal balok berdasarkan tulangan tarik terpasang (KNm)

$M'_{nak,b}$  = kuat lentur nominal balok berdasarkan luas tulangan tekan (KNm)

$O_0$  = faktor penambahan kekuatan sebesar 1,25 untuk  $f_y < 400$  MPa dan 1,4 untuk  $f_y > 400$  MPa

### 3.4.2 Perencanaan balok portal terhadap beban geser

Perencanaan kuat geser balok harus memenuhi ketentuan berikut ini :

$$\phi \cdot V_n \geq V_{u,b} \quad \dots\dots\dots(3.160)$$

dimana :

$\phi \cdot V_n$  = kapasitas geser rencana balok.

Dengan konsep desain kapasitas, kuat geser balok portal dihitung dalam kondisi terjadi sendi-sendi plastis pada kedua ujung balok portal tersebut dengan ketentuan berikut,

$$V_{u,b} = 0,7 \cdot \frac{M_{kap} + M'_{kap}}{l_n} + 1,05 \cdot (V_D + V_L) \quad \dots\dots\dots(3.161)$$

tetapi tidak perlu lebih besar dari :

$$V_{u,b}^* = 1,07 \cdot \left( V_{D,b} + V_{L,b} + \frac{4}{k} \cdot V_{T,b} \right) \quad \dots\dots\dots(3.162)$$

Gaya geser maksimum dihitung dengan ketentuan berikut,

$$V_{u,max} = V_S = \frac{V_{u,b}}{\phi} \quad \dots\dots\dots(3.163)$$

Gaya geser pada penampang kritis, sejauh  $d$  dari garis tengah kolom dihitung dengan ketentuan berikut,

$$V_u = \frac{l_n - d}{l_n} \cdot V_{u,max} \quad \dots\dots\dots(3.164)$$

dimana :

$V_u$  = kuat geser terfaktor pada penampang yang ditinjau (KN)

$M_{kap}$  = momen kapasitas balok berdasarkan tulangan yang sebenarnya terpasang pada salah satu ujung balok atau bidang muka kolom (KNm)

$M'_{kap}$  = momen kapasitas balok berdasarkan tulangan yang sebenarnya terpasang pada ujung balok atau bidang muka kolom yang lain (KNm)

$V_{D,b}$  = gaya geser balok akibat beban mati (KN)

$V_{L,b}$  = gaya geser balok akibat beban hidup (KN)

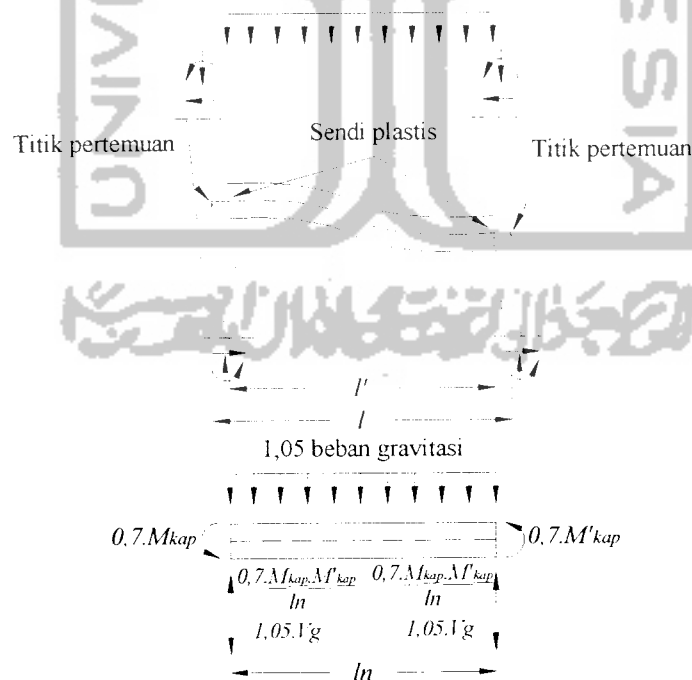
$V_{E,b}$  = gaya geser balok akibat beban gempa (KN)

$l_n$  = bentang bersih balok (m)

$K$  = faktor jenis struktur ( $K \geq 1$ )

$d$  = tinggi efektif penampang (m)

Selanjutnya untuk kriteria perencanaan tulangan geser sesuai dengan yang disyaratkan SK SNI T-15-1991-03 yakni pada persamaan 3.84 s/d 3.93 di atas.



**Gambar 3.8** Balok portal dengan sendi plastis pada kedua ujungnya

### 3.4.3 Perencanaan kolom portal terhadap beban lentur dan aksial

Kuat lentur kolom portal dengan daktilitas penuh yang ditentukan pada bidang muka balok  $M_{u,k}$  harus dihitung berdasarkan terjadinya kapasitas lentur sendi plastis pada kedua ujung balok yang bertemu dengan kolom tersebut, yaitu :

$$\Sigma M_{u,k} = \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \Sigma M_{kap,b} \dots\dots\dots (3.165)$$

atau :

$$M_{u,k} = \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \left[ \frac{I}{\ln} (\Sigma M_{kap,bx} + 0,3 \cdot \Sigma M_{kap,by})_{l_{ii}} \right] \dots\dots (3.166)$$

$$M_{u,k} = \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \left[ \frac{I}{\ln} (\Sigma M_{kap,bx} + 0,3 \cdot \Sigma M_{kap,by})_{l_{ii-1}} \right] \dots\dots (3.167)$$

$$M_{u,k} = \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \left[ \frac{I}{\ln} (0,3 \cdot \Sigma M_{kap,bx} + \Sigma M_{kap,by})_{l_{ii}} \right] \dots\dots (3.168)$$

$$M_{u,k} = \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \left[ \frac{I}{\ln} (0,3 \cdot \Sigma M_{kap,bx} + \Sigma M_{kap,by})_{l_{ii-1}} \right] \dots\dots (3.169)$$

$$\alpha_k = \frac{M_{maks\ atas}}{M_{maks\ atas} + M_{maks\ bawah}} \dots\dots\dots (3.170)$$

tetapi dalam segala hal tidak perlu lebih besar dari :

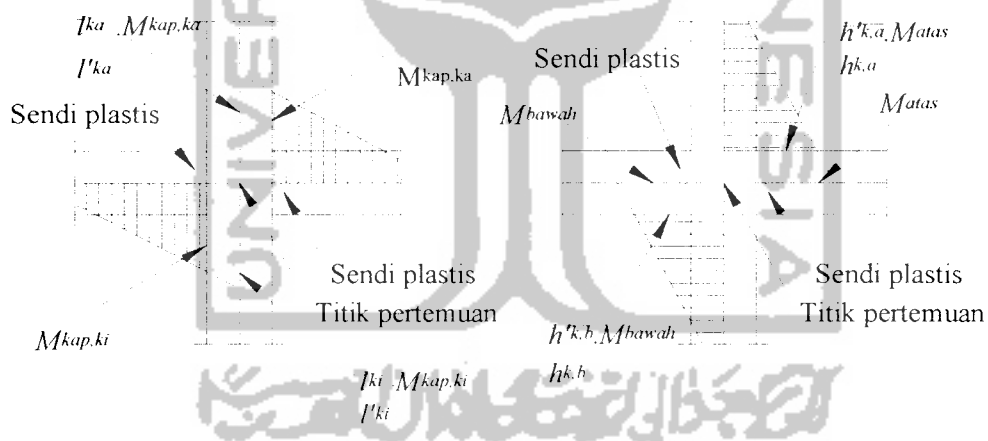
$$M_{u,k} = 1,05 \cdot \left( M_{D,k} + M_{L,k} + \frac{4}{K} M_{E,k} \right) \dots\dots\dots (3.171)$$

dimana :

$M_{kap,ki}$  = momen kapasitas lentur balok di sebelah kiri bidang muka kolom (KNm)

$M_{kap,ka}$  = momen kapasitas lentur balok di sebelah kanan bidang muka kolom (KNm)

- $\omega_d$  = faktor pembesar dinamis yang memperhitungkan pengaruh terjadinya sendi plastis pada struktur secara keseluruhan ( $\omega_d=1,3$ )
- $\alpha_k$  = faktor distribusi momen kolom portal sesuai dengan kekakuan relatif kolom atas dan kolom bawah
- $k$  = kekakuan relatif kolom
- $M_{D,k}$  = momen kolom akibat beban mati (KNm)
- $M_{L,k}$  = momen kolom akibat beban hidup (KNm)
- $M_{E,k}$  = momen kolom akibat beban gempa (KNm)
- $K$  = faktor jenis struktur ( $K \geq 1,0$ )



**Gambar 3.9** Pertemuan balok kolom dengan sendi plastis pada ujung-ujungnya

Sedangkan beban aksial rencana,  $N_{u,k}$  yang bekerja pada kolom portal dengan daktilitas penuh, dihitung dengan :

$$N_{u,k} = 0,7.R_f \cdot \left( \frac{M_{kap,ki}}{l_{ki}} + \frac{M_{kap,ka}}{l_{ka}} \right) + 1,05.N_{g,k} \dots \dots \dots (3.172)$$



tetapi dalam segala hal tidak perlu lebih besar dari :

$$N_{u,k} = 1,05 \cdot \left( N_{g,k} + \frac{4}{K} \cdot N_{E,k} \right) \dots\dots\dots(3.173)$$

dimana :

$R_V$  = faktor reduksi yang ditentukan sebesar :

$$1,0 \quad \text{untuk } 1 < n < 4$$

$$1,1 - 0,025 \cdot n \quad \text{untuk } 4 < n < 20$$

$$0,6 \quad \text{untuk } n > 20$$

$n$  = jumlah lantai diatas kolom yang ditinjau

$l_{ki}$  = bentang balok sebelah kiri as kolom dari as ke as kolom (m)

$l_{ka}$  = bentang balok sebelah kanan as kolom dari as ke as kolom (m)

$N_{g,k}$  = gaya aksial kolom akibat beban gravitasi (KN)

$N_{E,k}$  = gaya aksial kolom akibat beban gempa (KN)

#### 3.4.4 Perencanaan kolom portal terhadap beban geser

Kuat geser kolom portal dengan daktilitas penuh berdasarkan terjadinya sendi-sendi plastis pada ujung-ujung balok yang bertemu pada kolom tersebut, yang dihitung dengan cara sebagai berikut :

$$V_{u,k} = \frac{M_{u,k,atas} + M_{u,k,bawah}}{h_k'} \dots\dots\dots(3.174)$$

dan dalam segala hal tidak perlu lebih besar dari :

$$V_{u,k} = 1,05 \cdot \left( M_{D,k} + M_{L,k} + \frac{4}{K} \cdot V_{E,k} \right) \dots\dots\dots(3.175)$$

Kapasitas lentur sendi plastis kolom dapat dihitung :

$$M_{kap,k \text{ bawah}} = \phi_0 \cdot M_{nak,k \text{ bawah}} \dots\dots\dots(3.176)$$

dimana :

$M_{u,k \text{ atas}}$  = momen rencana kolom ujung atas dihitung pada muka balok (KNm)

$M_{u,k \text{ bawah}}$  = momen rencana kolom ujung bawah dihitung pada muka balok (KNm)

$h'_k$  = tinggi bersih kolom (m)

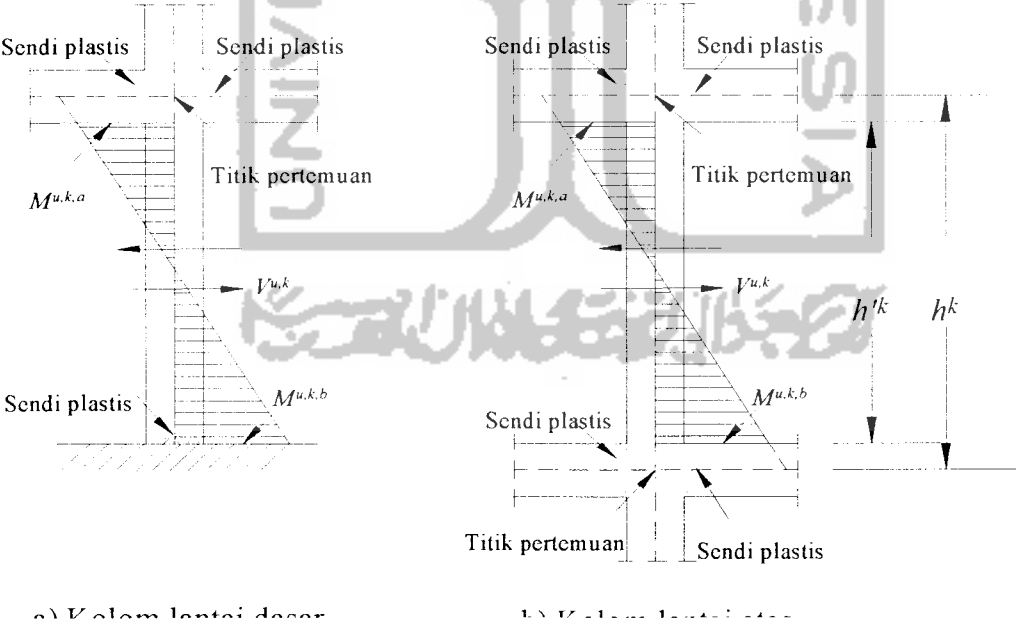
$V_{D,k}$  = gaya geser kolom akibat beban mati (KN)

$V_{L,k}$  = gaya geser kolom akibat beban hidup (KN)

$V_{E,k}$  = gaya geser kolom akibat beban gempa (KN)

$M_{kap,k \text{ bawah}}$  = kapasitas lentur ujung dasar kolom lantai dasar (KNm)

$M_{nak,k \text{ bawah}}$  = kuat lentur nominal aktual ujung dasar kolom lantai dasar (KNm)



Gambar 3.10 Kolom dengan  $M_{u,k}$  berdasarkan kapasitas sendi plastis balok

Kuat geser yang disumbangkan beton untuk struktur yang dibebani tekan aksial diberikan dengan ketentuan :

$$V_c = \left(1 + \frac{P_{u,k}}{14.Ag}\right) \cdot \frac{1}{6} \cdot \sqrt{f'_c} \cdot b \cdot d \quad \dots\dots\dots(3.177)$$

Untuk daerah sendi plastis sejauh Z dari atas atau bawah balok, jarak tulangan S :

$$S \leq \frac{A_v \cdot f_y \cdot d}{V_u / \phi} \quad \dots\dots\dots(3.178)$$

$$\leq \frac{1}{4} \text{ dimensi tampang kolom terkecil} \quad \dots\dots\dots(3.179)$$

$$\leq 8 \cdot \emptyset \text{ tulangan memanjang kolom} \quad \dots\dots\dots(3.180)$$

$$\leq 100 \text{ mm} \quad \dots\dots\dots(3.181)$$

$$Z = h \rightarrow \text{ untuk } N_{u,k} < 0,3 \cdot Ag \cdot f'_c \quad \dots\dots\dots(3.182)$$

$$Z = 1,5 \cdot h \rightarrow \text{ untuk } N_{u,k} > 0,3 \cdot Ag \cdot f'_c \quad \dots\dots\dots(3.183)$$

$$= \frac{1}{6} \cdot h' \cdot k \quad \dots\dots\dots(3.184)$$

$$= 450 \text{ mm} \quad \dots\dots\dots(3.185)$$

Bukan daerah sendi :

$$S \leq \frac{A_v \cdot f_y \cdot d}{\left(\frac{V_u}{\phi}\right) - V_c} \quad \dots\dots\dots(3.186)$$

$$\leq \frac{1}{4} \text{ dimensi tampang kolom terkecil}$$

$$\leq 8 \cdot \emptyset \text{ tulangan memanjang kolom}$$

$$\leq 100 \text{ mm}$$

dimana :

$V_c$  = tegangan ijin geser beton (MPa)

$N_u$  = gaya aksial kolom (N)

$A_g$  = luas penampang kolom ( $\text{mm}^2$ )

$S$  = jarak sengkang (mm)

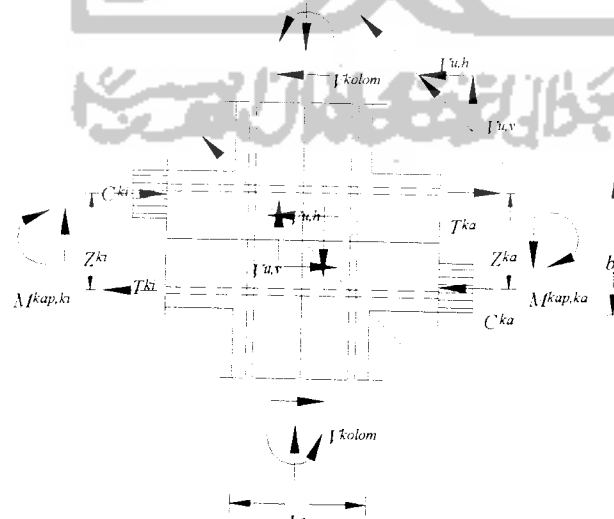
$V_u$  = gaya geser berfaktor akibat beban luar (N)

$\phi$  = faktor reduksi kekuatan, diambil nilai 0,60

$A_v$  = luas penampang tulangan geser ( $\text{mm}^2$ )

### 3.5 Perencanaan panel pertemuan balok kolom

Panel pertemuan balok kolom portal diproporsikan untuk dapat memenuhi persyaratan kuat gesr horizontal perlu ( $V_{j,h}$ ) dan kuat geser vertikal ( $V_{j,v}$ ) yang berkaitan dengan terjadinya momen kapasitas pada sendi plastis pada kedua ujung balok yang bertemu pada kolom itu. Gaya-gaya yang membentuk keseimbangan pada join rangka adalah seperti pada gambar dibawah ini :



Gambar 3.11 Panel pertemuan balok dan kolom portal

Gaya-gaya yang membentuk keseimbangan pada join rangka ditentukan dengan ketentuan sebagai berikut :

Gaya geser horizontal kolom pada join ( $V_{kol}$ ) ditentukan dari :

$$V_{kol,x} = \frac{0,7 \left( \sum \frac{l_v}{l_n} M_{kap,b_x} + 0,3 \sum \frac{l_v}{l_n} M_{kap,b_y} \right)}{\frac{1}{2} (h_{k,a} + h_{k,b})} \dots\dots\dots(3.187)$$

$$V_{kol,y} = \frac{0,7 \left( 0,3 \sum \frac{l_x}{l_n} M_{kap,b_x} + \sum \frac{l_y}{l_n} M_{kap,b_y} \right)}{\frac{1}{2} (h_{k,a} + h_{k,b})} \dots\dots\dots(3.188)$$

$$V_{jh} = C_{ki} + T_{ka} - V_{kol} \dots\dots\dots(3.189)$$

$$C_{ki} = T_{ki} = 0,7 \cdot \frac{M_{kap,b_{ki}}}{Z_{ki}} \dots\dots\dots(3.190)$$

$$T_{ka} = C_{ka} = 0,7 \cdot \frac{M_{kap,b_{ka}}}{Z_{ka}} \dots\dots\dots(3.191)$$

dimana :

$l_{ki}$  = panjang bentang balok sebelah kiri join (m)

$l'_{ki}$  = panjang bentang netto balok sebelah kiri join (m)

$l_{ka}$  = panjang bentang balok sebelah kanan join (m)

$l'_{ka}$  = panjang bentang netto balok sebelah kanan join (m)

$h_{ka}$  = tinggi kolom atas (m)

$h_{kb}$  = tinggi kolom bawah (m)

$V_{jh}$  = tegangan geser horizontal nominal dalam join (KN)

$C_{ki}$  = gaya desak beton dalam inti join (KN)

$T_{ki}$  = gaya tarik baja dalam inti join (KN)

$Z$  = kopel momen antara gaya desak beton dan gaya tarik baja dalam inti beton di sebelah kiri dan kanan join (m)

Kontrol tegangan geser horizontal minimum dalam join adalah :

$$V_{jh \text{ aktual}} = \frac{V_{jh}}{b_j \cdot h_c} < 1,15 \cdot \sqrt{f'c} \text{ (MPa)} \dots\dots\dots(3.192)$$

dimana :

$b_j$  = tinggi balok (m)

$h_c$  = tinggi potongan penampang kolom dalam arah geser yang ditinjau (m)

Gaya geser horizontal  $V_{jh}$  ditahan oleh dua mekanisme kuat geser inti join, yaitu :

1. Strat beton diagonal yang melewati daerah tekan ujung join yang memikul gaya geser  $V_{ch}$ .
2. Mekanisme panel rangka yang terdiri dari sengkang horizontal dan strat beton diagonal daerah tarik join yang memikul gaya geser  $V_{sh}$ .

sehingga :  $V_{sh} + V_{ch} = V_{jh}$

Besarnya  $V_{ch}$  yang dipikul oleh strat beton harus sama dengan nol, kecuali bila :

1. Tegangan tekan rata-rata minimal pada penampang bruto kolom beton diatas join, termasuk tegangan prategang, apabila ada, melebihi nilai  $0,1 \cdot f'c$ , maka :

$$V_{ch} = \frac{2}{3} \left\{ \sqrt{\frac{N_{u,k}}{A_g}} - 0,1 \cdot f'c \right\} \cdot b_j \cdot h_c \dots\dots\dots(3.193)$$

2. Balok diberi gaya prategang yang melewati join, maka :

$$V_{ch} = 0,7.P_{cs} \dots\dots\dots(3.194)$$

dimana :

$P_{cs}$  = gaya permanen dalam baja prategang yang terletak di sepertiga bagian tengah tinggi kolom.

3. Seluruh balok pada join dirancang sehingga penampang kritis sendi plastis terletak pada jarak yang lebih kecil dari tinggi penampang balok diukur dari muka kolom, maka :

$$V_{ch} = 0,5 \left[ \frac{A'_s}{A_s} \right] V_{jh} \left[ 1 + \frac{N_{u,k}}{0,4.A_g.f'c} \right] \dots\dots\dots(3.195)$$

dimana rasio  $\frac{A'_s}{A_s} \leq 1$

Bila tegangan rata-rata minimum pada penampang bruto kolom di atas join kurang dari  $0,1.f'c$  ( $\rho_c < 0,1.f'c$ ), maka :

$$V_{sh} = V_{jh} - \frac{2}{3} \sqrt{\left( \frac{N_{u,k}}{A_g} \right) - (0,1.f'c)} . b_j . h_c \dots\dots\dots(3.196)$$

Pada join rangka dengan melakukan relokasi sendi plastis

$$V_{sh} = V_{jh} - 0,5 \cdot \frac{A'_s}{A_s} \cdot V_{jh} \cdot \left[ 1 + \frac{N_{u,k}}{0,4.A_g.f'c} \right] \dots\dots\dots(3.197)$$

Luas total efektif tulangan geser horizontal yang melewati bidang kritis diagonal dengan yang diletakkan di daerah tekan join efektif ( $b_j$ ) tidak boleh kurang dari :

$$A_{jh} = \frac{V_{sh}}{f_y} \dots\dots\dots(3.198)$$

Geser joint vertikal  $V_{jv}$  dapat dihitung dari :

$$V_{jv} = V_{jh} \cdot \frac{b_j}{h_c} \dots\dots\dots(3.199)$$

Tulangan geser vertikal di dapat dari :

$$V_{sv} = V_{jv} - V_{cv} \dots\dots\dots(3.200)$$

menjadi :

$$V_{cv} = A_{sc}' \cdot \frac{V_{jh}}{A_{sc}} \left( 0,6 + \frac{N_{u,k}}{A_g \cdot f'c} \right) \dots\dots\dots(3.201)$$

dimana :

$A_{sc}'$  = luas tulangan longitudinal tekan

$A_{sc}$  = luas tulangan longitudinal tarik

Luas tulangan joint vertikal ditentukan dari :

$$A_{jv} = \frac{V_{sv}}{f_y} \dots\dots\dots(3.202)$$

### 3.6 Perencanaan Pondasi

#### 3.6.1 Perencanaan pondasi telapak

Langkah – langkah dalam perencanaan pondasi telapak adalah :

1. Diketahui beban kerja,  $f_c'$ ,  $f_y$ ,  $\sigma$  tanah dan tebal pelat pondasi dapat diasumsikan.
2. Menentukan daya dukung tanah netto

$$q = h_1 \cdot \gamma_1 + h_2 \cdot \gamma_2 \dots\dots\dots(3.203)$$

$$\sigma_{netto} = \sigma_{tanah} - q \dots\dots\dots(3.204)$$



### 3. Menentukan dimensi pondasi telapak

Dimensi pondasi bujursangkar terdapat momen yang bekerja pada arah x dan y, sehingga :

$$A_{\text{perlu}} = \frac{P}{\sigma_{\text{netto tanah}} - \left( \frac{My}{1/6 \cdot Bx^2 \cdot By} \right) - \left( \frac{Mx}{1/6 \cdot By^2 \cdot Bx} \right)} \quad \dots\dots(3.205)$$

$$Bp = \sqrt{A_{\text{perlu}}} \quad \dots\dots(3.206)$$

### 4. Perencanaan terhadap kuat geser

#### a. Perhitungan geser beton untuk satu arah

$$d = hp - Pb - \frac{1}{2} \cdot \emptyset_{\text{tul. pokok}} \quad \dots\dots(3.207)$$

$$n_1 = \frac{Lp - tk - 2 \cdot d}{2} \quad \dots\dots(3.208)$$

#### Arah X

$$q_{ux} = \frac{Pu}{Aada} \pm \frac{Mux}{1/6 \cdot B^2 \cdot N} \quad \dots\dots(3.209)$$

$$Vu = q_{ux\text{terjadi}} \cdot n_1 \cdot L \quad \dots\dots(3.210)$$

Kekuatan beton menahan geser :

$$V_{c_x} = \frac{1}{6} \cdot \sqrt{f'c} \cdot L \cdot d \geq \frac{Vu_x}{\phi} \quad \dots\dots(3.211)$$

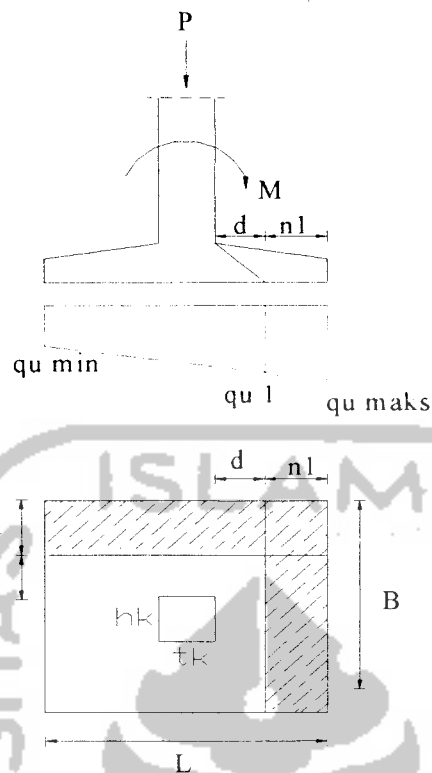
#### Arah Y

$$q_{uy} = \frac{Pu}{Aada} \pm \frac{Muy}{1/6 \cdot B^2 \cdot N} \quad \dots\dots(3.212)$$

$$Vu = q_{uy\text{terjadi}} \cdot n_1 \cdot L \quad \dots\dots(3.213)$$

Kekuatan beton menahan geser :

$$V_{c_y} = \frac{1}{6} \cdot \sqrt{f'c} \cdot P \cdot d \geq \frac{Vu_y}{\phi} \quad \dots\dots(3.214)$$



**Gambar 3.12** Daerah geser satu (1) arah pada penampang pondasi

b. Perhitungan geser beton untuk dua arah

$$x = h_k + d \quad \dots\dots\dots(3.215)$$

$$y = b_k + d \quad \dots\dots\dots(3.216)$$

$$q_u = \frac{P_u}{A_{ada}} \pm \frac{M_y}{1/6 \cdot B_x^2 \cdot B_y} \pm \frac{M_x}{1/6 \cdot B_y^2 \cdot B_x} \quad \dots\dots\dots(3.217)$$

$$V_u = q_{uT} \cdot ((P_p \cdot L_p) - (x, y)) \quad \dots\dots\dots(3.218)$$

Kekuatan beton menahan gaya geser ( $V_c$ ), diambil nilai terkecil antara :

$$V_c = 4 \cdot \sqrt{f'c} \cdot b_o \cdot L \quad \dots\dots\dots(3.219)$$

$$\text{atau : } V_c = \left(1 + \frac{2}{\beta_c}\right) \cdot (2 \cdot \sqrt{f'c}) \cdot b_o \cdot D \quad \dots\dots\dots(3.220)$$

$$b_o = 2.(x+y) = 2.((h_k+d)+(b_k+d)) \dots\dots\dots(3.221)$$

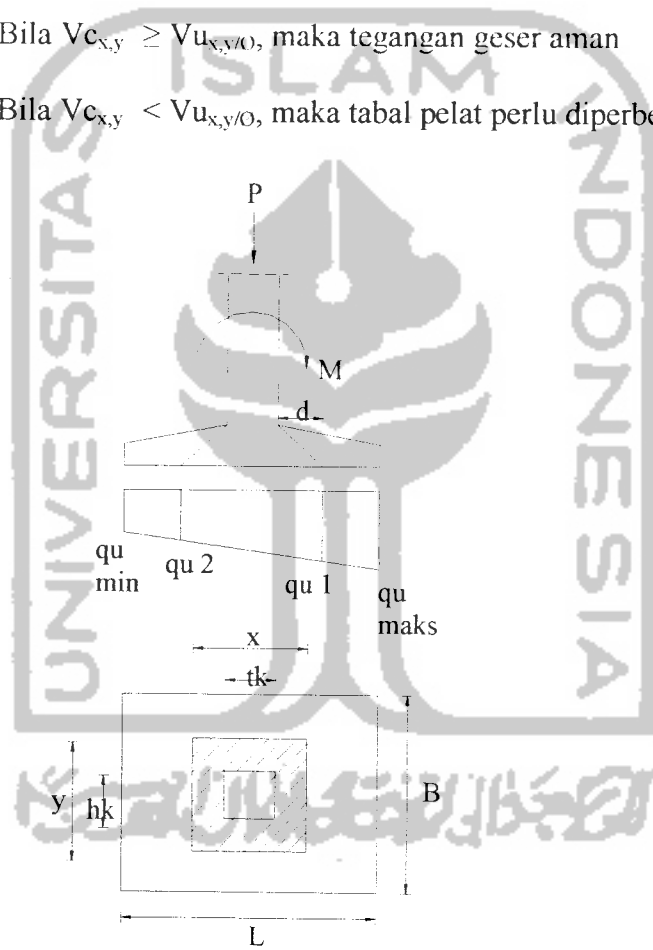
$$\beta_c = \frac{\text{sisipanjangtapak}}{\text{sisipendektapak}} \geq 1,0 \dots\dots\dots(3.222)$$

dimana :  $b_o$  = keliling penampang kritis ( $\text{mm}^2$ )

$\beta_c$  = rasio sisi panjang dengan sisi pendek

Kontrol gaya geser terjadi :

- Bila  $V_{c,x,y} \geq V_{u,x,y/O}$ , maka tegangan geser aman
- Bila  $V_{c,x,y} < V_{u,x,y/O}$ , maka tebal pelat perlu diperbesar



**Gambar 3.13** Gaya geser dua (2) arah pada penampang pondasi

5. Perencanaan tulangan lentur pondasi

Diambil nilai lebar (b) pondasi tiap 1 meter = 1000 mm

- Tulangan arah x :  $l_1 = \frac{1}{2} \cdot (P - h_k)$  .....(3.223)

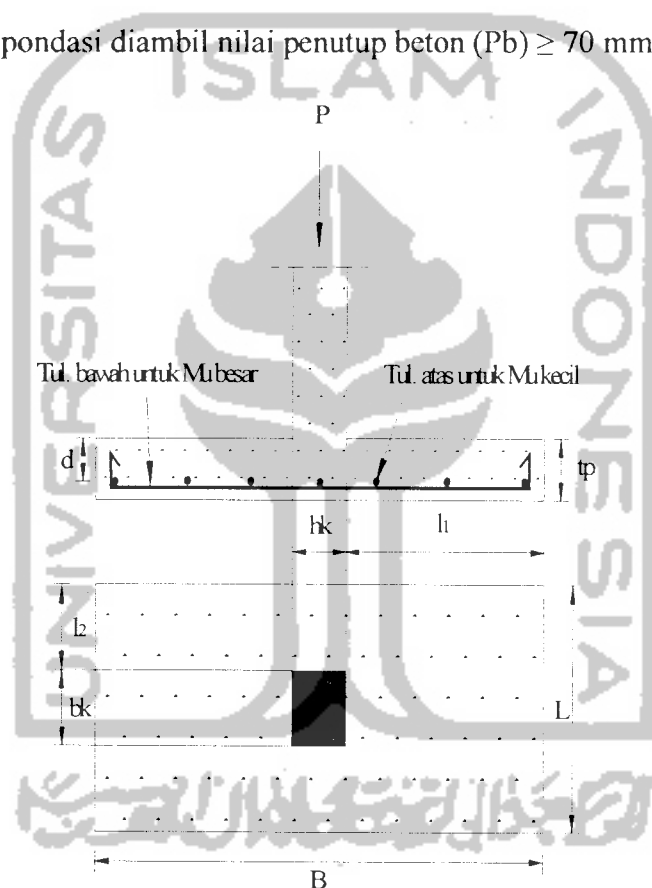
$$Mu_1 = \frac{1}{2} \cdot q_u \cdot l_1^2 \quad \text{.....(3.224)}$$

- Tulangan arah y :  $l_2 = \frac{1}{2} \cdot (P - b_k)$  .....(3.225)

$$Mu_2 = \frac{1}{2} \cdot q_u \cdot l_2^2 \quad \text{.....(3.226)}$$

Diambil nilai  $Mu_1$  atau  $Mu_2$  yang terbesar. Untuk  $Mu$  yang besar letak tulangan di bawah sedangkan  $Mu$  yang kecil letak tulangnya di atas.

Untuk pondasi diambil nilai penutup beton ( $P_b$ )  $\geq 70$  mm.



**Gambar 3.14** Tulangan lentur pondasi

$$d = h + P_b - \frac{1}{2} \cdot \emptyset_{\text{tul. bawah}} \quad \rightarrow \text{ untuk tulangan bawah}$$

$$d = h + P_b - \emptyset_{\text{tul. bawah}} - \frac{1}{2} \cdot \emptyset_{\text{tul. atas}} \quad \rightarrow \text{ untuk tulangan atas}$$

$$m = \frac{f_y}{0,85 \cdot f'_c} \quad \text{.....(3.227)}$$

$$Rn_{ada} = \frac{Mu/\phi}{b.d^2_{ada}} \dots\dots\dots(3.228)$$

$$\rho = \frac{1}{m} \left( 1 - \sqrt{\frac{2.Rn.m}{fy}} \right) \dots\dots\dots(3.229)$$

$$\rho_{min} = \frac{1,4}{fy} \dots\dots\dots(3.230)$$

Persyaratan :

1. bila  $\rho > \rho_{min}$  digunakan :  $\rightarrow \rho_{perlu} = \rho$
2. bila  $\rho < \rho_{min}$ ,  $1,33.\rho < \rho_{min}$  digunakan :  $\rightarrow \rho_{perlu} = 1,33.\rho$
3. bila  $\rho < \rho_{min}$ ,  $1,33.\rho > \rho_{min}$  digunakan :  $\rightarrow \rho_{perlu} = \rho_{min}$

$$\text{Luas tulangan perlu : } A_{s_{perlu}} = \rho_{perlu} \cdot b \cdot d \dots\dots\dots(3.231)$$

$$\text{Luas tulangan susut : } A_{s_{tul.susut}} = 0,002 \cdot b \cdot h \dots\dots\dots(3.232)$$

Dipilih diameter ( $\emptyset$ ) tulangan, didapatkan  $A_{\emptyset 1}$ , jarak antar tulangan :

$$s \leq \frac{A_{\emptyset 1} \cdot 1000}{A_{s_{perlu}}} \dots\dots\dots(3.233)$$

Sedangkan nilai  $A_{s_{ada}}$  dapat dihitung :

$$A_{s_{ada}} = \frac{A_{\emptyset 1} \cdot 1000}{s} \dots\dots\dots(3.234)$$

Kontrol kapasitas lentur yang terjadi :

$$a = \frac{As \cdot fy}{0,85 \cdot f'c \cdot b} \dots\dots\dots(3.235)$$

$$Mn = As \cdot fy \cdot \left( d - \frac{a}{2} \right) \geq \frac{Mu}{\phi} \dots\dots\dots(3.236)$$

### 3.7 Perencanaan Tangga

#### 3.7.1 Perencanaan dimensi tangga

Langkah - langkah perencanaan tangga adalah sebagai berikut :

1. Menentukan lebar, jumlah *optrede* dan *antrede*

- Tinggi bersih antar lantai ( $h$ ) dalam meter dapat diketahui
- Lebar bordes ( $L_b$ ) dalam meter dapat ditentukan, diambil  $\geq 1,20$  m
- Sandaran tangga dapat ditentukan tebal dan tingginya
- Tinggi *optrede* ideal  $\leq 20$  cm (15 – 18 cm), misal diambil nilai perkiraan awal tinggi *optrede* ( $h_o$ ) = 18 cm, maka jumlah *optrede* :

$$\text{Jumlah } optrede = \frac{h}{h_o} \text{ (dibulatkan keatas)} \dots\dots\dots(3.237)$$

$$\text{Maka tinggi } optrede \text{ sebenarnya : } h'o = \frac{h}{\text{jumlah } optrede} \dots\dots\dots(3.238)$$

- Lebar *antrede* ideal  $\geq 30$  cm, untuk menentukan jumlah *antrede* :

$$\text{Jumlah } antrede = \text{jumlah } optrede - 2 \dots\dots\dots(3.239)$$

- Panjang bentang tangga ( $P_t$ ) dapat dihitung dengan cara :

$$P_t = (L_a \times \text{jumlah } antrede / 2) + L_b \dots\dots\dots(3.240)$$

2. Menentukan tebal pelat tangga ( $h_1$ ) dan lebar tangga ( $L_t$ )

Untuk panjang bentang tangga  $\pm 4,50$  m.

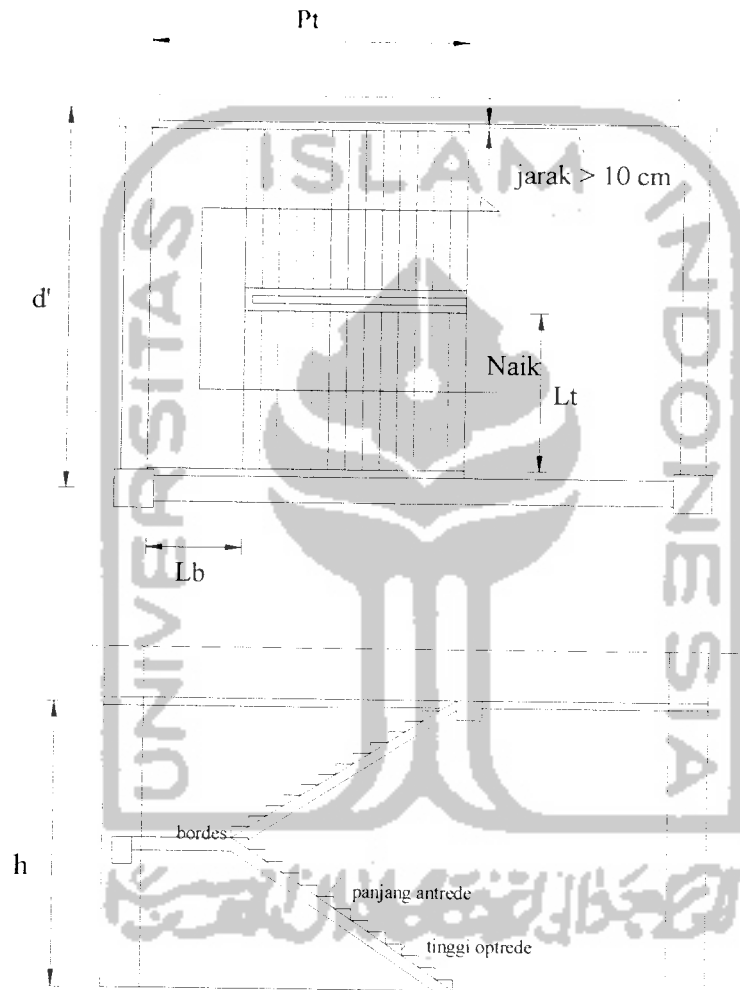
- Diambil nilai tebal pelat tangga ( $h_1$ ) : 15 cm
- Sudut kemiringan ideal tangga antara  $30^\circ$  -  $35^\circ$ , besarnya sudut tangga dapat dihitung dengan cara :

$$\text{arc tg } \alpha = \frac{\text{tinggi } optrede}{\text{panjang } antrede} \dots\dots\dots(3.241)$$

Sehingga besar sudut ( $\alpha$ ) dapat diketahui.

- Jarak antar as – as kolom ( $d$ ) dalam meter dapat diketahui, sehingga jarak bersih antar kolom ( $d'$ ) :

$$d' = d - 2 \cdot \left(\frac{1}{2} \cdot \text{lebar balok induk}\right) \dots\dots\dots(3.242)$$



Gambar 3.15 Dimensi tangga

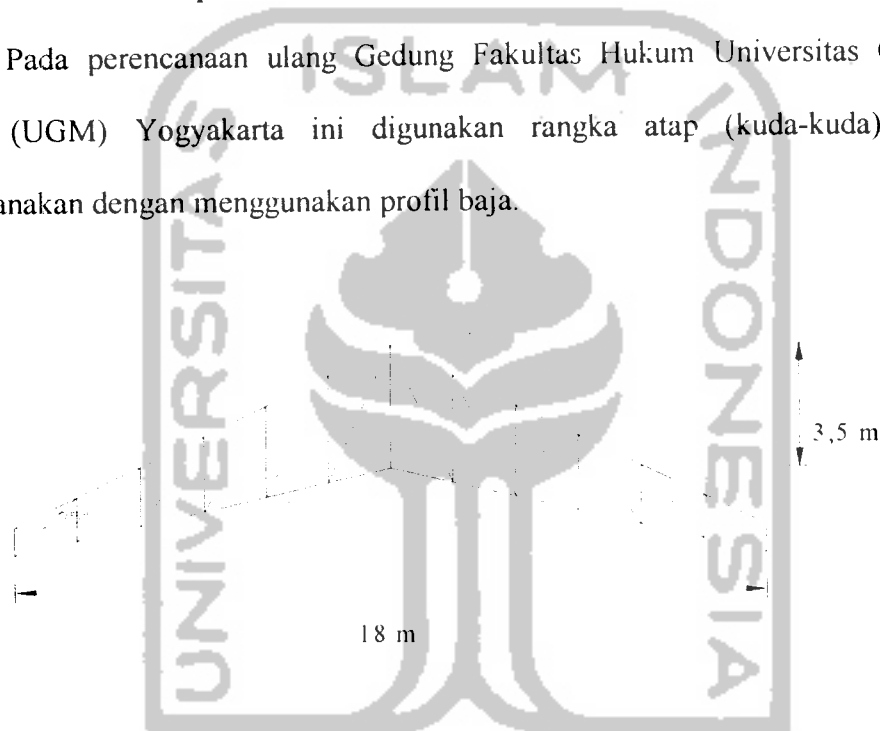
### 3.7.2 Perencanaan tulangan tangga

Perencanaan tulangan tangga sama dengan perhitungan pada pelat lantai.

## BAB IV PERENCANAAN

### 4.1 Perencanaan Atap

Pada perencanaan ulang Gedung Fakultas Hukum Universitas Gadjah Mada (UGM) Yogyakarta ini digunakan rangka atap (kuda-kuda) yang direncanakan dengan menggunakan profil baja.



**Gambar 4.1** Rencana rangka kuda-kuda 1

#### 4.1.1 Perencanaan gording pada kuda-kuda 1

Data-data pada perencanaan gording meliputi :

1. Jarak antar kuda-kuda = 3,0 m
2. Jarak antar gording = 1,730 m
3. Dipakai baja

Mutu baja profil ( $f_y$ ) = 2400 kg/cm<sup>2</sup>

Kuat tarik ( $F_u$ ) = 3700 kg/cm<sup>2</sup>

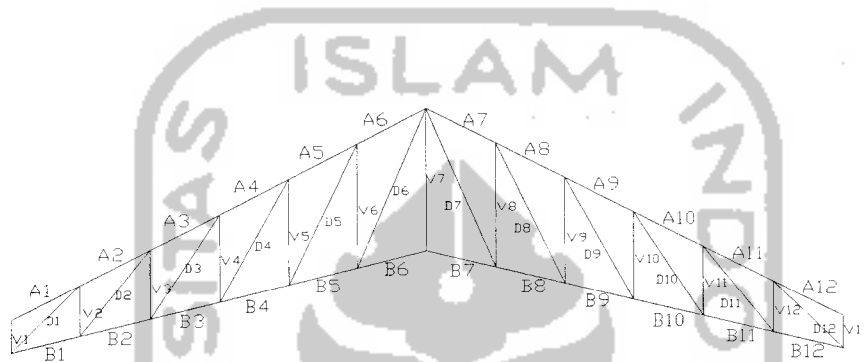


4. Mutu baut non full drat dari AISC A325x

$$F_u = 8250 \text{ kg/cm}^2 \text{ dan } f_y = 2050 \text{ kg/cm}^2$$

5. Direncanakan terhadap bangunan di darat  
6. Panjang batang

Berikut ini contoh perencanaan kuda-kuda 1 dengan bentang 18 m.



**Gambar 4.2** .Rencana rangka batang

**Tabel 4.1.** Panjang rangka batang kuda-kuda

Batang	Panjang (m)	Batang	Panjang (m)
A1 – A12	1,730	V1 = V13	0,800
B1 – B12	1,555	V2 = V12	1,250
D1 = D12	2,237	V3 = V11	1,700
D2 = D12	2,589	V4 = V10	2,150
D3 = D10	2,967	V5 = V9	2,600
D4 = D9	3,363	V6 = V8	3,050
D5 = D8	3,771	V7	3,500
D6 = D7	4,188		

7. Pembebanan gording

Dipakai profil 100 x 50 x 20 x 2,3 (Light Lip Channel)

$$A = 5,172 \text{ cm}^2$$

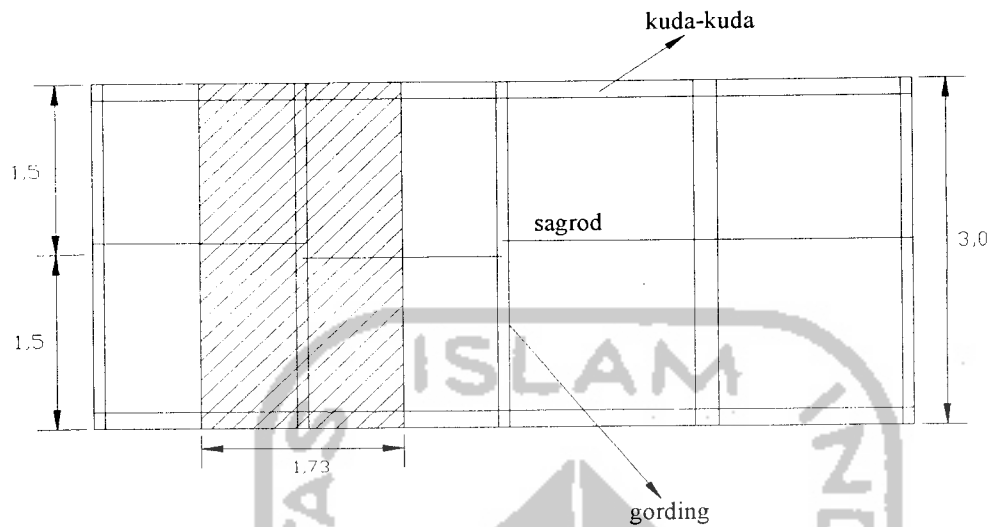
$$w = 4,06 \text{ kg/m}$$

$$I_x = 80,7 \text{ cm}^4$$

$$S_x = 16,1 \text{ cm}^3$$

$$I_y = 19 \text{ cm}^4$$

$$S_y = 6,06 \text{ cm}^3$$



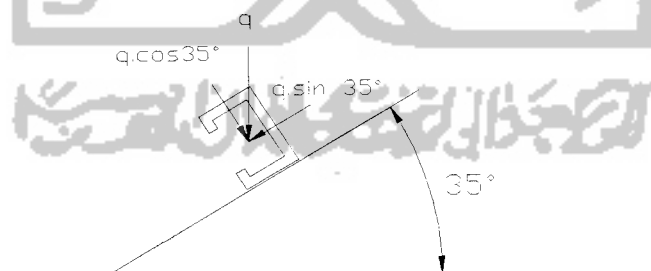
**Gambar 4.3.** Pembebanan gording

a. Beban tetap

$$\text{Beban penutup atap ( genteng )} = 50 \times 1,730 = 86,500 \text{ kg/m}$$

$$\text{Beban gording (diambil dari profil)} = \underline{4,060 \text{ kg/m} +}$$

$$q = 90,560 \text{ kg/m}$$



**Gambar 4.4.** Arah pembebanan gording

$$q_{\perp} = q \cos \alpha = 90,560 \cdot \cos 35^{\circ} = 74,182 \text{ kg/m}$$

$$q_{//} = q \sin \alpha = 90,560 \cdot \sin 35^{\circ} = 51,943 \text{ kg/m}$$

## b. Beban hidup

Beban hidup yang dipakai adalah beban pekerja (orang)

$$P = 100 \text{ kg}$$

$$\text{Maka } P_{\perp} = 100 \cdot \cos 35^{\circ} = 81,915 \text{ kg}$$

$$P_{//} = 100 \cdot \sin 35^{\circ} = 57,358 \text{ kg}$$

## c. Beban angin

Pada daerah daratan  $w$  (dalam PPIUG 1983) =  $25 \text{ kg/m}^2$

1) Angin tekan (wt)  $\alpha < 65^{\circ}$ , diketahui sudut  $\alpha = 35^{\circ}$

$$C_1 = 0,02 \alpha - 0,4 = 0,02 \cdot 35 - 0,4 = 0,3$$

$$wt = C_1 \cdot w \cdot \text{jarak gording} = 0,3 \cdot 25 \cdot 1,730 = 12,975 \text{ kg/m}$$

2) Angin hisap (wh),  $C_2 = -0,4$

$$wh = C_2 \cdot w \cdot \text{jarak gording} = -0,4 \cdot 25 \cdot 1,730 = -17,300 \text{ kg/m}$$

## 8. Perhitungan momen

## a. Akibat beban tetap

$$\begin{aligned} q_{\perp} = M_{\text{maks}} &= \frac{1}{8} \cdot q_{\perp} \cdot b^2 + \frac{1}{4} \cdot P_{\perp} \cdot b \\ &= \frac{1}{8} \cdot 74,182 \cdot 3^2 + \frac{1}{4} \cdot 81,915 \cdot 3 \\ &= 144,891 \text{ kgm} = 14489,1 \text{ kgcm} \end{aligned}$$

$$\begin{aligned} q_{//} = M_{\text{maks}} &= \frac{1}{32} \cdot q_{//} \cdot b^2 + \frac{1}{4} \cdot P_{//} \cdot b \\ &= \frac{1}{32} \cdot 51,943 \cdot 3^2 + \frac{1}{4} \cdot 57,358 \cdot 3 \\ &= 36,118 \text{ kgm} = 3611,8 \text{ kgcm} \end{aligned}$$

## b. Akibat beban angin

$$\begin{aligned} M_{\text{maks}} &= \frac{1}{8} \cdot w \cdot b^2 = \frac{1}{8} \cdot 12,975 \cdot 3^2 = 14,597 \text{ kgm} \\ &= 1459,7 \text{ kgcm} \end{aligned}$$

## 9. Dimensi gording

## a. Kontrol tegangan

$$f_{bx} = \frac{M_{\perp} \cdot \max}{S_x} = \frac{(14489,1 + 1459,7)}{16,1} = 990,609 \text{ kg/cm}^2$$

$$f_{by} = \frac{M_{\parallel} \cdot \max}{S_y} = \frac{3611,8}{6,06} = 596,007 \text{ kg/cm}^2$$

$$\frac{f_{bx}}{0,66 f_y} + \frac{f_{by}}{0,75 f_y} \leq 1,0$$

$$\frac{990,609}{0,66 \cdot 2400} + \frac{596,007}{0,75 \cdot 2400} = 0,956 \leq 1,0 \Rightarrow \text{Ok!}$$

## b. Kontrol lendutan

$$\delta_{\perp} = \frac{5 q_{\perp} L^4}{384 E I_x} + \frac{1 P_{\perp} L^3}{48 E I_x} \leq \frac{L}{360}$$

$$= \frac{5 \cdot 0,74584 \cdot 300^4}{384 \cdot 2,1 \cdot 10^6 \cdot 80,7} + \frac{1 \cdot 0,81915 \cdot 300^3}{48 \cdot 2,1 \cdot 10^6 \cdot 80,7}$$

$$= 0,467 \text{ cm} \leq \frac{300}{360} = 0,833 \text{ cm} \Rightarrow \text{Ok!}$$

$$\delta_{\parallel} = \frac{5 q_{\parallel} (L/(a+1))^4}{384 E I_y} + \frac{1 P_{\parallel} (L/(a+1))^3}{48 E I_y} \leq \frac{L}{360}$$

$$= \frac{5 \cdot 0,51943 \cdot (300/1+1)^4}{384 \cdot 2,1 \cdot 10^6 \cdot 19} + \frac{1 \cdot 0,57358 \cdot (300/1+1)^3}{48 \cdot 2,1 \cdot 10^6 \cdot 19}$$

$$= 0,087 \text{ cm} \leq \frac{300}{360} = 0,833 \text{ cm} \Rightarrow \text{Ok!}$$

$$\delta = \sqrt{\delta_{\perp}^2 + \delta_{\parallel}^2} = \sqrt{0,467^2 + 0,087^2}$$

$$= 0,475 \text{ cm} \leq \frac{L}{360} = 0,833 \text{ cm} \Rightarrow \text{Ok!}$$

Jadi profil Light Lip Channel 100 x 50 x 20 x 2,3 dapat digunakan.

#### 4.1.2 Perencanaan sagrod dan tierod

##### 1. Beban sagrod

$$\begin{aligned} \text{berat penutup atap} \times \left( \frac{1}{2} L / \cos \alpha \right) &= 50 \cdot \left( \frac{1}{2} \cdot 18 / \cos 35^\circ \right) \\ &= 549,349 \text{ kg/m} \end{aligned}$$

$$\begin{aligned} \text{jumlah gording satu sisi miring} \times \text{berat gording} &= 7 \cdot 4,06 \\ &= 28,420 \text{ kg/m} \end{aligned}$$

$$P = 549,349 + 28,420 = 577,769 \text{ kg/m}$$

$$\begin{aligned} P// &= P \cdot \sin \alpha \cdot S_s + \text{beban hidup} = 577,769 \cdot \sin 35^\circ \cdot 1,5 + 100 \\ &= 597,092 \text{ kg} \end{aligned}$$

##### 2. Dimensi sagrod

$$\begin{aligned} A_{\text{sagrod}} &= \frac{P//}{0,33 \cdot F_u} = \frac{1}{4} \cdot \pi \cdot D^2_{\text{sagrod}} \\ &= \frac{597,092}{0,33 \cdot 3700} = \frac{1}{4} \cdot \pi \cdot D^2 \end{aligned}$$

$$D_{\text{sagrod}} = \sqrt{\frac{(597,092 \cdot 4)}{(0,33 \cdot 3700 \cdot \pi)}} = 0,789 \text{ cm} \approx 8 \text{ mm}$$

$$D_{\text{sagrod}} = 8 + 3 = 11 \text{ mm}, \text{ pakai } \varnothing 12 \text{ mm}$$

##### 3. Dimensi tierod

$$\text{Beban tierod; } T = P// \cdot \cos 35^\circ = 597,092 \cdot \cos 35^\circ = 489,109 \text{ kg}$$

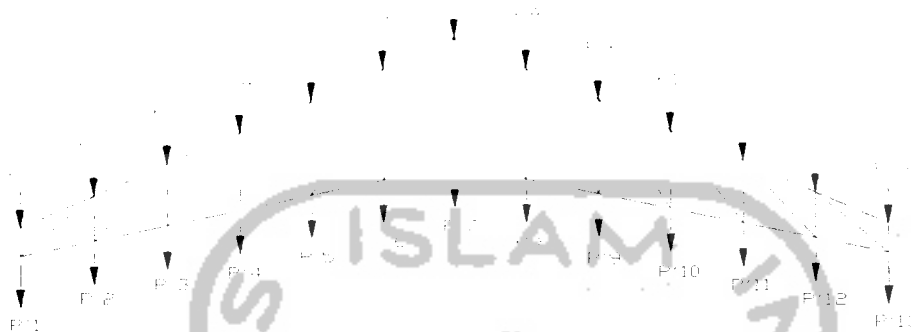
$$A_{\text{tierod}} = \frac{T}{0,33 F_u} = \frac{1}{4} \cdot \pi \cdot D^2_{\text{tierod}}$$

$$D_{\text{tierod}} = \sqrt{\frac{(489,109 \cdot 4)}{(0,33 \cdot 3700 \cdot \pi)}} = 0,714 \text{ cm} \approx 8 \text{ mm}$$

$$D_{\text{tierod}} = 8 + 3 = 11 \text{ mm}, \text{ pakai } \varnothing 12 \text{ mm}$$

### 4.1.3 Pembebanan kuda-kuda

Pembebanan kuda-kuda meliputi :



Gambar 4.5. Pembebanan kuda – kuda

#### 1. Beban tetap

berat gording = 4,06 kg/m

berat eternit + penggantung = 18 kg/m<sup>2</sup>

berat penutup atap ( genteng ) = 50 kg/m<sup>2</sup>

Tabel 4.2 Profil terpakai dan berat profil terpakai kuda-kuda 1 :

Batang	Profil (mm)	Berat Profil (kg/m)	Panjang (m)	Berat (kg)
Batang Atas	2L 60x60x6	2 x 5,42 = 10,84	20,760	225,038
Batang Bawah	2L 60x60x6	2 x 5,42 = 10,84	18,660	202,274
Batang Vertikal	2L 60x60x6	2 x 5,42 = 10,84	26,600	288,994
Batang Diagonal	2L 60x60x6	2 x 5,42 = 10,84	38,230	414,413
			Wtotal	= 1130,719

Berat kuda-kuda yang digunakan :

Berat total kuda-kuda = 1130,719 kg

Berat baut dan plat sambung = (20 % x berat total kuda-kuda )

= 226,144 kg

Jumlah ( $\Sigma$ ) = Berat total kuda-kuda + 20 % . Berat total kuda-kuda

= 1130,719 + 226,144 = 1356,863 kg

Panjang rangka kuda-kuda,  $L = 18 \text{ m}$

$$\frac{\Sigma}{L} = \frac{1356,863}{18} = 75,381 \text{ kg/m}$$

Beban masing-masing joint :

a.  $P_1 = P_{13}$

$$\text{Berat gording} = 4,06 \times 3,0 = 12,180 \text{ kg}$$

$$\begin{aligned} \text{Berat penutup atap} &= 50 \times 3,0 \times \frac{1}{2} \times 1,730 = \underline{129,750 \text{ kg}} + \\ &= 141,930 \text{ kg} \end{aligned}$$

b.  $P_2 = P_3 = P_4 = P_5 = P_6 = P_8 = P_9 = P_{10} = P_{11} = P_{12}$

$$\text{Berat gording} = 4,06 \times 3,0 = 12,180 \text{ kg}$$

$$\begin{aligned} \text{Berat penutup atap} &= 50 \times 3,0 \times 1,730 = \underline{259,500 \text{ kg}} + \\ &= 271,680 \text{ kg} \end{aligned}$$

c.  $P_7$

$$\text{Berat gording} = 2 \times 4,06 \times 3,0 = 24,360 \text{ kg}$$

$$\begin{aligned} \text{Berat penutup atap} &= 50 \times 3,0 \times 1,730 = \underline{259,500 \text{ kg}} + \\ &= 283,860 \text{ kg} \end{aligned}$$

d.  $P'1 = P'13$

$$\text{Berat eternit + plafond} = 18 \times 3,0 \times \frac{1}{2} \times 1,555 = 41,985 \text{ kg}$$

$$\begin{aligned} \text{Berat profil kuda-kuda} &= 75,381 \times \frac{1}{2} \times 1,555 = \underline{58,609 \text{ kg}} + \\ &= 100,594 \text{ kg} \end{aligned}$$

e.  $P'2 = P'3 = P'4 = P'5 = P'6 = P'7 = P'8 = P'9 = P'10 = P'11 = P'12$

$$\text{Berat eternit + plafond} = 18 \times 3,0 \times 1,555 = 83,970 \text{ kg}$$

$$\begin{aligned} \text{Berat profil kuda-kuda} &= 75,381 \times 1,555 = \underline{117,218 \text{ kg}} + \\ &= 201,188 \text{ kg} \end{aligned}$$

## 2. Beban hidup

Beban hidup dipakai  $P = 100 \text{ kg}$  (beban pekerja/beban orang)

## 3. Beban angin

Muatan angin di darat ( PPUUG 1983 ) untuk  $\alpha < 65^\circ = 25 \text{ kg/m}^2$

## a. Koefisien angin :

Angin tekan ( wt )

$$C1 = 0,02 \cdot \alpha - 0,4 = 0,02 \cdot 35 - 0,4 = 0,3$$

Angin hisap ( wh )

$$C2 = -0,4$$

## b. Beban yang bekerja

$$wt = C1 \times w = 0,3 \times 25 = 7,5 \text{ kg/m}^2$$

$$wh = C2 \times w = -0,4 \times 25 = -10 \text{ kg/m}^2$$

Angin kiri :

$$wt_1 = 7,5 \times \frac{1}{2} \times 1,730 \times 3,0 = 19,463 \text{ kg}$$

$$wt_2 = wt_3 = wt_4 = wt_5 = wt_6 = 7,5 \times 1,730 \times 3,0 = 38,925 \text{ kg}$$

$$wt_7 = 7,5 \times \frac{1}{2} \times 1,730 \times 3,0 = 19,463 \text{ kg}$$

$$wh_1 = -10 \times \frac{1}{2} \times 1,730 \times 3,0 = -25,950 \text{ kg}$$

$$wh_2 = wh_3 = wh_4 = wh_5 = wh_6 = -10 \times 1,730 \times 3,0 = -51,900 \text{ kg}$$

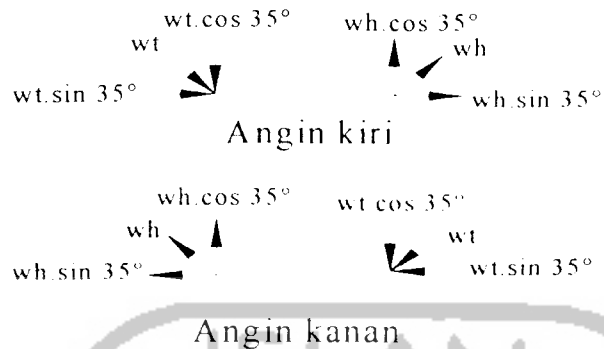
$$wh_7 = -10 \times \frac{1}{2} \times 1,730 \times 3,0 = -25,950 \text{ kg}$$

Angin kanan :

Besar angin kanan sama dengan besar angin kiri.



Keterangan :



#### 4.1.4 Perencanaan dimensi batang

Contoh perhitungan dimensi batang kuda – kuda 1:

##### 1. Batang tarik

Gaya tarik maksimal ( P ) = 1811,616 kg (batang D6)

Panjang batang ( L ) = 4,188 m = 418,8 cm

$f_y = 2400 \text{ kg/cm}^2$ ,  $F_u = 3700 \text{ kg/cm}^2$

$E = 2,1 \times 10^6 \text{ kg/cm}^2$

$K = 1$  (sendi-sendi)

##### a. Syarat batang tarik

$$\frac{L}{r} \leq 240 \text{ s/d } 300 \quad r_{\min} = \frac{KL}{240} = \frac{418,8}{240} = 1,745 \text{ cm}$$

##### b. Luas tampang perlu :

$$A_{g1} = \frac{T}{0,6 f_y} = \frac{1811,616}{0,6 \cdot 2400} = 1,258 \text{ cm}^2$$

$$\begin{aligned} A_{g2} &= \frac{T}{0,5 F_u \cdot \mu} + \left( \frac{1''}{8} + \phi_{baut} \right) \cdot t_p \cdot n \\ &= \frac{1811,616}{0,5 \cdot 3700 \cdot 0,75} + \left( \frac{1''}{8} + \frac{1''}{2} \right) \cdot 1,2 = 4,481 \text{ cm}^2 \end{aligned}$$

dicoba profil 2L 60x60x6 :

$$A = 6,91 \text{ cm}^2 \quad r = 1,82 \text{ cm} \quad W = 5,42 \text{ kg/m}$$

$$A_{\text{bruto}} = 2 \times 6,91 = 13,82 \text{ cm}^2$$

$$A_{\text{lubang}} = \left( \frac{l''}{8} + \phi_{\text{baut}} \right) \cdot t_p \cdot n = \left( \frac{l''}{8} + \frac{l''}{2} \right) \cdot 1,2 = 3,175 \text{ cm}^2$$

$$A_{\text{netto}} = A_{\text{bruto}} - A_{\text{lubang}} = 13,82 - 3,175 = 10,645 \text{ cm}^2$$

$$A_{\text{effektif}} = 0,75 \cdot A_{\text{netto}} = 0,75 \cdot 10,645 = 7,984 \text{ cm}^2$$

c. Kontrol tegangan :

$$\frac{T}{A_{\text{profil}}} \leq 0,6 \cdot f_y \rightarrow \frac{1811,616}{13,82} \leq 0,6 \cdot 2400$$

$$131,087 \text{ kg/cm}^2 \leq 1440 \text{ kg/cm}^2 \dots \text{Ok!}$$

$$\frac{T}{A_{\text{effektif}}} \leq 0,5 \cdot F_u \rightarrow \frac{1811,616}{7,984} \leq 0,5 \cdot 3700$$

$$226,906 \text{ kg/cm}^2 \leq 1850 \text{ kg/cm}^2 \dots \text{Ok!}$$

Jadi profil 2L 60x60x6 dapat digunakan.

2. Batang tekan

$$\text{Gaya tekan maksimal ( P )} = - 3907,326 \text{ kg (batang A4)}$$

$$\text{Panjang batang ( L )} = 1,730 \text{ m} = 173 \text{ cm}$$

$$f_y = 2400 \text{ kg/cm}^2, F_u = 3700 \text{ kg/cm}^2$$

$$E = 2,1 \times 10^6 \text{ kg/cm}^2$$

$$K = 1 \text{ (sendi-sendu)}$$

a. Syarat batang tekan

$$\frac{L}{r} \leq 200 \quad r_{\text{min}} = \frac{KL}{200} = \frac{173}{200} = 0,865 \text{ cm}$$

dicoba profil 2L 60x60X6

$$A = 6,91 \text{ cm}^2 \quad A_{\text{total}} = 13,82 \text{ cm}^2 \quad W = 5,42 \text{ kg/m}$$

$$r = 1,82 \text{ cm} \geq r_{\text{min}} = 0,865 \text{ cm} \rightarrow \text{dipakai } r = 1,82 \text{ cm}$$

$$I_x = I_y = 22,8 \text{ cm}^4 \quad i_x = i_y = 1,82 \text{ cm} \quad e = 1,69$$

$$x = e + (0,5 \cdot t_p) = 1,69 + (0,5 \cdot 1) = 2,19 \text{ cm}$$

$$I_{x \text{ gab}} = 2 \cdot I_x = 2 \cdot 22,8 = 45,6 \text{ cm}^4$$

$$I_{y \text{ gab}} = I_{x \text{ gab}} + 2A \cdot x^2 = 45,6 + 2 \cdot 6,91 \cdot 2,19^2 = 111,882 \text{ cm}^4$$

$$i_{x \text{ gab}} = \sqrt{\frac{I_{x \text{ gab}}}{2A}} = \sqrt{\frac{45,6}{2 \cdot 6,91}} = 1,816 \text{ cm}$$

$$i_{y \text{ gab}} = \sqrt{\frac{I_{y \text{ gab}}}{2A}} = \sqrt{\frac{111,882}{2 \cdot 6,91}} = 2,845 \text{ cm}$$

dipakai  $r = 1,816 \text{ cm}$

b. Syarat :

$$\frac{KL}{r} \leq C_c = \frac{6440}{\sqrt{f_y}}$$

$$\frac{KL}{r} = \frac{1,173}{1,816} = 95,240 \leq C_c = \frac{6440}{\sqrt{2400}} = 131,456$$

maka digunakan rumus :

$$F_s = \frac{5}{3} + \frac{3 \cdot (KL/r)}{8 \cdot C_c} - \frac{1 \cdot (KL/r)^3}{8 \cdot C_c^3} = \frac{5}{3} + \frac{3 \cdot (95,240)}{8 \cdot 131,456} - \frac{1 \cdot (95,240)^3}{8 \cdot 131,456^3}$$

$$= 1,891$$

$$F_a = \frac{f_y}{F_s} \left( 1 - 0,5 \left( \frac{KL/r}{C_c} \right)^2 \right) = \frac{2400}{1,891} \left( 1 - 0,5 \left( \frac{95,240}{131,456} \right)^2 \right)$$

$$= 936,168 \text{ kg/cm}^2$$

c. Kontrol Kapasitas

$$P = Fa.A_{total} > P_{terjadi}$$

$$= 936,168 \cdot 13,82 > 3907,326$$

$$12937,838 \text{ kg} > 3634,906 \text{ kg} \dots\dots\dots \text{OK!}$$

Jadi profil 21. 60x60x6 dapat digunakan.

#### 4.1.5 Perencanaan pelat kuda-kuda

$$P = 3579,266 \text{ kg (diambil dari reaksi maksimum yang terjadi)}$$

$$f_c' = 25 \text{ Mpa}$$

$$= 250 \text{ kg/cm}^2$$

$$A_{perlu} = \frac{P}{0,33 \cdot f_c'} = \frac{3579,266}{0,33 \cdot 250} = 43,385 \text{ cm}^2$$

$$\text{Diambil ukuran pelat} = 15 \times 20 = 300 \text{ cm}^2 > A_{perlu}$$

$$Q = \frac{P}{B \times L} = \frac{3579,266}{15 \times 20} = 11,931 \text{ cm}^2$$

$$x = \frac{20 - (6 + 1 + 6)}{2} = 3,5 \text{ cm}$$

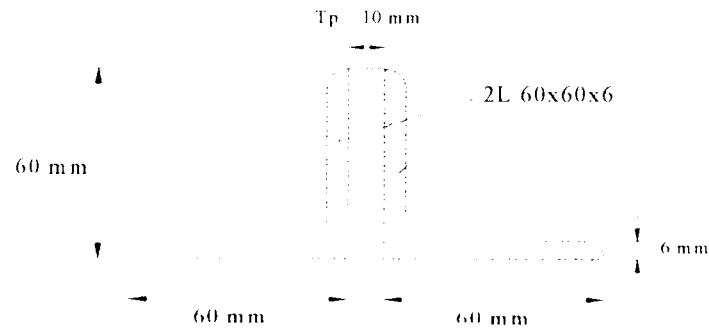
$$M = \frac{1}{2} \cdot q \cdot x^2 = \frac{1}{2} \cdot 11,931 \cdot 3,5^2 = 73,077 \text{ kg.cm}$$

Syarat :

$$0,6 \cdot f_y = \frac{M}{\frac{1}{6} \cdot l \cdot t_p^2} \quad t_p = \sqrt{\frac{M}{0,6 \cdot l \cdot 6 \cdot f_y}} = \sqrt{\frac{73,077}{0,6 \cdot 1 \cdot 6 \cdot 2400}} = 0,552 \text{ cm}$$

digunakan pelat dengan tebal ( $t_p$ ) = 1 cm

Dimensi pelat yang digunakan 15 x 20 x 1 cm.



Gambar 4.6. Penampang profil terpakai kuda-kuda 1

#### 4.1.6 Perencanaan dukungan arah lateral

Diketahui :

$$L_b = \text{jarak antar gording} = 1,730 \text{ m}$$

$$L_c = \text{jarak antar kuda-kuda} = 3 \text{ m}$$

$$L = \sqrt{L_b^2 + L_c^2} = \sqrt{1,730^2 + 3^2}$$

$$= 3,463 \text{ m}$$

Syarat :  $\frac{L}{r} \leq 300$  sehingga :

$$r \text{ min} \geq \frac{L}{300} = \frac{346,3}{300} = 1,154 \text{ cm}$$

Keterangan :

1.  $L \leq 3 \text{ m} \rightarrow$  dipakai baja tulangan  $\text{Ø}12 \text{ mm}$
2.  $L \geq 5 \text{ m} \rightarrow$  dipakai baja tulangan  $\text{Ø}19 \text{ mm}$
3.  $3 \text{ m} < L = 3,463 \text{ m} \leq 5 \text{ m} \rightarrow$  dipakai baja tulangan  $\text{Ø}16 \text{ mm}$

Sehingga digunakan baja tulangan  $\text{Ø}16 \text{ mm}$

#### 4.1.7 Perencanaan sambungan

Perhitungan sambungan dilakukan pada setengah bentang pada tiap joint, diambil tebal pelat sambungan ( $t_p$ ) = 1 cm,  $f_y = 2400 \text{ kg/cm}^2$ ,  $F_u = 3700 \text{ kg/cm}^2$ . Mutu baut non full drat dari AISC A325,  $f_y = 2050 \text{ kg/cm}^2$  dan  $F_u = 8250 \text{ kg/cm}^2$ . Tegangan tumpu yang terjadi pada pelat :

$$F_a \text{ tumpu} = 1,2 \cdot F_u \text{ pelat} = 1,2 \cdot 3700 = 4440 \text{ kg/cm}^2$$

Diameter baut yang dipakai  $\frac{1}{2}$ " = 1,27 cm

Sehingga didapat kekuatan 1 baut untuk menahan gaya adalah :

$$P \text{ tumpu} = t_p \cdot \phi \text{ baut} \cdot F_a \text{ tumpu} = 1 \cdot 1,27 \cdot 4440 \\ = 5638,800 \text{ kg}$$

$$P \text{ geser} = \frac{1}{4} \cdot \pi \cdot D^2 \cdot 0,22 \cdot F_u \text{ baut} \cdot 2 = \frac{1}{4} \cdot 3,14 \cdot (1,27)^2 \cdot 0,22 \cdot 8250 \cdot 2 \\ = 4598,370 \text{ kg}$$

dipakai P yang kecil = 4598,370 kg maka, Jumlah baut =  $\frac{P}{4598,370}$  buah

Jarak penggunaan baut  $\frac{1}{2}$ " :

- Jarak baut ke tepi minimal  $1,2 \cdot D$

$$\text{diambil } 2D = 2 \cdot 1,27 = 2,540 \text{ cm} \sim \text{pakai } 3 \text{ cm}$$

- Jarak antar baut  $2D$  s/d  $7D$

$$\text{diambil } 4D = 4 \cdot 1,27 = 5,080 \text{ cm} \sim \text{pakai } 5 \text{ cm}$$

Hitungan jumlah baut dilakukan untuk setengah bentang karena bentang simetris.

##### 1. Joint 2

a. Batang (1) = - 201,018 kg

$$n = \frac{201,018}{4598,370} = 0,044 \sim \text{dipakai baut } 2 \text{ buah}$$

b. Batang (7) = 42,449 kg

$$n = \frac{42,449}{4598,370} = 0,009 \sim \text{dipakai baut 2 buah}$$

2. Joint 1

a. Batang (1) = - 201,018 kg

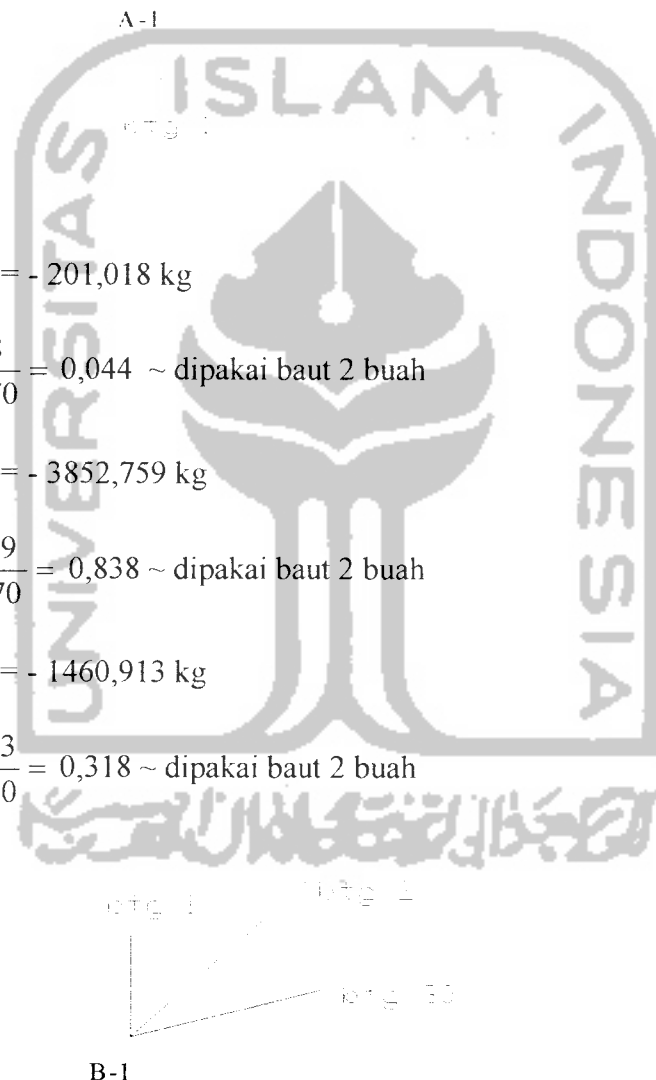
$$n = \frac{201,018}{4598,370} = 0,044 \sim \text{dipakai baut 2 buah}$$

b. Batang (2) = - 3852,759 kg

$$n = \frac{3852,759}{4598,370} = 0,838 \sim \text{dipakai baut 2 buah}$$

c. Batang (30) = - 1460,913 kg

$$n = \frac{1460,913}{4598,370} = 0,318 \sim \text{dipakai baut 2 buah}$$



Untuk sambungan pada joint berikutnya, dengan perhitungan yang sama didapat jumlah baut yang sama pula yaitu 2 buah, karena gaya-gaya batang yang terjadi kurang dari kekuatan 1 baut untuk menahan gaya.

Tabel 4.3. Jumlah baut terpakai pada setengah bentang kuda-kuda 1

Join	Batang	Gaya batang (kg)	Jumlah baut	Join	Batang	Gaya batang (kg)	Jumlah baut
2	1	- 201,018	2	1	1	- 201,018	2
	7	42,449	2		2	- 3852,759	2
7	7	42,449	2	30	- 1460,913	2	
	2	- 3852,759	2	30	- 1460,913	2	
	42	1061,657	2	26	42	1061,657	2
	8	- 3023,377	2	5	- 1273,680	2	
8	8	- 3023,377	2	29	- 681,112	2	
	5	- 1273,680	2	29	- 681,112	2	
	66	290,064	2	25	66	290,064	2
	9	- 3872,258	2	6	- 69,286	2	
9	9	- 3872,258	2	28	- 646,127	2	
	6	- 69,286	2	28	- 646,127	2	
	46	- 441,732	2	24	46	- 441,732	2
	10	- 3907,326	2	31	881,949	2	
	10	- 3907,326	2	27	- 1057,331	2	
10	31	881,949	2	27	- 1057,331	2	
	48	- 887,904	2	23	48	- 887,904	2
	11	- 3449,484	2	32	1398,961	2	
	11	- 3449,484	2	26	- 1639,128	2	
11	32	1398,961	2	26	- 1639,128	2	
	50	- 1278,585	2	22	50	- 1278,585	2
	12	- 2797,704	2	33	1811,616	2	
	12	- 2797,704	2	25	- 2314,637	2	
3	33	1811,616	2	25	- 2314,637	2	
	52	- 958,591	2	6	52	958,591	2
	34	1811,616	2	24	- 2314,637	2	
	13	- 2797,704	2				



## 4.2 Perencanaan Pelat Lantai dan Pelat Talang

### 4.2.1 Mutu bahan

1. Kuat tekan beton yang disyaratkan,  $f'c = 25 \text{ Mpa}$ .

2. Modulus elastisitas beton

$$E_c = 4700 \cdot \sqrt{f'c} = 4700 \cdot \sqrt{25} = 23500 \text{ Mpa} \\ = 2,396 \cdot 10^7 \text{ KN/m}^2.$$

3. Baja tulangan dengan  $f_y$  :

a. Baja tulangan  $\emptyset \leq 12 \text{ mm}$  digunakan tulangan polos dengan tegangan leleh ( $f_y$ ) = 240 Mpa.

b. Baja tulangan  $\emptyset \geq 12 \text{ mm}$  digunakan tulangan ulir (*deform*) dengan  $f_y = 400 \text{ Mpa}$ .

### 4.2.2 Pembebanan pelat lantai

1. Beban mati pelat lantai ( $q_D$ ).

a. berat pelat =  $0,12 \times 24 = 2,88 \text{ KN/m}^2$ .

b. berat pasir (5 cm) =  $0,05 \times 16 = 0,80 \text{ KN/m}^2$ .

c. berat spesi (3 cm) =  $0,03 \times 22 = 0,66 \text{ KN/m}^2$ .

d. berat keramik =  $0,01 \times 20 = 0,20 \text{ KN/m}^2$ .

$$q_D \text{ total} = \frac{\quad}{\quad} +$$

$$q_D \text{ total} = 4,54 \text{ KN/m}^2.$$

2. Beban hidup pelat lantai ( $q_L$ ).

Gedung ini berfungsi sebagai ruang kuliah dan kantor, sehingga beban hidup ( $q_L$ ) diambil sebesar  $250 \text{ Kg/cm}^2$  atau  $2,5 \text{ KN/m}^2$ . (PPIUG, 1983 tabel 3.1 halaman 17).

3. Kombinasi pembebanan (SK SNI T-15-1991-03, pasal 3.2.2).

$$q_U = 1,2.q_D + 1,6.q_L = 1,2.4,54 + 1,6.2,5 = 9,448 \text{ KNm.}$$

4. Tinggi manfaat pelat.

a. Pakai tulangan pokok  $\varnothing$  10 mm.

b. Penutup beton ( $P_b$ ) = 20 mm.

c. Tinggi Manfaat tulangan pelat :

$$\begin{aligned} 1) \text{ Arah lapangan x : } dx &= h - P_b - \frac{1}{2} \cdot \varnothing_{tul.x} \\ &= 120 - 20 - \frac{1}{2} \cdot 10 = 95 \text{ mm.} \end{aligned}$$

$$\begin{aligned} 2) \text{ Arah lapangan y : } dy &= h - P_b - \varnothing_{tul.y} - \frac{1}{2} \cdot \varnothing_{tul.y} \\ &= 120 - 20 - 10 - \frac{1}{2} \cdot 10 = 85 \text{ mm.} \end{aligned}$$

3) Arah tumpuan x dan y = 95 mm.

#### 4.2.3 Perencanaan pelat lantai

1. Perencanaan pelat lantai tipe I (ukuran 4,5m x 3,0 m).

a. Menentukan tebal pelat minimum ( $h$ ).

Pada SK SNI T-15-1991-03 pasal 3.2.5 butir 3.3 memberikan pendekatan empiris mengenai batasan defleksi dilakukan dengan tebal pelat minimum sebagai berikut :

$$\beta = \frac{4,5}{3,0} = 1,5$$

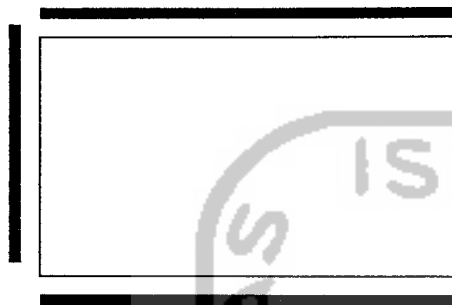
Perkiraan tebal pelat ( $h$ ) :

$$\begin{aligned} h_{\min} &= \frac{Ln.(0,8 + f_y/1500)}{36 + 9.\beta} \\ &= \frac{3000.(0,8 + 240/1500)}{36 + 9.1,5} = 58,1818 \text{ mm.} \end{aligned}$$

$h \geq h_{\min}$ , digunakan  $h = 12 \text{ cm} = 120 \text{ mm}$ .

b. Distribusi Momen.

Pelat dianggap terjepit elastis pada keempat sisinya.



Dihitung sebagai pelat

$L_x = 3,0 \text{ m}$  dua (2) arah.

$$\frac{L_y}{L_x} = \frac{4,5}{3,0} = 1,5 \text{ m.}$$

$$L_y = 4,5 \text{ m}$$

Dari tabel 13.3.1 dan 13.3.2 PBBI 1971 didapat faktor :

$L_y / L_x$	1,5
$M_{lx} = -M_{tx}$	56
$M_{ly}$	37
$-M_{ty}$	37

$$M_u = 0,001 \cdot qU \cdot L_x^2 \cdot x$$

$$M_{lx} = -M_{tx} = 0,001 \cdot 9,448 \cdot 3^2 \cdot 56 = 4,7618 \text{ KNm.}$$

$$M_{ly} = -M_{ty} = 0,001 \cdot 9,448 \cdot 3^2 \cdot 37 = 3,1462 \text{ KNm.}$$

c. Perencanaan tulangan arah  $M_{lx}$  dan  $M_{tx}$ .

$$M_u = 4,7618 \text{ KNm.}$$

$$M_n = \frac{M_u}{\Phi}$$

$$= \frac{4,7618}{0,8} = 5,9523 \text{ KNm.}$$

$$h = 120 \text{ mm.}$$

$$d = h - P_b - \frac{1}{2} \cdot \text{Øtul.} \cdot x = 120 - 20 - \frac{1}{2} \cdot 10 = 95 \text{ mm.}$$

$$\begin{aligned} \rho_b &= \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) \\ &= \frac{0,85 \cdot 25}{240} \cdot 0,85 \cdot \left( \frac{600}{600 + 240} \right) = 0,054. \end{aligned}$$

$$\rho_{\max} = 0,75 \cdot \rho_b = 0,75 \cdot 0,054 = 0,0405.$$

$$\rho_{\min} = \frac{1,4}{f_y} = \frac{1,4}{240} = 0,0058.$$

- Menentukan luas tulangan (As).

$$R_n = \frac{Mu/\phi}{b \cdot d^2} = \frac{5,9523 \cdot 10^6}{1000 \cdot 95^2} = 0,6595 \text{ Mpa.}$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{240}{0,85 \cdot 25} = 11,2941.$$

$$\rho_{\text{ada}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right].$$

$$= \frac{1}{11,2941} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 11,2941 \cdot 0,6595}{240}} \right]$$

$$= 0,0028 \leq \rho_{\min} = 0,0058.$$

$$\leq \rho_{\max} = 0,0405$$

$$1,33 \cdot \rho_{\text{ada}} = 1,33 \cdot 0,0028 = 0,0037.$$

$$\rho_{\text{ada}} < \rho_{\min}.$$

$$\left. \begin{array}{l} \rho_{\text{ada}} < \rho_{\min} \\ 1,33 \cdot \rho_{\text{ada}} < \rho_{\min} \end{array} \right\} \rho_{\text{pakai}} = 1,33 \cdot \rho_{\text{ada}} = 0,0037.$$

$$1,33 \cdot \rho_{\text{ada}} < \rho_{\min}.$$

$$\text{As pakai} = \rho_{\text{pakai}} \cdot b \cdot d = 0,0037 \cdot 1000 \cdot 95 = 351,50 \text{ mm}^2.$$

$$\begin{aligned} \text{Pakai tulangan P.10} \rightarrow A1.\phi &= \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 10^2 \\ &= 78,54 \text{ mm}^2. \end{aligned}$$

$$\begin{aligned} \text{Jarak tulangan (S)} &= \frac{A1.\phi.1000}{A_{spakai}} = \frac{78,54.1000}{351,5} \\ &= 223,4424 \text{ mm} < 2.h = 2 \cdot 120 = 240 \text{ mm} \\ &< 250 \text{ mm}. \end{aligned}$$

Jadi pakai jarak (S) = 220 mm  $\rightarrow$  **P 10 - 220 mm.**

$$A_{s \text{ ada}} = \frac{78,54.1000}{220} = 357 \text{ mm}^2.$$

▪ Kontrol Mn

$$a = \frac{A_{s \text{ ada}} \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{357 \cdot 240}{0,85 \cdot 25 \cdot 1000} = 4,032 \text{ mm}.$$

$$\begin{aligned} M_n &= A_{s \text{ ada}} \cdot f_y \cdot (d - a/2) \\ &= 357 \cdot 240 \cdot (95 - 4,032/2) \\ &= 7,9669 \text{ KNm} > 1,33 \cdot \frac{M_u}{\phi} = 1,33 \cdot 5,9523 = 7,9166 \text{ KNm}. \end{aligned}$$

d. Perencanaan tulangan arah Mly.

$$M_u = 3,1462 \text{ KNm}.$$

$$M_n = \frac{M_u}{\Phi} = \frac{3,1462}{0,8} = 3,9328 \text{ KNm}.$$

$$h = 120 \text{ mm}.$$

$$d = h - P_b - \frac{1}{2} \cdot \phi_{tul.y} - \phi_{tul.x} = 120 - 20 - \frac{1}{2} \cdot 10 - 10 = 85 \text{ mm}.$$

$$\begin{aligned} \rho_b &= \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) = \frac{0,85 \cdot 25}{240} \cdot 0,85 \cdot \left( \frac{600}{600 + 240} \right) \\ &= 0,054. \end{aligned}$$

$$\rho_{\max} = 0,75 \cdot \rho_b = 0,75 \cdot 0,043 = 0,0405.$$

$$\rho_{\min} = \frac{1,4}{f_y} = \frac{1,4}{240} = 0,0058.$$

- Menentukan luas tulangan ( $A_s$ ).

$$R_n = \frac{Mu/\phi}{b \cdot d^2} = \frac{3,9328 \cdot 10^6}{1000 \cdot 85^2} = 0,5443 \text{ Mpa.}$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{240}{0,85 \cdot 25} = 11,2941.$$

$$\rho_{\text{ada}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right]$$

$$= \frac{1}{11,2941} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 11,2941 \cdot 0,5443}{240}} \right]$$

$$= 0,0023 \leq \rho_{\min} = 0,0058.$$

$$\leq \rho_{\max} = 0,0405$$

$$1,33 \cdot \rho_{\text{ada}} = 1,33 \cdot 0,0023 = 0,0031.$$

$$\rho_{\text{ada}} < \rho_{\min}.$$

$$\left. \begin{array}{l} \rho_{\text{pakai}} = 1,33 \cdot \rho_{\text{ada}} = 0,0031. \\ 1,33 \cdot \rho_{\text{ada}} < \rho_{\min}. \end{array} \right\}$$

$$A_{s \text{ pakai}} = \rho_{\text{pakai}} \cdot b \cdot d = 0,0031 \cdot 1000 \cdot 85 = 263,5 \text{ mm}^2.$$

$$\text{Pakai tulangan P.10} \rightarrow A1 \cdot \phi = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 10^2$$

$$= 78,54 \text{ mm}^2.$$

$$\text{Jarak tulangan (S)} = \frac{A1 \cdot \phi \cdot 1000}{A_{s \text{ pakai}}} = \frac{78,54 \cdot 1000}{263,5}$$

$$= 298,0645 \text{ mm} > 2 \cdot h = 2 \cdot 120 = 240 \text{ mm}$$

$$> 250 \text{ mm.}$$

Jadi pakai jarak (S) = 240 mm → **P 10 - 240 mm.**

$$As \text{ ada} = \frac{78,54 \cdot 1000}{240} = 327,25 \text{ mm}^2.$$

▪ Kontrol Mn

$$a = \frac{As \text{ ada} \cdot fy}{0,85 \cdot f'c \cdot b} = \frac{327,250 \cdot 240}{0,85 \cdot 25 \cdot 1000} = 3,696 \text{ mm}.$$

$$\begin{aligned} Mn &= As \text{ ada} \cdot fy \cdot (d - a/2) \\ &= 327,25 \cdot 240 \cdot (85 - 3,696/2) \\ &= 6,5308 \text{ KNm} > 1,33 \cdot \frac{Mu}{\phi} = 1,33 \cdot 3,9328 = 5,2306 \text{ KNm} \end{aligned}$$

e. Perencanaan tulangan arah Mty.

$$Mu = 3,1462 \text{ KNm}.$$

$$Mn = \frac{Mu}{\Phi} = \frac{3,1462}{0,8} = 3,9328 \text{ KNm}.$$

$$h = 120 \text{ mm}.$$

$$d = h - Pb - \frac{1}{2} \cdot \text{Øtul} \cdot y = 120 - 20 - \frac{1}{2} \cdot 10 = 95 \text{ mm}.$$

$$\begin{aligned} \rho_b &= \frac{0,85 \cdot f'c}{fy} \cdot \beta_1 \cdot \left( \frac{600}{600 + fy} \right) \\ &= \frac{0,85 \cdot 25}{240} \cdot 0,85 \cdot \left( \frac{600}{600 + 240} \right) = 0,054. \end{aligned}$$

$$\rho_{\max} = 0,75 \cdot \rho_b = 0,75 \cdot 0,043 = 0,0405.$$

$$\rho_{\min} = \frac{1,4}{fy} = \frac{1,4}{240} = 0,0058.$$

- Menentukan luas tulangan (As).

$$R_n = \frac{Mu/\phi}{b \cdot d^2} = \frac{3,9328 \cdot 10^6}{1000 \cdot 95^2} = 0,4358 \text{ Mpa.}$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{240}{0,85 \cdot 25} = 11,2941.$$

$$\rho_{\text{ada}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right]$$

$$= \frac{1}{11,2941} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 11,2941 \cdot 0,4358}{240}} \right]$$

$$= 0,0018 \leq \rho_{\text{min}} = 0,0058.$$

$$\leq \rho_{\text{max}} = 0,0405$$

$$1,33 \cdot \rho_{\text{ada}} = 1,33 \cdot 0,0018 = 0,0024.$$

$$\rho_{\text{ada}} < \rho_{\text{min}}.$$

$$\left. \begin{array}{l} \rho_{\text{ada}} < \rho_{\text{min}} \\ 1,33 \cdot \rho_{\text{ada}} < \rho_{\text{min}} \end{array} \right\} \rho_{\text{pakai}} = 1,33 \cdot \rho_{\text{ada}} = 0,0024.$$

$$1,33 \cdot \rho_{\text{ada}} < \rho_{\text{min}}.$$

$$A_s \text{ pakai} = \rho_{\text{pakai}} \cdot b \cdot d = 0,0024 \cdot 1000 \cdot 95 = 228 \text{ mm}^2.$$

$$\text{Pakai tulangan P.10} \rightarrow A1 \cdot \phi = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 10^2$$

$$= 78,54 \text{ mm}^2.$$

$$\text{Jarak tulangan (S)} = \frac{A1 \cdot \phi \cdot 1000}{A_{\text{pakai}}} = \frac{78,54 \cdot 1000}{228}$$

$$= 344,4737 \text{ mm} > 2 \cdot h = 2 \cdot 120 = 240 \text{ mm}$$

$$> 250 \text{ mm.}$$

Jadi pakai jarak (S) = 240 mm → **P 10 - 240 mm.**

$$A_s \text{ ada} = \frac{78,54 \cdot 1000}{240} = 327,25 \text{ mm}^2.$$



▪ Kontrol Mn

$$a = \frac{Asada \cdot fy}{0,85 \cdot f'c \cdot b} = \frac{327,250 \cdot 240}{0,85 \cdot 25 \cdot 1000} = 3,696 \text{ mm.}$$

$$Mn = Asada \cdot fy \cdot (d - a/2).$$

$$= 327,25 \cdot 240 \cdot (95 - 3,696/2).$$

$$= 7,3162 \text{ KNm} > 1,33 \cdot \frac{Mu}{\phi} = 1,33 \cdot 3,9328 = 5,2306 \text{ KNm.}$$

f. Perencanaan tulangan bagi pelat lantai.

$$As \text{ bagi} = 0,002 \cdot b \cdot h$$

$$= 0,002 \cdot 1000 \cdot 120 = 240 \text{ mm}^2.$$

$$\text{Dipakai P 8} \rightarrow A1 \cdot \phi = 50,27 \text{ mm}^2.$$

$$\text{Jarak tulangan} = \frac{A1 \cdot \phi \cdot 1000}{As \text{ bagi}} = \frac{50,27 \cdot 1000}{240} = 209,4583 \text{ mm.}$$

Jadi dipakai tulangan bagi : **P 8 – 200 mm.**

$$As = \frac{50,27 \cdot 1000}{200} = 251,35 \text{ mm}^2 > 240 \text{ mm}^2.$$

#### 4.2.4 Pembebanan pelat talang

1. Beban mati pelat talang (qD).

a. berat pelat =  $0,10 \times 24 = 2,40 \text{ KN/m}^2$ .

b. lapisan kedap air (2 cm) =  $0,02 \times 22 = 0,44 \text{ KN/m}^2$ . +

$$qD \text{ total} = 2,84 \text{ KN/m}^2.$$

2. Beban hidup pelat talang (qL).

Pada pelat talang beban hidup berupa pekerja atau air hujan (qL) sebesar  $100 \text{ kg/cm}^2$  atau  $1 \text{ KN/m}^2$  (PPIUG, 1983 tabel 3.1, halaman 17).

3. Kombinasi pembebanan (SK SNI T-15-1991-03, pasal 3.2.2).

$$q_U = 1,2 \cdot q_D + 1,6 \cdot q_L = 1,2 \cdot 2,84 + 1,6 \cdot 1,0 = 5,008 \text{ KNm.}$$

4. Tinggi manfaat pelat.

a. pakai tulangan pokok  $\varnothing$  8 mm.

b. penutup beton (Pb) = 20 mm.

c. Tinggi Manfaat tulangan pelat :

$$\begin{aligned} 1) \text{ Arah lapangan x : } dx &= h - Pb - \frac{1}{2} \cdot \varnothing_{tul.x} \\ &= 100 - 20 - \frac{1}{2} \cdot 8 = 76 \text{ mm.} \end{aligned}$$

$$\begin{aligned} 2) \text{ Arah lapangan y : } dy &= h - Pb - \varnothing_{tul.y} - \frac{1}{2} \cdot \varnothing_{tul.y} \\ &= 100 - 20 - 8 - \frac{1}{2} \cdot 8 = 68 \text{ mm.} \end{aligned}$$

3) Arah tumpuan x dan y = 76 mm.

#### 4.2.5 Perencanaan pelat talang

1. Perencanaan pelat talang tipe I (ukuran 3,0m x 1,8m).

a. Menentukan tebal pelat minimum (h).

Pada SK SNI T-15-1991-03 pasal 3.2.5 butir 3.3 memberikan pendekatan empiris mengenai batasan defleksi dilakukan dengan tebal pelat minimum sebagai berikut :

$$\beta = \frac{3,0}{1,8} = 1,667$$

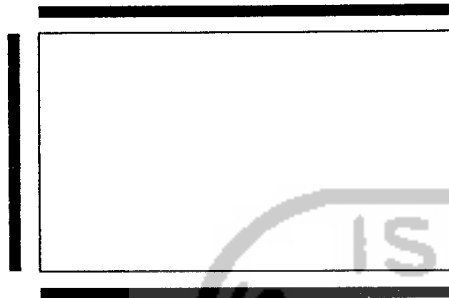
Perkiraan tebal pelat (h) :

$$\begin{aligned} h_{\min} &= \frac{Ln.(0,8 + fy/1500)}{36 + 9.\beta} \\ &= \frac{1800.(0,8 + 240/1500)}{36 + 9.1,6667} = 33,882 \text{ mm.} \end{aligned}$$

$h \geq h_{\min}$ , digunakan  $h = 10 \text{ cm} = 100 \text{ mm}$ .

b. Distribusi momen.

Pelat dianggap terjepit elastis pada keempat sisinya.



Dihitung sebagai pelat

$L_x = 3,0 \text{ m}$  dua (2) arah.

$$\frac{L_y}{L_x} = \frac{3,0}{1,8} = 1,6667 \text{ m.}$$

$L_y = 4,5 \text{ m}$

Dari tabel 13.3.1 dan 13.3.2 PBBI 1971 didapat faktor :

$L_y / L_x$	1,6	1.6667	1.7
$M_{lx} = -M_{tx}$	58	58,667	59
$M_{ly}$	36	36	36
$-M_{ty}$	36	36	36

$$M_u = 0,001 \cdot qU \cdot L_x^2 \cdot x$$

$$M_{lx} = -M_{tx} = 0,001 \cdot 5,008 \cdot 1,8^2 \cdot 58,6667 = 0,9519 \text{ KNm.}$$

$$M_{ly} = -M_{ty} = 0,001 \cdot 5,008 \cdot 1,8^2 \cdot 36 = 0,5841 \text{ KNm.}$$

c. Perencanaan tulangan arah  $M_{lx}$  dan  $M_{tx}$ .

$$M_u = 0,9519 \text{ KNm.}$$

$$M_n = \frac{M_u}{\Phi}$$

$$= \frac{0,9519}{0,8} = 1,1899 \text{ KNm.}$$

$$h = 100 \text{ mm.}$$

$$d = h - P_b - \frac{1}{2} \cdot \phi_{tul} \cdot x = 100 - 20 - \frac{1}{2} \cdot 8 = 76 \text{ mm.}$$

$$\rho_b = \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) = \frac{0,85 \cdot 25}{240} \cdot 0,85 \cdot \left( \frac{600}{600 + 240} \right)$$

$$= 0,054.$$

$$\rho_{\max} = 0,75 \cdot \rho_b = 0,75 \cdot 0,043 = 0,0405.$$

$$\rho_{\min} = \frac{1,4}{f_y} = \frac{1,4}{240} = 0,0058.$$

- Menentukan luas tulangan (As).

$$R_n = \frac{Mu/\phi}{b \cdot d^2} = \frac{1,1899 \cdot 10^6}{1000 \cdot 76^2} = 0,206 \text{ Mpa.}$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{240}{0,85 \cdot 25} = 11,2941.$$

$$\rho_{\text{ada}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right]$$

$$= \frac{1}{11,2941} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 11,2941 \cdot 0,206}{240}} \right]$$

$$= 0,0009 \leq \rho_{\min} = 0,0058.$$

$$\leq \rho_{\max} = 0,0323$$

$$1,33 \cdot \rho_{\text{ada}} = 1,33 \cdot 0,0009 = 0,0012.$$

$$\rho_{\text{ada}} < \rho_{\min}.$$

$$\left. \begin{array}{l} \rho_{\text{ada}} < \rho_{\min} \\ 1,33 \cdot \rho_{\text{ada}} < \rho_{\min} \end{array} \right\} \rho_{\text{pakai}} = 1,33 \cdot \rho_{\text{ada}} = 0,0012.$$

$$1,33 \cdot \rho_{\text{ada}} < \rho_{\min}.$$

$$A_s \text{ pakai} = \rho_{\text{pakai}} \cdot b \cdot d = 0,0012 \cdot 1000 \cdot 76 = 91,2 \text{ mm}^2.$$

$$\text{Pakai tulangan P.8} \rightarrow A_1 \cdot \emptyset = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 8^2$$

$$= 50,27 \text{ mm}^2.$$

$$\begin{aligned} \text{Jarak tulangan (S)} &= \frac{A1 \cdot \phi \cdot 1000}{A_{spakai}} = \frac{50,27 \cdot 1000}{91,2} \\ &= 551,2061 \text{ mm} > 2 \cdot h = 2 \cdot 100 = 200 \text{ mm} \\ &> 250 \end{aligned}$$

Jadi pakai jarak (S) = 200 mm → **P 8 - 200 mm.**

$$A_s \text{ ada} = \frac{50,27 \cdot 1000}{200} = 251,35 \text{ mm}^2.$$

▪ Kontrol Mn

$$a = \frac{A_s \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{251,350 \cdot 240}{0,85 \cdot 25 \cdot 1000} = 2,8388 \text{ mm.}$$

$$\begin{aligned} M_n &= A_s \text{ ada} \cdot f_y \cdot (d - a/2) \\ &= 251,35 \cdot 240 \cdot (76 - 2,8388/2) \\ &= 4,499 \text{ KNm} > 1,33 \cdot \frac{M_u}{\phi} = 1,33 \cdot 1,1899 = 1,5826 \text{ KNm.} \end{aligned}$$

d. Perencanaan tulangan arah Mly.

$$M_u = 0,5841 \text{ KNm.}$$

$$M_n = \frac{M_u}{\Phi} = \frac{0,5841}{0,8} = 0,7301 \text{ KNm.}$$

$$h = 100 \text{ mm.}$$

$$d = h - P_b - \frac{1}{2} \cdot \phi_{tul.y} - \phi_{tul.x} = 100 - 20 - \frac{1}{2} \cdot 8 - 8 = 68 \text{ mm.}$$

$$\begin{aligned} \rho_b &= \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) \\ &= \frac{0,85 \cdot 20}{240} \cdot 0,85 \cdot \left( \frac{600}{600 + 240} \right) = 0,054. \end{aligned}$$

$$\rho_{\max} = 0,75 \cdot \rho_b = 0,75 \cdot 0,043 = 0,0405.$$

$$\rho_{\min} = \frac{1,4}{f_y} = \frac{1,4}{240} = 0,0058.$$

- Menentukan luas tulangan (As).

$$R_n = \frac{Mu/\phi}{b \cdot d^2} = \frac{0,7301 \cdot 10^6}{1000 \cdot 68^2} = 0,1579 \text{ Mpa.}$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{240}{0,85 \cdot 25} = 11,2941.$$

$$\rho_{\text{ada}} = \frac{1}{m} \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right]$$

$$= \frac{1}{11,2941} \left[ 1 - \sqrt{1 - \frac{2 \cdot 11,2941 \cdot 0,1579}{240}} \right]$$

$$= 0,0007 \leq \rho_{\min} = 0,0058.$$

$$\leq \rho_{\max} = 0,0323$$

$$1,33 \cdot \rho_{\text{ada}} = 1,33 \cdot 0,0007 = 0,0009.$$

$$\rho_{\text{ada}} < \rho_{\min}.$$

$$\left. \begin{array}{l} \rho_{\text{ada}} < \rho_{\min} \\ 1,33 \cdot \rho_{\text{ada}} < \rho_{\min} \end{array} \right\} \rho_{\text{pakai}} = 1,33 \cdot \rho_{\text{ada}} = 0,009.$$

$$A_s \text{ pakai} = \rho_{\text{pakai}} \cdot b \cdot d = 0,0009 \cdot 1000 \cdot 68 = 61,2 \text{ mm}^2.$$

$$\text{Pakai tulangan P.8} \rightarrow A1 \cdot \emptyset = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 8^2$$

$$= 50,27 \text{ mm}^2.$$

$$\text{Jarak tulangan(S)} = \frac{A1 \cdot \phi \cdot 1000}{A_{\text{pakai}}} = \frac{50,27 \cdot 1000}{91,2}$$

$$= 821,4052 \text{ mm} > 2 \cdot h = 2 \cdot 100 = 200 \text{ mm}$$

$$> 250 \text{ mm.}$$

Jadi pakai jarak (S) = 200 mm → **P 8 - 200 mm.**

$$A_s \text{ ada} = \frac{50,27 \cdot 1000}{200} = 251,35 \text{ mm}^2.$$

▪ Kontrol Mn

$$a = \frac{A_s \text{ ada} \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{251,35 \cdot 240}{0,85 \cdot 25 \cdot 1000} = 2,8388 \text{ mm}.$$

$$M_n = A_s \text{ ada} \cdot f_y \cdot (d - a/2).$$

$$= 251,35 \cdot 240 \cdot (68 - 2,8388/2).$$

$$= 4,0164 \text{ KNm} > 1,33 \cdot \frac{M_u}{\phi} = 1,33 \cdot 0,7301 = 0,971 \text{ KNm}$$

e. Perencanaan tulangan arah M<sub>ty</sub>.

$$M_u = 0,5841 \text{ KNm}.$$

$$M_n = \frac{M_u}{\Phi} = \frac{0,5841}{0,8} = 0,7301 \text{ KNm}.$$

$$h = 100 \text{ mm}.$$

$$d = h - p_b - \frac{1}{2} \cdot \phi_{tul} \cdot y = 100 - 20 - \frac{1}{2} \cdot 8 = 76 \text{ mm}.$$

$$\rho_b = \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right)$$

$$= \frac{0,85 \cdot 25}{240} \cdot 0,85 \cdot \left( \frac{600}{600 + 240} \right) = 0,054.$$

$$\rho_{\text{max}} = 0,75 \cdot \rho_b = 0,75 \cdot 0,043 = 0,0405.$$

$$\rho_{\text{min}} = \frac{1,4}{f_y} = \frac{1,4}{240} = 0,0058.$$

▪ Menentukan luas tulangan (A<sub>s</sub>).

$$R_n = \frac{M_u / \phi}{b \cdot d^2} = \frac{0,7301 \cdot 10^6}{1000 \cdot 76^2} = 0,1264 \text{ Mpa}.$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{240}{0,85 \cdot 25} = 11,2941.$$

$$\rho_{\text{ada}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right].$$

$$= \frac{1}{11,2941} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 11,2941 \cdot 0,1264}{240}} \right]$$

$$= 0,0005 \leq \rho_{\text{min}} = 0,0058.$$

$$\leq \rho_{\text{max}} = 0,0323$$

$$1,33 \cdot \rho_{\text{ada}} = 1,33 \cdot 0,0005 = 0,0007.$$

$$\rho_{\text{ada}} < \rho_{\text{min}}.$$

$$\rho_{\text{pakai}} = 1,33 \cdot \rho_{\text{ada}} = 0,0007.$$

$$1,33 \cdot \rho_{\text{ada}} < \rho_{\text{min}}.$$

$$A_s \text{ pakai} = \rho_{\text{pakai}} \cdot b \cdot d = 0,0007 \cdot 1000 \cdot 76 = 53,2 \text{ mm}^2.$$

$$\begin{aligned} \text{Pakai tulangan P.8} \rightarrow A_1 \cdot \phi &= \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 8^2 \\ &= 50,27 \text{ mm}^2. \end{aligned}$$

$$\text{Jarak tulangan (S)} = \frac{A_1 \cdot \phi \cdot 1000}{A_{\text{pakai}}} = \frac{50,27 \cdot 1000}{53,2}$$

$$= 944,9248 \text{ mm} > 2 \cdot h = 2 \cdot 100 = 200 \text{ mm}$$

$$> 250 \text{ mm}.$$

Jadi pakai jarak (S) = 200 mm → **P 8 - 200 mm.**

$$A_s \text{ ada} = \frac{50,27 \cdot 1000}{200} = 251,35 \text{ mm}^2.$$

#### ▪ Kontrol Mn

$$a = \frac{A_s \text{ ada} \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{251,35 \cdot 240}{0,85 \cdot 25 \cdot 1000} = 2,8388 \text{ mm}.$$



### 4.3. Pembebanan Balok Induk dan Anak

#### 1. Beban pada balok lantai.

##### a. Beban mati (qD) :

$$1) \text{ berat pelat lantai} = 0,12 \times 24 = 2,88 \text{ KN/m}^2.$$

$$2) \text{ berat pasir (5cm)} = 0,05 \times 16 = 0,80 \text{ KN/m}^2.$$

$$3) \text{ berat spesi (3cm)} = 0,03 \times 22 = 0,66 \text{ KN/m}^2.$$

$$4) \text{ berat keramik} = 0,01 \times 20 = 0,20 \text{ KN/m}^2.$$

$$\text{qD total} = 4,54 \text{ KN/m}^2.$$

$$= 454 \text{ Kg/m}^2$$

##### b. Beban dinding / partisi (pasangan ½ bata).

$$Q \text{ din} = B_j \text{ bata} \times \text{Tinggi tembok}$$

$$= 2,5 \cdot (4,2 - 0,6) = 9 \text{ KN/m} = 900 \text{ Kg/m}.$$

##### c. Beban hidup (qL) = 250 Kg/m<sup>2</sup>.

##### d. Tipe beban pada balok lantai.

##### 1) Tipe I

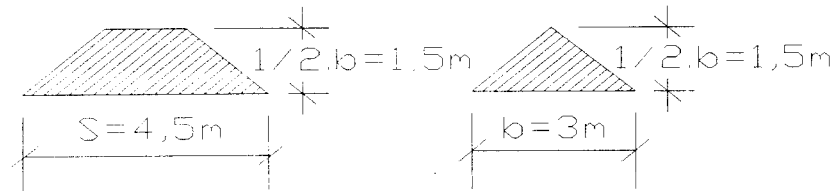


Beban mati (qD) :

$$q_1 (D) = qD \cdot \frac{1}{2} \cdot b \cdot 2 = 454 \cdot \frac{1}{2} \cdot 3 \cdot 2 = 1362 \text{ Kg/m}.$$

Beban hidup (qL) :

$$q_1 (L) = qL \cdot \frac{1}{2} \cdot b \cdot 2 = 250 \cdot \frac{1}{2} \cdot 3 \cdot 2 = 750 \text{ Kg/m}.$$

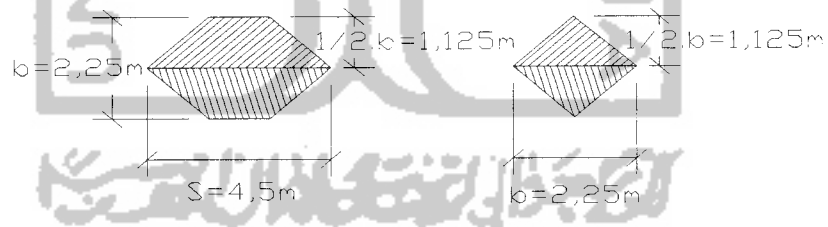
2) Tipe II.

Beban mati ( $q_D$ ) :

$$q_2(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 3 = 681 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_2(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 3 = 375 \text{ Kg/m.}$$

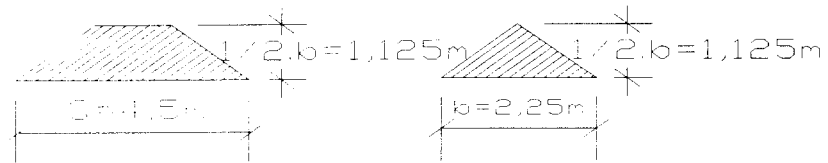
3) Tipe III.

Beban mati ( $q_D$ ) :

$$q_3(D) = q_D \cdot \frac{1}{2} \cdot b \cdot 2 = 454 \cdot \frac{1}{2} \cdot 2,25 \cdot 2 = 1021,5 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_3(L) = q_L \cdot \frac{1}{2} \cdot b \cdot 2 = 250 \cdot \frac{1}{2} \cdot 2,25 \cdot 2 = 562,5 \text{ Kg/m.}$$

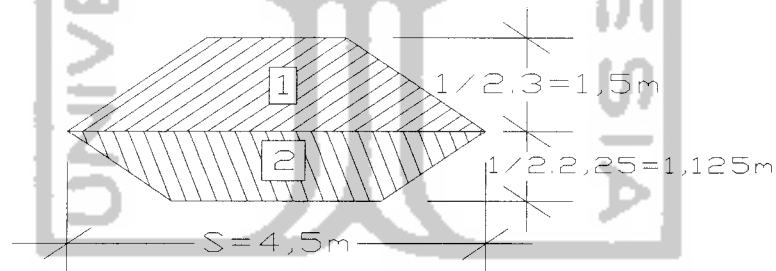
4) Tipe IV.

Beban mati (qD) :

$$q_4(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 2,25 = 510,75 \text{ Kg/m.}$$

Beban hidup (qL) :

$$q_4(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 2,25 = 281,25 \text{ Kg/m.}$$

5) Tipe V.

Beban mati (qD) :

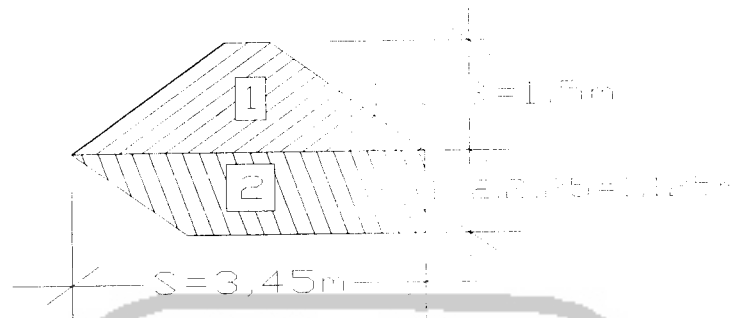
$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 3 = 681 \text{ Kg/m.}$$

$$q_5(D2) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 2,25 = 510,75 \text{ Kg/m}$$

Beban hidup (qL) :

$$q_5(L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 3 = 375 \text{ Kg/m.}$$

$$q_5(L2) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 2,25 = 281,25 \text{ Kg/m.}$$

6) Tipe VI.

Beban mati ( $q_D$ ):

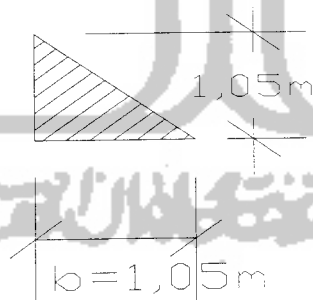
$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 3 = 681 \text{ Kg/m.}$$

$$q_5(D2) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 2,25 = 510,75 \text{ Kg/m}$$

Beban hidup ( $q_L$ ):

$$q_5(L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 3 = 375 \text{ Kg/m.}$$

$$q_5(L2) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 2,25 = 281,25 \text{ Kg/m.}$$

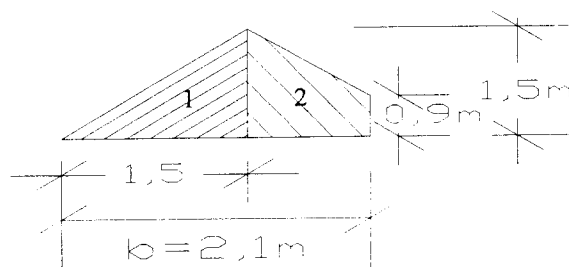
7) Tipe VII.

Beban mati ( $q_D$ ):

$$q_4(D) = q_D \cdot b = 454 \cdot 1,05 = 476,7 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ):

$$q_4(L) = q_L \cdot b = 250 \cdot 1,05 = 262,5 \text{ Kg/m.}$$

8) Tipe VIII.

Beban mati (qD) :

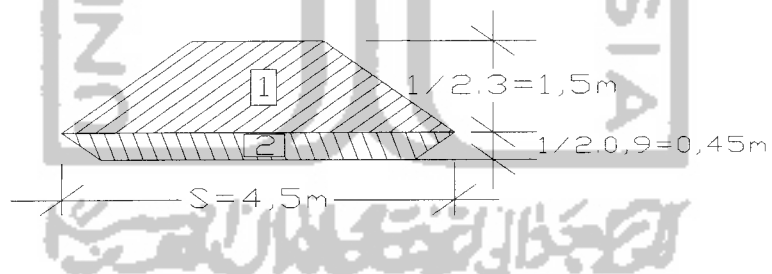
$$q_5 (D1) = qD \cdot 1,5 = 454 \cdot 1,5 = 681 \text{ Kg/m.}$$

$$q_5 (D2) = qD \cdot 0,9 = 454 \cdot 0,9 = 408,6 \text{ Kg/m}$$

Beban hidup (qL) :

$$q_5 (L1) = qL \cdot 1,5 = 250 \cdot 1,5 = 375 \text{ Kg/m.}$$

$$q_5 (L2) = qL \cdot 0,9 = 250 \cdot 0,9 = 225 \text{ Kg/m.}$$

9) Tipe IX.

Beban mati (qD) :

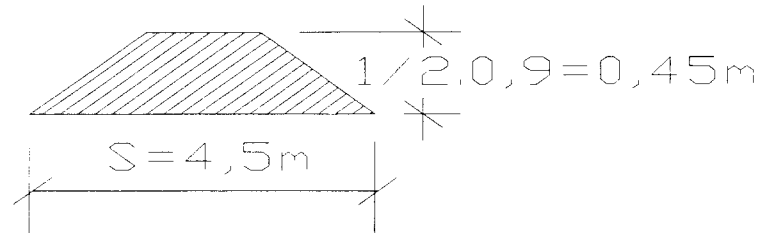
$$q_5 (D1) = qD \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 3 = 681 \text{ Kg/m.}$$

$$q_5 (D2) = qD \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m}$$

Beban hidup (qL) :

$$q_5 (L1) = qL \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 3 = 375 \text{ Kg/m.}$$

$$q_5 (L2) = qL \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

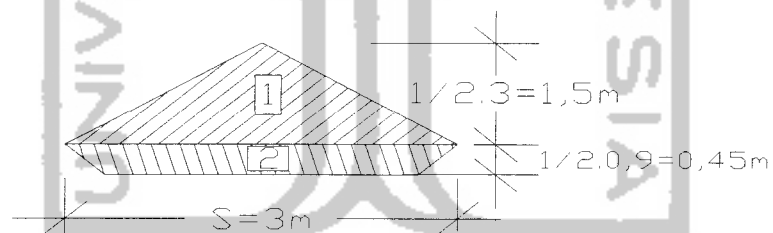
10) Tipe X.

Beban mati (qD) :

$$q_2(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m.}$$

Beban hidup (qL) :

$$q_2(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

11) Tipe XI.

Beban mati (qD) :

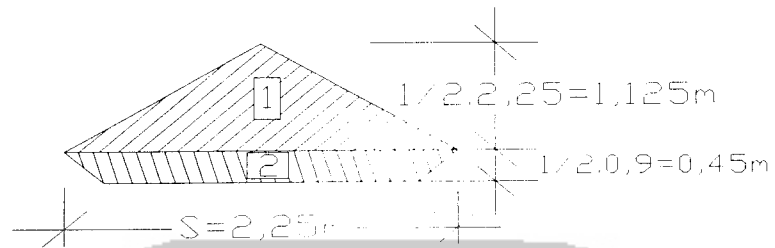
$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 3 = 681 \text{ Kg/m.}$$

$$q_5(D2) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m}$$

Beban hidup (qL) :

$$q_5(L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 3 = 375 \text{ Kg/m.}$$

$$q_5(L2) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

12) Tipe XII.

Beban mati ( $q_D$ ) :

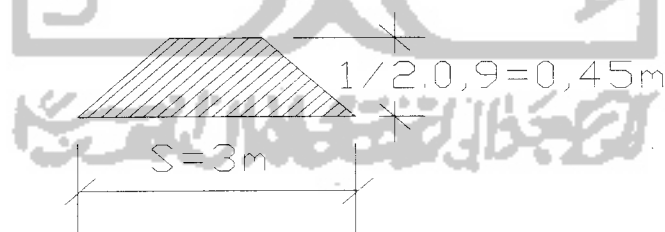
$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 2,25 = 510,75 \text{ Kg/m.}$$

$$q_5(D2) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m}$$

Beban hidup ( $q_L$ ) :

$$q_5(L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 2,25 = 281,25 \text{ Kg/m.}$$

$$q_5(L2) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

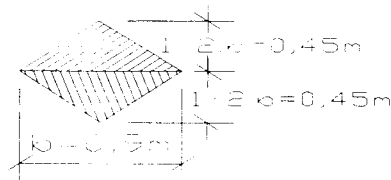
13) Tipe XIII.

Beban mati ( $q_D$ ) :

$$q_2(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_2(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

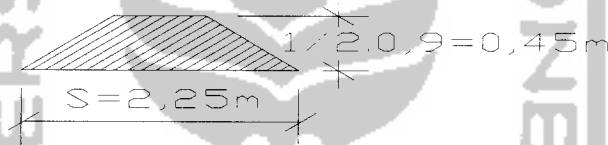
14) Tipe XIV.

Beban mati ( $q_D$ ) :

$$q_1(D) = q_D \cdot \frac{1}{2} \cdot b \cdot 2 = 454 \cdot \frac{1}{2} \cdot 0,9 \cdot 2 = 408,6 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_1(L) = q_L \cdot \frac{1}{2} \cdot b \cdot 2 = 250 \cdot \frac{1}{2} \cdot 0,9 \cdot 2 = 225 \text{ Kg/m.}$$

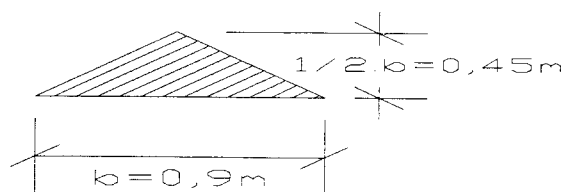
15) Tipe XV.

Beban mati ( $q_D$ ) :

$$q_2(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_2(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

16) Tipe XVI.

Beban mati ( $q_D$ ) :

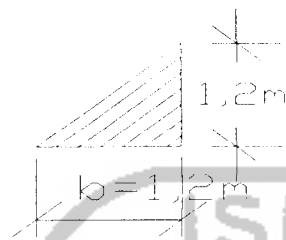
$$q_4(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m.}$$



Beban hidup ( $q_L$ ) :

$$q_4(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

17) Tipe XVII.



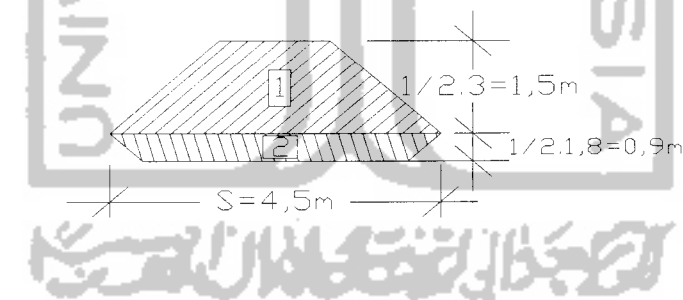
Beban mati ( $q_D$ ) :

$$q_4(D) = q_D \cdot b = 454 \cdot 1,2 = 544,8 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_4(L) = q_L \cdot b = 250 \cdot 1,2 = 300 \text{ Kg/m.}$$

18) Tipe XVIII.



Beban mati ( $q_D$ ) :

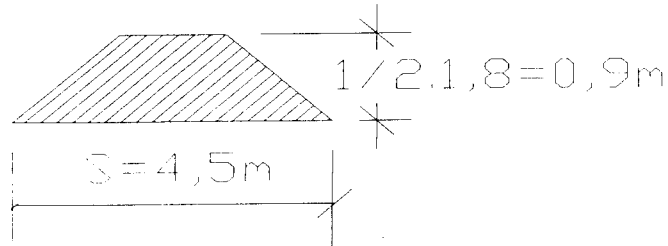
$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 3 = 681 \text{ Kg/m.}$$

$$q_5(D2) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m}$$

Beban hidup ( $q_L$ ) :

$$q_5(L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 3 = 375 \text{ Kg/m.}$$

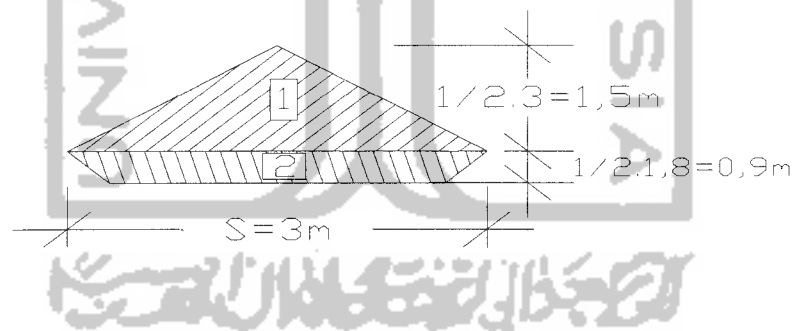
$$q_5(L2) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

19) Tipe XIX.Beban mati ( $q_D$ ) :

$$q_2(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_2(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

20) Tipe XX.Beban mati ( $q_D$ ) :

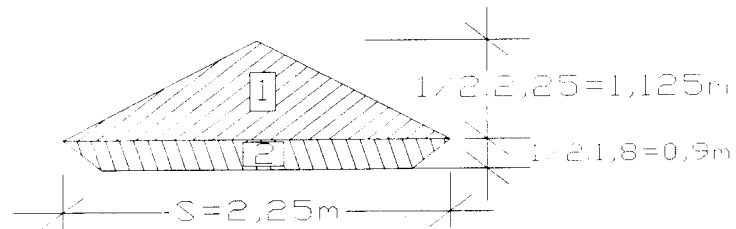
$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 3 = 681 \text{ Kg/m.}$$

$$q_5(D2) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m}$$

Beban hidup ( $q_L$ ) :

$$q_5(L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 3 = 375 \text{ Kg/m.}$$

$$q_5(L2) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

21) Tipe XXI.

Beban mati (qD) :

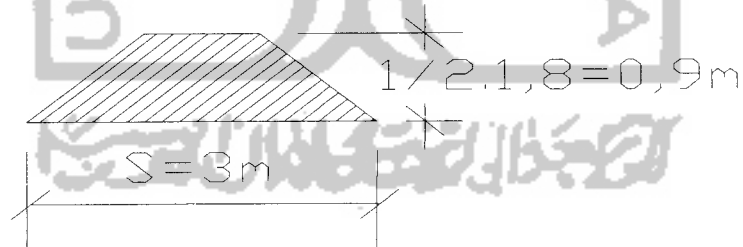
$$q_5 (D1) = qD \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 2,25 = 510,75 \text{ Kg/m.}$$

$$q_5 (D2) = qD \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m}$$

Beban hidup (qL) :

$$q_5 (L1) = qL \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 2,25 = 281,25 \text{ Kg/m.}$$

$$q_5 (L2) = qL \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

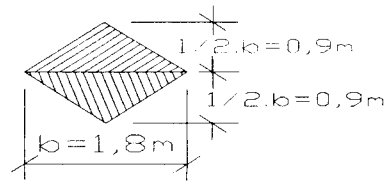
22) Tipe XXII.

Beban mati (qD) :

$$q_2 (D) = qD \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m.}$$

Beban hidup (qL) :

$$q_2 (L) = qL \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

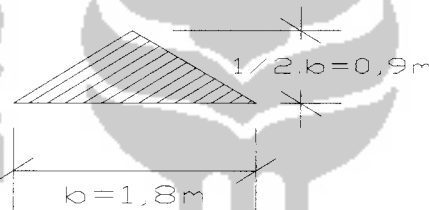
23) Tipe XXIII.

Beban mati ( $q_D$ ) :

$$q_1(D) = q_D \cdot \frac{1}{2} \cdot b \cdot 2 = 454 \cdot \frac{1}{2} \cdot 1,8 \cdot 2 = 817,25 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_1(L) = q_L \cdot \frac{1}{2} \cdot b \cdot 2 = 250 \cdot \frac{1}{2} \cdot 1,8 \cdot 2 = 450 \text{ Kg/m.}$$

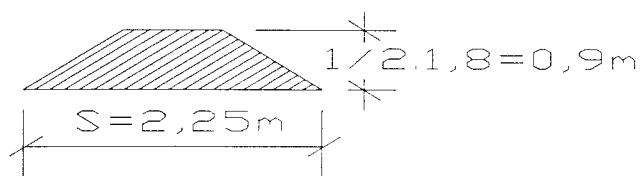
24) Tipe XXIV.

Beban mati ( $q_D$ ) :

$$q_4(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m.}$$

Beban hidup ( $q_L$ ) :

$$q_4(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

25) Tipe XXV.

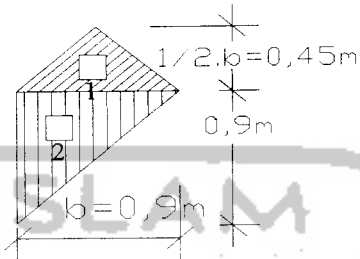
Beban mati ( $q_D$ ) :

$$q_2(D) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m.}$$

Beban hidup (qL) :

$$q_2(L) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

26) Tipe XXVI.



Beban mati (qD) :

$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 0,9 = 204,3 \text{ Kg/m.}$$

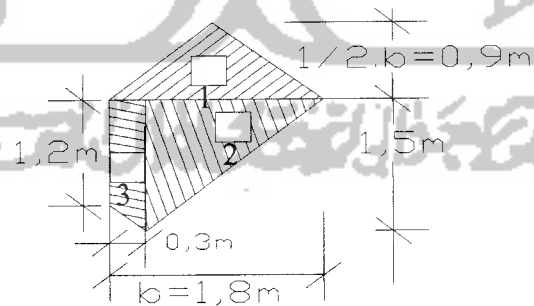
$$q_5(D2) = q_D \cdot b = 454 \cdot 0,9 = 408,6 \text{ Kg/m}$$

Beban hidup (qL) :

$$q_5(L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 0,9 = 112,5 \text{ Kg/m.}$$

$$q_5(L2) = q_L \cdot b = 250 \cdot 0,9 = 225 \text{ Kg/m.}$$

27) Tipe XXVII.



Beban mati (qD) :

$$q_5(D1) = q_D \cdot \frac{1}{2} \cdot b = 454 \cdot \frac{1}{2} \cdot 1,8 = 408,6 \text{ Kg/m.}$$

$$q_5(D2) = q_D \cdot 1,5 = 454 \cdot 1,5 = 681 \text{ Kg/m}$$

$$q_5(D3) = q_D \cdot 1,2 = 454 \cdot 1,2 = 544,8 \text{ Kg/m.}$$

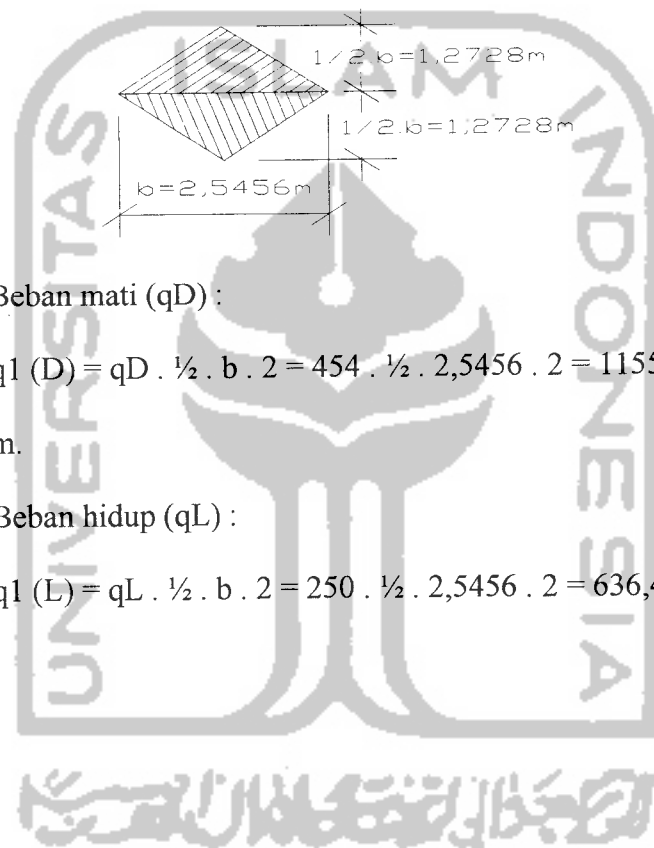
Beban hidup ( $q_L$ ) :

$$q_5 (L1) = q_L \cdot \frac{1}{2} \cdot b = 250 \cdot \frac{1}{2} \cdot 1,8 = 225 \text{ Kg/m.}$$

$$q_5 (L2) = q_L \cdot 1,5 = 250 \cdot 1,5 = 375 \text{ Kg/m.}$$

$$q_5 (L3) = q_L \cdot 1,2 = 250 \cdot 1,2 = 300 \text{ Kg/m.}$$

28) Tipe XXVIII.



Beban mati ( $q_D$ ) :

$$q_1 (D) = q_D \cdot \frac{1}{2} \cdot b \cdot 2 = 454 \cdot \frac{1}{2} \cdot 2,5456 \cdot 2 = 1155,7024$$

Kg/m.

Beban hidup ( $q_L$ ) :

$$q_1 (L) = q_L \cdot \frac{1}{2} \cdot b \cdot 2 = 250 \cdot \frac{1}{2} \cdot 2,5456 \cdot 2 = 636,4 \text{ Kg/m.}$$

#### 4.4 Perencanaan Beban Gempa

##### 4.4.1 Berat bangunan total

###### 1. Berat balok ring dan pelat talang

- Luas plafond : 918 m<sup>2</sup>
- Luas pelat talang : 268,56 m<sup>2</sup>
- Luas atap : 1058,76 m<sup>2</sup>
- Tebal pelat : 0,1 m
- b balok 1 : 0,4 m
- h balok 1 : 0,6 m
- b balok 2 : 0,2 m
- h balok 2 : 0,4 m
- b kolom : 0,6 m
- h kolom : 0,6 m
- Panjang balok induk : 190,8 m
- Panjang balok anak : 208,79 m
- Panjang balok konsol : 88,8 m
- Panjang dinding bawah : 285,7m
- Tinggi ½ kolom bawah : 2,1 m
- Jumlah kolom bawah (0,6x0,6 m) : 24 buah
- Bj beton : 2400 kg/m<sup>3</sup>
- Bj dinding ½ bata : 250 kg/m<sup>2</sup>
- Bj ploffond : 18 kg/m<sup>2</sup>

➤ **Beban mati**

– Genteng	= 50 x 1058,76	= 52938 kg
– Kuda-kuda		= 17476,3 kg
– Gording	= 752,64 x 4,06	= 3055,72 kg
– Balok induk	= 190,8 x 2400 x 0,4 x 0,6	= 109900,8 kg
– Balok anak	= 208,78 x 2400 x 0,2 x 0,4	= 40086,2 kg
– Balok konsol	= 88,8 x 2400 x 0,15 x 0,3	= 9590,4 kg
– Kolom	= 24 x 2,1 x 0,6 x 0,6 x 2400	= 43545,6 kg
– Dinding	= 285,7 x 2,1 x 250	= 149992,5 kg
– Plafond	= 918 x 18	= 16524 kg
– Pelat talang	= 268,56 x 0,1 x 2400	= 64454,4 kg
		+ W <sub>m</sub> = 507563,923 kg

➤ **Beban hidup**

– q <sub>h</sub> atap	= 100 kg/m <sup>2</sup>
– Koefisien reduksi	= 0,3

$$W_h = 0,3 \times 100 \times 1058,76 = 31762,8 \text{ kg}$$

➤ **Beban total (W1)**

$$W_1 = W_m + W_h = 31762,8 + 507563,923$$

$$= 539326,723 \text{ kg}$$

**2. Berat lantai 3**

- Luas pelat : 1024,2 m<sup>2</sup>
- Tebal pelat : 0,12 m
- b balok 1 : 0,4 m



- h balok 1 : 0,6 m
- b balok 2 : 0,2 m
- h balok 2 : 0,4 m
- b kolom : 0,6 m
- h kolom : 0,6 m
- Panjang balok induk : 377,4 m
- Panjang balok anak : 273,45 m
- Panjang dinding atas : 285,7 m
- Panjang dinding bawah : 356,6 m
- Tinggi ½ kolom atas : 2,1 m
- Tinggi ½ kolom bawah : 2,1 m
- Jumlah kolom atas (0,6x0,6 m) : 32 buah
- Jumlah kolom bawah (0,6x0,6 m) : 32 buah
- Bj beton : 2400 kg/m<sup>3</sup>
- Bj dinding ½ bata : 250 kg/m<sup>2</sup>
- Bj keramik : 20 kg/m<sup>2</sup>
- Bj spesi : 22 kg/m<sup>2</sup>
- Tebal spesi : 0,03 m

➤ **Beban mati**

- Pelat =  $1024,2 \times 0,12 \times 2400 = 294969,6$  kg
- Balok induk =  $377,4 \times 2400 \times 0,48 \times 0,4 = 173905,9$  kg
- Balok anak =  $273,45 \times 2400 \times 0,28 \times 0,2 = 36751,68$  kg
- Kolom atas =  $32 \times 2,1 \times 0,6 \times 0,6 \times 2400 = 58060,8$  kg

- Kolom bawah	= 32 x 2,1 x 0,6 x 0,6 x 2400	= 58060,8 kg
- Dinding atas	= 285,7 x 2,1 x 250	= 149992,5 kg
- Dinding bawah	= 356,6 x 2,1 x 250	= 187215 kg
- Spesi	= 1024,2 x 22 x 0,03	= 675,972 kg
- Keramik	= 1024,2 x 20	= 20484 kg
		+ W <sub>m</sub> = 980116,272 kg

➤ **Beban hidup**

- q <sub>h</sub> lantai	= 250 kg/m <sup>2</sup>
- Koefisien reduksi	= 0,3
W <sub>h</sub>	= 0,3 x 250 x 1024,2 = 76815 kg

➤ **Beban total (W<sub>2</sub>)**

$$W_2 = W_m + W_h = 76815 + 980116,272$$

$$= 1056931,272 \text{ kg}$$

**3. Berat lantai 2**

- Luas pelat : 956,7 m<sup>2</sup>
- Tebal pelat : 0,12 m
- b balok 1 : 0,4 m
- h balok 1 : 0,6 m
- b balok 2 : 0,2 m
- h balok 2 : 0,4 m
- b kolom : 0,6 m
- h kolom : 0,6 m
- Panjang balok induk : 361,2 m

- Panjang balok anak : 264,45 m
- Panjang dinding atas : 356,6 m
- Panjang dinding bawah : 343,1 m
- Tinggi ½ kolom atas : 2,1 m
- Tinggi ½ kolom bawah : 2,1 m
- Jumlah kolom atas (0,6x0,6 m) : 32 buah
- Jumlah kolom bawah (0,6x0,6 m) : 32 buah
- Bj beton : 2400 kg/m<sup>3</sup>
- Bj dinding ½ bata : 250 kg/m<sup>2</sup>
- Bj keramik : 20 kg/m<sup>2</sup>
- Bj spesi : 22 kg/m<sup>2</sup>
- Tebal spesi : 0,03 m

➤ **Beban mati**

- Pelat = 956,7 x 0,12 x 2400 = 275529,6 kg
- Balok induk = 361,2 x 2400 x 0,48 x 0,4 = 166440,96kg
- Balok anak = 264,45 x 2400 x 0,28 x 0,2 = 35542,08 kg
- Kolom atas = 32 x 2,1 x 0,6 x 0,6 x 2400 = 58060,8 kg
- Kolom bawah = 32 x 2,1 x 0,6 x 0,6 x 2400 = 58060,8 kg
- Dinding bawah = 343,1 x 2,1 x 250 = 180127,5 kg
- Dinding atas = 356,6 x 2,1 x 250 = 187215 kg
- Spesi = 956,7 x 22 x 0,03 = 631,422 kg
- Keramik = 956,7 x 20 = 19134 kg

$$\begin{array}{r} \text{-----} + \\ \text{Wm} = 980742,162 \text{ kg} \end{array}$$

➤ **Beban hidup**

$$- q_h \text{ lantai} = 250 \text{ kg/m}^2$$

$$- \text{Koefisien reduksi} = 0,3$$

$$W_h = 0,3 \times 250 \times 956,7 = 71752,5 \text{ kg}$$

➤ **Beban total (W3)**

$$\begin{aligned} W_3 &= W_m + W_h = 980742,162 + 71752,5 \\ &= 1052494,662 \text{ kg} \end{aligned}$$

**4. Berat total seluruhnya (Wt)**

$$\begin{aligned} W_t &= W_1 + W_2 + W_3 \\ &= 513916,483 + 1056931,272 + 1052494,662 \\ &= 2623342,417 \text{ kg} \end{aligned}$$

**4.4.2 Waktu getar bangunan (T)**

Dengan rumus Empiris :

$$T_x = T_y = 0,06 \cdot H^{3/4}$$

$$H = 2,1 + 4,2 + 4,2 + 4,2 = 14,7 \text{ m}$$

$$T_x = T_y = 0,06 \cdot H^{3/4}$$

$$= 0,06 \cdot 14,7^{3/4}$$

$$= 0,45 \text{ detik}$$

**4.4.3 Koefisien gempa dasar (C)**

Untuk  $T_x = T_y = 0,45$  detik zone 3 dan jenis tanah keras, diperoleh  $C = 0,05$

Faktor keutamaan  $I = 1$

Faktor jenis struktur  $K = 1$

➤ **Beban hidup**

– qh lantai = 250 kg/m<sup>2</sup>

– Koefisien reduksi = 0,3

$$W_h = 0,3 \times 250 \times 956,7 = 71752,5 \text{ kg}$$

➤ **Beban total (W3)**

$$\begin{aligned} W_3 &= W_m + W_h = 980742,162 + 71752,5 \\ &= 1052494,662 \text{ kg} \end{aligned}$$

**4. Berat total seluruhnya (Wt)**

$$\begin{aligned} W_t &= W_1 + W_2 + W_3 \\ &= 539326,723 + 1056931,272 + 1052494,662 \\ &= 2623342,417 \text{ kg} \end{aligned}$$

**4.4.2 Waktu getar bangunan (T)**

Dengan rumus Empiris :

$$T_x = T_y = 0,06 \cdot H^{3/4}$$

$$H = 2,1 + 4,2 + 4,2 + 4,2 = 14,7 \text{ m}$$

$$T_x = T_y = 0,06 \cdot H^{3/4}$$

$$= 0,06 \cdot 14,7^{3/4}$$

$$= 0,45 \text{ detik}$$

**4.4.3 Koefisien gempa dasar (C)**

Untuk  $T_x = T_y = 0,45$  detik zone 3 dan jenis tanah keras, diperoleh  $C = 0,05$

Faktor keutamaan  $I = 1$

Faktor jenis struktur  $K = 1$

#### 4.4.4 Gaya geser horizontal total akibat gempa

$$\begin{aligned}
 V_x = V_y &= C.I.K.Wt \\
 &= 0,05.1.1.2623115,497 \\
 &= 131155,775 \text{ kg} = 131,156 \text{ ton}
 \end{aligned}$$

#### 4.4.5 Distribusi gaya geser horizontal total akibat gempa ke sepanjang tinggi gedung

##### 1. Arah x

$$H/A = 14,7/51 = 0,288 < 3$$

$$F_{i,x} = \frac{W_i.H_i}{\sum W_i.H_i} V_x$$

##### 2. Arah y

$$H/A = 14,7/18 = 0,817 < 3$$

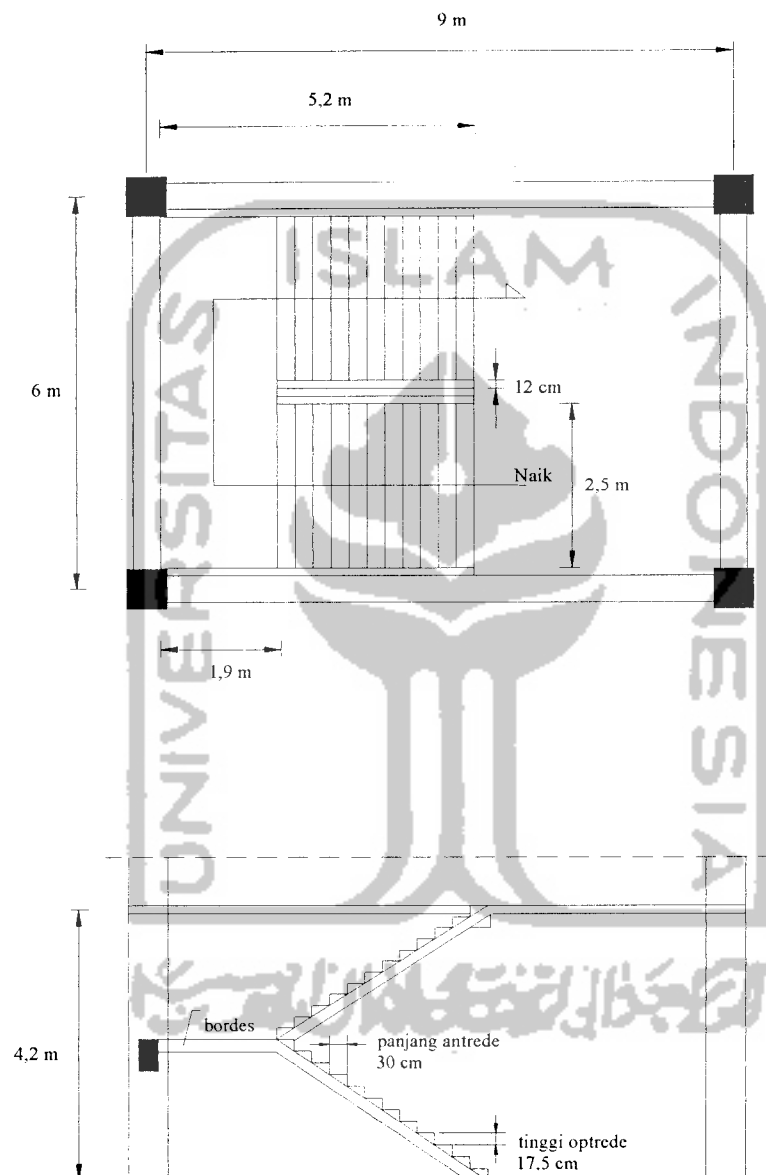
$$F_{i,y} = \frac{W_i.H_i}{\sum W_i.H_i} V_y$$

**Tabel 4.4.** Distribusi gaya geser dasar horizontal total akibat gempa

Tingkat	hi (m)	Wi (t)	Wi.hi (tm)	Fix,y total (t)	Untuk tiap portal	
					1/5.Fix(t)	1/10.Fiy(t)
Atap	14,7	539,327	7554,58	39,189	7,835	3,918
3	10,5	1056,931	11097,776	57,57	11,515	5,758
2	6,3	1052,495	6630,719	34,4	6,88	3,44
1 (GF)	2,1	-	-	-	-	-
			25283,075	131,156	26,23	13,116

## 4.5 Perencanaan Tangga

### 4.5.1 Perencanaan tangga I



Gambar 4.7 . Denah perencanaan tangga I

### 1. Data perencanaan tangga I :

a. Tinggi antar lantai = 4,2 m = 420 cm

b. Lebar bordes = 1,9 m = 190 cm

c. Lebar tangga = 2,5 m = 250 cm

d. Beban sandaran tangga

Tinggi sandaran = 1m

Tebal sandaran = 0,12m

e. Tinggi optrede rencana diambil 18 m

Jumlah optrede =  $420/18 = 23,333$  dipakai 24 buah

Tinggi optrede pakai =  $420/24 = 17,5$  cm

Jumlah antrede =  $24 - 2 = 22$  buah

Diambil panjang antrede 30 cm

f. Sudut kemiringan tangga =  $17,5/30 = \text{arc tg } \alpha \rightarrow \alpha = 31^\circ$

g. Dimensi tangga

Panjang tangga = (panjang antrede . jml antrede/2) + lebar bordes

$$= (30 \cdot 22/2) + 190$$

$$= 520 \text{ cm}$$

Lebar bersih tangga = 250 cm

h. Tebal pelat diambil 15 cm

### 2. Pembebanan

a. Pembebanan bordes

Beban mati (untuk sepanjang 1 m) :



- berat sendiri pelat =  $0,15 \cdot 1 \cdot 24 = 3,60 \text{ KN/m}$
  - berat spesi =  $0,03 \cdot 1 \cdot 24 = 0,72 \text{ KN/m}$
  - berat keramik =  $0,01 \cdot 1 \cdot 20 = 0,20 \text{ KN/m}$
  - berat sandaran =  $(0,12 \cdot 24 \cdot 1 \cdot 1)/3 = \underline{0,96 \text{ KN/m}}$
- $Q_D = 5,48 \text{ KN/m}$

Beban hidup (untuk sepanjang 1 m)

$$Q_L = 300 \cdot 1 = 3 \text{ KN/m}$$

b. Pembebanan tangga

Beban mati (untuk sepanjang 1 m) :

- berat sendiri tangga =  $\left\{ \frac{0,15}{\cos 31^\circ} + \frac{0,175}{2} \right\} \cdot 1 \cdot 24 = 6,298 \text{ KN/m}$
  - berat spesi =  $0,03 \cdot 1 \cdot 24 = 0,720 \text{ KN/m}$
  - berat keramik =  $0,01 \cdot 1 \cdot 20 = 0,200 \text{ KN/m}$
  - berat sandaran =  $(0,12 \cdot 24 \cdot 1 \cdot 1 \cdot 2)/2,5 = \underline{2,304 \text{ KN/m}}$
- $Q_D = 9,522 \text{ KN/m}$

Beban hidup (untuk sepanjang 1 m)

$$Q_L = 300 \cdot 1 = 3 \text{ KN/m}$$

3. Perhitungan penulangan tangga

Tinggi pelat = 15 cm = 150 mm.

$$\rho_b = \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) = \frac{0,85 \cdot 25}{400} \cdot 0,85 \cdot \left( \frac{600}{600 + 400} \right) = 0,027$$

$$\rho_{\text{maks}} = 0,75 \cdot \rho_b = 0,75 \cdot 0,027 = 0,02$$

$$\rho_{\text{min}} = \frac{1,4}{f_y} = \frac{1,4}{400} = 0,0035$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{400}{0,85 \cdot 25} = 18,824$$

$$d = h - P_b - \frac{1}{2} \cdot \phi_{tul} = 150 - 20 - \frac{1}{2} \cdot 13 = 123,5 \text{ mm (digunakan tulangan } \phi 13 \text{ mm).}$$

a. Perencanaan pelat bordes

Data dari SAP 2000 seperti tercantum dalam lampiran, didapat

momen max. = 20,59 KNm

$$M_n = \frac{Mu}{\phi} = \frac{20,59}{0,8} = 25,738 \text{ KNm}$$

$$R_n = \frac{Mu / \phi}{b \cdot d^2} = \frac{25,738 \cdot 10^6}{1000 \cdot 123,5^2} = 1,687 \text{ mm}^2$$

$$\rho_{\text{perlu}} = \frac{1}{m} \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right] = \frac{1}{18,824} \left[ 1 - \sqrt{1 - \frac{2 \cdot 18,824 \cdot 1,687}{400}} \right]$$

$$= 0,004$$

$$\rho_{\text{perlu}} = 0,004 > \rho_{\text{min}} = 0,0035$$

$$\text{sehingga } \rho \text{ pakai} = \rho_{\text{perlu}} = 0,004$$

$$A_s \text{ perlu} = \rho \text{ pakai} \cdot b \cdot d = 0,004 \cdot 1000 \cdot 123,5 = 543,362 \text{ mm}^2$$

$$\text{Pakai tulangan P13} \rightarrow A_1 \cdot \phi = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 13^2 = 132,73 \text{ mm}^2$$

$$\text{Jarak tulangan (x)} \leq \frac{A_1 \cdot \phi \cdot 1000}{A_s \text{ perlu}} = \frac{132,73 \cdot 1000}{543,362} = 244,276 \text{ mm}$$

$$\leq 2 \cdot h = 2 \cdot 150 = 300 \text{ mm}$$

$$\leq 250 \text{ mm}$$

Jadi pakai jarak (x) = 130 mm → **D13 - 240 mm.**

$$A_s \text{ ada} = \frac{132,73 \cdot 1000}{240} = 553,042 \text{ mm}^2 > A_s \text{ perlu} = 543,362 \text{ mm}^2$$

Kontrol Mn :

$$a = \frac{Asada \cdot fy}{0,85 \cdot f'c \cdot b} = \frac{553,042 \cdot 400}{0,85 \cdot 25 \cdot 1000} = 10,410 \text{ mm.}$$

$$Mn = Asada \cdot fy \cdot (d - a/2) = 553,042 \cdot 400 \cdot (123,5 - 10,410/2).$$

$$= 26168841,360 \text{ Nmm}$$

$$= 26,169 \text{ KNm} > \frac{Mu}{\phi} = 25,738 \text{ KNm} \dots\dots\dots \text{Ok !}$$

b. Perencanaan pelat tangga

Data dari SAP 2000 seperti tercantum dalam lampiran, didapat

momen max. = 21,41 KNm

$$Mn = \frac{Mu}{\phi} = \frac{21,41}{0,8} = 26,763 \text{ KNm}$$

$$Rn = \frac{Mu / \phi}{b \cdot d^2} = \frac{26,763 \cdot 10^6}{1000 \cdot 123,5^2} = 1,755 \text{ mm}^2$$

$$\rho_{\text{perlu}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot Rn}{fy}} \right] = \frac{1}{18,824} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 18,824 \cdot 1,755}{400}} \right]$$

$$= 0,005$$

$$\rho_{\text{perlu}} = 0,005 > \rho_{\text{min}} = 0,0035$$

$$\text{sehingga } \rho \text{ pakai} = \rho_{\text{perlu}} = 0,005$$

$$As_{\text{perlu}} = \rho \text{ pakai} \cdot b \cdot d = 0,005 \cdot 1000 \cdot 123,5 = 565,630 \text{ mm}^2$$

$$\text{Pakai tulangan P13} \rightarrow A1 \cdot \emptyset = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 13^2 = 132,73 \text{ mm}^2$$

$$\text{Jarak tulangan (x)} \leq \frac{A1 \cdot \phi \cdot 1000}{As_{\text{perlu}}} = \frac{132,73 \cdot 1000}{565,630} = 234,659 \text{ mm}$$

$$\leq 2 \cdot h = 2 \cdot 150 = 300 \text{ mm}$$

$$\leq 250 \text{ mm}$$

Jadi pakai jarak (x) = 100 mm → **D13 - 230 mm.**

$$As \text{ ada} = \frac{132,73 \cdot 1000}{230} = 577,087 \text{ mm}^2 > As \text{ perlu} = 565,630 \text{ mm}^2$$

Kontrol Mn :

$$a = \frac{Asada \cdot fy}{0,85 \cdot f'c \cdot b} = \frac{577,087 \cdot 400}{0,85 \cdot 25 \cdot 1000} = 10,863 \text{ mm.}$$

$$Mn = As \text{ ada} \cdot fy \cdot (d - a/2) = 577,087 \cdot 400 \cdot (123,5 - 10,863/2).$$

$$= 27254318,58 \text{ Nmm}$$

$$= 27,254 \text{ KNm} > \frac{Mu}{\phi} = 26,763 \text{ KNm} \dots\dots\dots \text{Ok!}$$

c. Perencanaan tulangan bagi

$$As \text{ bagi} = 0,002 \cdot b \cdot h = 0,002 \cdot 1000 \cdot 150 = 300 \text{ mm}^2$$

$$\text{Pakai tulangan P 8} \rightarrow A1 \cdot \phi = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 8^2 = 50,265 \text{ mm}^2$$

$$\begin{aligned} \text{Jarak antar tulangan (x)} &= \frac{A1 \cdot \phi \cdot 1000}{As \text{ bagi}} = \frac{50,265 \cdot 1000}{300} \\ &= 167,55 \text{ mm}^2 \end{aligned}$$

Dipakai tulangan → **P 8 - 160 mm.**

#### 4. Perencanaan balok bordes

Ukuran balok 40/60

Ø tulangan pokok = 22 mm

Ø tulangan sengkang = 10 mm

Tinggi efektif balok ( d diketahui ) = h diketahui - Pb - Ø sengkang - ½ Ø tul.pokok

$$d = 600 - 40 - 10 - \frac{1}{2} 22 = 539 \text{ mm}$$

Pembebanan :

- beban akibat tangga = 54,125 KN/m
  - berat sendiri =  $1,2 \cdot 0,40 \cdot 0,60 \cdot 24 = 6,912 \text{ KN/m}$  +
- $$q_u = 61,037 \text{ KN/m}$$

Momen tumpuan :

$$M_u = -\frac{1}{16} q_u L^2 = -\frac{1}{16} \cdot 61,037 \cdot 5,6^2 = -119,633 \text{ KNm}$$

Momen lapangan :

$$M_u = \frac{1}{11} q_u L^2 = \frac{1}{11} \cdot 61,037 \cdot 5,6^2 = 174,011 \text{ KNm}$$

a. Perencanaan tulangan lentur balok bordes

Untuk  $f'_c \leq 30 \text{ MPa} \rightarrow \beta_1 = 0,85$

$$\rho_b = \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \left( \frac{600}{600 + f_y} \right) = \frac{0,85 \cdot 25}{400} \cdot 0,85 \left( \frac{600}{600 + 400} \right)$$

$$= 0,027$$

$$\rho_{\text{maks}} = 0,75 \cdot \rho_b = 0,75 \cdot 0,027 = 0,020$$

$$\rho_{\text{min}} = \frac{1,4}{f_y} = \frac{1,4}{400} = 0,0035$$

$$\rho_{\text{pakai}} = 0,5 \cdot \rho_{\text{maks}} = 0,5 \cdot 0,020 = 0,010$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{400}{0,85 \cdot 25} = 18,824$$

$$R_n = \rho \cdot f_y (1 - \frac{1}{2} \rho m)$$

$$= 0,010 \cdot 400 (1 - \frac{1}{2} \cdot 0,010 \cdot 18,824) = 3,624 \text{ MPa}$$

- Tulangan tumpuan

$$M_u = 119,633 \text{ KNm}$$

$$\frac{M_u}{\phi} = \frac{119,633}{0,8} = 149,541 \text{ KNm}$$

$$b \cdot d^2 = \frac{M_u / \phi}{R_n}$$

$$d_{\text{perlu}} = \sqrt{\frac{M_u / \phi}{R_n \cdot b}} = \sqrt{\frac{149,541 \cdot 10^6}{3,624 \cdot 400}} = 321,186 \text{ mm} < d = 539 \text{ mm},$$

maka dipakai tulangan sebelah.

$$R_{n_{\text{ada}}} = \frac{M_u / \phi}{b \cdot d_{\text{ada}}^2} = \frac{149,541 \cdot 10^6}{400 \cdot 539^2} = 1,287 \text{ MPa}$$

$$\rho_{\text{ada}} = \frac{R_{n_{\text{ada}}}}{R_n} \cdot \rho = \frac{1,287}{3,624} \cdot 0,010 = 0,0035 = \rho_{\text{min}} = 0,0035$$

sehingga dipakai  $\rho_{\text{ada}} = 0,0035$

$$A_s = \rho_{\text{ada}} \cdot b \cdot d_{\text{ada}} = 0,0035 \cdot 400 \cdot 539 = 754,600 \text{ mm}^2$$

Dipakai diameter tulangan D22, maka :  $A_{10} = 380,286 \text{ mm}^2$

$$n = \frac{A_s}{A_1 \phi} = \frac{754,600}{380,286} = 1,98$$

Dipakai tulangan memanjang **2D22**, maka :

$$A_{s_{\text{ada}}} = 2 \cdot 380,286 = 760,572 \text{ mm}^2 > A_s = 754,600 \text{ mm}^2$$

Kontrol kapasitas lentur yang terjadi :

$$a = \frac{A_{s_{\text{ada}}} f_y}{0,85 \cdot f'_c \cdot b} = \frac{760,572 \cdot 400}{0,85 \cdot 25 \cdot 400} = 35,792 \text{ mm}$$

$$\begin{aligned}
 M_n &= A_s \text{ ada} \cdot f_y \cdot (d - a/2) = 760,572 \cdot 400 \cdot (539 - 35,792/2) \\
 &= 158534844,6 \text{ Nmm} \\
 &= 158,535 \text{ KNm} > \frac{M_u}{\phi} = 149,541 \text{ KNm} \dots\dots\dots \text{Ok!}
 \end{aligned}$$

- Tulangan lapangan

$$M_u = 174,011 \text{ KNm}$$

$$\frac{M_u}{\phi} = \frac{174,011}{0,8} = 217,514 \text{ KNm}$$

$$b \cdot d^2 = \frac{M_u / \phi}{R_n}$$

$$d_{\text{perlu}} = \sqrt{\frac{M_u / \phi}{R_n \cdot b}} = \sqrt{\frac{217,514 \cdot 10^6}{3,624 \cdot 400}} = 387,364 \text{ mm} < d = 539 \text{ mm},$$

maka dipakai tulangan sebelah.

$$R_{n_{\text{ada}}} = \frac{M_u / \phi}{b \cdot d_{\text{ada}}^2} = \frac{174,011 \cdot 10^6}{400 \cdot 539^2} = 1,497 \text{ MPa}$$

$$\rho_{\text{ada}} = \frac{R_{n_{\text{ada}}}}{R_n} \cdot \rho = \frac{1,497}{3,624} \cdot 0,010 = 0,004 > \rho_{\text{min}} = 0,0035$$

sehingga  $\rho_{\text{pakai}} = \rho_{\text{ada}} = 0,004$

$$A_s = \rho_{\text{ada}} \cdot b \cdot d_{\text{ada}} = 0,004 \cdot 400 \cdot 539 = 862,400 \text{ mm}^2$$

Dipakai diameter tulangan D22, maka :  $A_{1\phi} = 380,286 \text{ mm}^2$

$$n = \frac{A_s}{A_{1\phi}} = \frac{862,400}{380,286} = 2,268$$

Dipakai tulangan memanjang **3D22**, maka :

$$A_{s_{\text{ada}}} = 3 \cdot 380,286 = 1140,858 \text{ mm}^2 > A_s = 862,400 \text{ mm}^2$$

Kontrol kapasitas lentur yang terjadi :

$$a = \frac{A_{sada} f_y}{0,85 \cdot f'_c \cdot b} = \frac{1140,858 \cdot 400}{0,85 \cdot 25 \cdot 400} = 53,687 \text{ mm}$$

$$\begin{aligned} M_n &= A_{sada} \cdot f_y \cdot (d - a/2) = 1140,858 \cdot 400 \cdot (539 - 53,687/2) \\ &= 233719136,1 \text{ Nmm} \\ &= 233,719 \text{ KNm} > \frac{M_u}{\phi} = 217,514 \text{ KNm} \dots \dots \dots \text{Ok!} \end{aligned}$$

b. Perencanaan tulangan geser balok bordes

Gaya geser dukungan :

$$V_u \text{ dukungan} = \frac{1}{2} \cdot q \cdot U.L = \frac{1}{2} \cdot 61,037 \cdot 5,6 = 170,904 \text{ KN}$$

$$\text{maka } \frac{V_u}{\phi} = \frac{170,904}{0,6} = 284,839 \text{ KN}$$

Tegangan geser beton ( $V_c$ ) :

$$V_c = \left( \frac{1}{6} \sqrt{f'_c} \right) \cdot b \cdot d = \left( \frac{1}{6} \sqrt{25} \right) \cdot 400 \cdot 600 = 200000 \text{ N} = 200 \text{ KN}$$

$$\frac{V_u}{\phi} = 284,839 \text{ KN} > V_c = 200 \text{ KN}, \text{ maka perlu tulangan geser.}$$

$$V_s = \frac{V_u}{\phi} - V_c = 284,839 - 200 = 84,839 \text{ KN}$$

Dipakai sengkang P10, maka  $A_v = 2 \cdot \frac{1}{4} \cdot \pi \cdot 10^2 = 157 \text{ mm}^2$

$$\text{Jarak sengkang } s \leq \frac{A_v \cdot f_y \cdot d}{V_s} = \frac{157 \cdot 240 \cdot 539}{84839} = 239,389 \text{ mm}$$

$$\leq \frac{d}{2} = \frac{539}{2} = 269,5 \text{ mm}$$

$$\leq 600 \text{ mm}$$

Jadi dipakai sengkang **P10 – 230 mm**.



## 5. Perhitungan pondasi tangga

a. Data :

- $\sigma$  tanah = 150 KN/m<sup>2</sup>
- $\gamma$  batu = 22 KN/m<sup>3</sup>
- $\gamma$  tanah = 18 KN/m<sup>3</sup>
- balok diatas pondasi 25/50 cm

Tinjauan untuk lebar tangga = 2,5 m

Tinggi pondasi tangga = 1m

b. Pembebanan

$$\text{Akibat beban tangga} = 98,669 \text{ KN}$$

$$\text{Berat balok diatas pondasi} = 0,25 \cdot 0,5 \cdot 2,5 \cdot 24 = \underline{7,500 \text{ KN}}$$

$$P = 106,169 \text{ KN}$$

Tegangan ijin tanah pakai :

$$\begin{aligned} \sigma &= \sigma \text{ tanah} - \text{berat pondasi} \\ &= 150 - 1 \cdot 22 = 128 \text{ KN/m}^2 \end{aligned}$$

Diketahui pada kondisi kritis  $\rightarrow \sigma = P/A$

$$A = P/\sigma = 106,169/128 = 0,829 \text{ m}^2$$

$$B = A/L = 0,829/2,5 = 0,332 \text{ m} \rightarrow \text{diambil lebar (B)} = 0,4 \text{ m}$$

Kontrol tegangan tanah :

$$\sigma = P/A = 106,169 / (0,4 \cdot 2,5)$$

$$= 106,169 \text{ KN/m}^2 < \sigma \text{ tanah} = 128 \text{ KN/m}^2 \dots\dots\dots \text{Ok !}$$

#### 4.5.2 Perencanaan tangga II

##### 1. Data perencanaan tangga II :

a Tinggi antar lantai = 4,2 m = 420 cm

b Lebar bordes = 1,2 m = 120 cm

c. Lebar tangga = 1,2 m = 120 cm

d. Beban sandaran tangga :

Tinggi sandaran = 1m

Tebal sandaran = 0,12m

e. Tinggi optrede rencana diambil 18 m

Jumlah optrede =  $420/18 = 23,333$  dipakai 24 buah

Tinggi optrede pakai =  $420/24 = 17,5$  cm

Jumlah antrede =  $24 - 2 = 22$  buah

Diambil panjang antrede 30 cm

f. Sudut kemiringan tangga =  $17,5/30 = \text{arc tg } \alpha \rightarrow \alpha = 31^\circ$

g. Dimensi tangga

$$\begin{aligned} \text{Panjang tangga} &= (\text{panjang antrede} \cdot \text{jml antrede}/2) + \text{lebar bordes} \\ &= (30 \cdot 22/2) + 120 = 450 \text{ cm} \end{aligned}$$

Lebar bersih tangga = 120 cm

h. Tebal pelat diambil 15 cm

##### 2. Pembebanan

a Pembebanan bordes

Beban mati (untuk sepanjang 1 m) :

$$\begin{aligned}
 - \text{berat sendiri pelat} &= 0,15 \cdot 1 \cdot 24 &&= 3,60 \text{ KN/m} \\
 - \text{berat spesi} &= 0,03 \cdot 1 \cdot 24 &&= 0,72 \text{ KN/m} \\
 - \text{berat keramik} &= 0,01 \cdot 1 \cdot 20 &&= 0,20 \text{ KN/m} \\
 - \text{berat sandaran} &= (0,12 \cdot 24 \cdot 1 \cdot 1)/1,5 = \underline{1,92 \text{ KN/m}} + \\
 &&&Q_D = 6,44 \text{ KN/m}
 \end{aligned}$$

Beban hidup (untuk sepanjang 1 m)

$$Q_L = 300 \cdot 1 = 3 \text{ KN/m}$$

#### b Pembebanan tangga

Beban mati (untuk sepanjang 1 m) :

$$\begin{aligned}
 - \text{berat sendiri tangga} &= \left\{ \frac{0,15}{\cos 31} + \frac{0,175}{2} \right\} \cdot 1,24 = 6,30 \text{ KN/m} \\
 - \text{berat spesi} &= 0,03 \cdot 1 \cdot 24 &&= 0,72 \text{ KN/m} \\
 - \text{berat keramik} &= 0,01 \cdot 1 \cdot 20 &&= 0,20 \text{ KN/m} \\
 - \text{berat sandaran} &= (0,12 \cdot 24 \cdot 1 \cdot 2)/1,2 = \underline{4,80 \text{ KN/m}} + \\
 &&&Q_D = 12,02 \text{ KN/m}
 \end{aligned}$$

Beban hidup (untuk sepanjang 1 m)

$$Q_L = 300 \cdot 1 = 3 \text{ KN/m}$$

### 3. Perhitungan penulangan tangga

Tinggi pelat tangga = 15 cm = 150 mm.

$$\rho_b = \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) = \frac{0,85 \cdot 25}{400} \cdot 0,85 \cdot \left( \frac{600}{600 + 400} \right) = 0,027$$

$$\rho_{\text{maks}} = 0,75 \cdot \rho_b = 0,75 \cdot 0,027 = 0,02$$

$$\rho_{\text{min}} = \frac{1,4}{f_y} = \frac{1,4}{400} = 0,0035$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{400}{0,85 \cdot 25} = 18,824$$

$$d = h - P_b - \frac{1}{2} \cdot \phi_{tul} = 150 - 20 - \frac{1}{2} \cdot 13 = 123,5 \text{ mm.}$$

a. Perencanaan pelat bordes dan pelat tangga (momennya sama)

Data dari SAP 2000 seperti tercantum dalam lampiran, didapat

momen max. = 24,19 KNm

$$M_n = \frac{Mu}{\phi} = \frac{24,19}{0,8} = 30,238 \text{ KNm}$$

$$R_n = \frac{Mu / \phi}{b \cdot d^2} = \frac{30,238 \cdot 10^6}{1000 \cdot 123,5^2} = 1,982 \text{ mm}^2$$

$$\rho_{\text{perlu}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right] = \frac{1}{18,824} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 18,824 \cdot 1,982}{400}} \right]$$

$$= 0,005$$

$$\rho_{\text{perlu}} = 0,005 > \rho_{\text{min}} = 0,0035$$

sehingga  $\rho$  pakai =  $\rho_{\text{perlu}} = 0,005$

$$A_s \text{ perlu} = \rho \text{ pakai} \cdot b \cdot d = 0,005 \cdot 1000 \cdot 123,5 = 643,501 \text{ mm}^2$$

$$\text{Pakai tulangan P13} \rightarrow A1 \cdot \phi = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 13^2 = 132,73 \text{ mm}^2$$

$$\text{Jarak tulangan (x)} \leq \frac{A1 \cdot \phi \cdot 1000}{A_s \text{ perlu}} = \frac{132,73 \cdot 1000}{643,501} = 206,262 \text{ mm}$$

$$\leq 2 \cdot h = 2 \cdot 150 = 300 \text{ mm}$$

$$\leq 250 \text{ mm}$$

Jadi pakai jarak (x) = 130 mm  $\rightarrow$  **D13 - 200 mm.**

$$A_s \text{ ada} = \frac{132,73 \cdot 1000}{200} = 663,650 \text{ mm}^2 > A_s \text{ perlu} = 643,501 \text{ mm}^2$$

Kontrol Mn :

$$a = \frac{Asada \cdot fy}{0,85 \cdot f'c \cdot b} = \frac{663,650 \cdot 400}{0,85 \cdot 25 \cdot 1000} = 12,492 \text{ mm.}$$

$$Mn = Asada \cdot fy \cdot (d - a/2) = 663,650 \cdot 400 \cdot (123,5 - 12,492/2).$$

$$= 31126246,84 \text{ Nmm}$$

$$= 31,126 \text{ KNm} > \frac{Mu}{\phi} = 30,238 \text{ KNm} \dots\dots\dots \text{Ok !}$$

b. Perencanaan tulangan bagi

$$As \text{ bagi} = 0,002 \cdot b \cdot h = 0,002 \cdot 1000 \cdot 150 = 300 \text{ mm}^2$$

$$\text{Pakai tulangan P 8} \rightarrow A1 \cdot \phi = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 8^2 = 50,265 \text{ mm}^2$$

$$\text{Jarak antar tulangan (x)} = \frac{A1 \cdot \phi \cdot 1000}{As \text{ bagi}} = \frac{50,265 \cdot 1000}{300} = 167,55 \text{ mm}^2$$

Dipakai tulangan  $\rightarrow$  P 8 - 160 mm.

#### 4. Perencanaan balok bordes

Ukuran balok 20/40

$\phi$  tulangan pokok = 16mm

$\phi$  tulangan sengkang = 10 mm

Tinggi efektif balok ( $d$  diketahui) =  $h_{\text{diketahui}} - Pb - \phi_{\text{sengkang}} - \frac{1}{2} \phi_{\text{tul.pokok}}$

$$d = 400 - 40 - 10 - \frac{1}{2} \cdot 16 = 342 \text{ mm}$$

Pembebanan :

- beban akibat tangga = 73,475 KN/m

- berat sendiri =  $1,2 \cdot 0,20 \cdot 0,40 \cdot 24 = 2,304 \text{ KN/m} +$

$qu = 75,779 \text{ KN/m}$

Momen tumpuan :

$$Mu = -\frac{1}{16}qu.L^2 = -\frac{1}{16}.75,779.2,7^2 = -34,527 \text{ KNm}$$

Momen lapangan :

$$Mu = \frac{1}{11}qu.L^2 = \frac{1}{11}.75,779.2,7^2 = 50,221 \text{ KNm}$$

b. Perencanaan tulangan lentur balok bordes

Untuk  $f'c \leq 30 \text{ MPa} \rightarrow \beta_1 = 0,85$

$$\rho_b = \frac{0,85 \cdot f'c}{f_y} \cdot \beta_1 \left( \frac{600}{600 + f_y} \right) = \frac{0,85 \cdot 25}{400} \cdot 0,85 \left( \frac{600}{600 + 400} \right)$$

$$= 0,027$$

$$\rho_{maks} = 0,75 \cdot \rho_b = 0,75 \cdot 0,027 = 0,020$$

$$\rho_{min} = \frac{1,4}{f_y} = \frac{1,4}{400} = 0,0035$$

$$\rho_{pakai} = 0,5 \cdot \rho_{maks} = 0,5 \cdot 0,020 = 0,010$$

$$m = \frac{f_y}{0,85 \cdot f'c} = \frac{400}{0,85 \cdot 25} = 18,824$$

$$R_n = \rho \cdot f_y (1 - \frac{1}{2} \rho m)$$

$$= 0,010 \cdot 400 (1 - \frac{1}{2} \cdot 0,010 \cdot 18,824) = 3,624 \text{ MPa}$$

• Tulangan tumpuan

$$Mu = 34,527 \text{ KNm}$$

$$\frac{Mu}{\phi} = \frac{34,527}{0,8} = 43,159 \text{ KNm}$$

$$b \cdot d^2 = \frac{Mu / \phi}{R_n}$$

$$d_{\text{perlu}} = \sqrt{\frac{Mu/\phi}{Rn \cdot b}} = \sqrt{\frac{43,159 \cdot 10^6}{3,624 \cdot 200}} = 244,021 \text{ mm} < d = 342 \text{ mm},$$

maka dipakai tulangan sebelah.

$$Rn_{\text{ada}} = \frac{Mu}{b \cdot d_{\text{ada}}^2} = \frac{43,159 \cdot 10^6}{200 \cdot 342^2} = 1,845 \text{ MPa}$$

$$\rho_{\text{ada}} = \frac{Rn_{\text{ada}}}{Rn} \cdot \rho = \frac{1,845}{3,624} \cdot 0,010 = 0,005 > \rho_{\text{min}} = 0,0035$$

sehingga dipakai  $\rho_{\text{ada}} = 0,005$

$$A_s = \rho_{\text{ada}} \cdot b \cdot d_{\text{ada}} = 0,005 \cdot 200 \cdot 342 = 348,223 \text{ mm}^2$$

Dipakai diameter tulangan D16, maka :  $A_{1\phi} = 201,062 \text{ mm}^2$

$$n = \frac{A_s}{A_{1\phi}} = \frac{348,223}{201,062} = 1,732$$

Dipakai tulangan memanjang **2D16**, maka :

$$A_{s\text{ada}} = 2 \cdot 201,062 = 402,124 \text{ mm}^2 > A_s = 348,223 \text{ mm}^2$$

Kontrol kapasitas lentur yang terjadi :

$$a = \frac{A_{s\text{ada}} \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{402,124 \cdot 400}{0,85 \cdot 25 \cdot 200} = 37,847 \text{ mm}$$

$$M_n = A_{s\text{ada}} \cdot f_y \cdot (d - a/2) = 402,124 \cdot 400 \cdot (342 - 37,847/2).$$

$$= 51966725,79 \text{ Nmm}$$

$$= 51,967 \text{ KNm} > \frac{Mu}{\phi} = 43,159 \text{ KNm} \dots\dots\dots\text{Ok !}$$

- Tulangan lapangan

$$M_u = 50,221 \text{ KNm}$$

$$\frac{M_u}{\phi} = \frac{50,221}{0,8} = 62,776 \text{ KNm}$$

$$b \cdot d^2 = \frac{M_u / \phi}{R_n}$$

$$d_{\text{perlu}} = \sqrt{\frac{M_u / \phi}{R_n \cdot b}} = \sqrt{\frac{62,776 \cdot 10^6}{3,624 \cdot 200}} = 294,298 \text{ mm} < d = 342 \text{ mm},$$

maka dipakai tulangan sebelah.

$$R_{n_{\text{ada}}} = \frac{M_u / \phi}{b \cdot d_{\text{ada}}^2} = \frac{62,776 \cdot 10^6}{200 \cdot 342^2} = 2,684 \text{ MPa}$$

$$\rho_{\text{ada}} = \frac{R_{n_{\text{ada}}}}{R_n} \cdot \rho = \frac{2,684}{3,624} \cdot 0,010 = 0,007 > \rho_{\text{min}} = 0,0035$$

sehingga dipakai  $\rho_{\text{ada}} = 0,007$

$$A_s = \rho_{\text{ada}} \cdot b \cdot d_{\text{ada}} = 0,007 \cdot 200 \cdot 342 = 506,5 \text{ mm}^2$$

Dipakai diameter tulangan D16, maka :  $A_{10} = 201,062 \text{ mm}^2$

$$n = \frac{A_s}{A_{10}} = \frac{506,5}{201,062} = 2,519$$

Dipakai tulangan memanjang **3D16**, maka :

$$A_{s_{\text{ada}}} = 3 \cdot 201,062 = 603,186 \text{ mm}^2 > A_s = 506,5 \text{ mm}^2$$

Kontrol kapasitas lentur yang terjadi :

$$a = \frac{A_{s_{\text{ada}}} \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{603,186 \cdot 400}{0,85 \cdot 25 \cdot 200} = 56,770 \text{ mm}$$



$$\begin{aligned}
 M_n &= A_s \cdot f_y \cdot (d - a/2) = 603,186 \cdot 400 \cdot (342 - 56,770/2) \\
 &= 75667270,96 \text{ Nmm} \\
 &= 75,667 \text{ KNm} > \frac{M_u}{\phi} = 62,776 \text{ KNm} \dots\dots\dots \text{Ok !}
 \end{aligned}$$

b. Perencanaan tulangan geser balok bordes

Gaya geser dukungan :

$$V_u \text{ dukungan} = \frac{1}{2} \cdot q \cdot U \cdot L = \frac{1}{2} \cdot 75,779 \cdot 2,7 = 102,302 \text{ KN}$$

$$\text{maka } \frac{V_u}{\phi} = \frac{102,302}{0,6} = 170,503 \text{ KN}$$

Tegangan geser beton ( $V_c$ ) :

$$V_c = \left( \frac{1}{6} \sqrt{f_c'} \right) \cdot b \cdot d = \left( \frac{1}{6} \sqrt{25} \right) \cdot 200 \cdot 400 \cdot 10^{-3} = 66,667 \text{ KN}$$

$$\frac{V_u}{\phi} = 170,503 \text{ KN} > V_c = 66,667 \text{ KN}, \text{ maka perlu tulangan geser.}$$

$$V_s = \frac{V_u}{\phi} - V_c = 170,503 - 66,667 = 103,836 \text{ KN}$$

$$\text{Dipakai sengkang P10, maka } A_v = 2 \cdot \frac{1}{4} \cdot \pi \cdot 10^2 = 157 \text{ mm}^2$$

$$\text{Jarak sengkang } s \leq \frac{A_v \cdot f_y \cdot d}{V_s} = \frac{157 \cdot 240 \cdot 342}{103836} = 124,105 \text{ mm}$$

$$\leq \frac{d}{2} = \frac{342}{2} = 171 \text{ mm}$$

$$\leq 600 \text{ mm}$$

Jadi dipakai sengkang **P10 – 120 mm**.

## 5. Perhitungan pondasi tangga

a. Data :

$$\sigma \text{ tanah} = 150 \text{ KN/m}^2$$

$$\gamma \text{ batu} = 22 \text{ KN/m}^3$$

$$\gamma \text{ tanah} = 18 \text{ KN/m}^3$$

balok diatas pondasi 25/50 cm

Tinjauan untuk lebar tangga = 1,2 m

Tinggi pondasi tangga = 1m

b. Pembebanan

$$\text{Akibat beban tangga} = 119,033 \text{ KN}$$

$$\text{Berat balok diatas pondasi} = 0,25 \cdot 0,5 \cdot 1,2 \cdot 24 = \underline{3,600 \text{ KN} +}$$

$$P = 122,633 \text{ KN}$$

Tegangan ijin tanah pakai :

$$\sigma = \sigma \text{ tanah} - \text{berat pondasi}$$

$$= 150 - 1 \cdot 22 = 128 \text{ KN/m}^2$$

Diketahui pada kondisi kritis  $\rightarrow \sigma = P/A$

$$A = P/\sigma = 122,633 / 128 = 0,958 \text{ m}^2$$

$$B = A/L = 0,958/1,2 = 0,798 \text{ m} \rightarrow \text{diambil lebar (B)} = 0,8 \text{ m}$$

Kontrol tegangan tanah :

$$\sigma = P/A = 122,633/(0,8 \cdot 1,2)$$

$$= 127,743 \text{ KN/m}^2 < \sigma \text{ tanah} = 128 \text{ KN/m}^2 \dots\dots\dots \text{Ok !}$$

## 4.6 Perencanaan Balok

### 4.6.1 Perencanaan balok penampang persegi menahan lentur tulangan sebelah

1. Data perencanaan balok :

$$f'c = 25 \text{ Mpa}$$

$$fy = 400 \text{ Mpa}$$

$$\text{penutup beton (Pb)} = 40 \text{ mm}$$

$$\text{diameter tulangan pokok} = 22 \text{ mm}$$

$$\text{diameter tulangan sengkang} = 10 \text{ mm}$$

$$\text{lebar balok (b)} = 400 \text{ mm}$$

$$\text{tinggi balok (h)} = 600 \text{ mm}$$

$$\phi = 0,8$$

$$\beta = 0,85$$

$$d' = 40 + 10 + (22/2) = 61 \text{ mm}$$

$$d = 600 - 61 = 539 \text{ mm}$$

$$\rho_b = \frac{0,85 \cdot f'c}{fy} \cdot \beta_1 \cdot \left( \frac{600}{600 + fy} \right) = \frac{0,85 \cdot 25}{400} \cdot 0,85 \cdot \left( \frac{600}{600 + 400} \right) = 0,027$$

$$\rho_{maks} = 0,75 \cdot \rho_b = 0,75 \cdot 0,027 = 0,020$$

$$\rho_{min} = \frac{1,4}{fy} = \frac{1,4}{400} = 0,004$$

$$\rho_{rencana} = 0,5 \cdot \rho_{maks} = 0,5 \cdot 0,020 = 0,010 > \rho_{min}$$

$$m = \frac{fy}{0,85 \cdot f'c} = \frac{400}{0,85 \cdot 25} = 18,824$$

$$Rn = \rho \cdot fy \cdot (1 - \frac{1}{2} \cdot \rho \cdot m) = 0,010 \cdot 400 \cdot (1 - \frac{1}{2} \cdot 0,010 \cdot 18,824) = 3,624 \text{ MPa}$$

$$\begin{aligned}
 M_n &= A_s \cdot f_y \cdot (d - a/2) \\
 &= 251,35 \cdot 240 \cdot (76 - 2,8388/2) \\
 &= 4,499 \text{ KNm} > 1,33 \cdot \frac{M_u}{\phi} = 1,33 \cdot 0,7301 = 0,971 \text{ KN}
 \end{aligned}$$

f. Perencanaan tulangan bagi pelat talang.

$$A_s \text{ bagi} = 0,002 \cdot b \cdot h$$

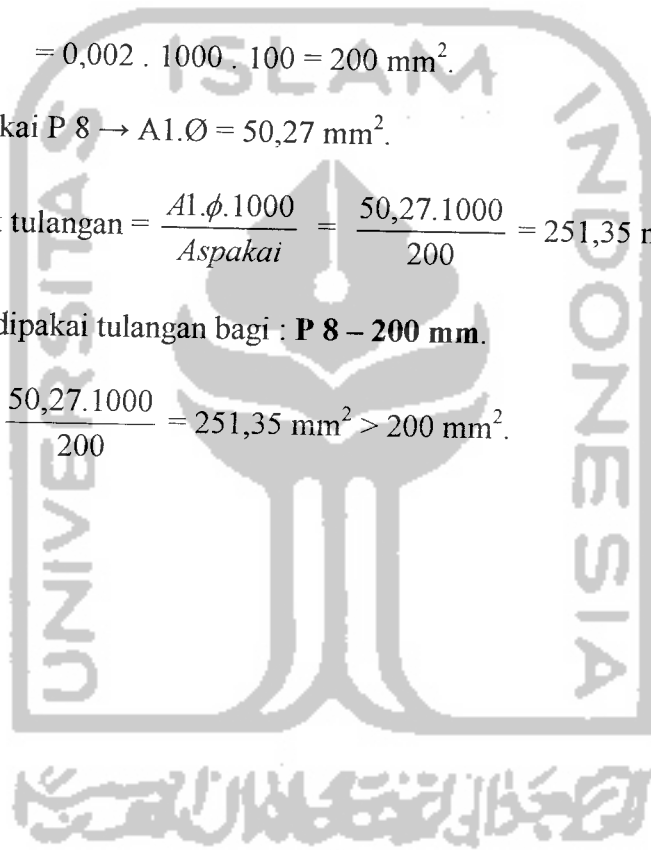
$$= 0,002 \cdot 1000 \cdot 100 = 200 \text{ mm}^2$$

$$\text{Dipakai P 8} \rightarrow A_1 \cdot \phi = 50,27 \text{ mm}^2$$

$$\text{Jarak tulangan} = \frac{A_1 \cdot \phi \cdot 1000}{A_s \text{ pakai}} = \frac{50,27 \cdot 1000}{200} = 251,35 \text{ mm}$$

Jadi dipakai tulangan bagi : **P 8 – 200 mm**.

$$A_s = \frac{50,27 \cdot 1000}{200} = 251,35 \text{ mm}^2 > 200 \text{ mm}^2$$



2. Perencanaan dimensi balok portal B1a Induk (9 m) lantai 2

a. Perencanaan tulangan tumpuan

Data dari SAP 2000 seperti tercantum pada lampiran, di dapat momen maksimum tumpuan ( $M$ ) = 297,071 KNm.

$$\frac{Mu}{\phi} = \frac{297,071}{0,8} = 371,339 \text{ KNm}$$

$$b.d^2 = \frac{Mu/\phi}{Rn} \rightarrow d_{\text{perlu}} = \sqrt{\frac{Mu/\phi}{Rn.b}} = \sqrt{\frac{371,339.10^6}{3,624.400}} = 502,575 \text{ mm}$$

$$d_{\text{diketahui}} = 540 \text{ mm} \rightarrow d_{\text{diketahui}} > d_{\text{perlu}} \text{ (tul sebelah)}$$

Jika nilai  $d_{\text{diketahui}} \geq d_{\text{perlu}}$ , maka digunakan tulangan sebelah

Jika nilai  $d_{\text{diketahui}} < d_{\text{perlu}}$ , maka digunakan tulangan rangkap

$$Rn_{\text{baru}} = \frac{Mu/\phi}{b.d_{\text{diketahui}}^2} = \frac{371,339.10^6}{400.540^2} = 3,184 \text{ MPa}$$

$$\rho_{\text{baru}} = \frac{Rn_{\text{baru}}}{Rn} . \rho = \frac{3,184}{3,624} . 0,010 = 0,009 \geq \rho_{\text{min}} = 0,004$$

$$As = \rho_{\text{baru}} . b . d_{\text{diketahui}} = 0,009 . 400 . 540 = 1900,938 \text{ mm}^2$$

Dipakai  $\emptyset$  tulangan tarik  $\rightarrow$  22 mm

$$A_{1\emptyset} = 380,286 \text{ mm}^2$$

$$n = \frac{As}{A_{1\emptyset}} = \frac{1900,938}{380,286} = 4,999 \approx 5$$

$$As_{\text{ada}} = n . A_{1\emptyset} = 5 . 380,286 = 1901,429 \text{ mm}^2 > As = 1900,938 \text{ mm}^2$$

Periksa penempatan tulangan :

$$Jbd = \frac{b - 2.(Pb + \phi_{\text{senggang}}) - (n.\phi_{\text{pokok}})}{n - 1}$$

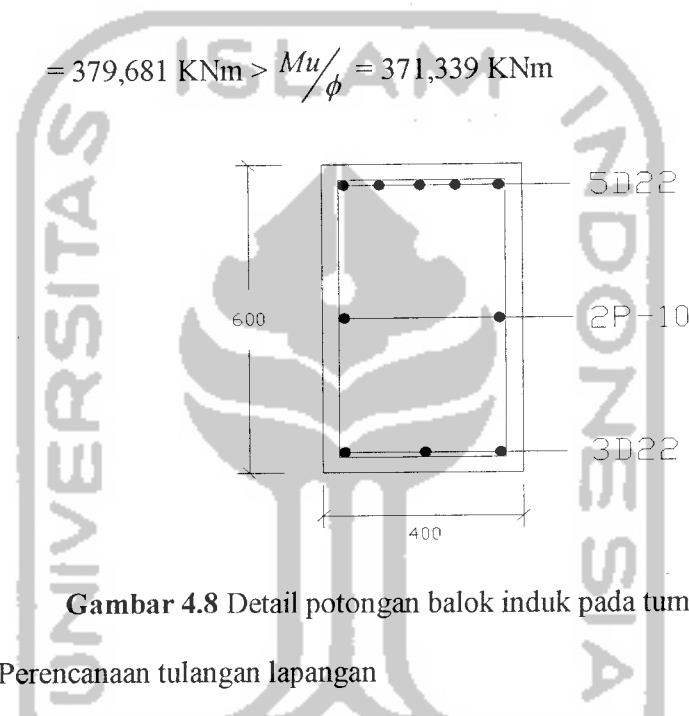
$$= \frac{400 - 2 \cdot (40 + 10) - (5 \cdot 22)}{5 - 1} = 47,5 \text{ mm} > D 22 = 22 \text{ mm}$$

### Kontrol momen

$$a = \frac{A_{s_{ada}} \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{1901,429 \cdot 400}{0,85 \cdot 25 \cdot 400} = 89,479$$

$$M_n = A_{s_{ada}} \cdot f_y \cdot \left( d_{diketahui} - \frac{a}{2} \right) = 1901,429 \cdot 400 \cdot \left( 540 - \frac{89,479}{2} \right)$$

$$= 379,681 \text{ KNm} > \frac{M_u}{\phi} = 371,339 \text{ KNm}$$



**Gambar 4.8** Detail potongan balok induk pada tumpuan

### b. Perencanaan tulangan lapangan

Data dari SAP 2000 seperti tercantum pada lampiran, di dapat momen maksimum lapangan ( $M^+$ ) = 251,961 KNm.

$$\frac{M_u}{\phi} = \frac{251,961}{0,8} = 314,951 \text{ KNm}$$

$$b \cdot d^2 = \frac{M_u / \phi}{R_n} \rightarrow d_{\text{perlu}} = \sqrt{\frac{M_u / \phi}{R_n \cdot b}} = \sqrt{\frac{314,951 \cdot 10^6}{3,624 \cdot 400}} = 462,847 \text{ mm}$$

$$d_{\text{diketahui}} = 540 \text{ mm} \rightarrow d_{\text{diketahui}} > d_{\text{perlu}} \text{ (tul sebelah)}$$

Jika nilai  $d_{diketahui} \geq d_{perlu}$ , maka digunakan tulangan sebelah

Jika nilai  $d_{diketahui} < d_{perlu}$ , maka digunakan tulangan rangkap

$$Rn_{baru} = \frac{Mu/\phi}{b \cdot d_{diketahui}^2} = \frac{314,951 \cdot 10^6}{400 \cdot 540^2} = 2,700 \text{ MPa}$$

$$\rho_{baru} = \frac{Rn_{baru}}{Rn} \cdot \rho = \frac{2,700}{3,624} \cdot 0,010 = 0,007 \geq \rho_{min} = 0,004$$

$$As = \rho_{baru} \cdot b \cdot d_{diketahui} = 0,007 \cdot 400 \cdot 540 = 1612,282 \text{ mm}^2$$

Dipakai  $\emptyset$  tulangan tarik  $\rightarrow 22 \text{ mm}$

$$A_{1\emptyset} = 380,286 \text{ mm}^2$$

$$n = \frac{As}{A_{1\emptyset}} = \frac{1612,282}{380,286} = 4,240 \approx 5$$

$$As_{ada} = n \cdot A_{1\emptyset} = 5 \cdot 380,286 = 1901,429 \text{ mm}^2 > As = 1612,282 \text{ mm}^2$$

Periksa penempatan tulangan :

$$Jbd = \frac{b - 2 \cdot (Pb + \phi_{senggang}) - (n \cdot \phi_{pokok})}{n - 1} = \frac{400 - 2 \cdot (40 + 10) - (5 \cdot 22)}{5 - 1}$$

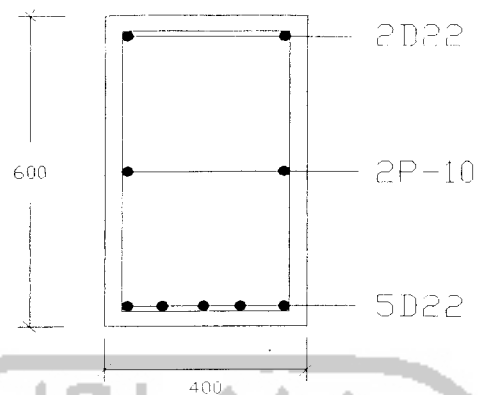
$$= 47,5 \text{ mm} > D 22 = 22 \text{ mm}$$

Kontrol momen

$$a = \frac{As_{ada} \cdot fy}{0,85 \cdot f'c \cdot b} = \frac{1901,429 \cdot 400}{0,85 \cdot 25 \cdot 400} = 89,479$$

$$Mn = As_{ada} \cdot fy \cdot \left( d_{diketahui} - \frac{a}{2} \right) = 1901,429 \cdot 400 \cdot \left( 540 - \frac{89,479}{2} \right)$$

$$= 379,681 \text{ KNm} > \frac{Mu}{\phi} = 314,951 \text{ KNm}$$



**Gambar 4.9** Detail potongan balok induk pada lapangan

c. Perencanaan gaya geser

Data dari SAP 2000 seperti tercantum pada lampiran, di dapat gaya geser maksimum sebagai berikut :

$$VD = 107,97 \text{ KN}$$

$$VL = 23,123 \text{ KN}$$

$$VE = 13.807 \text{ KN}$$

$$Vu = 0,7 \cdot \frac{M_{kap} + M'_{kap}}{l_n} + 1,05 \cdot V_g ; Vg = VD + VL$$

$$= 0,7 \cdot \phi \cdot \frac{M_{nak} + M'_{nak}}{l_n} + 1,05 \cdot (VD + VL) ; \phi = 1,25$$

$$= 0,7 \cdot 1,25 \cdot \frac{376,681 + 234,175}{8,6} + 1,05 \cdot (107,97 + 23,125)$$

$$= 199,801 \text{ KN}$$

$$Vu' = 1,05 \cdot (V_{D,b} + V_{L,b} + \frac{4}{k} \cdot V_{E,b})$$

$$= 1,05 \cdot (107,97 + 23,123 + \frac{4}{1} \cdot 13,807)$$

$$= 201,325 \text{ KN}$$



$V_{u,b}$  pakai adalah nilai terkecil antara  $V_{u,b}$  dan  $V_{u,b}'$ , sehingga di dapat  $V_{u,b}$  pakai = 199,801 KN.

Daerah sendi plastis (sepanjang 2.h) :

$V_c = 0$  (beton dianggap tidak menerima geser)

$$V_s = \frac{V_{u,b \text{ pakai}}}{\phi} = \frac{199,801}{0,6} = 333,002 \text{ KN}$$

$$V_c = \left( \frac{1}{6} \sqrt{f'_c} \right) b.d = \left( \frac{1}{6} \sqrt{25} \right) 400.540 = 180 \text{ KN}$$

$$V_{s_{\min}} = 1/3.b.d = 1/3.400.540 = 72 \text{ KN}$$

$$(V_c + V_{s_{\min}}) < V_s \leq 3.V_c \rightarrow 252 \text{ KN} < 333,002 \text{ KN} \leq 540 \text{ KN}$$

Tersedia tulangan sengkang P-10  $\rightarrow f_y = 240 \text{ MPa}$ .

$$A_v = \frac{1}{4} \pi D^2 = \frac{1}{4} \pi 10^2 \cdot 2 = 157,080 \text{ mm}^2$$

$$S \leq \frac{A_v f_y d}{\left( \frac{V_u}{\phi} - V_c \right)} = \frac{157,080 \cdot 240 \cdot 540}{(333,002 - 0) \cdot 1000} = 61,134 \text{ mm}$$

$$\leq d/2 = 540/2 = 270 \text{ mm}$$

$$\leq 600 \text{ mm}$$

S pakai  $\rightarrow$  P10-60.

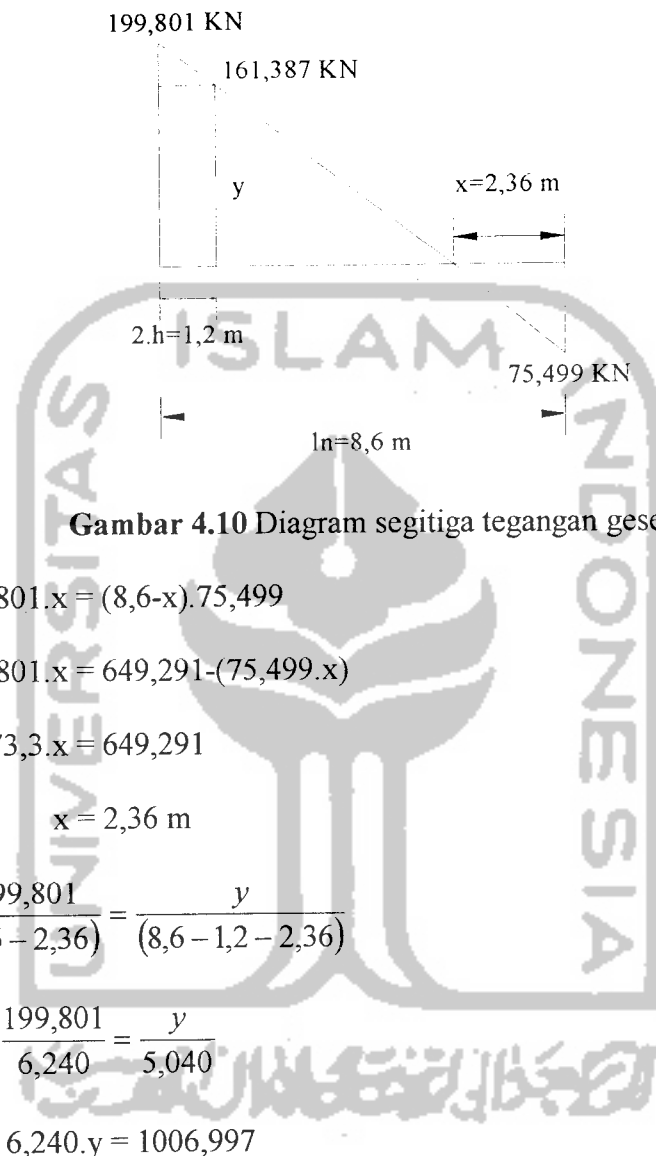
Daerah luar sendi plastis :

$$V_{u,b}'' = 0,7 \cdot \frac{M_{kap} + M'_{kap}}{l_n} - 1,05 V_g \quad ; V_g = VD + VL$$

$$= 0,7 \cdot \phi \cdot \frac{M_{nak} + M'_{nak}}{l_n} - 1,05 (VD + VL) \quad ; \phi = 1,25$$

$$= 0,7 \cdot 1,25 \cdot \frac{376,681 + 234,175}{8,6} - 1,05 (107,97 + 23,125)$$

$$= -75,499 \text{ KN}$$



**Gambar 4.10** Diagram segitiga tegangan geser

$$199,801 \cdot x = (8,6 - x) \cdot 75,499$$

$$199,801 \cdot x = 649,291 - (75,499 \cdot x)$$

$$273,3 \cdot x = 649,291$$

$$x = 2,36 \text{ m}$$

$$\frac{199,801}{(8,6 - 2,36)} = \frac{y}{(8,6 - 1,2 - 2,36)}$$

$$\frac{199,801}{6,240} = \frac{y}{5,040}$$

$$6,240 \cdot y = 1006,997$$

$$y = 161,387 \text{ KN}$$

$$V_{u,b \text{ pakai}} = 161,387 \text{ KN}$$

$$V_s = \frac{V_{u,b \text{ pakai}}}{\phi} = \frac{161,387}{0,6} = 268,978 \text{ KN}$$

$$V_c = \left( \frac{1}{6} \sqrt{f'c} \right) \cdot b \cdot d = \left( \frac{1}{6} \sqrt{25} \right) \cdot 400 \cdot 540 = 180 \text{ KN}$$

$$V_{s_{\min}} = 1/3 \cdot b \cdot d = 1/3 \cdot 400 \cdot 540 = 72 \text{ KN}$$

$$(V_c + V_{s_{\min}}) < V_s \leq 3 \cdot V_c \rightarrow 252 \text{ KN} < 268,978 \text{ KN} \leq 540 \text{ KN}$$

Tersedia tulangan sengkang P-10  $\rightarrow f_y = 240 \text{ MPa}$ .

$$A_v = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 10^2 \cdot 2 = 157,080 \text{ mm}^2.$$

$$S \leq \frac{A_v \cdot f_y \cdot d}{\left(\frac{V_u}{\phi} - V_c\right)} = \frac{157,080 \cdot 240 \cdot 540}{(268,978 - 180) \cdot 1000} = 228,885 \text{ mm}$$

$$\leq d/2 = 540/2 = 270 \text{ mm}$$

$$\leq 600 \text{ mm}$$

S pakai  $\rightarrow$  P10-225.

#### 4.6.2 Perencanaan tulangan torsi

Perencanaan dimensi balok portal B1a Induk (9 m) lantai 2

$$T_u = 11,783 \text{ KNm}$$

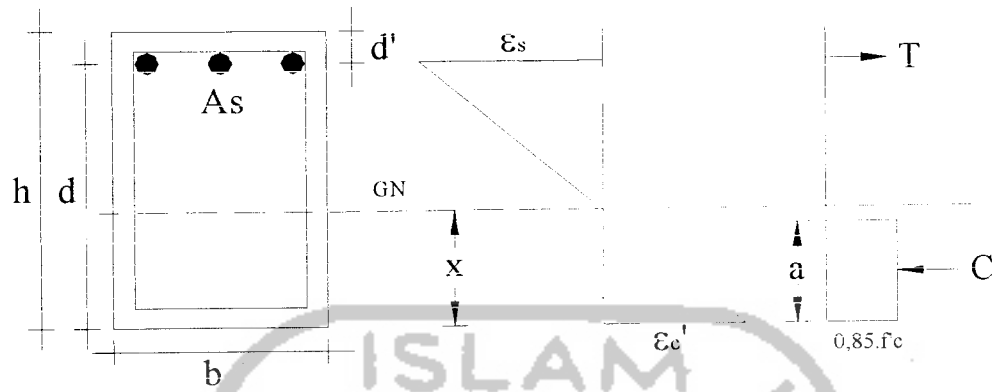
$$\Sigma x^2 \cdot y = 400^2 \cdot 600 = 96 \cdot 10^6 \text{ mm}^2.$$

$$\phi \cdot \left( \frac{1}{20} \cdot \sqrt{f'_c} \cdot \Sigma x^2 \cdot y \right) = 0,6 \cdot \left( \frac{1}{20} \cdot \sqrt{25} \cdot 96 \cdot 10^6 \right) = 14,4 \cdot 10^6 \text{ Nmm} = 14,4 \text{ KNm}$$

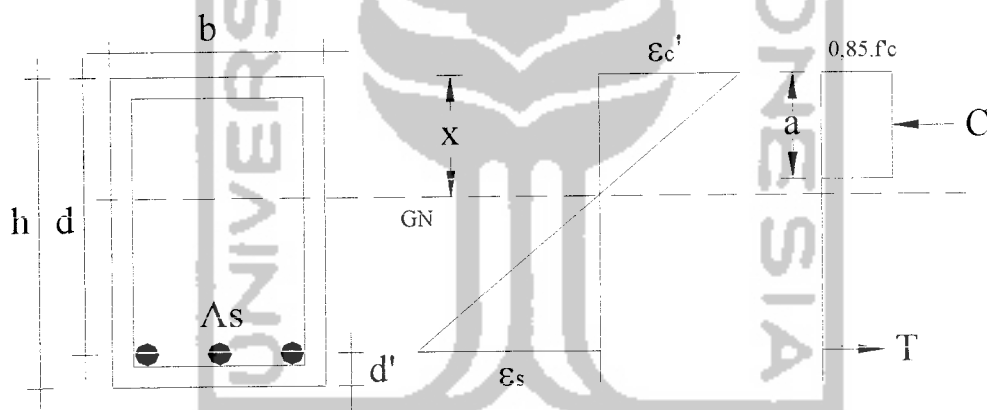
Kontrol :

$$T_u = 11,783 \text{ KNm} < \phi \cdot \left( \frac{1}{20} \cdot \sqrt{f'_c} \cdot \Sigma x^2 \cdot y \right) = 14,4 \text{ KNm}$$

$\rightarrow$  Tulangan torsi diabaikan.



Gambar 4.11 Balok persegi tulangan sebelah pada tumpuan



Gambar 4.12 Balok persegi tulangan sebelah pada lapangan

#### 4.7 Perencanaan Kolom

##### 1. Data

a. Ukuran kolom :

$$b = 600 \text{ mm}$$

$$h = 600 \text{ mm}$$

b. Ukuran balok :

$$b = 400 \text{ mm}$$

$$h = 600 \text{ mm}$$

c.  $f'c = 25 \text{ MPa}$

d.  $Fy \text{ ulir} = 400 \text{ MPa}$

e.  $Fy \text{ polos} = 240 \text{ MPa}$

f.  $Ec = Eg = 4700 \cdot \sqrt{f'c} = 4700 \cdot \sqrt{25} = 23500 \text{ MPa} = 23500000 \text{ KN/m}^2$

g.  $Ic \text{ (Inersia kolom)} = 1/12 \cdot b_k \cdot h_k^3 = 1/12 \cdot 0,6 \cdot 0,6^3 = 0,011 \text{ m}^4$

h.  $Ig \text{ (Inersia balok)} = 1/12 \cdot b_b \cdot h_b^3 = 1/12 \cdot 0,4 \cdot 0,6^3 = 0,007 \text{ m}^4$

i. Tinggi kolom = 4,2 m

j. Tinggi (h) pondasi = 2,1 m

k.  $Cm = 1$

l.  $\emptyset = 0,6$

m.  $\emptyset_o = 1,25$

n.  $d' = 61 \text{ mm}$

o.  $d = h - d' = 600 - 61 = 539 \text{ mm}$

2. Perencanaan kolom portal As 3 bentang C pada lantai 2

a. Perhitungan arah X

$$Lb_1 \text{ (panjang balok)} = 6 \text{ m}$$

$$Lb_1' \text{ (bentang bersih balok)} = 6 - 0,6 = 5,4 \text{ m}$$

$$Lb_2 \text{ (panjang balok)} = 6 \text{ m}$$

$$Lb_2' \text{ (bentang bersih balok)} = 6 - 0,6 = 5,4 \text{ m}$$

- Data momen diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$MDa = 2,780 \text{ KNm} \qquad MDb = 3,902 \text{ KNm}$$

$$MLa = 0,752 \text{ KNm} \qquad MLb = 1,182 \text{ KNm}$$

$$MEa = 0,085 \text{ KNm} \qquad MEb = 0,115 \text{ KNm}$$

$$Mua = 4,541 \text{ KNm} \qquad Mub = 6,573 \text{ KNm}$$

- Data gaya aksial diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$PDa = 490,028 \text{ KNm} \qquad PDb = 525,651 \text{ KNm}$$

$$PLa = 137,201 \text{ KNm} \qquad PLb = 137,201 \text{ KNm}$$

$$PEa = 7,387 \text{ KNm} \qquad PEb = 7,387 \text{ KNm}$$

$$Pua = 807,556 \text{ KNm} \qquad Pub = 850,303 \text{ KNm}$$

- Data gaya geser diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$VDa = 6,657 \text{ KNm} \qquad VDb = 6,657 \text{ KNm}$$

$$VLa = 0,896 \text{ KNm} \qquad VLb = 0,896 \text{ KNm}$$

$$VEa = 56,781 \text{ KNm} \qquad VEb = 56,781 \text{ KNm}$$

- Perhitungan momen rencana (Mc)

$$e = M_u / P_u = 4,541 / 807,556 = 0,006 \text{ m}$$

$$e_{\min} = (1,5 + 0,03 \cdot h) \text{ cm} = (1,5 + 0,03 \cdot 60) \text{ cm} = 3,3 \text{ cm} = 0,033 \text{ m}$$

$$= 0,033 \text{ m} > 0,006 \text{ m}, \text{ maka dipakai } e = 0,033 \text{ m}$$

$$\Psi_A = \frac{\sum \left( \frac{E_c I_c}{L_c} \right)}{\sum \left( \frac{E_g I_g}{L_g} \right)} = \frac{\sum \left( \frac{23500000 \cdot 0,011}{4,2} \right) + \left( \frac{23500000 \cdot 0,011}{4,2} \right)}{\sum \left( \frac{23500000 \cdot 0,007}{5,4} \right) + \left( \frac{23500000 \cdot 0,007}{5,4} \right)}$$

$$= 2,021$$

$$\Psi_B = \frac{\sum \left( \frac{E_c I_c}{L_c} \right)}{\sum \left( \frac{E_g I_g}{L_g} \right)} = \frac{\sum \left( \frac{23500000 \cdot 0,011}{4,2} \right) + \left( \frac{23500000 \cdot 0,011}{4,2} \right)}{\sum \left( \frac{23500000 \cdot 0,007}{5,4} \right) + \left( \frac{23500000 \cdot 0,007}{5,4} \right)}$$

$$= 2,021$$

Lihat nomogram unbranched frames, didapat  $k = 1,6$

$$\frac{k \cdot l}{r} = \frac{1,6 \cdot (4,2 - 0,6)}{(0,3 \cdot 0,6)} = 32 > 22 \text{ dan } \leq 100, \text{ maka termasuk kolom}$$

panjang, sehingga dipakai konsep pembesaran momen.

$$EI_1 = \frac{\frac{1}{5} \cdot (E_c I_g) + E_s I_{se}}{1 + \beta \cdot d}$$

$$= \frac{\frac{1}{5} \cdot (23500000 \cdot 0,007) + (2 \cdot 10^8 \cdot 0,6 \cdot 0,6 \cdot 0,025 \cdot 0,249^2)}{\left( 1 + \frac{588,034}{807,556} \right)}$$

$$= 83615,744 \text{ KNm}^2.$$

$$EI_2 = \frac{0,4 \cdot E_c I_g}{1 + \beta \cdot d} = \frac{0,4 \cdot 23500000 \cdot 0,007}{\left( 1 + \frac{588,034}{807,556} \right)} = 38075,069 \text{ KNm}^2.$$

dipakai  $EI = 83615,744 \text{ KNm}^2$ .

$$P_c = \frac{\mu^2 \cdot EI}{(k.l)^2} = \frac{\mu^2 \cdot 83615,744}{(1,6 \cdot 3,6)^2} = 24873,840 \text{ KN.}$$

$$\delta_b = \frac{C_m}{1 - \left( \frac{P_u}{\phi \cdot P_c} \right)} \geq 1$$

$$= \frac{1}{1 - \left( \frac{807,556}{0,6 \cdot 24873,840} \right)} \geq 1$$

$$= 1,057 \geq 1$$

$$\begin{aligned} \sum P_u &= 818,63 + 807,556 + 717,506 + 683,115 + 683,115 \\ &\quad + 717,506 + 807,556 + 818,63 \\ &= 6053,614 \text{ KN} \end{aligned}$$

$$\begin{aligned} \sum P_c &= 24852,371 + 24893,873 + 28165,672 + 27927,915 \\ &\quad + 27927,915 + 28165,672 + 24893,873 + 24852,371 \\ &= 211679,662 \text{ KN} \end{aligned}$$

$$\delta_s = \frac{C_m}{1 - \left( \frac{\sum P_u}{\phi \cdot \sum P_c} \right)} \geq 1$$

$$= \frac{1}{1 - \left( \frac{6053,614}{0,6 \cdot 211679,662} \right)} = 1,050 \geq 1$$

$$M_{u1} = 1,2 \cdot M_D + 1,6 \cdot M_L = 1,2 \cdot 2,780 + 1,6 \cdot 0,752 = 4,539 \text{ KNm.}$$

$$M_{u2} = M_E = 0,085 \text{ KNm}$$

$$M_{cx} = \delta_b \cdot M_{u1} + \delta_s \cdot M_{u2}$$

$$= 1,057 \cdot 4,539 + 1,050 \cdot 0,085 = 4,887 \text{ KNm}$$



## b. Perhitungan arah Y

$$Lb_1 \text{ (panjang balok)} = 9 \text{ m}$$

$$Lb_1' \text{ (bentang bersih balok)} = 9 - 0,6 = 8,4 \text{ m}$$

$$Lb_2 \text{ (panjang balok)} = 9 \text{ m}$$

$$Lb_2' \text{ (bentang bersih balok)} = 9 - 0,6 = 8,4 \text{ m}$$

- Data momen diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$MDa = 12,199 \text{ KNm}$$

$$MDb = 15,763 \text{ KNm}$$

$$MLa = 1,649 \text{ KNm}$$

$$MLb = 2,112 \text{ KNm}$$

$$MEa = 99,031 \text{ KNm}$$

$$MEb = 139,451 \text{ KNm}$$

$$Mua = 117,830 \text{ KNm}$$

$$Mub = 164,306 \text{ KNm}$$

- Data gaya aksial diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$PDa = 490,028 \text{ KNm}$$

$$PDb = 525,651 \text{ KNm}$$

$$PLa = 137,201 \text{ KNm}$$

$$PLb = 137,201 \text{ KNm}$$

$$PEa = 7,387 \text{ KNm}$$

$$PEb = 7,387 \text{ KNm}$$

$$Pua = 807,556 \text{ KNm}$$

$$Pub = 850,303 \text{ KNm}$$

- Data gaya geser diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$VDa = 1,591 \text{ KNm}$$

$$VDb = 1,591 \text{ KNm}$$

$$VLa = 0,460 \text{ KNm}$$

$$VLb = 0,460 \text{ KNm}$$

$$VEa = 0,048 \text{ KNm}$$

$$VEb = 0,048 \text{ KNm}$$

- Perhitungan momen rencana ( $M_c$ )

$$e = M_u / P_u = 117,830 / 807,556 = 0,146 \text{ m}$$

$$e_{\min} = (1,5 + 0,03 \cdot h) \text{ cm} = (1,5 + 0,03 \cdot 60) \text{ cm} = 3,3 \text{ cm} = 0,033 \text{ m}$$

$$= 0,033 \text{ m} < 0,146 \text{ m}, \text{ maka dipakai } e = 0,146 \text{ m}$$

$$\Psi_A = \frac{\sum \left( \frac{E_c \cdot I_c}{L_c} \right)}{\sum \left( \frac{E_g \cdot I_g}{L_g} \right)} = \frac{\sum \left( \frac{23500000 \cdot 0,011}{4,2} \right) + \left( \frac{23500000 \cdot 0,011}{4,2} \right)}{\sum \left( \frac{23500000 \cdot 0,007}{8,4} \right) + \left( \frac{23500000 \cdot 0,007}{8,4} \right)}$$

$$= 3,143$$

$$\Psi_B = \frac{\sum \left( \frac{E_c \cdot I_c}{L_c} \right)}{\sum \left( \frac{E_g \cdot I_g}{L_g} \right)} = \frac{\sum \left( \frac{23500000 \cdot 0,011}{4,2} \right) + \left( \frac{23500000 \cdot 0,011}{4,2} \right)}{\sum \left( \frac{23500000 \cdot 0,007}{8,4} \right) + \left( \frac{23500000 \cdot 0,007}{8,4} \right)}$$

$$= 3,143$$

Lihat nomogram unbranched frames, didapat  $k = 1,85$

$$\frac{k \cdot l}{r} = \frac{1,85 \cdot (4,2 - 0,6)}{(0,3 \cdot 0,6)} = 37 > 22 \text{ dan } \leq 100, \text{ maka termasuk kolom}$$

panjang, sehingga dipakai konsep pembesaran momen.

$$EI_1 = \frac{\frac{1}{5} \cdot (E_c \cdot I_g) + E_s \cdot I_{se}}{1 + \beta \cdot d}$$

$$= \frac{\frac{1}{5} \cdot (23500000 \cdot 0,007) + (2 \cdot 10^8 \cdot 0,6 \cdot 0,6 \cdot 0,025 \cdot 0,249^2)}{\left( 1 + \frac{588,034}{807,556} \right)}$$

$$= 83615,744 \text{ KNm}^2.$$

$$EI_2 = \frac{0,4 \cdot E_c \cdot I_g}{1 + \beta \cdot d} = \frac{0,4 \cdot 23500000 \cdot 0,007}{\left( 1 + \frac{588,034}{807,556} \right)} = 38075,069 \text{ KNm}^2.$$

dipakai  $EI = 83615,744 \text{ KNm}^2$ .

$$P_c = \frac{\mu^2 \cdot EI}{(k.l)^2} = \frac{\mu^2 \cdot 83615,744}{(1,85 \cdot 3,6)^2} = 18605,414 \text{ KN.}$$

$$\delta_b = \frac{C_m}{1 - \left( \frac{P_u}{\phi \cdot P_c} \right)} \geq 1$$

$$= \frac{1}{1 - \left( \frac{807,556}{0,6 \cdot 18605,414} \right)} \geq 1$$

$$= 1,078 \geq 1$$

$$\sum P_u = 807,556 + 923,285 + 919,579$$

$$= 2650,420 \text{ KN}$$

$$\sum P_c = 18620,399 + 10425,896 + 10429,107$$

$$= 39475,402 \text{ KN}$$

$$\delta_s = \frac{C_m}{1 - \left( \frac{\sum P_u}{\phi \cdot \sum P_c} \right)} \geq 1$$

$$= \frac{1}{1 - \left( \frac{2650,420}{0,6 \cdot 39475,402} \right)} \geq 1$$

$$= 1,126 \geq 1$$

$$M_{u1} = 1,2 \cdot M_D + 1,6 \cdot M_L = 1,2 \cdot 12,199 + 1,6 \cdot 1,649 = 17,277 \text{ KNm.}$$

$$M_{u2} = M_E = 99,031 \text{ KNm}$$

$$M_{cy} = \delta_b \cdot M_{u1} + \delta_s \cdot M_{u2}$$

$$= 1,078 \cdot 17,277 + 1,126 \cdot 99,031 = 130,134 \text{ KNm}$$

### 3. Analisis gaya aksial dan momen akibat balok

Data momen diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$MDa = 12,199 \text{ KNm}$$

$$MDb = 15,763 \text{ KNm}$$

$$MLa = 1,649 \text{ KNm}$$

$$MLb = 2,112 \text{ KNm}$$

$$MEa = 99,031 \text{ KNm}$$

$$MEb = 139,451 \text{ KNm}$$

$$Mua = 117,830 \text{ KNm}$$

$$Mub = 164,306 \text{ KNm}$$

Data gaya aksial diperoleh dari SAP 2000 seperti tercantum pada lampiran:

$$PDa = 490,028 \text{ KNm}$$

$$PDb = 525,651 \text{ KNm}$$

$$PLa = 137,201 \text{ KNm}$$

$$PLb = 137,201 \text{ KNm}$$

$$PEa = 7,387 \text{ KNm}$$

$$PEb = 7,387 \text{ KNm}$$

$$Pua = 807,556 \text{ KNm}$$

$$Pub = 850,303 \text{ KNm}$$

$$hk = 4,2 \text{ m}$$

$$hk' = 4,2 - h \text{ balok}$$

$$= 4,2 - 0,6 = 3,6 \text{ m}$$

$$Rv = 1 \text{ (jumlah lantai di atasnya; } n = 1)$$

$$\phi_o = 1,25$$

$$Mnak, bx_{kiri} = 443,851 \text{ KNm}$$

$$Mnak, bx_{kanan} = 234,175 \text{ KNm}$$

$$Mnak, by_{kiri} = 587,798 \text{ KNm}$$

$$Mnak, by_{kanan} = 306,789 \text{ KNm}$$

$$Nuk_{lx} = 0,7 \cdot Rv \cdot \phi_o \cdot \left( \frac{Mnak, bx_{kiri}}{l_{bx_{kiri}}} + \frac{Mnak, bx_{kanan}}{l_{bx_{kanan}}} \right) + 1,05 \cdot N_{g,k}$$

$$N_g = PD + PL$$

$$\begin{aligned} N_{k1x} &= 0,7 \cdot 1,1,25 \cdot \left( \frac{443,851}{6} + \frac{234,175}{6} \right) + 1,05 \cdot (490,028 + 137,201) \\ &= 757,469 \text{ KN} \end{aligned}$$

$$N_{k1y} = 0,7 \cdot R_v \cdot \phi \cdot \left( \frac{M_{nak, by_{kiri}}}{l_{by_{kiri}}} + \frac{M_{nak, by_{kanan}}}{l_{by_{kanan}}} \right) + 1,05 \cdot N_{g,k}$$

$$N_{g,k} = PD + PL$$

$$\begin{aligned} N_{k1y} &= 0,7 \cdot 1,1,25 \cdot \left( \frac{587,798}{9} + \frac{306,789}{9} \right) + 1,05 \cdot (490,028 + 137,201) \\ &= 745,564 \text{ KN} \end{aligned}$$

$$\begin{aligned} N_{k2x} = N_{k2y} &= 1,05 \cdot (P_D + P_L + \left( \frac{4}{\sqrt{k}} \right) P_E) \\ &= 1,05 \cdot (490,028 + 137,201 + \left( \frac{4}{\sqrt{1}} \right) 7,387) \\ &= 689,616 \text{ KN} \end{aligned}$$

dipakai Nuk minimum , yaitu  $N_{k2x} = N_{k2y} = 689,616 \text{ KN}$

$$M_{maksatas} = 117,830 \text{ KNm}$$

$$M_{maksbawah} = 164,306 \text{ KNm}$$

$$\alpha_{k,atas} = \frac{M_{maksatas}}{M_{maksatas} + M_{maksbawah}} = \frac{117,830}{117,830 + 164,306} = 0,418$$

$$\omega_d = 1,3$$

$$\begin{aligned} M_{k1} &= \left( \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \phi \cdot \left( \frac{l_{bx_{ki}}}{\ln, bx_{ki}} \cdot M_{nak, bx_{ki}} + \frac{l_{bx_{ka}}}{\ln, b_{ka}} \cdot M_{nak, bx_{ka}} \right) \right) + \\ &\left( \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \phi \cdot 0,3 \cdot \left( \frac{l_{by_{ki}}}{\ln, by_{ki}} \cdot M_{nak, by_{ki}} + \frac{l_{by_{ka}}}{\ln, by_{ka}} \cdot M_{nak, by_{ka}} \right) \right) \end{aligned}$$

$$\begin{aligned}
& \left( \frac{4,2}{3,6} \cdot 0,7 \cdot 1,3 \cdot 0,418 \cdot 1,25 \cdot \left( \frac{6}{5,4} \cdot 443,851 + \frac{6}{5,4} \cdot 234,175 \right) \right) + \\
& \left( \frac{4,2}{3,6} \cdot 0,7 \cdot 1,3 \cdot 0,418 \cdot 1,25 \cdot 0,3 \cdot \left( \frac{9}{8,4} \cdot 587,798 + \frac{9}{8,4} \cdot 306,789 \right) \right) \\
& = 577,413 \text{ KNm}
\end{aligned}$$

$$\begin{aligned}
\text{Muk}_2 &= \left( \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \phi \cdot 0,3 \cdot \left( \frac{lbx_{ki}}{\ln, bx_{ki}} \cdot \text{Mnak}, bx_{ki} + \frac{lby_{ka}}{\ln, b_{ka}} \cdot \text{Mnak}, bx_{ka} \right) \right) + \\
& \left( \frac{hk}{hk'} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \phi \cdot \left( \frac{lby_{ki}}{\ln, by_{ki}} \cdot \text{Mnak}, by_{ki} + \frac{lby_{ka}}{\ln, by_{ka}} \cdot \text{Mnak}, b_{ka} \right) \right) \\
& = \left( \frac{4,2}{3,6} \cdot 0,7 \cdot 1,3 \cdot 0,418 \cdot 1,25 \cdot 0,3 \cdot \left( \frac{6}{5,4} \cdot 443,851 + \frac{6}{5,4} \cdot 234,175 \right) \right) + \\
& \left( \frac{4,2}{3,6} \cdot 0,7 \cdot 1,3 \cdot 0,418 \cdot 1,25 \cdot \left( \frac{9}{8,4} \cdot 587,798 + \frac{9}{8,4} \cdot 306,789 \right) \right) \\
& = 657,064 \text{ KNm}
\end{aligned}$$

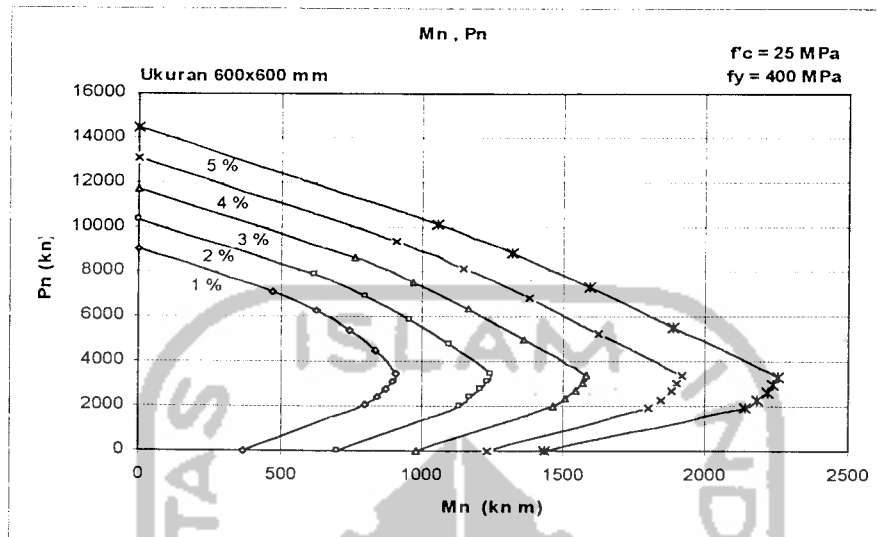
$$\begin{aligned}
\text{Muk}_3 &= 1,05 \cdot \left( M_{DK} + M_{LK} + \left( \frac{4}{k} \right) M_{EK} \right) \\
& = 1,05 \cdot \left( 12,199 + 1,649 + \left( \frac{4}{1} \right) 99,031 \right) \\
& = 430,471 \text{ KNm}
\end{aligned}$$

Dipakai Muk minimum, yaitu  $\text{Muk}_3 = 430,471 \text{ KNm}$ .

Bandingkan  $M_{cx} = 4,887 \text{ KNm}$ ;  $M_{cy} = 130,134 \text{ KNm}$  dan Muk pakai =  $430,471 \text{ KNm}$ , sehingga dipakai yang terbesar, yaitu Muk terpakai =  $430,471 \text{ KNm}$ .

$$M_n = \frac{Mu}{\phi} = \frac{430,471}{0,6} = 717,452 \text{ KNm}$$

$$P_n = \frac{Nu}{\phi} = \frac{689,616}{0,6} = 1149,360 \text{ KN}$$



Gambar 4.14 Grafik Mn-Pn kolom

Dari grafik Mn – Pn, didapat luas tulangan total (Ast) :

$$Ast < 1,2 \% \cdot b \cdot h = 1,2\% \cdot 600 \cdot 600 = 4320 \text{ mm}^2 \rightarrow \text{diambil } Ast = 1,2\% \cdot b \cdot h$$

$$\begin{aligned} As \text{ perlu} &= Ast / 2 \\ &= 4320 / 2 = 2160 \text{ mm}^2 \end{aligned}$$

dipakai 6D22  $\rightarrow As \text{ ada} = 2280,798 \text{ mm}^2 > As \text{ perlu} \dots\dots\dots \text{OK !}$

$$As = As' = 2280,798 \text{ mm}^2$$

Cek eksentrisitas balance ( $e_b$ ) :

$$Xb = \frac{600 \cdot d}{600 + fy} = \frac{600 \cdot 540}{600 + 400} = 324 \text{ mm}$$

$$fs' = \frac{Xb - d'}{Xb} \cdot 600 = \frac{324 - 60}{324} \cdot 600 = 488,889 \text{ MPa} > fy = 400 \text{ MPa}$$

dipakai  $fs' = fy = 400 \text{ MPa}$

$$Cc = 0,85 \cdot f'c \cdot b \cdot \beta \cdot Xb = (0,85 \cdot 25 \cdot 600 \cdot 0,85 \cdot 324) \cdot 10^{-3} = 3511,350 \text{ KN}$$

$$Cs = As' \cdot (fs' - 0,85 \cdot f'c) = 2280,798 \cdot (400 - 0,85 \cdot 25) \cdot 10^{-3} = 863,852 \text{ KN}$$

$$T_s = A_s \cdot f_y = (2280,798.400) \cdot 10^{-3} = 912,319 \text{ KN}$$

$$P_{nb} = C_c + C_s - T_s$$

$$= 3511,35 + 863,852 - 912,319 = 3462,883 \text{ KN}$$

$$M_{nb} = C_c \cdot \left( \frac{h}{2} - \left( \frac{\beta \cdot X_b}{2} \right) \right) + C_s \cdot \left( \frac{h}{2} - d' \right) + T_s \cdot \left( d - \frac{h}{2} \right)$$

$$= (3511,35 \cdot \left( \frac{600}{2} - \left( \frac{0,85 \cdot 324}{2} \right) \right) + 863,852 \cdot \left( \frac{600}{2} - 60 \right) +$$

$$912,319 \cdot \left( 540 - \frac{600}{2} \right) \cdot 10^{-3}$$

$$= 996,173 \text{ KNm}$$

$$e_b = \frac{M_{nb}}{P_{nb}} = \frac{996,173}{3462,883} = 0,288 \text{ m}$$

$$e = \frac{M_u / \phi}{N_u / \phi} = \frac{717,452}{1149,360} = 0,624 \text{ m}$$

karena  $e > e_b \rightarrow$  kolom mengalami patah tarik.

Kontrol tegangan pada daerah tarik :

$$P_n = 0,85 \cdot f'_{c,b,d} \cdot \left[ \left( -\rho \right) + 1 - \frac{e'}{d} + \sqrt{\left( \left( 1 - \frac{e'}{d} \right)^2 + 2 \cdot \rho \cdot \left( m - 1 \right) \left( 1 - \frac{d'}{d} \right) \right) + \frac{e'}{d}} \right]$$

$$e = \frac{M_u / \phi}{N_u / \phi} = \frac{717,452}{1149,360} = 0,624 \text{ m} = 624 \text{ mm}$$

$$e' = e + \left( d - \frac{h}{2} \right) = 624 + \left( 540 - \frac{600}{2} \right) = 864 \text{ mm}$$

$$\rho = \frac{A_s}{b \cdot d} = \frac{2280,798}{600 \cdot 540} = 0,007$$



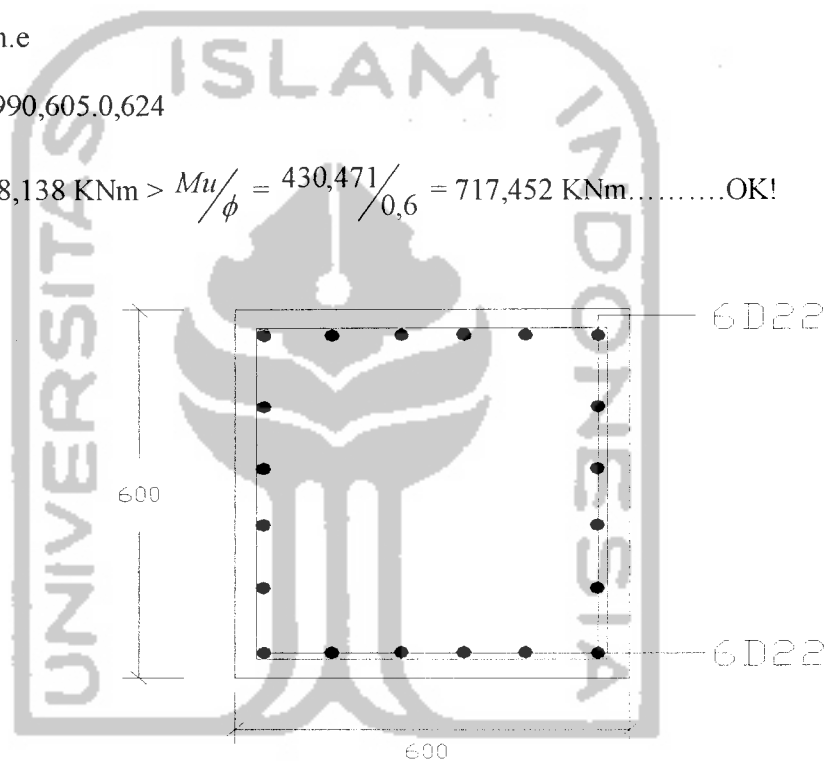
$$P_n = 0,85 \cdot 25 \cdot 600 \cdot 540 \cdot \left[ (-0,007) + 1 - \frac{864}{540} + \sqrt{\left(1 - \frac{864}{540}\right)^2 + \left(2 \cdot 0,007 \cdot (18,824 - 1) \cdot \left(1 - \frac{60}{540}\right)\right) + \left(\frac{864}{540}\right)} \right]$$

$$= 5990,605 \text{ KN} > P_n = \frac{Nu}{\phi} = \frac{689,616}{0,6} = 1149,360 \text{ KN} \dots \text{OK!}$$

$$M_n = P_n \cdot e$$

$$= 5990,605 \cdot 0,624$$

$$= 3738,138 \text{ KNm} > \frac{Mu}{\phi} = \frac{430,471}{0,6} = 717,452 \text{ KNm} \dots \text{OK!}$$



Gambar 4.15 Penampang kolom dengan tulangan

#### 4. Perencanaan tulangan geser kolom

- Data gaya geser diperoleh dari SAP 2000 seperti tercantum pada lampiran :

$$V_{Da} = 6,657 \text{ KNm}$$

$$V_{Db} = 6,657 \text{ KNm}$$

$$V_{La} = 0,896 \text{ KNm}$$

$$V_{Lb} = 0,896 \text{ KNm}$$

$$V_{Ea} = 56,781 \text{ KNm}$$

$$V_{Eb} = 56,781 \text{ KNm}$$

- Perhitungan tulangan geser kolom

$$Mu_{k_{atas}} = 430,471 \text{ KNm}$$

$$Mu_{k_{bawah}} = 576,910 \text{ KNm}$$

$$hk' = 3,6 \text{ m}$$

$$\begin{aligned} V_{uk_1} &= \frac{Mu_{k_{atas}} + Mu_{k_{bawah}}}{hk'} \\ &= \frac{430,471 + 576,910}{3,6} = 279,828 \text{ KN} \end{aligned}$$

$$\begin{aligned} V_{uk_2} &= 1,05 \cdot (V_{Dk} + V_{Lk} + \frac{4}{k} \cdot V_{Ek}) \\ &= 1,05 \cdot (6,657 + 0,896 + \frac{4}{1} \cdot 56,781) = 246,411 \text{ KN} \end{aligned}$$

$V_u$  pakai adalah nilai terkecil antara  $V_{uk_1}$  dan  $V_{uk_2}$ , sehingga didapat

$$V_{uk \text{ pakai}} = 246,411 \text{ KN}$$

$$V_s = \frac{V_{uk \text{ pakai}}}{\phi} = \frac{246,411}{0,6} = 410,685 \text{ KN}$$

#### Daerah sendi plastis

Kekutan beton dalam menahan gaya geser dinggap o ( $V_c=0$ ).

Dipakai tulangan geser P-10 mm,  $A_v = 3 \cdot 1/4 \cdot \pi \cdot 10^2 = 235,620 \text{ mm}^2$

$$\text{Jarak (s)} < \frac{A_v \cdot f_y \cdot d}{V_s} = \frac{235,620 \cdot 240 \cdot 540}{410,685 \cdot 10^3} = 74,355 \text{ mm}$$

$$< \frac{d}{4} = \frac{540}{4} = 135 \text{ mm}$$

$$< 8 \cdot \phi_{tul.pokok} = 8 \cdot 22 = 176 \text{ mm}$$

$$< 100 \text{ mm}$$

Digunakan sengkang **3P10-70 mm**.

**Daerah diluar sendi plastis**

$$V_c = \left(1 + \frac{P_{u,k}}{14.A_g}\right) \cdot \frac{1}{6} \cdot \sqrt{f'c} \cdot b \cdot d \rightarrow P_{u,k} = 807,556 \text{ KN}$$

$$= \left(1 + \frac{807,556 \cdot 10^3}{14 \cdot 600 \cdot 600}\right) \cdot \frac{1}{6} \cdot \sqrt{25} \cdot 600 \cdot 540 = 313,262 \text{ KN}$$

$$= 313,262 \text{ KN} < \frac{V_{uk\_pakai}}{\phi} = 410,685 \text{ KN}, \text{ maka perlu tulangan geser}$$

$$V_s = \frac{V_{uk\_pakai}}{\phi} - V_c = 410,685 - 313,262 = 97,423 \text{ KN}$$

Dipakai tulangan geser P-10 mm, maka :

$$A_v = 2 \cdot 1/4 \cdot \pi \cdot 10^2 = 157,080 \text{ mm}^2$$

$$\text{Jarak (s)} < \frac{A_v \cdot f_y \cdot d}{V_s} = \frac{157,08 \cdot 240 \cdot 540}{97,423 \cdot 10^3} = 208,961 \text{ mm}$$

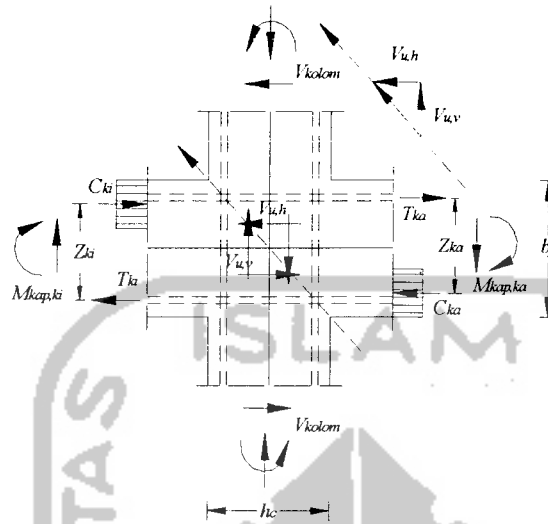
$$< \frac{d}{4} = \frac{540}{4} = 135 \text{ mm}$$

$$< 8 \cdot \phi_{tul.pokok} = 8 \cdot 22 = 176 \text{ mm}$$

$$< 100 \text{ mm}$$

Digunakan sengkang **P10-100 mm**.

#### 4.8 Pertemuan Balok Kolom



Gambar 4.16 Join balok-kolom dalam

a. Perhitungan gaya-gaya dalam

1. Arah X

$$b_j = b_c = 600 \text{ mm}$$

$$= b_b + 0,5 \cdot h_c = 400 + 0,5 \cdot 600 = 700 \text{ mm}$$

$$b_j \text{ pakai} = 600 \text{ mm}$$

$$h_c = 600 \text{ mm}$$

$$M_{nak,bx_{ki}} = 234,175 \text{ KNm}$$

$$M_{nak,bx_{ka}} = 443,851 \text{ KNm}$$

$$M_{nak,by_{ki}} = 306,789 \text{ KNm}$$

$$M_{nak,by_{ka}} = 587,798 \text{ KNm}$$

$$M_{kap,bx_{ki}} = 1,25 \cdot M_{nak,bx_{ki}} = 1,25 \cdot 234,175 = 292,719 \text{ KNm}$$

$$M_{kap,bx_{ka}} = 1,25 \cdot M_{nak,bx_{ka}} = 1,25 \cdot 443,851 = 554,814 \text{ KNm}$$

$$M_{kap,by_{ki}} = 1,25 \cdot M_{nak,by_{ki}} = 1,25 \cdot 306,789 = 383,486 \text{ KNm}$$

$$M_{kap,by_{ka}} = 1,25 \cdot M_{nak,by_{ka}} = 1,25 \cdot 587,798 = 734,748 \text{ KNm}$$

$$V_{kol,x} = \frac{0,7 \left( \sum l_x \cdot M_{kap,b_x} + 0,3 \cdot l_y \cdot M_{kap,b_y} \right)}{\frac{1}{2} \cdot (hk,a + hk,b)}$$

$$V_{kol,x} = \left( 0,7 \cdot \left[ \left( \frac{6}{5,4} \cdot 292,719 + \frac{6}{5,4} \cdot 554,814 \right) + 0,3 \cdot \left[ \left( \frac{9}{8,4} \cdot 383,486 + \frac{9}{8,4} \cdot 734,748 \right) \right] \right] \right) / \frac{1}{2} \cdot (4,2 + 0)$$

$$= 433,712 \text{ KN}$$

$$z_{ki} = z_{ka} = 0,9 \cdot d = 0,9 \cdot 540 = 486 \text{ mm} = 0,486 \text{ m}$$

$$C_{ki,x} = T_{ki,x} = 0,7 \cdot M_{kap,b_{x_{ki}}} / z_{ki}$$

$$= 0,7 \cdot 292,719 / 0,486 = 421,612 \text{ KN}$$

$$C_{ka,x} = T_{ka,x} = 0,7 \cdot M_{kap,b_{x_{ka}}} / z_{ka}$$

$$= 0,7 \cdot 554,814 / 0,486 = 799,115 \text{ KN}$$

$$V_{jh,x} = C_{ki,x} + T_{ka,x} - V_{kol,x} = 421,612 + 799,115 - 433,712 = 787,015 \text{ KN}$$

Kontrol tegangan geser horizontal :

$$v_{jh,x} = \frac{V_{jh,x}}{b_j \cdot h_c} \leq 1,5 \cdot \sqrt{f'c}$$

$$v_{jh,x} = \frac{787,015}{0,6 \cdot 0,6} = 2186,153 \text{ KN/m}^2$$

$$v_{jh,x} = 2,186 \text{ N/mm}^2 \leq 1,5 \cdot \sqrt{25} = 7,5 \text{ N/mm}^2 \dots\dots\dots \text{OK!}$$

$$Nu_k = 807,556 \text{ KN}$$

$$\frac{Nu_k}{Ag} = \frac{807,556}{0,6 \cdot 0,6} = 2243,211 \text{ KN/m}^2$$

$$= 2,243 \text{ N/mm}^2 < 0,1 \cdot f'c = 2,5 \text{ MPa}$$

$$V_{ch,x} = 0$$

$$V_{sh,x} = V_{jh,x} - V_{ch,x} = 787,015 - 0 = 787,015 \text{ KN}$$

## 2. Arah Y

$$b_j = b_c = 600 \text{ mm}$$

$$= b_b + 0,5 \cdot h_c = 400 + 0,5 \cdot 600 = 700 \text{ mm}$$

$$b_j \text{ pakai} = 600 \text{ mm}$$

$$h_c = 600 \text{ mm}$$

$$M_{nak,bx_{ki}} = 234,175 \text{ KNm}$$

$$M_{nak,bx_{ka}} = 443,851 \text{ KNm}$$

$$M_{nak,by_{ki}} = 306,789 \text{ KNm}$$

$$M_{nak,by_{ka}} = 587,798 \text{ KNm}$$

$$M_{kap,bx_{ki}} = 1,25 \cdot M_{nak,bx_{ki}} = 1,25 \cdot 234,175 = 292,719 \text{ KNm}$$

$$M_{kap,bx_{ka}} = 1,25 \cdot M_{nak,bx_{ka}} = 1,25 \cdot 443,851 = 554,814 \text{ KNm}$$

$$M_{kap,by_{ki}} = 1,25 \cdot M_{nak,by_{ki}} = 1,25 \cdot 306,789 = 383,486 \text{ KNm}$$

$$M_{kap,by_{ka}} = 1,25 \cdot M_{nak,by_{ka}} = 1,25 \cdot 587,798 = 734,748 \text{ KNm}$$

$$V_{kol,y} = \frac{0,7 \cdot \left( 0,3 \cdot \frac{I_x}{I_n} \cdot M_{kap,b_x} + \frac{I_y}{I_n} \cdot M_{kap,b_y} \right)}{\frac{1}{2} \cdot (h_k, a + h_k, b)}$$

$$V_{kol,y} = \left( 0,7 \cdot \left[ 0,3 \cdot \left( \frac{6}{5,4} \cdot 292,719 + \frac{6}{5,4} \cdot 554,814 \right) \right] \right. \\ \left. + \left[ \left( \frac{9}{8,4} \cdot 383,486 + \frac{9}{8,4} \cdot 734,748 \right) \right] \right) / \frac{1}{2} \cdot (4,2 + 0)$$

$$= 569,628 \text{ KN}$$

$$z_{ki} = z_{ka} = 0,9 \cdot d = 0,9 \cdot 540 = 486 \text{ mm} = 0,486 \text{ m}$$

$$C_{ki,y} = T_{ki,y} = 0,7 \cdot M_{kap,by_{ki}} / z_{ki} \\ = 0,7 \cdot 383,486 / 0,486 = 552,346 \text{ KN}$$

$$C_{ka,y} = T_{ka,y} = 0,7 \cdot M_{kap,by_{ka}} / z_{ka} \\ = 0,7 \cdot 734,748 / 0,486 = 1058,279 \text{ KN}$$

$$V_{jh,y} = C_{ki,y} + T_{ka,y} - V_{kol,y} \\ = 552,346 + 1058,279 - 569,628 = 1040,997 \text{ KN}$$

Kontrol tegangan geser horizontal :

$$v_{jh,y} = \frac{V_{jh,y}}{b_j \cdot h_c} \leq 1,5 \cdot \sqrt{f'c}$$

$$v_{jh,y} = \frac{1040,997}{0,6 \cdot 0,6} = 2891,658 \text{ KN/m}^2$$

$$v_{jh,y} = 2,892 \text{ N/mm}^2 < 1,5 \cdot \sqrt{25} = 7,5 \text{ N/mm}^2 \dots\dots\dots \text{OK!}$$

$$N_{u,k} = 807,556 \text{ KN}$$

$$\frac{N_{u,k}}{A_g} = \frac{807,556}{0,6 \cdot 0,6} = 2243,211 \text{ KN/m}^2$$

$$= 2,243 \text{ N/mm}^2 < 0,1 \cdot f'c = 2,5 \text{ MPa}$$

$$V_{ch,y} = 0$$

$$V_{sh,y} = V_{jh,y} - V_{ch,y}$$

$$= 1040,997 - 0 = 1040,997 \text{ KN}$$

b. Penulangan geser horizontal

$$V_{sh,maks} = V_{sh,y} = 1040,997 \text{ KN}$$

$$A_{jh} = \frac{V_{sh,maks}}{f_y} = \frac{1040997}{240} = 4337,488 \text{ mm}^2$$

Digunakan sengkang rangkap Ø 10 mm, dengan  $A_v = 314,159 \text{ mm}^2$

$$\text{Jumlah lapis sengkang} = \frac{4337,488}{314,159} = 13,807 = 14 \text{ lapis.}$$

c. Penulangan geser vertikal

$$V_{cv} = \frac{A_{sc'}}{A_{sc}} \cdot V_{jh, mak} \cdot \left( 0,6 + \frac{P_{u, k}}{A_g \cdot f'c} \right)$$

$$= 1.1040,997 \cdot 10^3 \cdot \left( 0,6 + \frac{807,556 \cdot 10^3}{600 \cdot 600 \cdot 25} \right)$$

$$= 718005,242 \text{ N} = 718,005 \text{ KN}$$

$$V_{jv} = \frac{b_j}{h_c} \cdot v_{jh, mak} = \frac{0,6}{0,6} \cdot 1040,997 = 1040,997 \text{ KN}$$

$$V_{sv} = V_{jv} - V_{cv} = 1040,997 - 718,005 = 322,992 \text{ KN}$$

$$A_{jv} = \frac{V_{sv}}{f_y} = \frac{322992}{240} = 1345,800 \text{ mm}^2$$

Digunakan sengkang rangkap Ø 10 mm, dengan  $A_v = 314,159 \text{ mm}^2$

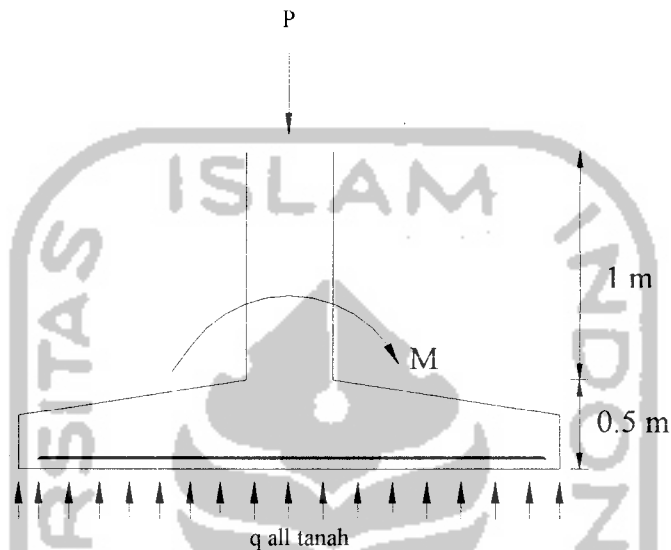
$$\text{Jumlah lapis sengkang} = \frac{1345,8}{314,159} = 4,284 = 5 \text{ lapis.}$$



## 4.9 Perencanaan Pondasi

### 4.9.1 Perencanaan dimensi pondasi (P1)

1. Tinjauan terhadap beban tetap



Gambar 4.17 Rencana pondasi

Data – data :

$$\sigma_{\text{tanah}} = 150 \text{ KN/m}^2$$

$$P = 1571,922 \text{ KN/m}^2$$

$$f'_c = 25 \text{ Mpa}$$

$$M_x = 4,748 \text{ KNm}$$

$$f_y = 400 \text{ Mpa}$$

$$M_y = 7,183 \text{ KNm}$$

$$\gamma_{\text{tanah}} = 18 \text{ KN/m}^3$$

$$\text{Asumsi tebal pondasi ( h )} = 500 \text{ mm}$$

$$\gamma_{\text{beton}} = 24 \text{ KN/m}^3$$

$$\text{Dimensi kolom} = 600/600 \text{ mm}$$

Direncanakan memakai pondasi telapak

$$\sigma_{\text{netto tanah}} = \sigma_{\text{tanah}} - \sum ( h \cdot \gamma_{\text{beton}} ) - \sum ( h \cdot \gamma_{\text{tanah}} )$$

$$= 150 - ( 0,5 \cdot 24 ) - ( 1 \cdot 18 )$$

$$= 120 \text{ KN/m}^2$$

Dimensi pelat pondasi ( terdapat momen yang bekerja pada arah x dan y ) :

$$\sigma_{\text{netto tanah}} = \frac{P}{A_{\text{perlu}}} + \frac{My}{1/6.Bx^2.By} + \frac{Mx}{1/6.By^2.Bx}$$

dicoba dengan nilai B = 3,7 m

$$\begin{aligned} A_{\text{perlu}} &= \frac{P}{\sigma_{\text{netto tanah}} - \left( \frac{My}{1/6.Bx^2.By} \right) - \left( \frac{Mx}{1/6.By^2.Bx} \right)} \\ &= \frac{1571,922}{120 - \left( \frac{4,748}{1/6.3,7^2.3,7} \right) - \left( \frac{7,183}{1/6.3,7^2.3,7} \right)} = 13,255 \text{ m}^2 \end{aligned}$$

Digunakan penampang bujursangkar dengan :

$$B = N = \sqrt{13,255} = 3,641 \text{ m} \rightarrow B_{\text{ada}} = N_{\text{ada}} = 3,7 \text{ m}$$

Luas penampang pelat pondasi :

$$A_{\text{ada}} = B_{\text{ada}} \times N_{\text{ada}} = 3,7 \times 3,7 = 13,69 \text{ m}^2 > A_{\text{perlu}} = 13,255 \text{ m}^2 \dots\dots\dots \text{Ok!}$$

Tegangan kontak yang terjadi di dasar pondasi :

$$\begin{aligned} \sigma_{\text{netto tanah}} &= \frac{P}{A_{\text{ada}}} + \frac{My}{1/6.N^2.B} + \frac{Mx}{1/6.B^2.N} \\ &= \frac{1571,922}{13,69} + \frac{7,183}{1/6.3,7^2.3,7} + \frac{4,748}{1/6.3,7^2.3,7} \\ &= 116,236 \text{ KN/m}^2 < \sigma_{\text{netto tanah}} = 120 \text{ KN/m}^2 \dots\dots\dots \text{Aman !} \end{aligned}$$

Perencanaan tebal pondasi telapak ( syarat kuat geser ) :

$$\text{Tebal selimut beton (Pb)} = 70 \text{ mm}$$

$$\text{\textcircled{O} tulangan pokok} = 22 \text{ mm}$$

$$d = hp - Pb - \frac{1}{2} \cdot \text{\textcircled{O}}_{\text{tul. pokok}} = 500 - 70 - \frac{1}{2} \cdot 22 = 419 \text{ mm}$$

## 2. Tinjauan terhadap beban sementara

Eksentrisitas yang terjadi :

$$e_x = \frac{M_x}{P} = \frac{4,748}{1571,922} = 0,003 \text{ m}$$

$$e_y = \frac{M_y}{P} = \frac{7,183}{1571,922} = 0,005 \text{ m}$$

Kontrol tegangan yang terjadi :

$$\begin{aligned} \sigma &= \frac{P}{(B.(N - 2.e_x)) + (N.(B - 2.e_y))} \\ &= \frac{1571,922}{(3,7.(3,7 - 2.0,003)) + (3,7.(3,7 - 2.0,005))} \\ &= 57,529 \text{ KN/m}^2 < 1,5 \cdot \sigma_{\text{netto}} = 1,5 \cdot 120 = 180 \text{ KN/m}^2 \dots\dots\dots \text{Aman !} \end{aligned}$$

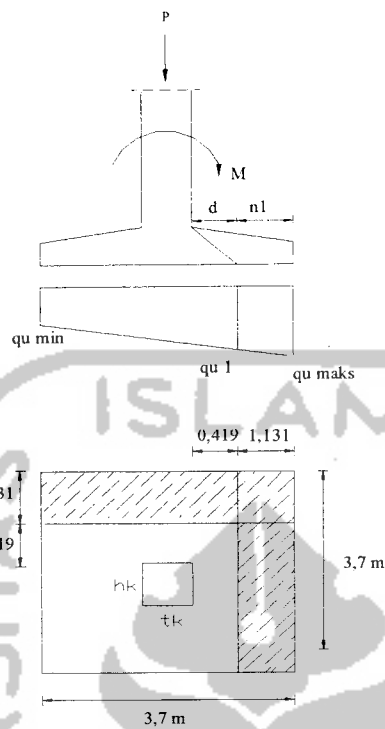
### 4.9.2 Perencanaan geser satu arah

Ditinjau dari arah momen terbesar :

$$P_u = 1996,976 \text{ KN}$$

$$M_{ux} = 157,143 \text{ KNm}$$

$$M_{uy} = 22,296 \text{ KNm}$$



**Gambar 4.18** Pondasi dengan geser satu arah

$$n_1 = \frac{L_p - t_k - 2 \cdot d}{2} = \frac{3,7 - 0,6 - 2 \cdot 0,419}{2} = 1,131 \text{ m}$$

**Arah X**

- Tegangan kontak yang terjadi :

$$q_{ux} = \frac{P_u}{A_{ada}} \pm \frac{M_{ux}}{1/6 \cdot B^2 \cdot N} = \frac{1996,976}{13,69} \pm \frac{157,143}{1/6 \cdot 3,7^2 \cdot 3,7}$$

$$q_{ux_{max}} = 164,485 \text{ KN/m}^2$$

$$q_{ux_{min}} = 127,257 \text{ KN/m}^2$$

$$q_{u_m} = \frac{(L_p - n_1) \cdot q_{ux_{max}} + n_1 \cdot q_{ux_{min}}}{L_p}$$

$$= \frac{(3,7 - 1,131) \cdot 164,485 + 1,131 \cdot 127,257}{3,7} = 153,105 \text{ KN/m}^2$$

$$\begin{aligned}
 q_{ux_{\text{terjadi}}} &= \frac{1}{2} \cdot (q_{ux_{\text{max}}} + q_{u_m}) = \frac{1}{2} \cdot (164,485 + 153,105) \\
 &= 158,795 \text{ KN/m}^2
 \end{aligned}$$

- Gaya geser akibat beban luar yang bekerja pada penampang kritis pondasi

$$V_u = q_{ux_{\text{terjadi}}} \cdot n_1 \cdot L = 158,795 \cdot 1,131 \cdot 3,7 = 664,510 \text{ KN}$$

$$\frac{V_u}{\phi} = \frac{664,510}{0,6} = 1107,518 \text{ KN}$$

- Kekuatan beton menahan geser

$$\begin{aligned}
 V_c &= \frac{1}{6} \cdot \sqrt{f'_c} \cdot L \cdot d = \frac{1}{6} \cdot \sqrt{25} \cdot 3,7 \cdot 0,419 \cdot 1000 \\
 &= 1291,917 \text{ KN} \geq \frac{V_u}{\phi} = 1107,518 \text{ KN} \dots\dots\dots \text{Aman !}
 \end{aligned}$$

#### Arah Y

- Tegangan kontak yang terjadi :

$$q_{uy} = \frac{P_u}{A_{ada}} \pm \frac{M_{uy}}{1/6 \cdot B^2 \cdot N} = \frac{1996,976}{13,69} \pm \frac{22,296}{1/6 \cdot 3,7^2 \cdot 3,7}$$

$$q_{uy_{\text{max}}} = 148,512 \text{ KN/m}^2$$

$$q_{uy_{\text{min}}} = 143,230 \text{ KN/m}^2$$

$$\begin{aligned}
 q_{u_m} &= \frac{(L_p - n_1) \cdot q_{uy_{\text{max}}} + n_1 \cdot q_{uy_{\text{min}}}}{L_p} \\
 &= \frac{(3,7 - 1,131) \cdot 148,512 + 1,131 \cdot 143,230}{3,7} = 146,898 \text{ KN/m}^2
 \end{aligned}$$

$$\begin{aligned}
 q_{u_{\text{terjadi}}} &= \frac{1}{2} \cdot (q_{uy_{\text{max}}} + q_{u_m}) = \frac{1}{2} \cdot (148,512 + 146,898) \\
 &= 147,705 \text{ KN/m}^2
 \end{aligned}$$

- Gaya geser akibat beban luar yang bekerja pada penampang kritis pondasi

$$V_u = q_{y_{\text{terjadi}}} \cdot n_1 \cdot L = 147,705 \cdot 1,131 \cdot 3,7 = 618,101 \text{ KN}$$

$$V_u / \phi = 618,101 / 0,6 = 1030,168 \text{ KN}$$

- Kekuatan beton menahan geser

$$V_c = \frac{1}{6} \cdot \sqrt{f'_c} \cdot L \cdot d = \frac{1}{6} \cdot \sqrt{25} \cdot 3,7 \cdot 0,419 \cdot 1000$$

$$= 1291,917 \text{ KN} \geq V_u / \phi = 1030,168 \text{ KN} \dots\dots\dots \text{Aman !}$$

#### 4.9.3 Perencanaan geser dua arah

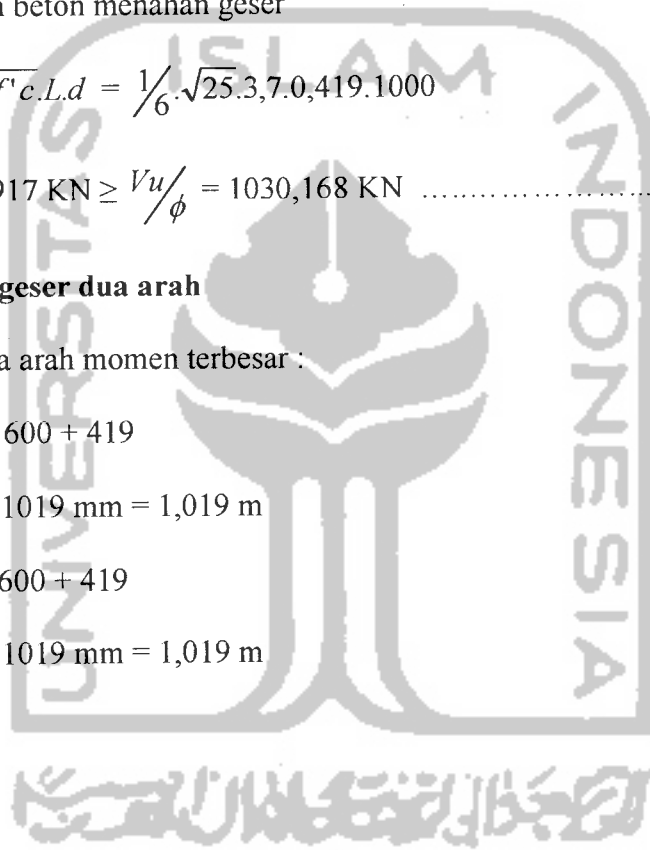
Ditinjau pada arah momen terbesar :

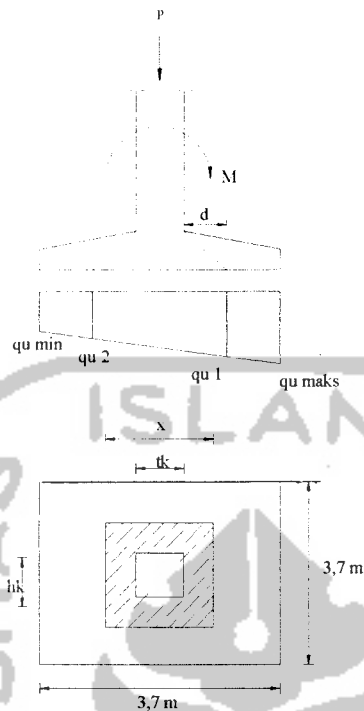
$$x = h_k + d = 600 + 419$$

$$= 1019 \text{ mm} = 1,019 \text{ m}$$

$$y = t_k + d = 600 + 419$$

$$= 1019 \text{ mm} = 1,019 \text{ m}$$





Gambar 4.19 Pondasi dengan geser dua arah

- Tegangan kontak yang terjadi :

$$\begin{aligned}
 q_u &= \frac{Pu}{Aada} \pm \frac{My}{1/6 \cdot Bx^2 \cdot By} \pm \frac{Mx}{1/6 \cdot By^2 \cdot Bx} \\
 &= \frac{1996,976}{13,69} \pm \frac{22,296}{1/6 \cdot 3,7^2 \cdot 3,7} \pm \frac{157,143}{1/6 \cdot 1,8^2 \cdot 1,8}
 \end{aligned}$$

$$q_{u_{\max}} = 167,126 \text{ KN/m}^2$$

$$q_{u_{\min}} = 124,616 \text{ KN/m}^2$$

$$q_{u_T} = \frac{1}{2} \cdot (q_{u_{\max}} + q_{u_{\min}}) = \frac{1}{2} \cdot (167,126 + 124,616) = 145,871 \text{ KN/m}^2$$

- Gaya geser akibat beban luar yang bekerja pada penampang kritis pondasi

$$\begin{aligned}
 V_u &= q_{u_T} \cdot ((Pp \cdot Lp) - (x, y)) \\
 &= 145,871 \cdot ((3,7 \cdot 3,7) - (1,019 \cdot 1,019)) = 1845,509 \text{ KN}
 \end{aligned}$$

$$\frac{V_u}{\phi} = \frac{1845,509}{0,6} = 3075,848 \text{ KN}$$

- Kekuatan beton menahan geser

$$\beta_c = \frac{\text{sisipanjangtapak}}{\text{sisipendektapak}} = \frac{Pp}{Lp} = \frac{3,7}{3,7} \geq 1,0$$

$$\begin{aligned} b_o &= 2.(x+y) = 2.((h_k+d)+(b_k+d)) \\ &= 2.(1019 + 1019) = 4076 \text{ mm} \end{aligned}$$

$$\begin{aligned} V_{c1} &= \left(1 + \frac{2}{\beta_c}\right) (2 \cdot \sqrt{f'c}) b_o \cdot d \\ &= \left(1 + \frac{2}{1}\right) (2 \cdot \sqrt{25}) 4076 \cdot 419 \cdot 10^{-3} = 51235,230 \text{ KN} \end{aligned}$$

$$\begin{aligned} V_{c2} &= 4 \cdot \sqrt{f'c} \cdot b_o \cdot d \\ &= 4 \cdot \sqrt{25} \cdot 4076 \cdot 419 \cdot 10^{-3} = 34156,880 \text{ KN} \end{aligned}$$

- Kontrol gaya geser

Digunakan nilai terkecil dari  $V_{c1}$  dan  $V_{c2}$ , yaitu  $V_c = 34156,880 \text{ KN}$

$$V_c = 34156,880 \text{ KN} \geq \frac{V_u}{\phi} = 3075,848 \text{ KN} \dots\dots\dots \text{Aman !}$$

#### 4.9.4 Kuat tumpuan pondasi

- Kuat tumpuan pondasi

$$\text{Luas pelat pondasi (A}_2) = B \cdot N = 3,7 \cdot 3,7 = 13,69 \text{ m}^2$$

$$\text{Luas penampang kolom (A}_1) = h_k \cdot t_k = 0,6 \cdot 0,6 = 0,36 \text{ m}^2$$

$$\sqrt{\frac{A_2}{A_1}} = \sqrt{\frac{13,69}{0,36}} = 6,167 > 2 \text{ (jika lebih besar dari 2, dipakai nilai 2)}$$

$$\Phi \cdot P_n = \Phi \cdot (0,85 \cdot f'c \cdot A_1 \cdot \sqrt{\frac{A_2}{A_1}})$$

$$= 0,7 \cdot (0,85 \cdot 25 \cdot 360000 \cdot 2) \cdot 10^{-3} = 10710 \text{ KN}$$



- Kuat tumpuan kolom

$$\Phi \cdot P_n = \Phi \cdot (0,85 \cdot f'_c \cdot A_1)$$

$$= 0,7 \cdot (0,85 \cdot 25 \cdot 360000) \cdot 10^{-3} = 5355 \text{ KN}$$

- Kontrol kuat tumpuan

$$\Phi \cdot P_{n_{\text{pondasi}}} = 10710 \text{ KN} > \Phi \cdot P_{n_{\text{kolom}}} = 5355 \text{ KN} \dots \dots \text{Aman !!}$$

#### 4.9.5 Perencanaan tulangan lentur telapak pondasi

- Momen yang terjadi :

$$l = \frac{L_p - t_k}{2} = \frac{3,7 - 0,6}{2} = 1,55 \text{ m}$$

$$q_{u_{\text{maks}}} = 167,126 \text{ KN/m}^2$$

$$\begin{aligned} M_u &= 0,5 \cdot q_{u_{\text{maks}}} \cdot l^2 = 0,5 \cdot 167,126 \cdot 1,55^2 \\ &= 200,760 \text{ KNm} \end{aligned}$$

$$\frac{M_u}{\phi} = \frac{200,760}{0,8} = 250,950 \text{ KNm}$$

- Digunakan tulangan  $\emptyset 22 \text{ mm}$ , maka :

$$A_1 \cdot \emptyset = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 22^2 = 380,286 \text{ mm}^2$$

Dipakai tebal pelat pondasi ( $h$ ) = 500 mm, selimut beton ( $P_b$ ) = 70 mm

$$d = h - P_b - \frac{1}{2} \cdot \emptyset_{\text{tul}} = 500 - 70 - \frac{1}{2} \cdot 22 = 419 \text{ mm}$$

$$m = \frac{f_y}{0,85 \cdot f'_c} = \frac{400}{0,85 \cdot 25} = 18,824$$

Koefisien ketahanan ( $R_n$ ), diambil nilai  $b$  tiap 1000 mm :

$$R_n = \frac{M_u / \phi}{b \cdot d^2} = \frac{250,950 \cdot 10^6}{1000 \cdot 419^2} = 1,429 \text{ mm}^2$$

- Rasio tulangan :

$$\rho_{\min} = \frac{1,4}{f_y} = \frac{1,4}{400} = 0,0035$$

$$\rho_b = \frac{0,85 \cdot f'_c}{f_y} \cdot \beta_1 \cdot \left( \frac{600}{600 + f_y} \right) = \frac{0,85 \cdot 25}{400} \cdot 0,85 \cdot \left( \frac{600}{600 + 400} \right) = 0,027$$

$$\rho_{\max} = 0,75 \cdot \rho_b = 0,75 \cdot 0,027 = 0,020$$

$$\rho_{\text{perlu}} = \frac{1}{m} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot m \cdot R_n}{f_y}} \right] = \frac{1}{18,824} \cdot \left[ 1 - \sqrt{1 - \frac{2 \cdot 18,824 \cdot 1,429}{400}} \right]$$

$$= 0,004 < \rho_{\max} = 0,02$$

$$> \rho_{\min} = 0,0035$$

$$\rho_{\text{terpakai}} = \rho_{\text{perlu}} = 0,004$$

$$A_{S_{\text{perlu}}} = \rho_{\text{terpakai}} \cdot b \cdot d = 0,004 \cdot 1000 \cdot 419 = 1676 \text{ mm}^2$$

- Jarak antar tulangan

$$s \leq \frac{A_1 \cdot \phi \cdot 1000}{A_{S_{\text{perlu}}}} = \frac{380,286 \cdot 1000}{1676} = 226,901 \text{ mm}$$

$$s \leq 2 \cdot h = 2 \cdot 500 = 1000 \text{ mm}$$

$$s \leq 250 \text{ mm}$$

→ Dipakai tulangan : D22 – 220 mm

$$A_{S_{\text{ada}}} = \frac{380,286 \cdot 1000}{220} = 1728,571 \text{ mm}^2 > A_{S_{\text{perlu}}} = 1676 \text{ mm}^2$$

- Kontrol kapasitas lentur pelat pondasi

$$a = \frac{A_{S_{\text{ada}}} \cdot f_y}{0,85 \cdot f'_c \cdot b} = \frac{1728,571 \cdot 400}{0,85 \cdot 25 \cdot 1000} = 32,538 \text{ mm.}$$

$$\begin{aligned}
 M_n &= A_{s_{ada}} \cdot f_y \cdot (d - a/2) = 1728,571.400.(419 - 32,538/2) \cdot 10^{-6} \\
 &= 278,460 \text{ KNm} > \frac{M_u}{\phi} = 250,950 \text{ KNm} \dots\dots\dots \text{Ok !}
 \end{aligned}$$

- Perencanaan tulangan bagi

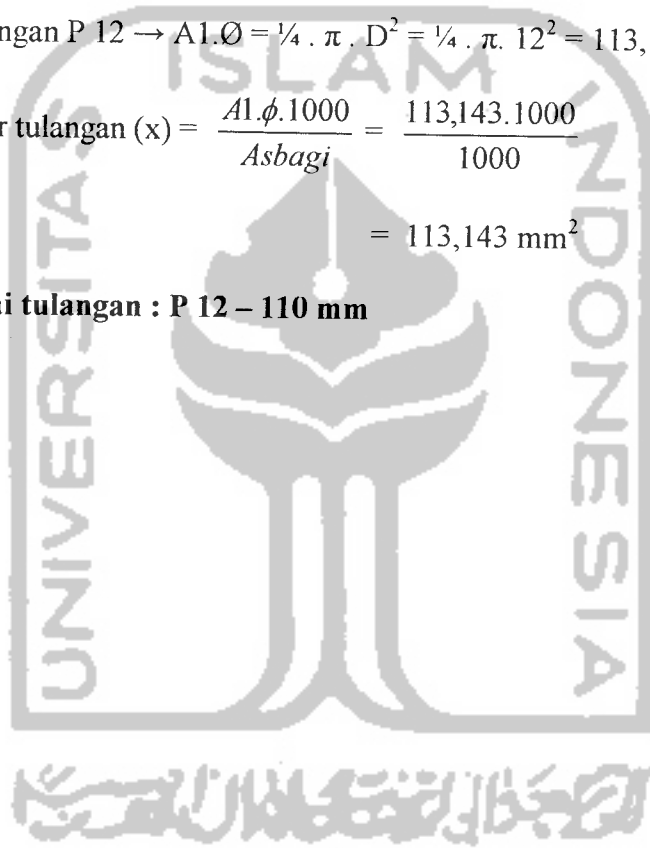
$$A_{s_{susut}} = 0,002 \cdot b \cdot h = 0,002 \cdot 1000 \cdot 500 = 1000 \text{ mm}^2$$

$$\text{Pakai tulangan P 12} \rightarrow A_1 \cdot \phi = \frac{1}{4} \cdot \pi \cdot D^2 = \frac{1}{4} \cdot \pi \cdot 12^2 = 113,143 \text{ mm}^2$$

$$\text{Jarak antar tulangan (x)} = \frac{A_1 \cdot \phi \cdot 1000}{A_{s_{bagi}}} = \frac{113,143 \cdot 1000}{1000}$$

$$= 113,143 \text{ mm}^2$$

→ Dipakai tulangan : P 12 – 110 mm



## BAB V

### PEMBAHASAN

#### 5.1 Tinjauan Umum

Dalam suatu perencanaan, banyak alternatif yang bisa ditempuh untuk menghasilkan struktur yang memenuhi syarat dari segi keamanan, kenyamanan dan ekonomis. Biasanya perencana mengambil suatu anggapan atau asumsi dari perilaku struktur yang ditinjau untuk menentukan rumus-rumus yang akan digunakan agar memudahkan dalam perhitungan dan juga kemudahan dalam pelaksanaan di lapangan. Dan kadang-kadang perencana juga menganggap elemen – elemen tertentu pada struktur portal memiliki persamaan gaya, sehingga hasil perhitungannya sama untuk beberapa elemen tersebut. Penentuan asumsi itu tentunya berdasarkan pengalaman dari perencana tetapi dengan memperhatikan pedoman dan peraturan perencanaan yang ada.

Pada Tugas Akhir perencanaan ulang struktur bangunan Fakultas Hukum Universitas Gadjah Mada ini, untuk mutu beton dipakai  $f'c = 25$  Mpa baik untuk pelat, balok, kolom maupun pondasi. Sedangkan untuk baja tulangan dengan diameter kurang atau sama dengan 12 mm dipakai mutu baja  $f_y = 240$  MPa dan untuk diameter lebih besar dari 12 mm dipakai mutu baja  $f_y = 400$  MPa.

Program SAP 2000 digunakan untuk analisa portal, kuda-kuda dan tangga guna mencari momen – momen yang terjadi pada struktur. Kemudian momen-

momen hasil analisa tersebut dikalikan dengan factor – faktor dan momen terfaktor ini yang digunakan sebagai perhitungan perencanaan struktur.

## 5.2 Atap

Pada perencanaan atap digunakan rangka baja sebagai kuda – kuda, yang terdiri dari dua macam tipe kuda – kuda. Perhitungan rencana atap pada Tugas Akhir ini berdasarkan pada metode tegangan kerja (*working stress design method*) dari AISC. Sedangkan profil yang digunakan untuk kuda-kuda yaitu 2L 60 x 60 x 6, diameter baut  $\frac{1}{2}$  inchi dan tebal pelat sambung 1 cm.

## 5.3 Pelat

Pelat pada bangunan ini terdiri dari pelat lantai dan pelat talang. Perencanaan pelat mengacu pada PBI 1971 tabel 13.3.2 yaitu tipe pelat dihitung berdasarkan perbandingan panjang sisi – sisinya dan dukungan pada pelat, sehingga didapatkan tipe pelat dua arah dengan ditumpu keempat sisinya.

Tebal pelat lantai digunakan 120 mm dan pelat talang 100 mm. Penentuan tebal pelat lantai dan pelat atap didasarkan pada panjang bentang sesuai dengan rumus SK-SNI T-15-1991-03. Pada pelat lantai digunakan tulangan pokok diameter 10 mm dan tulangan bagi diameter 8 mm, sedangkan pada pelat talang digunakan tulangan pokok dan susut diameter 8 mm.

## 5.4 Tangga

Pada bangunan ini terdapat dua macam tipe tangga. Untuk perencanaan tangga ini terdiri dari perencanaan pelat tangga, pelat bordes, balok bordes dan pondasi tangga. Perencanaan tangga menggunakan tulangan pokok diameter 13 mm dan tulangan bagi diameter 8 mm.

### 5.5 Balok

Balok merupakan struktur portal sehingga direncanakan berdasarkan analisis portal. Pada perencanaan struktur ini didapat penulangan yang menggunakan tulangan sebelah dan tulangan rangkap. Apabila tinggi efektif balok yang direncanakan lebih besar dari tinggi efektif balok yang diperlukan, maka balok tersebut menggunakan tulangan sebelah. Dan apabila tinggi efektif balok yang direncanakan lebih kecil dari tinggi efektif balok yang diperlukan, maka balok tersebut menggunakan tulangan rangkap. Tulangan pokok yang digunakan berdiameter 22 mm untuk ukuran balok 400/600, sedangkan untuk ukuran balok 200/400 dan sloof (250/500) menggunakan diameter 16 mm, dan untuk tulangan geser digunakan diameter 10 mm.

### 5.6 Kolom

Kolom juga merupakan struktur portal yang direncanakan berdasarkan dari analisa portal. Penentuan lebar kolom disesuaikan dengan lebar balok agar mempermudah dalam penulangan di lapangan. Lebar kolom direncanakan lebih besar dari lebar balok untuk memberikan kekakuan yang baik. Tulangan pokok yang digunakan adalah diameter 22 mm dengan tulangan geser diameter 10 mm.

### 5.7 Pondasi

Pondasi direncanakan dengan pondasi telapak (*foot plate*). Dipilih pondasi ini dikarenakan kemudahan dalam pengerjaan di lapangan sehingga dapat menghemat waktu pekerjaan dan juga kondisi tanah yang memungkinkan dipakainya jenis pondasi ini. Tulangan pokok yang digunakan diameter 22 mm dengan tulangan bagi diameter 12 mm.

Tabel 5.1 Rekapitulasi Tulangan Balok Anak Terpasang

Balok Anak	Lantai	Dimensi	Tul. Tumpuan		Tul. Lapangan		Tul. Geser	
			Atas	Bawah	Atas	Bawah	Dalam Plastis	Luar Plastis
R 1 ( 9 m )	Atap	200/400	2D16	2D16	2D16	2D16	P10-180	P10-180
R 2 ( 6 m )	Atap	200/400	2D16	2D16	2D16	2D16	P10-180	P10-180
R 3 ( 4,5 m )	Atap	200/400	2D16	2D16	2D16	2D16	P10-180	P10-180
R 4 ( 3 m )	Atap	200/400	3D16	2D16	2D16	2D16	P10-65	P10-180
R 5 ( 2,6 m )	Atap	200/400	2D16	2D16	2D16	2D16	P10-180	P10-180
R 6 ( 1,8 m )	Atap	200/400	2D16	2D16	2D16	2D16	P10-65	P10-180
B 1 a ( 9 m )	2	200/400	3D16	2D16	2D16	2D16	P10-100	P10-180
	3	200/400	4D16	2D16	2D16	2D16	P10-90	P10-180
B 1 b ( 9 m )	2	200/400	7D16	4D16	2D16	4D16	P10-65	P10-165
	3	200/400	6D16	3D16	2D16	3D16	P10-70	P10-180
B 2 a ( 6 m )	2	200/400	3D16	2D16	2D16	2D16	P10-95	P10-180
	3	200/400	3D16	2D16	2D16	2D16	P10-95	P10-180
B 2 b ( 6 m )	2	200/400	5D16	3D16	2D16	3D16	P10-60	P10-160
	3	200/400	5D16	3D16	2D16	3D16	P10-60	P10-165
B 3 a ( 4,5 m )	2	200/400	2D16	2D16	2D16	2D16	P10-180	P10-180
	3	200/400	2D16	2D16	2D16	2D16	P10-180	P10-180
B 3 b ( 4,5 m )	2	200/400	3D16	2D16	2D16	2D16	P10-180	P10-180
	3	200/400	3D16	2D16	2D16	2D16	P10-180	P10-180
B 4 ( 3 m )	2	200/400	5D16	3D16	2D16	3D16	P10-180	P10-180
	3	200/400	5D16	3D16	2D16	3D16	P10-100	P10-180
B 5 ( 0,9 m )	2	200/400	3D16	2D16	2D16	2D16	P10-70	P10-180
B 5 ( 1,8 m )	3	200/400	4D16	2D16	2D16	2D16	P10-180	P10-180

Tabel 5.2 Rekapitulasi Tulangan Balok Induk Terpasang

Balok Induk	Lantai	Dimensi	Tul. Tumpuan		Tul. Lapangan		Tul. Geser	
			Atas	Bawah	Atas	Bawah	Dalam Plastis	Luar Plastis
R 1 ( 9 m )	Atap	400/600	3D22	2D22	2D22	2D22	P10-270	P10-270
R 2 ( 6 m )	Atap	400/600	3D22	2D22	2D22	2D22	P10-270	P10-270
R 3 ( 4,5 m )	Atap	400/600	2D22	2D22	2D22	2D22	P10-270	P10-270
R 4 ( 3 m )	Atap	400/600	4D22	3D22	2D22	3D22	P10-210	P10-270
R 5 ( 1,8 m )	Atap	400/600	3D22	2D22	2D22	2D22	P10-205	P10-270
B 1 a ( 9 m )	2	400/600	5D22	3D22	3D22	5D22	P10-60	P10-225
	3	400/600	7D22	4D22	3D22	6D22	P10-60	P10-230
B 1 b ( 9 m )	2	400/600	8D22	4D22	3D22	5D22	3P10-60	P10-95
	3	400/600	8D22	4D22	3D22	6D22	3P10-65	P10-100
B 2 a ( 6 m )	2	400/600	3D22	2D22	2D22	3D22	P10-270	P10-270
	3	400/600	3D22	2D22	2D22	3D22	P10-270	P10-270
B 2 b ( 6 m )	2	400/600	6D22	3D22	2D22	3D22	P10-70	P10-270
	3	400/600	6D22	3D22	2D22	4D22	P10-70	P10-270
B 3 a ( 4,5 m )	2	400/600	4D22	2D22	2D22	2D22	P10-70	P10-270
	3	400/600	3D22	2D22	2D22	2D22	P10-75	P10-270
B 3 b ( 4,5 m )	2	400/600	3D22	2D22	2D22	2D22	P10-65	P10-270
	3	400/600	3D22	2D22	2D22	2D22	P10-65	P10-270
B 4 ( 3 m )	2	400/600	8D22	4D22	3D22	4D22	P10-70	P10-270
	3	400/600	8D22	4D22	3D22	4D22	P10-70	P10-270
B 5 ( 0,9 m )	2	400/600	2D22	2D22	2D22	2D22	P10-270	P10-270
B 5 ( 1,8 m )	3	400/600	4D22	2D22	2D22	2D22	P10-270	P10-270

Tabel 5.3 Rekapitulasi Tulangan Kolom Terpasang

Kolom	Lantai	Dimensi	Tulangan		Tul. Geser	
			Arah x	Arah y	Dalam Plastis	Luar Plastis
K1A=K10A	1	600/600	5D22	5D22	P10-100	P10-100
	2	600/600	5D22	5D22	P10-90	P10-100
	3	600/600	5D22	5D22	P10-100	P10-100
K1B=K10B	1	600/600	7D22	7D22	P10-65	P10-100
	2	600/600	7D22	7D22	3P10-75	P10-100
	3	600/600	5D22	5D22	P10-85	P10-100
K1D=K10D	1	600/600	6D22	6D22	P10-65	P10-100
	2	600/600	6D22	6D22	3P10-75	P10-100
	3	600/600	5D22	5D22	P10-85	P10-100
K1E=K10E	1	600/600	5D22	5D22	P10-100	P10-100
	2	600/600	5D22	5D22	P10-90	P10-100
	3	600/600	5D22	5D22	P10-100	P10-100
K2A=K9A	1	600/600	5D22	5D22	P10-75	P10-100
	2	600/600	5D22	5D22	P10-70	P10-100
	3	600/600	5D22	5D22	P10-95	P10-100
K2C=K9C	1	600/600	5D22	5D22	P10-70	P10-100
	2	600/600	5D22	5D22	3P10-80	P10-100
K2E=K9E	1	600/600	7D22	7D22	P10-75	P10-100
	2	600/600	5D22	5D22	P10-70	P10-100
	3	600/600	5D22	5D22	P10-95	P10-100
K3A=K8A	1	600/600	5D22	5D22	P10-70	P10-100
	2	600/600	5D22	5D22	P10-70	P10-100
	3	600/600	5D22	5D22	P10-95	P10-100
K3C=K8C	1	600/600	6D22	6D22	P10-70	P10-100
	2	600/600	6D22	6D22	3P10-70	P10-100
K3E=K8E	1	600/600	5D22	5D22	P10-70	P10-100
	2	600/600	5D22	5D22	P10-70	P10-100
	3	600/600	5D22	5D22	P10-85	P10-100
K4A=K7A	1	600/600	7D22	7D22	P10-65	P10-100
	2	600/600	6D22	6D22	P10-65	P10-100
	3	600/600	5D22	5D22	P10-85	P10-100
K4C=K7C	1	600/600	7D22	7D22	P10-65	P10-100
	2	600/600	7D22	7D22	P10-60	P10-100
K4E=K7E	1	600/600	7D22	7D22	P10-70	P10-100
	2	600/600	5D22	5D22	P10-70	P10-100
	3	600/600	5D22	5D22	P10-75	P10-100
K5A=K6A	1	600/600	5D22	5D22	P10-90	P10-100
	2	600/600	5D22	5D22	P10-100	P10-100
K5A'=K6A'	1	600/600	5D22	5D22	P10-100	P10-100
	2	600/600	5D22	5D22	P10-100	P10-100
K5A"=K6A"	3	600/600	5D22	5D22	P10-95	P10-100
K5C=K6C	1	600/600	7D22	7D22	P10-65	P10-100
	2	600/600	7D22	7D22	P10-60	P10-100
K5E=K6E	1	600/600	5D22	5D22	P10-85	P10-100
	2	600/600	5D22	5D22	P10-80	P10-100
	3	600/600	5D22	5D22	P10-75	P10-100



## BAB VI

### KESIMPULAN DAN SARAN

#### 6.1 Kesimpulan

Berdasarkan hasil perhitungan dan pembahasan Tugas Akhir perencanaan ulang struktur bangunan Fakultas Hukum Universitas Gadjah Mada Yogyakarta pada bab-bab sebelumnya, maka dapat diambil kesimpulan sebagai berikut :

1. Gedung yang didesain ulang berupa gedung Fakultas Hukum Universitas Gadjah Mada yang terletak di Bulaksumur Yogyakarta, yang terdiri dari 3 lantai (tingkat) tanpa *basement*.
2. Analisis portal menggunakan program SAP 2000 secara 3D, terhadap berat sendiri, beban kerja dan beban gempa. Beban gempa yang bekerja adalah yang terjadi di wilayah Yogyakarta (wilayah gempa 3).
3. Dalam perencanaan ulang ini menggunakan metode kekuatan batas (*ultimate strength design method*) yaitu beban kerja dinaikkan dengan memberikan faktor beban sehingga diperoleh suatu beban yang dipakai untuk perencanaan.
4. Perencanaan konstruksi meliputi :
  - a. Perencanaan atap menggunakan metode tegangan kerja (*working stresses design method*).
  - b. Perencanaan pelat menggunakan metode koefisien momen dengan menganggap tumpuan tepi jepit elastis sehingga didapat koefisien momen dari tabel 13.3.2 PBI 1971.

- c. Perencanaan portal menggunakan daktilitas penuh dengan nilai  $K = 1$  meliputi balok dan kolom, yang direncanakan berdasarkan SK SNI T-15-1991-03.

## 6.2 Saran

Kesempurnaan dalam perencanaan suatu struktur bangunan memang tidak mudah untuk dicapai. Namun hal itu harus diusahakan semaksimal mungkin agar perencanaan dapat selesai dengan baik dan sesuai dengan aturan dan persyaratan yang berlaku. Oleh karena itu, harus selalu ada usaha untuk menekan dan mengantisipasi segala hambatan yang terjadi diluar perencanaan.

Dengan mempertimbangkan hal – hal tersebut di atas, maka dapat diberikan beberapa saran antara lain :

1. Perlu adanya perhitungan sampai tahap akhir yaitu Rencana Anggaran Biaya (RAB), sehingga penghematan dari segi biaya dapat diketahui dengan jelas.
2. Perlu adanya perhitungan perencanaan ulang untuk Tugas Akhir ini dengan peningkatan spesifikasi bahan yang lain sehingga diketahui sejauh mana efisiensi bahan yang digunakan.
3. Untuk perbandingan pada analisis struktur, perlu adanya perhitungan menggunakan program baru seperti ETABS untuk mengecek desain yang direncanakan sehingga didapatkan perbandingan perencanaan.

**DAFTAR PUSTAKA**

Anonim, 1971, **PERATURAN BETON BERTULANG INDONESIA 1971 N.I.-2**, Departemen Pekerjaan Umum, Bandung.

Anonim, 1983, **PERATURAN PEMBEBANAN INDONESIA UNTUK GEDUNG**, Yayasan Lembaga Penyelidikan Masalah Bangunan, Bandung.

Anonim, 1987, **PEDOMAN PERENCANAAN KETAHANAN GEMPA UNTUK RUMAH DAN GEDUNG SKBI-1.3.53.1987**, Departemen Pekerjaan Umum, Jakarta.

Anonim, 1989, **MANUAL OF STEEL CONSTRUCTION ALLOWABLE STRESS DESIGN (ASD)**, Ninth Edition, American Institute of Steel Construction Inc, Chicago, Illinois.

Anonim, 1991, **STANDAR TATA CARA PERHITUNGAN STRUKTUR BETON UNTUK BANGUNAN GEDUNG SK SNI T-15-1991-03**, Departemen Pekerjaan Umum, Bandung.

Gideon Kusuma dan Takim Adriono, 1993, **DESAIN STRUKTUR RANGKA BETON BERTULANG DI DAERAH RAWAN GEMPA**, Seri Beton 3 Erlangga, Jakarta.

Ilman Noor, Ir, MSCE, **CATATAN KULIAH STRUKTUR BETON 1 & 2**, Jurusan Teknik Sipil, Universitas Islam Indonesia, Yogyakarta.

Ilman Noor, Ir, MSCE, **CATATAN KULIAH STRUKTUR BAJA 1**, Jurusan Teknik Sipil, Universitas Islam Indonesia, Yogyakarta.

Istimawan Dipohusodo, 1994, **STRUKTUR BETON BERTULANG**, PT. Gramedia Pustaka Utama, Jakarta.

Nawy, Edward G., 1998, **BETON BERTULANG**, Refika Aditama, Bandung.

Salmon, C.G. dan Johnson, J.E., 1996, **STRUKTUR BAJA DESAIN DAN PERILAKU**, Jilid I, PT. Gramedia Pustaka Utama, Jakarta.

Wang, C.K. dan Salmon, Charles G., 1989, **DESAIN BETON BERTULANG**, Edisi Keempat, Jilid 2, Erlangga, Jakarta.

Wang, C.K. dan Salmon, Charles G., 1993, **DESAIN BETON BERTULANG**, Edisi Keempat, Jilid 1, Erlangga, Jakarta.

W.C. Vis dan Gideon Kusuma, 1997, **DASAR – DASAR PERENCANAAN BETON BERTULANG**, Erlangga, Jakarta.

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1	Rizki Maulana	99511053	Teknik Sipil
2	Wawan Wibowo	99511397	Teknik Sipil

**JUDUL TUGAS AKHIR :**

.....Redesain struktur bangunan hukum UGM.....  
 .....  
 .....

**PERIODE III : MARET - AGUSTUS**  
**TAHUN : 2002 / 2003**

No.	Kegiatan	Bulan Ke :					
		Mar.	Apr.	Mei.	Jun.	Jul.	Aug.
1.	Pendaftaran						
2.	Penentuan Dosen Pembimbing						
3.	Pembuatan Proposal						
4.	Seminar Proposal						
5.	Konsultasi Penyusunan TA.						
6.	Sidang-Sidang						
7.	Pendadaran.						

DOSEN PEMBIMBING I  
 DOSEN PEMBIMBING II

Ir. Tri Fajar Budiono, MT.  
 Ir. Helmy Akbar Bale, MT.

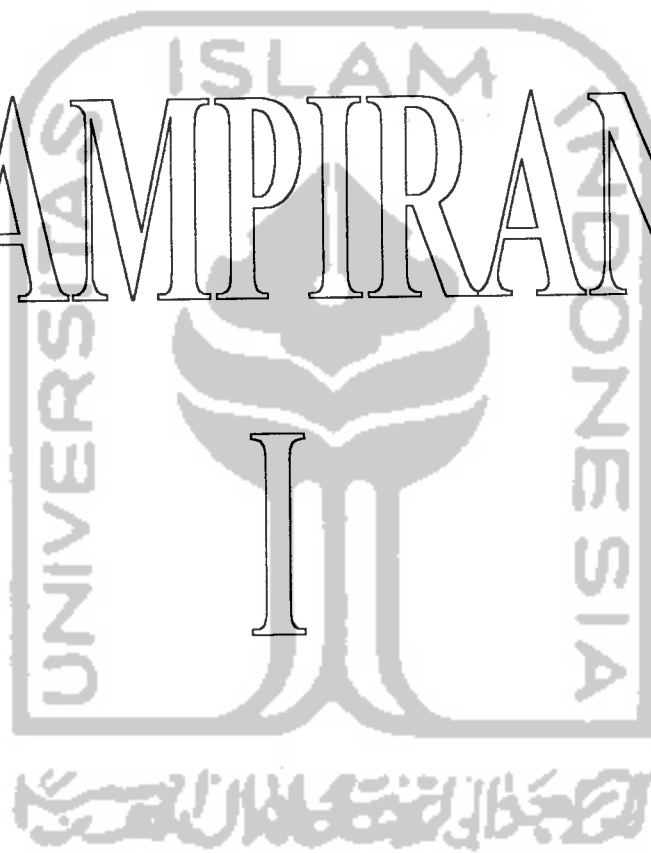


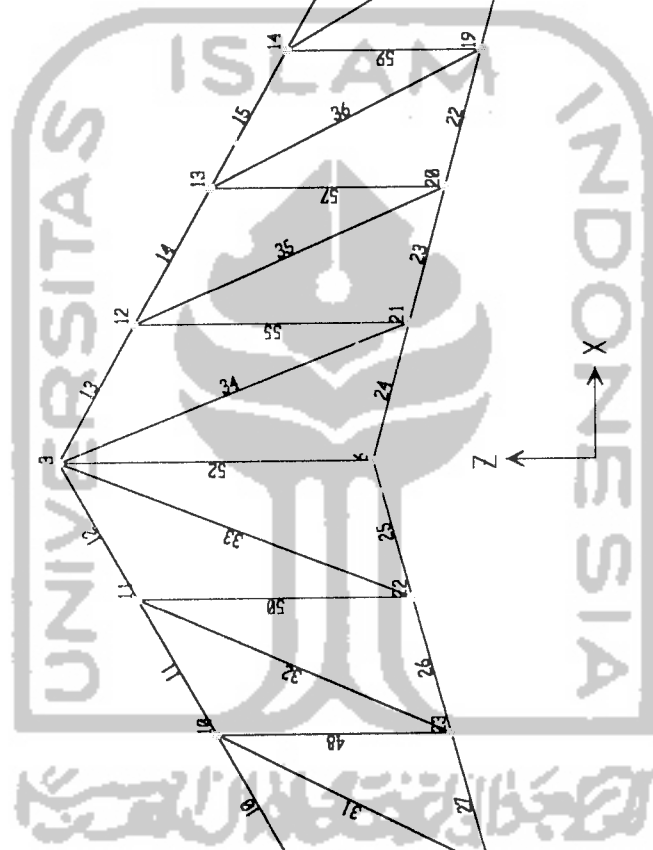
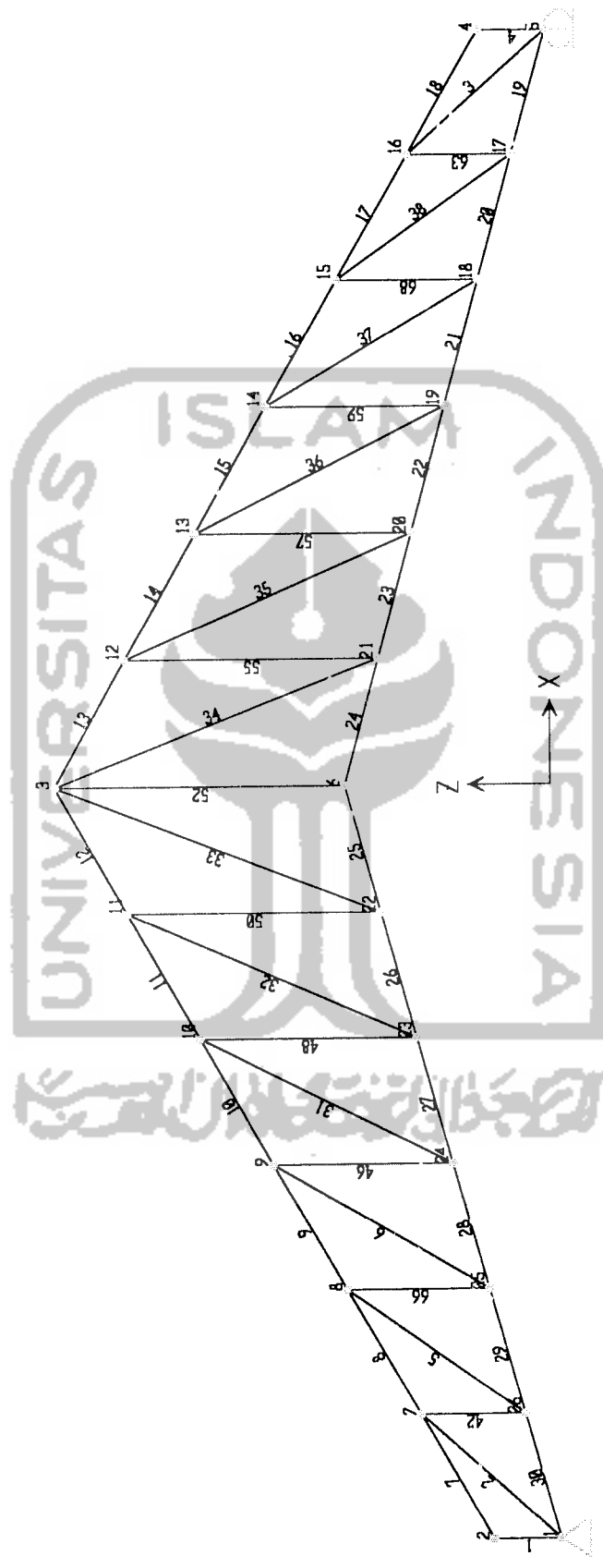
25 April 2003  
 Yogyakarta, .....  
 a.n. Dekan, .....  
 Ir. H. Munadhir, MS  
 (.....)

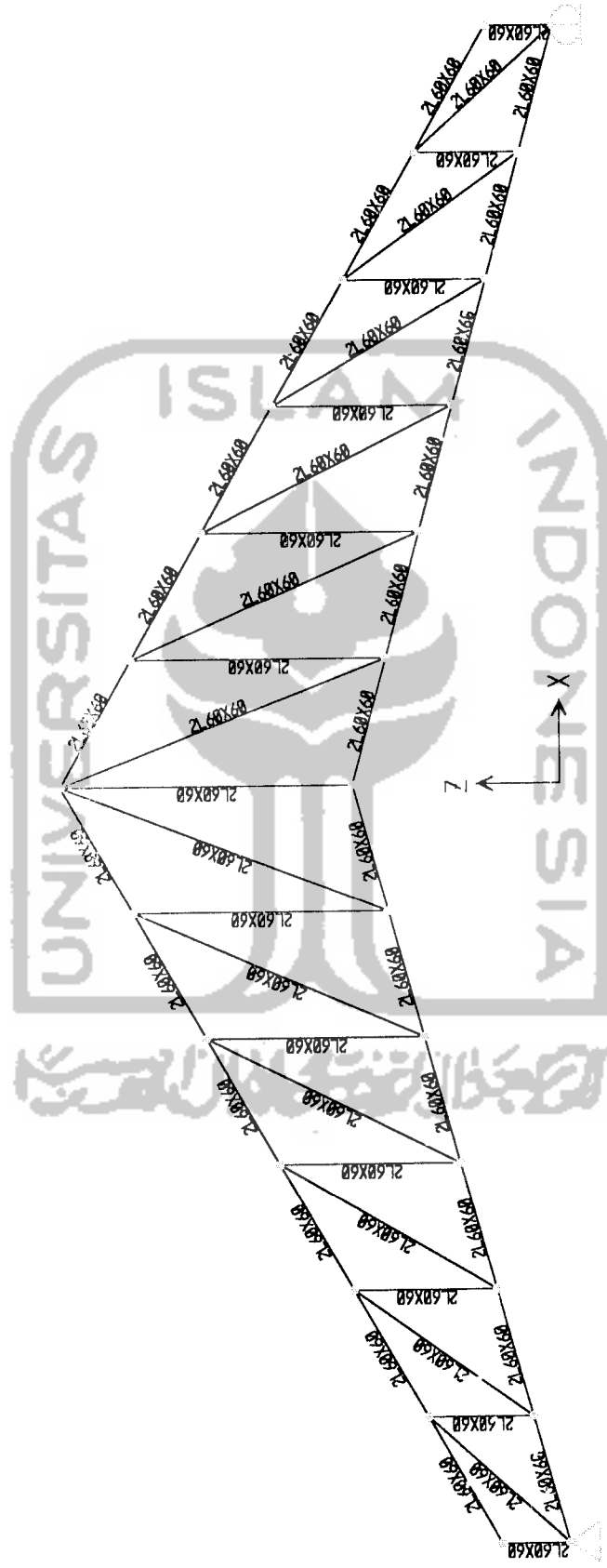
Seminar : 15 OKTOBER 2003  
 Sidang : 29 OKTOBER 2003  
 Pendadaran : 17 DESEMBER 2003

# LAMPIRAN

## I











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3	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
4	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
5	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
6	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
7	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
8	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
9	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
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23	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
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41	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
42	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
43	1	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
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SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 4  
10/8/03 0:28:03

UII DJOGJA

MATERIAL PROPERTY DATA

MAT LABEL	MODULUS OF ELASTICITY	POISSON'S RATIO	THERMAL COEFF	WEIGHT PER UNIT VOL	MASS PER UNIT VOL
STEEL	2.100E+10	0.300	1.170E-05	7833.000	798.100
CONC	2.531E+09	0.200	9.900E-06	2403.000	244.800
OTHER	2.531E+09	0.200	9.900E-06	2402.616	244.801

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 5  
10/8/03 0:28:03

UII DJOGJA

MATERIAL DESIGN DATA

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STEEL	S	37000000.				
CONC	C		3000000.00	32000000.	3000000.00	24000000.0
OTHER	N					

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 6  
10/8/03 0:28:03

UII DJOGJA

FRAME SECTION PROPERTY DATA

FRAME LABEL	MAT LABEL	SECTION TYPE	DEPTH	FLANGE WIDTH	FLANGE THICK	WEB THICK	FLANGE WIDTH BOTTOM	FLANGE THICK BOTTOM
FSEC1	STEEL	I	0.150	0.100	0.000	0.000	0.000	0.000
2L70X70	STEEL	L	0.150	0.100	0.000	0.000	0.000	0.000
	STEEL	L	0.150	0.100	0.000	0.000	0.000	0.000
	STEEL	L	0.150	0.100	0.000	0.000	0.000	0.000

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 7  
10/8/03 0:28:03

UII DJOGJA

FRAME SECTION PROPERTY DATA

SECTION LABEL	AREA	TORSIONAL INERTIA	MOMENTS OF INERTIA I33	MOMENTS OF INERTIA I22	SHEAR AREAS A2	SHEAR AREAS A3
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2L70X70	1.862E-03	0.000	0.000	2.035E-06	9.800E-04	9.800E-04

2L50X50 9.500E-04 0.000 0.000 0.000 5.000E-04 5.000E-04  
 2L60X60 1.368E-03 0.000 0.000 1.141E-06 7.200E-04 7.200E-04

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 8  
 10/8/03 0:28:03

UII DJOGJA

FRAME SECTION PROPERTY DATA

SECTION LABEL	SECTION MODULII		PLASTIC MODULII		RADI OF GYRATION	
	S33	S22	Z33	Z22	R33	R22
FSEC1	1.250E-02	7.500E-03	1.875E-02	1.125E-02	0.144	8.660E-02
2L70X70	1.731E-05	2.714E-05	3.120E-05	4.670E-05	2.155E-02	3.306E-02
2L50X50	6.310E-06	1.055E-05	1.137E-05	1.838E-05	1.539E-02	2.472E-02
2L60X60	1.090E-05	1.756E-05	1.965E-05	3.038E-05	1.847E-02	2.889E-02

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 9  
 10/8/03 0:28:04

UII DJOGJA

FRAME SECTION PROPERTY DATA

SECTION LABEL	TOTAL WEIGHT	TOTAL MASS
FSEC1	0.000	0.000
2L70X70	0.000	0.000
2L50X50	0.000	0.000
2L60X60	1116.982	113.809

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 10  
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UII DJOGJA

SHELL SECTION PROPERTY DATA

SECTION LABEL	MAT LABEL	SHELL TYPE	MEMBRANE THICK	BENDING THICK	MATERIAL ANGLE
SSEC1	CONC	4	1.000E-02	1.000E-02	0.000

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 11  
 10/8/03 0:28:04

UII DJOGJA

SHELL SECTION PROPERTY DATA

SECTION LABEL	TOTAL WEIGHT	TOTAL MASS
SSEC1	0.000	0.000

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 12  
 10/8/03 0:28:04

UII DJOGJA

GROUP MASS DATA

GROUP	M-X	M-Y	M-Z
ALL	1.138	1.138	1.138

SAP2000 v7.42 File: KK BAJA Kgf-m Units PAGE 13  
 10/8/03 0:28:04

UII DJOGJA

JOINT FORCES Load Case DL

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-MX	GLOBAL-MY	GLOBAL-MZ
1	0.000	0.000	-141.930	0.000	0.000	0.000

1	0.000	0.000	-111.634	0.000	0.000	0.000
2	0.000	0.000	-111.634	0.000	0.000	0.000
3	0.000	0.000	-111.634	0.000	0.000	0.000
4	0.000	0.000	-111.634	0.000	0.000	0.000
5	0.000	0.000	-111.634	0.000	0.000	0.000
6	0.000	0.000	-111.634	0.000	0.000	0.000
7	0.000	0.000	-111.634	0.000	0.000	0.000
8	0.000	0.000	-111.634	0.000	0.000	0.000
9	0.000	0.000	-111.634	0.000	0.000	0.000
10	0.000	0.000	-111.634	0.000	0.000	0.000
11	0.000	0.000	-111.634	0.000	0.000	0.000
12	0.000	0.000	-111.634	0.000	0.000	0.000
13	0.000	0.000	-111.634	0.000	0.000	0.000
14	0.000	0.000	-111.634	0.000	0.000	0.000
15	0.000	0.000	-111.634	0.000	0.000	0.000
16	0.000	0.000	-111.634	0.000	0.000	0.000
17	0.000	0.000	-109.594	0.000	0.000	0.000
18	0.000	0.000	-109.594	0.000	0.000	0.000
19	0.000	0.000	-101.133	0.000	0.000	0.000
20	0.000	0.000	-101.133	0.000	0.000	0.000
21	0.000	0.000	-101.133	0.000	0.000	0.000
22	0.000	0.000	-101.133	0.000	0.000	0.000
23	0.000	0.000	-101.133	0.000	0.000	0.000
24	0.000	0.000	-101.133	0.000	0.000	0.000
25	0.000	0.000	-101.133	0.000	0.000	0.000
26	0.000	0.000	-101.133	0.000	0.000	0.000

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UII DJOGJA

JOINT FORCES Load Case LL

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-RX	GLOBAL-RY	GLOBAL-RZ
9	0.000	0.000	-102.000	0.000	0.000	0.000
11	0.000	0.000	-102.000	0.000	0.000	0.000

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UII DJOGJA

JOINT FORCES Load Case WLKA

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-RX	GLOBAL-RY	GLOBAL-RZ
1	-14.804	0.000	11.257	0.000	0.000	0.000
2	-29.608	0.000	22.514	0.000	0.000	0.000
3	-44.412	0.000	33.771	0.000	0.000	0.000
4	-59.216	0.000	45.028	0.000	0.000	0.000
5	-74.020	0.000	56.285	0.000	0.000	0.000
6	-88.824	0.000	67.542	0.000	0.000	0.000
7	-103.628	0.000	78.799	0.000	0.000	0.000
8	-118.432	0.000	90.056	0.000	0.000	0.000
9	-133.236	0.000	101.313	0.000	0.000	0.000
10	-148.040	0.000	112.570	0.000	0.000	0.000
11	-162.844	0.000	123.827	0.000	0.000	0.000
12	-177.648	0.000	135.084	0.000	0.000	0.000
13	-192.452	0.000	146.341	0.000	0.000	0.000
14	-207.256	0.000	157.598	0.000	0.000	0.000
15	-222.060	0.000	168.855	0.000	0.000	0.000
16	-236.864	0.000	180.112	0.000	0.000	0.000
17	-251.668	0.000	191.369	0.000	0.000	0.000
18	-266.472	0.000	202.626	0.000	0.000	0.000
19	-281.276	0.000	213.883	0.000	0.000	0.000
20	-296.080	0.000	225.140	0.000	0.000	0.000
21	-310.884	0.000	236.397	0.000	0.000	0.000
22	-325.688	0.000	247.654	0.000	0.000	0.000
23	-340.492	0.000	258.911	0.000	0.000	0.000
24	-355.296	0.000	270.168	0.000	0.000	0.000
25	-370.100	0.000	281.425	0.000	0.000	0.000
26	-384.904	0.000	292.682	0.000	0.000	0.000

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UII DJOGJA

JOINT FORCES Load Case WLKI

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-RX	GLOBAL-RY	GLOBAL-RZ
9	14.804	0.000	11.257	0.000	0.000	0.000
11	29.608	0.000	22.514	0.000	0.000	0.000
13	44.412	0.000	33.771	0.000	0.000	0.000
15	59.216	0.000	45.028	0.000	0.000	0.000
17	74.020	0.000	56.285	0.000	0.000	0.000
19	88.824	0.000	67.542	0.000	0.000	0.000
21	103.628	0.000	78.799	0.000	0.000	0.000
23	118.432	0.000	90.056	0.000	0.000	0.000
25	133.236	0.000	101.313	0.000	0.000	0.000
27	148.040	0.000	112.570	0.000	0.000	0.000
29	162.844	0.000	123.827	0.000	0.000	0.000
31	177.648	0.000	135.084	0.000	0.000	0.000
33	192.452	0.000	146.341	0.000	0.000	0.000
35	207.256	0.000	157.598	0.000	0.000	0.000
37	222.060	0.000	168.855	0.000	0.000	0.000
39	236.864	0.000	180.112	0.000	0.000	0.000
41	251.668	0.000	191.369	0.000	0.000	0.000
43	266.472	0.000	202.626	0.000	0.000	0.000
45	281.276	0.000	213.883	0.000	0.000	0.000
47	296.080	0.000	225.140	0.000	0.000	0.000
49	310.884	0.000	236.397	0.000	0.000	0.000





















	0.00-01	-3.11E-02	-3.11E-02	0.00	0.00	0.00	1.11
	1.73	-3.11E-02	-3.11E-02	0.00	0.00	0.00	1.47
10000000	0.00	-3.11E-02	-3.11E-02	0.00	0.00	0.00	-1.79
	0.00E+01	-3.11E-02	-3.11E-02	0.00	0.00	0.00	6.734E-01
	1.73	-3.11E-02	-3.11E-02	0.00	0.00	0.00	1.66
100000000	0.00	-3.11E-02	-3.11E-02	0.00	0.00	0.00	-1.73
	0.00E+01	-3.11E-02	-3.11E-02	0.00	0.00	0.00	3.000E-01
	1.73	-3.11E-02	-3.11E-02	0.00	0.00	0.00	1.97
1000000000	0.00	-3.11E-02	-3.11E-02	0.00	0.00	0.00	-1.61
	0.00E+01	-3.11E-02	-3.11E-02	0.00	0.00	0.00	3.100E-01
	1.73	-3.11E-02	-3.11E-02	0.00	0.00	0.00	2.07
10000000000	0.00	-3.11E-02	-3.11E-02	0.00	0.00	0.00	-1.10E-01
	0.00E+01	-3.11E-02	-3.11E-02	0.00	0.00	0.00	3.100E-01
	1.73	-3.11E-02	-3.11E-02	0.00	0.00	0.00	1.11
100000000000	0.00	-1.63E-02	-1.63E-02	0.00	0.00	0.00	1.700E-01
	0.00E+01	-1.63E-02	-1.63E-02	0.00	0.00	0.00	3.000E-01
	1.73	-1.63E-02	-1.63E-02	0.00	0.00	0.00	-3.434E-01
1000000000000	0.00	-1.19E-02	-1.19E-02	0.00	0.00	0.00	-1.674E-01
	0.00E+01	-1.19E-02	-1.19E-02	0.00	0.00	0.00	3.000E-01
	1.73	-1.19E-02	-1.19E-02	0.00	0.00	0.00	1.734E-01
10000000000000	0.00	-7.7E-03	-7.7E-03	0.00	0.00	0.00	1.000E-01
	0.00E+01	-7.7E-03	-7.7E-03	0.00	0.00	0.00	-1.100E-01
	1.73	-7.7E-03	-7.7E-03	0.00	0.00	0.00	-3.643E-01
100000000000000	0.00	-3.07E-03	-3.07E-03	0.00	0.00	0.00	-3.100E-01
	0.00E+01	-3.07E-03	-3.07E-03	0.00	0.00	0.00	1.27
	1.73	-3.07E-03	-3.07E-03	0.00	0.00	0.00	1.67
1000000000000000	0.00	-1.12E-03	-1.12E-03	0.00	0.00	0.00	-3.000E-01
	0.00E+01	-1.12E-03	-1.12E-03	0.00	0.00	0.00	1.000E-01
	1.73	-1.12E-03	-1.12E-03	0.00	0.00	0.00	1.92
10000000000000000	0.00	-4.11E-04	-4.11E-04	0.00	0.00	0.00	-1.000E-01
	0.00E+01	-4.11E-04	-4.11E-04	0.00	0.00	0.00	1.000E-01
	1.73	-4.11E-04	-4.11E-04	0.00	0.00	0.00	1.16
100000000000000000	0.00	-1.47E-04	-1.47E-04	0.00	0.00	0.00	-1.000E-01
	0.00E+01	-1.47E-04	-1.47E-04	0.00	0.00	0.00	1.000E-01
	1.73	-1.47E-04	-1.47E-04	0.00	0.00	0.00	1.19
1000000000000000000	0.00	-5.30E-05	-5.30E-05	0.00	0.00	0.00	1.000E-01
	0.00E+01	-5.30E-05	-5.30E-05	0.00	0.00	0.00	1.11
	1.73	-5.30E-05	-5.30E-05	0.00	0.00	0.00	0.00
10000000000000000000	0.00	-1.90E-05	-1.90E-05	0.00	0.00	0.00	1.000E-01
	0.00E+01	-1.90E-05	-1.90E-05	0.00	0.00	0.00	1.400E-01
	1.73	-1.90E-05	-1.90E-05	0.00	0.00	0.00	1.51E-01
100000000000000000000	0.00	-6.80E-06	-6.80E-06	0.00	0.00	0.00	1.000E-01
	0.00E+01	-6.80E-06	-6.80E-06	0.00	0.00	0.00	1.400E-01
	1.73	-6.80E-06	-6.80E-06	0.00	0.00	0.00	1.51E-01
1000000000000000000000	0.00	-2.49E-06	-2.49E-06	0.00	0.00	0.00	8.736E-01
	0.00E+01	-2.49E-06	-2.49E-06	0.00	0.00	0.00	1.71
	1.73	-2.49E-06	-2.49E-06	0.00	0.00	0.00	1.56
10000000000000000000000	0.00	-9.00E-07	-9.00E-07	0.00	0.00	0.00	1.000E-01
	0.00E+01	-9.00E-07	-9.00E-07	0.00	0.00	0.00	1.19
	1.73	-9.00E-07	-9.00E-07	0.00	0.00	0.00	1.79
100000000000000000000000	0.00	-3.24E-07	-3.24E-07	0.00	0.00	0.00	5.941E-01
	0.00E+01	-3.24E-07	-3.24E-07	0.00	0.00	0.00	1.37
	1.73	-3.24E-07	-3.24E-07	0.00	0.00	0.00	1.31
1000000000000000000000000	0.00	-1.17E-07	-1.17E-07	0.00	0.00	0.00	6.540E-01
	0.00E+01	-1.17E-07	-1.17E-07	0.00	0.00	0.00	1.25
	1.73	-1.17E-07	-1.17E-07	0.00	0.00	0.00	1.81
10000000000000000000000000	0.00	-4.27E-08	-4.27E-08	0.00	0.00	0.00	6.31
	0.00E+01	-4.27E-08	-4.27E-08	0.00	0.00	0.00	-1.35
	1.73	-4.27E-08	-4.27E-08	0.00	0.00	0.00	-6.97
100000000000000000000000000	0.00	-1.52E-08	-1.52E-08	0.00	0.00	0.00	3.054E-01
	0.00E+01	-1.52E-08	-1.52E-08	0.00	0.00	0.00	-5.965E-01
	1.73	-1.52E-08	-1.52E-08	0.00	0.00	0.00	-3.376E-01











	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.18
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.23
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.16E-01
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.143E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.001E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.104E-01
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	-1.017E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-1.037E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.366E-01
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.001E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.113E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.005E-01
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.00
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.48
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.07
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.38
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.00
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	7.155E-01
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.36
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.13
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	0.000E+00
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.43
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.07
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	0.000E+00
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.29
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.103E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.66
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.000E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.773E-02
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.103E-01
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.705E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.044E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.000E+00
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	4.000E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	1.043E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.100E-01
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	9.14
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.004E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-10.07
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	0.35
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.002E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-7.55
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	6.79
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.004E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.05
	0.00	-0.0000	-0.0000E+00	0.00	0.00	0.00	6.64
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.041E-01
	1.00E-01	-0.0000	-0.0000E+00	0.00	0.00	0.00	-0.11
	0.00	0.0000	0.0000E+00	0.00	0.00	0.00	-0.000E-01
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	-0.000E-01
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	1.15
	0.00	0.0000	0.0000E+00	0.00	0.00	0.00	-0.441E-02
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	4.004E-01
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	1.045E-01
	0.00	-1.0000	-0.0000E+00	0.00	0.00	0.00	0.000E-02
	1.00E-01	-1.0000	-0.0000E+00	0.00	0.00	0.00	-0.000E-02
	1.00E-01	-1.0000	-0.0000E+00	0.00	0.00	0.00	-0.000E-01
	0.00	0.0000	0.0000E+00	0.00	0.00	0.00	-0.000E-02
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	-0.000E-02
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	1.611E-01
	0.00	0.0000	0.0000E+00	0.00	0.00	0.00	-0.000E-01
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	0.000E-01
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	1.05
	0.00	0.0000	0.0000E+00	0.00	0.00	0.00	-0.000E-01
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	-0.000E-01
	1.00E-01	0.0000	0.0000E+00	0.00	0.00	0.00	0.000E-01
	0.00	0.0000	0.0000E+00	0.00	0.00	0.00	9.700E-01







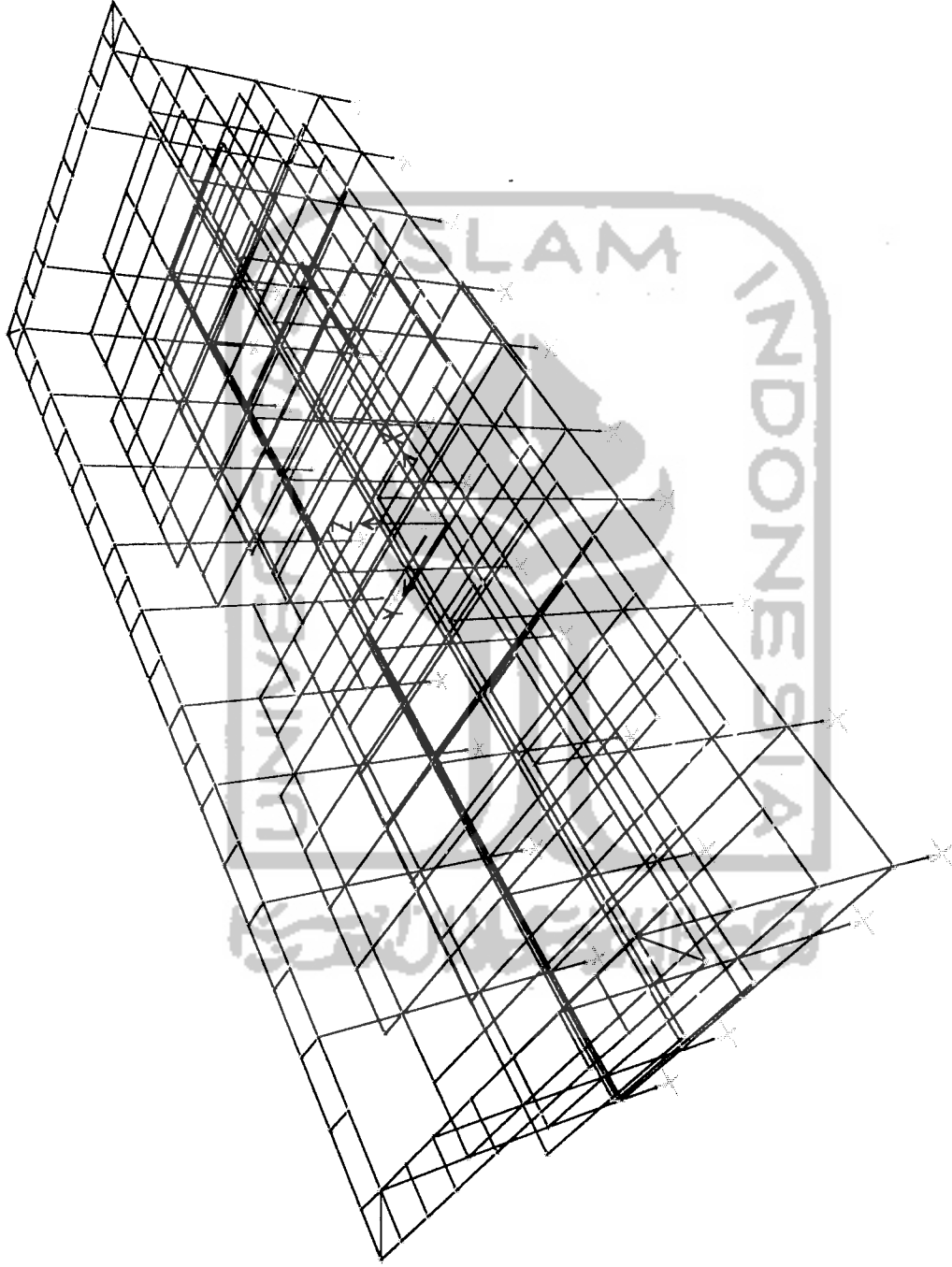


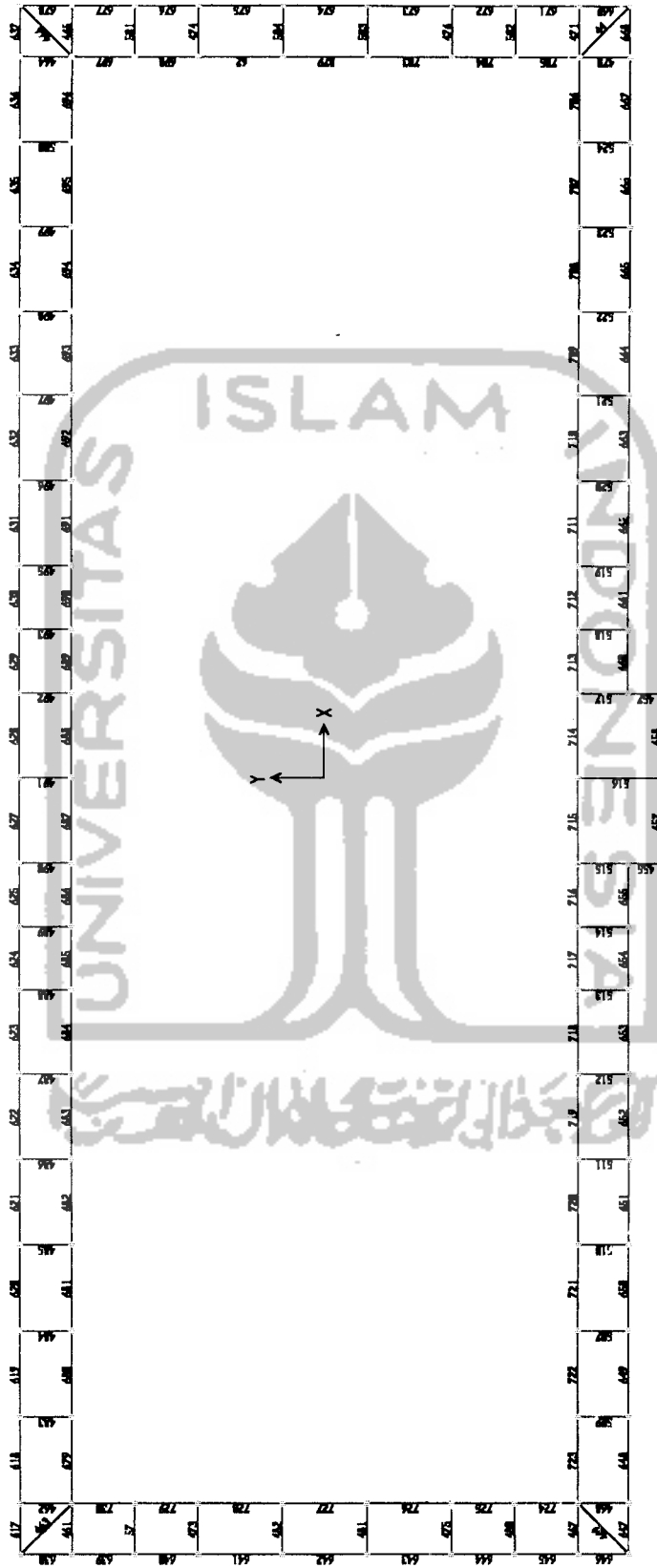
	0.00	-1177.19	4.31	0.00	0.00	0.00	0.00
	1.75	-1177.19	4.31	0.00	0.00	0.00	-1.613E-01
80 - 11B01	3.00	-1177.19	4.31	0.00	0.00	0.00	-8.60
	0.00	-941.66	3.88	0.00	0.00	0.00	4.40
	1.75	-941.66	3.88	0.00	0.00	0.00	-1.1113E-01
80 - 11B02	3.00	-941.66	3.88	0.00	0.00	0.00	-4.37
	0.00	-949.95	3.19	0.00	0.00	0.00	4.85
	1.75	-949.95	3.19	0.00	0.00	0.00	-1.7808E-02
80 - 11B03	3.00	-949.95	3.19	0.00	0.00	0.00	-4.39
	0.00	-949.95	3.19	0.00	0.00	0.00	4.85
	1.75	-949.95	3.19	0.00	0.00	0.00	-1.7808E-02
80 - 11B04	3.00	-949.95	3.19	0.00	0.00	0.00	-4.39
	0.00	-937.87	0.00	0.00	0.00	0.00	0.00
	1.75	-937.87	0.00	0.00	0.00	0.00	0.00
80 - 11B05	3.00	-937.87	0.00	0.00	0.00	0.00	0.00
	0.00	-941.66	0.00	0.00	0.00	0.00	0.00
	1.75	-941.66	0.00	0.00	0.00	0.00	0.00
80 - 11B06	3.00	-941.66	0.00	0.00	0.00	0.00	0.00
	0.00	15.91	-3.177E-01	0.00	0.00	0.00	-3.658E-01
	1.75	15.91	-3.177E-01	0.00	0.00	0.00	1.414E-02
81 - 11B01	3.00	15.91	-3.177E-01	0.00	0.00	0.00	3.961E-01
	0.00	15.91	-3.177E-01	0.00	0.00	0.00	-3.658E-01
	1.75	15.91	-3.177E-01	0.00	0.00	0.00	1.414E-02
81 - 11B02	3.00	15.91	-3.177E-01	0.00	0.00	0.00	-3.961E-01
	0.00	-708.11	0.00	0.00	0.00	0.00	0.00
	1.75	-708.11	0.00	0.00	0.00	0.00	0.00
81 - 11B03	3.00	-708.11	0.00	0.00	0.00	0.00	0.00
	0.00	-682.93	0.00	0.00	0.00	0.00	0.00
	1.75	-682.93	0.00	0.00	0.00	0.00	0.00
81 - 11B04	3.00	-682.93	0.00	0.00	0.00	0.00	0.00
	0.00	-682.93	0.00	0.00	0.00	0.00	0.00
	1.75	-682.93	0.00	0.00	0.00	0.00	0.00
81 - 11B05	3.00	-682.93	0.00	0.00	0.00	0.00	0.00
	0.00	-995.34	3.37	0.00	0.00	0.00	5.12
	1.75	-995.34	3.37	0.00	0.00	0.00	-1.633E-02
82 - 11B01	3.00	-995.34	3.37	0.00	0.00	0.00	-5.16
	0.00	-1107.34	1.901E-01	0.00	0.00	0.00	0.497E-01
	1.75	-1107.34	1.901E-01	0.00	0.00	0.00	-2.368E-02
82 - 11B02	3.00	-1107.34	1.901E-01	0.00	0.00	0.00	-2.549E-01
	0.00	-1107.34	1.901E-01	0.00	0.00	0.00	3.699E-01
	1.75	-1107.34	1.901E-01	0.00	0.00	0.00	1.449E-02
82 - 11B03	3.00	-1107.34	1.901E-01	0.00	0.00	0.00	-3.609E-01
	0.00	-1107.34	1.901E-01	0.00	0.00	0.00	-1.751E-01
	1.75	-1107.34	1.901E-01	0.00	0.00	0.00	-1.571E-02
82 - 11B04	3.00	-1107.34	1.901E-01	0.00	0.00	0.00	5.477E-01
	0.00	-1177.19	4.31	0.00	0.00	0.00	6.55
	1.75	-1177.19	4.31	0.00	0.00	0.00	-2.613E-02
82 - 11B05	3.00	-1177.19	4.31	0.00	0.00	0.00	-8.60
	0.00	-941.66	3.88	0.00	0.00	0.00	4.37
	1.75	-941.66	3.88	0.00	0.00	0.00	-1.1541E-02
82 - 11B06	3.00	-941.66	3.88	0.00	0.00	0.00	-4.40
	0.00	-949.95	3.19	0.00	0.00	0.00	4.85
	1.75	-949.95	3.19	0.00	0.00	0.00	-1.7808E-02
82 - 11B07	3.00	-949.95	3.19	0.00	0.00	0.00	-4.39
	0.00	-908.96	3.09	0.00	0.00	0.00	4.89
	1.75	-908.96	3.09	0.00	0.00	0.00	-1.867E-02
82 - 11B08	3.00	-908.96	3.09	0.00	0.00	0.00	-4.73
	0.00	-657.52	3.69	0.00	0.00	0.00	3.55
	1.75	-657.52	3.69	0.00	0.00	0.00	5.700E-02
82 - 11B09	3.00	-657.52	3.69	0.00	0.00	0.00	-3.45
	0.00	-611.79	-1.367E-01	0.00	0.00	0.00	3.168E-01
	1.75	-611.79	-1.367E-01	0.00	0.00	0.00	0.088E-03

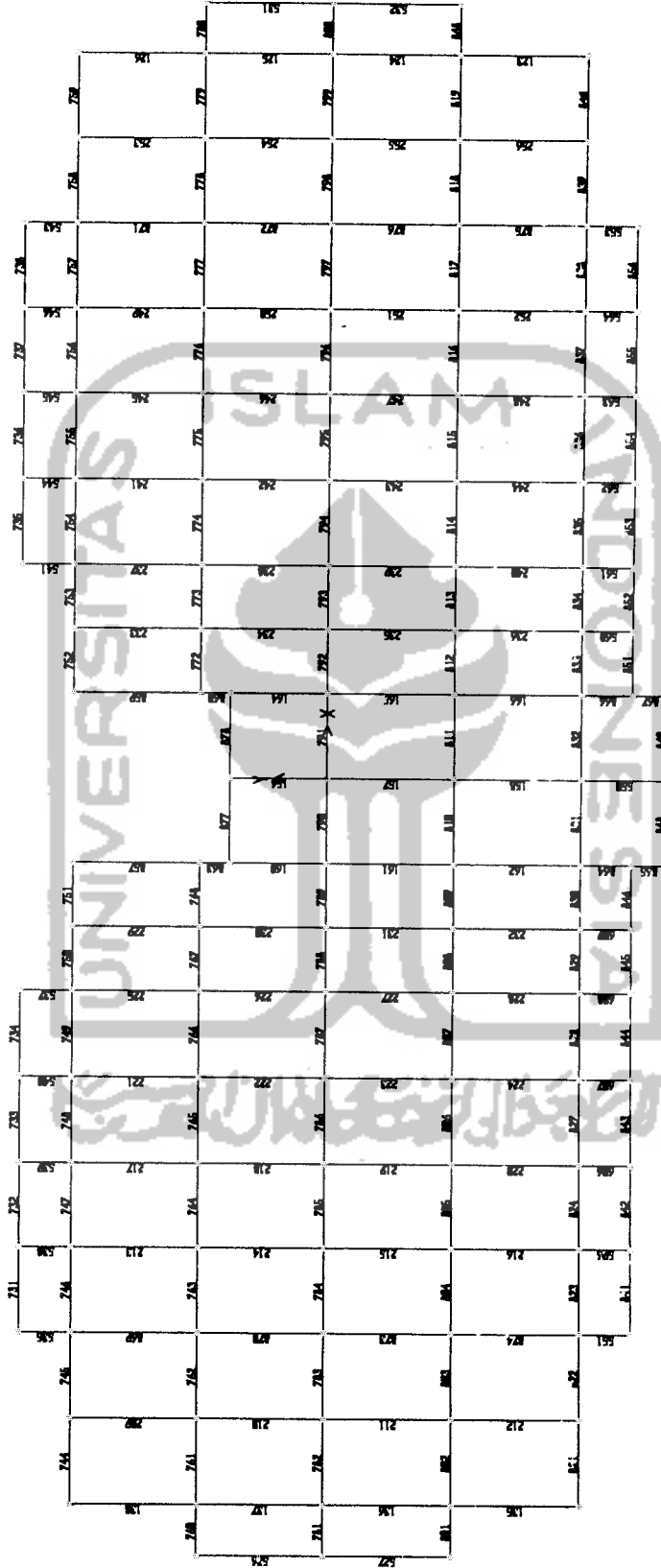


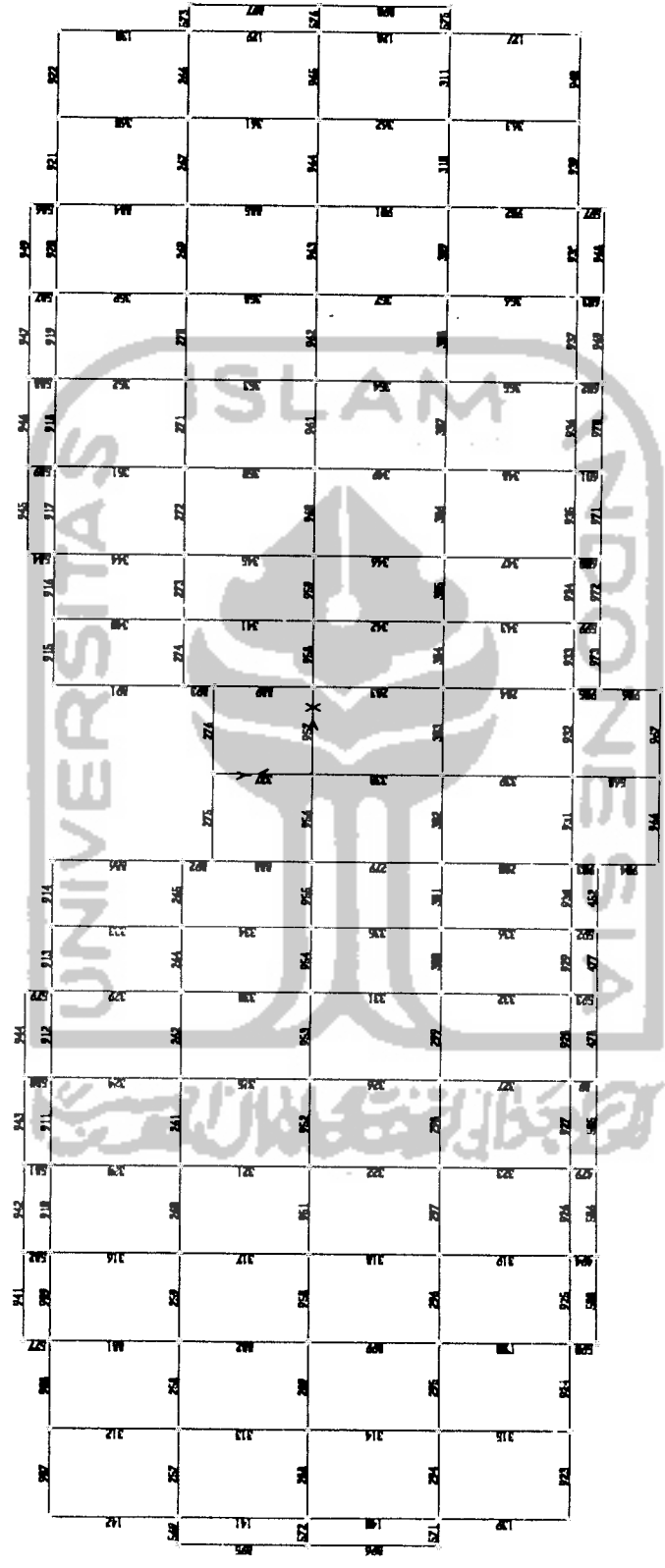
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		0,00	-1,70E-01	1,00E-01	0,00	0,00	0,00	2,00E-01
		1,00	-1,70E-01	1,00E-01	0,00	0,00	0,00	-7,74E-02
		0,00	-1,70E-01	1,00E-01	0,00	0,00	0,00	-8,014E-01
07	0018	0,00	1,00E-01	-3,00E-01	0,00	0,00	0,00	-4,00E-01
		1,00	1,00E-01	-3,00E-01	0,00	0,00	0,00	6,11E-02
		0,00	1,00E-01	-3,00E-01	0,00	0,00	0,00	5,11E-01
07	0019A	0,00	-9,07E-01	4,00	0,00	0,00	0,00	4,77
		1,00	-9,07E-01	4,00	0,00	0,00	0,00	1,01E-01
		0,00	-9,07E-01	4,00	0,00	0,00	0,00	-1,00
07	0019B	0,00	-9,07E-01	4,00	0,00	0,00	0,00	3,00
		1,00	-9,07E-01	4,00	0,00	0,00	0,00	2,10E-01
		0,00	-9,07E-01	4,00	0,00	0,00	0,00	-2,00
07	0020	0,00	-8,00E-01	1,00	0,00	0,00	0,00	3,00
		1,00	-8,00E-01	1,00	0,00	0,00	0,00	4,10E-01
		0,00	-8,00E-01	1,00	0,00	0,00	0,00	-3,00
07	0021	0,00	-6,77E-01	1,00	0,00	0,00	0,00	3,40
		1,00	-6,77E-01	1,00	0,00	0,00	0,00	1,07E-01
		0,00	-6,77E-01	1,00	0,00	0,00	0,00	-3,00
07	0022	0,00	-7,00E-01	1,00	0,00	0,00	0,00	1,00
		1,00	-7,00E-01	1,00	0,00	0,00	0,00	1,00E-01
		0,00	-7,00E-01	1,00	0,00	0,00	0,00	-1,00
07	0023	0,00	-7,40E-01	1,00E-01	0,00	0,00	0,00	0,01E-01
		1,00	-7,40E-01	1,00E-01	0,00	0,00	0,00	-1,00E-02
		0,00	-7,40E-01	1,00E-01	0,00	0,00	0,00	-1,10E-01
07	0024	0,00	-6,67E-01	1,00E-01	0,00	0,00	0,00	0,00E-01
		1,00	-6,67E-01	1,00E-01	0,00	0,00	0,00	0,00E-03
		0,00	-6,67E-01	1,00E-01	0,00	0,00	0,00	-1,00E-01
07	0025	0,00	-6,00E-01	1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	-6,00E-01	1,00E-01	0,00	0,00	0,00	-3,01E-02
		0,00	-6,00E-01	1,00E-01	0,00	0,00	0,00	3,00E-01
07	0026	0,00	-5,00E-01	1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	-5,00E-01	1,00E-01	0,00	0,00	0,00	-3,00E-02
		0,00	-5,00E-01	1,00E-01	0,00	0,00	0,00	3,00E-01
07	0027	0,00	-4,00E-01	1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	-4,00E-01	1,00E-01	0,00	0,00	0,00	-3,01E-02
		0,00	-4,00E-01	1,00E-01	0,00	0,00	0,00	3,00E-01
07	0028	0,00	-3,00E-01	1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	-3,00E-01	1,00E-01	0,00	0,00	0,00	-3,01E-02
		0,00	-3,00E-01	1,00E-01	0,00	0,00	0,00	3,00E-01
07	0029	0,00	-2,00E-01	1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	-2,00E-01	1,00E-01	0,00	0,00	0,00	-3,01E-02
		0,00	-2,00E-01	1,00E-01	0,00	0,00	0,00	3,00E-01
07	0030	0,00	-1,00E-01	1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	-1,00E-01	1,00E-01	0,00	0,00	0,00	-3,01E-02
		0,00	-1,00E-01	1,00E-01	0,00	0,00	0,00	3,00E-01
07	0031	0,00	0,00	1,00E-01	0,00	0,00	0,00	3,00E-01
		0,00E-01	0,00	1,00E-01	0,00	0,00	0,00	2,00E-02
		1,00	0,00	1,00E-01	0,00	0,00	0,00	-3,10E-01
08	0010	0,00	1,00E-01	-1,00E-01	0,00	0,00	0,00	-6,00
		0,00E-01	1,00E-01	-1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	1,00E-01	-1,00E-01	0,00	0,00	0,00	6,00
08	0011	0,00	41,00	-3,00E-01	0,00	0,00	0,00	-2,40E-01
		0,00E-01	41,00	-3,00E-01	0,00	0,00	0,00	-2,40E-03
		1,00	41,00	-3,00E-01	0,00	0,00	0,00	2,30E-01
08	0012A	0,00	-13,14	-3,00E-01	0,00	0,00	0,00	-2,00E-01
		0,00E-01	-13,14	-3,00E-01	0,00	0,00	0,00	-1,10E-02
		1,00	-13,14	-3,00E-01	0,00	0,00	0,00	2,20E-01
08	0012B	0,00	3,00	1,00E-01	0,00	0,00	0,00	3,00E-01
		0,00E-01	3,00	1,00E-01	0,00	0,00	0,00	2,00E-02
		1,00	3,00	1,00E-01	0,00	0,00	0,00	-3,10E-01
08	0013	0,00	1,00E-01	-1,00E-01	0,00	0,00	0,00	-6,00
		0,00E-01	1,00E-01	-1,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	1,00E-01	-1,00E-01	0,00	0,00	0,00	6,00
08	0014	0,00	7,00E-01	-4,00E-01	0,00	0,00	0,00	-4,67
		0,00E-01	7,00E-01	-4,00E-01	0,00	0,00	0,00	-2,00E-01
		1,00	7,00E-01	-4,00E-01	0,00	0,00	0,00	4,27
08	0015	0,00	7,00E-01	-4,00E-01	0,00	0,00	0,00	-4,94
		0,00E-01	7,00E-01	-4,00E-01	0,00	0,00	0,00	-3,00E-01
		1,00	7,00E-01	-4,00E-01	0,00	0,00	0,00	4,50
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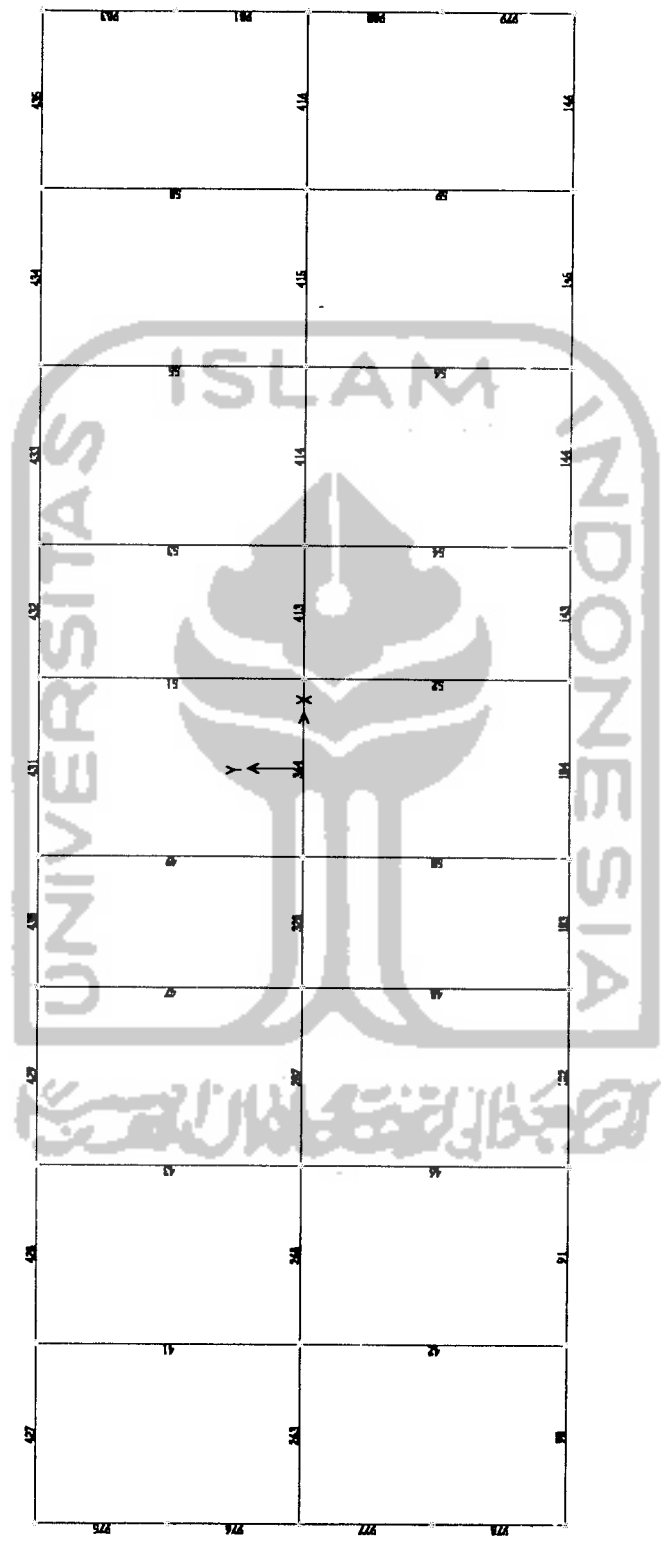
	0.00	134.10	-7.60	0.00	0.00	0.00	-1.00E-01
	1.70	134.10	-7.60	0.00	0.00	0.00	1.10E-01
65. CIBD	0.00	200.00	-1.50	0.00	0.00	0.00	-1.10
	0.50E-01	200.00	-1.50	0.00	0.00	0.00	-1.10E-01
	1.70	200.00	-1.50	0.00	0.00	0.00	1.10E-01
65. CIBD	0.00	30.00	3.110E-02	0.00	0.00	0.00	1.0000E-01
	0.50E-01	30.00	3.110E-02	0.00	0.00	0.00	-1.0000E-01
	1.70	30.00	3.110E-02	0.00	0.00	0.00	-9.9999E-01
65. CIBDA	0.00	60.00	1.016E-01	0.00	0.00	0.00	1.0000E-01
	0.50E-01	60.00	1.016E-01	0.00	0.00	0.00	-1.0000E-01
	1.70	60.00	1.016E-01	0.00	0.00	0.00	-3.0000E-01
65. CIBBI	0.00	-53.00	-1.960E-01	0.00	0.00	0.00	-1.0000E-01
	0.50E-01	-53.00	-1.960E-01	0.00	0.00	0.00	-6.9560E-03
	1.70	-53.00	-1.960E-01	0.00	0.00	0.00	1.1000E-01
65. CIBBC	0.00	200.00	-1.77	0.00	0.00	0.00	-1.10
	0.50E-01	200.00	-1.77	0.00	0.00	0.00	-1.0000E-01
	1.70	200.00	-1.77	0.00	0.00	0.00	1.10E-01
65. CIBBD	0.00	100.00	-1.31	0.00	0.00	0.00	-1.10
	0.50E-01	100.00	-1.31	0.00	0.00	0.00	-1.0000E-01
	1.70	100.00	-1.31	0.00	0.00	0.00	9.9999E-01
65. CIBBE	0.00	171.40	-1.54	0.00	0.00	0.00	-1.10
	0.50E-01	171.40	-1.54	0.00	0.00	0.00	-1.0000E-01
	1.70	171.40	-1.54	0.00	0.00	0.00	1.10E-01
65. CIBBF	0.00	226.10	-1.22	0.00	0.00	0.00	-1.10
	0.50E-01	226.10	-1.22	0.00	0.00	0.00	-1.0000E-01
	1.70	226.10	-1.22	0.00	0.00	0.00	1.1000E-01
65. CIG	0.00	200.00	1.50	0.00	0.00	0.00	1.10
	0.50E-01	200.00	1.50	0.00	0.00	0.00	1.0000E-01
	1.70	200.00	1.50	0.00	0.00	0.00	-1.10E-01
65. CII	0.00	100.00	-1.010E-01	0.00	0.00	0.00	-6.0000E-01
	0.50E-01	100.00	-1.010E-01	0.00	0.00	0.00	1.0000E-01
	1.70	100.00	-1.010E-01	0.00	0.00	0.00	-1.0000E-01
65. NIKA	0.00	-1.00	1.000E-01	0.00	0.00	0.00	1.0000E-01
	0.50E-01	-1.00	1.000E-01	0.00	0.00	0.00	6.9999E-01
	1.70	-1.00	1.000E-01	0.00	0.00	0.00	-1.0000E-01
65. WIKI	0.00	60.00	-1.010E-01	0.00	0.00	0.00	-2.490E-01
	0.50E-01	60.00	-1.010E-01	0.00	0.00	0.00	-1.0000E-01
	1.70	60.00	-1.010E-01	0.00	0.00	0.00	1.0000E-01
65. WIKBI	0.00	100.00	1.31	0.00	0.00	0.00	1.10
	0.50E-01	100.00	1.31	0.00	0.00	0.00	1.0000E-01
	1.70	100.00	1.31	0.00	0.00	0.00	-1.0000E-01
65. WIKBC	0.00	100.00	1.31	0.00	0.00	0.00	1.10
	0.50E-01	100.00	1.31	0.00	0.00	0.00	1.0000E-01
	1.70	100.00	1.31	0.00	0.00	0.00	-1.10E-01
65. WIKBD	0.00	100.00	1.31	0.00	0.00	0.00	1.10
	0.50E-01	100.00	1.31	0.00	0.00	0.00	1.0000E-01
	1.70	100.00	1.31	0.00	0.00	0.00	-1.10E-01
65. WIKBE	0.00	100.00	1.31	0.00	0.00	0.00	1.10
	0.50E-01	100.00	1.31	0.00	0.00	0.00	1.0000E-01
	1.70	100.00	1.31	0.00	0.00	0.00	-1.10E-01
65. WIKBF	0.00	100.00	1.31	0.00	0.00	0.00	1.10
	0.50E-01	100.00	1.31	0.00	0.00	0.00	1.0000E-01
	1.70	100.00	1.31	0.00	0.00	0.00	-1.10E-01

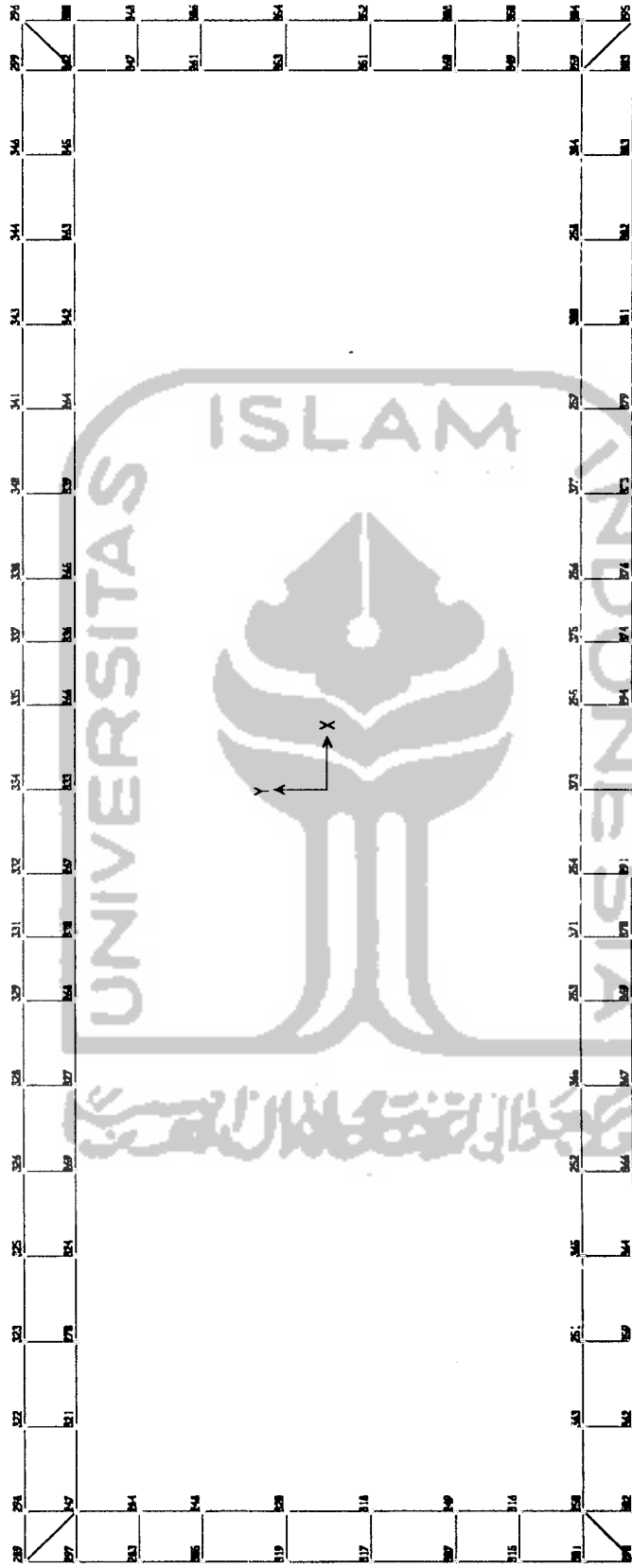




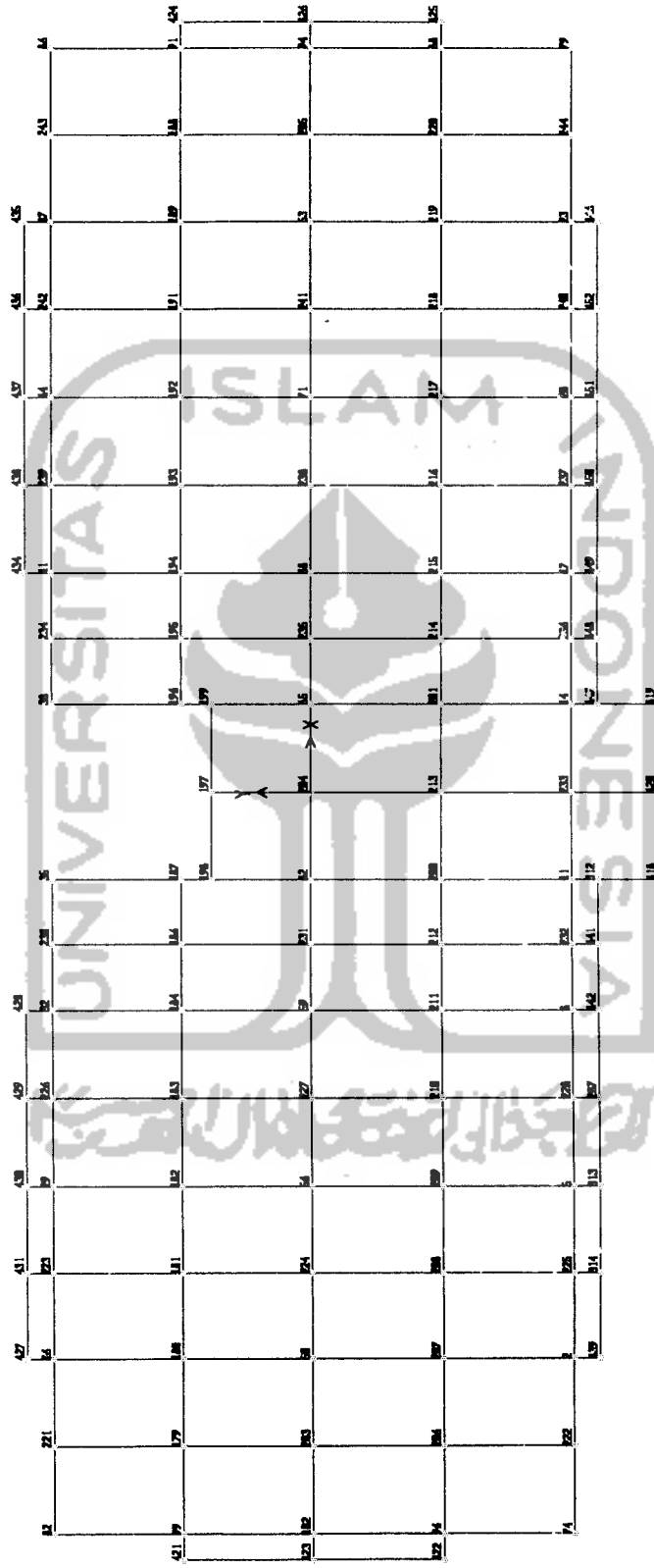


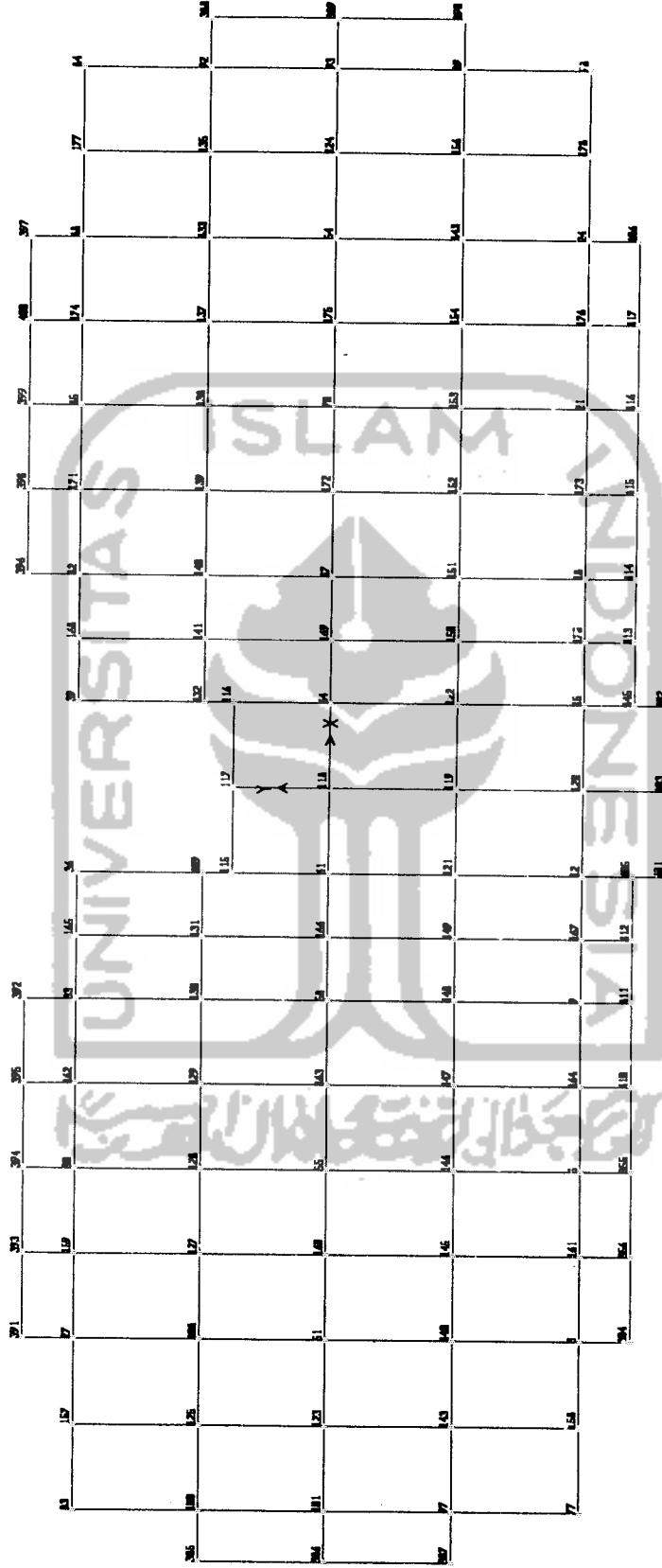


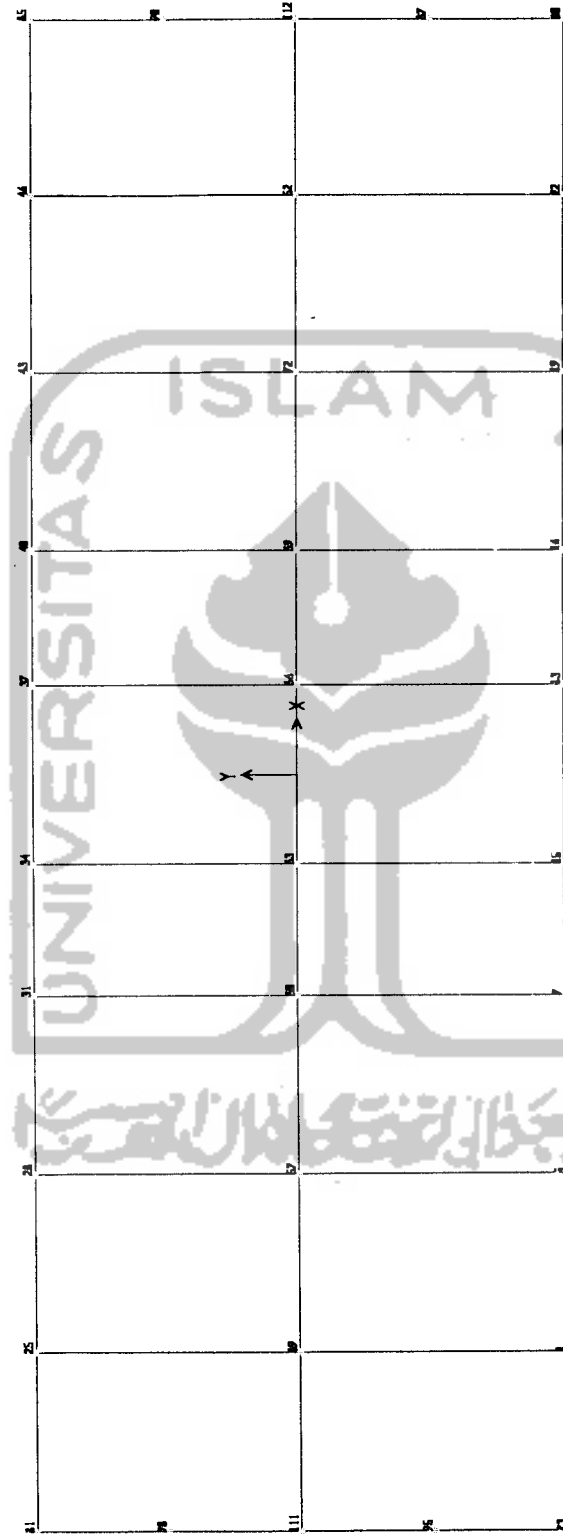


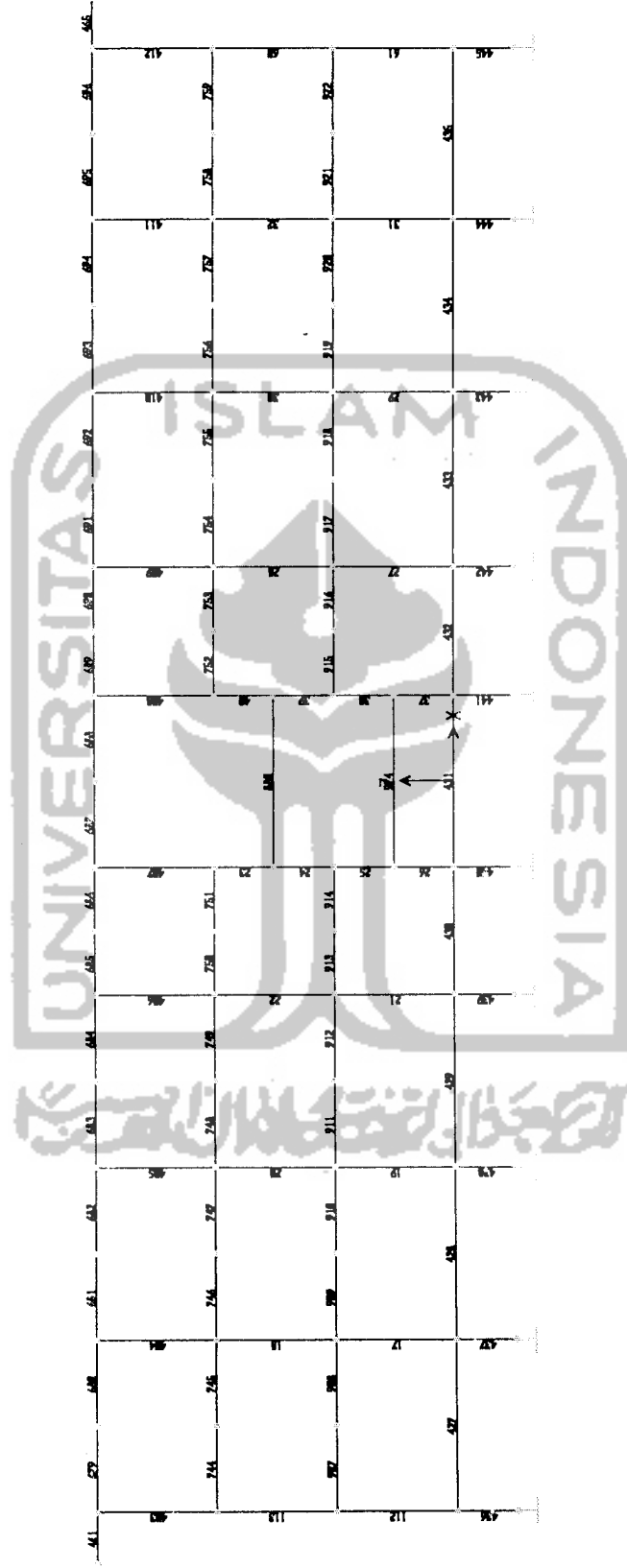


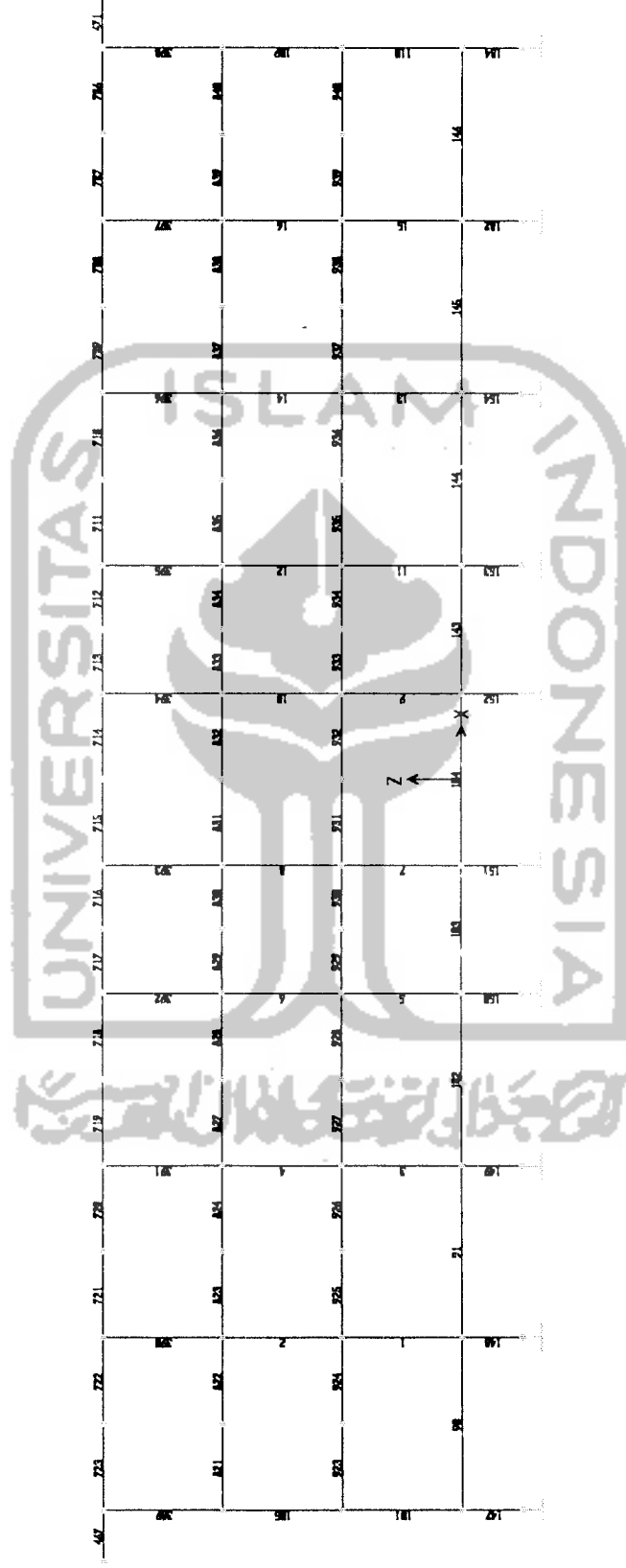


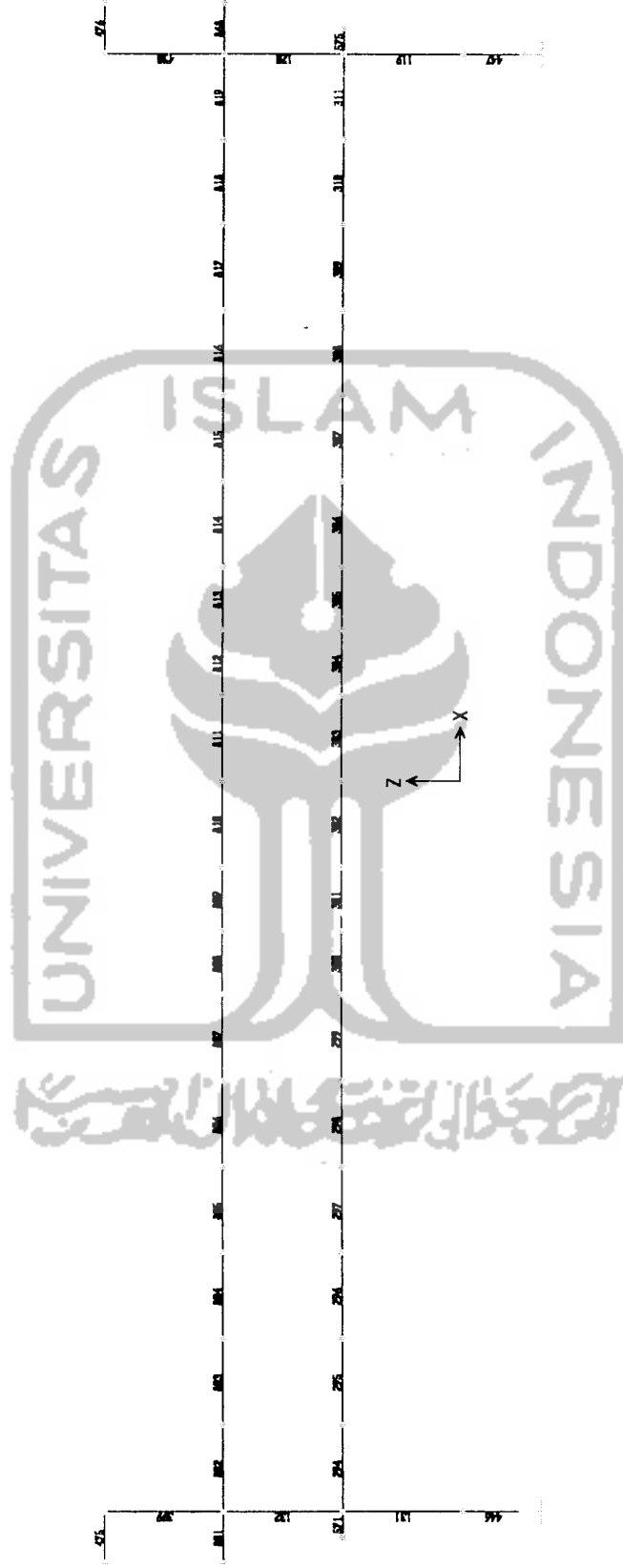


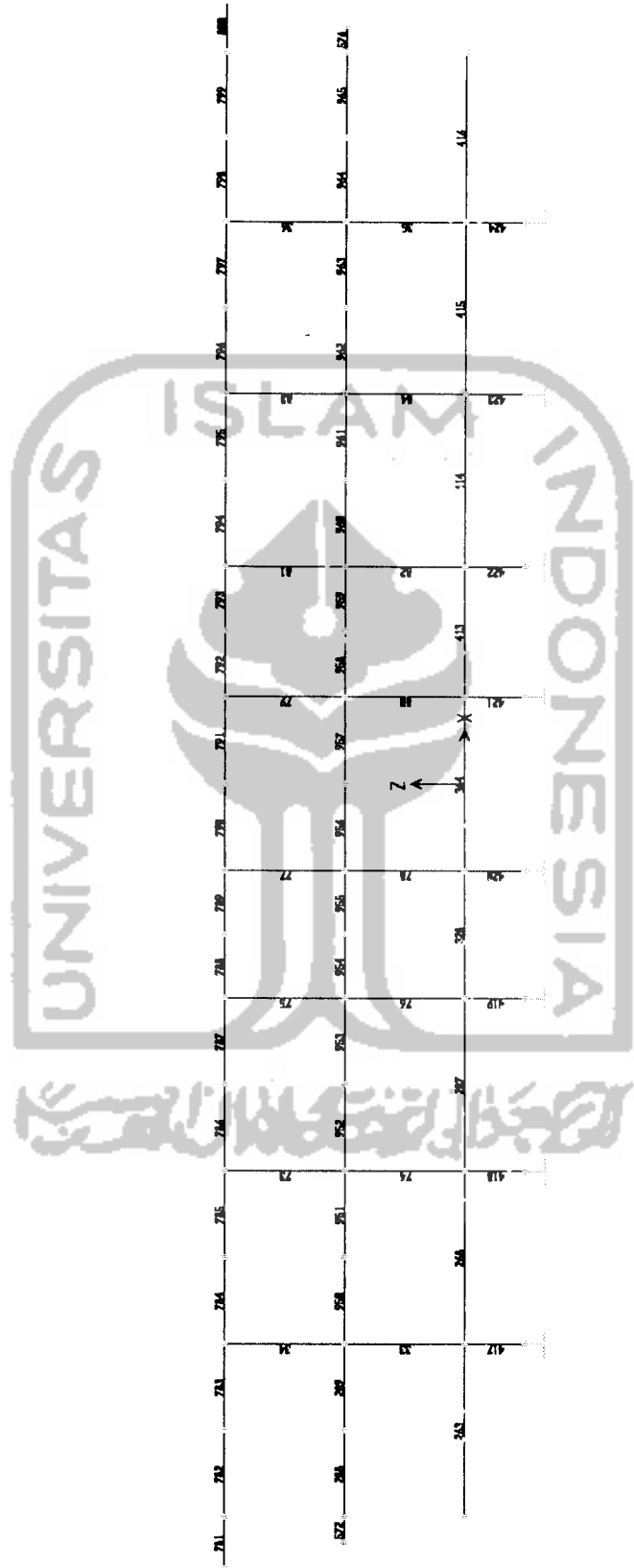


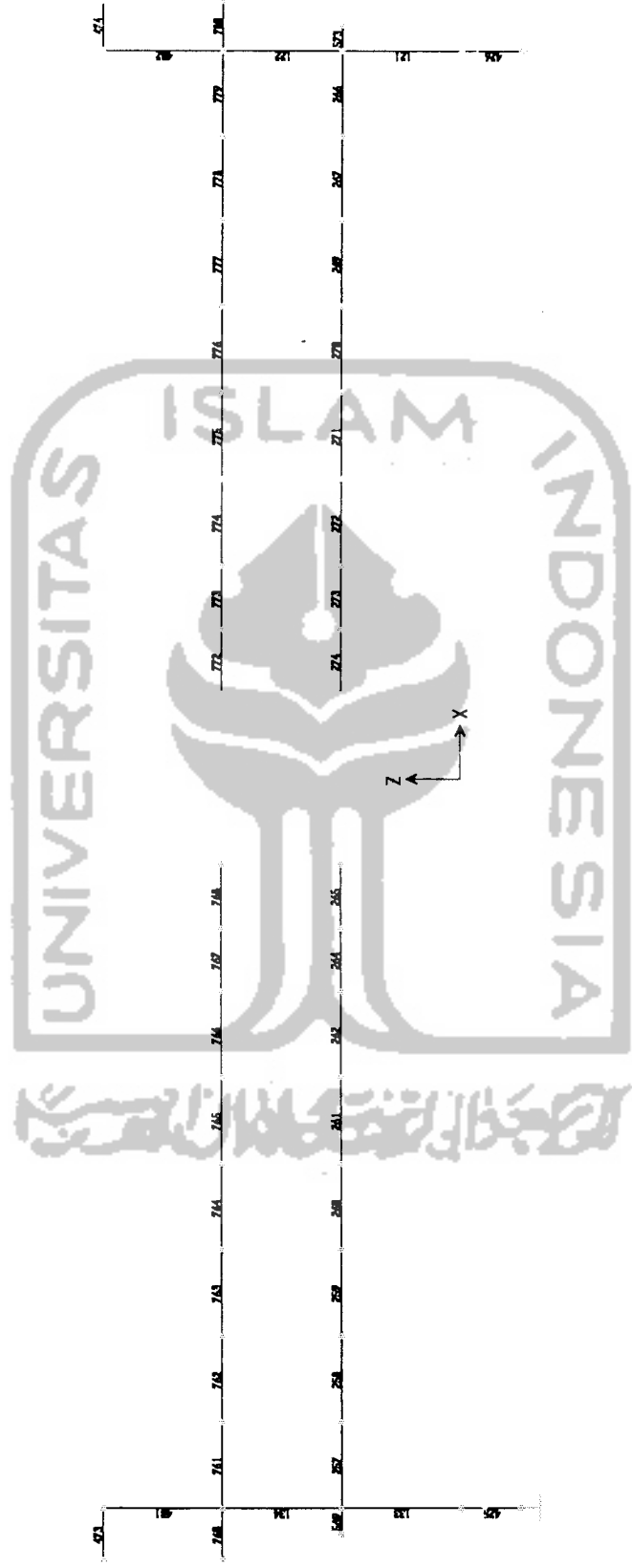














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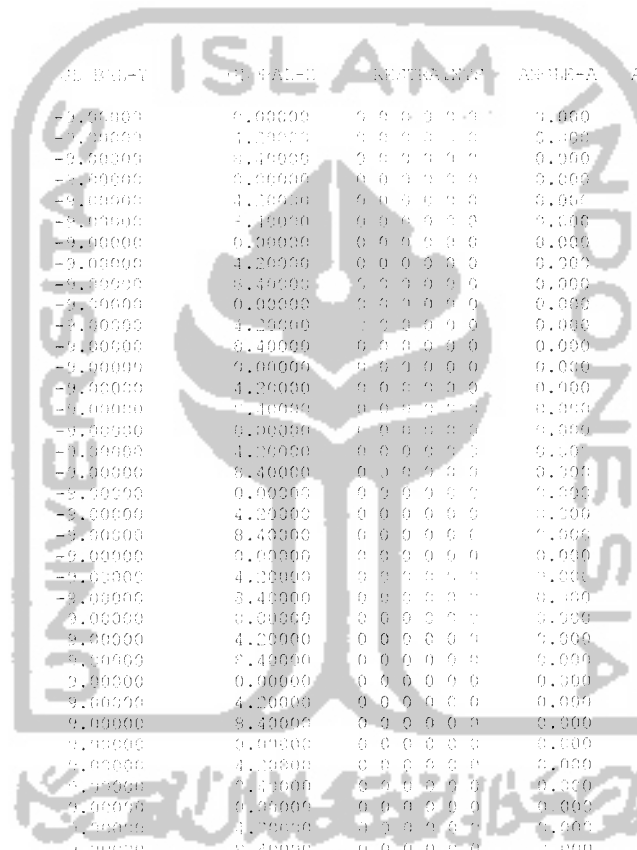
STATIC LOAD CASES

STATIC CASE	CASE TYPE	SELF WT FACTOR
DL	DEAD	1.0000
LL	LIVE	0.0000
ELKA	QUAKE	0.0000
ELKI	QUAKE	0.0000

YOGYAKARTA

JOINT DATA

JOINT	ELKAB-A	ELKAB-T	ELKAB-E	ELKAB-INT	ANGLE-A	ANGLE-B	ANGLE-C
1	-19.50000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
2	-19.50000	-9.00000	1.20000	0 0 0 0 0	0.000	0.000	0.000
3	-19.50000	-9.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
4	-13.50000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
5	-13.50000	-9.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
6	-13.50000	-9.00000	7.40000	0 0 0 0 0	0.000	0.000	0.000
7	-7.50000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
8	-7.50000	-9.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
9	-7.50000	-9.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
10	-3.00000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
11	-3.00000	-9.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
12	-3.00000	-9.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
13	3.00000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
14	3.00000	-9.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
15	3.00000	-9.00000	7.40000	0 0 0 0 0	0.000	0.000	0.000
16	7.50000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
17	7.50000	-9.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
18	7.50000	-9.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
19	13.50000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
20	13.50000	-9.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
21	13.50000	-9.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
22	19.50000	-9.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
23	19.50000	-9.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
24	19.50000	-9.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
25	-19.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
26	-19.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
27	-19.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
28	-13.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
29	-13.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
30	-13.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
31	-7.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
32	-7.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
33	-7.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
34	-3.00000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
35	-3.00000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
36	-3.00000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
37	3.00000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
38	3.00000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
39	3.00000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
40	7.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
41	7.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
42	7.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
43	13.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
44	13.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
45	13.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
46	19.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
47	19.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
48	19.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
49	-19.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
50	-19.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
51	-19.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
52	-13.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
53	-13.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
54	-13.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
55	-7.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
56	-7.50000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
57	-7.50000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000
58	-3.00000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
59	-3.00000	0.00000	4.20000	0 0 0 0 0	0.000	0.000	0.000
60	-3.00000	0.00000	8.40000	0 0 0 0 0	0.000	0.000	0.000































1	101	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
2	102	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
3	103	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
4	104	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
5	105	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
6	106	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
7	107	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
8	108	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
9	109	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
10	110	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
11	111	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
12	112	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
13	113	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
14	114	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
15	115	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
16	116	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
17	117	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
18	118	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
19	119	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
20	120	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
21	121	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
22	122	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
23	123	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
24	124	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
25	125	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
26	126	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
27	127	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
28	128	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
29	129	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
30	130	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
31	131	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
32	132	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
33	133	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
34	134	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
35	135	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
36	136	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
37	137	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
38	138	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
39	139	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250
40	140	1	0.000000	0.000	0.00000	4	0.000	0.000	1.000	0.250

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YOGYAKARTA

M A T E R I A L P R O P E R T Y D A T A

MAT LABEL	MODULUS OF ELASTICITY	POISSON'S RATIO	THERMAL COEFF	WEIGHT PER UNIT VOL	MASS PER UNIT VOL
STEEL	199947977	0.300	1.170E-05	76.819	7.827
CONC	23500000.0	0.200	9.900E-06	23.560	2.401
OTHER	24821128.4	0.200	9.900E-06	23.562	2.401

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YOGYAKARTA

M A T E R I A L D E S I G N D A T A

MAT LABEL	DESIGN CODE	STEEL FY	CONCRETE FC	REBAR FY	CONCRETE FCS	REBAR FYS
STEEL	S	248211.289				
CONC	C		25000.000	400000.000	25000.000	230000.000
OTHER	N					

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YOGYAKARTA

F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	MAT LABEL	SECTION TYPE	DEPTH	FLANGE WIDTH	FLANGE THICK	WEB THICK	FLANGE WIDTH BOTTOM	FLANGE THICK BOTTOM
K600X600	CONC		0.600	0.600	0.000	0.000	0.000	0.000
K400X400	CONC		0.400	0.400	0.000	0.000	0.000	0.000
K300X300	CONC		0.300	0.300	0.000	0.000	0.000	0.000
S150X150	CONC		0.150	0.150	0.000	0.000	0.000	0.000

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YOGYAKARTA

F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	AREA	TORSIONAL INERTIA	MOMENTS OF INERTIA I33	MOMENTS OF INERTIA I22	SHEAR AREAS A2	SHEAR AREAS A3
---------------	------	-------------------	------------------------	------------------------	----------------	----------------

K600X600	0.300	1.825E-02	1.080E-02	1.080E-02	0.300	0.300
B400X600	0.240	7.512E-03	7.200E-03	3.200E-03	0.200	0.200
B200X400	3.000E-02	7.324E-04	1.067E-03	2.667E-04	6.667E-02	6.667E-02
S250X500	0.125	1.788E-03	2.604E-03	6.510E-04	0.104	0.104

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YOGYAKARTA

FRAME SECTION PROPERTY DATA

SECTION LABEL	SECTION MODULII		PLASTIC MODULII		RADIUS OF GYRATION	
	S33	S22	Z33	Z22	R33	R22
K600X600	3.600E-02	3.600E-02	5.400E-02	5.400E-02	0.173	0.173
B400X600	2.400E-02	1.600E-02	3.600E-02	2.400E-02	0.173	0.115
B200X400	5.333E-03	2.667E-03	8.000E-03	4.000E-03	0.115	5.774E-02
S250X500	1.042E-02	5.208E-03	1.563E-02	7.813E-03	0.144	7.217E-02

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YOGYAKARTA

FRAME SECTION PROPERTY DATA

SECTION LABEL	TOTAL WEIGHT	TOTAL MASS
K600X600	3704.763	377.552
B400X600	5458.758	556.302
B200X400	1648.224	167.971
S250X500	980.685	99.942

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YOGYAKARTA

SHELL SECTION PROPERTY DATA

SECTION LABEL	MAT LABEL	SHELL TYPE	MEMBRANE THICK	BENDING THICK	MATERIAL ANGLE
SSEC1	CONC	4	1.000	1.000	0.000

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YOGYAKARTA

SHELL SECTION PROPERTY DATA

SECTION LABEL	TOTAL WEIGHT	TOTAL MASS
SSEC1	0.000	0.000

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YOGYAKARTA

JOINT FORCES Load Case DL

JOINT	GLOBAL-XX	GLOBAL-YY	GLOBAL-EE	GLOBAL-EX	GLOBAL-TY	GLOBAL-DE
100	0.000	0.000	-31.701	0.000	0.000	0.000
101	0.000	0.000	-31.701	0.000	0.000	0.000
102	0.000	0.000	-31.701	0.000	0.000	0.000
103	0.000	0.000	-31.701	0.000	0.000	0.000
104	0.000	0.000	-31.701	0.000	0.000	0.000
105	0.000	0.000	-31.701	0.000	0.000	0.000
106	0.000	0.000	-31.701	0.000	0.000	0.000
107	0.000	0.000	-31.701	0.000	0.000	0.000
108	0.000	0.000	-31.701	0.000	0.000	0.000
109	0.000	0.000	-31.701	0.000	0.000	0.000
110	0.000	0.000	-31.701	0.000	0.000	0.000



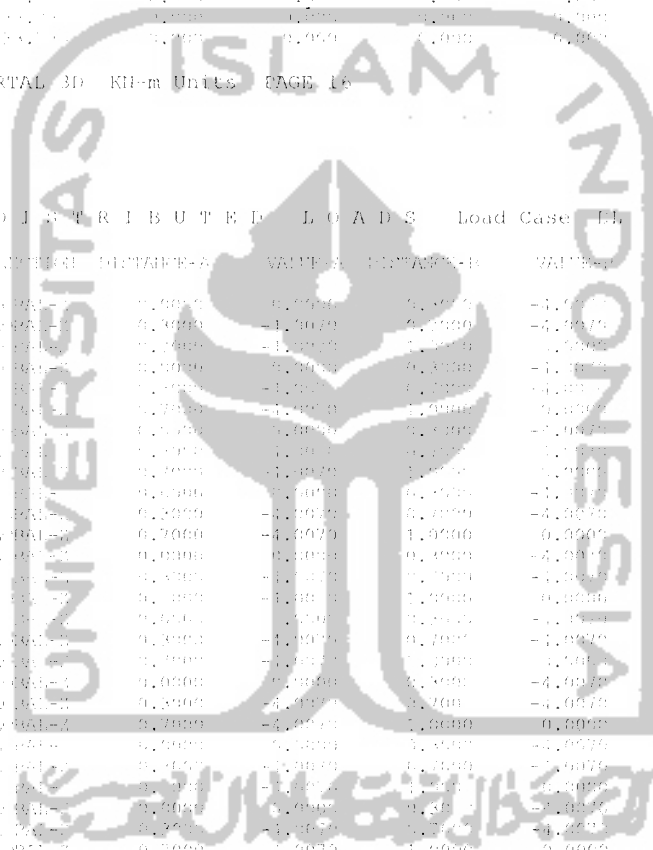




16	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
17	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
18	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
19	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
20	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
21	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
22	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
23	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
24	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
25	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
26	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
27	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
28	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
29	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
30	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
31	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
32	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
33	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
34	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
35	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
36	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
37	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
38	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
39	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000
40	0,0000	+0,1417	0,0000	0,0000	0,0000	0,0000

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YOGYAKARTA



FRAME SPAN DISTRIBUTED LOADS Load Case (k)

FRAME	TYPE	MEMBER	DISTANCE-A	VALUE-A	DISTANCE-B	VALUE-B
1	F-4000	MEMBER-1	0,0000	0,0000	0,0000	-4,0000
2	F-4000	MEMBER-2	0,0000	-4,0000	0,0000	-4,0000
3	F-4000	MEMBER-3	0,0000	-4,0000	0,0000	-4,0000
4	F-4000	MEMBER-4	0,0000	-4,0000	0,0000	-4,0000
5	F-4000	MEMBER-5	0,0000	-4,0000	0,0000	-4,0000
6	F-4000	MEMBER-6	0,0000	-4,0000	0,0000	-4,0000
7	F-4000	MEMBER-7	0,0000	-4,0000	0,0000	-4,0000
8	F-4000	MEMBER-8	0,0000	-4,0000	0,0000	-4,0000
9	F-4000	MEMBER-9	0,0000	-4,0000	0,0000	-4,0000
10	F-4000	MEMBER-10	0,0000	-4,0000	0,0000	-4,0000
11	F-4000	MEMBER-11	0,0000	-4,0000	0,0000	-4,0000
12	F-4000	MEMBER-12	0,0000	-4,0000	0,0000	-4,0000
13	F-4000	MEMBER-13	0,0000	-4,0000	0,0000	-4,0000
14	F-4000	MEMBER-14	0,0000	-4,0000	0,0000	-4,0000
15	F-4000	MEMBER-15	0,0000	-4,0000	0,0000	-4,0000
16	F-4000	MEMBER-16	0,0000	-4,0000	0,0000	-4,0000
17	F-4000	MEMBER-17	0,0000	-4,0000	0,0000	-4,0000
18	F-4000	MEMBER-18	0,0000	-4,0000	0,0000	-4,0000
19	F-4000	MEMBER-19	0,0000	-4,0000	0,0000	-4,0000
20	F-4000	MEMBER-20	0,0000	-4,0000	0,0000	-4,0000
21	F-4000	MEMBER-21	0,0000	-4,0000	0,0000	-4,0000
22	F-4000	MEMBER-22	0,0000	-4,0000	0,0000	-4,0000
23	F-4000	MEMBER-23	0,0000	-4,0000	0,0000	-4,0000
24	F-4000	MEMBER-24	0,0000	-4,0000	0,0000	-4,0000
25	F-4000	MEMBER-25	0,0000	-4,0000	0,0000	-4,0000
26	F-4000	MEMBER-26	0,0000	-4,0000	0,0000	-4,0000
27	F-4000	MEMBER-27	0,0000	-4,0000	0,0000	-4,0000
28	F-4000	MEMBER-28	0,0000	-4,0000	0,0000	-4,0000
29	F-4000	MEMBER-29	0,0000	-4,0000	0,0000	-4,0000
30	F-4000	MEMBER-30	0,0000	-4,0000	0,0000	-4,0000
31	F-4000	MEMBER-31	0,0000	-4,0000	0,0000	-4,0000
32	F-4000	MEMBER-32	0,0000	-4,0000	0,0000	-4,0000
33	F-4000	MEMBER-33	0,0000	-4,0000	0,0000	-4,0000
34	F-4000	MEMBER-34	0,0000	-4,0000	0,0000	-4,0000
35	F-4000	MEMBER-35	0,0000	-4,0000	0,0000	-4,0000
36	F-4000	MEMBER-36	0,0000	-4,0000	0,0000	-4,0000
37	F-4000	MEMBER-37	0,0000	-4,0000	0,0000	-4,0000
38	F-4000	MEMBER-38	0,0000	-4,0000	0,0000	-4,0000
39	F-4000	MEMBER-39	0,0000	-4,0000	0,0000	-4,0000
40	F-4000	MEMBER-40	0,0000	-4,0000	0,0000	-4,0000



























870	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
871	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
872	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
873	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
874	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
875	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
876	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
877	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
878	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
879	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
880	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
881	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
882	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
883	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
884	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
885	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
886	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
887	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
888	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
889	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
890	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
891	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
892	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
893	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
894	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
895	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
896	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
897	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
898	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
899	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000
900	FORCE	GLOBAL-Z	0.0000	0.0000	0.3333	-13.3567
901	FORCE	GLOBAL-Z	0.3333	-13.3567	0.6667	-13.3567
902	FORCE	GLOBAL-Z	1.0000	-13.3567	1.0000	0.0000























363	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
364	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
365	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
366	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
367	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
368	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
369	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
370	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
371	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
372	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
373	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
374	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
375	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
376	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
377	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
378	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
379	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
380	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
381	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
382	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
383	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
384	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
385	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
386	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
387	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
388	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260
389	FORCE	GLOBAL-Z	0.0000	-8.8260	1.0000	-8.8260

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YOGYAKARTA

FRAME SPAN POINT LOADS Load Case DL

FRAME	TYPE	DIRECTION	INSTANCE	VALUE
713	FORCE	GLOBAL-Z	0.3333	-31.2010
714	FORCE	GLOBAL-Z	0.3333	-31.2010
715	FORCE	GLOBAL-Z	0.3333	-31.2010
613	FORCE	GLOBAL-Z	0.3333	-31.2010
614	FORCE	GLOBAL-Z	0.3333	-31.2010
615	FORCE	GLOBAL-Z	0.3333	-31.2010
703	FORCE	GLOBAL-Z	0.3333	-0.3395
704	FORCE	GLOBAL-Z	0.3333	-0.3395
705	FORCE	GLOBAL-Z	0.3333	-0.3395
603	FORCE	GLOBAL-Z	0.3333	-0.3395
604	FORCE	GLOBAL-Z	0.3333	-0.3395
605	FORCE	GLOBAL-Z	0.3333	-0.3395
723	FORCE	GLOBAL-Z	0.6667	-0.3395
724	FORCE	GLOBAL-Z	0.6667	-0.3395
725	FORCE	GLOBAL-Z	0.6667	-0.3395

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YOGYAKARTA

FRAME SPAN DISTRIBUTED LOADS Load Case LL

FRAME	TYPE	DIRECTION	INSTANCE-A	VALUE-A	INSTANCE-B	VALUE-B
61	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
611	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
612	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
613	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
614	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
615	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
621	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
622	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
623	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
624	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
625	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
626	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
627	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
628	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
629	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
630	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
631	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
632	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
633	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
634	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
635	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
636	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
637	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
638	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
639	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065
640	FORCE	GLOBAL-Z	0.3333	-3.2065	0.3333	-3.2065













































YOGYAKARTA

LOAD COMBINATION MULTIPLIERS

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
COMB1	ADD	DL	1.2000	STATIC (DEAD)	COMB1
		LL	1.6000	STATIC (LIVE)	
COMB2	ADD	DL	0.9000	STATIC (DEAD)	COMB2
		ELKA	1.0000	STATIC (QUAKE)	
COMB3	ADD	DL	0.9000	STATIC (DEAD)	COMB3
		ELKI	1.0000	STATIC (QUAKE)	
COMB4	ADD	DL	1.0500	STATIC (DEAD)	COMB4
		LL	0.6300	STATIC (LIVE)	
COMB5	ADD	DL	1.0500	STATIC (DEAD)	COMB5
		LL	0.6300	STATIC (LIVE)	
		ELKI	1.0500	STATIC (QUAKE)	

YOGYAKARTA

JOINT DISPLACEMENTS

JOINT	LOAD	U1	U2	U3	R1	R2	R3
1	DL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	LL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00
	ELKI	0.000E+00	0.000E+00	-1.007E-05	6.790E-04	0.000E+00	1.600E-05
	COMB1	-8.824E-05	-7.128E-05	-2.131E-04	-1.538E-02	-1.169E-05	-7.150E-06
	COMB2	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB3	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB4	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB5	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00
2	DL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	LL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00
	ELKI	0.000E+00	0.000E+00	-1.007E-05	6.790E-04	0.000E+00	1.600E-05
	COMB1	-8.824E-05	-7.128E-05	-2.131E-04	-1.538E-02	-1.169E-05	-7.150E-06
	COMB2	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB3	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB4	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB5	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00
3	DL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	LL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00
	ELKI	0.000E+00	0.000E+00	-1.007E-05	6.790E-04	0.000E+00	1.600E-05
	COMB1	-8.824E-05	-7.128E-05	-2.131E-04	-1.538E-02	-1.169E-05	-7.150E-06
	COMB2	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB3	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB4	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB5	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00
4	DL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	LL	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00
	ELKI	0.000E+00	0.000E+00	-1.007E-05	6.790E-04	0.000E+00	1.600E-05
	COMB1	-8.824E-05	-7.128E-05	-2.131E-04	-1.538E-02	-1.169E-05	-7.150E-06
	COMB2	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB3	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB4	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	COMB5	-1.103E-04	-8.410E-05	-2.644E-04	-1.920E-02	-1.433E-05	-8.457E-06
	ELKA	0.000E+00	0.000E+00	1.160E-05	-6.841E-04	0.000E+00	0.000E+00

10	DL	3.175E-05	-1.378E-04	-1.090E-03	1.350E-04	9.355E-06	-7.497E-05
10	LL	1.711E-05	-1.321E-05	-1.076E-04	-3.899E-05	0.0000	-1.121E-05
10	ELKA	-1.177E-05	9.715E-05	1.338E-05	-1.143E-02	-6.239E-06	1.065E-04
10	ELK1	3.092E-05	-3.313E-03	-3.541E-05	9.333E-04	3.435E-06	-2.302E-05
10	COMB1	1.072E-05	-3.313E-03	-1.643E-03	1.962E-05	1.276E-05	-1.119E-04
10	COMB2	1.114E-05	1.599E-03	-3.374E-04	-1.027E-03	2.199E-05	3.723E-05
10	COMB3	1.113E-05	-1.335E-03	-1.616E-03	7.447E-04	1.923E-05	-1.573E-04
10	COMB4	3.713E-05	1.311E-03	-1.331E-03	-1.130E-03	3.739E-06	1.332E-05
10	COMB5	1.113E-05	-0.0101	-1.313E-03	7.396E-04	1.303E-05	-1.509E-04
11	DL	-1.129E-05	-1.450E-05	-1.578E-04	0.0000	-1.443E-05	1.322E-06
11	LL	1.129E-05	-1.450E-05	-1.578E-05	3.657E-05	1.173E-05	0.0000
11	ELKA	0.0000	1.323E-04	1.134E-05	-7.932E-04	0.0000	4.732E-06
11	ELK1	-1.176E-05	-1.155E-04	-3.778E-04	7.768E-04	0.0000	-8.417E-06
11	COMB1	-1.176E-05	-1.155E-04	-3.778E-04	7.768E-04	0.0000	-8.417E-06
11	COMB2	-1.176E-05	-1.155E-04	-3.778E-04	7.768E-04	0.0000	-8.417E-06
11	COMB3	-1.176E-05	-1.155E-04	-3.778E-04	7.768E-04	0.0000	-8.417E-06
11	COMB4	-1.176E-05	-1.155E-04	-3.778E-04	7.768E-04	0.0000	-8.417E-06
11	COMB5	-1.176E-05	-1.155E-04	-3.778E-04	7.768E-04	0.0000	-8.417E-06
12	DL	-1.144E-06	-1.157E-04	-7.631E-04	-3.666E-04	-3.562E-05	-7.179E-06
12	LL	-1.144E-06	-1.157E-04	-7.631E-04	-1.153E-04	-1.153E-05	0.0000
12	ELKA	1.199E-06	9.430E-03	3.599E-05	-3.486E-04	0.0000	3.059E-05
12	ELK1	-1.176E-05	-1.155E-05	-3.923E-05	3.123E-04	0.0000	-2.926E-01
12	COMB1	-1.176E-05	-1.155E-05	-3.923E-05	3.123E-04	0.0000	-2.926E-01
12	COMB2	-1.176E-05	-1.155E-05	-3.923E-05	3.123E-04	0.0000	-2.926E-01
12	COMB3	-1.176E-05	-1.155E-05	-3.923E-05	3.123E-04	0.0000	-2.926E-01
12	COMB4	-1.176E-05	-1.155E-05	-3.923E-05	3.123E-04	0.0000	-2.926E-01
12	COMB5	-1.176E-05	-1.155E-05	-3.923E-05	3.123E-04	0.0000	-2.926E-01
13	DL	1.199E-06	-1.131E-03	-9.793E-04	3.371E-04	-3.101E-05	-7.397E-05
13	LL	1.199E-06	-1.131E-04	-1.131E-04	-3.399E-05	-1.344E-05	-1.116E-05
13	ELKA	-1.176E-06	9.754E-03	3.769E-05	-1.176E-03	-1.176E-05	-1.176E-05
13	ELK1	0.0000	-9.643E-03	-3.337E-05	6.323E-04	0.0000	3.914E-05
13	COMB1	3.616E-05	-1.644E-03	-1.465E-03	3.423E-04	-9.672E-05	-1.966E-04
13	COMB2	1.469E-05	8.743E-03	-8.337E-04	-9.556E-04	-4.791E-05	-6.333E-06
13	COMB3	1.469E-05	-9.0197	-3.200E-04	9.359E-04	-1.493E-05	-1.207E-04
13	COMB4	1.469E-05	9.973E-03	-1.090E-03	-9.969E-04	-6.723E-05	-2.145E-05
13	COMB5	1.469E-05	-0.0115	-1.183E-03	1.046E-04	-6.113E-05	-1.416E-04
14	DL	-3.137E-06	3.394E-04	-3.993E-04	-1.013E-04	1.697E-06	3.266E-06
14	LL	-3.137E-06	3.394E-05	-3.137E-05	1.699E-05	-3.322E-06	0.0000
14	ELKA	0.0000	9.893E-04	1.351E-05	-8.062E-04	0.0000	4.391E-06
14	ELK1	0.0000	-9.694E-04	-1.176E-05	7.943E-04	0.0000	-3.900E-06
14	COMB1	-1.176E-05	1.417E-05	-4.314E-04	-3.657E-05	-3.397E-06	1.170E-06
14	COMB2	-4.376E-06	1.619E-03	-3.473E-04	-8.974E-04	4.570E-06	7.414E-06
14	COMB3	-4.376E-06	-9.356E-04	-2.730E-04	6.951E-04	3.911E-06	0.0000
14	COMB4	-4.376E-06	1.663E-03	-3.233E-04	-9.393E-04	0.0000	8.429E-06
14	COMB5	-4.376E-06	-9.932E-04	-3.496E-04	7.309E-04	0.0000	0.0000
15	DL	-1.176E-06	-3.182E-04	-9.011E-04	1.680E-05	1.035E-04	0.0000
15	LL	-1.176E-06	-3.182E-05	-1.537E-04	-7.166E-05	3.369E-05	0.0000
15	ELKA	1.663E-06	3.650E-03	3.736E-05	-3.621E-04	0.0000	0.0000
15	ELK1	-1.176E-06	-3.182E-03	-3.182E-05	9.617E-04	0.0000	1.559E-05
15	COMB1	-1.176E-06	-3.182E-04	-1.176E-05	-3.063E-05	1.161E-04	-1.411E-05
15	COMB2	-3.921E-06	5.263E-03	-1.176E-05	-3.063E-05	1.161E-04	0.0000
15	COMB3	-3.921E-06	5.263E-03	-6.839E-04	-7.950E-05	9.272E-05	1.572E-05
15	COMB4	-3.921E-06	-5.839E-03	-7.328E-04	1.031E-03	3.159E-05	-1.397E-05
15	COMB5	-3.921E-06	5.471E-03	-9.084E-04	-8.728E-04	1.326E-04	1.655E-05
15	COMB6	-3.921E-06	-3.182E-03	-9.237E-04	1.042E-03	1.335E-04	-1.463E-05
16	DL	6.741E-06	-1.549E-03	-1.110E-03	6.160E-04	7.661E-05	-4.923E-05
16	LL	1.711E-06	-3.465E-04	-2.113E-04	6.137E-04	7.437E-05	-6.857E-06
16	ELKA	1.176E-06	0.0101	1.013E-05	-1.306E-03	3.260E-06	1.197E-05
16	ELK1	1.176E-06	-1.0101E-05	-1.010E-05	1.306E-03	0.0000	-1.197E-05
16	COMB1	1.176E-06	-1.039E-05	-1.673E-03	7.495E-04	1.373E-04	-6.385E-05
16	COMB2	1.176E-06	1.039E-05	-9.436E-04	-7.527E-04	6.769E-05	-1.445E-05
16	COMB3	1.176E-06	-0.0112	-1.403E-03	1.261E-03	6.966E-05	-6.981E-05
16	COMB4	9.379E-06	6.832E-03	-1.250E-03	-7.216E-04	9.730E-05	-1.090E-05
16	COMB5	6.741E-06	-6.0101	-1.314E-03	1.393E-03	9.996E-05	-8.268E-05
17	DL	1.569E-06	3.306E-05	-2.993E-04	-1.913E-04	-4.697E-06	-3.360E-06
17	LL	1.569E-06	-1.724E-05	-3.139E-05	2.169E-05	6.892E-06	0.0000
17	ELKA	0.0000	9.893E-04	1.351E-05	-8.062E-04	0.0000	-4.391E-06
17	ELK1	0.0000	-9.694E-04	-1.176E-05	7.943E-04	0.0000	3.980E-06
17	COMB1	1.134E-05	1.417E-05	-4.314E-04	-8.688E-05	5.390E-06	-4.770E-06
17	COMB2	4.769E-06	1.019E-03	-2.478E-04	-8.974E-04	-4.570E-06	-7.415E-06
17	COMB3	4.769E-06	-9.396E-04	-3.730E-04	6.931E-04	-3.913E-06	0.0000
17	COMB4	4.769E-06	1.663E-03	-3.233E-04	-9.393E-04	0.0000	-8.429E-06
17	COMB5	4.769E-06	-9.932E-04	-3.496E-04	7.309E-04	0.0000	0.0000
18	DL	1.663E-06	-3.182E-04	-9.011E-04	7.679E-05	-1.035E-04	0.0000
18	LL	1.663E-06	-3.182E-05	-1.537E-04	-7.668E-05	-3.369E-05	0.0000
18	ELKA	-1.039E-06	3.650E-03	3.704E-05	-8.621E-04	0.0000	0.0000
18	ELK1	1.176E-06	-3.182E-03	-3.182E-05	9.617E-04	0.0000	1.411E-05
18	COMB1	1.176E-06	-3.182E-04	-1.176E-05	-3.063E-05	1.161E-04	-1.411E-05
18	COMB2	1.176E-06	-3.182E-04	-1.176E-05	-3.063E-05	1.161E-04	0.0000
18	COMB3	1.176E-06	-3.182E-04	-1.176E-05	-3.063E-05	1.161E-04	0.0000
18	COMB4	1.176E-06	-3.182E-04	-1.176E-05	-3.063E-05	1.161E-04	0.0000
18	COMB5	1.176E-06	-3.182E-04	-1.176E-05	-3.063E-05	1.161E-04	0.0000







82	CI1B0	0.0000	-1.138E-03	-5.535E-04	1.212E-01	-5.602E-07	-4.695E-05
83	CI1B1	0.0000	-1.138E-03	-7.951E-04	-5.912E-03	-9.403E-05	3.356E-05
84	CI1B2	0.0000	-1.138E-03	-7.951E-04	1.212E-01	-9.173E-05	-4.932E-05
85	CI1	0.0000	-1.138E-03	-9.110E-04	3.075E-04	-8.907E-05	-8.268E-05
86	CI1A	0.0000	-1.138E-04	-1.616E-04	1.266E-04	-3.145E-05	-1.644E-05
87	CI1B1	0.0000	-1.138E-03	-8.205E-04	-6.347E-04	1.179E-06	7.357E-05
88	CI1B2	0.0000	-1.138E-03	1.771E-05	1.267E-05	-3.522E-06	-7.733E-05
89	CI1B0	0.0000	-1.138E-03	-1.138E-03	1.713E-03	-1.722E-04	-6.139E-07
90	CI1B3	0.0000	-1.138E-03	-8.136E-04	-4.077E-04	-7.531E-05	0.616E-05
91	CI1B4	0.0000	-1.138E-03	-7.712E-04	1.344E-03	-3.369E-05	-1.243E-04
92	CI1B5	0.0000	-1.138E-03	-1.099E-03	-3.161E-04	-1.114E-04	0.999E-05
93	CI1B6	0.0000	-0.9113	-1.099E-03	1.735E-03	-1.170E-04	-1.376E-04
94	CI1	0.0000	0.0000	-1.138E-04	0.124E-05	1.769E-05	1.131E-05
95	CI1A	0.0000	0.0000	-1.138E-03	-1.071E-05	0.0000	0.0000
96	CI1B1	0.0000	0.0000	-1.138E-03	-7.123E-04	0.0000	1.947E-06
97	CI1B2	0.0000	0.0000	-1.138E-03	-1.037E-04	0.0000	-3.771E-06
98	CI1B3	0.0000	0.0000	-1.138E-04	0.0000	1.737E-05	1.433E-06
99	CI1B4	0.0000	0.0000	-1.138E-04	-7.187E-04	1.599E-05	2.100E-06
100	CI1B5	0.0000	-0.139E-04	-1.631E-04	8.675E-04	1.599E-05	-2.618E-06
101	CI1B6	0.0000	0.0000	-1.138E-03	-2.799E-04	1.365E-05	3.350E-06
102	CI1B7	0.0000	-0.9113	-1.049E-04	0.069E-04	1.661E-05	-1.653E-06
103	CI1	0.0000	0.0000	-1.138E-03	1.710E-04	-2.307E-06	0.0000
104	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	0.0000
105	CI1B1	0.0000	0.0000	-1.138E-03	-3.713E-04	-1.138E-06	0.0000
106	CI1B2	0.0000	0.0000	-1.138E-03	0.0000	1.138E-05	0.0000
107	CI1B3	0.0000	-0.139E-04	-1.137E-04	7.464E-04	1.367E-05	-1.413E-05
108	CI1B4	0.0000	0.0000	-1.138E-03	-1.138E-03	-3.459E-05	0.0000
109	CI1B5	0.0000	-0.139E-04	-1.138E-03	-0.138E-03	-1.138E-05	0.0000
110	CI1B6	0.0000	-0.139E-04	-1.138E-03	1.314E-03	-1.138E-06	-1.138E-05
111	CI1B7	0.0000	0.0000	-1.138E-03	-4.499E-05	-1.138E-05	0.263E-06
112	CI1B8	0.0000	-0.139E-03	-0.403E-04	1.449E-05	-1.738E-05	-1.447E-05
113	CI1	0.0000	0.0000	-1.138E-03	-7.139E-04	1.533E-04	-0.113E-05
114	CI1A	0.0000	-1.138E-04	-0.138E-03	0.0000	-1.738E-05	1.413E-06
115	CI1B1	0.0000	0.0000	-1.138E-03	-0.138E-03	-1.138E-04	0.0000
116	CI1B2	0.0000	-0.139E-04	1.013E-05	1.314E-03	0.0000	-0.134E-05
117	CI1B3	0.0000	-1.138E-03	-0.138E-03	0.0000	-1.138E-05	-0.138E-05
118	CI1B4	0.0000	0.0000	-0.138E-03	-0.138E-03	-0.138E-04	-1.494E-05
119	CI1B5	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
120	CI1B6	0.0000	-0.139E-04	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
121	CI1B7	0.0000	0.0000	-1.138E-03	1.138E-03	-0.138E-05	-0.138E-05
122	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
123	CI1A	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
124	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
125	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
126	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
127	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
128	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
129	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
130	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
131	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
132	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
133	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
134	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
135	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
136	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
137	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
138	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
139	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
140	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
141	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
142	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
143	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
144	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
145	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
146	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
147	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
148	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
149	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
150	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
151	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
152	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
153	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
154	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
155	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
156	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
157	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
158	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
159	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
160	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
161	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
162	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
163	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
164	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
165	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
166	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
167	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
168	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
169	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
170	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
171	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
172	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
173	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
174	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
175	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
176	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
177	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
178	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
179	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
180	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
181	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
182	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
183	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
184	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
185	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
186	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
187	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
188	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
189	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
190	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
191	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
192	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
193	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
194	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
195	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
196	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
197	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000	0.0000
198	CI1B3	0.0000	0.0000	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
199	CI1B4	0.0000	-0.139E-04	-1.138E-03	-1.138E-03	-1.138E-05	-1.138E-05
200	CI1B5	0.0000	1.000E-05	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
201	CI1B6	0.0000	0.0000	-0.138E-03	-0.138E-03	-1.138E-05	-1.138E-05
202	CI1B7	0.0000	-0.139E-04	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
203	CI1	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
204	CI1A	0.0000	0.0000	-1.138E-03	0.0000	-1.138E-05	-1.138E-05
205	CI1B1	0.0000	0.0000	-1.138E-03	-1.138E-03	0.0000	-1.138E-05
206	CI1B2	0.0000	-0.139E-04	1.138E-05	0.0000	0.0000</	





57	ELKI	0.0000	-1.169E-03	-1.921E-06	3.076E-04	0.0000	-1.199E-05
58	ELKA	1.1294E-05	-8.352E-04	-1.138E-03	1.617E-04	-1.423E-04	-1.080E-05
59	ELKI	0.0000	1.674E-03	-6.839E-04	-7.024E-04	-7.110E-05	3.962E-05
60	COMB3	3.1006E-06	-8.819E-05	-6.041E-04	9.120E-04	-7.111E-05	-2.424E-05
61	COMB4	0.1302E-06	3.025E-03	-9.095E-04	-7.176E-04	-1.916E-04	2.175E-05
62	COMB5	-0.1339E-06	-0.113E-02	-9.097E-04	9.707E-04	-1.016E-04	-3.535E-05
63	EL	0.0000	-1.013E-05	-0.397E-04	4.437E-05	-3.632E-06	1.339E-06
64	EL	0.0000	-1.120E-06	-0.876E-05	3.637E-06	3.145E-05	0.0000
65	ELKA	0.0000	3.637E-04	-1.646E-06	-7.814E-04	0.0000	0.0000
66	ELKI	0.0000	-1.646E-04	-1.687E-06	7.814E-04	0.0000	0.0000
67	COMB3	0.0000	-6.035E-05	-4.345E-04	5.906E-05	-1.486E-06	2.276E-06
68	COMB4	2.1386E-06	9.195E-04	-2.570E-04	-7.114E-04	-7.423E-06	7.536E-06
69	COMB5	1.193E-06	-1.609E-03	-1.570E-04	7.907E-04	-7.437E-06	-4.899E-06
70	COMB3	1.0000	9.176E-04	-3.366E-04	-7.401E-04	-3.634E-06	8.317E-06
71	COMB4	1.0000	-1.667E-03	-3.367E-04	7.401E-04	-3.634E-06	-8.317E-06
72	EL	0.0000	-1.135E-03	-9.541E-04	1.646E-04	1.176E-04	-1.578E-05
73	EL	0.0000	-1.135E-04	-9.541E-04	1.646E-04	1.176E-04	-1.578E-05
74	ELKA	0.0000	3.909E-03	-1.041E-05	-4.616E-04	3.144E-06	1.137E-05
75	ELKI	0.0000	-3.909E-03	-1.041E-05	4.616E-04	-3.144E-06	-1.137E-05
76	COMB3	0.0000	-2.133E-03	-1.433E-03	3.049E-04	1.294E-04	-1.938E-05
77	COMB4	0.0000	3.911E-03	-8.691E-04	-3.135E-04	1.080E-04	-2.839E-06
78	COMB5	0.0000	-0.0111	-1.664E-04	6.197E-04	7.941E-04	-1.923E-05
79	COMB3	0.0000	6.668E-03	-1.146E-03	-3.696E-04	1.467E-04	-4.784E-06
80	COMB4	0.0000	-0.0111	-1.143E-03	7.006E-04	1.467E-04	-4.784E-06
81	EL	0.0000	-3.120E-04	-7.326E-04	1.263E-04	6.214E-05	2.379E-06
82	EL	0.0000	-3.120E-04	-7.326E-04	1.263E-04	6.214E-05	2.379E-06
83	ELKA	0.0000	5.184E-03	-6.933E-06	-7.273E-04	1.174E-06	6.063E-06
84	ELKI	0.0000	-5.184E-03	-6.933E-06	7.273E-04	-1.174E-06	-6.063E-06
85	COMB3	0.0000	-4.659E-04	-1.133E-03	3.022E-04	1.095E-04	-6.920E-06
86	COMB4	0.0000	5.247E-03	-6.653E-04	-6.606E-04	3.733E-05	9.588E-06
87	COMB5	0.0000	-5.877E-03	-6.633E-04	9.952E-04	3.445E-05	-4.331E-06
88	COMB3	0.0000	3.456E-03	-8.753E-04	-6.431E-04	7.870E-05	7.947E-05
89	COMB4	0.0000	-6.005E-03	-8.722E-04	1.095E-03	1.563E-05	-4.118E-06
90	EL	0.0000	2.179E-04	-2.765E-04	6.763E-06	7.188E-05	2.591E-06
91	EL	0.0000	2.179E-04	-2.765E-04	6.763E-06	7.188E-05	2.591E-06
92	ELKA	0.0000	9.400E-04	-2.026E-06	-7.637E-04	0.0000	0.0000
93	ELKI	0.0000	-9.400E-04	-2.026E-06	7.637E-04	0.0000	0.0000
94	COMB3	0.0000	3.817E-03	-4.163E-04	-1.314E-04	6.111E-06	3.363E-04
95	COMB4	0.0000	3.817E-03	-4.163E-04	-1.314E-04	6.111E-06	3.363E-04
96	COMB5	0.0000	-9.597E-04	-1.902E-04	-7.577E-04	1.293E-06	4.211E-06
97	COMB3	0.0000	1.955E-03	-3.257E-04	-7.997E-04	1.091E-05	0.0000
98	COMB4	0.0000	-1.902E-03	-3.257E-04	7.997E-04	1.091E-05	0.0000
99	COMB5	0.0000	1.955E-03	-3.257E-04	-7.997E-04	1.091E-05	0.0000
100	COMB3	0.0000	-1.902E-03	-3.257E-04	7.997E-04	1.091E-05	0.0000
101	EL	0.0000	-1.552E-03	-9.540E-04	1.645E-04	-1.176E-04	1.578E-05
102	EL	0.0000	-1.552E-03	-9.540E-04	1.645E-04	-1.176E-04	1.578E-05
103	ELKA	0.0000	1.688E-04	-2.108E-04	6.708E-05	-3.532E-05	0.0000
104	ELKI	0.0000	-1.688E-04	-2.108E-04	6.708E-05	3.532E-05	0.0000
105	COMB3	0.0000	-1.000E-03	-7.190E-04	1.624E-04	1.157E-06	9.037E-06
106	COMB4	0.0000	-2.133E-03	-1.433E-03	3.047E-04	-1.294E-04	1.933E-05
107	COMB5	0.0000	3.911E-03	-8.691E-04	-3.136E-04	-1.090E-04	2.829E-06
108	COMB3	0.0000	-0.0111	-1.664E-04	6.195E-04	-1.041E-04	2.303E-05
109	COMB4	0.0000	1.667E-03	-1.143E-03	-2.697E-04	-1.467E-04	4.781E-06
110	COMB5	0.0000	-0.0111	-1.143E-03	7.006E-04	1.467E-04	4.781E-06
111	EL	0.0000	-3.422E-04	-7.325E-04	1.367E-04	-6.220E-05	-2.879E-06
112	EL	0.0000	-3.422E-04	-7.325E-04	1.367E-04	-6.220E-05	-2.879E-06
113	ELKA	0.0000	1.164E-03	-6.032E-06	-4.934E-05	-1.903E-05	0.0000
114	ELKI	0.0000	-1.164E-03	-6.032E-06	4.934E-05	1.903E-05	0.0000
115	COMB3	0.0000	-4.059E-04	-1.133E-03	3.022E-04	1.501E-06	6.922E-06
116	COMB4	0.0000	5.247E-03	-6.653E-04	-6.606E-04	-1.051E-04	-3.791E-06
117	COMB5	0.0000	-5.877E-03	-6.633E-04	9.952E-04	3.445E-05	-4.330E-06
118	COMB3	0.0000	3.456E-03	-8.753E-04	-6.426E-04	7.870E-05	4.330E-06
119	COMB4	0.0000	-6.005E-03	-8.753E-04	6.426E-04	-7.870E-05	-4.330E-06
120	COMB5	0.0000	1.955E-03	-3.257E-04	-7.997E-04	1.091E-05	0.0000
121	EL	0.0000	1.150E-05	-2.765E-04	6.694E-06	-1.197E-05	-2.591E-06
122	EL	0.0000	1.150E-05	-2.765E-04	6.694E-06	-1.197E-05	-2.591E-06
123	ELKA	0.0000	1.092E-04	-2.026E-06	-7.636E-04	3.111E-06	0.0000
124	ELKI	0.0000	-1.092E-04	-2.026E-06	7.636E-04	-3.111E-06	0.0000
125	COMB3	0.0000	3.826E-05	-4.162E-04	-1.662E-06	-9.111E-06	1.858E-06
126	COMB4	0.0000	3.996E-04	-2.509E-04	-7.578E-04	-1.043E-05	-4.221E-06
127	COMB5	0.0000	-3.897E-04	-2.502E-04	7.693E-04	-1.090E-05	0.0000
128	COMB3	0.0000	1.655E-03	-3.257E-04	-7.988E-04	-1.017E-05	-4.883E-06
129	COMB4	0.0000	-1.602E-03	-3.257E-04	7.988E-04	1.017E-05	4.883E-06
130	EL	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
131	EL	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
132	ELKA	0.0000	3.996E-03	-8.843E-06	-4.492E-04	4.931E-05	5.125E-06
133	ELKI	0.0000	-3.996E-03	-8.843E-06	4.492E-04	-4.931E-05	-5.125E-06
134	COMB3	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
135	COMB4	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
136	COMB5	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
137	COMB3	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
138	COMB4	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
139	COMB5	1.139E-05	-1.138E-03	-9.824E-04	6.633E-05	1.385E-04	4.810E-05
140	EL	-6.502E-06	-4.323E-04	-7.545E-04	1.161E-04	7.898E-05	2.501E-06
141	EL	-6.502E-06	-4.323E-04	-7.545E-04	1.161E-04	7.898E-05	2.501E-06











111	Q44B4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
112	Q44B5	0.0000	-8.341E-04	-8.521E-03	-2.773E-04	2.976E-04	-1.311E-06
113	PL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	BLKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	BLKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	Q44B1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	Q44B2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	Q44B3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	Q44B4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	Q44B5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	PL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	BLKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	BLKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	Q44B1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	Q44B2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	Q44B3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	Q44B4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114	Q44B5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
115	PL	0.0000	-1.568E-03	-3.997E-03	-7.993E-04	1.432E-04	-4.353E-05
115	LL	0.0000	-1.731E-04	-8.921E-04	-1.373E-04	-1.722E-06	-1.899E-05
115	BLKA	0.0000	-1.491E-03	-4.479E-05	2.545E-04	3.482E-06	7.537E-06
115	BLKI	-1.925E-06	-3.958E-03	-4.448E-04	-4.393E-04	-7.342E-06	-2.427E-05
115	Q44B1	1.131E-05	-1.181E-03	-6.061E-03	-1.999E-03	1.932E-04	-8.118E-05
115	Q44B2	-1.814E-06	-1.482E-03	-3.628E-03	-3.827E-04	1.504E-04	-3.164E-05
115	Q44B3	1.135E-06	-0.0114	-4.023E-03	-1.076E-03	1.391E-04	-1.491E-05
115	Q44B4	3.765E-06	1.633E-03	-1.733E-03	-5.626E-04	1.710E-04	-4.919E-05
115	Q44B5	1.778E-03	-0.0122	-5.153E-03	-4.191E-03	1.641E-04	-3.162E-05
116	PL	-1.914E-06	-1.561E-03	-3.992E-03	-7.989E-04	-1.632E-04	4.353E-05
116	LL	-1.191E-06	-1.731E-04	-8.921E-04	-1.373E-04	1.722E-06	-1.899E-05
116	BLKA	0.0000	3.891E-03	-4.479E-05	2.545E-04	-3.482E-06	-7.537E-06
116	BLKI	1.925E-06	-3.958E-03	-4.448E-04	-4.393E-04	7.342E-06	-2.427E-05
116	Q44B1	-1.131E-05	-1.181E-03	-6.062E-03	-1.999E-03	-1.932E-04	8.117E-05
116	Q44B2	-1.814E-06	-1.482E-03	-3.628E-03	-3.827E-04	-1.504E-04	3.164E-05
116	Q44B3	-1.135E-06	-0.0114	-4.023E-03	-1.076E-03	-1.391E-04	1.491E-05
116	Q44B4	-3.765E-06	1.633E-03	-1.733E-03	-5.627E-04	-1.710E-04	4.919E-05
116	Q44B5	-1.778E-06	-0.0122	-5.153E-03	-4.191E-03	-1.641E-04	3.162E-05
117	PL	0.0000	-1.491E-03	-4.479E-03	-7.419E-04	0.0000	0.0000
117	LL	0.0000	-1.731E-04	-8.921E-04	-1.373E-04	-1.722E-06	-1.899E-05
117	BLKA	0.0000	-1.491E-03	-4.479E-05	2.545E-04	0.0000	0.0000
117	BLKI	0.0000	-3.959E-03	-4.448E-04	-4.393E-04	0.0000	0.0000
117	Q44B1	1.131E-05	-1.181E-03	-6.062E-03	-1.999E-03	1.932E-04	-8.117E-05
117	Q44B2	0.0000	-1.482E-03	-3.628E-03	-3.827E-04	-1.504E-04	3.164E-05
117	Q44B3	0.0000	-0.0114	-4.023E-03	-1.076E-03	-1.391E-04	1.491E-05
117	Q44B4	3.765E-06	1.633E-03	-1.733E-03	-5.626E-04	1.710E-04	-4.919E-05
117	Q44B5	1.778E-03	-0.0122	-5.153E-03	-4.191E-03	-1.641E-04	3.162E-05
118	PL	0.0000	-1.603E-03	-2.046E-03	4.183E-04	0.0000	0.0000
118	LL	0.0000	-1.715E-04	-5.422E-04	-1.651E-04	0.0000	0.0000
118	BLKA	0.0000	0.0109	7.893E-05	-1.111E-03	0.0000	0.0000
118	BLKI	0.0000	-3.962E-03	-5.928E-05	5.874E-04	0.0000	0.0000
118	Q44B1	0.0000	-2.201E-03	-0.0127	-2.618E-04	0.0000	0.0000
118	Q44B2	0.0000	-1.944E-03	-7.163E-03	1.418E-04	0.0000	0.0000
118	Q44B3	0.0000	-0.0115	-5.255E-03	-3.799E-04	0.0000	0.0000
118	Q44B4	0.0000	3.893E-03	-9.967E-03	1.189E-04	0.0000	0.0000
118	Q44B5	0.0000	-0.0122	-9.667E-03	-4.286E-04	0.0000	0.0000
119	PL	0.0000	-1.503E-03	-2.046E-03	4.183E-04	0.0000	0.0000
119	LL	0.0000	-1.715E-04	-5.422E-04	-1.651E-04	0.0000	0.0000
119	BLKA	0.0000	0.0109	7.893E-05	-1.111E-03	0.0000	0.0000
119	BLKI	0.0000	-3.962E-03	-5.928E-05	5.874E-04	0.0000	0.0000
119	Q44B1	0.0000	-2.195E-03	-3.382E-03	2.379E-04	0.0000	0.0000
119	Q44B2	0.0000	-2.389E-03	-1.762E-03	-7.345E-04	0.0000	0.0000
119	Q44B3	0.0000	-0.0115	-1.990E-03	9.639E-04	0.0000	0.0000
119	Q44B4	0.0000	3.711E-03	-2.407E-03	-8.313E-04	0.0000	0.0000
119	Q44B5	0.0000	-0.0122	-2.852E-03	9.520E-04	0.0000	0.0000
120	PL	0.0000	-1.499E-03	-1.333E-03	-1.611E-04	2.730E-04	0.755E-06
120	LL	0.0000	-1.499E-04	-1.430E-03	-1.613E-04	1.134E-04	-1.227E-06
120	BLKA	-1.130E-06	0.375E-03	-5.359E-04	1.140E-04	3.371E-06	-7.439E-06
120	BLKI	2.289E-06	-9.879E-03	2.641E-04	-2.746E-04	-1.906E-06	5.454E-06
120	Q44B1	0.396E-05	-2.115E-03	-7.487E-03	-2.197E-04	7.395E-04	1.247E-05
120	Q44B2	0.052E-05	3.584E-03	-4.836E-03	2.687E-04	3.361E-04	0.0000





142	Q1031	1.1538E-04	-8.1538E-04	-5.752E-03	-3.349E-04	1.577E-05	-8.703E-05
142	Q1032	1.1538E-04	7.449E-03	-3.386E-03	-1.641E-04	9.301E-04	1.719E-04
143	Q1033	1.1538E-04	-7.106E-03	-2.916E-03	-1.914E-04	8.124E-04	-2.409E-04
144	Q1034	1.1469E-04	7.752E-03	-1.474E-03	-0.2339E-04	1.255E-03	1.735E-04
144	Q1035	8.343E-04	-8.139E-03	-4.086E-03	-1.525E-04	1.132E-03	-2.599E-04
145	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
145	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
145	ELKA	1.1749E-04	1.1749E-04	-1.559E-04	1.570E-04	1.003E-05	1.092E-04
145	ELKI	1.1749E-04	-1.1749E-04	2.226E-04	-1.623E-04	-6.451E-06	-1.064E-04
145	Q1037	1.1749E-04	1.1749E-04	-8.011E-05	1.164E-04	-1.776E-04	-6.828E-05
145	Q1038	1.1749E-04	-1.1749E-04	-7.512E-03	-2.743E-04	-9.342E-05	6.714E-05
145	Q1039	1.1749E-04	-9.1664E-03	-6.549E-03	-1.409E-04	-1.399E-04	-1.404E-04
145	Q1040	1.1749E-04	1.1749E-04	-8.011E-05	1.164E-04	-1.776E-04	-6.828E-05
145	Q1041	1.1749E-04	-9.1664E-03	-6.549E-03	-1.409E-04	-1.399E-04	-1.404E-04
146	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
146	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
146	ELKA	-1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
146	ELKI	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
146	Q1043	1.1749E-04	-9.519E-04	-3.783E-03	-3.001E-05	-6.577E-05	3.404E-05
146	Q1044	1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
146	Q1045	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
146	Q1046	1.1749E-04	-9.519E-04	-3.783E-03	-3.001E-05	-6.577E-05	3.404E-05
146	Q1047	1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
146	Q1048	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
146	Q1049	1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
146	Q1050	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
147	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
147	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
147	ELKA	-1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
147	ELKI	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
147	Q1053	1.1749E-04	-1.349E-03	-0.0127	6.566E-06	-1.643E-04	-1.736E-05
147	Q1054	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
147	Q1055	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
147	Q1056	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
147	Q1057	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
148	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
148	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
148	ELKA	-1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
148	ELKI	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
148	Q1061	1.1749E-04	-1.675E-03	-0.0074E-03	-1.167E-04	-1.320E-04	1.573E-05
148	Q1062	1.1749E-04	1.666E-03	-4.094E-03	3.183E-04	-5.833E-04	4.311E-05
148	Q1063	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
148	Q1064	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
148	Q1065	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
148	Q1066	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
148	Q1067	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
149	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
149	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
149	ELKA	-1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
149	ELKI	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
149	Q1071	1.1749E-04	-1.675E-03	-0.0074E-03	-1.167E-04	-1.320E-04	1.573E-05
149	Q1072	1.1749E-04	1.666E-03	-4.094E-03	3.183E-04	-5.833E-04	4.311E-05
149	Q1073	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
149	Q1074	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
149	Q1075	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
149	Q1076	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
149	Q1077	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
150	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
150	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
150	ELKA	-1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
150	ELKI	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
150	Q1081	1.1749E-04	-1.675E-03	-0.0074E-03	-1.167E-04	-1.320E-04	1.573E-05
150	Q1082	1.1749E-04	1.666E-03	-4.094E-03	3.183E-04	-5.833E-04	4.311E-05
150	Q1083	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
150	Q1084	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
150	Q1085	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
150	Q1086	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
150	Q1087	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
151	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
151	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
151	ELKA	-1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05
151	ELKI	1.1749E-04	-9.051E-03	1.200E-04	-2.451E-04	-4.455E-06	1.723E-05
151	Q1091	1.1749E-04	-1.675E-03	-0.0074E-03	-1.167E-04	-1.320E-04	1.573E-05
151	Q1092	1.1749E-04	1.666E-03	-4.094E-03	3.183E-04	-5.833E-04	4.311E-05
151	Q1093	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
151	Q1094	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
151	Q1095	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
151	Q1096	1.1749E-04	9.571E-03	-1.205E-03	2.523E-04	-3.520E-05	1.898E-05
151	Q1097	1.1749E-04	-0.0127	-6.031E-03	-2.249E-04	-1.355E-05	-1.311E-04
152	IL	1.1749E-04	-1.1749E-04	-2.551E-03	1.474E-05	-1.172E-04	-1.675E-05
152	IL	61.912E-05	-6.683E-05	-2.760E-03	5.419E-05	-2.619E-05	-5.753E-06
152	ELKA	-1.1749E-04	9.129E-03	-3.079E-04	3.671E-04	1.155E-05	-2.193E-05

152	ELKA	-1.110E-03	-1.110E-03	1.000E-04	-1.451E-04	8.355E-04	-1.793E-05
152	ELKI	-1.110E-03	-1.110E-04	-0.743E-03	-3.061E-05	6.817E-05	-3.404E-06
152	COMB1	-1.110E-03	1.110E-03	-0.410E-03	8.319E-04	2.825E-03	1.409E-06
152	COMB2	-1.110E-04	-1.110E-03	-1.389E-03	-0.303E-04	4.024E-05	-3.343E-06
152	COMB3	-1.110E-04	-1.110E-03	-1.389E-03	0.010E-04	0.000E-04	-3.533E-06
152	COMB4	-1.110E-04	-1.110E-03	-1.389E-03	-1.397E-04	0.433E-05	-4.533E-06
152	COMB5	-1.110E-04	-1.110E-03	-1.389E-03	1.476E-05	1.472E-04	4.673E-05
153	EL	-1.110E-04	-1.110E-04	-1.037E-03	3.419E-05	2.619E-05	8.754E-06
153	ELI	-1.110E-04	-1.110E-03	-1.786E-04	1.500E-04	-4.907E-03	-1.692E-04
153	ELKA	-1.110E-04	-1.110E-03	-1.786E-04	-1.633E-04	0.490E-06	1.064E-04
153	ELKI	-1.110E-04	-1.110E-03	-0.0135	1.164E-04	2.166E-04	6.528E-05
153	COMB1	-1.110E-04	-1.110E-03	-2.514E-03	2.742E-04	9.24E-05	-0.714E-05
153	COMB2	-1.110E-04	-1.110E-03	-4.749E-03	-1.399E-03	1.399E-04	1.434E-04
153	COMB3	-1.110E-04	-1.110E-03	-0.0104	3.247E-04	1.790E-04	-6.196E-05
153	COMB4	-1.110E-04	-1.110E-03	-1.397E-03	-1.167E-04	1.778E-04	1.644E-04
153	COMB5	-1.110E-04	-1.110E-03	-1.397E-03	-1.167E-04	-0.264E-04	1.114E-05
154	EL	-1.110E-04	-1.110E-03	-1.060E-03	-3.847E-05	0.000E-04	4.677E-06
154	ELI	-1.110E-03	-1.110E-03	-1.103E-04	3.717E-05	-1.336E-05	-0.099E-04
154	ELKA	-1.110E-03	-1.110E-03	1.133E-04	4.902E-06	0.137E-05	2.029E-04
154	ELKI	-1.110E-03	-1.110E-04	-0.703E-03	-0.343E-04	-0.573E-03	0.299E-05
154	COMB1	-1.110E-04	-1.110E-03	-2.386E-03	-1.641E-04	-0.301E-04	-1.719E-04
154	COMB2	-1.110E-04	-1.110E-03	-2.412E-03	-1.011E-04	-0.111E-04	0.109E-04
154	COMB3	-1.110E-04	-1.110E-03	-1.474E-03	-1.389E-04	-1.339E-03	-1.735E-04
154	COMB4	-1.110E-04	-1.110E-03	-1.466E-03	-1.389E-04	-1.339E-03	0.599E-04
154	COMB5	-1.110E-04	-1.110E-03	-1.466E-03	-1.389E-04	-1.339E-03	0.599E-04
155	EL	-1.110E-04	-1.110E-03	-1.437E-03	0.000E-04	0.000E-05	-1.395E-05
155	ELI	-1.110E-03	-1.110E-03	-1.599E-04	-3.735E-04	-1.044E-05	-1.331E-05
155	ELKA	-1.110E-03	-1.110E-03	-0.496E-05	-3.461E-04	-1.784E-05	1.301E-04
155	ELKI	-1.110E-03	-1.110E-03	0.320E-05	4.937E-05	1.896E-05	-1.325E-04
155	COMB1	-1.110E-03	-1.110E-03	-0.103E-05	1.432E-05	2.094E-05	-1.323E-05
155	COMB2	-1.110E-03	-1.110E-03	-0.103E-05	1.432E-05	2.094E-05	-1.323E-05
155	COMB3	-1.110E-03	-1.110E-03	-1.309E-03	1.000E-04	0.000E-05	1.853E-04
155	COMB4	-1.110E-03	-1.110E-03	-1.309E-03	1.000E-04	0.000E-05	1.853E-04
155	COMB5	-1.110E-03	-1.110E-03	-1.309E-03	1.000E-04	0.000E-05	1.853E-04
156	EL	-1.110E-03	-1.110E-03	-1.431E-03	-0.561E-04	0.000E-05	-0.394E-05
156	ELI	-1.110E-03	-1.110E-03	-1.603E-04	-3.679E-04	1.044E-05	-1.334E-06
156	ELKA	-1.110E-03	-1.110E-03	-0.244E-05	-4.929E-05	-1.607E-05	-1.607E-04
156	ELKI	0.0000	-1.490E-03	-0.485E-05	3.463E-05	2.836E-05	-0.951E-06
156	COMB1	0.0000	-1.490E-03	-1.241E-05	-1.000E-04	0.000E-05	1.704E-04
156	COMB2	0.0000	-1.490E-03	-1.241E-05	-1.000E-04	0.000E-05	-1.811E-04
156	COMB3	0.0000	-1.490E-03	-1.241E-05	-1.000E-04	0.000E-05	1.804E-04
156	COMB4	0.0000	-1.490E-03	-1.241E-05	-1.000E-04	0.000E-05	-1.803E-04
156	COMB5	0.0000	-1.490E-03	-1.241E-05	-1.000E-04	0.000E-05	-1.803E-04
157	EL	1.1370E-03	-0.309E-04	-1.963E-03	4.264E-04	0.137E-05	-6.962E-05
157	ELI	1.1370E-03	-0.309E-04	-1.963E-04	7.532E-04	1.986E-05	-9.580E-06
157	ELKA	-1.1370E-03	-1.597E-03	-0.144E-05	-1.777E-04	0.0000	1.776E-04
157	ELKI	-1.1370E-03	-1.597E-03	0.009E-05	0.323E-04	0.0000	-1.103E-04
157	COMB1	-1.1370E-03	-1.597E-04	-1.970E-03	-0.977E-03	1.294E-05	-9.987E-05
157	COMB2	0.0000E-03	0.119E-03	-1.736E-03	-0.550E-05	0.434E-06	1.150E-04
157	COMB3	0.0000E-03	0.119E-03	-1.736E-03	1.256E-05	0.412E-06	-2.349E-04
157	COMB4	0.0000E-03	0.119E-03	-1.736E-03	1.066E-04	0.861E-06	1.074E-04
157	COMB5	0.0000E-03	0.119E-03	-1.736E-03	1.153E-03	1.123E-05	-0.600E-04
158	EL	-1.110E-03	-0.172E-04	-0.107E-03	0.394E-05	1.239E-05	-7.290E-06
158	ELI	0.0000	-0.306E-05	-0.978E-04	0.0000	0.0000	-0.407E-06
158	ELKA	-1.110E-03	-0.044E-03	-1.586E-05	-1.785E-04	0.0000	1.935E-04
158	ELKI	-1.110E-03	-0.044E-03	-1.586E-05	-1.785E-04	0.0000	-1.937E-04
158	COMB1	-1.110E-03	-0.044E-03	-1.586E-05	-1.785E-04	0.0000	-1.937E-04
158	COMB2	-1.110E-03	-0.044E-03	-1.586E-05	-1.785E-04	0.0000	-1.937E-04
158	COMB3	-1.110E-03	-0.044E-03	-1.586E-05	-1.785E-04	0.0000	-1.937E-04
158	COMB4	-1.110E-03	-0.044E-03	-1.586E-05	-1.785E-04	0.0000	-1.937E-04
158	COMB5	-1.110E-03	-0.044E-03	-1.586E-05	-1.785E-04	0.0000	-1.937E-04
159	EL	1.1370E-03	-0.613E-05	-4.603E-03	6.957E-05	-3.700E-04	0.0000
159	ELI	1.1370E-03	-0.613E-05	-4.603E-03	6.957E-05	-3.700E-04	0.0000
159	ELKA	0.0000E-03	0.642E-03	-0.117E-05	4.791E-04	1.133E-05	-0.641E-05
159	ELKI	0.0000E-03	0.642E-03	-0.117E-05	4.791E-04	1.133E-05	-0.641E-05
159	COMB1	0.0000E-03	0.189E-03	-1.619E-03	-1.136E-03	7.201E-06	1.174E-04
159	COMB2	0.0000E-03	0.189E-03	-1.619E-03	-1.136E-03	7.201E-06	-2.369E-04
159	COMB3	0.0000E-03	0.189E-03	-1.619E-03	-1.136E-03	7.201E-06	1.127E-04
159	COMB4	0.0000E-03	0.189E-03	-1.619E-03	-1.136E-03	7.201E-06	-2.593E-04
159	COMB5	0.0000E-03	0.189E-03	-1.619E-03	-1.136E-03	7.201E-06	-2.593E-04
160	EL	1.1370E-03	-0.907E-04	-1.947E-03	4.265E-04	-2.322E-05	-9.623E-05
160	ELI	1.1370E-03	-0.907E-04	-1.947E-03	4.265E-04	-2.322E-05	-9.623E-05
160	ELKA	-0.548E-06	0.415E-03	-5.900E-05	-5.441E-04	0.0000	1.081E-04
160	ELKI	0.0000E-06	0.415E-03	-5.900E-05	-5.441E-04	0.0000	-1.037E-04
160	COMB1	0.0000E-06	0.415E-03	-5.900E-05	-5.441E-04	0.0000	-1.311E-04
160	COMB2	0.0000E-06	0.415E-03	-5.900E-05	-5.441E-04	0.0000	2.149E-05
160	COMB3	0.0000E-06	0.415E-03	-5.900E-05	-5.441E-04	0.0000	-1.903E-04
160	COMB4	0.0000E-06	0.415E-03	-5.900E-05	-5.441E-04	0.0000	6.310E-06
160	COMB5	0.0000E-06	0.415E-03	-5.900E-05	-5.441E-04	0.0000	-2.161E-04
161	EL	-0.000E-05	-0.802E-04	-2.214E-03	0.229E-06	5.235E-06	-0.904E-05
161	ELI	0.0000	-1.138E-04	-6.334E-04	0.0000	0.0000	-2.981E-06

163	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.259E-04	0.0000	-1.168E-04
163	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.259E-04	1.0000	-1.168E-04
163	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	9.544E-06	7.695E-05	-1.134E-04
163	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.188E-04	4.919E-06	-2.765E-04
163	Q1BB	-1.173E-03	-0.0103	-2.009E-03	2.032E-04	4.769E-06	-2.053E-04
163	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.192E-04	6.271E-05	-1.134E-04
163	Q1BB	-1.173E-03	-0.0119	-1.143E-03	-1.141E-04	6.233E-06	-2.533E-04
164	Q1	-1.173E-03	-1.134E-03	-1.143E-03	-6.443E-05	-1.675E-05	-9.099E-05
164	Q1	-1.173E-03	-1.134E-03	-1.143E-03	-2.941E-04	-2.783E-06	-9.135E-06
164	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.073E-05	0.0000	-1.071E-04
164	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	6.449E-04	0.0000	-1.095E-04
164	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-6.488E-04	-2.480E-05	-1.227E-04
164	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.196E-05	-1.493E-05	-2.066E-05
164	Q1BB	-1.173E-03	-0.0103	-1.734E-03	4.959E-04	-1.493E-05	-1.966E-04
164	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.193E-05	-1.193E-05	-1.134E-04
164	Q1BB	-1.173E-03	-0.0119	-2.304E-03	3.161E-04	-1.916E-05	-1.134E-04
165	Q1	-1.173E-03	-1.134E-03	-1.143E-03	-7.75E-05	-1.193E-05	-9.135E-06
165	Q1	-1.173E-03	-1.134E-03	-1.143E-03	-2.941E-04	-2.783E-06	-9.135E-06
165	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.733E-04	0.0000	-1.134E-04
165	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	1.666E-05	0.0000	-1.095E-04
165	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.196E-05	-1.196E-05	-1.071E-04
165	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	2.110E-04	-1.362E-05	-1.147E-04
165	Q1BB	-1.173E-03	-0.0103	-1.734E-03	1.734E-04	-1.493E-05	-1.966E-04
165	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.193E-05	-1.193E-05	-1.134E-04
165	Q1BB	-1.173E-03	-0.0119	-2.304E-03	3.161E-04	-1.916E-05	-1.134E-04
166	Q1	-1.173E-03	-1.134E-03	-1.143E-03	-1.190E-04	-2.923E-06	-2.699E-05
166	Q1	0.0000	-1.134E-03	-1.143E-03	2.952E-05	-4.499E-06	-7.918E-06
166	Q1AA	0.0000	-1.134E-03	-1.143E-03	-1.170E-04	0.0000	-1.147E-04
166	Q1AA	-1.173E-03	-0.039E-03	-1.131E-03	2.471E-04	0.0000	-6.202E-05
166	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	1.952E-04	-1.104E-05	-1.132E-04
166	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.095E-04	-1.107E-06	-1.134E-04
166	Q1AA	-1.173E-03	-0.0111	-1.109E-03	1.900E-04	-1.435E-05	-1.136E-04
166	Q1AA	-7.180E-06	0.756E-03	-1.449E-03	-1.900E-04	-2.923E-06	-2.699E-05
166	Q1AA	-7.181E-06	-0.0119	-1.456E-03	3.296E-04	-7.949E-06	-1.476E-04
167	Q1	-1.173E-03	-1.134E-03	-1.143E-03	3.366E-04	3.113E-05	-1.199E-04
167	Q1	-1.173E-03	-1.134E-03	-1.143E-03	-1.143E-04	9.819E-06	-1.134E-04
167	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.170E-04	0.0000	-1.147E-04
167	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	6.922E-04	0.0000	-1.134E-04
167	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.196E-05	-1.196E-05	-1.071E-04
167	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	2.110E-04	-1.362E-05	-1.147E-04
167	Q1BB	-1.173E-03	-0.0103	-1.734E-03	1.734E-04	-1.493E-05	-1.966E-04
167	Q1BB	-1.173E-03	-1.134E-03	-1.143E-03	-1.193E-05	-1.193E-05	-1.134E-04
167	Q1BB	-1.173E-03	-0.0119	-2.304E-03	3.161E-04	-1.916E-05	-1.134E-04
168	Q1	-1.173E-03	-1.134E-03	-1.143E-03	1.790E-04	3.113E-05	-7.705E-05
168	Q1	-1.173E-03	-1.134E-03	-1.143E-03	3.033E-04	1.153E-05	-9.135E-06
168	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.170E-04	0.0000	-1.147E-04
168	Q1AA	-1.173E-03	-0.039E-03	-1.131E-03	1.093E-05	0.0000	-1.093E-05
168	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	1.521E-03	6.793E-06	1.012E-04
168	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.170E-04	-1.170E-04	-1.147E-04
168	Q1AA	-1.173E-03	-0.0111	-1.109E-03	1.970E-04	-1.435E-05	-1.136E-04
168	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	-1.095E-04	-1.107E-06	-1.134E-04
168	Q1AA	-1.173E-03	-0.0119	-1.456E-03	3.296E-04	-7.949E-06	-1.476E-04
169	Q1	-1.173E-03	-1.134E-03	-1.143E-03	4.822E-05	1.588E-06	8.182E-05
169	Q1	0.0000	-1.134E-03	-1.143E-03	2.980E-04	3.810E-06	7.022E-04
169	Q1AA	0.0000	-1.134E-03	-1.143E-03	-1.170E-04	0.0000	-1.147E-04
169	Q1AA	2.943E-06	-9.733E-05	-1.116E-05	3.471E-04	0.0000	1.292E-03
169	Q1AA	-1.173E-03	-1.134E-03	-1.143E-03	1.093E-05	1.398E-05	1.122E-04
169	Q1AA	1.173E-03	3.374E-03	-1.109E-03	-2.036E-04	4.296E-06	0.219E-05
169	Q1AA	1.173E-03	-0.0111	-1.109E-03	1.970E-04	-1.435E-05	-1.136E-04
169	Q1AA	1.173E-03	0.756E-03	-1.449E-03	-1.901E-04	-2.923E-06	-2.699E-05
169	Q1AA	1.173E-03	-0.0119	-1.456E-03	3.296E-04	-7.949E-06	-1.476E-04
170	Q1	-1.211E-03	-1.497E-03	-1.243E-03	2.766E-04	-3.713E-05	7.587E-05
170	Q1	-1.211E-03	-1.474E-04	-2.554E-04	-1.439E-04	-9.519E-06	5.945E-06
170	Q1AA	0.0000	0.004E-03	0.889E-05	-1.135E-03	0.0000	-4.474E-05
170	Q1AA	0.0000	-9.997E-03	-5.027E-05	6.922E-04	0.0000	1.653E-05
170	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	5.544E-05	-5.279E-05	1.008E-04
170	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-9.214E-04	-3.353E-05	1.354E-05
170	Q1AA	-1.211E-03	-0.0111	-1.109E-03	1.970E-04	-1.435E-05	-1.148E-04
170	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.033E-03	-4.109E-05	3.643E-05
170	Q1AA	-1.211E-03	-0.0119	-1.519E-03	7.910E-04	-4.509E-05	1.323E-04
171	Q1	-1.211E-03	-1.497E-03	-1.243E-03	4.366E-04	1.122E-05	2.623E-05
171	Q1	-1.211E-03	-1.497E-03	-1.243E-03	3.494E-04	1.153E-06	9.759E-06
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.170E-04	0.0000	-1.147E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	1.093E-05	-1.107E-06	-1.134E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.170E-04	-1.170E-04	-1.147E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	1.999E-05	3.199E-05	1.131E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.170E-04	-1.170E-04	-1.147E-04
171	Q1AA	-1.211E-03	-0.0111	-1.109E-03	1.970E-04	-1.435E-05	-1.136E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.095E-04	-1.107E-06	-1.134E-04
171	Q1AA	-1.211E-03	-0.0119	-1.747E-03	1.747E-03	-3.566E-05	2.161E-04
171	Q1	-1.211E-03	-1.497E-03	-1.243E-03	4.366E-04	1.122E-05	2.623E-05
171	Q1	-1.211E-03	-1.497E-03	-1.243E-03	3.494E-04	1.153E-06	9.759E-06
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.170E-04	0.0000	-1.147E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	1.093E-05	-1.107E-06	-1.134E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.170E-04	-1.170E-04	-1.147E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	1.999E-05	3.199E-05	1.131E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.170E-04	-1.170E-04	-1.147E-04
171	Q1AA	-1.211E-03	-0.0111	-1.109E-03	1.970E-04	-1.435E-05	-1.136E-04
171	Q1AA	-1.211E-03	-1.497E-03	-1.243E-03	-1.095E-04	-1.107E-06	-1.134E-04
171	Q1AA	-1.211E-03	-0.0119	-1.747E-03	1.747E-03	-3.566E-05	2.161E-04
171	Q1	-1.211E-03	-1.497E-03	-1.243E-03	4.366E-04	1.122E-05	2.623E-05







187	DL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	ELKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
187	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
191	DL	-1.001E-05	-3.503E-04	-7.743E-03	-1.029E-01	0.154E-02	1.941E-05
191	LL	3.441E-05	-3.730E-05	-3.759E-03	-7.953E-01	1.775E-01	1.967E-06
191	ELKA	-2.027E-05	4.916E-03	1.781E-04	2.650E-04	-3.160E-08	-2.103E-05
191	ELKI	1.184E-05	-4.918E-03	-1.002E-04	-2.491E-04	0.243E-02	5.953E-05
191	COMB1	2.107E-05	-3.111E-04	-6.913E-03	-3.143E-01	1.431E-01	1.613E-06
191	COMB2	1.406E-05	4.690E-03	-6.790E-03	1.186E-04	0.271E-05	-3.300E-05
191	COMB3	3.705E-05	-5.143E-03	-7.069E-03	-3.956E-04	9.393E-05	0.801E-05
191	COMB4	4.108E-05	4.981E-03	-9.681E-03	5.926E-05	1.081E-04	-3.230E-05
191	COMB5	6.155E-05	-5.444E-03	-9.973E-03	-4.091E-04	1.109E-04	7.470E-05
192	DL	2.398E-05	-3.376E-04	-5.413E-03	-1.199E-04	2.099E-05	-6.509E-06
192	LL	2.600E-05	-3.090E-05	-1.653E-03	-3.205E-01	3.193E-02	-1.733E-05
192	ELKA	-3.421E-05	5.141E-03	1.336E-04	2.870E-04	0.0000	1.081E-05
192	ELKI	1.973E-05	-5.141E-03	-5.083E-05	-3.651E-04	1.109E-05	-1.049E-05
192	COMB1	7.123E-05	-4.831E-04	-9.156E-03	-1.391E-01	3.184E-05	-1.082E-05
192	COMB2	1.155E-05	4.837E-03	-4.233E-03	1.100E-04	1.709E-05	7.163E-06
192	COMB3	3.733E-05	-5.446E-03	-4.922E-03	-4.430E-04	2.009E-05	-1.035E-05
192	COMB4	3.435E-05	5.025E-03	-6.580E-03	2.613E-04	2.740E-05	3.094E-06
192	COMB5	1.478E-05	-5.772E-03	-6.784E-03	-3.091E-04	2.375E-05	-1.936E-05
193	DL	2.240E-05	-3.892E-04	-7.185E-03	-1.647E-04	1.430E-05	1.110E-05
193	LL	1.433E-05	-3.863E-05	-2.712E-03	-7.377E-01	1.997E-05	0.0000
193	ELKA	-2.670E-05	5.309E-03	1.776E-04	2.914E-04	1.183E-08	-3.931E-05
193	ELKI	3.830E-05	-5.309E-03	-3.114E-05	-2.752E-04	0.0000	3.187E-05
193	COMB1	1.200E-05	-4.203E-04	-0.0153	-3.137E-04	3.227E-05	1.459E-05
193	COMB2	1.079E-05	4.959E-03	-6.359E-03	1.461E-04	1.405E-05	-2.896E-05
193	COMB3	2.011E-05	-4.688E-03	-6.318E-03	-4.115E-04	1.470E-05	-4.893E-05
193	COMB4	2.181E-05	4.113E-03	-3.382E-03	2.966E-05	1.203E-05	-1.889E-05
193	COMB5	1.104E-05	-5.104E-03	-4.153E-03	-3.963E-04	2.217E-05	5.096E-05
194	DL	1.130E-05	-4.304E-04	-4.390E-03	-1.371E-01	3.461E-04	-3.721E-06
194	LL	1.364E-05	-2.460E-05	-1.450E-03	-2.899E-01	1.769E-04	0.0000
194	ELKA	-6.709E-05	3.459E-03	1.492E-04	4.143E-04	-3.249E-06	7.238E-06
194	ELKI	2.500E-05	-3.453E-03	-4.287E-05	-3.989E-04	3.182E-06	-7.113E-06
194	COMB1	5.211E-05	-4.113E-04	-3.308E-03	-2.107E-04	6.973E-04	-5.733E-06
194	COMB2	0.667E-05	3.072E-03	-4.343E-03	3.915E-04	3.093E-04	3.949E-06
194	COMB3	2.596E-05	-4.740E-03	-4.334E-03	-5.115E-04	3.145E-04	-1.046E-05
194	COMB4	2.339E-05	4.359E-03	-5.397E-03	2.726E-04	4.723E-04	3.055E-06
194	COMB5	3.945E-05	-6.199E-03	-6.198E-03	-5.714E-04	4.781E-04	-1.189E-05
195	DL	1.133E-05	-5.290E-04	-4.139E-03	-2.070E-04	1.401E-04	-1.068E-05
195	LL	1.090E-05	-2.186E-05	-1.313E-03	-3.669E-01	1.339E-04	0.0000
195	ELKA	-2.000E-05	4.719E-03	1.545E-04	3.289E-04	-3.426E-06	-2.031E-05
195	ELKI	7.309E-05	-4.717E-03	-4.900E-05	-3.060E-04	4.197E-06	2.057E-05
195	COMB1	1.184E-05	-4.295E-04	-3.699E-03	-3.391E-04	3.190E-04	-1.334E-05
195	COMB2	7.500E-05	5.168E-03	-4.553E-03	1.136E-04	1.227E-04	-3.010E-05
195	COMB3	2.097E-05	-5.864E-03	-4.255E-03	-4.923E-04	1.305E-04	1.078E-05
195	COMB4	2.017E-05	4.365E-03	-6.283E-03	9.330E-05	2.151E-04	-3.286E-05
195	COMB5	2.402E-05	-4.211E-03	-6.496E-03	-5.744E-04	2.231E-04	1.097E-05
196	DL	1.170E-05	-4.136E-04	-4.191E-03	-3.270E-04	1.186E-04	-6.910E-06
196	LL	1.090E-05	-2.186E-05	-1.313E-03	-3.669E-01	1.339E-04	-9.431E-06
196	ELKA	-1.000E-05	4.769E-03	1.293E-04	4.264E-04	-9.937E-06	3.346E-06
196	ELKI	8.710E-05	-4.769E-03	-3.970E-05	-3.391E-04	3.957E-06	-5.346E-06
196	COMB1	3.741E-05	-4.838E-04	-6.414E-03	-5.314E-05	3.961E-04	-2.566E-05
196	COMB2	6.710E-05	3.042E-03	-3.043E-03	3.790E-04	1.249E-04	-4.582E-06
196	COMB3	1.008E-05	-4.871E-03	-3.793E-03	-4.466E-04	1.430E-04	-1.327E-05
196	COMB4	1.037E-05	4.451E-03	-4.310E-03	3.964E-04	2.324E-04	-1.168E-05
196	COMB5	2.000E-05	-4.113E-03	-4.268E-03	-4.704E-04	2.514E-04	-2.081E-05
197	DL	0.0000	-3.369E-04	-4.267E-03	-7.671E-04	0.0000	0.0000
197	LL	0.0000	-2.375E-05	-8.466E-04	-1.209E-04	0.0000	0.0000
197	ELKA	0.0000	3.166E-03	-3.283E-04	2.732E-04	0.0000	0.0000
197	ELKI	0.0000	-3.166E-03	4.013E-01	-2.388E-04	0.0000	0.0000
197	COMB1	0.0000	-4.422E-04	-6.406E-03	-1.114E-03	-1.456E-06	0.0000
197	COMB2	0.0000	5.163E-03	-4.115E-03	-4.172E-04	0.0000	0.0000
197	COMB3	0.0000	-5.163E-03	-3.395E-03	-9.292E-04	0.0000	0.0000
197	COMB4	0.0000	5.175E-03	-5.297E-03	-5.949E-04	0.0000	0.0000
197	COMB5	0.0000	-6.208E-03	-4.531E-03	-1.132E-03	0.0000	0.0000
198	DL	-1.002E-06	-3.534E-04	-3.767E-03	-7.253E-04	1.430E-04	3.366E-06
198	LL	-3.251E-06	-3.616E-05	7.201E-04	-1.437E-04	-4.868E-06	7.503E-06
198	ELKA	0.0000	3.561E-03	-3.113E-04	3.646E-04	9.110E-06	-2.844E-06
198	ELKI	0.0000	-3.564E-03	3.661E-04	-3.304E-04	-7.338E-06	3.186E-06
198	COMB1	-3.294E-06	-4.843E-04	-5.785E-03	-1.100E-03	1.638E-04	3.204E-05
198	COMB2	0.0000	5.143E-03	-3.702E-03	-2.981E-04	1.368E-04	4.690E-06
198	COMB3	-1.209E-06	-4.113E-03	-3.094E-03	-9.830E-04	1.214E-04	1.071E-05
198	COMB4	-1.511E-06	4.451E-03	-4.780E-03	-4.692E-04	1.556E-04	1.052E-05

197	CLM1	-1.1700E-05	-6.119E-05	-1.049E-02	-1.199E-02	1.391E-04	1.656E-05
199	IL	0.0000	-3.334E-04	-3.763E-03	-7.246E-04	-1.437E-04	-8.961E-06
199	IL	1.144E-06	-7.517E-05	-7.091E-04	-1.435E-04	1.773E-04	-7.303E-05
199	KLMA	0.0000	3.961E-03	-3.113E-04	3.646E-04	-3.110E-06	1.044E-06
199	KLK1	0.0000	-5.554E-03	3.861E-04	-3.364E-04	7.336E-06	-3.186E-05
199	CLM1	3.113E-04	-1.013E-04	-1.777E-03	-1.099E-02	-1.073E-04	-1.104E-03
199	CLM2	0.0000	1.133E-03	-2.693E-03	-1.877E-04	-1.876E-04	-1.691E-06
199	CLM3	1.251E-06	-5.172E-03	-3.001E-03	-2.823E-04	-1.112E-04	-1.071E-05
199	CLM4	1.007E-06	5.463E-03	-4.777E-03	-1.656E-04	-1.100E-04	-1.061E-05
199	CLM5	1.113E-06	-6.119E-03	-4.043E-03	-1.193E-02	-1.100E-04	-1.688E-05
200	IL	-3.109E-06	-3.333E-04	-4.799E-03	-5.126E-03	3.344E-04	0.0000
200	IL	-6.104E-06	-3.075E-05	-1.350E-03	6.375E-06	1.757E-04	0.0000
200	KLMA	-1.1700E-05	1.170E-03	-1.032E-05	3.097E-04	1.000E-06	-1.186E-06
200	KLK1	1.099E-06	-5.554E-03	1.493E-04	-1.229E-04	-1.698E-06	2.695E-06
200	CLM1	-1.1700E-05	-1.013E-04	-7.967E-03	-1.159E-02	6.944E-04	0.0000
200	CLM2	-1.1700E-05	1.133E-03	-4.736E-03	3.616E-04	3.114E-04	-1.956E-06
200	CLM3	-1.1700E-05	-1.013E-04	-4.043E-03	-4.791E-04	3.093E-04	1.084E-06
200	CLM4	-1.1700E-05	3.463E-03	-5.699E-03	3.675E-04	-4.739E-04	-3.733E-06
200	CLM5	-6.104E-06	-4.799E-03	-5.700E-03	-4.943E-03	4.706E-04	3.189E-06
201	IL	0.0000	3.333E-04	-1.709E-03	-5.133E-03	-3.411E-04	0.0000
201	IL	3.007E-06	-3.075E-05	-1.350E-03	6.375E-06	-1.757E-04	0.0000
201	KLMA	1.1700E-05	1.170E-03	-1.032E-05	3.097E-04	-1.000E-06	1.186E-06
201	KLK1	-1.099E-06	-5.554E-03	1.493E-04	-1.229E-04	1.698E-06	-2.695E-06
201	CLM1	1.1700E-05	-1.013E-04	-7.967E-03	-1.159E-02	-6.944E-04	0.0000
201	CLM2	1.1700E-05	1.133E-03	-4.736E-03	3.616E-04	3.114E-04	-1.956E-06
201	CLM3	1.1700E-05	-1.013E-04	-4.043E-03	-4.791E-04	-3.093E-04	-1.084E-06
201	CLM4	1.1700E-05	3.463E-03	-5.699E-03	3.675E-04	-4.739E-04	-3.733E-06
201	CLM5	6.104E-06	-4.799E-03	-5.701E-03	-4.949E-04	-4.706E-04	-3.189E-06
202	IL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	IL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	KLMA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	KLK1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	CLM1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	CLM2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	CLM3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	CLM4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
202	CLM5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
203	IL	1.1700E-05	-1.170E-03	-1.032E-05	3.097E-04	-1.000E-06	-1.186E-06
203	IL	1.1700E-05	-1.032E-05	-1.110E-04	0.0000	-1.000E-06	-1.186E-06
203	KLMA	-1.1700E-05	1.170E-03	-1.032E-05	3.097E-04	0.0000	1.186E-06
203	KLK1	-1.099E-06	-1.013E-04	-7.967E-03	-1.159E-02	0.0000	-6.944E-04
203	CLM1	1.1700E-05	-1.013E-04	-7.967E-03	-1.159E-02	-1.111E-03	-1.103E-05
203	CLM2	1.1700E-05	1.133E-03	-4.736E-03	3.616E-04	-3.231E-04	-6.095E-05
203	CLM3	1.1700E-05	-1.013E-04	-4.043E-03	-4.791E-04	-3.093E-04	-6.094E-05
203	CLM4	1.1700E-05	3.463E-03	-5.699E-03	3.675E-04	-4.739E-04	-6.133E-05
203	CLM5	6.104E-06	-4.799E-03	-5.700E-03	-4.943E-04	-4.706E-04	-3.189E-06
204	IL	0.0000	-3.334E-04	-1.383E-02	4.149E-04	0.0000	0.0000
204	IL	0.0000	-3.463E-05	-4.739E-04	2.162E-04	0.0000	0.0000
204	KLMA	1.1700E-05	1.170E-03	-1.034E-05	-5.134E-04	0.0000	0.0000
204	KLK1	0.0000	-1.013E-04	9.867E-06	9.100E-04	0.0000	0.0000
204	CLM1	0.0000	-1.013E-04	-7.962E-03	-1.152E-02	3.541E-04	0.0000
204	CLM2	0.0000	1.133E-03	-1.539E-03	-1.409E-04	0.0000	0.0000
204	CLM3	0.0000	-1.013E-04	-4.041E-03	-4.614E-03	0.0000	0.0000
204	CLM4	0.0000	3.476E-03	-5.709E-03	3.900E-05	0.0000	0.0000
204	CLM5	0.0000	-4.799E-03	-1.163E-02	1.106E-03	0.0000	0.0000
205	IL	-6.104E-06	-1.170E-03	-3.045E-03	6.666E-06	3.362E-04	1.457E-05
205	IL	-3.075E-05	-1.073E-05	-6.138E-04	0.0000	1.892E-04	1.892E-06
205	KLMA	1.099E-06	1.493E-03	-4.133E-06	-9.861E-05	0.0000	-7.496E-05
205	KLK1	1.094E-06	-1.494E-03	-4.679E-06	9.901E-05	0.0000	7.383E-05
205	CLM1	-1.1700E-05	-1.013E-04	-8.297E-03	9.159E-04	1.411E-02	2.036E-05
205	CLM2	1.094E-06	1.977E-03	-3.295E-03	-9.081E-04	6.429E-04	-6.095E-05
205	CLM3	-3.041E-06	-4.012E-03	-3.784E-02	1.059E-04	3.423E-04	3.694E-05
205	CLM4	-1.1700E-05	1.133E-03	-4.450E-03	-9.623E-05	1.108E-02	-8.133E-05
205	CLM5	-6.104E-06	-4.836E-03	-4.468E-02	1.114E-04	1.103E-03	9.395E-05
206	IL	-3.109E-06	-1.324E-03	-3.154E-03	-1.753E-04	9.501E-04	-1.283E-05
206	IL	-3.075E-05	-1.073E-05	-6.138E-04	-3.352E-06	2.877E-04	-1.480E-06
206	KLMA	-1.1700E-05	1.170E-03	-1.033E-05	3.093E-04	1.000E-06	1.186E-06
206	KLK1	0.0000	-1.494E-03	1.174E-04	-1.841E-05	-1.937E-05	-8.162E-05
206	CLM1	1.1700E-05	-1.013E-04	-8.011E-03	-2.649E-03	1.600E-03	-1.776E-05
206	CLM2	1.1700E-05	1.133E-03	-4.737E-03	3.624E-04	-1.471E-04	6.632E-04
206	CLM3	1.1700E-05	-1.013E-04	-4.000E-03	-1.769E-04	3.287E-04	-9.217E-05
206	CLM4	-1.1700E-05	1.133E-03	-4.193E-03	-1.849E-04	1.107E-02	1.522E-05
206	CLM5	-4.739E-04	-4.869E-03	-4.160E-03	-2.245E-04	1.119E-02	-1.901E-04
207	IL	-1.103E-05	-1.097E-04	-3.350E-03	4.191E-05	3.044E-04	-3.905E-06
207	IL	-3.075E-05	-1.073E-05	-6.137E-03	1.439E-03	1.644E-04	-3.260E-06
207	KLMA	-1.1700E-05	1.170E-03	-1.033E-05	3.094E-04	-1.000E-06	1.186E-06
207	KLK1	1.091E-06	-1.493E-03	-1.499E-04	-3.146E-04	-2.394E-06	-1.490E-05
207	CLM1	-1.1700E-05	-1.013E-04	-7.944E-03	-1.427E-02	3.247E-04	-1.553E-04
207	CLM2	-1.1700E-05	1.133E-03	-4.739E-03	3.620E-04	4.114E-04	-1.956E-06
207	CLM3	-1.1700E-05	-1.013E-04	-4.065E-03	-3.771E-04	-4.160E-04	-2.621E-06

207	LL	-1.179E-05	-1.171E-05	-6.110E-05	1.629E-04	-1.239E-04	-6.730E-06
207	ELKA	-1.171E-05	-1.163E-05	-6.454E-05	-2.771E-04	6.120E-04	-1.400E-05
207	ELK1	-1.409E-05	-1.144E-04	-7.742E-05	1.312E-04	-9.233E-05	-1.798E-05
207	COMB1	-1.401E-05	-1.126E-05	-2.760E-03	7.166E-05	-1.730E-05	-1.895E-06
207	COMB2	-1.171E-05	-1.171E-05	-1.009E-04	1.491E-04	-1.177E-06	5.011E-05
207	COMB3	-1.171E-05	-1.171E-05	1.795E-04	-1.654E-04	1.199E-06	-1.950E-05
207	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	-1.171E-05
207	COMB5	-1.171E-05	-1.171E-05	-7.009E-03	3.671E-04	-9.787E-05	3.392E-05
208	LL	-1.171E-05	-1.143E-05	-6.789E-05	-1.475E-04	-6.389E-05	-6.669E-05
208	ELKA	-1.143E-05	-1.143E-05	-9.974E-05	4.444E-04	-1.183E-04	3.754E-05
208	ELK1	-1.143E-05	-1.143E-05	-9.974E-05	-1.143E-04	-1.183E-04	-7.319E-05
208	COMB1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
208	COMB2	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
208	COMB3	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
208	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
208	COMB5	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	LL	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	ELKA	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	ELK1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	COMB1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	COMB2	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	COMB3	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
209	COMB5	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	LL	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	ELKA	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	ELK1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	COMB1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	COMB2	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	COMB3	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
210	COMB5	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	LL	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	ELKA	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	ELK1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	COMB1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	COMB2	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	COMB3	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
211	COMB5	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	LL	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	ELKA	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	ELK1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	COMB1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	COMB2	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	COMB3	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
212	COMB5	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
213	LL	0.0000	-3.341E-04	-7.139E-03	-9.016E-05	0.0000	0.0000
213	ELKA	0.0000	-1.369E-05	-1.711E-05	1.399E-06	0.0000	0.0000
213	ELK1	0.0000	5.567E-03	-7.591E-05	2.959E-04	0.0000	0.0000
213	COMB1	0.0000	-5.564E-03	1.821E-04	-3.139E-04	0.0000	0.0030
213	COMB2	0.0000	-4.427E-04	-6.0131	-9.315E-05	0.0000	0.0000
213	COMB3	0.0000	5.266E-03	-8.583E-03	2.147E-04	0.0000	0.0000
213	COMB4	0.0000	-5.864E-03	-1.325E-03	-4.001E-04	0.0000	0.0000
213	COMB5	0.0000	5.478E-03	-9.398E-03	2.219E-04	0.0000	0.0000
214	LL	0.0000	-6.293E-03	-9.117E-03	-4.236E-04	0.0000	0.0000
214	ELKA	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
214	ELK1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
214	COMB1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
214	COMB2	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
214	COMB3	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
214	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
214	COMB5	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	LL	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	ELKA	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	ELK1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	COMB1	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	COMB2	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	COMB3	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	COMB4	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
215	COMB5	-1.171E-05	-1.171E-05	-1.171E-05	1.171E-04	-1.171E-04	1.171E-05
216	LL	1.410E-05	-1.170E-04	-7.475E-03	1.034E-04	2.314E-05	1.217E-05
216	ELKA	1.410E-05	-1.170E-05	-2.704E-03	6.732E-05	1.167E-05	0.0000
216	ELK1	1.410E-05	-1.170E-05	-8.127E-05	2.734E-04	0.0000	-3.841E-05
216	COMB1	-1.170E-05	-1.170E-03	1.773E-04	-2.945E-04	1.480E-06	3.795E-05
216	COMB2	1.081E-05	-1.170E-04	-6.0133	2.319E-04	4.643E-05	1.531E-05
216	COMB3	1.775E-05	-4.961E-03	-6.899E-03	3.665E-04	2.165E-05	-2.746E-05

216	ELBO	2.451E-04	-5.457E-05	-6.551E-03	-2.014E-04	2.230E-05	4.499E-05
216	ELB34	2.168E-03	-5.141E-03	-9.639E-03	-4.381E-04	2.281E-03	-2.728E-05
216	ELB35	2.139E-03	-6.607E-03	-9.867E-03	-1.977E-04	2.820E-03	5.250E-05
217	EL	2.230E-03	-3.309E-04	-5.420E-03	5.985E-05	2.467E-05	-1.973E-06
217	EL	2.230E-03	-4.244E-05	-1.664E-03	2.488E-05	4.939E-06	1.176E-06
217	ELBA	2.230E-03	-2.113E-03	-2.113E-03	3.670E-04	1.395E-05	1.670E-05
217	ELK1	-6.298E-06	-5.142E-03	1.438E-04	-3.899E-04	0.0000	-1.944E-05
217	ELM31	2.230E-03	-4.259E-04	-2.168E-02	1.116E-04	3.890E-05	0.0000
217	ELM32	2.230E-03	1.244E-03	-4.979E-03	4.191E-04	2.290E-05	6.277E-06
217	ELM33	2.230E-03	-9.140E-03	-4.734E-03	-3.341E-04	1.239E-05	-1.221E-05
217	ELM34	2.230E-03	1.237E-03	-6.793E-03	-4.620E-04	2.634E-05	9.801E-06
217	ELM35	2.230E-03	-5.775E-03	-6.938E-03	-3.269E-04	2.920E-05	-1.329E-05
218	EL	2.230E-03	-2.214E-04	-2.214E-03	1.241E-04	6.439E-05	1.299E-05
218	EL	2.230E-03	-2.214E-03	-2.214E-03	2.166E-05	1.239E-05	1.694E-06
218	ELBA	2.230E-03	1.217E-03	-1.909E-04	1.451E-04	2.297E-06	-5.011E-05
218	ELK1	-1.621E-06	-2.214E-03	1.789E-04	-2.654E-04	-2.299E-05	5.090E-05
218	ELM31	2.230E-03	-2.214E-04	-2.214E-03	1.241E-04	6.439E-05	1.299E-05
218	ELM32	2.230E-03	1.217E-03	-1.909E-04	1.451E-04	2.297E-06	-5.011E-05
218	ELM33	2.230E-03	-9.140E-03	-4.734E-03	-3.341E-04	1.239E-05	-1.221E-05
218	ELM34	2.230E-03	1.237E-03	-6.793E-03	-4.620E-04	2.634E-05	9.801E-06
218	ELM35	2.230E-03	-5.775E-03	-6.938E-03	-3.269E-04	2.920E-05	-1.329E-05
219	EL	2.230E-03	-2.214E-04	-2.214E-03	1.241E-04	6.439E-05	1.299E-05
219	EL	2.230E-03	-2.214E-03	-2.214E-03	2.166E-05	1.239E-05	1.694E-06
219	ELBA	2.230E-03	1.217E-03	-1.909E-04	1.451E-04	2.297E-06	-5.011E-05
219	ELK1	-1.621E-06	-2.214E-03	1.789E-04	-2.654E-04	-2.299E-05	5.090E-05
219	ELM31	2.230E-03	-2.214E-04	-2.214E-03	1.241E-04	6.439E-05	1.299E-05
219	ELM32	2.230E-03	1.217E-03	-1.909E-04	1.451E-04	2.297E-06	-5.011E-05
219	ELM33	2.230E-03	-9.140E-03	-4.734E-03	-3.341E-04	1.239E-05	-1.221E-05
219	ELM34	2.230E-03	1.237E-03	-6.793E-03	-4.620E-04	2.634E-05	9.801E-06
219	ELM35	2.230E-03	-5.775E-03	-6.938E-03	-3.269E-04	2.920E-05	-1.329E-05
220	EL	2.230E-03	-2.214E-04	-2.214E-03	1.241E-04	6.439E-05	1.299E-05
220	EL	2.230E-03	-2.214E-03	-2.214E-03	2.166E-05	1.239E-05	1.694E-06
220	ELBA	2.230E-03	1.217E-03	-1.909E-04	1.451E-04	2.297E-06	-5.011E-05
220	ELK1	-1.621E-06	-2.214E-03	1.789E-04	-2.654E-04	-2.299E-05	5.090E-05
220	ELM31	2.230E-03	-2.214E-04	-2.214E-03	1.241E-04	6.439E-05	1.299E-05
220	ELM32	2.230E-03	1.217E-03	-1.909E-04	1.451E-04	2.297E-06	-5.011E-05
220	ELM33	2.230E-03	-9.140E-03	-4.734E-03	-3.341E-04	1.239E-05	-1.221E-05
220	ELM34	2.230E-03	1.237E-03	-6.793E-03	-4.620E-04	2.634E-05	9.801E-06
220	ELM35	2.230E-03	-5.775E-03	-6.938E-03	-3.269E-04	2.920E-05	-1.329E-05
221	EL	-1.283E-05	-1.283E-04	-1.150E-03	6.927E-04	1.139E-05	-1.308E-05
221	EL	-1.283E-05	-1.283E-03	-1.223E-04	2.729E-04	2.962E-06	2.017E-05
221	ELBA	-1.283E-05	1.497E-03	-2.852E-05	-2.074E-04	-1.195E-06	2.985E-05
221	ELK1	1.283E-05	-1.283E-03	9.990E-05	4.939E-04	1.103E-05	-6.064E-05
221	ELM31	-1.283E-05	-1.283E-03	-1.173E-03	1.263E-03	6.269E-05	-1.247E-05
221	ELM32	-1.283E-05	1.497E-03	-1.139E-05	1.116E-04	2.949E-05	8.773E-05
221	ELM33	-1.283E-05	-1.283E-03	-9.979E-04	1.079E-05	5.299E-05	-1.241E-05
221	ELM34	-1.283E-05	1.497E-03	-1.408E-03	1.677E-04	4.371E-05	6.097E-05
221	ELM35	-1.283E-05	-1.283E-03	-1.299E-03	1.399E-03	6.419E-05	-7.614E-05
222	EL	-1.283E-05	-1.283E-04	-1.174E-03	-6.199E-04	1.243E-05	-1.124E-05
222	EL	-1.283E-05	-1.283E-03	-2.234E-04	-2.710E-04	7.902E-06	-5.026E-06
222	ELBA	-1.283E-05	1.497E-03	-1.201E-05	-4.937E-04	1.173E-05	6.220E-05
222	ELK1	1.283E-05	-1.283E-03	-1.739E-03	3.039E-04	-1.113E-05	-7.027E-05
222	ELM31	-1.283E-05	-1.283E-03	-1.173E-03	1.263E-03	6.269E-05	-1.247E-05
222	ELM32	-1.283E-05	1.497E-03	-1.139E-05	1.116E-04	2.949E-05	8.773E-05
222	ELM33	-1.283E-05	-1.283E-03	-9.979E-04	1.079E-05	5.299E-05	-1.241E-05
222	ELM34	-1.283E-05	1.497E-03	-1.408E-03	1.677E-04	4.371E-05	6.097E-05
222	ELM35	-1.283E-05	-1.283E-03	-1.299E-03	1.399E-03	6.419E-05	-7.614E-05
223	EL	-1.283E-05	-1.283E-04	-1.041E-03	9.979E-04	0.0000	-3.326E-05
223	EL	-1.283E-05	-1.283E-03	-2.309E-04	4.466E-04	0.0000	-3.257E-06
223	ELBA	-1.283E-05	1.497E-03	-1.444E-03	-6.679E-04	1.110E-05	9.094E-05
223	ELK1	1.283E-05	-1.283E-03	5.746E-05	6.073E-04	-1.407E-06	-7.590E-05
223	ELM31	-1.283E-05	-1.283E-03	-2.326E-03	1.792E-03	1.774E-06	-4.582E-05
223	ELM32	-1.283E-05	1.497E-03	-1.041E-03	1.492E-04	1.431E-06	5.076E-05
223	ELM33	-1.283E-05	-1.283E-03	-1.399E-03	1.115E-03	-1.986E-06	-1.064E-04
223	ELM34	-1.283E-05	1.497E-03	-1.992E-03	5.229E-04	2.175E-06	4.697E-05
223	ELM35	-1.283E-05	-1.283E-03	-1.785E-03	1.862E-03	0.0000	-1.173E-04
224	EL	0.0000	-1.509E-04	-1.897E-03	2.642E-03	7.907E-06	-3.155E-05
224	EL	0.0000	-1.509E-03	-1.392E-04	3.544E-06	2.561E-06	-3.380E-06
224	ELBA	-1.509E-05	1.676E-03	-1.397E-06	-4.073E-04	0.0000	8.751E-05
224	ELK1	-1.509E-05	-1.509E-03	-1.646E-06	4.073E-04	0.0000	-8.738E-05
224	ELM31	0.0000	-1.509E-03	-3.127E-03	3.977E-05	1.349E-05	-4.526E-05
224	ELM32	0.0000	1.676E-03	-1.700E-03	-3.839E-04	2.246E-06	5.912E-05
224	ELM33	0.0000	-1.509E-03	-1.700E-03	4.343E-04	2.399E-05	-1.138E-04
224	ELM34	0.0000	1.676E-03	-2.322E-03	-3.969E-04	1.264E-05	5.604E-05
224	ELM35	0.0000	-1.509E-03	-2.322E-03	4.613E-04	1.071E-05	-1.179E-04
225	EL	-1.290E-05	-1.290E-04	-1.548E-03	-3.259E-04	1.115E-06	-2.294E-05
225	EL	-1.290E-05	-1.290E-03	-3.612E-04	-4.381E-04	0.0000	-2.690E-06
225	ELBA	-1.290E-05	1.417E-03	-5.735E-05	-6.675E-04	0.0000	7.714E-05
225	ELK1	0.0000	-1.290E-03	-5.444E-05	6.694E-04	0.0000	-9.120E-05
225	ELM31	-1.290E-05	-1.290E-04	-2.439E-03	-1.692E-03	2.656E-06	-3.184E-05

227	ELM0	-1.1129E-05	-1.691E-02	-1.383E-05	-1.351E-05	0.0000	5.649E-05
228	ELM1	-1.1129E-05	-1.143E-03	-1.443E-03	-7.493E-05	1.602E-05	-1.016E-04
229	ELM2	-1.1129E-05	-1.117E-03	-1.179E-03	-1.791E-03	0.0000	5.821E-05
230	ELM3	-1.1129E-05	-1.141E-03	-1.910E-03	-4.414E-04	1.316E-06	-1.110E-04
231	EL	0.0000	0.0000	-1.919E-03	0.117E-01	-1.117E-05	-1.104E-05
232	EL	0.0000	0.0000	-1.919E-03	4.442E-01	-3.099E-06	0.0000
233	ELKA	0.0000	-1.919E-03	-1.117E-03	-1.117E-03	1.014E-05	-1.000E-05
234	ELK1	0.0000	-1.919E-03	-1.117E-03	-1.117E-03	1.250E-06	-1.156E-05
235	COMB1	-1.1129E-05	-1.167E-04	-1.396E-04	1.866E-03	-1.195E-05	-1.939E-05
236	COMB2	-1.1129E-05	-1.299E-03	-1.439E-03	0.853E-05	-9.899E-06	4.944E-06
237	COMB3	-1.1129E-05	-1.117E-03	-1.396E-03	1.474E-03	-7.119E-06	-1.104E-05
238	COMB4	-1.1129E-05	-1.117E-03	-1.396E-03	4.409E-04	-1.265E-05	4.937E-05
239	COMB5	-1.1129E-05	-1.299E-03	-1.754E-03	1.911E-03	-1.601E-06	-7.959E-05
240	EL	0.0000	-1.919E-03	-1.933E-03	5.413E-05	0.0000	-1.799E-05
241	EL	0.0000	-1.143E-03	-1.933E-03	5.413E-05	0.0000	0.0000
242	ELKA	0.0000	-1.919E-03	-1.346E-03	-4.580E-04	0.0000	5.956E-05
243	ELK1	-1.1129E-05	-1.919E-03	-1.396E-03	4.539E-04	0.0000	-1.393E-05
244	COMB1	-1.1129E-05	-1.213E-04	-1.300E-03	7.454E-05	-1.049E-06	-2.255E-05
245	COMB2	-1.1129E-05	-1.999E-03	-1.743E-03	-4.093E-04	0.0000	-1.378E-05
246	COMB3	-1.1129E-05	-1.117E-03	-1.743E-03	5.067E-04	0.0000	-7.449E-05
247	COMB4	-1.1129E-05	-1.141E-03	-1.396E-03	-4.203E-04	0.0000	4.364E-05
248	COMB5	-1.1129E-05	-1.299E-03	-1.396E-03	5.415E-04	0.0000	-6.049E-05
249	EL	-1.095E-05	-1.161E-03	-1.529E-03	-7.743E-04	-6.021E-06	-1.446E-05
250	EL	-1.095E-05	-4.369E-05	-1.627E-04	-4.292E-04	-1.217E-06	0.0000
251	ELKA	0.0000	-1.919E-03	-1.572E-05	-6.551E-04	0.0000	5.365E-05
252	ELK1	0.0000	-1.919E-03	-1.337E-05	7.334E-04	0.0000	-5.454E-05
253	COMB1	-1.1129E-05	-1.133E-04	-1.415E-03	-1.616E-03	-9.173E-06	-1.680E-05
254	COMB2	-1.1129E-05	-1.961E-03	-1.740E-03	-1.352E-03	-6.140E-06	4.063E-05
255	COMB3	-1.1129E-05	-1.117E-03	-1.439E-03	3.655E-05	-1.329E-06	-6.756E-05
256	COMB4	-1.1129E-05	-1.141E-03	-1.765E-03	-1.771E-03	-7.865E-06	4.136E-05
257	COMB5	-1.1129E-05	-1.299E-03	-1.900E-03	-3.133E-04	-6.573E-06	-7.324E-05
258	EL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
259	EL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
260	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
261	ELK1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
262	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
263	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
264	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
265	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
266	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
267	EL	0.0000	-1.919E-04	-7.793E-04	9.941E-04	-2.635E-05	2.470E-05
268	EL	0.0000	-1.964E-05	-1.305E-04	3.089E-04	-1.267E-05	1.745E-05
269	ELKA	-1.1129E-05	-1.919E-03	-4.609E-05	-7.737E-04	0.0000	2.134E-05
270	ELK1	1.053E-06	-1.919E-03	4.465E-05	6.377E-04	0.0000	-1.399E-05
271	COMB1	-1.1129E-05	-1.191E-04	-1.147E-03	1.675E-05	-1.370E-05	3.244E-05
272	COMB2	-4.129E-06	5.167E-03	-7.413E-04	1.170E-04	-2.313E-05	4.357E-05
273	COMB3	-4.157E-06	-5.864E-03	-6.567E-04	1.573E-03	-2.431E-05	3.256E-06
274	COMB4	-5.052E-06	5.365E-03	-9.437E-04	4.155E-04	-3.373E-05	4.944E-05
275	COMB5	4.771E-06	-6.118E-03	-8.568E-04	1.950E-05	-3.502E-05	7.112E-06
276	EL	3.271E-06	-1.997E-04	-1.939E-03	9.991E-05	-3.963E-06	2.471E-05
277	EL	1.745E-06	-1.445E-05	-1.903E-04	2.779E-05	-3.767E-06	4.373E-06
278	ELKA	0.0000	5.810E-03	-3.962E-06	-5.391E-04	0.0000	2.433E-05
279	ELK1	0.0000	-1.919E-03	-4.702E-06	5.387E-04	0.0000	-2.431E-05
280	COMB1	0.718E-06	-1.115E-04	-1.648E-03	1.642E-04	-1.078E-05	3.665E-05
281	COMB2	7.577E-06	5.169E-03	-9.395E-04	-4.492E-04	-3.483E-05	4.657E-05
282	COMB3	7.014E-06	-1.964E-03	-9.402E-04	6.385E-04	-1.511E-06	-1.067E-06
283	COMB4	4.149E-06	5.365E-03	-1.263E-03	-4.437E-04	-6.447E-06	5.425E-05
284	COMB5	4.019E-06	-6.119E-03	-1.254E-03	6.300E-04	-6.539E-06	3.179E-06
285	EL	-7.076E-06	-1.810E-04	-9.233E-04	-3.965E-04	2.361E-05	2.897E-05
286	EL	-1.061E-06	-1.839E-05	-1.823E-04	-2.536E-04	4.312E-06	5.144E-05
287	ELKA	-1.061E-06	5.814E-03	5.433E-05	-7.202E-04	0.0000	2.130E-05
288	ELK1	-1.545E-06	-1.919E-03	-1.934E-05	0.078E-04	0.0000	-2.203E-05
289	COMB1	-1.342E-05	-1.196E-04	-1.409E-03	-8.821E-04	3.427E-05	4.300E-05
290	COMB2	-1.317E-06	5.171E-03	-7.767E-04	-1.977E-03	2.023E-05	4.739E-05
291	COMB3	-7.213E-06	-1.955E-03	-8.813E-04	4.506E-04	2.077E-05	4.043E-05
292	COMB4	-7.217E-06	5.365E-03	-1.027E-03	-1.333E-03	2.636E-05	5.603E-05
293	COMB5	-1.099E-05	-6.212E-03	-1.137E-03	2.717E-04	2.692E-05	1.053E-05
294	EL	0.0000	-1.919E-04	-1.769E-03	-5.401E-05	0.0000	0.0000
295	EL	0.0000	-1.724E-05	-4.943E-04	-2.358E-04	0.0000	0.0000
296	ELKA	0.0000	5.567E-03	6.405E-05	-6.991E-05	0.0000	0.0000
297	ELK1	0.0000	-1.919E-03	-6.058E-05	7.956E-04	0.0000	0.0000
298	COMB1	0.0000	-1.117E-04	-1.314E-03	-4.422E-04	0.0000	0.0000
299	COMB2	0.0000	5.269E-03	-1.588E-03	-7.477E-04	0.0000	0.0000
300	COMB3	0.0000	-1.963E-03	-1.653E-03	7.370E-04	0.0000	0.0000
301	COMB4	0.0000	5.480E-03	-2.102E-03	-9.394E-04	0.0000	0.0000
302	COMB5	0.0000	-6.208E-03	-2.232E-03	6.196E-04	0.0000	0.0000
303	EL	0.0000	-1.919E-04	-7.792E-04	9.939E-04	2.636E-05	-2.470E-05
304	EL	0.0000	-1.965E-05	-1.325E-04	3.088E-04	1.068E-05	-1.745E-06
305	ELKA	4.130E-06	5.520E-03	-4.609E-05	-7.737E-04	0.0000	-2.134E-05
306	ELK1	-4.653E-06	-1.919E-03	4.465E-05	6.877E-04	0.0000	1.398E-05

224	COM1	-1.171E-04	-1.192E-04	-1.147E-05	1.675E-03	4.872E-05	-3.244E-05
224	COM2	-1.171E-04	-1.192E-04	-1.147E-05	1.117E-04	1.311E-05	-1.557E-05
224	COM3	-4.982E-04	-1.864E-03	-6.366E-04	1.573E-02	1.432E-05	-3.226E-06
224	COM4	-1.048E-06	1.365E-03	-9.436E-04	4.151E-04	3.379E-05	-4.944E-05
224	COM5	-4.175E-04	-6.216E-03	-8.547E-04	1.950E-03	3.503E-05	-7.113E-06
225	EL	-1.772E-04	-1.772E-04	-1.353E-03	1.091E-04	3.893E-06	-3.171E-05
225	EL	-1.772E-04	-1.772E-04	-1.503E-04	2.794E-05	3.703E-06	-4.373E-06
225	ELNA	0.0000	1.513E-03	-3.902E-06	-5.391E-04	0.0000	-2.133E-05
225	ELK1	0.0000	-1.458E-03	-4.709E-06	1.387E-04	0.0000	1.431E-05
225	COM1	-1.772E-04	-1.772E-04	-1.644E-03	1.648E-04	1.034E-05	-3.665E-05
225	COM2	-1.772E-04	-1.772E-04	-1.394E-04	-4.490E-04	3.519E-06	-4.657E-05
225	COM3	-1.772E-04	-1.772E-04	-9.401E-04	6.288E-04	3.597E-06	-3.066E-06
225	COM4	-1.772E-04	-1.772E-04	-1.254E-03	-4.432E-04	6.488E-07	-3.125E-05
225	COM5	-4.029E-06	-6.217E-03	-1.254E-03	6.084E-04	6.379E-06	-3.761E-06
226	EL	-1.772E-04	-1.772E-04	-1.353E-04	-3.962E-04	-1.281E-05	-2.197E-05
226	EL	-1.772E-04	-1.772E-04	-1.383E-04	-3.537E-04	-4.131E-06	-3.145E-06
226	ELNA	-1.293E-06	-1.144E-05	1.435E-05	-1.392E-04	0.0000	-2.139E-05
226	ELK1	1.541E-06	-1.141E-05	-6.034E-05	6.070E-04	0.0000	2.203E-05
226	COM1	-1.772E-04	-1.772E-04	-1.400E-03	-8.822E-04	-4.427E-05	-4.300E-05
226	COM2	-1.772E-04	-1.772E-04	-1.367E-04	-1.677E-03	-3.610E-05	-4.739E-05
226	COM3	-1.772E-04	-1.772E-04	-8.813E-04	4.196E-04	-1.077E-05	-4.044E-06
226	COM4	-1.772E-04	-1.772E-04	-1.922E-02	-1.333E-03	-2.636E-05	-1.603E-05
226	COM5	1.879E-06	-6.217E-03	-1.137E-03	3.217E-04	-3.692E-05	-1.053E-05
227	EL	-1.772E-04	-1.772E-04	-1.520E-03	-7.743E-04	1.021E-06	1.446E-05
227	EL	-1.772E-04	-1.772E-04	-3.827E-04	-1.792E-04	1.117E-06	0.0000
227	ELNA	-1.293E-06	-1.144E-05	6.172E-05	-6.551E-04	0.0000	-3.366E-05
227	ELK1	0.0000	-1.139E-03	-6.357E-05	7.334E-04	0.0000	3.454E-05
227	COM1	-1.772E-04	-1.772E-04	-1.415E-03	-1.614E-03	3.123E-06	1.699E-05
227	COM2	-1.772E-04	-1.772E-04	-1.310E-03	-1.252E-03	6.189E-06	-4.063E-05
227	COM3	-1.772E-04	-1.772E-04	-1.429E-03	-3.654E-04	4.222E-06	6.786E-05
227	COM4	-1.772E-04	-1.772E-04	-1.765E-03	-1.771E-03	7.666E-06	-4.136E-05
227	COM5	1.541E-04	-6.007E-02	-1.900E-03	-3.133E-04	6.973E-06	3.224E-05
228	EL	-1.772E-04	-1.772E-04	-1.353E-02	3.411E-04	0.0000	1.793E-05
228	EL	-1.772E-04	-1.772E-04	-3.544E-04	3.989E-06	0.0000	0.0000
228	ELNA	0.0000	1.336E-03	-1.346E-06	-1.377E-04	0.0000	-1.296E-05
228	ELK1	-1.241E-04	-1.399E-03	-3.381E-06	1.580E-04	0.0000	3.931E-05
228	COM1	-1.772E-04	-1.772E-04	-1.367E-03	-7.192E-04	1.445E-06	-1.265E-05
228	COM2	-1.772E-04	-1.772E-04	-1.743E-03	-4.033E-04	0.0000	-4.177E-05
228	COM3	-1.772E-04	-1.772E-04	-1.713E-03	3.267E-04	0.0000	7.449E-05
228	COM4	-1.772E-04	-1.772E-04	-3.363E-03	-4.206E-04	0.0000	-4.264E-05
228	COM5	-1.669E-06	-1.066E-03	-2.138E-03	3.475E-04	0.0000	3.042E-05
229	EL	-1.772E-04	-1.772E-04	-1.512E-03	3.217E-04	1.171E-06	1.380E-05
229	EL	-1.772E-04	-1.772E-04	-3.593E-04	1.411E-04	3.690E-06	0.0000
229	ELNA	-1.293E-06	-1.399E-03	-6.212E-05	-7.320E-04	-1.243E-06	-3.399E-05
229	ELK1	-1.177E-04	-1.397E-03	6.454E-05	6.534E-04	1.256E-06	3.180E-05
229	COM1	-1.772E-04	-1.772E-04	-2.398E-03	1.890E-05	1.293E-06	1.936E-05
229	COM2	-1.772E-04	-1.772E-04	-1.429E-03	3.983E-05	3.893E-06	-4.044E-05
229	COM3	-1.772E-04	-1.772E-04	-1.395E-03	1.474E-03	1.219E-05	6.504E-05
229	COM4	-1.772E-04	-1.772E-04	-1.367E-03	4.689E-04	1.363E-05	-4.837E-05
229	COM5	-1.394E-06	-1.066E-03	-1.784E-03	1.924E-03	1.601E-05	7.039E-05
230	EL	-1.772E-04	-1.772E-04	-1.512E-03	-6.250E-04	-1.117E-06	1.294E-05
230	EL	-1.772E-04	-1.772E-04	-1.347E-03	-4.341E-04	0.0000	1.897E-06
230	ELNA	-1.293E-06	-1.144E-05	1.435E-05	-6.070E-04	0.0000	-4.144E-04
230	ELK1	0.0000	-1.916E-03	-3.444E-05	6.694E-04	0.0000	3.120E-05
230	COM1	-1.772E-04	-1.772E-04	-1.636E-03	-1.592E-03	-1.693E-06	3.184E-05
230	COM2	-1.772E-04	-1.772E-04	-1.434E-03	-1.364E-03	-1.364E-06	-3.646E-05
230	COM3	-1.772E-04	-1.772E-04	-1.448E-03	-7.493E-04	-1.602E-06	1.019E-04
230	COM4	-1.772E-04	-1.772E-04	-1.772E-03	-1.772E-03	0.0000	-5.021E-05
230	COM5	1.541E-05	-1.447E-03	-1.919E-03	-4.414E-04	-2.315E-06	1.110E-04
231	EL	-1.772E-04	-1.772E-04	-1.353E-02	1.242E-04	-1.906E-06	3.189E-06
231	EL	-1.772E-04	-1.772E-04	-3.991E-04	3.444E-06	-1.591E-06	3.899E-06
231	ELNA	-1.293E-06	-1.144E-05	-1.173E-06	-4.095E-06	0.0000	-3.751E-05
231	ELK1	1.483E-06	-4.918E-04	-1.646E-06	4.098E-04	0.0000	3.732E-05
231	COM1	-1.772E-04	-1.772E-04	-3.177E-03	3.972E-05	-1.349E-05	-4.326E-05
231	COM2	-1.772E-04	-1.772E-04	-1.709E-03	-3.820E-04	-7.845E-06	-5.912E-05
231	COM3	-1.772E-04	-1.772E-04	-1.790E-03	1.343E-04	-7.364E-06	1.158E-04
231	COM4	-1.772E-04	-1.772E-04	-3.322E-03	-3.969E-04	-1.664E-05	-1.664E-05
231	COM5	-1.459E-06	-1.449E-03	-2.322E-03	4.613E-04	-1.971E-06	1.370E-04
232	EL	-1.772E-04	-1.772E-04	-1.541E-03	3.979E-04	0.0000	3.387E-05
232	EL	-1.772E-04	-1.772E-04	-3.605E-04	4.466E-04	0.0000	3.937E-06
232	ELNA	-1.293E-06	-1.144E-05	-1.446E-05	-6.679E-04	-1.110E-06	-3.054E-05
232	ELK1	-1.994E-06	-4.918E-03	3.746E-05	6.073E-04	1.407E-06	7.599E-05
232	COM1	-1.772E-04	-1.772E-04	-1.420E-03	1.792E-03	-1.773E-06	1.397E-05
232	COM2	-1.772E-04	-1.772E-04	-1.441E-03	1.401E-04	-1.931E-06	-1.069E-05
232	COM3	-1.772E-04	-1.772E-04	-1.350E-03	1.411E-03	1.697E-06	1.964E-04
232	COM4	-1.772E-04	-1.772E-04	-1.992E-03	3.229E-04	-2.175E-06	-4.697E-05
232	COM5	6.420E-06	-1.449E-03	-1.785E-03	1.062E-03	0.0000	1.173E-04
233	EL	-1.772E-04	-1.772E-04	-1.190E-03	6.329E-04	-4.366E-06	1.308E-05
233	EL	-1.772E-04	-1.772E-04	-2.229E-04	2.779E-04	-7.992E-06	-2.017E-06
233	ELNA	-1.293E-06	-1.144E-05	-7.093E-05	-6.031E-06	1.166E-06	-6.966E-05



243	ELK1	-1.199E-05	-1.500E-03	7.990E-05	4.837E-04	-1.101E-05	6.084E-05
243	COMB1	2.218E-05	-1.675E-04	-1.773E-03	1.730E-03	-6.769E-05	1.247E-05
243	COMB2	1.756E-05	1.376E-03	-1.159E-03	1.119E-04	-7.949E-05	-5.779E-05
243	COMB3	4.990E-06	-4.611E-03	-9.802E-04	1.098E-03	-5.185E-05	7.241E-05
243	COMB4	3.736E-05	4.877E-03	-1.460E-03	3.627E-04	-4.071E-05	-6.057E-05
243	COMB5	1.375E-05	-1.167E-03	-1.095E-03	1.399E-03	-6.413E-05	7.614E-05
244	EL	2.668E-05	-1.338E-04	-1.184E-03	-6.509E-04	-4.555E-05	1.194E-05
244	LL	1.196E-05	-1.807E-05	-2.254E-04	-2.736E-04	-7.302E-06	1.017E-06
244	ELKA	-5.854E-06	3.337E-05	3.094E-05	-4.937E-04	-1.175E-05	-6.230E-05
244	ELK1	1.105E-04	-1.472E-03	-7.739E-04	5.639E-04	1.113E-05	3.017E-05
244	COMB1	1.005E-04	-1.919E-04	-1.778E-03	-1.210E-03	-6.773E-05	3.238E-05
244	COMB2	1.763E-05	3.977E-03	-9.855E-04	-1.070E-03	-8.273E-05	-5.145E-05
244	COMB3	2.188E-05	-1.115E-03	-1.113E-03	-8.196E-05	-2.884E-05	6.192E-05
244	COMB4	4.114E-04	1.170E-03	-1.200E-03	-1.363E-03	-6.514E-05	-4.949E-05
244	COMB5	2.218E-05	-1.675E-04	-1.773E-03	1.730E-03	-6.769E-05	1.247E-05
245	EL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	ELK1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
245	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	EL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	ELK1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
246	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
247	EL	-2.190E-04	-1.844E-04	-6.543E-04	-2.162E-04	-1.668E-04	-5.346E-05
247	LL	-2.295E-05	-1.119E-05	-1.042E-04	-6.932E-05	-1.261E-05	-7.764E-06
247	ELKA	-1.344E-04	1.703E-03	-1.998E-04	-2.254E-04	0.0000	1.022E-04
247	ELK1	-2.117E-04	-1.339E-03	1.142E-04	2.829E-04	-2.525E-05	-2.972E-04
247	COMB1	-8.129E-05	-1.735E-04	-9.519E-04	-3.570E-04	-2.795E-04	-7.657E-05
247	COMB2	1.018E-04	1.33E-03	-6.936E-04	-4.208E-04	-1.509E-04	5.452E-05
247	COMB3	-1.637E-04	-9.014E-03	-4.740E-04	3.832E-05	-1.754E-04	-3.453E-04
247	COMB4	0.0000	8.923E-03	-8.679E-04	-8.031E-04	-2.071E-04	4.674E-05
247	COMB5	-1.102E-04	-9.591E-03	-6.301E-04	3.165E-05	-1.329E-04	-3.731E-04
248	EL	-1.169E-04	-7.096E-04	-9.372E-04	1.976E-04	-9.921E-04	-1.122E-04
248	LL	-1.544E-04	-1.355E-05	-1.368E-04	7.294E-05	-1.327E-04	-1.827E-05
248	ELKA	1.110E-04	1.712E-03	7.271E-04	-1.648E-04	-1.943E-05	3.811E-05
248	ELK1	-4.094E-04	-8.783E-03	-8.417E-05	1.600E-04	-1.068E-04	-5.855E-05
248	COMB1	-1.794E-03	-2.969E-04	-1.483E-03	3.219E-04	-1.455E-03	-1.919E-04
248	COMB2	-1.065E-03	8.524E-03	-8.112E-04	1.311E-05	-7.925E-04	-8.637E-05
248	COMB3	-1.546E-03	-3.975E-03	-7.726E-04	3.386E-04	-9.187E-04	-1.730E-04
248	COMB4	-1.361E-03	8.910E-03	-1.073E-03	6.787E-05	-1.073E-03	-1.156E-04
248	COMB5	-1.966E-03	-3.459E-03	-1.243E-03	4.697E-04	-1.206E-03	-2.666E-04
249	EL	-1.150E-03	-1.538E-04	-9.832E-04	-1.926E-04	-8.698E-04	9.331E-05
249	LL	-1.643E-04	-1.676E-05	-1.863E-04	-5.235E-05	-2.270E-04	-1.382E-05
249	ELKA	-3.928E-04	1.712E-03	-8.395E-05	-1.666E-04	-1.067E-04	6.141E-05
249	ELK1	6.514E-05	-8.724E-03	7.736E-05	1.653E-04	1.744E-05	-2.796E-05
249	COMB1	-7.443E-05	-3.374E-04	-1.573E-03	-3.339E-04	-1.407E-03	1.341E-04
249	COMB2	-1.148E-03	1.623E-03	-9.689E-04	-3.340E-04	-8.395E-04	1.454E-04
249	COMB3	-1.138E-04	-1.354E-03	-8.974E-04	-3.976E-04	-1.384E-04	5.600E-05
249	COMB4	-1.724E-03	9.033E-03	-1.233E-03	-4.039E-04	-1.168E-03	1.712E-04
249	COMB5	-1.343E-03	-9.337E-03	-1.068E-03	-6.165E-05	-1.938E-03	7.732E-05
250	EL	-1.606E-06	-1.714E-04	-6.589E-04	2.339E-04	-1.598E-04	-4.468E-05
250	LL	0.0000	-2.034E-05	-1.945E-04	6.324E-05	-4.846E-05	-5.213E-06
250	ELKA	-2.335E-05	1.336E-03	1.154E-04	-2.828E-04	-1.374E-03	3.029E-04
250	ELK1	1.019E-05	-8.720E-03	-1.104E-04	2.262E-04	-8.300E-06	-1.941E-04
250	COMB1	-1.694E-05	-2.512E-04	-9.593E-04	3.919E-04	-2.623E-04	-6.195E-05
250	COMB2	-8.210E-05	1.667E-03	-1.777E-04	-7.230E-04	-1.600E-04	3.626E-04
250	COMB3	4.446E-04	-8.883E-03	-7.034E-04	4.368E-04	-1.191E-04	-1.443E-04
250	COMB4	-6.435E-05	9.089E-03	-6.367E-04	-1.152E-05	-1.180E-04	2.678E-04
250	COMB5	3.324E-06	-9.369E-03	-8.739E-04	5.230E-04	-2.439E-04	-1.885E-04
251	EL	1.134E-04	-2.377E-03	-1.194E-03	1.096E-03	1.119E-04	-2.447E-04
251	LL	1.677E-06	-2.306E-04	-1.984E-04	2.371E-04	9.398E-06	-3.310E-06
251	ELKA	-6.408E-05	0.0141	4.158E-05	-1.597E-03	-1.724E-05	4.866E-05
251	ELK1	1.917E-05	-0.0101	-3.546E-05	4.688E-04	1.130E-06	-1.783E-04
251	COMB1	3.947E-05	-3.913E-03	-1.632E-03	1.695E-02	1.459E-04	-3.466E-04
251	COMB2	-4.527E-05	0.0121	-9.519E-04	-6.103E-04	8.328E-05	2.464E-04
251	COMB3	4.199E-05	-0.0121	-1.629E-03	1.453E-03	1.917E-04	-3.955E-04
251	COMB4	-4.131E-05	9.0124	-1.235E-03	-3.763E-04	1.050E-04	2.332E-04
251	COMB5	5.031E-05	-0.0131	-1.316E-03	1.791E-03	1.243E-04	-4.613E-04
252	DL	2.930E-05	-4.273E-03	-1.193E-03	1.583E-03	-4.275E-05	-2.369E-04
252	LL	6.624E-06	-5.456E-04	-2.240E-04	3.176E-04	0.0000	-3.948E-05

251	DL	-1.0000E-05	-0.0177	-4.330E-03	-2.234E-03	-9.071E-06	-2.350E-04
252	BLKA	-1.0000E-05	-0.0115	-3.141E-03	-5.667E-04	-1.0000E-06	-1.434E-04
253	BLKI	-1.0000E-05	-0.0116	-1.790E-03	-1.400E-03	-1.0000E-06	-3.459E-04
254	COMB1	-1.0000E-05	-0.0133	-1.030E-03	-8.091E-04	-1.0000E-06	-6.977E-05
255	COMB2	-1.0000E-05	-0.0152	-1.109E-03	-1.992E-03	-1.0000E-06	-3.567E-04
256	COMB3	-1.0000E-05	-0.0173	-1.340E-03	-4.433E-04	-1.0000E-06	-2.444E-04
257	COMB4	-1.0000E-05	-0.0169	-1.431E-03	-2.457E-03	-1.0000E-06	-4.157E-04
258	DL	-1.0000E-05	-0.0156	-1.100E-03	-2.413E-03	-1.0000E-06	-1.150E-04
259	BL	-1.0000E-05	-0.0108	-1.071E-04	-1.0000E-03	-1.0000E-06	-1.0000E-05
260	BLKA	-1.0000E-05	-0.0107	-1.100E-05	-1.0000E-03	-1.0000E-06	-1.0000E-05
261	BLKI	-1.0000E-05	-0.0104	-3.000E-05	-6.404E-04	-1.0000E-06	-9.005E-05
262	COMB1	-1.0000E-05	-0.0106	-1.590E-03	-3.071E-03	-1.0000E-06	-3.000E-07
263	COMB2	-1.0000E-05	-0.0129	-9.118E-04	-6.093E-07	-1.0000E-06	-1.159E-05
264	COMB3	-1.0000E-05	-0.0191	-9.981E-04	-2.460E-02	-1.0000E-06	-3.174E-04
265	COMB4	-1.0000E-05	-0.0101	-1.100E-03	-2.583E-04	-1.0000E-06	-1.302E-04
266	COMB5	-1.0000E-05	-0.0100	-1.360E-03	-3.049E-03	-1.0000E-06	-3.903E-04
267	DL	-1.0000E-05	-0.0066	-1.109E-03	-1.580E-03	-1.176E-04	-1.935E-04
268	BL	-1.0000E-05	-1.004E-03	-2.341E-04	-5.526E-04	-2.079E-05	-3.762E-05
269	BLKA	-1.0000E-05	-0.0193	-3.915E-05	-2.610E-02	-1.0000E-06	-1.107E-04
270	BLKI	-1.0000E-05	-0.0107	-3.975E-05	-6.750E-04	-1.0000E-06	-5.0000E-05
271	COMB1	-1.0000E-05	-0.0116	-1.025E-03	-3.980E-03	-1.0000E-06	-1.924E-04
272	COMB2	-1.0000E-05	-0.0101	-1.039E-03	-2.075E-04	-1.0000E-06	-6.345E-04
273	COMB3	-1.0000E-05	-0.0109	-1.128E-03	-2.998E-03	-1.0000E-06	-2.330E-04
274	COMB4	-1.0000E-05	-0.0111	-1.365E-03	-3.172E-04	-1.0000E-06	-1.106E-04
275	COMB5	-1.0000E-05	-0.0108	-1.458E-03	-3.767E-03	-1.0000E-06	-2.087E-04
276	DL	-1.0000E-05	-1.006E-03	-1.009E-03	-2.580E-03	-1.176E-04	-1.935E-04
277	BL	-1.0000E-05	-1.004E-03	-2.341E-04	-5.526E-04	-2.079E-05	-3.762E-05
278	BLKA	-1.0000E-05	-0.0193	-3.915E-05	-2.610E-02	-1.0000E-06	-1.107E-04
279	BLKI	-1.0000E-05	-0.0107	-3.975E-05	-6.750E-04	-1.0000E-06	-5.0000E-05
280	COMB1	-1.0000E-05	-0.0116	-1.025E-03	-3.980E-03	-1.0000E-06	-1.924E-04
281	COMB2	-1.0000E-05	-0.0101	-1.039E-03	-2.075E-04	-1.0000E-06	-6.345E-04
282	COMB3	-1.0000E-05	-0.0109	-1.128E-03	-2.998E-03	-1.0000E-06	-2.330E-04
283	COMB4	-1.0000E-05	-0.0111	-1.365E-03	-3.172E-04	-1.0000E-06	-1.106E-04
284	COMB5	-1.0000E-05	-0.0108	-1.458E-03	-3.767E-03	-1.0000E-06	-2.087E-04
285	DL	-1.0000E-05	-1.006E-03	-1.009E-03	-2.580E-03	-1.176E-04	-1.935E-04
286	BL	-1.0000E-05	-1.004E-03	-2.341E-04	-5.526E-04	-2.079E-05	-3.762E-05
287	BLKA	-1.0000E-05	-0.0193	-3.915E-05	-2.610E-02	-1.0000E-06	-1.107E-04
288	BLKI	-1.0000E-05	-0.0107	-3.975E-05	-6.750E-04	-1.0000E-06	-5.0000E-05
289	COMB1	-1.0000E-05	-0.0116	-1.025E-03	-3.980E-03	-1.0000E-06	-1.924E-04
290	COMB2	-1.0000E-05	-0.0101	-1.039E-03	-2.075E-04	-1.0000E-06	-6.345E-04
291	COMB3	-1.0000E-05	-0.0109	-1.128E-03	-2.998E-03	-1.0000E-06	-2.330E-04
292	COMB4	-1.0000E-05	-0.0111	-1.365E-03	-3.172E-04	-1.0000E-06	-1.106E-04
293	COMB5	-1.0000E-05	-0.0108	-1.458E-03	-3.767E-03	-1.0000E-06	-2.087E-04
294	DL	-1.0000E-05	-0.0066	-1.066E-03	-3.002E-03	-4.430E-05	-1.506E-04
295	BL	-1.0000E-05	-0.0000E-04	-1.041E-04	-4.029E-04	-5.000E-06	-3.043E-05
296	BLKA	-1.0000E-05	-0.0107	-3.975E-05	-6.750E-04	-1.0000E-06	-1.0000E-05
297	BLKI	-1.0000E-05	-0.0104	-3.000E-05	-6.404E-04	-1.0000E-06	-9.005E-05
298	COMB1	-1.0000E-05	-0.007E-03	-1.590E-03	-3.071E-03	-6.114E-05	-3.070E-04
299	COMB2	-1.0000E-05	-0.0130	-9.118E-04	-6.093E-04	-4.476E-05	-1.150E-05
300	COMB3	-1.0000E-05	-0.0191	-9.981E-04	-2.460E-02	-3.000E-05	-3.174E-04
301	COMB4	-1.0000E-05	-0.0101	-1.100E-03	-2.581E-04	-9.000E-05	-1.302E-04
302	COMB5	-1.0000E-05	-0.0100	-1.360E-03	-3.049E-03	-4.807E-05	-3.903E-04
303	DL	-1.0000E-05	-0.0066	-1.109E-03	-1.580E-03	-1.176E-05	-1.936E-04
304	BL	-1.0000E-05	-0.0000E-04	-1.100E-04	-3.176E-04	-1.0000E-06	-3.043E-05
305	BLKA	-1.0000E-05	-0.0172	-4.330E-03	-2.234E-03	-9.071E-06	-2.350E-04
306	BLKI	-1.0000E-05	-0.0115	-3.141E-03	-5.667E-04	-1.0000E-06	-1.434E-04
307	COMB1	-1.0000E-05	-0.0116	-1.790E-03	-1.400E-03	-1.0000E-06	-3.459E-04
308	COMB2	-1.0000E-05	-0.0133	-1.030E-03	-8.091E-04	-1.0000E-06	-6.977E-05
309	COMB3	-1.0000E-05	-0.0152	-1.109E-03	-1.992E-03	-1.0000E-06	-3.567E-04
310	COMB4	-1.0000E-05	-0.0173	-1.340E-03	-4.433E-04	-1.0000E-06	-2.444E-04
311	COMB5	-1.0000E-05	-0.0169	-1.431E-03	-2.457E-03	-1.0000E-06	-4.157E-04
312	DL	-1.0000E-05	-0.0077E-03	-1.104E-03	-1.096E-03	-1.117E-04	-1.447E-04
313	BL	-1.0000E-05	-0.100E-06	-1.100E-04	-1.371E-04	-3.000E-06	-3.10E-05
314	BLKA	-1.0000E-05	-0.0141	-1.000E-05	-1.0000E-03	-1.0000E-06	-1.0000E-05
315	BLKI	-1.0000E-05	-0.0101	-3.046E-05	-1.600E-04	-1.0000E-06	-1.70E-04
316	COMB1	-1.0000E-05	-0.0000E-04	-1.000E-04	-1.0000E-03	-1.0000E-06	-1.0000E-05
317	COMB2	-1.0000E-05	-0.0101	-9.819E-04	-6.103E-04	-1.0000E-06	-1.0000E-04
318	COMB3	-1.0000E-05	-0.0101	-1.009E-03	-1.403E-03	-1.0000E-06	-3.955E-04
319	COMB4	-1.0000E-05	-0.0104	-1.100E-03	-2.460E-02	-1.0000E-06	-2.330E-04
320	COMB5	-1.0000E-05	-0.0101	-1.310E-03	-1.700E-03	-1.0000E-06	-4.000E-04
321	DL	-1.0000E-05	-0.001E-03	-1.014E-04	-6.589E-04	-1.599E-04	-4.069E-05
322	BL	-1.0000E-05	-0.0000E-04	-1.040E-04	-6.304E-04	-2.046E-05	-3.214E-06
323	BLKA	-1.0000E-05	-0.0000E-03	-1.184E-04	-1.028E-04	-1.0000E-06	-3.000E-04
324	BLKI	-1.0000E-05	-0.0000E-03	-1.104E-04	-1.000E-04	-1.0000E-06	-1.041E-04
325	COMB1	-1.0000E-05	-0.0000E-04	-0.933E-04	-5.910E-04	-2.693E-04	-6.10E-05
326	COMB2	-1.0000E-05	-0.0000E-03	-4.777E-04	-7.230E-04	-1.0000E-06	-2.000E-04
327	COMB3	-1.0000E-05	-0.0000E-03	-0.044E-04	-4.368E-04	-1.401E-04	-1.445E-04
328	COMB4	-1.0000E-05	-0.0000E-03	-6.367E-04	-1.152E-05	-2.100E-04	-2.678E-04
329	COMB5	-1.0000E-05	-0.0000E-03	-8.738E-04	-5.230E-04	-2.039E-04	-1.595E-04
330	DL	-1.0000E-05	-1.0000E-04	-9.932E-04	-1.926E-04	-9.698E-07	-9.531E-05
331	BL	-1.0000E-05	-1.0000E-04	-1.963E-04	-5.230E-05	-2.270E-04	-1.392E-05
332	BLKA	-1.0000E-05	-0.0000E-03	-1.184E-04	-1.028E-04	-1.0000E-06	-3.000E-04
333	BLKI	-1.0000E-05	-0.0000E-03	-1.104E-04	-1.000E-04	-1.0000E-06	-1.041E-04
334	COMB1	-1.0000E-05	-0.0000E-04	-0.933E-04	-5.910E-04	-2.693E-04	-6.10E-05
335	COMB2	-1.0000E-05	-0.0000E-03	-4.777E-04	-7.230E-04	-1.0000E-06	-2.000E-04
336	COMB3	-1.0000E-05	-0.0000E-03	-0.044E-04	-4.368E-04	-1.401E-04	-1.445E-04
337	COMB4	-1.0000E-05	-0.0000E-03	-6.367E-04	-1.152E-05	-2.100E-04	-2.678E-04
338	COMB5	-1.0000E-05	-0.0000E-03	-8.738E-04	-5.230E-04	-2.039E-04	-1.595E-04
339	DL	-1.0000E-05	-1.0000E-04	-9.932E-04	-1.926E-04	-9.698E-07	-9.531E-05
340	BL	-1.0000E-05	-1.0000E-04	-1.963E-04	-5.230E-05	-2.270E-04	-1.392E-05
341	BLKA	-1.0000E-05	-0.0000E-03	-1.184E-04	-1.028E-04	-1.0000E-06	-3.000E-04
342	BLKI	-1.0000E-05	-0.0000E-03	-1.104E-04	-1.000E-04	-1.0000E-06	-1.041E-04
343	COMB1	-1.0000E-05	-0.0000E-04	-0.933E-04	-5.910E-04	-2.693E-04	-6.10E-05
344	COMB2	-1.0000E-05	-0.0000E-03	-4.777E-04	-7.230E-04	-1.0000E-06	-2.000E-04
345	COMB3	-1.0000E-05	-0.0000E-03	-0.044E-04	-4.368E-04	-1.401E-04	-1.445E-04
346	COMB4	-1.0000E-05	-0.0000E-03	-6.367E-04	-1.152E-05	-2.100E-04	-2.678E-04
347	COMB5	-1.0000E-05	-0.0000E-03	-8.738E-04	-5.230E-04	-2.039E-04	-1.595E-04
348	DL	-1.0000E-05	-0.0000E-04	-9.972E-04	-1.976E-04	-1.0000E-06	-1.272E-04





177	DL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	ELKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	DL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	ELKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
178	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	DL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	ELKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
179	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	DL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	ELKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	DL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	ELKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
181	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	DL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	LL	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	ELKA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	ELKI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	COMB1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	COMB2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	COMB3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	COMB4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
182	COMB5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
183	DL	-8.095E-04	-9.303E-05	-1.160E-03	1.235E-04	-8.540E-04	-1.056E-04
183	LL	-8.335E-05	-1.098E-05	-4.876E-04	1.063E-04	-1.162E-04	-2.860E-05
183	ELKA	8.510E-05	8.537E-03	4.658E-05	-1.882E-05	1.607E-05	3.561E-05
183	ELKI	-3.601E-04	-8.486E-03	-1.776E-04	4.335E-05	-6.921E-05	-1.112E-04
183	COMB1	-3.600E-04	-1.129E-04	-3.372E-03	6.311E-04	-1.371E-03	-1.325E-04
183	COMB2	-4.459E-04	8.453E-03	-1.897E-03	3.644E-04	-7.123E-04	-1.498E-04
183	COMB3	-8.181E-04	-8.570E-03	-3.121E-03	1.260E-04	-3.375E-04	-0.263E-04
183	COMB4	-1.190E-04	8.359E-03	-3.526E-03	4.943E-04	-1.916E-03	-1.966E-04
183	COMB5	-1.075E-03	-9.015E-03	-2.761E-03	5.566E-04	-1.106E-03	-3.507E-04
184	DL	-6.005E-04	-1.050E-04	-8.841E-04	1.121E-04	-6.680E-04	-1.128E-04
184	LL	-3.121E-05	-2.430E-05	-1.827E-04	2.349E-05	-1.738E-04	-6.717E-05
184	ELKA	3.866E-05	8.710E-03	1.830E-05	2.367E-05	1.297E-05	-8.072E-06
184	ELKI	-3.695E-04	-8.810E-03	-3.357E-05	-3.104E-05	-6.721E-05	-3.345E-05
184	COMB1	-8.521E-04	-0.866E-04	-9.833E-04	1.801E-04	-1.988E-03	-1.269E-04
184	COMB2	-4.589E-04	8.527E-03	-8.974E-04	1.246E-04	-5.893E-04	-3.167E-04
184	COMB3	-8.181E-04	-8.593E-03	-6.093E-04	6.986E-05	-6.636E-04	-3.420E-04
184	COMB4	-8.976E-04	8.915E-03	-7.638E-04	1.605E-04	-8.016E-04	-3.081E-04
184	COMB5	-1.076E-03	-8.480E-03	-8.393E-04	1.931E-05	-6.818E-04	-4.249E-04
187	DL	-3.090E-05	-3.965E-04	-1.148E-03	-3.090E-04	1.370E-05	-1.351E-05
187	LL	-8.115E-06	-4.371E-05	-8.890E-05	-3.415E-04	3.847E-06	0.0000
187	ELKA	3.718E-05	8.309E-02	6.842E-04	-7.037E-04	-9.007E-06	4.315E-05
187	ELKI	-3.516E-05	-8.391E-03	-1.517E-04	7.354E-03	1.980E-05	-4.315E-05
187	COMB1	-3.327E-05	-8.337E-04	-1.423E-03	-9.183E-04	2.999E-05	-1.534E-05
187	COMB2	1.871E-05	4.981E-03	-3.487E-04	-9.829E-04	3.121E-06	3.190E-05
187	COMB3	-8.361E-05	-8.656E-03	-1.798E-03	5.071E-04	2.312E-05	-8.340E-05
187	COMB4	1.408E-05	5.141E-03	-5.049E-04	-1.279E-03	6.509E-06	3.205E-05
187	COMB5	-8.136E-05	-6.007E-03	-2.818E-03	2.847E-04	2.751E-05	-5.751E-05
189	DL	1.346E-05	-1.682E-04	-2.014E-03	-4.319E-04	-3.719E-04	-4.175E-05
189	LL	5.270E-06	-1.340E-05	-4.678E-04	-1.074E-04	-9.123E-05	-5.417E-06
189	ELKA	-1.586E-04	8.531E-03	-4.739E-04	-2.064E-04	2.093E-05	9.964E-05
189	ELKI	3.728E-04	-8.442E-03	4.820E-04	2.421E-04	-7.746E-05	-2.284E-04
189	COMB1	6.060E-05	-1.514E-04	-3.165E-03	-6.900E-04	-5.921E-04	-5.977E-05
189	COMB2	-1.325E-04	3.434E-03	-2.287E-03	-5.956E-04	-3.138E-04	6.206E-05
189	COMB3	3.972E-04	-8.539E-03	-1.331E-03	-1.465E-04	-4.121E-04	-2.660E-04
189	COMB4	-1.176E-04	8.936E-03	-3.907E-03	-7.277E-04	-4.260E-04	5.737E-05
189	COMB5	1.257E-04	-8.936E-03	-1.903E-03	-2.669E-04	-5.292E-04	-2.871E-04
190	DL	-1.691E-04	-4.757E-04	-3.030E-03	4.465E-04	-3.601E-04	-7.736E-05
190	LL	-1.194E-05	-8.197E-06	-4.694E-04	1.094E-04	-3.048E-05	-1.100E-05
190	ELKA	3.567E-04	8.438E-03	4.937E-04	-2.415E-04	-7.197E-05	2.385E-04
190	ELKI	-1.070E-04	-8.540E-03	-4.838E-04	2.070E-04	1.640E-05	-1.004E-04
190	COMB1	-1.161E-04	-1.349E-05	-3.187E-03	7.108E-04	-8.753E-04	-1.164E-04
190	COMB2	3.845E-04	8.357E-03	-1.333E-03	1.599E-04	-3.852E-04	1.689E-04
190	COMB3	-8.197E-04	-8.671E-03	-2.311E-03	6.088E-04	-3.977E-04	-1.720E-04
190	COMB4	2.346E-04	4.764E-03	-1.909E-03	2.837E-04	-5.091E-04	1.623E-04









310	COMB1	-1.354E-05	1.550E-03	-2.175E-03	4.750E-04	1.500E-03	-2.160E-05
310	LL	-1.354E-05	-2.384E-03	-1.361E-03	2.300E-04	-1.640E-03	2.31E-06
310	ELKA	-1.620E-05	2.350E-03	-2.817E-03	2.120E-04	-1.940E-03	-2.771E-05
310	ELK1	-1.990E-05	-2.416E-03	-3.239E-03	4.560E-04	-3.070E-03	1.990E-06
311	COMB1	-1.344E-05	2.387E-04	-1.060E-03	-8.197E-04	1.144E-04	2.280E-04
311	LL	-1.344E-05	1.490E-04	-1.747E-04	-2.276E-04	2.972E-05	1.074E-05
311	ELKA	-1.344E-05	2.960E-03	-2.895E-04	-2.790E-04	-1.790E-04	1.994E-04
311	ELK1	-2.190E-05	-2.0114	7.975E-05	9.364E-04	2.405E-05	-1.940E-03
311	COMB2	-1.340E-05	3.099E-04	-1.563E-03	-1.320E-03	1.937E-04	2.193E-01
311	COMB3	1.613E-05	9.883E-03	-1.051E-03	-1.077E-03	9.612E-04	4.763E-04
311	COMB4	1.984E-04	-2.0111	-8.817E-04	2.003E-04	1.260E-03	-1.120E-04
311	COMB5	1.434E-05	0.0101	-1.208E-03	-1.252E-02	1.813E-04	2.583E-04
311	COMB6	-1.170E-04	-2.0111	-1.149E-03	-2.480E-06	7.781E-04	-2.416E-04
312	COMB1	2.790E-05	1.891E-04	-2.945E-03	-1.090E-02	2.490E-01	-2.160E-05
312	LL	2.790E-05	1.413E-05	-2.823E-04	-2.960E-04	2.175E-05	-2.177E-06
312	ELKA	-1.941E-04	9.369E-03	-2.834E-04	-3.460E-04	6.231E-04	1.756E-04
312	ELK1	2.790E-05	-2.0111	1.761E-03	2.940E-04	-2.145E-04	-2.851E-04
312	COMB2	2.790E-05	3.090E-04	-1.636E-03	-1.790E-03	2.443E-04	1.411E-04
312	COMB3	-1.415E-04	9.883E-03	-3.344E-03	-1.330E-03	2.943E-04	1.623E-04
312	COMB4	2.790E-05	-2.0111	-2.880E-04	-4.891E-05	-1.790E-04	-2.195E-04
312	COMB5	-1.170E-04	2.0101	-4.294E-03	-1.697E-02	1.992E-04	2.796E-04
312	COMB6	2.790E-05	-2.0111	-1.677E-03	-2.822E-04	-2.934E-05	-2.422E-04
313	COMB1	1.430E-05	2.390E-04	-2.199E-03	-1.260E-03	2.013E-04	-2.344E-05
313	LL	2.0000	7.590E-05	-2.927E-04	-3.644E-04	2.172E-05	0.0000
313	ELKA	-1.620E-04	0.0101	-2.742E-04	-4.644E-04	2.909E-05	2.093E-05
313	ELK1	2.360E-04	-2.0111	2.900E-03	1.580E-03	-1.600E-04	-2.379E-04
313	COMB2	1.620E-05	1.710E-03	-4.247E-03	-1.990E-03	2.923E-04	-1.973E-05
313	COMB3	-1.410E-04	2.0109	-2.753E-03	-1.590E-03	2.103E-04	7.583E-01
313	COMB4	1.620E-04	-2.0134	2.173E-05	1.460E-04	0.0000	-2.390E-04
313	COMB5	-1.170E-04	0.0116	-4.713E-03	-1.003E-03	2.619E-04	2.604E-05
313	COMB6	1.620E-04	-2.0139	-7.499E-04	1.44E-01	1.140E-05	-1.790E-04
314	COMB1	-1.344E-05	2.387E-03	-1.909E-03	-1.205E-03	1.190E-04	2.145E-05
314	LL	2.0000	1.114E-04	-2.940E-04	-3.067E-04	2.207E-06	1.153E-05
314	ELKA	-1.620E-04	2.0100	-2.450E-05	-2.111E-04	-1.220E-06	2.090E-04
314	ELK1	-2.473E-04	-2.0159	3.057E-05	1.931E-03	2.911E-04	-2.544E-04
314	COMB2	-1.344E-05	1.460E-03	-1.790E-03	-1.910E-03	2.190E-04	1.641E-04
314	COMB3	-2.011E-05	2.0119	-1.771E-03	-1.605E-03	2.618E-06	2.147E-04
314	COMB4	-2.438E-05	-2.0148	-1.686E-03	2.460E-04	1.486E-05	-1.990E-04
314	COMB5	1.620E-04	2.0176	-2.140E-03	-2.000E-02	1.380E-05	2.480E-04
314	COMB6	-1.620E-04	-2.0154	-2.150E-03	2.61E-04	2.103E-04	-1.997E-04
315	COMB1	2.190E-05	1.074E-03	-4.420E-03	-1.420E-02	7.290E-05	2.480E-05
315	LL	2.190E-05	2.124E-04	-2.715E-04	-2.790E-04	1.790E-04	2.135E-04
315	ELKA	-1.620E-04	2.0109	-2.748E-04	-2.224E-04	2.290E-04	1.764E-04
315	ELK1	2.190E-05	-2.0159	3.552E-03	1.940E-03	-2.126E-04	-4.236E-04
315	COMB2	2.190E-05	1.460E-03	-2.859E-03	-2.325E-03	1.172E-04	2.929E-05
315	COMB3	-1.410E-04	2.0118	-2.954E-03	-1.803E-03	2.330E-04	1.980E-04
315	COMB4	2.190E-05	-2.0148	-2.369E-04	6.597E-04	-1.450E-04	-2.812E-04
315	COMB5	-1.620E-04	2.0126	-2.279E-03	-2.286E-03	1.236E-04	2.151E-04
315	COMB6	2.190E-05	-2.0154	-1.580E-03	1.004E-04	-1.000E-04	-1.330E-04
316	COMB1	2.390E-05	1.170E-03	-4.673E-03	-1.461E-02	-2.890E-01	-2.199E-05
316	LL	2.0000	1.250E-04	-2.927E-04	-3.467E-04	1.231E-06	0.0000
316	ELKA	-1.620E-04	0.0115	-1.065E-03	-2.706E-03	1.790E-05	2.154E-05
316	ELK1	2.390E-05	-2.0133	4.000E-03	2.233E-03	-2.307E-05	-1.974E-04
316	COMB2	2.417E-05	1.620E-03	-2.687E-03	-2.332E-03	-2.349E-05	-2.651E-05
316	COMB3	-1.678E-04	2.0126	-4.359E-03	-1.904E-03	-1.637E-05	2.175E-05
316	COMB4	2.390E-05	-2.0162	2.367E-04	2.295E-04	-1.736E-04	-2.172E-04
316	COMB5	-1.170E-04	2.0134	-1.170E-03	-2.297E-03	1.203E-05	2.151E-05
316	COMB6	2.390E-05	-2.0139	-1.880E-03	2.200E-03	-1.360E-04	-1.504E-04
317	COMB1	-1.997E-05	7.230E-04	-1.624E-03	-1.294E-03	-1.522E-05	-1.907E-04
317	LL	-1.997E-05	1.161E-04	-2.855E-04	-3.260E-04	-7.660E-06	-2.753E-06
317	ELKA	2.390E-05	0.0130	-2.894E-05	-6.080E-04	-1.146E-06	1.643E-04
317	ELK1	-1.990E-05	-2.0181	2.196E-05	2.393E-03	3.023E-06	-2.663E-04
317	COMB2	-1.990E-05	1.684E-03	-2.406E-03	-2.075E-03	-2.682E-05	-2.428E-04
317	COMB3	2.345E-06	2.0127	-1.190E-03	-1.773E-03	-1.484E-05	-7.312E-06
317	COMB4	-7.887E-05	-2.0124	-1.410E-03	1.219E-03	-1.988E-05	-4.378E-04
317	COMB5	1.463E-06	2.0134	-1.926E-03	-2.203E-03	-2.201E-05	-3.322E-05
317	COMB6	-2.015E-05	-2.0181	-1.830E-03	9.382E-04	-1.763E-05	-4.853E-04
318	COMB1	1.465E-05	7.231E-04	-4.338E-03	-1.552E-03	-4.451E-05	-1.043E-04
318	LL	2.0000	1.161E-04	-2.855E-04	-1.643E-04	-2.370E-06	-2.317E-06
318	ELKA	-1.990E-04	2.0130	-1.134E-03	-2.080E-04	1.440E-05	1.219E-04
318	ELK1	2.390E-05	-2.0181	4.249E-03	2.388E-03	-2.009E-05	-2.160E-04
318	COMB2	1.997E-05	1.684E-03	-2.790E-03	-2.590E-03	-2.681E-05	-1.390E-04
318	COMB3	-7.958E-05	2.0127	-5.036E-03	-2.005E-03	-1.557E-05	2.705E-05
318	COMB4	1.465E-04	-2.0174	4.478E-04	9.911E-04	-1.301E-04	-2.099E-04
318	COMB5	-7.945E-05	2.0134	-6.370E-03	-2.523E-03	-2.629E-05	1.534E-05
318	COMB6	2.329E-04	-2.0181	-6.125E-04	2.230E-04	-1.466E-04	-2.385E-04
319	COMB1	2.545E-05	2.390E-04	-2.279E-03	-1.260E-03	-1.730E-04	-2.209E-05
319	LL	-1.190E-06	2.150E-04	-1.711E-04	-2.267E-04	-1.260E-04	0.0000
319	ELKA	-1.990E-04	2.0134	-1.190E-03	-2.420E-04	1.070E-04	2.095E-05
319	ELK1	1.710E-04	-2.0187	4.573E-03	2.512E-02	-2.491E-05	-1.173E-04



337	ELK1	-1.111E-04	-0.0167	-4.572E-03	-1.211E-02	3.191E-05	-1.173E-04
338	ELK2	-1.111E-04	1.632E-04	-8.399E-03	-2.155E-02	1.333E-04	-1.594E-05
339	ELK3	-1.111E-04	0.0136	-4.143E-03	-1.259E-02	1.457E-04	-8.179E-05
339	COMB3	-1.927E-04	-0.0195	1.631E-03	1.299E-03	1.913E-04	1.372E-04
339	COMB4	-1.927E-04	0.0135	-8.154E-04	-1.307E-03	1.409E-04	-1.769E-05
339	COMB5	-1.927E-04	-0.0194	-2.921E-04	-1.993E-04	1.472E-04	1.179E-04
339	EL	1.927E-04	1.732E-04	-1.623E-03	-1.294E-02	1.122E-05	-1.597E-04
339	LL	1.927E-04	1.163E-04	-1.285E-04	-5.262E-04	1.669E-06	1.762E-06
339	ELKA	-1.111E-04	0.0139	-8.266E-03	-6.066E-02	1.176E-06	-1.143E-04
339	ELK1	-1.111E-04	-0.0121	-1.196E-03	1.353E-03	-3.022E-06	-1.662E-04
339	COMB1	-1.927E-04	1.695E-03	-3.496E-03	-1.977E-02	1.653E-05	-2.479E-04
339	COMB2	-1.927E-04	0.0127	-1.509E-03	-1.773E-03	1.185E-06	7.137E-06
339	COMB3	-1.927E-04	-0.0124	-1.470E-03	1.113E-02	1.293E-06	4.774E-04
339	COMB4	-1.927E-04	0.0131	-1.926E-03	-1.293E-02	1.341E-06	3.323E-05
339	COMB5	-1.927E-04	-0.0131	-1.250E-03	-9.527E-04	1.465E-06	-1.494E-04
340	EL	-1.111E-04	1.732E-04	-1.325E-03	-1.562E-03	4.151E-05	-1.043E-04
340	LL	0.0000	1.166E-04	-9.959E-04	-4.643E-04	0.374E-06	3.356E-06
340	ELKA	1.927E-04	0.0129	-1.134E-03	-6.083E-04	-2.149E-05	-1.110E-04
340	ELK1	-1.927E-04	-0.0181	4.349E-03	2.389E-03	9.009E-05	2.160E-04
340	COMB1	-1.927E-04	1.853E-03	-6.796E-03	-1.599E-02	6.682E-06	-1.366E-04
340	COMB2	-1.927E-04	0.0127	-8.036E-03	-2.995E-03	1.857E-06	-2.794E-05
340	COMB3	-1.927E-04	-0.0124	-1.473E-04	3.911E-04	1.392E-04	1.699E-04
340	COMB4	1.944E-05	0.0134	-6.370E-03	-2.533E-03	1.636E-05	-1.533E-05
340	COMB5	-1.629E-04	-0.0131	-6.124E-04	6.236E-04	1.466E-04	3.355E-04
341	EL	-1.927E-04	1.173E-03	-5.673E-03	-1.431E-02	3.399E-05	-2.179E-05
341	LL	0.0000	1.351E-04	-7.997E-04	-3.466E-04	-1.280E-06	0.0000
341	ELKA	1.943E-04	0.0115	-1.863E-03	-3.766E-03	-1.200E-05	-8.154E-05
341	ELK1	-1.967E-04	-0.0122	4.969E-03	2.233E-03	8.307E-05	1.974E-04
341	COMB1	-1.177E-04	1.609E-03	-5.687E-03	-2.333E-03	1.359E-05	-1.651E-05
341	COMB2	1.076E-04	0.0126	-4.369E-03	-1.964E-03	1.637E-05	-6.175E-05
341	COMB3	-3.233E-04	-0.0162	1.637E-04	3.995E-04	1.173E-04	2.172E-04
341	COMB4	1.109E-04	0.0134	-8.477E-02	-1.373E-03	2.022E-05	-8.248E-05
341	COMB5	-8.311E-04	-0.0168	-8.664E-05	9.795E-04	1.263E-04	1.394E-04
342	EL	1.071E-04	1.074E-03	-1.929E-03	-1.295E-03	-1.295E-05	-7.144E-04
342	LL	0.0000	1.114E-04	-2.946E-04	-3.937E-04	-6.377E-06	-1.133E-05
342	ELKA	-1.071E-04	0.0199	-3.459E-05	-8.311E-04	2.929E-06	-2.564E-04
342	ELK1	3.871E-04	-3.0153	5.687E-05	1.931E-03	-5.711E-06	6.543E-04
342	COMB1	1.314E-04	1.467E-03	-2.787E-03	-1.940E-03	-2.323E-05	-1.942E-04
342	COMB2	-2.012E-05	0.0119	-1.771E-03	-1.605E-03	-7.019E-06	-3.137E-04
342	COMB3	9.434E-05	-0.0148	-1.686E-03	3.466E-04	-1.496E-05	4.900E-04
342	COMB4	-1.987E-05	0.0126	-2.348E-03	-2.067E-03	-1.282E-05	-3.452E-04
342	COMB5	1.693E-04	-0.0154	-2.159E-03	5.637E-04	-2.195E-05	4.297E-04
343	EL	-1.109E-04	1.973E-03	-4.471E-03	-1.422E-03	-7.336E-05	-2.490E-05
343	LL	0.0000	1.113E-04	-9.719E-04	-3.355E-04	-1.268E-05	-1.393E-06
343	ELKA	1.507E-04	0.0108	-9.748E-04	-5.224E-04	-3.399E-05	-1.764E-04
343	ELK1	-2.459E-04	-0.0153	3.542E-03	1.940E-03	2.156E-04	4.036E-04
343	COMB1	-2.149E-05	1.466E-03	-6.959E-03	-3.325E-03	-1.172E-04	-3.928E-03
343	COMB2	3.312E-04	0.0119	-4.954E-03	-1.803E-03	-9.965E-05	-1.988E-04
343	COMB3	-3.854E-04	-0.0143	-4.369E-04	6.597E-04	1.450E-04	3.812E-04
343	COMB4	1.459E-04	0.0126	-6.278E-03	-2.286E-03	-1.236E-04	-2.151E-04
343	COMB5	-3.463E-04	-0.0154	-1.535E-03	3.064E-04	1.333E-04	3.932E-04
344	EL	-1.106E-04	3.308E-04	-3.199E-03	-1.200E-03	-3.613E-04	2.344E-05
344	LL	0.0000	1.096E-04	-6.937E-04	-3.044E-04	-3.173E-05	0.0000
344	ELKA	1.630E-04	0.0103	-3.743E-04	-4.646E-04	-3.999E-05	-9.493E-05
344	ELK1	-3.396E-04	-0.0141	2.999E-03	1.566E-03	1.308E-04	2.379E-04
344	COMB1	-1.233E-04	1.114E-03	-4.947E-03	-1.399E-03	-2.323E-04	-1.673E-05
344	COMB2	1.479E-04	0.0109	-3.753E-03	-1.599E-03	-2.193E-04	-7.854E-05
344	COMB3	-1.076E-04	-0.0134	-1.214E-03	1.489E-04	0.0000	1.890E-04
344	COMB4	1.041E-04	0.0116	-4.713E-03	-2.093E-03	-2.619E-04	-7.654E-05
344	COMB5	-4.037E-04	-0.0139	-7.499E-04	1.442E-04	-4.146E-05	2.750E-04
345	EL	1.343E-04	1.189E-04	-1.069E-03	-9.107E-04	-1.146E-04	-2.299E-04
345	LL	1.229E-04	1.496E-05	-1.747E-04	-2.179E-04	-2.972E-05	-8.174E-05
345	ELKA	-1.343E-04	0.0108	-6.895E-05	-3.473E-04	1.392E-05	-1.664E-04
345	ELK1	2.104E-04	-0.0114	7.975E-05	9.384E-04	-2.405E-05	1.649E-03
345	COMB1	1.927E-05	3.099E-04	-1.563E-03	-1.329E-03	-1.987E-04	-3.123E-04
345	COMB2	-1.621E-05	3.583E-03	-1.031E-03	-1.977E-03	-9.413E-05	-4.763E-04
345	COMB3	1.931E-04	-0.0111	-9.827E-04	2.088E-04	-1.362E-04	6.420E-04
345	COMB4	-1.484E-05	0.0101	-1.305E-03	-1.352E-03	-1.313E-04	-5.386E-04
345	COMB5	1.168E-04	-0.0117	-1.149E-03	-2.653E-06	-1.754E-04	8.456E-04
346	EL	-1.261E-04	1.391E-04	-2.945E-03	-1.092E-03	-3.499E-04	-9.180E-05
346	LL	-1.024E-04	1.113E-05	-6.992E-04	-2.356E-04	-7.775E-05	-8.173E-06
346	ELKA	1.641E-04	0.0108	-6.934E-04	-3.469E-04	-6.931E-05	-1.786E-04
346	ELK1	-3.937E-04	-0.0114	1.761E-03	9.346E-04	4.445E-04	6.931E-04
346	COMB1	-3.969E-05	3.099E-04	-4.636E-03	-1.783E-03	-5.443E-04	-1.113E-04
346	COMB2	1.439E-04	3.983E-03	-3.344E-03	-1.339E-03	-3.942E-04	-2.503E-04
346	COMB3	-4.134E-04	-0.0111	-8.888E-04	-4.890E-05	1.296E-04	8.295E-04
346	COMB4	1.475E-04	0.0101	-4.254E-03	-1.697E-03	-4.892E-04	-2.786E-03
346	COMB5	-1.593E-04	-0.0117	-1.377E-03	-3.502E-04	5.034E-05	5.422E-04
347	EL	6.050E-04	-2.939E-04	-6.841E-04	1.121E-04	6.682E-04	3.429E-04
347	LL	6.029E-05	-1.032E-05	-1.627E-04	2.349E-05	1.798E-04	4.717E-05









376	ELBA	-1.170E-03	-7.530E-03	-9.950E-03	-1.720E-04	-1.401E-05	-3.377E-05
377	EL	2.380E-04	-1.430E-04	-1.545E-03	-1.417E-03	-1.590E-04	9.168E-06
377	EL	9.406E-03	-1.700E-03	-1.183E-04	-2.500E-04	-1.200E-05	2.140E-06
377	ELBA	-4.157E-03	7.060E-03	-9.354E-05	-2.479E-04	-6.196E-06	4.260E-05
377	ELK1	1.119E-05	-7.066E-03	5.802E-05	2.466E-04	-1.604E-05	-1.620E-05
377	COMB1	1.203E-04	-7.330E-04	-2.043E-03	-2.101E-03	-2.654E-04	7.619E-06
377	ELBA	1.009E-04	6.931E-03	-1.494E-03	-1.525E-03	-4.472E-04	1.720E-05
377	ELK1	7.361E-03	-1.145E-03	-1.330E-03	-1.020E-03	-1.197E-04	-1.150E-05
377	COMB1	1.675E-03	1.132E-03	-1.779E-03	-1.967E-03	-2.134E-04	2.141E-05
377	ELBA	1.228E-04	-1.490E-03	-1.636E-03	-1.387E-03	-2.171E-04	-1.020E-05
378	EL	-1.441E-04	-1.396E-04	-1.561E-03	1.420E-03	4.267E-04	1.764E-05
378	EL	-1.143E-04	-1.679E-05	-1.185E-04	2.520E-04	-1.200E-05	4.659E-06
378	ELBA	-1.143E-03	7.071E-03	1.098E-05	-2.461E-04	2.666E-06	-1.711E-05
378	ELK1	6.111E-05	-7.069E-03	-9.598E-05	2.480E-04	2.723E-06	4.111E-05
378	COMB1	-1.713E-04	-1.956E-04	-2.064E-03	2.115E-03	7.677E-04	1.362E-05
378	ELBA	-1.034E-04	6.951E-03	-1.347E-03	1.037E-03	4.067E-04	-1.234E-06
378	ELK1	4.173E-04	-1.134E-03	-1.501E-03	1.851E-03	7.047E-04	8.726E-05
378	COMB1	1.229E-04	1.125E-03	-1.653E-03	1.398E-03	2.140E-04	2.480E-06
378	ELBA	-1.564E-04	-7.579E-03	-1.015E-03	1.917E-03	2.270E-04	6.420E-05
379	EL	1.891E-04	-1.514E-04	-1.557E-02	-1.237E-06	1.862E-03	5.611E-06
379	EL	-2.179E-06	-1.668E-05	-1.498E-03	0.0000	7.200E-05	9.0600
379	ELBA	2.153E-06	7.053E-03	-1.507E-05	1.601E-04	7.300E-06	-2.077E-05
379	ELK1	1.290E-06	-1.067E-03	-1.570E-05	-1.604E-04	4.966E-06	1.594E-05
379	COMB1	7.128E-04	-1.593E-03	-1.0106	-5.169E-06	1.731E-03	6.300E-06
379	ELBA	1.977E-05	6.931E-03	-7.282E-03	1.366E-04	7.231E-03	-1.174E-05
379	COMB1	1.249E-05	-7.175E-03	-7.253E-03	-1.643E-04	1.231E-03	3.099E-05
379	ELBA	1.036E-06	1.033E-03	-9.359E-03	1.634E-03	1.541E-03	-1.161E-05
379	ELK1	1.487E-03	-7.389E-03	-9.930E-03	-1.732E-04	1.481E-03	3.525E-05
379	EL	-1.548E-04	-1.483E-04	-1.548E-03	-1.417E-03	1.896E-04	-5.160E-06
379	EL	-2.407E-03	-1.709E-03	-1.183E-04	-2.500E-04	-1.200E-05	-1.149E-06
379	ELBA	1.157E-03	7.060E-03	-2.354E-05	-2.479E-04	6.196E-06	-4.260E-05
379	ELK1	-1.119E-05	-7.066E-03	5.802E-05	2.466E-04	-1.604E-05	-1.620E-05
379	COMB1	-4.293E-04	-1.993E-04	-2.043E-03	-2.102E-03	2.654E-04	-9.540E-06
379	ELBA	-1.009E-04	6.931E-03	-1.494E-03	-1.525E-03	-4.472E-04	1.720E-05
379	ELK1	1.203E-04	-7.330E-04	-2.043E-03	-2.102E-03	2.654E-04	-9.540E-06
379	COMB1	1.203E-04	-7.330E-04	-2.043E-03	-2.102E-03	2.654E-04	-9.540E-06
379	ELBA	-1.034E-04	6.951E-03	-1.347E-03	-1.525E-03	-4.472E-04	1.720E-05
379	ELK1	7.361E-03	-1.145E-03	-1.330E-03	-1.020E-03	-1.197E-04	-1.150E-05
379	COMB1	1.675E-03	1.132E-03	-1.779E-03	-1.967E-03	-2.134E-04	2.141E-05
380	EL	1.132E-04	-1.199E-04	-1.661E-03	-1.308E-04	5.463E-04	-1.417E-05
380	EL	1.860E-06	-1.705E-05	-1.600E-03	1.001E-04	2.318E-05	6.0000
380	ELBA	-1.143E-03	7.071E-03	1.098E-05	-2.461E-04	2.666E-06	-1.711E-05
380	ELK1	6.111E-05	-7.069E-03	-9.598E-05	2.480E-04	2.723E-06	4.111E-05
380	COMB1	-1.713E-04	-1.956E-04	-2.064E-03	2.115E-03	7.677E-04	1.362E-05
380	ELBA	-1.034E-04	6.951E-03	-1.347E-03	1.037E-03	4.067E-04	-1.234E-06
380	ELK1	4.173E-04	-1.134E-03	-1.501E-03	1.851E-03	7.047E-04	8.726E-05
380	COMB1	1.229E-04	1.125E-03	-1.653E-03	1.398E-03	2.140E-04	2.480E-06
380	ELBA	-1.564E-04	-7.579E-03	-1.015E-03	1.917E-03	2.270E-04	6.420E-05
381	EL	1.132E-04	-1.199E-04	-1.661E-03	-1.308E-04	5.463E-04	-1.417E-05
381	EL	1.860E-06	-1.705E-05	-1.600E-03	1.001E-04	2.318E-05	6.0000
381	ELBA	-1.143E-03	7.071E-03	1.098E-05	-2.461E-04	2.666E-06	-1.711E-05
381	ELK1	6.111E-05	-7.069E-03	-9.598E-05	2.480E-04	2.723E-06	4.111E-05
381	COMB1	-1.713E-04	-1.956E-04	-2.064E-03	2.115E-03	7.677E-04	1.362E-05
381	ELBA	-1.034E-04	6.951E-03	-1.347E-03	1.037E-03	4.067E-04	-1.234E-06
381	ELK1	4.173E-04	-1.134E-03	-1.501E-03	1.851E-03	7.047E-04	8.726E-05
381	COMB1	1.229E-04	1.125E-03	-1.653E-03	1.398E-03	2.140E-04	2.480E-06
381	ELBA	-1.564E-04	-7.579E-03	-1.015E-03	1.917E-03	2.270E-04	6.420E-05
382	EL	1.132E-04	-1.199E-04	-1.661E-03	-1.308E-04	5.463E-04	-1.417E-05
382	EL	1.860E-06	-1.705E-05	-1.600E-03	1.001E-04	2.318E-05	6.0000
382	ELBA	-1.143E-03	7.071E-03	1.098E-05	-2.461E-04	2.666E-06	-1.711E-05
382	ELK1	6.111E-05	-7.069E-03	-9.598E-05	2.480E-04	2.723E-06	4.111E-05
382	COMB1	-1.713E-04	-1.956E-04	-2.064E-03	2.115E-03	7.677E-04	1.362E-05
382	ELBA	-1.034E-04	6.951E-03	-1.347E-03	1.037E-03	4.067E-04	-1.234E-06
382	ELK1	4.173E-04	-1.134E-03	-1.501E-03	1.851E-03	7.047E-04	8.726E-05
382	COMB1	1.229E-04	1.125E-03	-1.653E-03	1.398E-03	2.140E-04	2.480E-06
382	ELBA	-1.564E-04	-7.579E-03	-1.015E-03	1.917E-03	2.270E-04	6.420E-05
383	EL	1.132E-04	-1.199E-04	-1.661E-03	-1.308E-04	5.463E-04	-1.417E-05
383	EL	1.860E-06	-1.705E-05	-1.600E-03	1.001E-04	2.318E-05	6.0000
383	ELBA	-1.143E-03	7.071E-03	1.098E-05	-2.461E-04	2.666E-06	-1.711E-05
383	ELK1	6.111E-05	-7.069E-03	-9.598E-05	2.480E-04	2.723E-06	4.111E-05
383	COMB1	-1.713E-04	-1.956E-04	-2.064E-03	2.115E-03	7.677E-04	1.362E-05
383	ELBA	-1.034E-04	6.951E-03	-1.347E-03	1.037E-03	4.067E-04	-1.234E-06
383	ELK1	4.173E-04	-1.134E-03	-1.501E-03	1.851E-03	7.047E-04	8.726E-05
383	COMB1	1.229E-04	1.125E-03	-1.653E-03	1.398E-03	2.140E-04	2.480E-06
383	ELBA	-1.564E-04	-7.579E-03	-1.015E-03	1.917E-03	2.270E-04	6.420E-05
384	EL	1.132E-04	-1.199E-04	-1.661E-03	-1.308E-04	5.463E-04	-1.417E-05
384	EL	1.860E-06	-1.705E-05	-1.600E-03	1.001E-04	2.318E-05	6.0000
384	ELBA	-1.143E-03	7.071E-03	1.098E-05	-2.461E-04	2.666E-06	-1.711E-05
384	ELK1	6.111E-05	-7.069E-03	-9.598E-05	2.480E-04	2.723E-06	4.111E-05
384	COMB1	-1.713E-04	-1.956E-04	-2.064E-03	2.115E-03	7.677E-04	1.362E-05
384	ELBA	-1.034E-04	6.951E-03	-1.347E-03	1.037E-03	4.067E-04	-1.234E-06
384	ELK1	4.173E-04	-1.134E-03	-1.501E-03	1.851E-03	7.047E-04	8.726E-05
384	COMB1	1.229E-04	1.125E-03	-1.653E-03	1.398E-03	2.140E-04	2.480E-06
384	ELBA	-1.564E-04	-7.579E-03	-1.015E-03	1.917E-03	2.270E-04	6.420E-05
385	EL	1.132E-04	-1.199E-04	-1.661E-03	-1.308E-04	5.463E-04	-1.417E-05
385	EL	1.860E-06	-1.705E-05	-1.600E-03	1.001E-04	2.318E-05	6.0000
385	ELBA	-1.143E-03	7.071E-03	1.098E-05	-2.461E-04	2.666E-06	-1.711E-05
385	ELK1	6.111E-05	-7.069E-03	-9.598E-05	2.480E-04	2.723E-06	4.111E-05
385	COMB1	-1.713E-04	-1.956E-04	-2.064E-03	2.115E-03	7.677E-04	1.362E-05
385	ELBA	-1.034E-04	6.951E-03	-1.347E-03	1.037E-03	4.067E-04	-1.234E-06
385	ELK1	4.173E-04	-1.134E-03	-1.501E-03	1.851E-03	7.047E-04	8.726E-05
385	COMB1	1.229E-04	1.125E-03	-1.653E-03	1.398E-03	2.140E-04	2.480E-06
385	ELBA	-1.564E-04	-7.579E-03	-1.015E-03	1.917E-03	2.270E-04	6.420E-05



395	COMB4	-1.183E-05	1.769E-05	-4.243E-05	-1.532E-05	-7.150E-05	3.175E-05
395	COMB5	-8.652E-04	-0.0111	-9.246E-04	8.696E-04	-1.397E-01	-1.143E-04
396	IL	-1.135E-04	-1.380E-03	-8.842E-04	-9.004E-04	1.918E-04	5.976E-05
396	IL	-1.361E-05	-1.654E-04	1.956E-05	3.163E-07	7.401E-05	6.759E-06
396	ELKA	1.184E-04	9.657E-05	-1.238E-05	-8.173E-04	-1.366E-05	-1.159E-04
396	ELKT	-2.177E-04	-9.031E-03	2.343E-03	1.354E-05	1.048E-01	1.355E-04
396	COMB1	-1.143E-04	-1.392E-05	-1.079E-03	7.608E-07	1.035E-01	1.013E-05
396	COMB2	1.697E-05	8.491E-05	-2.054E-03	-2.463E-04	9.990E-05	-6.176E-05
396	COMB3	-3.149E-04	-0.0110	1.517E-05	1.134E-05	1.431E-04	1.599E-04
396	COMB4	2.012E-05	1.681E-05	-1.341E-05	-9.179E-04	6.437E-04	-1.278E-01
396	COMB5	-9.611E-04	-0.0113	1.914E-05	1.001E-05	1.151E-04	1.991E-04
397	IL	-1.135E-04	-4.119E-04	-1.065E-03	-1.360E-04	-8.146E-05	4.147E-05
397	IL	-2.123E-05	-1.754E-07	1.000E-07	1.001E-01	-1.375E-05	9.050E-06
397	ELKA	1.177E-04	8.943E-05	-9.878E-04	-9.394E-04	2.943E-06	-1.106E-04
397	ELKT	-2.184E-04	-9.111E-03	1.667E-03	8.975E-04	9.675E-06	1.173E-04
397	COMB1	-1.135E-04	-8.614E-04	-1.131E-03	-6.450E-06	-1.734E-04	5.315E-05
397	COMB2	1.697E-05	8.491E-05	-2.054E-03	-6.351E-04	-4.393E-04	-9.997E-07
397	COMB3	-3.149E-04	-0.0110	1.517E-05	1.134E-05	1.431E-04	1.599E-04
397	COMB4	2.012E-05	1.681E-05	-1.341E-05	-9.179E-04	6.437E-04	-1.278E-01
397	COMB5	-9.611E-04	-0.0113	1.914E-05	1.001E-05	1.151E-04	1.991E-04
398	IL	-1.135E-04	-3.999E-04	-2.800E-03	-8.719E-04	9.065E-05	6.955E-05
398	IL	-1.361E-05	-1.653E-04	-1.777E-04	5.313E-05	1.349E-05	8.296E-06
398	ELKA	1.177E-04	8.943E-05	-1.238E-05	-8.173E-04	-1.366E-05	-1.159E-04
398	ELKT	-2.177E-04	-9.031E-03	2.343E-03	1.354E-05	1.048E-01	1.355E-04
398	COMB1	-1.143E-04	-1.392E-05	-1.079E-03	7.608E-07	1.035E-01	1.013E-05
398	COMB2	1.697E-05	8.491E-05	-2.054E-03	-9.149E-04	1.232E-04	9.678E-05
398	COMB3	-3.149E-04	-0.0103	1.517E-05	-1.411E-03	6.352E-05	-3.999E-07
398	COMB4	2.012E-05	1.681E-05	-1.341E-05	-4.187E-04	3.814E-04	1.699E-04
398	COMB5	-9.611E-04	-0.0111	1.914E-05	-1.603E-03	5.137E-05	-3.146E-05
399	IL	-1.135E-04	-1.334E-04	-1.850E-03	-8.195E-04	0.0000	5.049E-05
399	IL	-1.361E-05	-1.653E-04	-1.777E-04	4.556E-05	-1.151E-06	3.086E-06
399	ELKA	1.177E-04	8.943E-05	-1.238E-05	-8.173E-04	-1.366E-05	-1.159E-04
399	ELKT	-2.177E-04	-9.037E-03	2.305E-03	1.107E-03	3.111E-05	1.336E-04
399	COMB1	-1.143E-04	-1.392E-05	-1.079E-03	7.608E-07	1.035E-01	1.013E-05
399	COMB2	1.697E-05	8.491E-05	-2.054E-03	-1.607E-04	-2.432E-06	6.542E-05
399	COMB3	-3.149E-04	-0.0098	1.517E-05	-2.907E-02	-1.169E-04	-6.676E-07
399	COMB4	2.012E-05	1.681E-05	-1.341E-05	1.196E-04	1.694E-04	1.692E-04
399	COMB5	-9.611E-04	-0.0106	1.905E-04	-1.361E-03	-1.636E-05	-6.066E-05
400	IL	-1.135E-04	-3.312E-04	-2.819E-03	-9.833E-04	8.999E-05	4.161E-05
400	IL	-1.361E-05	-1.652E-05	-1.708E-04	6.131E-05	-7.895E-05	3.904E-06
400	ELKA	1.177E-04	8.937E-05	-1.242E-05	-8.166E-04	-1.374E-05	-1.163E-04
400	ELKT	-2.177E-04	-9.045E-03	1.371E-03	9.869E-04	8.943E-05	1.507E-01
400	COMB1	-1.143E-04	-1.392E-05	-1.079E-03	7.608E-07	1.035E-01	1.013E-05
400	COMB2	1.697E-05	8.491E-05	-2.054E-03	-9.311E-04	-9.116E-05	6.576E-05
400	COMB3	-3.149E-04	-0.0105	1.517E-05	-3.559E-03	-1.355E-03	-9.709E-01
400	COMB4	2.012E-05	1.681E-05	-1.341E-05	1.837E-04	3.636E-04	1.949E-04
400	COMB5	-9.611E-04	-0.0106	1.905E-04	-1.462E-03	-1.031E-03	-9.164E-05
401	IL	-1.135E-04	-1.549E-03	-5.415E-03	1.728E-03	7.899E-04	3.809E-04
401	IL	-1.361E-05	-1.656E-04	-8.503E-04	1.486E-04	1.396E-04	3.314E-04
401	ELKA	1.177E-04	0.0100	3.927E-03	-1.299E-09	0.0000	-7.764E-07
401	ELKT	-2.177E-04	-9.056E-03	-2.125E-03	6.959E-04	0.0000	1.619E-05
401	COMB1	-1.143E-04	-2.098E-03	-7.379E-03	2.311E-03	1.167E-03	5.125E-03
401	COMB2	1.697E-05	8.497E-03	-9.119E-04	2.853E-04	7.698E-04	-1.317E-05
401	COMB3	-3.149E-04	-0.0112	-7.009E-03	2.751E-03	7.311E-04	7.966E-01
401	COMB4	2.012E-05	8.832E-03	-1.907E-03	5.941E-04	9.194E-04	-1.822E-01
401	COMB5	-9.611E-04	-0.0111	-8.874E-03	2.688E-03	6.176E-04	8.974E-03
402	IL	-1.135E-04	-1.650E-03	-8.415E-03	1.702E-03	7.899E-04	-8.809E-05
402	IL	-1.361E-05	-1.650E-04	-7.828E-04	1.486E-04	-1.362E-04	-3.315E-06
402	ELKA	1.177E-04	0.0100	3.927E-03	-1.299E-03	0.0000	1.764E-05
402	ELKT	-2.177E-04	-9.050E-03	-2.125E-03	6.959E-04	0.0000	1.619E-05
402	COMB1	-1.143E-04	-2.098E-03	-7.379E-03	2.311E-03	1.167E-03	-5.126E-01
402	COMB2	1.697E-05	8.497E-03	-9.119E-04	2.853E-04	7.698E-04	-1.317E-05
402	COMB3	-3.149E-04	-0.0112	-7.009E-03	2.751E-03	7.311E-04	7.966E-01
402	COMB4	2.012E-05	8.832E-03	-1.907E-03	5.941E-04	9.194E-04	-1.822E-01
402	COMB5	-9.611E-04	-0.0111	-8.874E-03	2.688E-03	6.176E-04	8.974E-03
403	IL	0.0000	-1.137E-03	-9.379E-03	1.516E-03	0.0000	0.0000
403	IL	0.0000	-1.136E-04	-1.083E-03	2.271E-04	0.0000	0.0000
403	ELKA	0.0000	0.0100	3.927E-03	-1.299E-03	0.0000	0.0000
403	ELKT	0.0000	-9.901E-03	-3.996E-03	7.193E-04	0.0000	0.0000
403	COMB1	0.0000	-2.178E-03	-0.0117	3.803E-03	0.0000	0.0000
403	COMB2	0.0000	1.560E-03	-8.979E-03	9.261E-07	0.0000	0.0000
403	COMB3	0.0000	-0.0113	-9.335E-03	2.284E-03	0.0000	0.0000
403	COMB4	0.0000	8.711E-03	-5.307E-03	1.390E-03	0.0000	0.0000
403	COMB5	0.0000	-0.0122	-0.0116	3.540E-03	0.0000	0.0000
404	IL	-1.135E-04	-1.649E-04	-1.037E-03	1.391E-04	5.116E-04	-6.171E-05
404	IL	-1.361E-05	-1.747E-05	-1.803E-06	-8.038E-06	7.839E-01	-7.117E-05
404	ELKA	1.177E-04	9.137E-05	1.654E-03	-3.959E-04	-7.139E-05	5.972E-05
404	ELKT	-2.177E-04	-9.050E-03	-9.897E-04	3.283E-04	-4.133E-06	-6.937E-05
404	COMB1	-1.143E-04	-1.392E-05	-1.079E-03	1.467E-04	7.926E-04	-9.150E-07
404	COMB2	1.697E-05	7.959E-03	5.356E-04	-6.816E-04	4.973E-04	3.430E-06



414	CMR1	-5.197E-05	-8.143E-05	-3.617E-05	-5.157E-05	1.311E-04	-1.711E-05
414	CMR2	-1.170E-04	-0.0000	-3.116E-04	-1.995E-05	1.000E-04	7.041E-05
414	CMR3	-1.170E-04	-8.753E-05	-3.776E-04	-2.954E-04	1.179E-04	-1.711E-05
414	CMR4	1.491E-04	-0.0011	-3.998E-04	1.798E-04	1.390E-04	0.000E+00
415	BL	-8.114E-04	-0.114E-04	-0.110E-03	1.189E-03	-8.866E-05	7.938E-05
415	BL	-1.170E-04	-1.979E-04	-0.700E-04	-0.170E-04	-0.170E-04	0.000E+00
415	BLKA	-1.170E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
415	BLK1	2.406E-05	-0.416E-03	-4.140E-05	0.173E-04	-0.073E-05	0.000E+00
415	CMR1	0.000E+00	-1.438E-03	-4.636E-03	1.469E-03	-0.891E-05	1.067E-04
415	CMR2	-5.197E-05	-0.500E-02	-1.000E-05	-0.514E-05	-1.170E-05	-0.001E-05
415	CMR3	1.170E-04	0.0000	1.170E-04	1.170E-04	0.000E+00	1.000E-04
415	CMR4	1.170E-04	0.000E+00	-1.170E-04	1.000E-04	0.000E+00	-7.041E-05
415	CMR5	1.170E-04	-0.0011	-0.000E-05	1.074E-03	-1.000E-04	1.111E-04
416	BL	0.000E+00	-0.141E-04	-0.138E-03	0.000E-04	-0.171E-05	0.100E-05
416	BL	0.000E+00	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.000E+00
416	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.000E+00
416	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
416	CMR1	0.000E+00	-0.001E-04	-0.000E-03	1.000E-05	-0.150E-05	0.000E+00
416	CMR2	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
416	CMR3	1.000E-04	-1.000E-05	-0.100E-03	1.000E-04	0.000E+00	-1.000E-05
416	CMR4	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
416	CMR5	1.000E-04	-0.0011	-0.000E-05	1.000E-05	-0.150E-05	0.000E+00
417	BL	0.000E+00	-0.073E-04	-0.138E-03	1.000E-05	-1.076E-05	0.071E-05
417	BL	0.000E+00	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.000E+00
417	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.000E+00
417	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
417	CMR1	0.000E+00	-0.001E-04	-0.000E-03	1.000E-05	-0.150E-05	0.000E+00
417	CMR2	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
417	CMR3	1.000E-04	-1.000E-05	-0.100E-03	1.000E-04	0.000E+00	-1.000E-05
417	CMR4	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
417	CMR5	1.000E-04	-0.0011	-0.000E-05	1.000E-05	-0.150E-05	0.000E+00
418	BL	0.0000	-0.138E-04	-0.138E-03	1.000E-05	-0.000E-04	0.100E-06
418	BL	0.0000	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.000E+00
418	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.000E+00
418	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
418	CMR1	0.0000	-0.001E-04	-0.000E-03	1.000E-05	-0.150E-05	0.000E+00
418	CMR2	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
418	CMR3	1.000E-04	-1.000E-05	-0.100E-03	1.000E-04	0.000E+00	-1.000E-05
418	CMR4	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
418	CMR5	1.000E-04	-0.0011	-0.000E-05	1.000E-05	-0.150E-05	0.000E+00
419	BL	0.0000	-0.138E-04	-0.138E-03	1.000E-05	-0.000E-04	0.100E-06
419	BL	0.0000	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.000E+00
419	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.000E+00
419	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
419	CMR1	0.0000	-0.001E-04	-0.000E-03	1.000E-05	-0.150E-05	0.000E+00
419	CMR2	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
419	CMR3	1.000E-04	-1.000E-05	-0.100E-03	1.000E-04	0.000E+00	-1.000E-05
419	CMR4	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.000E-05
419	CMR5	1.000E-04	-0.0011	-0.000E-05	1.000E-05	-0.150E-05	0.000E+00
420	BL	0.0000	-0.138E-04	-0.138E-03	1.000E-05	0.0000	0.0000
420	BL	0.0000	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.0000
420	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.0000
420	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
420	CMR1	0.0000	-0.001E-04	-0.000E-03	1.000E-05	-0.150E-05	0.0000
420	CMR2	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.0000
420	CMR3	1.000E-04	-1.000E-05	-0.100E-03	1.000E-04	0.0000	0.0000
420	CMR4	-0.117E-05	0.109E-02	-0.409E-05	-0.500E-04	-0.410E-06	1.0000
420	CMR5	1.000E-04	-0.0011	-0.000E-05	1.000E-05	-0.150E-05	0.0000
421	BL	-0.000E-05	-0.138E-05	-0.000E-04	0.000E-05	0.0000	0.0000
421	BL	-0.000E-05	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.0000
421	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.0000
421	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
421	CMR1	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
421	CMR2	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
421	CMR3	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
421	CMR4	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
421	CMR5	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
422	BL	-0.000E-05	-0.138E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
422	BL	-0.000E-05	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.000E-05
422	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.000E-05
422	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
422	CMR1	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
422	CMR2	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
422	CMR3	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
422	CMR4	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
422	CMR5	-0.000E-05	-0.000E-05	-0.000E-04	0.000E-05	0.000E-05	0.000E-05
423	BL	0.000E-06	-0.138E-05	-0.000E-04	0.000E-06	0.0000	0.0000
423	BL	0.000E-06	-0.138E-03	-0.131E-04	-0.137E-05	-0.137E-05	0.0000
423	BLKA	-1.170E-04	0.000E+00	0.000E+00	-1.170E-05	-1.170E-05	0.0000
423	BLK1	1.000E-04	-0.000E-05	-0.140E-03	0.000E-04	0.000E-05	-0.140E-05
423	CMR1	0.000E-06	-0.000E-06	-0.000E-05	0.000E-06	0.0000	0.0000
423	CMR2	-0.000E-06	-0.000E-06	-0.000E-05	-0.000E-06	-0.0000	-0.0000
423	CMR3	0.000E-06	0.000E-06	0.000E-05	0.000E-06	0.0000	0.0000
423	CMR4	-0.000E-06	-0.000E-06	-0.000E-05	-0.000E-06	-0.0000	-0.0000
423	CMR5	0.000E-06	-0.000E-06	0.000E-05	0.000E-06	0.0000	0.0000



427	ELKA	-1.145E-03	-9.177E-03	-9.170E-04	-4.171E-04	4.477E-05	-2.182E-05
428	ELKAI	-1.145E-03	-9.145E-03	-8.667E-03	-2.592E-05	3.725E-04	9.705E-05
429	ELKAL	-1.145E-03	-9.177E-03	-8.701E-03	3.442E-04	1.120E-04	4.769E-05
430	ELKAM	-1.145E-03	-9.0114	-4.870E-03	-4.482E-04	1.312E-04	3.975E-05
431	ELKAN	-1.145E-03	-9.625E-03	-4.899E-03	3.589E-04	3.166E-04	6.967E-05
432	ELKAO	-1.145E-03	-9.1917	-4.135E-03	-4.681E-04	3.262E-04	4.146E-05
433	EL	-1.145E-03	-8.170E-04	-8.392E-03	-2.797E-05	-1.247E-04	3.294E-05
434	ELI	-1.145E-03	-1.171E-05	-1.618E-05	-1.333E-05	-1.721E-04	5.227E-06
435	ELIA	-1.145E-03	-1.583E-05	3.736E-04	1.932E-04	1.413E-05	-3.766E-05
436	ELIB	-1.145E-03	-1.171E-03	-1.440E-04	-3.753E-04	-8.571E-05	4.114E-05
437	ELIC	-1.145E-03	-1.171E-04	-9.099E-03	-5.336E-05	-9.049E-04	3.421E-05
438	ELID	-1.145E-03	-1.171E-03	-1.641E-03	1.680E-04	-4.581E-04	-1.821E-05
439	ELIE	-1.145E-03	-1.171E-03	-1.361E-03	-3.993E-04	-5.598E-04	8.153E-05
440	ELIF	-1.145E-03	-1.171E-03	-1.194E-03	1.657E-04	-6.445E-04	-1.397E-05
441	ELI	-1.145E-03	-1.171E-03	-1.399E-03	-3.326E-04	-7.493E-04	3.915E-05
442	ELI	-1.145E-03	-1.171E-04	-1.435E-04	4.587E-04	3.450E-04	8.637E-06
443	ELIA	-1.145E-03	-1.171E-03	1.750E-05	1.488E-04	3.746E-04	-1.437E-05
444	ELIB	-1.145E-03	-1.171E-03	-8.770E-04	-9.387E-04	-1.555E-05	-5.081E-05
445	ELIC	-1.145E-03	-1.171E-03	7.943E-04	8.414E-04	1.415E-05	5.147E-05
446	ELID	-1.145E-03	-1.171E-04	-3.429E-04	7.922E-04	3.381E-04	3.082E-06
447	ELIE	-1.145E-03	-1.171E-03	-1.095E-03	-5.313E-04	2.651E-04	-4.273E-05
448	ELIF	-1.145E-03	-1.171E-03	5.782E-04	1.249E-03	2.348E-04	5.924E-05
449	ELIG	-1.145E-03	-1.171E-03	-1.164E-03	-4.166E-04	2.584E-04	-4.486E-05
450	ELIH	-1.145E-03	-1.171E-03	5.906E-04	1.453E-03	2.896E-04	6.221E-05
451	ELI	-1.145E-03	-1.171E-04	-8.955E-04	3.613E-04	-2.709E-04	2.504E-05
452	ELIA	-1.145E-03	-1.171E-03	1.340E-05	1.438E-04	-2.742E-05	6.266E-06
453	ELIB	-1.145E-03	-1.171E-03	-1.339E-04	-7.790E-04	1.191E-05	-5.553E-05
454	ELIC	-1.145E-03	-1.171E-03	6.839E-04	7.339E-04	-1.206E-05	5.695E-05
455	ELID	-1.145E-03	-1.171E-04	-4.605E-04	6.615E-04	-3.010E-04	4.096E-05
456	ELIE	-1.145E-03	-1.171E-03	-1.077E-03	-4.539E-04	-1.870E-04	-3.305E-05
457	ELIF	-1.145E-03	-1.171E-03	3.369E-04	1.049E-03	-2.109E-04	7.949E-05
458	ELIG	-1.145E-03	-1.171E-03	-1.170E-03	-3.489E-04	-2.337E-04	-2.813E-05
459	ELIH	-1.145E-03	-1.171E-03	3.141E-04	1.220E-03	-2.589E-04	9.603E-05
460	ELI	-1.145E-03	-1.171E-03	-1.056E-03	4.260E-04	3.127E-05	3.313E-05
461	ELIA	-1.145E-03	-1.171E-03	-1.153E-05	3.522E-04	2.996E-06	3.662E-07
462	ELIB	-1.145E-03	-1.171E-03	-6.823E-04	-7.142E-04	-1.911E-05	-6.925E-05
463	ELIC	-1.145E-03	-1.171E-03	6.396E-04	6.903E-04	1.566E-05	6.161E-05
464	ELID	-1.145E-03	-1.171E-04	-3.494E-04	-1.137E-03	1.004E-03	4.282E-05
465	ELIE	-1.145E-03	-1.171E-03	-1.633E-05	-3.398E-04	7.140E-06	-4.903E-05
466	ELIF	-1.145E-03	-1.171E-03	-3.207E-04	1.034E-03	4.330E-05	8.242E-05
467	ELIG	-1.145E-03	-1.171E-03	4.882E-03	-1.833E-03	-7.696E-05	1.267E-05
468	ELIH	-1.145E-03	-1.171E-03	-4.519E-04	1.356E-05	5.116E-05	9.128E-05
469	ELI	-1.145E-03	-1.171E-04	-4.579E-04	3.406E-04	9.0000	1.216E-05
470	ELIA	-1.145E-03	-1.171E-03	-7.491E-06	1.587E-04	-1.971E-06	2.320E-06
471	ELIB	-1.145E-03	-1.171E-03	-8.175E-04	-8.746E-04	-4.198E-06	-5.417E-05
472	ELIC	-1.145E-03	-1.171E-05	-5.137E-05	7.484E-04	7.898E-04	2.800E-05
473	ELID	-1.145E-03	-1.171E-04	-4.133E-04	-5.613E-04	6.626E-04	-1.114E-06
474	ELIE	-1.145E-03	-1.171E-03	-1.230E-03	-5.681E-04	-3.748E-06	-2.419E-05
475	ELIF	-1.145E-03	-1.171E-03	3.334E-04	1.096E-03	3.250E-06	7.059E-05
476	ELIG	-1.145E-03	-1.171E-03	-1.344E-03	-4.607E-04	-4.558E-06	-3.743E-05
477	ELIH	-1.145E-03	-1.171E-03	2.973E-04	1.287E-03	2.790E-06	7.733E-05
478	ELI	-1.145E-03	-1.171E-04	-1.016E-03	4.487E-04	-3.933E-06	1.339E-05
479	ELIA	-1.145E-03	-1.171E-05	-1.119E-05	3.578E-04	0.0000	0.0000
480	ELIB	-1.145E-03	-1.171E-03	-7.810E-04	-7.832E-04	-8.956E-05	-5.075E-05
481	ELIC	-1.145E-03	-1.171E-03	6.804E-04	7.008E-04	7.261E-06	5.120E-05
482	ELID	-1.145E-03	-1.171E-04	-1.337E-03	1.411E-05	-4.429E-06	1.751E-05
483	ELIE	-1.145E-03	-1.171E-03	-1.666E-03	-3.794E-04	-1.750E-05	-3.870E-05
484	ELIF	-1.145E-03	-1.171E-03	-1.341E-04	1.105E-03	3.742E-06	8.325E-05
485	ELIG	-1.145E-03	-1.171E-03	-1.863E-03	-1.059E-04	-1.342E-05	-3.866E-05
486	ELIH	-1.145E-03	-1.171E-03	3.596E-04	1.432E-03	3.609E-06	6.839E-05
487	ELI	-1.145E-03	-1.171E-04	-4.419E-04	-3.619E-04	2.217E-04	-9.856E-06
488	ELIA	-1.145E-03	-1.171E-05	-5.553E-06	-1.352E-04	2.251E-05	2.950E-06
489	ELIB	-1.145E-03	-1.171E-03	-6.833E-04	-7.237E-04	1.105E-05	5.134E-05
490	ELIC	-1.145E-03	-1.171E-03	-7.304E-04	7.795E-04	-1.079E-05	-5.044E-05
491	ELID	-1.145E-03	-1.171E-04	-5.392E-04	-5.795E-04	3.021E-04	-6.749E-06
492	ELIE	-1.145E-03	-1.171E-03	2.860E-04	-9.954E-04	2.106E-04	4.334E-05
493	ELIF	-1.145E-03	-1.171E-03	-1.128E-03	5.079E-04	1.888E-04	-5.904E-05
494	ELIG	-1.145E-03	-1.171E-03	2.585E-04	-1.162E-03	2.586E-04	4.636E-05
495	ELIH	-1.145E-03	-1.171E-03	-1.334E-03	4.164E-04	3.397E-04	-6.114E-05
496	ELI	-1.145E-03	-1.171E-04	-5.295E-03	0.0000	5.101E-04	9.999E-06
497	ELIA	-1.145E-03	-1.171E-05	-1.697E-03	8.605E-06	1.763E-04	3.731E-06
498	ELIB	-1.145E-03	-1.171E-03	-4.443E-04	-2.749E-04	1.442E-05	4.279E-05
499	ELIC	-1.145E-03	-1.171E-03	1.774E-03	-1.553E-04	-1.413E-05	-3.767E-05
500	ELID	-1.145E-03	-1.171E-04	-8.917E-03	1.259E-05	8.847E-04	1.677E-05
501	ELIE	-1.145E-03	-1.171E-03	-8.392E-03	2.740E-04	5.445E-04	5.065E-05
502	ELIF	-1.145E-03	-1.171E-03	-4.584E-03	-1.941E-04	4.449E-04	-2.977E-05
503	ELIG	-1.145E-03	-1.171E-03	-7.135E-03	2.930E-04	7.326E-04	5.669E-05
504	ELIH	-1.145E-03	-1.171E-03	-6.380E-03	-1.985E-04	6.210E-04	-2.797E-05
505	ELI	-1.145E-03	-1.171E-04	-8.239E-04	-4.724E-06	1.479E-04	6.373E-06
506	ELIA	-1.145E-03	-1.171E-05	0.0000	-1.782E-04	1.959E-05	1.468E-06





## MOMEN BALOK

BTG	STA	MD	ML	ME KA	ME KI	1,2.MD+ 1,6.ML	0,9.MD+ MEKA	0,9.MD+ MEKI	1,05(MD+ 0,6.ML+MEKA)	1,05(MD+ 0,6.ML+MEKI)
41	0	-77.685	-0.910	-26.802	27.195	-94.678	-96.719	-42.722	-110.285	-53.588
41	2.25	10.954	-0.568	-13.463	13.709	12.236	-3.604	23.568	-2.992	25.539
41	4.5	40.004	-0.227	-0.124	0.224	47.642	35.879	36.227	41.731	42.096
41	6.75	9.462	0.115	13.215	-13.262	11.539	21.731	-4.746	23.884	-3.918
41	9	-80.670	0.457	26.555	-26.748	-96.073	-46.048	-99.351	-56.534	-112.501
42	0	-78.797	0.682	-26.737	26.564	-93.465	-97.654	-44.353	-110.381	-54.414
42	2.25	10.390	0.226	-13.257	13.220	12.830	-3.906	22.571	-2.868	24.933
42	4.5	39.986	-0.229	0.223	-0.124	47.617	36.211	35.864	42.076	41.711
42	6.75	9.991	-0.684	13.703	-13.468	10.895	22.696	-4.476	24.449	-4.081
42	9	-79.594	-1.139	27.184	-26.812	-97.335	-44.451	-98.447	-55.748	-112.444
43	0	-76.680	-0.874	-29.150	29.647	-93.415	-98.162	-39.365	-111.673	-49.935
43	2.25	11.468	-0.560	-14.638	14.952	12.865	-4.317	25.273	-3.682	27.387
43	4.5	40.025	-0.246	-0.126	0.256	47.636	35.896	36.278	41.739	42.140
43	6.75	8.991	0.068	14.386	-14.440	10.899	22.478	-6.347	24.589	-5.678
43	9	-81.633	0.382	28.898	-29.135	-97.348	-44.572	-102.605	-55.131	-116.066
44	0	-14.020	-4.558	-0.933	0.426	-24.117	-13.551	-12.192	-18.572	-17.146
44	0.64	-5.516	-1.319	-0.791	0.356	-8.730	-5.755	-4.609	-7.453	-6.250
44	1.27	-0.071	0.657	-0.649	0.286	0.966	-0.713	0.222	-0.342	0.639
44	1.91	0.786	0.526	-0.507	0.215	1.786	0.200	0.923	0.624	1.383
44	2.55	-1.415	-0.868	-0.366	0.145	-3.087	-1.639	-1.128	-2.417	-1.880
45	0	-43.997	-0.802	-0.082	0.077	-54.080	-39.679	-39.520	-46.788	-46.621
45	1.5	4.874	-0.802	-0.082	0.077	4.566	4.305	4.464	4.527	4.694
45	3	21.165	-0.802	-0.082	0.077	24.115	18.967	19.126	21.632	21.799
45	4.5	4.875	-0.802	-0.082	0.077	4.566	4.305	4.464	4.527	4.694
45	6	-43.997	-0.802	-0.082	0.077	-54.079	-39.679	-39.520	-46.788	-46.621
46	0	-78.139	0.767	-29.134	28.898	-92.540	-99.459	-41.427	-112.153	-51.220
46	2.25	10.718	0.258	-14.439	14.386	13.274	-4.793	24.033	-3.744	26.522
46	4.5	39.985	-0.251	0.256	-0.126	47.580	36.242	35.861	42.094	41.694
46	6.75	9.661	-0.760	14.950	-14.638	10.377	23.645	-5.942	25.363	-5.704
46	9	-80.253	-1.269	29.645	-29.150	-98.335	-42.583	-101.377	-53.938	-115.672
47	0	-76.682	-0.807	-30.879	31.398	-93.309	-99.893	-37.615	-113.447	-48.056
47	2.25	11.465	-0.512	-15.507	15.838	12.939	-5.189	26.156	-4.567	28.345
47	4.5	40.021	-0.217	-0.135	0.277	47.678	35.883	36.296	41.743	42.177
47	6.75	8.986	0.078	15.236	-15.283	10.908	23.324	-7.195	25.483	-6.563
47	9	-81.639	0.373	30.608	-30.843	-97.371	-42.867	-104.319	-53.348	-117.872
48	0	-78.141	0.660	-30.867	30.587	-92.714	-101.195	-39.740	-114.043	-49.516
48	2.25	10.740	0.218	-15.295	15.226	13.237	-5.629	24.891	-4.645	27.401
48	4.5	40.031	-0.224	0.278	-0.136	47.678	36.306	35.891	42.183	41.748
48	6.75	9.731	-0.666	15.851	-15.498	10.611	24.608	-6.740	26.441	-6.475
48	9	-80.160	-1.118	31.423	-30.860	-97.964	-40.721	-103.003	-51.871	-117.268
49	0	-77.801	-0.737	-31.358	31.893	-94.540	-101.379	-38.128	-115.081	-48.667
49	2.25	10.978	-0.412	-15.744	16.084	12.515	-5.864	25.964	-5.264	28.156
49	4.5	40.165	-0.086	-0.129	0.275	48.060	36.019	36.424	41.983	42.409
49	6.75	9.763	0.239	15.485	-15.533	12.097	24.271	-6.747	26.661	-5.909
49	9	-80.231	0.564	31.099	-31.342	-95.374	-41.108	-103.550	-51.233	-116.796
50	0	-80.693	0.132	-31.387	31.100	-96.620	-104.010	-41.524	-117.600	-51.990
50	2.25	9.680	-0.028	-15.549	15.478	11.571	-6.837	24.190	-6.180	26.398
50	4.5	40.462	-0.188	0.289	-0.143	48.253	36.704	36.273	42.670	42.216
50	6.75	11.654	-0.349	16.126	-15.764	13.426	26.615	-5.276	28.949	-4.536
50	9	-76.745	-0.509	31.964	-31.386	-92.909	-37.107	-100.457	-47.341	-113.859
51	0	-77.800	-0.737	-31.358	31.893	-94.539	-101.378	-38.127	-115.080	-48.667
51	2.25	10.978	-0.411	-15.744	16.084	12.516	-5.863	25.965	-5.263	28.157
51	4.5	40.166	-0.086	-0.129	0.275	48.062	36.020	36.425	41.985	42.410
51	6.75	9.764	0.240	15.485	-15.533	12.099	24.272	-6.746	26.662	-5.907
51	9	-80.230	0.565	31.099	-31.342	-95.372	-41.107	-103.549	-51.231	-116.795
52	0	-80.695	0.131	-31.387	31.100	-96.624	-104.012	-41.526	-117.603	-51.992
52	2.25	9.679	-0.029	-15.549	15.478	11.568	-6.838	24.189	-6.182	26.397
52	4.5	40.462	-0.189	0.289	-0.143	48.252	36.704	36.272	42.669	42.216
52	6.75	11.654	-0.349	16.126	-15.764	13.427	26.615	-5.276	28.950	-4.536
52	9	-76.744	-0.509	31.964	-31.386	-92.907	-37.106	-100.456	-47.340	-113.857
53	0	-76.681	-0.807	-30.879	31.398	-93.308	-99.892	-37.615	-113.447	-48.055
53	2.25	11.465	-0.512	-15.507	15.838	12.939	-5.189	26.157	-4.567	28.346



53	4.5	40.021	-0.217	-0.135	0.277	47.678	35.884	36.296	41.743	42.177
53	6.75	8.986	0.078	15.236	-15.283	10.908	23.324	-7.195	25.483	-6.562
53	9	-81.639	0.373	30.608	-30.843	-97.371	-42.867	-104.319	-53.348	-117.872
54	0	-78.142	0.660	-30.867	30.587	-92.714	-101.195	-39.740	-114.044	-49.516
54	2.25	10.740	0.218	-15.295	15.226	13.237	-5.629	24.891	-4.645	27.401
54	4.5	40.031	-0.224	0.278	-0.136	47.678	36.305	35.891	42.183	41.748
54	6.75	9.731	-0.666	15.851	-15.498	10.611	24.608	-6.740	26.441	-6.475
54	9	-80.160	-1.108	31.423	-30.860	-97.964	-40.721	-103.003	-51.871	-117.268
55	0	-76.680	-0.874	-29.150	29.647	-93.415	-98.162	-39.365	-111.672	-49.935
55	2.25	11.468	-0.560	-14.638	14.952	12.865	-4.317	25.273	-3.682	27.387
55	4.5	40.025	-0.246	-0.126	0.256	47.636	35.896	36.278	41.739	42.140
55	6.75	8.991	0.068	14.386	-14.440	10.898	22.478	-6.347	24.589	-5.678
55	9	-81.633	0.382	28.898	-29.135	-97.348	-44.572	-102.605	-55.131	-116.066
56	0	-78.139	0.767	-29.134	28.898	-92.540	-99.459	-41.427	-112.153	-51.220
56	2.25	10.718	0.258	-14.439	14.386	13.274	-4.793	24.033	-3.744	26.522
56	4.5	39.985	-0.251	0.256	-0.126	47.580	36.242	35.861	42.094	41.694
56	6.75	9.661	-0.760	14.950	-14.638	10.377	23.645	-5.942	25.363	-5.704
56	9	-80.253	-1.269	29.645	-29.150	-98.335	-42.583	-101.377	-53.938	-115.673
57	0	-0.154	-0.072	-0.064	0.023	-0.299	-0.203	-0.116	-0.274	-0.183
57	0.45	-0.242	0.151	-0.004	-0.002	-0.049	-0.222	-0.220	-0.163	-0.161
57	0.9	-1.522	-0.074	0.056	-0.028	-1.945	-1.314	-1.398	-1.587	-1.674
57	1.35	-4.537	-1.043	0.116	-0.053	-7.114	-3.968	-4.137	-5.300	-5.477
57	1.8	-8.745	-2.460	0.176	-0.079	-14.430	-7.695	-7.949	-10.548	-10.814
58	0	-77.685	-0.910	-26.802	27.195	-94.678	-96.719	-42.722	-110.285	-53.588
58	2.25	10.954	-0.568	-13.463	13.709	12.236	-3.604	23.568	-2.992	25.539
58	4.5	40.004	-0.227	-0.124	0.224	47.642	35.879	36.227	41.731	42.096
58	6.75	9.462	0.115	13.215	-13.262	11.539	21.731	-4.746	23.884	-3.918
58	9	-80.670	0.457	26.555	-26.748	-96.074	-46.048	-99.351	-56.534	-112.501
59	0	-78.797	0.682	-26.737	26.564	-93.465	-97.654	-44.353	-110.381	-54.414
59	2.25	10.390	0.226	-13.257	13.220	12.830	-3.906	22.571	-2.868	24.933
59	4.5	39.986	-0.229	0.223	-0.124	47.617	36.211	35.864	42.076	41.711
59	6.75	9.991	-0.684	13.703	-13.468	10.895	22.696	-4.476	24.449	-4.081
59	9	-79.594	-1.139	27.184	-26.812	-97.335	-44.451	-98.447	-55.748	-112.444
62	0	-83.854	-19.652	-20.392	20.218	-132.069	-95.861	-55.251	-121.840	-79.199
62	0.75	-44.670	-10.748	-16.938	16.776	-70.480	-57.140	-23.427	-71.333	-35.933
62	1.5	-10.383	-2.389	-13.483	13.334	-16.282	-22.828	3.989	-26.565	1.593
62	2.25	18.400	4.528	-10.029	9.892	29.326	6.531	26.452	11.642	32.559
62	3	42.285	10.500	-6.575	6.449	67.541	31.482	44.506	44.111	57.786
63	0	-44.654	-1.010	-0.055	0.041	-55.201	-40.244	-40.147	-47.581	-47.480
63	1.5	4.216	-1.010	-0.055	0.041	3.443	3.740	3.836	3.733	3.834
63	3	20.506	-1.010	-0.055	0.041	22.991	18.401	18.497	20.838	20.939
63	4.5	4.215	-1.011	-0.055	0.041	3.441	3.739	3.835	3.732	3.833
63	6	-44.656	-1.011	-0.055	0.041	-55.205	-40.246	-40.149	-47.584	-47.483
89	0	-0.595	-0.990	0.526	-0.566	-2.299	-0.010	-1.101	-0.697	-1.843
89	0.23	-6.584	-1.660	0.940	-1.014	-10.556	-4.986	-6.940	-6.972	-9.024
89	0.45	-12.770	-2.385	1.354	-1.463	-19.140	-10.139	-12.956	-13.489	-16.447
89	0.68	-19.220	-3.203	1.768	-1.912	-28.189	-15.530	-19.210	-20.342	-24.206
89	0.9	-25.867	-4.078	2.182	-2.360	-37.564	-21.098	-25.640	-27.438	-32.207
90	0	-35.834	-0.713	-0.129	0.144	-44.142	-32.380	-32.106	-38.211	-37.924
90	1.5	4.353	-0.375	-0.060	0.068	4.624	3.857	3.286	4.271	4.406
90	3	18.055	-0.036	0.009	-0.008	21.608	16.258	16.241	18.944	18.926
90	4.5	5.272	0.302	0.078	-0.085	6.811	4.823	4.660	5.808	5.638
90	6	-33.995	0.641	0.147	-0.161	-39.769	-30.449	-30.756	-35.137	-35.460
91	0	-36.163	-0.339	0.030	-0.020	-43.938	-32.517	-32.567	-38.153	-38.205
91	1.5	3.934	-0.187	0.015	-0.009	4.422	3.556	3.532	4.029	4.004
91	3	17.547	-0.035	0.000	0.001	21.001	15.792	15.793	18.402	18.404
91	4.5	4.675	0.117	-0.015	0.012	5.797	4.192	4.219	4.966	4.995
91	6	-34.682	0.269	-0.031	0.022	-41.188	-31.245	-31.192	-36.279	-36.223
102	0	-35.468	0.028	0.035	-0.028	-42.517	-31.887	-31.950	-37.188	-37.254
102	1.5	4.391	-0.008	0.018	-0.015	5.257	3.970	3.937	4.625	4.590
102	3	17.766	-0.045	0.002	-0.002	21.248	15.991	15.988	18.628	18.624
102	4.5	4.656	-0.081	-0.015	0.011	5.458	4.176	4.202	4.823	4.850
102	6	-34.938	-0.117	-0.031	0.024	-42.113	-31.475	-31.420	-36.792	-36.733
103	0	-21.075	-0.214	0.030	-0.024	-25.632	-18.938	-18.992	-22.232	-22.289
103	1.13	1.748	-0.044	0.015	-0.011	2.026	1.587	1.562	1.822	1.795
103	2.25	9.673	0.125	-0.001	0.002	11.807	8.705	8.707	10.234	10.237
103	3.38	2.701	0.294	-0.016	0.014	3.711	2.414	2.445	3.004	3.036

103	4.5	-19.169	0.463	-0.032	0.027	-22.262	-17.284	-17.225	-19.869	-19.808
104	0	-35.217	-0.141	0.007	-0.006	-42.486	-31.688	-31.702	-37.059	-37.073
104	1.5	4.510	-0.141	0.007	-0.006	5.187	4.066	4.053	4.654	4.640
104	3	17.752	-0.141	0.007	-0.006	21.078	15.984	15.971	18.559	18.545
104	4.5	4.510	-0.141	0.007	-0.006	5.187	4.066	4.053	4.654	4.640
104	6	-35.217	-0.141	0.007	-0.006	-42.485	-31.688	-31.702	-37.059	-37.073
123	0	-14.894	-0.650	75.953	-75.705	-18.913	62.549	-89.110	63.702	-95.539
123	1.13	8.957	1.905	39.154	-39.020	13.797	47.215	-30.959	51.716	-30.366
123	2.25	8.455	1.143	2.354	-2.336	11.974	9.963	5.273	12.069	7.145
123	3.38	-18.749	-4.231	-34.445	34.349	-29.268	-51.319	17.476	-58.519	13.715
123	4.5	-70.304	-12.923	-71.244	71.034	-105.042	-134.519	7.760	-156.768	-7.375
124	0	-235.262	-51.491	42.261	-42.278	-364.700	-169.475	-254.014	-235.091	-323.856
124	1.13	-95.990	-19.147	31.038	-30.998	-145.823	-55.354	-117.389	-80.263	-145.400
124	2.25	25.568	7.384	19.814	-19.718	42.497	42.826	3.293	52.304	10.795
124	3.38	126.525	26.512	8.591	-8.438	194.249	122.464	105.434	158.575	140.694
124	4.5	209.769	39.826	-2.632	2.842	315.445	186.160	191.634	242.585	248.332
125	0	209.637	39.808	2.832	-2.625	315.256	191.505	186.048	248.171	242.441
125	1.13	126.856	26.551	-8.425	8.610	194.708	105.745	122.780	141.079	158.966
125	2.25	26.362	7.481	-19.683	19.845	43.603	4.043	43.570	11.726	53.229
125	3.38	-94.734	-18.993	-30.940	31.080	-144.070	-116.201	-54.181	-143.923	-78.803
125	4.5	-233.542	-51.280	-42.198	42.314	-362.299	-252.386	-167.874	-321.833	-233.096
126	0	-73.163	-13.276	70.913	-71.360	-109.037	5.067	-137.206	-10.726	-160.112
126	1.13	-20.117	-4.400	34.293	-34.503	-31.181	16.187	-52.608	12.112	-60.123
126	2.25	8.575	1.158	-2.328	2.354	12.142	5.389	10.072	7.288	12.205
126	3.38	10.566	2.104	-38.949	39.211	16.046	-29.439	48.721	-28.476	53.592
126	4.5	-11.795	-0.268	-75.570	76.068	-14.583	-86.185	65.453	-91.902	67.318
127	0	-22.658	-2.331	116.955	-116.075	-30.919	96.563	-136.467	97.544	-147.138
127	1.13	5.482	1.127	60.842	-60.333	8.381	65.776	-55.399	70.350	-56.884
127	2.25	9.269	1.266	4.729	-4.591	13.149	13.070	3.751	15.495	5.799
127	3.38	-13.645	-3.205	-51.385	51.151	-21.502	-63.665	38.870	-70.301	37.361
127	4.5	-60.912	-10.995	-107.498	106.893	-90.686	-162.319	52.071	-183.758	41.353
128	0	-195.078	-39.361	57.950	-57.918	-297.071	-117.620	-233.487	-168.781	-290.443
128	1.13	-79.075	-14.383	42.451	-42.385	-117.903	-28.716	-113.552	-47.516	-136.594
128	2.25	21.277	5.917	26.952	-26.852	35.000	46.102	-7.703	54.369	-2.126
128	3.38	103.564	20.210	11.453	-11.320	156.613	104.660	81.887	133.500	109.588
128	4.5	170.199	29.826	-4.046	4.213	251.961	149.133	157.392	193.251	201.923
129	0	169.919	29.789	4.202	-4.040	251.565	157.129	148.887	201.594	192.940
129	1.13	103.986	20.260	-11.311	11.470	157.200	82.276	105.057	110.072	133.993
129	2.25	22.402	6.054	-26.825	26.980	36.570	-6.663	47.142	-0.829	55.666
129	3.38	-77.247	-14.159	-42.339	42.489	-115.351	-111.861	-27.033	-134.485	-45.416
129	4.5	-192.547	-39.050	-57.852	57.999	-293.537	-231.145	-115.293	-287.521	-165.877
130	0	-65.520	-11.562	106.799	-107.611	-97.124	47.831	-166.579	36.059	-189.072
130	1.13	-15.839	-3.475	51.106	-51.439	-24.567	36.851	-65.694	34.841	-72.832
130	2.25	9.489	1.293	-4.587	4.733	13.456	3.953	13.273	5.962	15.748
130	3.38	8.117	1.451	-60.280	60.904	12.061	-52.975	68.209	-53.858	73.386
130	4.5	-17.609	-1.710	-115.973	117.076	-23.866	-131.821	101.228	-141.339	103.363
135	0	-14.894	-0.650	75.953	-75.705	-18.913	62.549	-89.110	63.702	-95.539
135	1.13	8.957	1.905	39.154	-39.020	13.797	47.215	-30.959	51.716	-30.366
135	2.25	8.455	1.143	2.354	-2.336	11.974	9.963	5.273	12.069	7.145
135	3.38	-18.749	-4.231	-34.445	34.349	-29.268	-51.319	17.476	-58.519	13.715
135	4.5	-70.305	-12.923	-71.244	71.034	-105.043	-134.519	7.760	-156.768	-7.376
136	0	-235.262	-51.491	42.261	-42.278	-364.700	-169.475	-254.014	-235.091	-323.856
136	1.13	-95.990	-19.147	31.038	-30.998	-145.823	-55.354	-117.389	-80.263	-145.400
136	2.25	25.568	7.384	19.814	-19.718	42.497	42.826	3.293	52.304	10.795
136	3.38	126.525	26.512	8.591	-8.438	194.249	122.464	105.434	158.575	140.694
136	4.5	209.769	39.826	-2.632	2.842	315.445	186.160	191.634	242.585	248.332
137	0	209.637	39.808	2.832	-2.625	315.256	191.505	186.048	248.171	242.441
137	1.13	126.856	26.551	-8.425	8.610	194.708	105.745	122.780	141.079	158.966
137	2.25	26.362	7.481	-19.683	19.845	43.603	4.043	43.570	11.726	53.229
137	3.38	-94.734	-18.993	-30.940	31.080	-144.070	-116.201	-54.181	-143.924	-78.803
137	4.5	-233.543	-51.280	-42.198	42.314	-362.299	-252.386	-167.874	-321.833	-233.096
138	0	-73.162	-13.276	70.913	-71.360	-109.037	5.067	-137.206	-10.726	-160.112
138	1.13	-20.117	-4.400	34.293	-34.503	-31.181	16.187	-52.608	12.112	-60.123
138	2.25	8.575	1.158	-2.328	2.354	12.142	5.389	10.072	7.288	12.205
138	3.38	10.566	2.104	-38.949	39.211	16.046	-29.439	48.721	-28.476	53.592
138	4.5	-11.795	-0.268	-75.570	76.068	-14.583	-86.185	65.453	-91.902	67.318
139	0	-22.658	-2.331	116.955	-116.075	-30.919	96.563	-136.467	97.544	-147.138

139	1.13	5.482	1.127	60.842	-60.333	8.381	65.776	-55.399	70.350	-56.884
139	2.25	9.269	1.266	4.729	-4.591	13.149	13.070	3.751	15.495	5.709
139	3.38	-13.645	-3.205	-51.385	51.151	-21.503	-63.666	38.870	-70.301	37.361
139	4.5	-60.912	-10.995	-107.498	106.893	-90.687	-162.319	52.071	-183.758	41.352
140	0	-195.078	-39.361	57.950	-57.918	-297.071	-117.620	-233.487	-168.781	-290.443
140	1.13	-79.075	-14.383	42.451	-42.385	-117.903	-28.716	-113.552	-47.516	-136.594
140	2.25	21.278	5.917	26.952	-26.852	35.001	46.102	-7.703	54.369	-2.126
140	3.38	103.564	20.210	11.453	-11.320	156.613	104.660	81.867	133.500	109.588
140	4.5	170.200	29.826	-4.046	4.213	251.961	149.133	157.392	193.251	201.923
141	0	169.919	29.789	4.202	-4.040	251.565	157.129	148.887	201.594	192.940
141	1.13	103.986	20.260	-11.311	11.470	157.200	82.276	105.057	110.072	137.993
141	2.25	22.402	6.054	-26.825	26.980	36.570	-6.663	47.142	-0.829	55.665
141	3.38	-77.247	-14.159	-42.339	42.489	-115.351	-111.861	-27.033	-134.485	-45.416
141	4.5	-192.547	-39.050	-57.852	57.999	-293.537	-231.145	-115.293	-287.521	-165.877
142	0	-65.520	-11.562	106.799	-107.611	-97.124	47.831	-166.579	36.059	-189.072
142	1.13	-15.839	-3.475	51.106	-51.439	-24.567	36.851	-65.694	34.841	-72.832
142	2.25	9.489	1.293	-4.587	4.733	13.456	3.953	13.273	5.962	15.748
142	3.38	8.117	1.451	-60.280	60.904	12.061	-52.975	68.209	-53.858	73.386
142	4.5	-17.609	-1.710	-115.973	117.076	-23.867	-131.821	101.228	-141.339	103.363
143	0	-19.169	0.463	-0.032	0.027	-22.262	-17.284	-17.225	-19.869	-19.808
143	1.13	2.701	0.294	-0.016	0.014	3.711	2.414	2.445	3.004	3.036
143	2.25	9.673	0.125	-0.001	0.002	11.807	8.705	8.707	10.234	10.237
143	3.38	1.748	-0.044	0.015	-0.011	2.026	1.587	1.562	1.822	1.795
143	4.5	-21.075	-0.214	0.030	-0.024	-25.632	-18.938	-18.992	-22.232	-22.289
144	0	-34.938	-0.117	-0.031	0.024	-42.113	-31.475	-31.420	-36.792	-36.734
144	1.5	4.656	-0.081	-0.015	0.011	5.458	4.176	4.202	4.823	4.850
144	3	17.766	-0.045	0.002	-0.002	21.248	15.991	15.988	18.628	18.624
144	4.5	4.391	-0.008	0.018	-0.015	5.257	3.970	3.937	4.625	4.590
144	6	-35.468	0.028	0.035	-0.028	-42.517	-31.887	-31.950	-37.188	-37.254
145	0	-34.682	0.269	-0.031	0.022	-41.188	-31.245	-31.192	-36.279	-36.223
145	1.5	4.675	0.117	-0.015	0.012	5.797	4.192	4.219	4.966	4.995
145	3	17.547	-0.035	0.000	0.001	21.001	15.792	15.793	18.402	18.404
145	4.5	3.934	-0.187	0.015	-0.009	4.422	3.556	3.532	4.029	4.004
145	6	-36.163	-0.339	0.030	-0.020	-43.938	-32.517	-32.567	-38.153	-38.205
146	0	-33.995	0.641	0.147	-0.161	-39.769	-30.449	-30.756	-35.137	-35.460
146	1.5	5.272	0.302	0.078	-0.085	6.811	4.823	4.660	5.808	5.658
146	3	18.055	-0.036	0.009	-0.008	21.608	16.258	16.241	18.944	18.926
146	4.5	4.353	-0.375	-0.060	0.068	4.624	3.857	3.986	4.271	4.406
146	6	-35.834	-0.713	-0.129	0.144	-44.142	-32.380	-32.106	-38.211	-37.924
156	0	1.661	-1.318	2.763	-2.620	-0.115	4.257	-1.125	3.814	-1.837
156	0.86	3.566	1.231	2.922	-3.549	6.248	6.131	-0.339	7.588	0.793
156	1.73	-1.627	0.642	3.081	-4.478	-0.925	1.617	-5.942	1.932	-6.005
156	2.59	-17.389	-4.994	3.241	-5.407	-28.858	-12.410	-21.057	-18.002	-27.082
156	3.45	-40.250	-13.768	3.400	-6.336	-70.328	-32.825	-42.561	-47.366	-57.588
157	0	-50.450	-21.303	-8.159	5.040	-94.625	-53.564	-40.365	-74.960	-61.101
157	1.13	-10.402	-3.805	-5.602	3.719	-18.570	-14.964	-5.643	-19.202	-9.414
157	2.25	15.208	7.056	-3.046	2.398	29.540	10.642	16.085	17.216	22.932
157	3.38	21.685	8.695	-0.489	1.077	39.934	19.027	20.594	27.734	29.378
157	4.5	13.724	3.697	2.067	-0.244	22.384	14.419	12.108	18.910	16.483
158	0	13.903	3.688	2.513	-0.601	22.585	15.026	11.912	19.561	16.291
158	1.13	18.464	8.455	5.245	-2.493	35.685	21.862	14.124	30.221	22.096
158	2.25	8.587	6.585	7.976	-4.386	20.841	15.704	3.342	21.540	8.560
158	3.38	-20.424	-4.507	10.708	-6.279	-31.720	-7.674	-24.660	-13.041	-30.877
158	4.5	-63.872	-22.236	13.439	-8.172	-112.224	-44.045	-65.656	-66.963	-89.654
160	0	97.367	21.662	9.741	-6.790	151.500	97.371	80.840	126.111	108.753
160	0.86	42.133	9.052	22.431	-25.506	65.043	60.351	12.414	73.495	23.161
160	1.73	-30.447	-7.178	35.121	-44.222	-48.022	7.718	-71.625	0.385	-82.925
160	2.59	-122.096	-27.576	47.811	-62.938	-191.278	-62.075	-172.825	-95.624	-211.911
160	3.45	-230.062	-51.828	60.502	-81.654	-358.999	-146.554	-288.709	-210.690	-359.953
161	0	-189.697	-58.744	-82.168	60.829	-321.628	-252.895	-109.898	-322.467	-172.320
161	1.13	-63.137	-22.128	-57.546	44.272	-111.169	-114.369	-12.552	-140.657	-33.749
161	2.25	33.788	8.262	-32.923	27.714	53.764	-2.514	58.123	6.113	69.782
161	3.38	97.673	30.549	-8.301	11.156	166.086	79.605	99.062	113.086	133.516
161	4.5	131.923	46.609	16.321	-5.402	232.882	135.051	113.328	185.020	162.211
162	0	132.122	46.725	15.852	-5.021	233.307	134.763	113.889	184.810	162.893
162	1.13	77.027	28.614	40.284	-20.962	138.215	109.608	48.363	141.203	76.895
162	2.25	-7.704	4.275	64.715	-36.902	-2.404	57.782	-43.835	62.555	-44.142

162	3.38	-125.474	-28.166	89.146	-52.842	-195.635	-23.781	-165.769	-55.889	-204.977
162	4.5	-272.881	-66.834	113.578	-68.782	-434.391	-132.015	-314.375	-209.373	-400.851
164	0	97.370	21.664	9.741	-6.790	151.506	97.374	80.843	126.114	108.757
164	0.86	42.136	9.054	22.431	-25.506	65.050	60.354	12.417	73.500	23.166
164	1.73	-30.444	-7.176	35.121	-44.222	-48.014	7.722	-71.621	0.390	-82.920
164	2.59	-122.092	-27.974	47.811	-62.938	-191.269	-62.072	-172.821	-95.619	-211.905
164	3.45	-230.057	-51.826	60.502	-81.654	-358.989	-146.550	-238.705	-210.683	-359.947
165	0	-189.705	-58.749	-82.168	60.829	-321.645	-252.903	-109.905	-322.479	-172.332
165	1.13	-63.143	-22.131	-57.546	44.272	-111.182	-114.374	-12.557	-140.666	-33.758
165	2.25	33.784	8.259	-32.923	27.714	53.755	-2.518	58.119	6.106	69.775
165	3.38	97.670	30.548	-8.301	11.156	166.080	79.602	99.059	113.082	133.512
165	4.5	131.921	46.609	16.321	-5.402	232.880	135.050	113.327	185.018	162.209
166	0	132.121	46.725	15.852	-5.021	233.305	134.761	113.888	184.809	162.891
166	1.13	77.027	28.614	40.284	-20.962	138.214	109.608	48.363	141.203	76.895
166	2.25	-7.703	4.275	64.715	-36.902	-2.403	57.782	-43.835	62.556	-44.142
166	3.38	-125.473	-28.165	89.146	-52.842	-195.632	-23.779	-165.768	-55.887	-204.975
166	4.5	-272.878	-66.833	113.578	-68.782	-434.386	-132.013	-314.373	-209.370	-400.848
209	0	-20.471	-9.471	-6.119	8.009	-39.719	-24.544	-10.416	-33.887	-19.053
209	1.13	4.083	2.097	-4.010	5.469	8.256	-0.335	9.144	1.398	11.351
209	2.25	14.200	7.029	-1.901	2.929	28.287	10.879	15.709	17.342	22.414
209	3.38	5.184	2.738	0.208	0.389	10.601	4.873	5.035	7.386	7.577
209	4.5	-18.271	-8.189	2.317	-2.150	-35.028	-14.127	-18.594	-21.911	-26.601
210	0	-20.774	-8.862	-1.270	1.334	-39.108	-19.967	-17.362	-28.729	-25.994
210	1.13	3.418	1.883	-0.581	0.510	7.114	2.495	3.586	4.165	5.310
210	2.25	13.171	5.991	0.109	-0.315	25.391	11.963	11.539	17.719	17.274
210	3.38	3.791	0.877	0.799	-1.139	5.952	4.211	2.273	5.372	3.337
210	4.5	-20.026	-10.874	1.489	-1.964	-41.431	-16.535	-19.988	-26.316	-29.941
211	0	-19.860	-10.849	-1.968	1.491	-41.190	-19.842	-16.383	-29.754	-26.122
211	1.13	3.918	0.894	-1.141	0.799	6.132	2.384	4.325	3.478	5.516
211	2.25	13.257	6.001	-0.315	0.108	25.510	11.617	12.040	17.370	17.814
211	3.38	3.463	1.885	0.512	-0.583	7.172	3.629	2.534	5.361	4.212
211	4.5	-20.768	-8.868	1.338	-1.275	-39.110	-17.353	-19.966	-25.988	-28.732
212	0	-18.174	-8.184	-2.143	2.321	-34.903	-18.500	-14.035	-26.489	-21.801
212	1.13	5.086	2.721	0.391	0.210	10.457	4.968	4.787	7.465	7.275
212	2.25	13.908	6.990	2.925	-1.902	27.873	15.442	10.615	22.078	17.010
212	3.38	3.597	2.036	5.459	-4.013	7.573	8.696	-0.776	10.791	0.845
212	4.5	-21.153	-9.555	7.993	-6.125	-40.670	-11.045	-25.162	-19.837	-34.661
213	0	-54.964	-19.852	-6.723	10.550	-97.720	-56.191	-38.918	-77.278	-59.142
213	1.13	-12.885	-2.585	-5.150	8.407	-19.599	-16.746	-3.190	-20.566	-6.331
213	2.25	14.756	8.044	-3.577	6.264	30.578	9.704	19.544	16.806	27.139
213	3.38	23.263	9.452	-2.003	4.122	43.039	18.934	25.058	28.277	34.709
213	4.5	17.333	4.222	-0.430	1.979	27.555	15.170	17.579	20.408	22.938
214	0	17.488	4.428	-0.158	1.648	28.070	15.581	17.387	20.986	22.883
214	1.13	21.774	8.238	0.873	-0.379	39.310	20.470	19.218	28.970	27.655
214	2.25	11.623	5.111	1.904	-2.406	22.605	12.365	8.055	17.612	13.087
214	3.38	-17.661	-6.639	2.935	-4.433	-31.815	-12.960	-20.328	-19.645	-27.381
214	4.5	-61.384	-25.325	3.966	-6.460	-114.180	-51.280	-61.705	-76.243	-87.190
215	0	-60.524	-25.216	-6.447	3.961	-112.975	-60.919	-50.510	-86.206	-75.277
215	1.13	-17.076	-6.565	-4.425	2.932	-30.996	-19.794	-12.436	-26.712	-18.987
215	2.25	11.934	5.449	-2.403	1.903	23.039	8.337	12.644	13.440	17.962
215	3.38	21.811	8.241	-0.381	0.874	39.358	19.248	20.504	27.693	29.011
215	4.5	17.250	4.396	1.641	-0.154	27.733	17.166	15.370	22.604	20.719
216	0	17.036	4.182	1.971	-0.426	27.134	17.303	14.906	22.591	20.075
216	1.13	22.611	9.363	4.110	-1.999	42.114	24.460	18.350	33.956	27.541
216	2.25	13.748	7.908	6.250	-3.572	29.150	18.623	8.801	25.980	15.666
216	3.38	-14.248	-2.770	8.390	-5.145	-21.530	-4.434	-17.969	-7.896	-22.108
216	4.5	-56.682	-20.085	10.529	-6.718	-100.154	-40.484	-57.732	-61.114	-79.224
217	0	-231.480	-64.162	-61.056	100.427	-380.435	-269.388	-107.906	-347.585	-178.028
217	1.13	-86.593	-23.211	-46.868	78.769	-141.049	-124.801	0.836	-154.757	-22.838
217	2.25	27.916	11.102	-32.680	57.111	51.263	-7.556	82.236	1.992	96.273
217	3.38	107.350	36.194	-18.492	35.454	186.729	78.122	132.068	116.102	172.745
217	4.5	156.404	54.648	-4.304	13.796	275.122	136.460	154.560	194.133	213.139
218	0	156.305	54.479	-4.652	14.246	274.733	136.023	154.921	193.558	213.401
218	1.13	103.350	32.971	10.172	-7.680	176.774	103.187	85.335	139.970	121.225
218	2.25	20.016	4.826	24.995	-29.607	31.741	43.009	-11.593	50.302	-7.030
218	3.38	-98.393	-32.541	39.818	-51.533	-170.138	-48.735	-140.087	-82.004	-177.924
218	4.5	-247.181	-76.545	54.642	-73.460	-419.090	-167.821	-295.923	-250.390	-384.897

219	0	-232.747	-74.619	-73.340	54.614	-398.687	-282.812	-154.859	-368.401	-234.050
219	1.13	-88.458	-31.238	-51.457	39.803	-156.131	-131.069	-39.809	-166.591	-70.768
219	2.25	25.452	5.505	-29.574	24.993	39.351	-6.667	47.899	-0.860	56.435
219	3.38	104.287	33.026	-7.691	10.182	177.987	86.168	104.041	122.233	141.000
219	4.5	152.744	53.911	14.192	-4.628	269.550	151.661	132.841	209.246	189.485
220	0	152.877	54.084	13.743	-4.281	269.987	151.333	133.308	209.025	190.099
220	1.13	99.683	35.104	35.359	-18.456	175.786	125.073	71.259	163.909	107.404
220	2.25	16.109	9.487	56.974	-32.630	34.511	71.472	-18.132	82.714	-11.370
220	3.38	-102.539	-25.352	78.589	-46.804	-163.610	-13.696	-139.089	-41.119	-172.782
220	4.5	-251.566	-66.828	100.205	-60.979	-408.804	-126.205	-287.388	-201.031	-370.274
221	0	-53.158	-19.619	-7.592	12.463	-95.179	-55.434	-35.379	-76.147	-55.089
221	1.13	-12.028	-2.511	-5.822	9.921	-18.451	-16.647	-0.904	-20.324	-3.794
221	2.25	14.664	7.961	-4.051	7.379	30.333	9.147	20.577	16.159	28.160
221	3.38	22.222	9.209	-2.280	4.837	41.402	17.720	24.837	26.741	34.214
221	4.5	15.343	3.822	-0.509	2.296	24.526	13.299	16.104	17.982	20.928
222	0	15.296	3.971	-0.160	1.866	24.709	13.606	15.632	18.394	20.522
222	1.13	20.725	8.033	0.975	-0.434	37.723	19.628	18.219	27.846	26.367
222	2.25	11.717	5.458	2.110	-2.733	22.792	12.655	7.812	17.956	12.871
222	3.38	-16.425	-6.340	3.245	-5.033	-29.854	-11.538	-19.816	-17.833	-26.525
222	4.5	-59.005	-24.774	4.380	-7.333	-110.444	-48.724	-60.437	-72.964	-85.262
223	0	-56.913	-24.445	-7.313	4.367	-107.407	-58.534	-46.854	-82.837	-70.573
223	1.13	-15.072	-6.141	-5.022	3.238	-27.911	-18.587	-10.326	-24.967	-16.294
223	2.25	12.332	5.526	-2.732	2.109	23.641	8.367	13.208	13.562	18.544
223	3.38	20.603	7.971	-0.442	0.979	37.476	18.101	19.522	26.191	27.683
223	4.5	14.436	3.778	1.849	-0.150	23.368	14.841	12.842	19.479	17.380
224	0	14.335	3.613	2.276	-0.498	22.983	15.178	12.403	19.718	16.805
224	1.13	20.448	8.927	4.823	-2.273	38.820	23.226	16.130	32.158	24.707
224	2.25	12.123	7.604	7.369	-4.047	26.713	18.279	6.863	25.256	13.269
224	3.38	-15.336	-2.942	9.915	-5.822	-23.110	-3.887	-19.624	-7.545	-24.069
224	4.5	-57.232	-20.124	12.461	-7.596	-100.876	-39.047	-59.105	-59.687	-80.748
225	0	-199.215	-55.119	-66.701	110.221	-327.249	-245.995	-69.073	-313.937	-128.169
225	1.13	-66.760	-19.105	-51.227	86.479	-110.679	-111.310	26.395	-135.922	8.669
225	2.25	36.061	10.682	-35.753	62.737	60.364	-3.298	95.192	7.053	110.467
225	3.38	105.841	32.367	-20.278	38.995	178.796	74.978	134.252	110.232	172.469
225	4.5	145.985	47.825	-4.804	15.253	251.702	126.583	146.640	178.370	199.430
226	0	145.743	47.651	-5.198	15.743	251.132	125.970	146.912	177.592	199.580
226	1.13	95.721	28.938	10.855	-8.125	161.166	97.004	78.024	130.135	110.207
226	2.25	16.064	3.997	26.908	-31.993	25.673	41.365	-17.535	47.639	-14.207
226	3.38	-96.633	-29.045	42.960	-55.861	-162.431	-44.009	-142.831	-74.654	-178.417
226	4.5	-238.965	-68.315	59.013	-79.729	-396.061	-156.055	-294.798	-231.988	-377.667
227	0	-203.538	-63.483	-79.733	59.017	-345.818	-262.917	-124.167	-337.428	-191.741
227	1.13	-73.119	-25.876	-55.849	42.954	-129.143	-121.656	-22.852	-151.718	-47.974
227	2.25	27.665	5.504	-31.966	26.892	42.005	-7.067	51.790	-1.048	60.752
227	3.38	95.409	28.782	-8.083	10.829	160.542	77.785	96.697	109.825	129.683
227	4.5	133.517	45.832	15.801	-5.233	233.552	135.966	114.932	185.658	163.572
228	0	133.720	45.992	15.342	-4.859	234.052	135.690	115.488	185.490	164.279
228	1.13	84.284	29.378	38.953	-20.262	148.146	114.809	55.594	147.907	85.731
228	2.25	5.212	6.537	62.564	-35.664	16.714	67.256	-30.973	75.284	-27.857
228	3.38	-106.899	-24.407	86.176	-51.067	-167.330	-10.034	-147.276	-37.136	-181.241
228	4.5	-248.646	-61.578	109.787	-66.469	-396.899	-113.995	-290.251	-184.596	-369.665
229	0	-32.464	-12.320	-8.098	13.227	-58.669	-37.315	-15.991	-50.352	-27.961
229	1.13	-1.920	-0.032	-6.218	10.558	-2.356	-7.946	8.830	-8.565	9.049
229	2.25	15.673	6.438	-4.338	7.889	29.108	9.767	21.995	15.957	28.796
229	3.38	18.202	5.927	-2.458	5.220	31.325	13.923	21.602	20.264	28.327
229	4.5	7.780	-0.402	-0.578	2.551	8.692	6.424	9.553	7.308	10.594
230	0	8.559	-0.103	-0.162	2.033	10.106	7.542	9.737	8.752	11.057
230	1.13	15.011	4.883	1.179	-0.585	25.826	14.689	12.925	20.076	18.223
230	2.25	8.512	4.051	2.520	-3.204	16.697	10.181	4.457	14.136	8.126
230	3.38	-13.050	-3.762	3.861	-5.823	-21.680	-7.884	-17.569	-12.019	-22.187
230	4.5	-47.564	-17.394	5.202	-8.442	-84.906	-37.605	-51.250	-55.438	-69.764
231	0	-43.170	-16.838	-8.429	5.203	-78.745	-47.282	-33.651	-64.787	-50.474
231	1.13	-9.889	-3.226	-5.841	3.878	-17.028	-14.741	-5.023	-18.548	-8.344
231	2.25	10.441	4.569	-3.252	2.553	19.839	6.145	11.950	10.427	16.522
231	3.38	15.708	5.381	-0.664	1.228	27.460	13.473	15.365	19.186	21.173
231	4.5	8.024	0.376	1.924	-0.097	10.230	9.145	7.125	10.682	8.560
232	0	7.651	0.201	2.374	-0.474	9.503	9.260	6.412	10.653	7.663
232	1.13	14.334	5.715	5.285	-2.502	26.344	18.186	10.398	24.200	16.023

232	2.25	8.065	5.410	8.196	-4.531	18.334	15.455	2.728	20.483	7.119
232	3.38	-13.267	-1.876	11.108	-6.560	-18.922	-0.832	-18.500	-3.449	-22.000
232	4.5	-47.549	-14.980	14.019	-8.589	-81.028	-28.776	-51.383	-44.645	-68.382
233	0	-32.464	-12.320	-8.098	13.227	-58.669	-37.315	-15.990	-50.351	-27.960
233	1.13	-1.920	-0.032	-6.218	10.558	-2.355	-7.946	8.830	-8.565	9.050
233	2.25	15.673	6.438	-4.338	7.889	29.109	9.767	21.995	15.958	28.796
233	3.38	18.202	5.927	-2.458	5.220	31.325	13.924	21.602	20.265	28.327
233	4.5	7.780	-0.402	-0.578	2.551	8.693	6.424	9.554	7.309	10.595
234	0	8.559	-0.103	-0.162	2.033	10.107	7.542	9.737	8.753	11.058
234	1.13	15.011	4.883	1.179	-0.585	25.827	14.690	12.925	20.077	18.224
234	2.25	8.513	4.051	2.520	-3.204	16.697	10.181	4.457	14.137	8.126
234	3.38	-13.050	-3.762	3.861	-5.823	-21.680	-7.884	-17.568	-12.019	-22.187
234	4.5	-47.564	-17.393	5.202	-8.442	-84.906	-37.605	-51.249	-55.438	-69.764
235	0	-43.171	-16.838	-8.429	5.203	-78.746	-47.283	-33.651	-64.788	-50.475
235	1.13	-9.890	-3.226	-5.841	3.878	-17.029	-14.741	-5.023	-18.549	-8.345
235	2.25	10.441	4.569	-3.252	2.553	19.839	6.144	11.950	10.426	16.522
235	3.38	15.707	5.381	-0.664	1.228	27.459	13.473	15.365	19.186	21.173
235	4.5	8.023	0.376	1.924	-0.097	10.230	9.145	7.124	10.682	8.560
236	0	7.651	0.201	2.374	-0.474	9.503	9.260	6.412	10.653	7.663
236	1.13	14.333	5.714	5.285	-2.502	26.343	18.185	10.398	24.200	16.023
236	2.25	8.065	5.410	8.196	-4.531	18.334	15.455	2.728	20.483	7.119
236	3.38	-13.266	-1.876	11.108	-6.560	-18.922	-0.832	-18.500	-3.449	-22.000
236	4.5	-47.549	-14.980	14.019	-8.589	-81.027	-28.775	-51.383	-44.644	-68.382
237	0	-199.214	-55.119	-66.701	110.221	-327.247	-245.994	-69.072	-313.936	-128.168
237	1.13	-66.759	-19.104	-51.227	86.479	-110.678	-111.310	26.396	-135.921	8.671
237	2.25	36.061	10.683	-35.753	62.737	60.366	-3.297	95.192	7.054	110.469
237	3.38	105.842	32.368	-20.278	38.995	178.798	74.979	134.253	110.233	172.470
237	4.5	145.986	47.825	-4.804	15.253	251.704	126.584	146.641	178.371	199.431
238	0	145.744	47.651	-5.198	15.743	251.134	125.971	146.912	177.593	199.581
238	1.13	95.722	28.938	10.855	-8.125	161.167	97.004	78.025	130.136	110.208
238	2.25	16.065	3.998	26.908	-31.993	25.674	41.366	-17.535	47.639	-14.206
238	3.38	-96.632	-29.045	42.960	-55.861	-162.431	-44.009	-142.830	-74.654	-178.416
238	4.5	-238.965	-68.315	59.013	-79.729	-396.061	-156.055	-294.798	-231.988	-377.667
239	0	-203.539	-63.483	-79.733	59.017	-345.819	-262.917	-124.168	-337.429	-191.742
239	1.13	-73.119	-25.876	-55.849	42.954	-129.145	-121.657	-22.853	-151.719	-47.975
239	2.25	27.664	5.504	-31.966	26.892	42.003	-7.068	51.790	-1.049	60.751
239	3.38	95.408	28.782	-8.083	10.829	160.540	77.785	96.697	109.824	129.682
239	4.5	133.516	45.832	15.801	-5.233	233.551	135.965	114.931	185.657	163.571
240	0	133.719	45.992	15.342	-4.859	234.050	135.689	115.488	185.489	164.278
240	1.13	84.283	29.378	38.953	-20.262	148.145	114.808	55.593	147.907	85.731
240	2.25	5.212	6.537	62.564	-35.664	16.713	67.255	-30.974	75.283	-27.857
240	3.38	-106.899	-24.407	86.176	-51.067	-167.330	-10.034	-147.276	-37.136	-181.241
240	4.5	-248.646	-61.577	109.787	-66.469	-396.899	-113.994	-290.251	-184.596	-369.665
241	0	-53.157	-19.619	-7.592	12.463	-95.179	-55.434	-35.379	-76.147	-55.089
241	1.13	-12.028	-2.511	-5.822	9.921	-18.451	-16.647	-0.904	-20.324	-3.794
241	2.25	14.664	7.961	-4.051	7.379	30.334	9.147	20.577	16.159	28.160
241	3.38	22.222	9.209	-2.280	4.837	41.402	17.720	24.837	26.741	34.214
241	4.5	15.343	3.822	-0.509	2.296	24.526	13.299	16.104	17.982	20.928
242	0	15.296	3.971	-0.160	1.866	24.709	13.606	15.632	18.394	20.522
242	1.13	20.725	8.033	0.975	-0.434	37.723	19.628	18.219	27.846	26.367
242	2.25	11.717	5.458	2.110	-2.733	22.793	12.655	7.812	17.956	12.871
242	3.38	-16.425	-6.340	3.245	-5.033	-29.854	-11.538	-19.816	-17.833	-26.525
242	4.5	-59.005	-24.774	4.380	-7.333	-110.444	-48.724	-60.437	-72.964	-85.262
243	0	-56.913	-24.445	-7.313	4.367	-107.407	-58.534	-46.855	-82.837	-70.573
243	1.13	-15.072	-6.141	-5.022	3.238	-27.911	-18.587	-10.326	-24.967	-16.294
243	2.25	12.332	5.526	-2.732	2.109	23.640	8.367	13.208	13.562	18.644
243	3.38	20.603	7.971	-0.442	0.979	37.476	18.101	19.522	26.191	27.683
243	4.5	14.435	3.778	1.849	-0.150	23.368	14.840	12.842	19.479	17.380
244	0	14.335	3.613	2.276	-0.498	22.983	15.178	12.403	19.718	16.805
244	1.13	20.448	8.927	4.823	-2.273	38.820	23.225	16.130	32.158	24.707
244	2.25	12.123	7.604	7.369	-4.047	26.713	18.279	6.863	25.256	13.269
244	3.38	-15.336	-2.942	9.915	-5.822	-23.110	-3.887	-19.624	-7.545	-24.069
244	4.5	-57.232	-20.124	12.461	-7.596	-100.877	-39.048	-59.105	-59.687	-80.748
245	0	-231.480	-64.161	-61.056	100.427	-380.434	-269.388	-107.905	-347.584	-178.028
245	1.13	-86.592	-23.211	-46.868	78.769	-141.049	-124.801	0.836	-154.756	-22.338
245	2.25	27.916	11.103	-32.680	57.111	51.263	-7.556	82.236	1.992	96.273
245	3.38	107.350	36.194	-18.492	35.454	186.730	78.123	132.068	116.103	172.746



245	4.5	156.404	54.648	-4.304	13.796	275.122	136.460	154.560	194.133	213.139
246	0	156.305	54.479	-4.652	14.246	274.733	136.023	154.921	193.558	213.401
246	1.13	103.350	32.971	10.172	-7.680	176.774	103.187	85.335	139.970	121.225
246	2.25	20.016	4.826	24.995	-29.607	31.741	43.009	-11.593	50.302	-7.030
246	3.38	-98.393	-32.541	39.818	-51.533	-170.138	-48.735	-140.087	-82.004	-177.924
246	4.5	-247.181	-76.545	54.642	-73.460	-419.090	-167.821	-295.923	-250.390	-384.897
247	0	-232.747	-74.619	-73.340	54.614	-398.686	-282.812	-154.859	-368.401	-234.050
247	1.13	-88.458	-31.238	-51.457	39.803	-156.131	-131.069	-39.809	-166.591	-70.768
247	2.25	25.452	5.505	-29.574	24.993	39.351	-6.667	47.900	-0.860	56.435
247	3.38	104.287	33.026	-7.691	10.182	177.987	86.168	104.041	122.233	141.000
247	4.5	152.744	53.911	14.192	-4.628	269.549	151.661	132.841	209.246	189.485
248	0	152.877	54.084	13.743	-4.281	269.987	151.333	133.308	209.024	190.099
248	1.13	99.683	35.104	35.359	-18.456	175.786	125.073	71.259	163.909	107.404
248	2.25	16.109	9.487	56.974	-32.630	34.511	71.472	-18.132	82.714	-11.370
248	3.38	-102.539	-25.352	78.589	-46.804	-163.610	-13.696	-139.090	-41.119	-172.782
248	4.5	-251.567	-66.828	100.205	-60.979	-408.804	-126.205	-287.389	-201.031	-370.274
249	0	-54.964	-19.852	-6.723	10.550	-97.720	-56.190	-38.918	-77.278	-59.142
249	1.13	-12.885	-2.585	-5.150	8.407	-19.599	-16.746	-3.190	-20.566	-6.331
249	2.25	14.756	8.044	-3.577	6.264	30.578	9.704	19.544	16.806	27.139
249	3.38	23.263	9.452	-2.003	4.122	43.039	18.934	25.058	28.277	34.709
249	4.5	17.333	4.222	-0.430	1.979	27.555	15.170	17.579	20.408	22.938
250	0	17.488	4.428	-0.158	1.648	28.070	15.581	17.387	20.986	22.883
250	1.13	21.774	8.238	0.873	-0.379	39.310	20.470	19.218	28.970	27.655
250	2.25	11.623	5.411	1.904	-2.406	22.605	12.365	8.055	17.612	13.087
250	3.38	-17.661	-6.639	2.935	-4.433	-31.815	-12.960	-20.328	-19.645	-27.381
250	4.5	-61.384	-25.325	3.966	-6.460	-114.180	-51.280	-61.705	-76.243	-87.190
251	0	-60.524	-25.216	-6.447	3.961	-112.975	-60.919	-50.510	-86.206	-75.277
251	1.13	-17.076	-6.565	-4.425	2.932	-30.996	-19.794	-12.436	-26.712	-18.987
251	2.25	11.934	5.449	-2.403	1.903	23.039	8.337	12.644	13.440	17.962
251	3.38	21.811	8.241	-0.381	0.874	39.358	19.248	20.504	27.693	29.011
251	4.5	17.250	4.396	1.641	-0.154	27.733	17.166	15.370	22.604	20.719
252	0	17.036	4.182	1.971	-0.426	27.134	17.303	14.906	22.591	20.075
252	1.13	22.611	9.363	4.110	-1.999	42.114	24.460	18.350	33.956	27.541
252	2.25	13.748	7.908	6.250	-3.572	29.150	18.623	8.801	25.980	15.666
252	3.38	-14.248	-2.770	8.390	-5.145	-21.530	-4.434	-17.969	-7.896	-22.108
252	4.5	-56.682	-20.085	10.529	-6.718	-100.154	-40.484	-57.732	-61.114	-79.224
253	0	-20.471	-9.471	-6.119	8.009	-39.719	-24.544	-10.416	-33.887	-19.053
253	1.13	4.083	2.097	-4.010	5.469	8.256	-0.335	9.144	1.398	11.351
253	2.25	14.200	7.029	-1.901	2.929	28.287	10.879	15.709	17.342	22.414
253	3.38	5.184	2.738	0.208	0.389	10.601	4.873	5.055	7.386	7.577
253	4.5	-18.271	-8.189	2.317	-2.150	-35.028	-14.127	-18.594	-21.911	-26.601
254	0	-20.774	-8.862	-1.270	1.334	-39.108	-19.967	-17.362	-28.729	-25.994
254	1.13	3.418	1.883	-0.581	0.510	7.114	2.495	3.586	4.165	5.310
254	2.25	13.171	5.991	0.109	-0.315	25.391	11.963	11.539	17.719	17.274
254	3.38	3.791	0.877	0.799	-1.139	5.952	4.211	2.273	5.372	3.337
254	4.5	-20.026	-10.874	1.489	-1.964	-41.431	-16.535	-19.988	-26.316	-29.941
255	0	-19.860	-10.849	-1.968	1.491	-41.190	-19.842	-16.383	-29.754	-26.122
255	1.13	3.918	0.894	-1.141	0.799	6.132	2.384	4.325	3.478	5.516
255	2.25	13.257	6.001	-0.315	0.108	25.510	11.617	12.040	17.370	17.814
255	3.38	3.463	1.885	0.512	-0.583	7.172	3.629	2.534	5.361	4.212
255	4.5	-20.768	-8.868	1.338	-1.275	-39.110	-17.353	-19.966	-25.988	-28.732
256	0	-18.174	-8.184	-2.143	2.321	-34.903	-18.500	-14.035	-26.489	-21.801
256	1.13	5.086	2.721	0.391	0.210	10.457	4.968	4.787	7.465	7.275
256	2.25	13.908	6.990	2.925	-1.902	27.873	15.442	10.615	22.078	17.010
256	3.38	3.597	2.036	5.459	-4.013	7.573	8.696	-0.776	10.791	0.845
256	4.5	-21.153	-9.555	7.993	-6.125	-40.670	-11.045	-25.162	-19.837	-34.561
257	0	-144.714	-46.622	2.740	-2.257	-248.251	-127.502	-132.499	-178.444	-183.691
257	0.75	-84.825	-26.295	1.684	-1.297	-143.862	-74.658	-77.639	-103.864	-106.994
257	1.50	-31.874	-8.037	0.628	-0.337	-51.108	-28.058	-29.023	-37.871	-38.885
257	2.25	11.636	6.773	-0.427	0.623	24.800	10.045	11.096	16.036	17.139
257	3	48.209	19.515	-1.483	1.583	89.074	41.905	44.971	61.356	64.576
258	0	43.762	18.295	-1.440	1.574	81.786	37.946	40.960	55.964	59.129
258	0.75	40.883	14.592	-1.057	1.073	72.407	35.738	37.868	51.011	53.247
258	1.5	31.066	8.821	-0.673	0.572	51.393	27.287	28.532	37.470	38.778
258	2.25	11.809	-0.399	-0.289	0.071	13.533	10.339	10.699	11.844	12.223
258	3	-14.387	-11.686	0.095	-0.430	-35.962	-12.853	-13.378	-22.369	-22.919
259	0	-30.943	-17.087	0.263	-0.330	-64.471	-27.586	-28.179	-42.979	-43.602

259	0.75	-8.330	-5.700	0.087	-0.136	-19.116	-7.410	-7.633	-12.246	-12.481
259	1.5	9.466	3.619	-0.089	0.058	17.150	8.430	8.577	12.126	12.280
259	2.25	19.940	9.490	-0.265	0.251	39.113	17.682	18.198	26.638	27.180
259	3	25.599	13.293	-0.441	0.445	51.987	22.598	23.484	34.790	35.721
260	0	25.916	13.355	-0.448	0.473	52.467	22.877	23.797	35.155	36.122
260	0.75	17.299	8.685	-0.209	0.205	34.655	15.360	15.775	23.416	23.851
260	1.5	3.866	1.947	0.029	-0.062	7.754	3.508	3.417	5.316	5.220
260	2.25	-16.889	-8.239	0.267	-0.330	-33.450	-14.933	-15.530	-22.644	-23.270
260	3	-42.461	-20.494	0.506	-0.597	-83.743	-37.709	-38.812	-56.964	-58.122
261	0	-41.627	-20.359	0.510	-0.542	-82.527	-36.954	-38.006	-55.999	-57.104
261	0.75	-16.212	-8.087	0.261	-0.274	-32.392	-14.330	-14.864	-21.843	-22.404
261	1.5	4.387	2.117	0.011	-0.006	8.652	3.960	3.943	5.952	5.935
261	2.25	17.665	8.874	-0.238	0.262	35.396	15.660	16.161	23.888	24.414
261	3	26.126	13.561	-0.488	0.531	53.049	23.025	24.044	35.463	36.533
262	0	26.153	13.584	-0.481	0.531	53.119	23.057	24.069	35.514	36.577
262	0.75	19.099	9.560	-0.256	0.276	38.215	16.933	17.465	25.807	26.366
262	1.5	7.228	3.467	-0.032	0.021	14.220	6.474	6.526	9.740	9.795
262	2.25	-11.964	-6.074	0.193	-0.235	-24.076	-10.575	-11.002	-16.186	-16.636
262	3	-35.973	-17.684	0.418	-0.490	-71.461	-31.958	-32.866	-48.474	-49.427
263	0	1.467	-0.335	0.010	0.007	1.224	1.330	1.328	1.339	1.337
263	1.5	21.622	-0.183	0.003	0.002	25.654	19.462	19.461	22.591	22.590
263	3	15.292	-0.030	-0.004	-0.004	18.302	13.758	13.759	16.033	16.033
263	4.5	-17.523	0.123	-0.011	-0.009	-20.831	-15.782	-15.780	-18.333	-18.332
263	6	-76.823	0.276	-0.017	-0.015	-91.746	-69.158	-69.156	-80.509	-80.506
264	0	-27.179	-12.780	0.325	-0.366	-53.063	-24.136	-24.827	-36.248	-36.974
264	0.56	-12.659	-5.870	0.156	-0.178	-24.584	-11.237	-11.571	-16.826	-17.177
264	1.13	-0.320	0.167	-0.013	0.010	-0.118	-0.302	-0.278	-0.245	-0.221
264	1.69	8.780	4.750	-0.182	0.198	18.136	7.720	8.101	12.020	12.420
264	2.25	15.700	8.460	-0.352	0.387	32.376	13.779	14.517	21.446	22.221
265	0	16.095	8.797	-0.361	0.399	33.389	14.124	14.885	22.062	22.861
265	0.56	10.185	5.400	-0.212	0.227	20.863	8.955	9.393	13.874	14.335
265	1.13	2.094	1.131	-0.063	0.054	4.323	1.822	1.939	2.846	2.968
265	1.69	-9.234	-4.593	0.087	-0.118	-13.430	-8.224	-8.429	-12.498	-12.714
265	2.25	-22.744	-11.189	0.236	-0.291	-45.196	-20.233	-20.760	-30.682	-31.236
266	0	-144.714	-46.622	2.740	-2.257	-248.251	-127.502	-132.499	-178.444	-183.690
266	0.75	-84.825	-26.295	1.684	-1.297	-143.862	-74.658	-77.639	-103.864	-106.994
266	1.5	-31.874	-8.037	0.628	-0.337	-51.108	-28.058	-29.023	-37.871	-38.884
266	2.25	11.636	6.773	-0.427	0.623	24.800	10.045	11.096	16.036	17.139
266	3	48.209	19.515	-1.483	1.583	89.074	41.905	44.971	61.356	64.576
267	0	43.762	18.295	-1.440	1.574	81.786	37.946	40.960	55.964	59.129
267	0.75	40.883	14.592	-1.057	1.073	72.407	35.738	37.868	51.011	53.247
267	1.5	31.067	8.821	-0.673	0.572	51.393	27.287	28.532	37.470	38.778
267	2.25	11.809	-0.399	-0.289	0.071	13.533	10.339	10.699	11.844	12.223
267	3	-14.387	-11.686	0.095	-0.430	-35.962	-12.853	-13.378	-22.369	-22.919
268	0	-37.283	0.178	-0.007	-0.010	-44.455	-33.562	-33.565	-39.042	-39.046
268	1.5	3.159	0.106	-0.003	-0.005	3.961	2.840	2.839	3.381	3.379
268	3	17.116	0.034	0.001	0.001	20.595	15.406	15.406	17.995	17.995
268	4.5	4.589	-0.037	0.006	0.007	5.447	4.136	4.137	4.801	4.802
268	6	-34.423	-0.109	0.010	0.012	-41.482	-30.971	-30.969	-36.203	-36.200
269	0	-30.943	-17.087	0.263	-0.330	-64.471	-27.586	-28.179	-42.979	-43.602
269	0.75	-8.330	-5.700	0.087	-0.136	-19.116	-7.410	-7.633	-12.246	-12.481
269	1.5	9.466	3.619	-0.089	0.058	17.150	8.430	8.577	12.126	12.280
269	2.25	19.940	9.490	-0.265	0.251	39.113	17.682	18.198	26.638	27.180
269	3	25.598	13.293	-0.441	0.445	51.987	22.598	23.484	34.790	35.720
270	0	25.916	13.355	-0.448	0.473	52.467	22.877	23.797	35.155	36.122
270	0.75	17.299	8.685	-0.209	0.205	34.655	15.360	15.775	23.416	23.851
270	1.5	3.866	1.947	0.029	-0.062	7.753	3.508	3.417	5.316	5.220
270	2.25	-16.889	-8.239	0.267	-0.330	-33.450	-14.933	-15.530	-22.644	-23.271
270	3	-42.461	-20.494	0.506	-0.597	-83.744	-37.709	-38.812	-56.964	-58.122
271	0	-41.628	-20.360	0.510	-0.542	-82.529	-36.955	-38.007	-56.000	-57.105
271	0.75	-16.212	-8.087	0.261	-0.274	-32.393	-14.330	-14.864	-21.844	-22.405
271	1.5	4.387	2.117	0.011	-0.006	8.653	3.960	3.943	5.952	5.935
271	2.25	17.665	8.874	-0.238	0.262	35.397	15.661	16.161	23.889	24.415
271	3	26.127	13.562	-0.488	0.531	53.051	23.026	24.045	35.465	36.534
272	0	26.154	13.585	-0.481	0.531	53.121	23.058	24.070	35.515	36.579
272	0.75	19.101	9.561	-0.256	0.276	38.219	16.935	17.467	25.810	26.369
272	1.5	7.231	3.468	-0.032	0.021	14.226	6.476	6.529	9.744	9.799



272	2.25	-11.960	-6.072	0.193	-0.235	-24.067	-10.571	-10.999	-16.181	-16.630
272	3	-35.968	-17.681	0.418	-0.490	-71.451	-31.953	-32.861	-48.467	-49.420
273	0	-27.163	-12.772	0.325	-0.366	-53.030	-24.121	-24.813	-36.226	-36.952
273	0.56	-12.647	-5.864	0.156	-0.178	-24.559	-11.226	-11.560	-16.810	-17.161
273	1.13	-0.313	0.171	-0.013	0.010	-0.101	-0.294	-0.271	-0.234	-0.210
273	1.69	8.784	4.752	-0.182	0.198	18.144	7.724	8.104	12.026	12.425
273	2.25	15.700	8.460	-0.352	0.387	32.375	13.778	14.517	21.445	22.221
274	0	16.098	8.799	-0.361	0.399	33.396	14.127	14.888	22.067	22.865
274	0.56	10.179	5.397	-0.212	0.227	20.850	8.949	9.388	13.866	14.326
274	1.13	2.079	1.122	-0.063	0.054	4.290	1.808	1.925	2.824	2.947
274	1.69	-9.259	-4.607	0.087	-0.118	-18.482	-8.246	-8.452	-12.533	-12.749
274	2.25	-22.778	-11.208	0.236	-0.291	-45.267	-20.264	-20.791	-30.730	-31.284
275	0	23.661	4.734	0.993	-0.832	35.968	22.288	20.463	28.870	26.953
275	0.75	20.412	3.275	0.725	-0.623	29.735	19.097	17.748	24.258	22.842
275	1.5	12.105	0.781	0.457	-0.414	15.776	11.352	10.480	13.683	12.768
275	2.25	-2.514	-3.436	0.189	-0.205	-8.514	-2.073	-2.467	-4.605	-5.019
275	3	-22.191	-8.687	-0.079	0.004	-40.529	-20.051	-19.968	-28.857	-28.770
276	0	23.662	4.735	0.993	-0.832	35.971	22.290	20.464	28.872	26.955
276	0.75	20.399	3.268	0.725	-0.623	29.707	19.084	17.736	24.239	22.823
276	1.5	12.076	0.766	0.457	-0.414	15.717	11.326	10.455	13.643	12.728
276	2.25	-2.557	-3.459	0.189	-0.205	-8.604	-2.112	-2.506	-4.666	-5.079
276	3	-22.249	-8.719	-0.079	0.004	-40.650	-20.103	-20.020	-28.938	-28.851
279	0	-207.320	-63.211	-93.939	97.673	-349.922	-280.527	-88.915	-356.145	-154.952
279	1.13	-73.612	-25.128	-70.018	72.364	-128.538	-136.269	6.113	-166.642	-17.141
279	2.25	30.462	6.728	-46.097	47.054	47.319	-18.682	74.470	-12.179	85.630
279	3.38	101.495	30.482	-22.177	21.745	170.565	69.169	113.090	102.488	148.606
279	4.5	142.893	48.009	1.744	-3.565	248.285	130.348	125.039	182.114	176.540
280	0	143.108	48.123	1.226	-3.032	248.726	130.024	125.766	181.869	177.397
280	1.13	94.729	31.304	24.297	-27.566	163.761	109.553	57.690	144.699	90.242
280	2.25	16.714	8.257	47.368	-52.100	33.269	62.410	-37.057	72.488	-31.953
280	3.38	-94.340	-22.891	70.438	-76.635	-149.834	-14.468	-161.541	-39.519	-193.945
280	4.5	-235.031	-60.266	93.509	-101.169	-378.463	-118.019	-312.696	-186.566	-390.977
283	0	-207.293	-63.196	-93.939	97.673	-349.864	-280.502	-88.890	-356.106	-154.914
283	1.13	-73.590	-25.115	-70.018	72.364	-128.492	-136.249	6.133	-166.611	-17.110
283	2.25	30.478	6.737	-46.097	47.054	47.353	-18.667	74.485	-12.156	85.653
283	3.38	101.506	30.488	-22.177	21.745	170.588	69.179	113.100	102.503	148.621
283	4.5	142.898	48.011	1.744	-3.565	248.296	130.352	125.044	182.121	176.547
284	0	143.114	48.126	1.226	-3.032	248.738	130.029	125.770	181.876	177.405
284	1.13	94.731	31.305	24.297	-27.566	163.764	109.555	57.691	144.701	90.245
284	2.25	16.712	8.256	47.368	-52.100	33.265	62.409	-37.059	72.485	-31.956
284	3.38	-94.346	-22.894	70.438	-76.635	-149.846	-14.474	-161.546	-39.527	-193.953
284	4.5	-235.040	-60.272	93.509	-101.169	-378.483	-118.028	-312.705	-186.579	-390.991
287	0	-35.181	0.232	-0.006	-0.008	-41.846	-31.669	-31.671	-36.800	-36.803
287	1.5	4.530	0.091	-0.003	-0.004	5.581	4.073	4.072	4.810	4.809
287	3	17.755	-0.050	0.000	0.000	21.226	15.979	15.979	18.611	18.611
287	4.5	4.496	-0.191	0.002	0.004	5.090	4.049	4.050	4.603	4.604
287	6	-35.247	-0.332	0.005	0.008	-42.829	-31.717	-31.715	-37.214	-37.211
288	0	-18.844	0.042	-0.044	-0.069	-22.546	-17.004	-17.029	-19.806	-19.832
288	0.75	19.661	9.857	-0.037	-0.058	39.365	17.659	17.638	26.816	26.794
288	1.5	46.265	17.604	-0.029	-0.046	83.684	41.610	41.593	59.638	59.621
288	2.25	58.463	21.903	-0.021	-0.034	105.200	52.595	52.582	75.162	75.149
288	3	58.758	24.134	-0.014	-0.023	109.124	52.869	52.860	76.886	76.877
289	0	64.770	25.682	-0.030	-0.040	118.815	58.263	58.254	84.156	84.147
289	0.75	18.286	9.694	0.008	0.008	37.453	16.465	16.465	25.315	25.315
289	1.5	-40.101	-8.362	0.046	0.055	-61.501	-36.045	-36.036	-47.326	-47.317
289	2.25	-112.894	-29.866	0.085	0.102	-183.258	-101.520	-101.502	-137.265	-137.247
289	3	-197.588	-53.439	0.123	0.149	-322.608	-177.706	-177.680	-241.005	-240.977
294	0	-144.912	-46.764	-2.092	2.760	-248.717	-132.513	-127.661	-183.815	-178.721
294	0.75	-85.018	-26.418	-1.158	1.700	-144.291	-77.675	-74.817	-107.129	-104.128
294	1.5	-32.062	-8.141	-0.225	0.640	-51.499	-29.080	-28.216	-39.029	-38.121
294	2.25	11.454	6.689	0.709	-0.420	24.446	11.017	9.888	16.985	15.799
294	3	48.032	19.450	1.642	-1.480	88.758	44.871	41.748	64.411	61.133
295	0	43.584	18.229	1.635	-1.438	81.468	40.860	37.787	58.964	55.737
295	0.75	40.769	14.548	1.117	-1.059	72.201	37.810	35.634	53.147	50.862
295	1.5	31.018	8.799	0.600	-0.679	51.299	28.516	27.237	38.742	37.399
295	2.25	11.825	-0.398	0.082	-0.299	13.552	10.724	10.343	12.251	11.851
295	3	-14.306	-11.664	-0.435	0.080	-35.830	-13.311	-12.795	-22.827	-22.285

296	0	-30.907	-17.083	-0.338	0.267	-64.421	-28.154	-27.550	-43.570	-42.934
296	0.75	-8.316	-5.697	-0.143	0.090	-19.095	-7.627	-7.395	-12.471	-12.227
296	1.5	9.458	3.620	0.053	-0.087	17.141	8.564	8.425	12.266	12.119
296	2.25	19.910	9.490	0.248	-0.264	39.076	18.167	17.655	27.145	26.607
296	3	25.546	13.291	0.443	-0.441	51.920	23.435	22.550	35.662	34.733
297	0	25.858	13.351	0.472	-0.449	52.391	23.744	22.823	36.057	35.091
297	0.75	17.282	8.689	0.206	-0.212	34.641	15.760	15.342	23.837	23.398
297	1.5	3.890	1.958	-0.059	0.025	7.800	3.442	3.526	5.256	5.344
297	2.25	-16.824	-8.221	-0.324	0.262	-33.342	-15.466	-14.830	-23.185	-22.570
297	3	-42.355	-20.468	-0.590	0.499	-83.574	-38.709	-37.620	-57.986	-56.844
298	0	-41.507	-20.301	-0.545	0.513	-82.290	-37.902	-36.844	-56.945	-55.834
298	0.75	-16.120	-8.050	-0.277	0.263	-32.224	-14.785	-14.245	-22.288	-21.721
298	1.5	4.451	2.132	-0.008	0.013	8.753	3.997	4.019	6.008	6.031
298	2.25	17.700	8.867	0.261	-0.236	35.427	16.191	15.694	24.445	23.923
298	3	26.133	13.533	0.529	-0.486	53.012	24.049	23.033	36.521	35.455
299	0	26.197	13.568	0.531	-0.480	53.144	24.108	23.096	36.611	35.550
299	0.75	19.202	9.499	0.271	-0.250	38.240	17.552	17.031	26.430	25.883
299	1.5	7.390	3.361	0.010	-0.020	14.245	6.661	6.631	9.888	9.856
299	2.25	-11.743	-6.225	-0.250	0.211	-24.050	-10.818	-10.358	-16.514	-16.030
299	3	-35.692	-17.878	-0.510	0.441	-71.436	-32.633	-31.682	-49.276	-48.277
300	0	-25.684	-13.216	-0.443	0.411	-51.966	-23.559	-22.704	-35.760	-34.863
300	0.56	-12.483	-6.653	-0.227	0.210	-25.624	-11.462	-11.025	-17.537	-17.078
300	1.13	-1.464	-0.962	-0.011	0.008	-3.295	-1.328	-1.309	-2.154	-2.134
300	1.69	6.318	3.275	0.206	-0.193	12.821	5.891	5.493	8.913	8.494
300	2.25	11.918	6.638	0.422	-0.394	24.923	11.148	10.332	17.139	16.282
301	0	12.152	6.645	0.425	-0.394	25.214	11.362	10.543	17.392	16.532
301	0.56	5.883	3.207	0.198	-0.187	12.190	5.493	5.107	8.405	8.000
301	1.13	-2.568	-1.104	-0.029	0.019	-4.848	-2.340	-2.292	-3.422	-3.371
301	1.69	-14.257	-6.869	-0.256	0.226	-28.098	-13.087	-12.605	-19.565	-19.059
301	2.25	-28.126	-13.506	-0.483	0.433	-55.362	-25.797	-24.881	-38.549	-37.587
302	0	-36.678	-18.308	-0.516	0.469	-73.306	-33.526	-32.541	-50.587	-49.553
302	0.75	-12.260	-6.352	-0.252	0.228	-24.875	-11.286	-10.807	-17.139	-16.636
302	1.5	7.340	3.537	0.013	-0.013	14.467	6.619	6.593	9.948	9.921
302	2.25	19.619	9.977	0.277	-0.255	39.506	17.934	17.403	27.176	26.619
302	3	27.082	14.349	0.541	-0.496	55.456	24.915	23.878	38.044	36.955
303	0	27.082	14.349	0.541	-0.496	55.456	24.914	23.878	38.043	36.955
303	0.75	19.620	9.977	0.277	-0.255	39.507	17.935	17.403	27.177	26.619
303	1.5	7.341	3.537	0.013	-0.013	14.469	6.620	6.594	9.950	9.923
303	2.25	-12.258	-6.350	-0.252	0.228	-24.871	-11.284	-10.805	-17.136	-16.633
303	3	-36.675	-18.307	-0.516	0.469	-73.300	-33.523	-32.539	-50.583	-49.549
304	0	-28.125	-13.505	-0.483	0.433	-55.358	-25.795	-24.879	-38.546	-37.585
304	0.56	-14.255	-6.868	-0.256	0.226	-28.095	-13.086	-12.604	-19.563	-19.057
304	1.13	-2.567	-1.103	-0.029	0.019	-4.845	-2.339	-2.291	-3.421	-3.370
304	1.69	5.883	3.207	0.198	-0.187	12.192	5.493	5.108	8.406	8.001
304	2.25	12.153	6.645	0.425	-0.394	25.215	11.363	10.543	17.393	16.533
305	0	11.919	6.639	0.422	-0.394	24.925	11.149	10.333	17.140	16.283
305	0.56	6.318	3.275	0.206	-0.193	12.821	5.892	5.493	8.913	8.494
305	1.13	-1.464	-0.962	-0.011	0.008	-3.297	-1.329	-1.310	-2.155	-2.135
305	1.69	-12.484	-6.653	-0.227	0.210	-25.626	-11.463	-11.026	-17.538	-17.080
305	2.25	-25.685	-13.217	-0.443	0.411	-51.970	-23.560	-22.706	-35.762	-34.865
306	0	-35.692	-17.879	-0.510	0.441	-71.437	-32.633	-31.682	-49.276	-48.278
306	0.75	-11.743	-6.225	-0.250	0.211	-24.051	-10.819	-10.358	-16.514	-16.030
306	1.5	7.390	3.361	0.010	-0.020	14.245	6.661	6.631	9.887	9.856
306	2.25	19.202	9.498	0.271	-0.250	38.239	17.552	17.031	26.430	25.883
306	3	26.196	13.568	0.531	-0.480	53.144	24.108	23.096	36.611	35.549
307	0	26.133	13.533	0.529	-0.486	53.012	24.049	23.033	36.521	35.455
307	0.75	17.700	8.867	0.261	-0.236	35.427	16.191	15.694	24.445	23.923
307	1.5	4.451	2.132	-0.008	0.013	8.752	3.997	4.019	6.008	6.031
307	2.25	-16.120	-8.050	-0.277	0.263	-32.224	-14.785	-14.245	-22.288	-21.721
307	3	-41.507	-20.301	-0.545	0.513	-82.290	-37.902	-36.844	-56.945	-55.834
308	0	-42.355	-20.468	-0.590	0.499	-83.574	-38.709	-37.621	-57.986	-56.844
308	0.75	-16.824	-8.221	-0.324	0.262	-33.342	-15.466	-14.880	-23.185	-22.570
308	1.5	3.890	1.958	-0.059	0.025	7.800	3.442	3.526	5.255	5.344
308	2.25	17.282	8.689	0.206	-0.212	34.641	15.760	15.342	23.837	23.398
308	3	25.858	13.351	0.472	-0.449	52.391	23.744	22.823	36.057	35.091
309	0	25.546	13.291	0.443	-0.441	51.920	23.435	22.550	35.662	34.733
309	0.75	19.910	9.490	0.248	-0.264	39.076	18.167	17.655	27.145	26.607

309	1.5	9.458	3.620	0.053	-0.087	17.141	8.564	8.425	12.266	12.119
309	2.25	-8.316	-5.697	-0.143	0.090	-19.095	-7.627	-7.395	-12.471	-12.227
309	3	-30.907	-17.083	-0.338	0.267	-64.421	-28.154	-27.550	-43.570	-42.934
310	0	-14.306	-11.664	-0.435	0.080	-35.830	-13.311	-12.795	-22.827	-22.285
310	0.75	11.825	-0.398	0.082	-0.299	13.552	10.724	10.343	12.251	11.851
310	1.5	31.018	8.799	0.600	-0.679	51.299	28.516	27.237	38.742	37.399
310	2.25	40.769	14.548	1.117	-1.059	72.201	37.810	35.634	53.147	50.862
310	3	43.584	18.229	1.635	-1.438	81.468	40.860	37.787	58.964	55.738
311	0	48.032	19.450	1.642	-1.480	88.758	44.871	41.749	64.411	61.133
311	0.75	11.454	6.689	0.709	-0.420	24.446	11.017	9.888	16.985	15.799
311	1.5	-32.062	-8.141	-0.225	0.640	-51.499	-29.080	-28.215	-39.029	-38.121
311	2.25	-85.018	-26.418	-1.158	1.700	-144.291	-77.675	-74.817	-107.129	-104.128
311	3	-144.912	-46.764	-2.092	2.760	-248.717	-132.513	-127.661	-183.815	-178.721
312	0	-21.333	-9.651	-9.421	9.227	-41.041	-28.621	-9.972	-38.371	-18.791
312	1.13	3.996	2.046	-6.164	5.990	8.069	-2.568	9.586	-0.988	11.774
312	2.25	14.886	7.107	-2.907	2.753	29.234	10.491	16.151	17.055	22.998
312	3.38	6.644	2.944	0.350	-0.484	12.683	6.329	5.495	9.198	8.322
312	4.5	-16.037	-7.855	3.607	-3.721	-31.812	-10.826	-18.154	-18.000	-25.694
313	0	-19.107	-8.451	-1.542	1.482	-36.450	-18.738	-15.714	-27.005	-23.830
313	1.13	4.130	2.055	-0.445	0.436	8.244	3.273	4.153	5.165	6.089
313	2.25	12.930	5.924	0.653	-0.610	24.995	12.290	11.026	17.994	16.668
313	3.38	2.595	0.571	1.751	-1.656	4.029	4.087	0.679	4.923	1.346
313	4.5	-22.177	-11.418	2.848	-2.702	-44.881	-17.111	-22.661	-27.488	-33.316
314	0	-21.905	-11.379	-2.713	2.853	-44.493	-22.428	16.862	-33.018	-27.174
314	1.13	2.786	0.597	-1.661	1.754	4.298	0.846	4.261	1.557	5.142
314	2.25	13.039	5.937	-0.610	0.654	25.145	11.125	12.389	16.791	18.118
314	3.38	4.158	2.054	0.442	-0.445	8.276	4.185	3.297	6.124	5.193
314	4.5	-19.160	-8.466	1.494	-1.545	-36.537	-15.750	-18.789	-23.883	-27.073
315	0	-15.908	-7.847	-3.703	3.609	-31.645	-18.020	-10.708	-25.535	-17.858
315	1.13	6.602	2.935	-0.474	0.350	12.618	5.468	6.292	8.283	9.148
315	2.25	14.675	7.080	2.754	-2.909	28.937	15.961	10.298	22.760	16.814
315	3.38	3.614	2.002	5.982	-6.168	7.540	9.234	-2.916	11.337	-1.421
315	4.5	-21.885	-9.712	9.210	-9.427	-41.801	-10.487	-29.124	-19.427	-38.997
316	0	-48.662	-18.559	-10.088	9.480	-88.088	-53.884	-34.316	-73.380	-52.834
316	1.13	-8.145	-1.634	-7.643	7.125	-12.388	-14.973	-0.206	-17.607	-2.100
316	2.25	17.934	8.654	-5.197	4.770	35.368	10.943	20.911	18.826	29.292
316	3.38	24.880	9.720	-2.752	2.416	45.408	19.640	24.908	29.358	34.784
316	4.5	17.388	4.149	-0.307	0.061	27.504	15.342	15.710	20.549	20.935
317	0	17.717	4.390	0.105	-0.339	28.285	16.050	15.606	21.479	21.013
317	1.13	21.557	8.166	1.929	-2.002	38.935	21.330	17.400	29.805	25.678
317	2.25	10.960	5.306	3.753	-3.664	21.641	13.617	6.199	18.791	11.003
317	3.38	-18.771	-6.777	5.577	-5.327	-33.369	-11.317	-22.221	-18.124	-29.573
317	4.5	-62.940	-25.497	7.401	-6.989	-116.324	-49.245	-63.636	-74.379	-89.489
318	0	-62.033	-25.388	-6.989	7.407	-115.061	-62.819	-48.423	-88.468	-73.352
318	1.13	-18.071	-6.692	-5.326	5.581	-32.393	-21.590	-10.683	-28.783	-17.331
318	2.25	11.453	5.367	-3.663	3.755	22.330	6.645	14.063	11.560	19.349
318	3.38	21.844	8.203	-2.000	1.929	39.338	17.659	21.589	26.004	30.130
318	4.5	17.797	4.403	-0.337	0.104	28.401	15.680	16.121	21.106	21.569
319	0	17.413	4.156	0.063	-0.308	27.545	15.735	15.364	20.968	20.578
319	1.13	24.603	9.689	2.417	-2.755	45.027	24.560	19.389	34.476	29.046
319	2.25	17.356	8.586	4.771	-5.201	34.565	20.392	10.419	28.643	18.172
319	3.38	-9.024	-1.740	7.125	-7.648	-13.613	-0.997	-15.770	-3.090	-18.602
319	4.5	-49.843	-18.703	9.479	-10.094	-89.735	-35.379	-54.953	-54.164	-74.717
320	0	-204.673	-61.214	-92.633	86.030	-343.550	-276.839	-98.176	-350.736	-163.141
320	1.13	-64.789	-20.783	-70.198	64.862	-111.000	-128.508	6.552	-154.830	-13.017
320	2.25	44.715	13.011	-47.762	43.695	74.476	-7.518	83.939	4.998	101.027
320	3.38	119.146	37.582	-25.327	22.527	203.106	81.904	129.758	122.186	172.433
320	4.5	163.197	55.517	-2.892	1.360	284.663	143.985	148.237	203.296	207.760
321	0	162.987	55.313	-3.408	1.857	284.085	143.280	148.545	202.405	207.933
321	1.13	104.536	33.096	19.759	-20.114	178.396	113.841	73.968	151.360	109.494
321	2.25	15.706	4.242	42.926	-42.085	25.634	57.061	-27.949	64.236	-25.025
321	3.38	-108.199	-33.835	66.093	-64.055	-183.975	-31.286	-161.435	-65.527	-202.183
321	4.5	-262.483	-78.548	89.261	-86.026	-440.656	-146.974	-322.261	-231.369	-415.420
322	0	-248.189	-76.793	-86.014	89.301	-420.696	-309.384	-134.069	-399.292	-215.212
322	1.13	-97.484	-32.524	-64.044	66.123	-169.018	-151.779	-21.612	-190.094	-53.419
322	2.25	22.843	5.109	-42.074	42.944	35.586	-21.516	63.503	-16.974	72.295
322	3.38	108.095	33.519	-20.105	19.766	183.345	77.180	117.051	113.507	155.371

322	4.5	162.967	55.293	1.865	-3.412	284.030	148.535	143.258	207.908	202.367
323	0	163.242	55.506	1.368	-2.896	284.701	148.286	144.022	207.809	203.333
323	1.13	115.716	37.171	22.536	-25.344	198.334	126.681	78.801	168.583	118.309
323	2.25	37.812	12.200	43.705	-47.792	64.894	77.736	-13.762	93.278	-2.794
323	3.38	-75.168	-21.994	64.874	-70.241	-125.392	-2.777	-137.891	-24.665	-166.535
323	4.5	-218.526	-62.825	86.042	-92.689	-362.752	-110.631	-289.362	-178.688	-366.356
324	0	-46.673	-18.245	-11.127	10.316	-85.200	-53.132	-31.689	-72.184	-49.669
324	1.13	-7.107	-1.487	-8.422	7.739	-10.908	-14.818	1.343	-17.242	-0.273
324	2.25	18.021	8.634	-5.717	5.162	35.440	10.502	21.381	18.359	29.782
324	3.38	24.016	9.533	-3.012	2.584	44.072	18.602	24.199	28.059	33.936
324	4.5	15.572	3.796	-0.308	0.007	24.760	13.708	14.022	18.419	18.750
325	0	15.745	4.000	0.204	-0.489	25.294	14.375	13.681	19.267	18.539
325	1.13	20.494	7.969	2.197	-2.281	37.344	20.642	16.164	28.847	24.145
325	2.25	10.806	5.302	4.191	-4.073	21.450	13.916	5.652	19.087	10.410
325	3.38	-18.016	-6.588	6.184	-5.865	-32.160	-10.030	-22.079	-16.574	-29.225
325	4.5	-61.275	-25.115	8.178	-7.657	-113.714	-46.970	-62.805	-71.575	-88.201
326	0	-59.492	-24.871	-7.656	8.175	-111.184	-61.198	-45.368	-86.174	-69.551
326	1.13	-16.652	-6.415	-5.865	6.183	-30.246	-20.852	-8.803	-27.684	-15.033
326	2.25	11.751	5.404	-4.074	4.192	22.748	6.501	14.767	11.465	20.144
326	3.38	21.020	8.001	-2.283	2.200	38.025	16.634	21.118	24.714	29.421
326	4.5	15.851	3.961	-0.493	0.209	25.359	13.773	14.474	18.622	19.358
327	0	15.567	3.746	0.004	-0.302	24.674	14.014	13.708	18.709	18.388
327	1.13	23.460	9.447	2.588	-3.014	43.267	23.701	18.099	33.301	27.419
327	2.25	16.914	8.512	5.172	-5.726	33.916	20.395	9.497	28.553	17.110
327	3.38	-8.765	-1.646	7.756	-8.438	-13.151	-0.132	-16.326	-2.096	-19.099
327	4.5	-48.881	-18.441	10.340	-11.149	-88.163	-33.653	-55.142	-52.086	-74.650
328	0	-19.888	0.317	-0.016	0.007	-23.359	-17.916	-17.893	-20.700	-20.676
328	1.13	2.331	0.218	-0.007	0.001	3.146	2.091	2.099	2.578	2.586
328	2.25	9.653	0.119	0.003	-0.004	11.774	8.690	8.683	10.214	10.206
328	3.38	2.077	0.021	0.012	-0.010	2.525	1.881	1.860	2.207	2.184
328	4.5	-20.397	-0.078	0.022	-0.015	-24.601	-18.335	-18.372	-21.443	-21.482
329	0	-182.295	-53.274	-99.176	91.615	-303.993	-263.242	-72.450	-329.107	-128.776
329	1.13	-53.229	-17.586	-75.116	69.011	-92.012	-123.023	21.104	-145.842	5.492
329	2.25	46.200	11.876	-51.056	46.407	74.441	-9.476	87.987	2.383	104.719
329	3.38	112.590	33.235	-26.996	23.802	188.284	74.335	125.134	110.812	164.150
329	4.5	149.345	48.367	-2.936	1.198	256.600	131.474	135.608	184.200	188.541
330	0	149.057	48.177	-3.495	1.739	255.952	130.656	135.891	183.191	188.688
330	1.13	95.347	28.940	21.240	-21.625	160.720	107.052	64.187	140.648	95.640
330	2.25	12.001	3.475	45.976	-44.988	19.961	56.777	-34.188	63.065	-32.447
330	3.38	-104.385	-30.091	70.711	-68.352	-173.408	-23.235	-162.299	-54.315	-200.331
330	4.5	-250.407	-69.885	95.447	-91.716	-412.304	-129.919	-317.082	-206.735	-403.256
331	0	-221.676	-66.467	-91.812	95.467	-372.358	-291.321	-104.042	-371.037	-174.394
331	1.13	-83.607	-27.663	-68.411	70.713	-144.588	-143.657	-4.533	-177.046	-30.966
331	2.25	24.827	4.914	-45.009	45.959	37.655	-22.664	68.303	-18.095	77.421
331	3.38	100.221	29.389	-21.607	21.205	167.288	68.592	111.403	101.060	146.012
331	4.5	145.979	47.637	1.795	-3.550	251.394	133.176	127.832	185.174	179.563
332	0	146.213	47.817	1.271	-3.010	251.962	132.863	128.582	184.983	180.488
332	1.13	104.235	32.321	23.850	-27.016	176.795	117.661	66.795	154.851	101.442
332	2.25	32.621	10.598	46.429	-51.022	56.101	75.787	-21.664	89.679	-12.545
332	3.38	-72.033	-19.227	69.008	-75.028	-117.204	4.178	-139.858	-15.290	-166.528
332	4.5	-206.323	-55.280	91.587	-99.034	-336.035	-94.104	-284.725	-155.300	-355.451
333	0	-31.239	-12.170	-11.989	11.097	-56.959	-40.105	-17.019	-53.057	-28.817
333	1.13	-0.938	0.097	-9.068	8.316	-0.970	-9.912	7.472	-10.445	7.808
333	2.25	16.413	6.545	-6.148	5.535	30.169	8.624	20.307	14.903	27.170
333	3.38	18.700	6.013	-3.227	2.755	32.061	13.604	19.585	20.035	26.316
333	4.5	8.037	-0.338	-0.306	-0.026	9.103	6.927	7.207	7.905	8.198
334	0	8.751	-0.051	0.273	-0.587	10.420	8.149	7.289	9.443	8.540
334	1.13	14.886	4.902	2.557	-2.646	25.707	15.954	10.751	21.403	15.940
334	2.25	8.070	4.038	4.840	-4.706	16.145	12.103	2.557	16.100	6.676
334	3.38	-13.811	-3.807	7.124	-6.765	-22.664	-5.306	-19.194	-9.419	-24.003
334	4.5	-48.642	-17.471	9.408	-8.824	-86.323	-34.370	-52.602	-52.202	-71.345
335	0	-45.282	-17.223	-8.836	9.407	-81.896	-49.590	-31.347	-67.674	-48.520
335	1.13	-11.125	-3.483	-6.788	7.138	-18.923	-16.800	-2.874	-21.003	-6.380
335	2.25	10.081	4.439	-4.739	4.870	19.200	4.334	13.943	8.406	18.495
335	3.38	16.223	5.380	-2.691	2.602	28.076	11.910	17.203	17.598	23.156
335	4.5	9.415	0.503	-0.642	0.334	12.102	7.831	8.807	9.528	10.553
336	0	9.052	0.330	-0.121	-0.200	11.390	8.025	7.946	9.585	9.502

336	1.13	17.123	6.147	2.813	-3.285	30.382	18.224	12.126	24.805	18.402
336	2.25	12.243	6.146	5.748	-6.369	24.525	16.767	4.649	22.763	10.039
336	3.38	-7.701	-0.836	8.683	-9.454	-10.579	1.752	-16.384	0.505	-18.539
336	4.5	-40.595	-13.636	11.618	-12.538	-70.533	-24.918	-49.074	-39.017	-64.381
337	0	2.064	-1.110	4.482	-4.495	0.700	6.340	-2.637	6.174	-3.252
337	0.86	3.522	1.334	5.099	-4.976	6.361	8.269	-1.806	9.893	-0.686
337	1.73	-2.118	0.642	5.715	-5.456	-1.514	3.809	-7.363	4.181	-7.549
337	2.59	-18.328	-5.098	6.332	-5.937	-30.150	-10.163	-22.432	-15.808	-28.689
337	3.45	-41.636	-13.975	6.948	-6.417	-72.323	-30.524	-43.889	-45.226	-59.260
338	0	-52.835	-21.868	-8.496	9.046	-98.391	-56.048	-38.505	-78.175	-59.755
338	1.13	-11.780	-4.183	-6.502	6.838	-20.829	-17.104	-3.764	-21.831	-7.824
338	2.25	14.838	6.865	-4.508	4.630	28.789	8.847	17.984	15.172	24.766
338	3.38	22.323	8.690	-2.513	2.421	40.691	17.577	22.512	26.275	31.456
338	4.5	15.370	3.879	-0.519	0.213	24.649	13.314	14.045	18.037	18.805
339	0	15.555	3.865	-0.032	-0.289	24.851	13.968	13.711	18.735	18.464
339	1.13	20.908	8.807	2.755	-3.221	39.181	21.573	15.597	30.395	24.120
339	2.25	11.824	7.112	5.542	-6.153	25.568	16.184	4.489	22.715	10.435
339	3.38	-16.394	-3.805	8.329	-9.085	-25.761	-6.425	-23.840	-10.865	-29.150
339	4.5	-59.050	-21.359	11.116	-12.017	-105.035	-42.029	-65.162	-63.787	-88.076
340	0	-31.230	-12.165	-11.989	11.097	-56.941	-40.097	-17.011	-53.045	-28.804
340	1.13	-0.934	0.099	-9.068	8.316	-0.963	-9.909	7.476	-10.440	7.814
340	2.25	16.412	6.545	-6.148	5.535	30.166	8.623	20.306	14.901	27.168
340	3.38	18.694	6.009	-3.227	2.755	32.047	13.598	19.579	20.026	26.307
340	4.5	8.025	-0.344	-0.306	-0.026	9.079	6.917	7.196	7.888	8.182
341	0	8.739	-0.058	0.273	-0.587	10.393	8.138	7.278	9.426	8.523
341	1.13	14.879	4.898	2.557	-2.646	25.692	15.947	10.745	21.393	15.930
341	2.25	8.068	4.037	4.840	-4.706	16.141	12.101	2.555	16.097	6.074
341	3.38	-13.807	-3.805	7.124	-6.765	-22.657	-5.302	-19.191	-9.414	-23.998
341	4.5	-48.632	-17.466	9.408	-8.824	-36.304	-34.362	-52.593	-52.189	-71.333
342	0	-45.278	-17.222	-8.836	9.407	-81.888	-49.586	-31.344	-67.670	-48.515
342	1.13	-11.122	-3.482	-6.788	7.138	-18.917	-16.798	-2.872	-20.999	-6.377
342	2.25	10.083	4.440	-4.739	4.870	19.204	4.335	13.945	8.408	18.498
342	3.38	16.224	5.381	-2.691	2.602	28.078	11.911	17.204	17.600	23.157
342	4.5	9.415	0.503	-0.642	0.334	12.103	7.831	8.807	9.528	10.553
343	0	9.052	0.330	-0.121	-0.200	11.391	8.025	7.947	9.585	9.502
343	1.13	17.123	6.147	2.813	-3.285	30.383	18.224	12.126	24.806	18.403
343	2.25	12.243	6.146	5.748	-6.369	24.525	16.767	4.649	22.762	10.039
343	3.38	-7.701	-0.836	8.683	-9.454	-10.580	1.752	-16.385	0.504	-18.540
343	4.5	-40.596	-13.637	11.618	-12.538	-70.534	-24.919	-49.075	-39.018	-64.382
344	0	-182.287	-53.270	-99.176	91.615	-303.976	-263.234	-72.443	-329.096	-128.765
344	1.13	-53.226	-17.584	-75.116	69.011	-92.005	-123.020	21.107	-145.837	5.496
344	2.25	46.199	11.875	-51.056	46.407	74.439	-9.477	87.986	2.381	104.717
344	3.38	112.584	33.232	-26.996	23.802	188.271	74.330	125.128	110.803	164.142
344	4.5	149.334	48.361	-2.936	1.198	256.578	131.464	135.599	184.185	188.526
345	0	149.046	48.171	-3.495	1.739	255.929	130.646	135.881	183.176	188.672
345	1.13	95.340	28.936	21.240	-21.625	160.707	107.047	64.182	140.640	95.632
345	2.25	11.999	3.474	45.976	-44.988	19.958	56.775	-34.189	63.063	-32.450
345	3.38	-104.382	-30.089	70.711	-68.352	-173.402	-23.232	-162.296	-54.310	-200.327
345	4.5	-250.399	-69.881	95.447	-91.716	-412.288	-129.912	-317.074	-206.724	-403.245
346	0	-221.675	-66.466	-91.812	95.467	-372.355	-291.320	-104.040	-371.035	-174.392
346	1.13	-83.605	-27.662	-68.411	70.713	-144.585	-143.655	-4.532	-177.044	-30.964
346	2.25	24.829	4.915	-45.009	45.959	37.659	-22.663	68.305	-18.092	77.424
346	3.38	100.223	29.390	-21.607	21.205	167.292	68.594	111.405	101.063	146.015
346	4.5	145.982	47.638	1.795	-3.550	251.399	133.178	127.834	185.177	179.565
347	0	146.215	47.818	1.271	-3.010	251.966	132.865	128.584	184.986	180.491
347	1.13	104.236	32.321	23.850	-27.016	176.797	117.662	66.796	154.852	101.443
347	2.25	32.620	10.598	46.429	-51.022	56.101	75.787	-21.664	89.678	-12.645
347	3.38	-72.035	-19.228	69.008	-75.028	-117.206	4.177	-139.859	-15.292	-166.530
347	4.5	-206.325	-55.281	91.587	-99.034	-336.040	-94.106	-284.727	-155.303	-355.454
348	0	-48.881	-18.441	10.340	-11.149	-88.163	-33.653	-55.142	-52.086	-74.650
348	1.13	-8.765	-1.646	7.756	-8.438	-13.151	-0.132	-16.326	-2.096	-19.099
348	2.25	16.914	8.512	5.172	-5.726	33.916	20.395	9.497	28.553	17.110
348	3.38	23.460	9.447	2.588	-3.014	43.267	23.701	18.099	33.301	27.419
348	4.5	15.567	3.746	0.004	-0.302	24.674	14.014	13.708	18.709	18.388
349	0	15.851	3.961	-0.493	0.209	25.359	13.773	14.474	18.622	19.358
349	1.13	21.020	8.001	-2.283	2.200	38.025	16.634	21.118	24.714	29.421
349	2.25	11.751	5.404	-4.074	4.192	22.748	6.501	14.767	11.465	20.144

349	3.38	-16.652	-6.415	-5.865	6.183	-30.246	-20.851	-8.803	-27.684	-15.033
349	4.5	-59.492	-24.871	-7.656	8.175	-111.183	-61.198	-45.368	-86.173	-69.551
350	0	-61.276	-25.115	8.178	-7.657	-113.716	-46.971	-62.806	-71.576	-88.202
350	1.13	-18.016	-6.588	6.184	-5.865	-32.161	-10.030	-22.080	-16.574	-29.226
350	2.25	10.806	5.302	4.191	-4.073	21.450	13.916	5.652	19.087	10.410
350	3.38	20.495	7.970	2.197	-2.281	37.345	20.643	16.164	28.848	24.145
350	4.5	15.746	4.001	0.204	-0.489	25.296	14.375	13.682	19.268	18.540
351	0	15.573	3.796	-0.308	0.007	24.762	13.708	14.023	18.420	18.751
351	1.13	24.016	9.534	-3.012	2.584	44.073	18.602	24.199	28.060	33.937
351	2.25	18.021	8.634	-5.717	5.162	35.440	10.502	21.381	18.359	29.781
351	3.38	-7.107	-1.487	-8.422	7.739	-10.909	-14.818	1.342	-17.243	-0.274
351	4.5	-46.673	-18.246	-11.127	10.316	-85.201	-53.133	-31.590	-72.185	-49.670
352	0	-204.674	-61.214	-92.633	86.030	-343.551	-276.839	-98.177	-350.737	-163.141
352	1.13	-64.790	-20.783	-70.198	64.862	-111.001	-128.508	6.551	-154.830	-13.017
352	2.25	44.716	13.011	-47.762	43.695	74.476	-7.518	83.939	4.998	101.028
352	3.38	119.146	37.583	-25.327	22.527	203.107	81.905	129.759	122.187	172.434
352	4.5	163.197	55.517	-2.892	1.360	284.665	143.986	148.238	203.297	207.761
353	0	162.987	55.314	-3.408	1.857	284.087	143.280	148.546	202.406	207.935
353	1.13	104.536	33.096	19.759	-20.114	178.397	113.841	73.969	151.360	109.494
353	2.25	15.706	4.242	42.926	-42.085	25.634	57.061	-27.950	64.236	-25.026
353	3.38	-108.200	-33.835	66.093	-64.055	-183.976	-31.286	-161.435	-65.528	-202.184
353	4.5	-262.484	-78.549	89.261	-86.026	-440.658	-146.975	-322.262	-231.370	-415.421
354	0	-248.189	-76.793	-86.014	89.301	-420.696	-309.384	-134.069	-399.292	-215.212
354	1.13	-97.483	-32.524	-64.044	66.123	-169.018	-151.779	-21.612	-190.094	-53.419
354	2.25	22.843	5.109	-42.074	42.944	35.586	-21.516	63.503	-16.974	72.295
354	3.38	108.095	33.519	-20.105	19.766	183.345	77.180	117.051	113.507	155.371
354	4.5	162.967	55.293	1.865	-3.412	284.030	148.535	143.258	207.908	202.367
355	0	163.242	55.506	1.368	-2.896	284.700	148.286	144.022	207.809	203.333
355	1.13	115.716	37.171	22.536	-25.344	198.334	126.681	78.801	168.583	118.309
355	2.25	37.812	12.200	43.705	-47.792	64.894	77.735	-13.762	93.278	-2.794
355	3.38	-75.168	-21.994	64.874	-70.241	-125.392	-2.777	-137.892	-24.665	-166.535
355	4.5	-218.526	-62.825	86.042	-92.689	-362.752	-110.631	-289.362	-178.688	-366.356
356	0	-49.843	-18.703	9.479	-10.094	-89.735	-35.379	-54.953	-54.164	-74.717
356	1.13	-9.024	-1.770	7.125	-7.648	-13.613	-0.997	-15.770	-3.090	-18.602
356	2.25	17.356	8.586	4.771	-5.201	34.565	20.392	10.419	28.643	18.172
356	3.38	24.603	9.689	2.417	-2.755	45.027	24.560	19.389	34.476	29.046
356	4.5	17.413	4.156	0.063	-0.308	27.545	15.735	15.364	20.968	20.578
357	0	17.797	4.403	-0.337	0.104	28.401	15.680	16.121	21.106	21.569
357	1.13	21.844	8.203	-2.000	1.929	39.338	17.659	21.589	26.004	30.130
357	2.25	11.453	5.367	-3.663	3.755	22.330	6.645	14.063	11.560	19.349
357	3.38	-18.071	-6.692	-5.326	5.581	-32.393	-21.590	-10.683	-28.783	-17.331
357	4.5	-62.033	-25.388	-6.989	7.407	-115.061	-62.819	-48.423	-88.468	-73.352
358	0	-62.940	-25.497	7.401	-6.989	-116.324	-49.245	-63.636	-74.379	-89.489
358	1.13	-18.771	-6.777	5.577	-5.327	-33.369	-11.317	-22.221	-18.124	-29.573
358	2.25	10.960	5.306	3.753	-3.664	21.641	13.617	6.199	18.791	11.003
358	3.38	21.557	8.166	1.929	-2.002	38.935	21.330	17.400	29.805	25.678
358	4.5	17.717	4.390	0.105	-0.339	28.285	16.050	15.606	21.479	21.013
359	0	17.387	4.149	-0.307	0.061	27.504	15.342	15.710	20.549	20.935
359	1.13	24.880	9.720	-2.752	2.416	45.408	19.640	24.808	29.358	34.784
359	2.25	17.934	8.654	-5.197	4.770	35.368	10.943	20.911	18.826	29.292
359	3.38	-8.145	-1.634	-7.643	7.125	-12.388	-14.973	-0.206	-17.607	-2.100
359	4.5	-48.662	-18.559	-10.088	9.480	-88.088	-53.884	-34.316	-73.380	-52.833
360	0	-21.333	-9.651	-9.421	9.227	-41.041	-28.621	-9.972	-38.371	-18.791
360	1.13	3.996	2.046	-6.164	5.990	8.069	-2.568	9.586	-0.988	11.774
360	2.25	14.886	7.107	-2.907	2.753	29.234	10.491	16.151	17.055	22.998
360	3.38	6.644	2.944	0.350	-0.484	12.683	6.329	5.495	9.198	8.322
360	4.5	-16.037	-7.855	3.607	-3.721	-31.812	-10.826	-18.154	-18.000	-25.694
361	0	-19.107	-8.451	-1.542	1.482	-36.450	-18.738	-15.714	-27.005	-23.830
361	1.13	4.130	2.055	-0.445	0.436	8.244	3.273	4.153	5.165	6.089
361	2.25	12.930	5.924	0.653	-0.610	24.995	12.290	11.026	17.994	16.668
361	3.38	2.595	0.571	1.751	-1.656	4.029	4.087	0.679	4.923	1.346
361	4.5	-22.177	-11.418	2.848	-2.702	-44.881	-17.111	-22.661	-27.488	-33.316
362	0	-21.905	-11.379	-2.713	2.853	-44.493	-22.428	-16.862	-33.018	-27.174
362	1.13	2.786	0.597	-1.661	1.754	4.298	0.846	4.261	1.557	5.142
362	2.25	13.039	5.937	-0.610	0.654	25.145	11.125	12.389	16.791	18.118
362	3.38	4.158	2.054	0.442	-0.445	8.276	4.185	3.297	6.124	5.193
362	4.5	-19.160	-8.466	1.494	-1.545	-36.537	-15.750	-18.789	-23.883	-27.073



363	0	-15.908	-7.847	-3.703	3.609	-31.645	-18.020	-10.708	-25.535	-17.858
363	1.13	6.602	2.935	-0.474	0.350	12.618	5.468	6.292	8.283	9.148
363	2.25	14.675	7.080	2.754	-2.909	28.937	15.961	10.298	22.760	16.814
363	3.38	3.614	2.002	5.982	-6.168	7.540	9.234	-2.916	11.337	-1.421
363	4.5	-21.885	-9.712	9.210	-9.427	-41.801	-10.487	-29.124	-19.427	-38.997
364	0	-35.070	-0.065	-0.005	0.004	-42.189	-31.569	-31.559	-36.870	-36.860
364	1.5	4.657	-0.065	-0.005	0.004	5.483	4.186	4.195	4.843	4.853
364	3	17.899	-0.065	-0.005	0.004	21.374	16.104	16.113	18.747	18.757
364	4.5	4.656	-0.066	-0.005	0.004	5.482	4.185	4.195	4.842	4.852
364	6	-35.071	-0.066	-0.005	0.004	-42.190	-31.569	-31.560	-36.872	-36.861
413	0	-20.397	-0.078	0.022	-0.015	-24.602	-18.335	-18.372	-21.443	-21.482
413	1.13	2.077	0.021	0.012	-0.010	2.525	1.881	1.860	2.206	2.184
413	2.25	9.653	0.119	0.003	-0.004	11.775	8.690	8.684	10.214	10.206
413	3.38	2.331	0.218	-0.007	0.001	3.147	2.092	2.100	2.578	2.587
413	4.5	-19.888	0.317	-0.016	0.007	-23.358	-17.915	-17.892	-20.699	-20.675
414	0	-35.247	-0.332	0.005	0.008	-42.829	-31.717	-31.715	-37.214	-37.211
414	1.5	4.496	-0.191	0.002	0.004	5.089	4.049	4.050	4.603	4.604
414	3	17.755	-0.050	0.000	0.000	21.226	15.979	15.979	18.611	18.611
414	4.5	4.530	0.091	-0.003	-0.004	5.581	4.073	4.072	4.810	4.809
414	6	-35.181	0.232	-0.006	-0.008	-41.846	-31.669	-31.671	-36.800	-36.803
415	0	-34.423	-0.109	0.010	0.012	-41.482	-30.971	-30.969	-36.203	-36.200
415	1.5	4.589	-0.037	0.006	0.007	5.447	4.136	4.137	4.801	4.802
415	3	17.116	0.034	0.001	0.001	20.595	15.406	15.406	17.995	17.995
415	4.5	3.159	0.106	-0.003	-0.005	3.961	2.840	2.839	3.381	3.379
415	6	-37.283	0.178	-0.007	-0.010	-44.455	-33.562	-33.565	-39.042	-39.046
416	0	-76.823	0.276	-0.017	-0.015	-91.746	-69.158	-69.156	-80.509	-80.506
416	1.5	-17.523	0.123	-0.011	-0.009	-20.831	-15.782	-15.780	-18.333	-18.332
416	3	15.292	-0.030	-0.004	-0.004	18.302	13.758	13.759	16.033	16.033
416	4.5	21.622	-0.183	0.003	0.002	25.654	19.462	19.461	22.591	22.590
416	6	1.467	-0.335	0.010	0.007	1.224	1.330	1.328	1.339	1.337
427	0	-35.754	-0.690	0.084	-0.068	-44.009	-32.095	-32.247	-37.888	-38.048
427	1.5	4.393	-0.363	0.038	-0.029	4.690	3.991	3.924	4.423	4.353
427	3	18.055	-0.037	-0.009	0.009	21.607	16.241	16.259	18.925	18.944
427	4.5	5.232	0.290	-0.055	0.048	6.743	4.654	4.757	5.619	5.727
427	6	-34.075	0.617	-0.102	0.086	-39.903	-30.769	-30.581	-35.497	-35.299
428	0	-36.078	-0.311	-0.074	0.085	-43.791	-32.544	-32.386	-38.155	-37.989
428	1.5	3.977	-0.173	-0.037	0.043	4.495	3.543	3.623	4.028	4.112
428	3	17.548	-0.036	0.000	0.001	21.000	15.793	15.795	18.402	18.404
428	4.5	4.634	0.102	0.036	-0.040	5.723	4.207	4.130	4.968	4.887
428	6	-34.765	0.239	0.073	-0.082	-41.335	-31.215	-31.370	-36.276	-36.438
429	0	-35.223	0.107	-0.069	0.077	-42.097	-31.770	-31.624	-36.990	-36.837
429	1.5	4.507	0.030	-0.037	0.041	5.457	4.019	4.097	4.712	4.794
429	3	17.752	-0.046	-0.005	0.005	21.228	15.971	15.982	18.605	18.616
429	4.5	4.513	-0.123	0.027	-0.031	5.219	4.088	4.031	4.689	4.629
429	6	-35.212	-0.199	0.059	-0.067	-42.573	-31.632	-31.757	-37.036	-37.168
430	0	-19.228	0.496	-0.034	0.041	-22.281	-17.340	-17.264	-19.913	-19.834
430	1.13	2.601	0.268	-0.022	0.026	3.549	2.319	2.367	2.876	2.926
430	2.25	9.532	0.039	-0.009	0.011	11.501	8.570	8.589	10.024	10.045
430	3.38	1.566	-0.189	0.003	-0.005	1.576	1.412	1.405	1.528	1.520
430	4.5	-21.298	-0.417	0.016	-0.020	-26.226	-19.153	-19.188	-22.609	-22.647
431	0	-34.952	0.002	0.001	0.000	-41.939	-31.456	-31.457	-36.698	-36.699
431	1.5	4.775	0.002	0.001	0.000	5.733	4.298	4.297	5.016	5.014
431	3	18.017	0.002	0.001	0.000	21.624	16.216	16.215	18.920	18.919
431	4.5	4.775	0.002	0.001	0.000	5.733	4.298	4.297	5.015	5.014
431	6	-34.952	0.002	0.001	0.000	-41.940	-31.456	-31.458	-36.698	-36.699
432	0	-21.298	-0.417	0.016	-0.020	-26.226	-19.153	-19.188	-22.610	-22.647
432	1.13	1.566	-0.189	0.003	-0.005	1.576	1.412	1.405	1.528	1.520
432	2.25	9.532	0.039	-0.009	0.011	11.501	8.570	8.590	10.024	10.045
432	3.38	2.601	0.268	-0.022	0.026	3.549	2.319	2.367	2.877	2.927
432	4.5	-19.228	0.496	-0.034	0.041	-22.280	-17.339	-17.264	-19.913	-19.834
433	0	-35.212	-0.199	0.059	-0.067	-42.573	-31.632	-31.757	-37.036	-37.168
433	1.5	4.513	-0.123	0.027	-0.031	5.219	4.088	4.031	4.689	4.629
433	3	17.752	-0.046	-0.005	0.005	21.228	15.971	15.982	18.605	18.616
433	4.5	4.507	0.030	-0.037	0.041	5.457	4.019	4.097	4.712	4.794
433	6	-35.223	0.107	-0.069	0.077	-42.097	-31.770	-31.624	-36.990	-36.836
434	0	-34.765	0.239	0.073	-0.082	-41.335	-31.215	-31.370	-36.276	-36.438
434	1.5	4.634	0.102	0.036	-0.040	5.723	4.207	4.130	4.968	4.887

434	3	17.548	-0.036	0.000	0.001	21.000	15.793	15.795	18.402	18.404
434	4.5	3.977	-0.173	-0.037	0.043	4.495	3.543	3.625	4.028	4.112
434	6	-36.078	-0.311	-0.074	0.085	-43.791	-32.544	-32.586	-38.155	-37.989
435	0	-34.075	0.616	-0.102	0.086	-39.903	-30.769	-30.581	-35.497	-35.299
435	1.5	5.232	0.290	-0.055	0.048	6.743	4.654	4.757	5.619	5.727
435	3	18.055	-0.037	-0.009	0.009	21.607	16.241	16.259	18.925	18.944
435	4.5	4.393	-0.363	0.038	-0.029	4.690	3.991	3.924	4.423	4.353
435	6	-35.754	-0.690	0.084	-0.068	-44.009	-32.095	-32.247	-37.888	-38.048
452	0	-10.429	-0.704	-1.492	1.620	-13.642	-10.878	-7.766	-12.961	-9.693
452	0.56	-2.704	-0.413	-0.722	0.786	-3.906	-3.156	-1.648	-3.858	-2.274
452	1.13	1.066	-0.434	0.047	-0.049	0.585	1.007	0.911	0.896	0.795
452	1.69	0.814	-0.804	0.817	-0.883	-0.310	1.549	-0.151	1.206	-0.579
452	2.25	-3.394	-1.486	1.586	-1.717	-6.450	-1.468	-4.772	-2.834	-6.303
455	0	-33.078	-8.864	0.001	0.000	-53.876	-29.769	-29.770	-40.315	-40.316
455	0.3	-23.735	-6.460	0.004	-0.001	-38.818	-21.358	-21.363	-28.988	-28.993
455	0.6	-15.263	-4.254	0.007	-0.003	-25.121	-13.729	-13.739	-18.698	-18.708
455	0.9	-7.539	-2.180	0.010	-0.004	-12.536	-6.775	-6.789	-9.279	-9.294
455	1.2	-0.445	-0.173	0.014	-0.005	-0.811	-0.387	-0.406	-0.562	-0.582
457	0	-0.445	-0.173	0.014	-0.005	-0.811	-0.387	-0.406	-0.562	-0.582
457	0.3	-7.539	-2.180	0.010	-0.004	-12.536	-6.775	-6.789	-9.279	-9.294
457	0.6	-15.263	-4.254	0.007	-0.003	-25.121	-13.729	-13.739	-18.698	-18.708
457	0.9	-23.735	-6.460	0.004	-0.001	-38.818	-21.358	-21.363	-28.988	-28.993
457	1.2	-33.078	-8.864	0.001	0.000	-53.876	-29.769	-29.770	-40.315	-40.316
461	0	-67.126	-16.344	-2.228	0.938	-106.701	-62.641	-59.475	-83.118	-79.794
461	0.45	-47.300	-11.470	-1.617	0.611	-75.111	-44.187	-41.959	-58.589	-56.249
461	0.9	-29.430	-7.043	-1.006	0.284	-46.585	-27.493	-26.203	-36.395	-35.040
461	1.35	-14.058	-3.361	-0.395	-0.043	-22.246	-13.047	-12.695	-17.293	-16.923
461	1.8	-0.642	-0.125	0.216	-0.370	-0.971	-0.362	-0.948	-0.527	-1.141
462	0	-72.420	-18.445	-0.464	6.021	-116.416	-65.643	-59.157	-88.149	-81.340
462	0.45	-51.277	-13.056	-0.396	4.803	-82.422	-46.546	-41.346	-62.483	-57.023
462	0.9	-32.091	-8.114	-0.328	3.586	-51.491	-29.210	-25.296	-39.152	-35.042
462	1.35	-15.402	-3.916	-0.260	2.368	-24.748	-14.122	-11.494	-18.913	-16.153
462	1.8	-0.669	-0.166	-0.192	1.151	-1.068	-0.795	0.548	-1.009	0.401
463	0	-14.097	-4.568	0.420	-0.929	-24.225	-12.268	-13.616	-17.239	-18.655
463	0.64	-5.582	-1.327	0.351	-0.788	-8.821	-4.673	-5.812	-6.328	-7.524
463	1.27	-0.125	0.650	0.282	-0.648	0.891	0.170	-0.760	0.575	-0.401
463	1.91	0.744	0.521	0.213	-0.507	1.727	0.883	0.163	1.334	0.577
463	2.55	-1.445	-0.872	0.145	-0.367	-3.129	-1.156	-1.667	-1.915	-2.452
464	0	-72.420	-18.445	-0.464	6.021	-116.416	-65.643	-59.157	-88.149	-81.339
464	0.45	-51.277	-13.056	-0.396	4.803	-82.422	-46.546	-41.346	-62.483	-57.023
464	0.9	-32.091	-8.114	-0.328	3.586	-51.491	-29.210	-25.296	-39.152	-35.042
464	1.35	-15.402	-3.916	-0.260	2.368	-24.748	-14.122	-11.494	-18.913	-16.153
464	1.8	-0.669	-0.166	-0.192	1.151	-1.068	-0.795	0.548	-1.009	0.401
465	0	-67.126	-16.344	-2.228	0.938	-106.701	-62.641	-59.475	-83.118	-79.794
465	0.45	-47.300	-11.470	-1.617	0.611	-75.111	-44.187	-41.959	-58.589	-56.249
465	0.9	-29.430	-7.043	-1.006	0.284	-46.585	-27.493	-26.203	-36.395	-35.040
465	1.35	-14.058	-3.361	-0.395	-0.043	-22.246	-13.047	-12.695	-17.293	-16.923
465	1.8	-0.642	-0.125	0.216	-0.370	-0.971	-0.362	-0.948	-0.527	-1.141
466	0	-14.097	-4.568	0.420	-0.929	-24.225	-12.268	-13.616	-17.239	-18.655
466	0.64	-5.582	-1.327	0.351	-0.788	-8.821	-4.673	-5.812	-6.328	-7.524
466	1.27	-0.125	0.650	0.282	-0.648	0.891	0.170	-0.760	0.575	-0.401
466	1.91	0.744	0.521	0.213	-0.507	1.727	0.883	0.163	1.334	0.577
466	2.55	-1.445	-0.872	0.145	-0.367	-3.129	-1.156	-1.667	-1.915	-2.452
467	0	-66.857	-16.295	0.854	-2.200	-106.300	-59.318	-62.371	-79.569	-82.775
467	0.45	-47.086	-11.431	0.546	-1.595	-74.793	-41.831	-43.972	-56.069	-58.317
467	0.9	-29.272	-7.015	0.238	-0.990	-46.349	-26.106	-27.335	-34.904	-36.194
467	1.35	-13.955	-3.343	-0.069	-0.385	-22.094	-12.629	-12.944	-16.831	-17.163
467	1.8	-0.594	-0.118	-0.377	0.220	-0.901	-0.912	-0.315	-1.094	-0.468
468	0	-73.251	-18.559	6.075	-0.501	-117.596	-59.851	-66.427	-82.227	-89.132
468	0.45	-51.940	-13.147	4.842	-0.422	-83.363	-41.904	-47.168	-57.735	-63.263
468	0.9	-32.585	-8.182	3.609	-0.344	-52.193	-25.718	-29.670	-35.580	-39.730
468	1.35	-15.728	-3.961	2.375	-0.265	-25.212	-11.780	-14.420	-16.516	-19.289
468	1.8	-0.827	-0.188	1.142	-0.187	-1.293	0.398	-0.931	0.212	-1.183
469	0	-14.020	-4.558	-0.933	0.426	-24.117	-13.551	-12.192	-18.572	-17.146
469	0.64	-5.516	-1.319	-0.791	0.356	-8.730	-5.755	-4.609	-7.453	-6.250
469	1.27	-0.071	0.657	-0.649	0.286	0.966	-0.713	0.222	-0.342	0.639
469	1.91	0.786	0.526	-0.507	0.215	1.786	0.200	0.923	0.624	1.383



469	2.55	-1.415	-0.868	-0.366	0.145	-3.087	-1.639	-1.128	-2.417	-1.880
470	0	-73.251	-18.559	6.075	-0.501	-117.596	-59.851	-66.427	-82.227	-89.132
470	0.45	-51.940	-13.147	4.842	-0.422	-83.363	-41.904	-47.168	-57.735	-63.263
470	0.9	-32.585	-8.182	3.609	-0.344	-52.193	-25.718	-29.070	-35.580	-39.730
470	1.35	-15.728	-3.961	2.375	-0.265	-25.212	-11.780	-14.420	-16.516	-19.289
470	1.8	-0.827	-0.188	1.142	-0.187	-1.293	0.398	-0.931	0.212	-1.183
471	0	-66.857	-16.295	0.854	-2.200	-106.300	-59.318	-62.371	-79.569	-82.775
471	0.45	-47.086	-11.431	0.546	-1.595	-74.793	-41.832	-43.972	-56.069	-58.317
471	0.9	-29.272	-7.015	0.238	-0.990	-46.349	-26.106	-27.335	-34.904	-36.194
471	1.35	-13.955	-3.343	-0.069	-0.385	-22.094	-12.629	-12.944	-16.831	-17.163
471	1.8	-0.594	-0.118	-0.377	0.220	-0.901	-0.912	-0.315	-1.094	-0.468
473	0	-72.280	-18.672	0.898	-0.685	-116.611	-64.154	-65.737	-86.715	-88.376
473	0.45	-51.183	-13.251	0.630	-0.448	-82.622	-45.435	-46.513	-61.429	-62.561
473	0.9	-32.044	-8.277	0.363	-0.210	-51.695	-28.477	-29.049	-38.479	-39.081
473	1.35	-15.401	-4.048	0.095	0.027	-24.957	-13.766	-13.334	-18.621	-18.693
473	1.8	-0.715	-0.265	-0.172	0.265	-1.282	-0.816	-0.379	-1.099	-0.640
474	0	-72.280	-18.672	0.898	-0.685	-116.611	-64.154	-65.737	-86.715	-88.376
474	0.45	-51.183	-13.251	0.630	-0.448	-82.622	-45.435	-46.513	-61.429	-62.561
474	0.9	-32.044	-8.277	0.363	-0.210	-51.695	-28.477	-29.049	-38.479	-39.081
474	1.35	-15.401	-4.048	0.095	0.027	-24.957	-13.766	-13.834	-18.621	-18.693
474	1.8	-0.715	-0.265	-0.172	0.265	-1.282	-0.816	-0.379	-1.099	-0.640
475	0	-72.614	-18.736	-0.616	0.886	-117.115	-65.969	-64.467	-88.695	-87.118
475	0.45	-51.453	-13.303	-0.394	0.621	-83.027	-46.701	-45.687	-62.819	-61.754
475	0.9	-32.248	-8.316	-0.171	0.356	-52.003	-29.195	-28.667	-39.279	-38.726
475	1.35	-15.541	-4.073	0.051	0.091	-25.166	-13.936	-13.896	-18.831	-18.789
475	1.8	-0.790	-0.278	0.273	-0.174	-1.393	-0.438	-0.885	-0.718	-1.188
476	0	-72.614	-18.736	-0.616	0.886	-117.115	-65.969	-64.467	-88.695	-87.118
476	0.45	-51.453	-13.303	-0.394	0.621	-83.027	-46.701	-45.687	-62.819	-61.754
476	0.9	-32.248	-8.316	-0.171	0.356	-52.003	-29.195	-28.667	-39.279	-38.726
476	1.35	-15.541	-4.073	0.051	0.091	-25.166	-13.936	-13.896	-18.831	-18.789
476	1.8	-0.790	-0.278	0.273	-0.174	-1.393	-0.438	-0.885	-0.718	-1.188
477	0	-2.398	-1.364	1.562	-1.688	-5.059	-0.596	-3.846	-1.737	-5.149
477	0.56	0.795	-0.624	0.797	-0.861	-0.044	1.512	-0.146	1.278	-0.463
477	1.13	0.033	-0.196	0.031	-0.035	-0.274	0.061	-0.005	-0.056	-0.126
477	1.69	-4.752	-0.117	-0.734	0.791	-5.890	-5.011	-3.486	-5.834	-4.233
477	2.25	-13.493	-0.350	-1.500	1.618	-16.751	-13.643	-10.526	-15.962	-12.689
478	0	-16.243	-0.413	-1.545	1.685	-20.153	-16.164	-12.934	-18.938	-15.546
478	0.75	-1.768	0.380	-0.809	0.884	-1.514	-2.400	-0.707	-2.466	-0.688
478	1.5	5.623	0.590	-0.072	0.084	7.691	4.989	5.144	6.200	6.364
478	2.25	5.863	0.179	0.664	-0.717	7.322	5.940	4.559	6.966	5.515
478	3	-0.982	-0.815	1.400	-1.518	-2.483	0.516	-2.402	-0.074	-3.139
479	0	-49.995	-2.024	-2.146	2.349	-63.232	-47.141	-42.646	-56.022	-51.303
479	0.23	-36.077	-1.175	-1.744	1.911	-45.173	-34.214	-30.559	-40.453	-36.615
479	0.45	-22.994	-0.383	-1.342	1.473	-28.206	-22.037	-19.222	-25.795	-22.839
479	0.68	-10.814	0.317	-0.941	1.035	-12.469	-10.673	-8.697	-12.142	-10.068
479	0.9	0.533	0.961	-0.539	0.597	2.176	-0.060	1.076	0.599	1.791
480	0	-0.157	-0.072	0.023	-0.064	-0.303	-0.118	-0.205	-0.186	-0.277
480	0.45	-0.242	0.150	-0.003	-0.004	-0.050	-0.221	-0.222	-0.162	-0.164
480	0.9	-1.521	-0.074	-0.028	0.055	-1.943	-1.397	-1.313	-1.672	-1.585
480	1.35	-4.534	-1.043	-0.053	0.115	-7.109	-4.133	-3.965	-5.473	-5.296
480	1.8	-8.740	-2.458	-0.078	0.175	-14.421	-7.944	-7.691	-10.807	-10.542
481	0	2.020	0.615	-0.109	0.121	3.408	1.709	1.939	2.394	2.635
481	0.45	-1.028	-0.109	0.010	-0.012	-1.409	-0.916	-0.937	-1.139	-1.161
481	0.9	-5.270	-1.281	0.128	-0.144	-8.373	-4.615	-4.887	-6.206	-6.492
481	1.35	-11.246	-3.197	0.247	-0.277	-18.610	-9.874	-10.398	-13.563	-14.112
481	1.8	-18.414	-5.560	0.365	-0.409	-30.993	-16.208	-16.982	-22.454	-23.267
482	0	2.039	0.619	0.120	-0.111	3.437	1.955	1.724	2.657	2.414
482	0.45	-1.027	-0.109	-0.012	0.010	-1.408	-0.936	-0.915	-1.160	-1.137
482	0.9	-5.287	-1.284	-0.144	0.131	-8.399	-4.902	-4.627	-6.511	-6.223
482	1.35	-11.280	-3.204	-0.276	0.252	-18.662	-10.428	-9.901	-14.152	-13.598
482	1.8	-18.467	-5.570	-0.408	0.372	-31.072	-17.028	-16.248	-23.328	-22.508
483	0	-12.395	-3.999	0.002	-0.204	-21.272	-11.154	-11.359	-15.532	-15.748
483	0.45	-7.027	-2.099	0.002	-0.133	-11.792	-6.323	-6.457	-8.699	-8.840
483	0.9	-2.852	-0.647	0.001	-0.062	-4.458	-2.566	-2.629	-3.401	-3.468
483	1.35	-0.412	0.061	0.001	0.009	-0.396	-0.369	-0.362	-0.392	-0.385
483	1.8	0.836	0.322	0.001	0.079	1.519	0.753	0.832	1.082	1.164
484	0	-73.519	-19.049	0.638	-3.484	-118.702	-65.530	-69.651	-88.527	-92.855

484	0.45	-51.931	-13.511	0.514	-2.784	-83.935	-46.224	-49.522	-62.500	-65.963
484	0.9	-32.300	-8.420	0.390	-2.083	-52.231	-28.680	-31.153	-38.809	-41.407
484	1.35	-15.166	-4.073	0.266	-1.383	-24.715	-13.383	-15.032	-18.210	-19.942
484	1.8	0.012	-0.173	0.143	-0.683	-0.262	0.153	-0.672	0.053	-0.813
485	0	-10.054	-3.917	-0.059	0.425	-18.333	-9.108	-8.624	-13.087	-12.579
485	0.45	-5.418	-2.047	-0.039	0.278	-9.777	-4.915	4.598	-7.019	-6.687
485	0.9	-1.975	-0.624	-0.018	0.131	-3.368	-1.795	-1.646	-2.485	-2.329
485	1.35	-0.266	0.055	0.003	-0.016	-0.231	-0.236	-0.255	-0.241	-0.261
485	1.8	0.250	0.287	0.023	-0.163	0.759	0.249	0.062	0.468	0.272
486	0	-77.468	-19.906	0.098	-1.540	-124.811	-69.623	-71.261	-93.779	-95.499
486	0.45	-54.903	-14.168	0.080	-1.237	-88.552	-49.333	-50.650	-66.490	-67.873
486	0.9	-34.295	-8.877	0.061	-0.934	-55.356	-30.804	-31.799	-41.537	-42.583
486	1.35	-16.184	-4.330	0.043	-0.631	-26.349	-14.523	-15.196	-19.676	-20.384
486	1.8	-0.029	-0.231	0.024	-0.328	-0.404	-0.002	-0.354	-0.151	-0.520
487	0	-11.531	-3.992	-0.023	0.197	-20.225	-10.401	-10.180	-14.646	-14.415
487	0.45	-6.430	-2.094	-0.015	0.129	-11.067	-5.802	-5.658	-8.087	-7.935
487	0.9	-2.522	-0.643	-0.007	0.062	-4.056	-2.277	-2.208	-3.061	-2.989
487	1.35	-0.349	0.063	0.001	-0.006	-0.317	-0.313	-0.320	-0.325	-0.333
487	1.8	0.632	0.323	0.009	-0.074	1.275	0.577	0.495	0.876	0.789
488	0	-69.302	-17.291	0.157	-0.608	-110.828	-62.215	-62.980	-83.495	-84.299
488	0.45	-48.855	-12.191	0.128	-0.495	-78.131	-43.842	-44.464	-58.844	-59.497
488	0.9	-30.364	-7.538	0.098	-0.381	-48.498	-27.230	-27.709	-36.528	-37.032
488	1.35	-14.371	-3.629	0.069	-0.268	-23.053	-12.865	-13.202	-17.304	-17.657
488	1.8	-0.335	-0.168	0.040	-0.154	-0.670	-0.262	-0.455	-0.415	-0.619
489	0	-8.351	-2.524	-0.022	0.086	-14.059	-7.538	-7.430	-10.381	-10.268
489	0.45	-4.268	-1.087	-0.014	0.054	-6.861	-3.855	-3.787	-5.180	-5.109
489	0.9	-1.378	-0.097	-0.006	0.022	-1.809	-1.245	-1.218	-1.514	-1.484
489	1.35	-0.222	0.148	0.003	-0.009	-0.029	-0.197	-0.209	-0.137	-0.149
489	1.8	-0.259	-0.054	0.011	-0.041	-0.397	-0.222	-0.274	-0.294	-0.349
490	0	-70.921	-17.772	0.135	-0.480	-113.540	-63.694	-64.309	-85.522	-86.167
490	0.45	-50.038	-12.544	0.108	-0.382	-80.115	-44.926	-45.416	-60.329	-60.843
490	0.9	-31.112	-7.762	0.081	-0.284	-49.754	-27.919	-28.284	-37.472	-37.855
490	1.35	-14.683	-3.726	0.054	-0.186	-23.581	-13.160	-13.400	-17.707	-17.959
490	1.8	-0.210	-0.136	0.028	-0.087	-0.470	-0.161	-0.277	-0.277	-0.398
491	0	-11.517	-4.001	-0.018	0.070	-20.222	-10.383	-10.295	-14.632	-14.539
491	0.45	-6.407	-2.096	-0.011	0.046	-11.042	-5.778	-5.721	-8.060	-8.000
491	0.9	-2.490	-0.637	-0.005	0.021	-4.008	-2.246	-2.220	-3.021	-2.994
491	1.35	-0.308	0.077	0.001	-0.004	-0.246	-0.276	-0.281	-0.273	-0.279
491	1.8	0.681	0.345	0.008	-0.028	1.369	0.621	0.585	0.940	0.903
492	0	-70.921	-17.772	0.135	-0.480	-113.540	-63.694	-64.309	-85.522	-86.167
492	0.45	-50.038	-12.544	0.108	-0.382	-80.116	-44.926	-45.416	-60.329	-60.343
492	0.9	-31.112	-7.763	0.081	-0.284	-49.754	-27.919	-28.284	-37.472	-37.855
492	1.35	-14.683	-3.726	0.054	-0.186	-23.581	-13.160	-13.400	-17.707	-17.959
492	1.8	-0.210	-0.136	0.028	-0.087	-0.470	-0.161	-0.277	-0.277	-0.398
493	0	-8.351	-2.524	-0.022	0.086	-14.059	-7.538	-7.430	-10.381	-10.268
493	0.45	-4.268	-1.087	-0.014	0.054	-6.861	-3.855	-3.787	-5.180	-5.109
493	0.9	-1.378	-0.097	-0.006	0.022	-1.809	-1.245	-1.217	-1.514	-1.484
493	1.35	-0.222	0.148	0.003	-0.009	-0.029	-0.197	-0.209	-0.137	-0.149
493	1.8	-0.259	-0.054	0.011	-0.041	-0.397	-0.222	-0.274	-0.294	-0.349
494	0	-26.749	-4.143	1.917	-2.046	-38.729	-22.158	-26.121	-28.685	-32.846
494	0.23	-19.839	-3.255	1.564	-1.669	-29.016	-16.291	-19.524	-21.240	-24.635
494	0.45	-13.126	-2.423	1.212	-1.292	-19.628	-10.602	-13.105	-14.036	-16.665
494	0.68	-6.677	-1.684	0.859	-0.915	-10.707	-5.150	-6.924	-7.170	-9.033
494	0.9	-0.425	-1.001	0.506	-0.538	-2.111	0.124	-0.921	-0.545	-1.642
495	0	-69.302	-17.291	0.157	-0.608	-110.828	-62.215	-62.980	-83.495	-84.299
495	0.45	-48.855	-12.191	0.128	-0.495	-78.132	-43.842	-44.464	-58.844	-59.497
495	0.9	-30.365	-7.538	0.098	-0.381	-48.498	-27.230	-27.709	-36.528	-37.032
495	1.35	-14.371	-3.629	0.069	-0.268	-23.053	-12.865	-13.202	-17.304	-17.657
495	1.8	-0.335	-0.168	0.040	-0.154	-0.670	-0.262	-0.455	-0.415	-0.619
496	0	-11.531	-3.992	-0.023	0.197	-20.225	-10.400	-10.180	-14.646	-14.415
496	0.45	-6.430	-2.094	-0.015	0.129	-11.067	-5.802	-5.658	-8.087	-7.935
496	0.9	-2.522	-0.643	-0.007	0.062	-4.056	-2.277	-2.208	-3.061	-2.989
496	1.35	-0.349	0.063	0.001	-0.006	-0.317	-0.313	-0.320	-0.325	-0.333
496	1.8	0.632	0.323	0.009	-0.074	1.275	0.577	0.495	0.876	0.789
497	0	-77.468	-19.906	0.098	-1.540	-124.811	-69.623	-71.261	-93.779	-95.499
497	0.45	-54.903	-14.168	0.080	-1.237	-88.552	-49.333	-50.650	-66.490	-67.873
497	0.9	-34.295	-8.877	0.061	-0.934	-55.356	-30.804	-31.799	-41.537	-42.583

497	1.35	-16.184	-4.330	0.043	-0.631	-26.349	-14.523	-15.196	-19.676	-20.384
497	1.8	-0.029	-0.231	0.024	-0.328	-0.404	-0.002	-0.354	-0.151	-0.520
498	0	-10.054	-3.917	-0.059	0.425	-18.333	-9.108	-8.624	-13.087	-12.579
498	0.45	-5.418	-2.047	-0.039	0.278	-9.777	-4.915	-4.598	-7.019	-6.687
498	0.9	-1.975	-0.624	-0.018	0.131	-3.368	-1.795	-1.646	-2.485	-2.329
498	1.35	-0.266	0.055	0.003	-0.016	-0.231	-0.236	-0.255	-0.241	-0.261
498	1.8	0.250	0.287	0.023	-0.163	0.759	0.249	0.062	0.468	0.272
499	0	-73.519	-19.049	0.638	-3.484	-118.702	-65.530	-69.651	-88.527	-92.855
499	0.45	-51.931	-13.511	0.514	-2.784	-83.935	-46.224	-49.522	-62.500	-65.963
499	0.9	-32.300	-8.420	0.390	-2.083	-52.231	-28.680	-31.153	-38.809	-41.407
499	1.35	-15.166	-4.073	0.266	-1.383	-24.715	-13.383	-15.032	-18.210	-19.942
499	1.8	0.012	-0.173	0.143	-0.683	-0.262	0.153	-0.672	0.053	-0.813
500	0	-12.395	-3.999	0.002	-0.204	-21.272	-11.154	-11.359	-15.532	-15.748
500	0.45	-7.027	-2.099	0.002	-0.133	-11.792	-6.323	-6.457	-8.699	-8.840
500	0.9	-2.852	-0.647	0.001	-0.062	-4.458	-2.566	-2.629	-3.401	-3.468
500	1.35	-0.412	0.061	0.001	0.009	-0.396	-0.369	-0.362	-0.392	-0.385
500	1.8	0.836	0.322	0.001	0.079	1.519	0.753	0.832	1.082	1.164
501	0	-8.745	-2.460	0.176	-0.079	-14.430	-7.695	-7.949	-10.548	-10.814
501	0.45	-4.537	-1.043	0.116	-0.053	-7.114	-3.968	-4.137	-5.300	-5.477
501	0.9	-1.522	-0.074	0.056	-0.028	-1.945	-1.314	-1.398	-1.587	-1.674
501	1.35	-0.242	0.151	-0.004	-0.002	-0.049	-0.222	-0.220	-0.163	-0.161
501	1.8	-0.154	-0.072	-0.064	0.023	-0.299	-0.203	-0.116	-0.274	-0.183
502	0	-8.740	-2.458	-0.078	0.175	-14.421	-7.944	-7.691	-10.807	-10.542
502	0.45	-4.534	-1.043	-0.053	0.115	-7.109	-4.133	-3.965	-5.473	-5.296
502	0.9	-1.521	-0.074	-0.028	0.055	-1.943	-1.397	-1.313	-1.672	-1.585
502	1.35	-0.242	0.150	-0.003	-0.004	-0.050	-0.221	-0.222	-0.162	-0.164
502	1.8	-0.157	-0.072	0.023	-0.064	-0.303	-0.118	-0.205	-0.186	-0.277
503	0	-18.414	-5.560	0.365	-0.409	-30.993	-16.208	-16.982	-22.454	-23.267
503	0.45	-11.246	-3.197	0.247	-0.277	-18.610	-9.874	-10.398	-13.563	-14.112
503	0.9	-5.270	-1.281	0.128	-0.144	-8.373	-4.615	-4.887	-6.206	-6.492
503	1.35	-1.028	-0.109	0.010	-0.012	-1.409	-0.916	-0.937	-1.139	-1.161
503	1.8	2.020	0.615	-0.109	0.121	3.408	1.709	1.939	2.394	2.635
504	0	-18.467	-5.570	-0.408	0.372	-31.072	-17.028	-16.248	-23.328	-22.508
504	0.45	-11.280	-3.204	-0.276	0.252	-18.662	-10.428	-9.901	-14.152	-13.598
504	0.9	-5.287	-1.284	-0.144	0.131	-8.399	-4.902	-4.627	-6.511	-6.223
504	1.35	-1.027	-0.109	-0.012	0.010	-1.408	-0.936	-0.915	-1.160	-1.137
504	1.8	2.039	0.619	0.120	-0.111	3.437	1.955	1.724	2.657	2.114
505	0	-0.825	-0.782	1.333	-1.436	-2.242	0.590	-2.179	0.040	-2.867
505	0.75	5.466	0.101	0.689	-0.742	6.722	5.609	4.178	6.527	5.025
505	1.5	4.674	0.402	0.045	-0.047	6.251	4.252	4.139	5.208	5.111
505	2.25	-3.271	0.081	-0.599	0.648	-3.794	-3.542	-2.296	-4.012	-2.703
505	3	-18.299	-0.822	-1.243	1.343	-23.274	-17.712	-15.127	-21.037	-18.322
506	0	-18.145	-0.812	-1.486	1.659	-23.074	-17.817	-14.672	-21.124	-17.822
506	0.75	-3.242	0.077	-0.791	0.894	-3.768	-3.709	-2.024	-4.186	-2.418
506	1.5	4.577	0.382	-0.096	0.128	6.103	4.024	4.247	4.946	5.181
506	2.25	5.244	0.066	0.600	-0.637	6.399	5.319	4.083	6.178	4.879
506	3	-1.173	-0.832	1.295	-1.403	-2.739	0.239	-2.458	-0.396	-3.228
507	0	-73.949	-19.123	-3.491	0.649	-119.336	-70.045	-65.906	-93.360	-89.013
507	0.45	-52.277	-13.770	-2.789	0.522	-84.445	-49.838	-46.527	-66.368	-62.892
507	0.9	-32.561	-8.464	-2.086	0.396	-52.616	-31.391	-28.909	-41.712	-39.106
507	1.35	-15.342	-4.103	-1.384	0.269	-24.975	-15.192	-13.539	-20.147	-18.412
507	1.8	-0.080	-0.189	-0.681	0.143	-0.398	-0.754	0.070	-0.918	-0.053
508	0	-1.335	-0.853	1.180	-1.244	-2.966	-0.021	-2.445	-0.700	-3.245
508	0.75	6.263	0.172	0.700	-0.753	7.791	6.336	4.884	7.419	5.894
508	1.5	6.776	0.614	0.220	-0.262	9.113	6.318	5.837	7.732	7.226
508	2.25	0.137	0.435	-0.261	0.229	0.860	-0.137	0.353	0.144	0.659
508	3	-13.586	-0.327	-0.741	0.720	-16.827	-12.968	-11.507	-15.249	-13.715
509	0	0.795	0.316	0.081	0.000	1.460	0.797	0.716	1.119	1.035
509	0.45	-0.416	0.060	0.009	0.001	-0.402	-0.366	-0.373	-0.389	-0.397
509	0.9	-2.820	-0.642	-0.064	0.002	-4.411	-2.602	-2.536	-3.432	-3.363
509	1.35	-6.958	-2.089	-0.136	0.003	-11.693	-6.398	-6.259	-8.765	-8.619
509	1.8	-12.290	-3.983	-0.208	0.004	-21.121	-11.269	-11.057	-15.632	-15.409
510	0	0.205	0.279	-0.163	0.023	0.692	0.022	0.208	0.220	0.415
510	0.45	-0.269	0.055	-0.016	0.003	-0.235	-0.258	-0.239	-0.264	-0.245
510	0.9	-1.935	-0.616	0.131	-0.018	-3.308	-1.611	-1.760	-2.283	-2.439
510	1.35	-5.336	-2.032	0.277	-0.039	-9.654	-4.525	-4.841	-6.592	-6.923
510	1.8	-9.930	-3.894	0.424	-0.059	-18.147	-8.513	-8.996	-12.434	-12.942

511	0	-0.226	-0.268	-0.323	0.021	-0.700	-0.526	-0.182	-0.745	-0.384
511	0.45	-16.541	-4.393	-0.625	0.039	-26.878	-15.512	-14.848	-20.792	-20.095
511	0.9	-34.813	-8.965	-0.928	0.056	-56.119	-32.259	-31.275	-43.175	-42.142
511	1.35	-55.582	-14.281	-1.230	0.074	-89.548	-51.254	-49.950	-68.650	-67.286
511	1.8	-78.308	-20.044	-1.533	0.092	-126.040	-72.010	-70.385	-96.460	-94.754
512	0	0.466	0.276	-0.068	0.006	1.000	0.351	0.425	0.591	0.669
512	0.45	-0.366	0.059	-0.005	0.000	-0.345	-0.335	-0.329	-0.353	-0.347
512	0.9	-2.392	-0.604	0.058	-0.005	-3.836	-2.094	-2.158	-2.831	-2.897
512	1.35	-6.151	-2.012	0.121	-0.011	-10.600	-5.415	-5.547	-7.599	-7.738
512	1.8	-11.104	-3.867	0.184	-0.017	-19.511	-9.809	-10.010	-13.902	-14.112
513	0	-0.934	-0.352	-0.126	0.025	-1.685	-0.967	-0.815	-1.335	-1.176
513	0.45	-15.970	-4.109	-0.193	0.031	-25.737	-14.565	-14.342	-19.559	-19.324
513	0.9	-32.961	-8.312	-0.259	0.037	-52.853	-29.925	-29.629	-40.118	-39.808
513	1.35	-52.451	-13.260	-0.326	0.042	-84.157	-47.532	-47.164	-63.769	-63.383
513	1.8	-73.897	-18.655	-0.392	0.048	-118.523	-66.899	-66.459	-89.756	-89.294
514	0	-0.850	-0.252	-0.041	0.011	-1.423	-0.806	-0.754	-1.094	-1.040
514	0.45	-1.353	-0.148	-0.010	0.003	-1.861	-1.228	-1.215	-1.524	-1.511
514	0.9	-3.049	-0.491	0.022	-0.006	-4.445	-2.723	-2.750	-3.489	-3.517
514	1.35	-6.480	-1.579	0.053	-0.014	-10.303	-5.779	-5.846	-7.743	-7.814
514	1.8	-11.103	-3.114	0.084	-0.022	-18.306	-9.909	-10.015	-13.532	-13.644
515	0	-31.025	-8.304	-0.136	0.049	-50.517	-28.059	-27.874	-37.951	-37.757
515	0.45	-52.304	-13.596	-0.274	0.099	-84.519	-47.347	-46.974	-63.772	-63.381
515	0.9	-76.311	-19.759	-0.411	0.150	-123.188	-69.090	-68.530	-93.006	-92.417
515	1.35	-102.950	-26.742	-0.548	0.201	-166.327	-93.203	-92.454	-125.520	-124.734
515	1.8	-131.545	-34.171	-0.686	0.251	-212.528	-119.076	-118.139	-160.370	-159.387
516	0	0.890	0.346	-0.027	0.010	1.622	0.774	0.811	1.124	1.163
516	0.75	2.602	1.708	-0.011	0.004	5.856	2.331	2.346	3.797	3.813
516	1.5	-0.503	1.002	0.005	-0.002	1.000	-0.447	-0.454	0.109	0.102
516	2.25	-10.929	-3.152	0.022	-0.007	-18.158	-9.814	-9.843	-13.438	-13.469
516	3	-26.172	-9.375	0.038	-0.013	-46.405	-23.516	-23.568	-33.346	-33.400
517	0	-31.025	-8.304	-0.136	0.049	-50.517	-28.059	-27.874	-37.951	-37.757
517	0.45	-52.304	-13.596	-0.274	0.099	-84.519	-47.347	-46.974	-63.772	-63.381
517	0.9	-76.311	-19.760	-0.411	0.150	-123.188	-69.090	-68.530	-93.006	-92.417
517	1.35	-102.950	-26.742	-0.548	0.201	-166.327	-93.203	-92.454	-125.520	-124.734
517	1.8	-131.545	-34.171	-0.686	0.251	-212.529	-119.076	-118.140	-160.370	-159.387
518	0	-0.850	-0.252	-0.041	0.011	-1.423	-0.806	-0.754	-1.094	-1.040
518	0.45	-1.353	-0.148	-0.010	0.003	-1.861	-1.228	-1.215	-1.524	-1.511
518	0.9	-3.049	-0.491	0.022	-0.006	-4.445	-2.723	-2.750	-3.489	-3.517
518	1.35	-6.480	-1.579	0.053	-0.014	-10.303	-5.779	-5.846	-7.743	-7.814
518	1.8	-11.103	-3.114	0.084	-0.022	-18.306	-9.909	-10.015	-13.532	-13.644
519	0	-73.897	-18.655	-0.392	0.048	-118.523	-66.899	-66.459	-89.756	-89.294
519	0.45	-52.451	-13.260	-0.326	0.042	-84.157	-47.532	-47.164	-63.769	-63.383
519	0.9	-32.961	-8.312	-0.259	0.037	-52.853	-29.925	-29.629	-40.118	-39.808
519	1.35	-15.970	-4.109	-0.193	0.031	-25.737	-14.565	-14.342	-19.559	-19.324
519	1.8	-0.934	-0.352	-0.126	0.025	-1.685	-0.967	-0.815	-1.335	-1.176
520	0	-11.104	-3.867	0.184	-0.017	-19.511	-9.809	-10.010	-13.902	-14.112
520	0.45	-6.151	-2.012	0.121	-0.011	-10.600	-5.415	-5.547	-7.599	-7.738
520	0.9	-2.392	-0.604	0.058	-0.005	-3.836	-2.094	-2.158	-2.831	-2.897
520	1.35	-0.366	0.059	-0.005	0.000	-0.345	-0.335	-0.329	-0.353	-0.347
520	1.8	0.466	0.276	-0.068	0.006	1.000	0.351	0.425	0.591	0.669
521	0	-78.308	-20.044	-1.533	0.092	-126.040	-72.010	-70.385	-96.460	-94.754
521	0.45	-55.582	-14.281	-1.230	0.074	-89.548	-51.254	-49.950	-68.650	-67.280
521	0.9	-34.813	-8.965	-0.928	0.056	-56.119	-32.259	-31.275	-43.175	-42.142
521	1.35	-16.541	-4.393	-0.625	0.039	-26.878	-15.512	-14.848	-20.792	-20.095
521	1.8	-0.226	-0.268	-0.323	0.021	-0.700	-0.526	-0.182	-0.745	-0.384
522	0	-9.930	-3.894	0.424	-0.059	-18.147	-8.513	-8.996	-12.434	-12.942
522	0.45	-5.336	-2.032	0.277	-0.039	-9.654	-4.525	-4.841	-6.592	-6.923
522	0.9	-1.935	-0.616	0.131	-0.018	-3.308	-1.611	-1.760	-2.283	-2.439
522	1.35	-0.269	0.055	-0.016	0.003	-0.235	-0.258	-0.239	-0.264	-0.245
522	1.8	0.205	0.279	-0.163	0.023	0.692	0.022	0.208	0.220	0.415
523	0	-73.949	-19.123	-3.491	0.649	-119.336	-70.045	-65.906	-93.360	-89.013
523	0.45	-52.277	-13.570	-2.789	0.522	-84.445	-49.838	-46.527	-66.368	-62.892
523	0.9	-32.561	-8.464	-2.086	0.396	-52.616	-31.391	-28.909	-41.712	-39.106
523	1.35	-15.342	-4.103	-1.384	0.269	-24.975	-15.192	-13.539	-20.147	-18.412
523	1.8	-0.080	-0.189	-0.681	0.143	-0.398	-0.754	0.070	-0.918	-0.053
524	0	0.795	0.316	0.081	0.000	1.460	0.797	0.716	1.119	1.035
524	0.45	-0.416	0.060	0.009	0.001	-0.402	-0.366	-0.373	-0.389	-0.397

524	0.9	-2.820	-0.642	-0.064	0.002	-4.411	-2.602	-2.536	-3.432	-3.363
524	1.35	-6.958	-2.089	-0.136	0.003	-11.693	-6.398	-6.259	-8.765	-8.619
524	1.8	-12.290	-3.983	-0.208	0.004	-21.121	-11.269	-11.057	-15.632	-15.409
526	0	-44.242	-7.300	-4.204	4.290	-64.770	-44.022	-35.528	-55.467	-46.549
526	1.13	-2.912	-0.784	-3.233	3.283	-4.748	-5.854	0.662	-6.946	-0.105
526	2.25	20.331	3.238	-2.263	2.275	29.578	16.035	20.574	21.012	25.777
526	3.38	24.947	4.467	-1.292	1.268	37.084	21.161	23.721	27.652	30.341
526	4.5	11.477	3.202	-0.321	0.261	18.895	10.008	10.591	13.731	14.342
527	0	11.506	3.200	0.268	-0.324	18.928	10.623	10.031	14.379	13.757
527	1.13	24.914	4.461	1.270	-1.296	37.034	23.693	21.127	30.304	27.610
527	2.25	20.236	3.227	2.272	-2.267	29.446	20.484	15.945	25.666	20.900
527	3.38	-3.070	-0.800	4.277	-4.211	-65.067	-35.739	-44.226	-0.289	-7.128
527	4.5	-44.462	-7.321	-4.204	4.290	-64.770	-44.022	-35.528	-46.806	-55.718
531	0	-44.242	-7.300	-3.233	3.283	29.578	16.035	20.574	21.012	-0.105
531	1.13	-2.912	-0.784	-3.233	2.275	29.578	16.035	23.721	27.652	25.777
531	2.25	20.331	3.238	-2.263	1.268	37.084	21.161	23.721	27.652	30.341
531	3.38	24.947	4.467	-1.292	0.261	18.895	10.008	10.591	13.731	14.342
531	4.5	11.477	3.202	-0.321	-0.324	18.928	10.623	10.031	14.379	13.757
532	0	11.506	3.200	0.268	-0.324	18.928	10.623	10.031	14.379	13.757
532	1.13	24.914	4.461	1.270	-1.296	37.034	23.693	21.127	30.304	27.610
532	2.25	20.236	3.227	2.272	-2.267	29.446	20.484	15.945	25.666	20.900
532	3.38	-3.070	-0.800	4.277	-4.211	-65.067	-35.739	-44.226	-0.289	-7.128
532	4.5	-44.462	-7.321	-4.204	4.290	-64.770	-44.022	-35.528	-46.806	-55.718
533	0	-44.242	-7.300	-3.233	3.283	29.578	16.035	20.574	21.012	-0.105
533	1.13	-2.912	-0.784	-3.233	2.275	29.578	16.035	23.721	27.652	25.777
533	2.25	20.331	3.238	-2.263	1.268	37.084	21.161	23.721	27.652	30.341
533	3.38	24.947	4.467	-1.292	0.261	18.895	10.008	10.591	13.731	14.342
533	4.5	11.477	3.202	-0.321	-0.324	18.928	10.623	10.031	14.379	13.757
533	0	11.506	3.200	0.268	-0.324	18.928	10.623	10.031	14.379	13.757
533	1.13	24.914	4.461	1.270	-1.296	37.034	23.693	21.127	30.304	27.610
533	2.25	20.236	3.227	2.272	-2.267	29.446	20.484	15.945	25.666	20.900
533	3.38	-3.070	-0.800	4.277	-4.211	-65.067	-35.739	-44.226	-0.289	-7.128
533	4.5	-44.462	-7.321	-4.204	4.290	-64.770	-44.022	-35.528	-46.806	-55.718
535	0	-81.563	-7.288	0.513	-0.219	-75.878	-50.462	-31.337	-18.244	-1.686
535	0.45	-56.480	-5.064	0.370	-0.075	-46.584	-31.034	-14.870	-1.970	-2.199
535	0.9	-34.735	-3.063	0.228	0.069	-22.216	-14.854	-1.408	-1.850	-19.217
535	1.35	-16.599	-1.435	0.085	0.069	-2.210	-1.678	-1.894	-1.850	-19.217
535	1.8	-1.801	-0.030	-0.057	0.213	-2.279	-1.561	-1.894	-1.850	-19.217
537	0	-1.869	-0.023	0.121	-0.212	-2.279	-1.561	-1.894	-1.850	-19.217
537	0.45	-16.769	-1.429	0.399	-0.676	-22.408	-14.693	-15.768	-37.972	-39.881
537	0.9	-35.007	-3.058	0.677	-1.140	-46.901	-30.829	-32.646	-61.879	-64.568
537	1.35	-56.853	-5.059	0.956	-1.605	-76.319	-50.212	-52.772	-89.433	-92.900
537	1.8	-82.037	-7.284	1.234	-2.069	-110.100	-72.599	-75.902	-113.607	-118.982
538	0	-42.905	-8.834	-1.936	3.069	-65.620	-40.551	-35.546	-36.195	-32.200
538	0.45	-29.505	-5.822	-1.473	1.595	-25.969	-16.578	-13.973	-8.645	-7.171
538	0.9	-17.299	-3.257	-1.009	0.859	-10.489	-6.689	-5.285	-2.450	-2.665
538	1.35	-6.826	-1.436	-0.546	0.122	2.845	2.125	2.330	-160.036	-167.083
538	1.8	2.453	-0.062	-0.083	0.122	2.845	2.125	2.330	-160.036	-167.083
538	0	-145.522	-15.485	1.823	-3.296	-141.485	-91.389	-96.508	-113.607	-118.982
539	0	-145.522	-15.485	1.823	-3.296	-141.485	-91.389	-96.508	-113.607	-118.982
539	0.45	-103.569	-10.751	1.249	-2.278	-88.775	-57.575	-61.102	-71.389	-75.093
539	0.9	-65.360	-6.464	0.675	-1.260	-42.399	-27.617	-29.552	-34.140	-36.172
539	1.35	-31.436	-2.922	0.101	-0.241	-1.230	-1.029	-1.371	-1.103	-1.463
539	1.8	-1.256	0.173	0.101	-0.241	-1.230	-1.029	-1.371	-1.103	-1.463
540	0	-42.360	-8.770	-2.208	3.677	-64.864	-40.332	-34.447	-52.321	-46.142
540	0.45	-29.092	-5.772	-1.677	2.788	-44.146	-27.859	-23.395	-35.943	-31.256
540	0.9	-17.017	-3.222	-1.145	1.898	-25.575	-16.460	-13.417	-21.100	-17.905
540	1.35	-6.675	-1.416	-0.614	1.008	-10.277	-6.622	-5.000	-8.546	-6.843
540	1.8	2.473	-0.057	-0.083	0.118	2.875	2.143	2.343	-21.100	-17.905
541	0	-82.037	-7.284	1.234	-2.069	-110.100	-72.599	-75.902	-89.433	-92.900
541	0.45	-56.853	-5.059	0.956	-1.605	-76.319	-50.212	-52.772	-61.880	-64.568
541	0.9	-35.007	-3.058	0.677	-1.140	-46.901	-30.829	-32.646	-46.188	-49.881
541	1.35	-16.769	-1.429	0.399	-0.676	-22.409	-14.693	-15.768	-18.088	-19.217
541	1.8	-1.869	-0.023	0.121	-0.212	-2.279	-1.561	-1.894	-1.850	-19.217
541	0	-1.869	-0.023	0.121	-0.212	-2.279	-1.561	-1.894	-1.850	-19.217
541	0.45	-16.769	-1.429	0.399	-0.676	-22.409	-14.693	-15.768	-18.088	-19.217
541	0.9	-35.007	-3.058	0.677	-1.140	-46.901	-30.829	-32.646	-46.188	-49.881
541	1.35	-56.853	-5.059	0.956	-1.605	-76.319	-50.212	-52.772	-61.880	-64.568
541	1.8	-82.037	-7.284	1.234	-2.069	-110.100	-72.599	-75.902	-89.433	-92.900
543	0	-42.360	-8.770	-2.208	3.677	-64.864	-40.332	-34.447	-52.321	-46.142
543	0.45	-29.092	-5.772	-1.677	2.788	-44.146	-27.859	-23.395	-35.943	-31.256
543	0.9	-17.017	-3.222	-1.145	1.898	-25.575	-16.460	-13.417	-21.100	-17.905
543	1.35	-6.675	-1.416	-0.614	1.008	-10.277	-6.622	-5.000	-8.546	-6.843
543	1.8	2.473	-0.057	-0.083	0.118	2.875	2.143	2.343	-21.100	-17.905
544	0	-42.360	-8.770	-2.208	3.677	-64.864	-40.332	-34.447	-52.321	-46.142
544	0.45	-29.092	-5.772	-1.677	2.788	-44.146	-27.859	-23.395	-35.943	-31.256
544	0.9	-17.017	-3.222	-1.145	1.898	-25.575	-16.460	-13.417	-21.100	-17.905
544	1.35	-6.675	-1.416	-0.614	1.008	-10.277	-6.622	-5.000	-8.546	-6.843
544	1.8	2.473	-0.057	-0.083	0.118	2.875	2.143	2.343	-21.100	-17.905
545	0	-145.522	-15.485	1.823	-3.296	-141.485	-91.389	-96.508	-113.606	-118.982
545	0.45	-103.569	-10.751	1.249	-2.278	-88.775	-57.575	-61.102	-71.389	-75.092
545	0.9	-65.360	-6.464	0.675	-1.260	-42.399	-27.617	-29.552	-34.140	-36.172
545	1.35	-31.436	-2.922	0.101	-0.241	-1.230	-1.029	-1.371	-1.103	-1.463
545	1.8	-1.256	0.173	0.101	-0.241	-1.230	-1.029	-1.371	-1.103	-1.463

545	1.8	-1.256	0.173	0.101	-0.241	-1.230	-1.029	-1.371	-1.103	-1.463
546	0	-42.905	-8.834	-1.936	3.069	-65.620	-40.551	-35.546	-52.649	-47.393
546	0.45	-29.505	-5.822	-1.473	2.332	-44.721	-28.027	-24.223	-36.195	-32.200
546	0.9	-17.299	-3.257	-1.009	1.595	-25.969	-16.578	-13.973	-21.275	-18.540
546	1.35	-6.826	-1.436	-0.546	0.859	-10.489	-6.689	-5.285	-8.645	-7.171
546	1.8	2.453	-0.062	-0.083	0.122	2.845	2.125	2.330	2.450	2.665
550	0	3.771	0.375	-0.189	0.112	5.125	3.205	3.505	3.997	4.313
550	0.75	-2.239	0.618	0.814	-0.495	-1.699	-1.201	-2.510	-1.107	-2.482
550	1.5	-13.066	-1.208	1.817	-1.102	-17.612	-9.942	-12.861	-12.572	-15.637
550	2.25	-31.213	-6.482	2.820	-1.709	-47.827	-25.272	-29.801	-33.897	-38.652
550	3	-54.177	-13.824	3.823	-2.316	-87.132	-44.937	-51.076	-61.582	-68.027
551	0	-81.878	-7.332	-0.346	0.505	-109.985	-74.036	-73.185	-90.955	-90.061
551	0.45	-56.752	-5.102	-0.207	0.365	-76.265	-51.284	-50.712	-63.021	-62.421
551	0.9	-34.964	-3.095	-0.068	0.225	-46.909	-31.535	-31.243	-38.733	-38.426
551	1.35	-16.784	-1.461	0.072	0.085	-22.479	-15.034	-15.021	-18.468	-18.455
551	1.8	-1.942	-0.050	0.211	-0.055	-2.412	-1.537	-1.804	-1.850	-2.130
553	0	-81.878	-7.332	-0.346	0.505	-109.985	-74.036	-73.185	-90.955	-90.061
553	0.45	-56.752	-5.102	-0.207	0.365	-76.265	-51.284	-50.712	-63.021	-62.421
553	0.9	-34.964	-3.095	-0.068	0.225	-46.909	-31.535	-31.243	-38.733	-38.426
553	1.35	-16.784	-1.461	0.072	0.085	-22.479	-15.034	-15.021	-18.468	-18.455
553	1.8	-1.942	-0.050	0.211	-0.055	-2.412	-1.537	-1.804	-1.850	-2.130
560	0	-31.872	-6.683	-4.175	-2.547	-48.940	-24.510	-31.232	-33.292	-40.350
560	0.45	-21.900	-4.237	3.107	-1.896	-33.059	-16.602	-21.606	-22.401	-27.655
560	0.9	-13.120	-2.238	2.039	-1.246	-19.324	-9.769	-13.054	-13.045	-16.494
560	1.35	-6.075	-0.983	0.971	-0.595	-8.862	-4.496	-6.062	-5.978	-7.622
560	1.8	-0.222	-0.175	-0.097	0.056	-0.547	-0.297	-0.145	-0.446	-0.285
561	0	-130.570	-13.165	-4.068	2.467	-177.748	-121.581	-115.046	-149.664	-142.802
561	0.45	-92.427	-9.047	-3.064	1.857	-125.388	-86.248	-81.327	-105.965	-100.798
561	0.9	-58.029	-5.375	-2.060	1.248	-78.234	-54.286	-50.978	-66.479	-63.006
561	1.35	-27.915	-2.447	-1.056	0.638	-37.414	-26.179	-21.485	-31.961	-30.183
561	1.8	-1.545	0.033	-0.052	0.029	-1.801	-1.442	-1.362	-1.656	-1.571
562	0	-42.496	-8.824	3.767	-2.264	-65.114	-34.480	-40.510	-46.225	-52.557
562	0.45	-29.396	-5.834	2.845	-1.712	-44.611	-23.612	-28.169	-31.555	-36.340
562	0.9	-17.490	-3.291	1.922	-1.161	-26.254	-13.818	-16.902	-18.419	-21.657
562	1.35	-7.317	-1.493	1.000	-0.610	-11.170	-5.585	-7.195	-7.573	-9.264
562	1.8	1.662	-0.141	0.078	-0.058	1.768	1.574	1.437	1.738	1.595
563	0	-144.820	-15.404	-4.247	2.359	-198.431	-134.586	-127.979	-166.226	-159.289
563	0.45	-103.090	-10.698	-3.244	1.794	-140.825	-96.026	-90.988	-118.391	-113.101
563	0.9	-65.104	-6.439	-2.241	1.228	-88.427	-60.835	-57.366	-74.769	-71.126
563	1.35	-31.403	-2.924	-1.238	0.663	-42.362	-29.500	-27.600	-36.115	-34.120
563	1.8	-1.445	0.144	-0.235	0.097	-1.505	-1.535	-1.204	-1.673	-1.325
564	0	-43.316	-8.888	3.057	-1.932	-66.199	-35.927	-40.916	-47.871	-53.109
564	0.45	-29.825	-5.864	2.324	-1.470	-45.173	-24.519	-28.312	-32.571	-36.554
564	0.9	-17.528	-3.287	1.590	-1.008	-26.293	-14.185	-16.783	-18.805	-21.533
564	1.35	-6.965	-1.455	0.857	-0.546	-10.685	-5.411	-6.814	-7.329	-8.802
564	1.8	2.405	-0.069	0.124	-0.084	2.776	2.289	2.081	2.612	2.394
568	0	-52.636	-13.554	3.126	-3.382	-84.849	-44.246	-50.754	-60.524	-67.357
568	0.75	-29.981	-6.270	2.312	-2.501	-46.008	-24.671	-29.483	-33.002	-38.055
568	1.5	-12.142	-1.054	1.497	-1.619	-16.258	-9.431	-12.548	-11.842	-15.114
568	2.25	-1.625	0.714	0.683	-0.738	-0.809	-0.780	-2.201	-0.540	-2.032
568	3	4.075	0.413	-0.131	0.143	5.551	3.536	3.810	4.401	4.689
569	0	-41.725	-3.994	-1.322	1.335	-56.460	-38.875	-36.218	-47.716	-44.926
569	0.23	-30.316	-2.953	-0.987	0.998	-41.104	-28.272	-26.286	-34.729	-32.644
569	0.45	-19.691	-1.940	-0.653	0.662	-26.734	-18.375	-17.060	-22.583	-21.203
569	0.68	-9.884	-0.974	-0.318	0.326	-13.419	-9.213	-8.570	-11.325	-10.650
569	0.9	-0.860	-0.036	0.017	-0.011	-1.089	-0.757	-0.785	-0.907	-0.937
571	0	-0.855	-0.033	-0.014	0.016	-1.079	-0.783	-0.753	-0.933	-0.901
571	0.23	-9.893	-0.973	0.322	-0.319	-13.427	-8.581	-9.222	-10.662	-11.335
571	0.45	-19.714	-1.940	0.657	-0.654	-26.761	-17.085	-18.397	-21.232	-22.609
571	0.68	-30.353	-2.954	0.993	-0.990	-41.150	-26.325	-28.307	-32.689	-34.771
571	0.9	-41.776	-3.996	1.328	-1.325	-56.524	-36.270	-38.923	-44.988	-47.773
572	0	-37.078	-0.947	-0.006	-0.010	-46.009	-33.376	-33.380	-39.535	-39.539
572	0.23	-26.094	-0.591	-0.005	-0.009	-32.258	-23.490	-23.494	-27.777	-27.780
572	0.45	-15.945	-0.290	-0.005	-0.008	-19.598	-14.355	-14.358	-16.930	-16.933
572	0.68	-6.698	-0.083	-0.004	-0.007	-8.170	-6.032	-6.035	-7.089	-7.092
572	0.9	1.715	0.069	-0.004	-0.006	2.168	1.540	1.538	1.840	1.838
573	0	-41.725	-3.994	-1.322	1.335	-56.460	-38.875	-36.218	-47.716	-44.926



573	0.23	-30.316	-2.953	-0.987	0.998	-41.104	-28.272	-26.286	-34.729	-32.644
573	0.45	-19.691	-1.940	-0.653	0.662	-26.734	-18.375	-17.060	-22.583	-21.203
573	0.68	-9.884	-0.974	-0.318	0.326	-13.419	-9.213	-8.570	-11.325	-10.650
573	0.9	-0.860	-0.036	0.017	-0.011	-1.089	-0.757	-0.785	-0.907	-0.937
575	0	-0.855	-0.033	-0.014	0.016	-1.079	-0.783	-0.753	-0.933	-0.901
575	0.23	-9.893	-0.973	0.322	-0.319	-13.427	-8.581	-9.222	-10.662	-11.335
575	0.45	-19.714	-1.940	0.657	-0.654	-26.761	-17.085	-18.397	-21.232	-22.609
575	0.68	-30.353	-2.954	0.993	-0.990	-41.150	-26.325	-28.307	-32.689	-34.771
575	0.9	-41.776	-3.996	1.328	-1.325	-56.524	-36.270	-38.923	-44.988	-47.773
576	0	-37.078	-0.97	-0.006	-0.010	-46.009	-33.376	-33.380	-39.535	-39.539
576	0.23	-26.094	-0.591	-0.005	-0.009	-32.258	-23.490	-23.494	-27.777	-27.780
576	0.45	-15.945	-0.290	-0.005	-0.008	-19.598	-14.355	-14.358	-16.930	-16.933
576	0.68	-6.698	-0.083	-0.004	-0.007	-8.170	-6.032	-6.035	-7.089	-7.092
576	0.9	1.715	0.069	-0.004	-0.006	2.168	1.540	1.538	1.840	1.838
577	0	-26.555	-0.818	0.736	-0.744	-33.175	-23.163	-24.643	-27.625	-29.179
577	0.23	-18.685	-0.434	0.591	-0.601	-23.116	-16.225	-17.417	-19.272	-20.523
577	0.45	-11.599	-0.077	0.445	-0.459	-14.041	-9.993	-10.898	-11.759	-12.709
577	0.68	-5.330	0.233	0.300	-0.317	-6.023	-4.497	-5.114	-5.134	-5.782
577	0.9	0.155	0.516	0.155	-0.174	1.011	0.294	-0.035	0.650	0.304
579	0	-0.010	0.500	0.372	-0.336	0.788	0.363	-0.345	0.695	-0.048
579	0.23	-5.557	0.209	0.585	-0.531	-6.334	-4.416	-5.532	-5.089	-6.260
579	0.45	-11.887	-0.110	0.797	-0.726	-14.440	-9.901	-11.425	-11.714	-13.313
579	0.68	-19.036	-0.475	1.010	-0.921	-23.603	-16.122	-18.053	-19.226	-21.254
579	0.9	-26.968	-0.868	1.223	-1.116	-33.750	-23.048	-25.387	-27.579	-30.035
580	0	-26.134	-4.054	-2.264	2.092	-37.847	-25.785	-21.429	-32.372	-27.798
580	0.23	-19.334	-3.182	-1.845	1.706	-28.291	-19.246	-15.694	-24.243	-20.513
580	0.45	-12.730	-2.366	-1.427	1.320	-19.061	-12.884	-10.137	-16.355	-13.471
580	0.68	-6.391	-1.643	-1.009	0.935	-10.298	-6.761	-4.817	-8.805	-6.764
580	0.9	-0.249	-0.976	-0.590	0.549	-1.859	-0.814	0.325	-1.496	-0.300
581	0	-50.258	-2.059	2.349	-2.149	-63.605	-42.883	-47.381	-51.602	-56.324
581	0.23	-36.292	-1.204	1.912	-1.748	-45.477	-30.751	-34.411	-36.858	-40.700
581	0.45	-23.161	-0.404	1.475	-1.347	-28.440	-19.370	-22.192	-23.025	-25.988
581	0.68	-10.932	0.302	1.039	-0.946	-12.635	-8.800	-10.785	-10.198	-12.281
581	0.9	0.463	0.953	0.602	-0.545	2.080	1.018	-0.128	1.718	0.514
582	0.00	-26.520	-4.116	-2.044	1.916	-38.409	-25.912	-21.952	-32.585	-28.427
582	0.23	-19.651	-3.233	-1.668	1.564	-28.753	-19.353	-16.122	-24.421	-21.028
582	0.45	-12.978	-2.405	-1.291	1.211	-19.422	-12.971	-10.469	-16.498	-13.870
582	0.68	-6.570	-1.671	-0.915	0.859	-10.558	-6.828	-5.054	-8.912	-7.050
582	0.9	-0.359	-0.993	-0.538	0.506	-2.019	-0.861	0.183	-1.567	-0.471
584	0	-26.968	-0.868	1.223	-1.116	-33.750	-23.048	-25.387	-27.579	-30.035
584	0.23	-19.035	-0.475	1.010	-0.921	-23.602	-16.122	-18.053	-19.226	-21.254
584	0.45	-11.887	-0.110	0.797	-0.726	-14.440	-9.901	-11.425	-11.713	-13.313
584	0.68	-5.556	0.209	0.585	-0.531	-6.333	-4.416	-5.532	-5.089	-6.260
584	0.9	-0.010	0.500	0.372	-0.336	0.788	0.363	-0.345	0.695	-0.048
586	0	0.155	0.516	0.155	-0.174	1.011	0.294	-0.035	0.650	0.304
586	0.23	-5.330	0.233	0.300	-0.317	-6.023	-4.497	-5.114	-5.134	-5.782
586	0.45	-11.599	-0.077	0.445	-0.459	-14.041	-9.993	-10.898	-11.759	-12.709
586	0.68	-18.685	-0.434	0.591	-0.601	-23.116	-16.225	-17.417	-19.272	-20.523
586	0.9	-26.555	-0.818	0.736	-0.744	-33.175	-23.163	-24.643	-27.625	-29.179
587	0	-26.520	-4.116	-2.044	1.916	-38.409	-25.912	-21.952	-32.585	-28.427
587	0.23	-19.651	-3.233	-1.668	1.564	-28.753	-19.353	-16.122	-24.421	-21.028
587	0.45	-12.978	-2.405	-1.291	1.211	-19.422	-12.971	-10.469	-16.498	-13.870
587	0.68	-6.570	-1.671	-0.915	0.859	-10.558	-6.828	-5.054	-8.912	-7.050
587	0.9	-0.359	-0.993	-0.538	0.506	-2.019	-0.861	0.183	-1.567	-0.471
588	0	-50.258	-2.059	2.349	-2.149	-63.605	-42.883	-47.381	-51.602	-56.325
588	0.23	-36.292	-1.204	1.912	-1.748	-45.477	-30.751	-34.411	-36.858	-40.701
588	0.45	-23.161	-0.404	1.475	-1.347	-28.440	-19.370	-22.192	-23.025	-25.988
588	0.68	-10.932	0.302	1.039	-0.946	-12.635	-8.800	-10.785	-10.198	-12.281
588	0.9	0.463	0.953	0.602	-0.545	2.080	1.018	-0.128	1.718	0.514
589	0	-26.135	-4.054	-2.264	2.092	-37.847	-25.785	-21.429	-32.372	-27.798
589	0.23	-19.334	-3.182	-1.845	1.706	-28.292	-19.246	-15.694	-24.243	-20.514
589	0.45	-12.730	-2.366	-1.427	1.320	-19.061	-12.884	-10.137	-16.356	-13.471
589	0.68	-6.391	-1.643	-1.009	0.935	-10.298	-6.761	-4.817	-8.805	-6.764
589	0.9	-0.249	-0.976	-0.590	0.549	-1.859	-0.814	0.325	-1.496	-0.300
590	0	-26.592	-0.820	-0.750	0.744	-33.223	-24.683	-23.189	-29.226	-27.657
590	0.23	-18.724	-0.436	-0.606	0.597	-23.166	-17.457	-16.254	-20.571	-19.308
590	0.45	-11.639	-0.080	-0.462	0.449	-14.094	-10.937	-10.025	-12.756	-11.799

590	0.68	-5.372	0.230	-0.318	0.302	-6.078	-5.152	-4.532	-5.829	-5.178
590	0.9	0.112	0.511	-0.174	0.155	0.953	-0.073	0.256	0.257	0.602
592	0	-1.590	-0.719	0.424	-0.456	-3.059	-1.007	-1.888	-1.678	-2.602
592	0.23	-6.076	-1.355	1.038	-1.121	-9.459	-4.430	-6.589	-6.143	-8.410
592	0.45	-10.758	-2.047	1.652	-1.785	-16.184	-8.030	-11.467	-10.851	-14.460
592	0.68	-15.705	-2.831	2.266	-2.449	-23.376	-11.868	-16.584	-15.894	-20.845
592	0.9	-20.848	-3.672	2.880	-3.114	-30.893	-15.883	-21.877	-21.180	-27.473
593	0	-0.096	0.690	-0.504	0.548	0.989	-0.590	0.461	-0.195	0.909
593	0.23	-10.040	0.272	-1.031	1.118	-11.612	-10.067	-7.918	-11.453	-9.196
593	0.45	-20.819	-0.201	-1.558	1.689	-25.304	-20.295	-17.048	-23.622	-20.213
593	0.68	-32.499	-0.768	-2.085	2.260	-40.228	-31.334	-26.989	-36.797	-32.235
593	0.9	-45.014	-1.390	-2.612	2.831	-56.242	-43.125	-37.682	-50.884	-45.169
596	0	-43.316	-8.888	3.057	-1.932	-66.199	-35.927	-40.916	-47.871	-53.109
596	0.45	-29.825	-5.864	2.324	-1.470	-45.173	-24.519	-28.312	-32.571	-36.554
596	0.9	-17.528	-3.287	1.590	-1.008	-26.293	-14.185	-16.783	-18.805	-21.533
596	1.35	-6.965	-1.455	0.857	-0.546	-10.685	-5.411	-6.814	-7.329	-8.802
596	1.8	2.405	-0.069	0.124	-0.084	2.776	2.289	2.081	2.612	2.394
597	0	-26.592	-0.820	-0.750	0.744	-33.223	-24.683	-23.189	-29.226	-27.657
597	0.23	-18.724	-0.436	-0.606	0.597	-23.166	-17.457	-16.254	-20.571	-19.308
597	0.45	-11.639	-0.080	-0.462	0.449	-14.094	-10.937	-10.025	-12.756	-11.799
597	0.68	-5.372	0.230	-0.318	0.302	-6.078	-5.152	-4.532	-5.829	-5.178
597	0.9	0.112	0.511	-0.174	0.155	0.953	-0.073	0.256	0.257	0.602
599	0	-1.590	-0.719	0.424	-0.456	-3.060	-1.007	-1.888	-1.678	-2.602
599	0.23	-6.076	-1.355	1.038	-1.121	-9.459	-4.430	-6.589	-6.143	-8.410
599	0.45	-10.758	-2.047	1.652	-1.785	-16.184	-8.030	-11.467	-10.851	-14.460
599	0.68	-15.705	-2.831	2.266	-2.449	-23.376	-11.868	-16.584	-15.894	-20.846
599	0.9	-20.848	-3.672	2.880	-3.114	-30.893	-15.883	-21.877	-21.180	-27.473
600	0	-0.096	0.690	-0.504	0.548	0.989	-0.590	0.461	-0.195	0.909
600	0.23	-10.040	0.272	-1.031	1.118	-11.612	-10.067	-7.918	-11.453	-9.196
600	0.45	-20.819	-0.201	-1.558	1.689	-25.304	-20.295	-17.047	-23.622	-20.212
600	0.68	-32.499	-0.768	-2.085	2.260	-40.227	-31.334	-26.989	-36.797	-32.235
600	0.9	-45.014	-1.390	-2.612	2.831	-56.241	-43.125	-37.682	-50.884	-45.168
601	0	-0.595	-0.990	0.526	-0.566	-2.299	-0.010	-1.101	-0.697	-1.843
601	0.23	-6.584	-1.660	0.940	-1.014	-10.556	-4.986	-6.940	-6.972	-9.024
601	0.45	-12.770	-2.385	1.354	-1.463	-19.140	-10.139	-12.956	-13.489	-16.447
601	0.68	-19.220	-3.203	1.768	-1.912	-28.189	-15.530	-19.210	-20.342	-24.206
601	0.9	-25.867	-4.078	2.182	-2.360	-37.564	-21.098	-25.641	-27.438	-32.267
602	0	0.533	0.961	-0.539	0.597	2.176	-0.060	1.076	0.599	1.791
602	0.23	-10.814	0.317	-0.941	1.035	-12.469	-10.673	-8.697	-12.142	-10.068
602	0.45	-22.994	-0.383	-1.342	1.473	-28.206	-22.037	-19.222	-25.795	-22.839
602	0.68	-36.077	-1.175	-1.744	1.911	-45.173	-34.214	-30.559	-40.453	-36.615
602	0.9	-49.995	-2.024	-2.146	2.349	-63.232	-47.141	-42.646	-56.022	-51.303
603	0	-0.425	-1.001	0.506	-0.538	-2.111	0.124	-0.921	-0.545	-1.642
603	0.23	-6.677	-1.684	0.859	-0.915	-10.707	-5.150	-6.924	-7.170	-9.033
603	0.45	-13.126	-2.423	1.212	-1.292	-19.628	-10.602	-13.105	-14.036	-16.665
603	0.68	-19.839	-3.255	1.564	-1.669	-29.016	-16.291	-19.524	-21.240	-24.635
603	0.9	-26.749	-4.143	1.917	-2.046	-38.729	-22.158	-26.121	-28.685	-32.846
606	0	-144.820	-15.404	-4.247	2.359	-198.431	-134.586	-127.979	-166.226	-159.289
606	0.45	-103.090	-10.698	-3.244	1.794	-140.825	-96.026	-90.988	-118.391	-113.101
606	0.9	-65.104	-6.439	-2.241	1.228	-88.427	-60.835	-57.366	-74.769	-71.126
606	1.35	-31.403	-2.924	-1.238	0.663	-42.362	-29.500	-27.600	-36.115	-34.120
606	1.8	-1.445	0.144	-0.235	0.097	-1.505	-1.535	-1.204	-1.673	-1.325
607	0	-42.496	-8.824	3.767	-2.264	-65.114	-34.480	-40.510	-46.225	-52.557
607	0.45	-29.396	-5.834	2.845	-1.712	-44.611	-23.612	-28.169	-31.555	-36.340
607	0.9	-17.490	-3.291	1.922	-1.161	-26.254	-13.818	-16.902	-18.419	-21.657
607	1.35	-7.317	-1.493	1.000	-0.610	-11.170	-5.585	-7.195	-7.573	-9.264
607	1.8	1.662	-0.141	0.078	-0.058	1.768	1.574	1.437	1.738	1.595
608	0	-130.570	-13.165	-4.068	2.467	-177.748	-121.581	-115.046	-149.664	-142.802
608	0.45	-92.427	-9.047	-3.064	1.857	-125.387	-86.248	-81.327	-105.965	-100.798
608	0.9	-58.029	-5.375	-2.060	1.248	-78.234	-54.286	-50.978	-66.479	-63.006
608	1.35	-27.915	-2.447	-1.056	0.638	-37.414	-26.179	-24.485	-31.961	-30.182
608	1.8	-1.545	0.033	-0.052	0.029	-1.801	-1.442	-1.362	-1.656	-1.571
609	0	-31.872	-6.683	4.175	-2.547	-48.940	-24.510	-31.232	-33.292	-40.350
609	0.45	-21.900	-4.237	3.107	-1.896	-33.059	-16.602	-21.606	-22.401	-27.655
609	0.9	-13.120	-2.238	2.039	-1.246	-19.324	-9.769	-13.054	-13.045	-16.494
609	1.35	-6.075	-0.983	0.971	-0.595	-8.862	-4.496	-6.062	-5.978	-7.622
609	1.8	-0.223	-0.175	-0.097	0.056	-0.547	-0.297	-0.145	-0.446	-0.285



617	0	0.510	0.458	-0.234	0.495	1.345	0.225	0.954	0.578	1.344
617	0.45	-1.692	-0.188	-0.143	0.686	-2.330	-1.666	-0.837	-2.045	-1.174
617	0.9	-4.681	-1.057	-0.052	0.877	-7.308	-4.265	-3.336	-5.636	-4.660
617	1.35	-8.728	-2.298	0.038	1.067	-14.150	-7.817	-6.788	-10.572	-9.491
617	1.8	-13.562	-3.762	0.129	1.258	-22.295	-12.077	-10.948	-16.475	-15.290
618	0	-20.858	-5.818	-0.903	5.964	-34.337	-19.675	-12.808	-26.514	-19.303
618	0.75	-9.388	-2.366	-0.638	4.252	-15.052	-9.088	-4.197	-12.019	-6.884
618	1.5	-0.697	0.139	-0.374	2.541	-0.615	-1.001	1.913	-1.037	2.023
618	2.25	-4.684	1.406	-0.109	0.829	7.870	4.107	5.045	5.690	6.675
618	3	7.288	1.726	0.156	-0.882	11.508	6.715	5.677	8.904	7.814
619	0	6.391	1.539	-0.192	0.984	10.131	5.559	6.736	7.478	8.713
619	0.75	6.269	1.826	0.072	-0.609	10.445	5.714	5.033	7.809	7.094
619	1.5	3.370	1.167	0.336	-2.203	5.912	3.369	0.830	4.627	1.961
619	2.25	-2.839	-0.730	0.600	-3.797	-4.574	-1.954	-6.351	-2.810	-7.427
619	3	-11.825	-3.573	0.865	-5.390	-19.908	-9.778	-16.033	-13.760	-20.328
620	0	-15.768	-4.530	-0.149	1.110	-26.170	-14.340	-13.081	-19.567	-18.245
620	0.75	-4.899	-1.343	-0.091	0.683	-8.026	-4.500	-3.726	-6.085	-5.272
620	1.5	3.192	0.899	-0.033	0.257	5.269	2.840	3.130	3.883	4.188
620	2.25	7.974	1.902	0.024	-0.170	12.613	7.201	7.007	9.597	9.393
620	3	9.978	1.960	0.082	-0.597	15.109	9.062	8.384	11.798	11.085
621	0	9.723	1.916	-0.058	0.269	14.734	8.693	9.020	11.356	11.700
621	0.75	7.783	1.891	0.035	-0.402	12.366	7.039	6.603	9.400	8.941
621	1.5	3.064	0.920	0.127	-1.074	5.149	2.885	1.684	3.930	2.670
621	2.25	-4.963	-1.290	0.219	-1.745	-8.019	-4.248	-6.212	-5.794	-7.856
621	3	-15.769	-4.445	0.311	-2.416	-26.036	-13.881	-16.609	-19.031	-21.895
622	0	-16.396	-4.606	-0.178	0.391	-27.044	-14.934	-14.365	-20.304	-19.707
622	0.75	-5.718	-1.398	-0.117	0.225	-9.098	-5.263	-4.921	-7.007	-6.648
622	1.5	2.182	0.864	-0.055	0.059	4.001	1.909	2.022	2.778	2.897
622	2.25	6.773	1.888	0.006	-0.108	11.148	6.102	5.938	8.307	8.188
622	3	8.585	1.966	0.068	-0.274	13.447	7.794	7.453	10.324	9.965
623	0	8.702	1.968	-0.034	0.097	13.592	7.797	7.929	10.341	10.479
623	0.75	7.344	2.010	0.041	-0.182	12.029	6.650	6.428	9.020	8.787
623	1.5	3.208	1.106	0.115	-0.461	5.619	3.003	2.426	4.186	3.581
623	2.25	-4.237	-1.037	0.190	-0.740	-6.743	-3.623	-4.553	-4.902	-5.879
623	3	-14.460	-4.126	0.265	-1.019	-23.953	-12.749	-14.033	-17.504	-18.852
624	0	-10.847	-2.909	-0.028	0.109	-17.671	-9.790	-9.654	-13.251	-13.108
624	0.56	-4.847	-1.194	-0.008	0.041	-7.726	-4.370	-4.321	-5.850	-5.798
624	1.13	-0.227	0.090	0.011	-0.026	-0.128	-0.193	-0.230	-0.170	-0.209
624	1.69	2.586	0.707	0.030	-0.094	4.235	2.358	2.234	3.193	3.063
624	2.25	4.019	0.892	0.050	-0.161	6.250	3.667	3.456	4.834	4.613
625	0	4.075	0.879	0.007	-0.024	6.296	3.675	3.644	4.840	4.807
625	0.56	2.263	0.573	0.037	-0.131	3.633	2.073	1.905	2.776	2.599
625	1.13	-0.930	-0.164	0.066	-0.239	-1.378	-0.771	-1.076	-1.010	-1.330
625	1.69	-5.930	-1.568	0.096	-0.346	-9.624	-5.241	-5.683	-7.114	-7.577
625	2.25	-12.310	-3.403	0.125	-0.453	-20.217	-10.954	-11.532	-14.938	-15.545
627	0	-14.862	-4.284	0.042	-0.134	-24.690	-13.334	-13.510	-18.260	-18.445
627	0.75	-4.419	-1.142	0.037	-0.114	-7.131	-3.940	-4.091	-5.321	-5.479
627	1.5	3.246	1.054	0.032	-0.093	5.581	2.953	2.828	4.105	3.974
627	2.25	7.602	2.012	0.026	-0.072	12.340	6.868	6.769	9.277	9.173
627	3	9.179	2.023	0.021	-0.052	14.252	8.282	8.209	10.935	10.858
628	0	9.179	2.023	0.021	-0.052	14.252	8.282	8.209	10.935	10.858
628	0.75	7.601	2.012	0.026	-0.072	12.340	6.868	6.769	9.277	9.173
628	1.5	3.246	1.054	0.032	-0.093	5.581	2.953	2.828	4.105	3.974
628	2.25	-4.419	-1.142	0.037	-0.114	-7.131	-3.940	-4.091	-5.321	-5.479
628	3	-14.862	-4.284	0.042	-0.134	-24.690	-13.334	-13.510	-18.261	-18.446
629	0	-12.310	-3.403	0.125	-0.453	-20.217	-10.954	-11.532	-14.938	-15.545
629	0.56	-5.930	-1.568	0.096	-0.346	-9.624	-5.241	-5.683	-7.114	-7.577
629	1.13	-0.930	-0.164	0.066	-0.239	-1.378	-0.771	-1.076	-1.010	-1.330
629	1.69	2.263	0.573	0.037	-0.131	3.633	2.073	1.905	2.776	2.599
629	2.25	4.075	0.879	0.007	-0.024	6.296	3.675	3.644	4.840	4.807
630	0	4.019	0.892	0.050	-0.161	6.250	3.667	3.456	4.834	4.613
630	0.56	2.586	0.707	0.030	-0.094	4.235	2.358	2.234	3.193	3.063
630	1.13	-0.227	0.090	0.011	-0.026	-0.128	-0.193	-0.230	-0.170	-0.209
630	1.69	-4.847	-1.194	-0.008	0.041	-7.726	-4.370	-4.321	-5.850	-5.798
630	2.25	-10.847	-2.909	-0.028	0.109	-17.671	-9.790	-9.654	-13.251	-13.108
631	0	-14.460	-4.126	0.265	-1.019	-23.953	-12.749	-14.033	-17.504	-18.852
631	0.75	-4.237	-1.037	0.190	-0.740	-6.743	-3.623	-4.553	-4.902	-5.879

631	1.5	3.208	1.106	0.115	-0.461	5.619	3.003	2.426	4.186	3.581
631	2.25	7.344	2.010	0.041	-0.182	12.029	6.650	6.428	9.020	8.787
631	3	8.702	1.968	-0.034	0.097	13.592	7.797	7.929	10.341	10.479
632	0	8.585	1.966	0.068	-0.274	13.447	7.794	7.453	10.324	9.965
632	0.75	6.773	1.888	0.006	-0.108	11.148	6.102	5.988	8.307	8.188
632	1.5	2.182	0.864	-0.055	0.059	4.001	1.909	2.022	2.778	2.897
632	2.25	-5.718	-1.398	-0.117	0.225	-9.098	-5.263	-4.921	-7.007	-6.648
632	3	-16.396	-4.606	-0.178	0.391	-27.044	-14.934	-14.365	-20.304	-19.707
633	0	-15.769	-4.445	0.311	-2.416	-26.036	-13.881	-16.509	-19.031	-21.895
633	0.75	-4.963	-1.290	0.219	-1.745	-8.019	-4.248	-6.212	-5.794	-7.856
633	1.5	3.064	0.920	0.127	-1.074	5.149	2.885	1.684	3.930	2.670
633	2.25	7.783	1.891	0.035	-0.402	12.366	7.039	6.603	9.400	8.941
633	3	9.723	1.916	-0.058	0.269	14.734	8.693	9.020	11.356	11.700
634	0	9.978	1.960	0.082	-0.597	15.109	9.062	8.384	11.798	11.085
634	0.75	7.974	1.902	0.024	-0.170	12.613	7.201	7.007	9.597	9.393
634	1.5	3.192	0.899	-0.033	0.257	5.269	2.840	3.130	3.883	4.188
634	2.25	-4.899	-1.343	-0.091	0.683	-8.026	-4.500	-3.726	-6.085	-5.272
634	3	-15.768	-4.530	-0.149	1.110	-26.170	-14.340	-13.081	-19.567	-18.245
635	0	-11.825	-3.573	0.865	-5.390	-19.908	-9.778	-16.033	-13.760	-20.328
635	0.75	-2.839	-0.730	0.600	-3.797	-4.574	-1.954	-6.351	-2.810	-7.427
635	1.5	3.370	1.167	0.336	-2.203	5.912	3.369	0.830	4.627	1.961
635	2.25	6.269	1.826	0.072	-0.609	10.445	5.714	5.033	7.809	7.094
635	3	6.391	1.539	-0.192	0.984	10.131	5.559	6.736	7.478	8.713
636	0	7.288	1.726	0.156	-0.882	11.508	6.715	5.677	8.904	7.814
636	0.75	4.684	1.406	-0.109	0.829	7.870	4.107	5.045	5.690	6.675
636	1.5	-0.697	0.139	-0.374	2.541	-0.615	-1.001	1.913	-1.037	2.023
636	2.25	-9.388	-2.366	-0.638	4.252	-15.052	-9.088	-4.197	-12.019	-6.884
636	3	-20.858	-5.818	-0.903	5.964	-34.337	-19.675	-12.808	-26.514	-19.303
637	0	-13.562	-3.762	0.129	1.258	-22.295	-12.077	-10.948	-16.475	-15.290
637	0.45	-8.728	-2.298	0.038	1.067	-14.150	-7.817	-6.788	-10.572	-9.491
637	0.9	-4.681	-1.057	-0.052	0.877	-7.308	-4.265	-3.336	-5.636	-4.660
637	1.35	-1.692	-0.188	-0.143	0.686	-2.330	-1.666	-0.837	-2.045	-1.174
637	1.8	0.510	0.458	-0.234	0.495	1.345	0.225	0.954	0.578	1.344
638	0	0.469	0.446	-0.189	0.558	1.276	0.233	0.979	0.575	1.358
638	0.45	-1.480	-0.117	-0.328	0.466	-1.963	-1.660	-0.865	-1.972	-1.138
638	0.9	-4.215	-0.903	-0.467	0.375	-6.504	-4.261	-3.419	-5.486	-4.601
638	1.35	-8.009	-2.062	-0.607	0.284	-12.910	-7.815	-6.924	-10.345	-9.410
638	1.8	-12.590	-3.444	-0.746	0.193	-20.618	-12.077	-11.138	-16.172	-15.187
639	0	-18.089	-4.851	-2.895	2.960	-29.468	-19.174	-13.320	-25.089	-18.941
639	0.56	-10.614	-2.747	-2.305	2.437	-17.131	-11.858	-7.115	-15.295	-10.316
639	1.13	-4.519	-1.074	-1.716	1.915	-7.141	-5.783	-2.153	-7.223	-3.411
639	1.69	-0.232	-0.068	-1.126	1.392	-0.387	-1.335	1.183	-1.469	1.175
639	2.25	2.675	0.506	-0.537	0.869	4.020	1.871	3.277	2.564	4.041
640	0	1.425	0.196	-0.367	0.573	2.024	0.915	1.856	1.234	2.222
640	0.56	1.243	0.254	0.147	0.082	1.898	1.266	1.201	1.620	1.551
640	1.13	-0.319	-0.119	0.662	-0.409	-0.574	0.374	-0.697	0.284	-0.840
640	1.69	-3.689	-1.160	1.176	-0.900	-6.283	-2.144	-4.220	-3.369	-5.549
640	2.25	-8.439	-2.632	1.691	-1.391	-14.338	-5.905	-8.986	-8.744	-11.980
641	0	-23.097	-6.741	-1.847	1.906	-38.502	-22.635	-18.881	-30.438	-26.498
641	0.75	-10.125	-2.793	-1.607	1.647	-16.618	-10.719	-7.465	-14.077	-10.661
641	1.5	0.070	0.209	-1.366	1.388	0.418	-1.304	1.451	-1.230	1.662
641	2.25	6.955	1.973	-1.126	1.129	11.502	5.133	7.388	7.363	9.731
641	3	11.062	2.790	-0.886	0.870	17.739	9.070	10.825	12.443	14.286
642	0	9.637	2.341	-0.930	0.911	15.310	7.744	9.585	10.618	12.551
642	0.75	14.051	3.903	-0.469	0.451	23.105	12.177	13.096	16.720	17.685
642	1.5	15.686	4.519	-0.008	-0.010	26.053	14.109	14.107	19.308	19.306
642	2.25	14.012	3.897	0.453	-0.471	23.049	13.063	12.140	17.642	16.673
642	3	9.560	2.328	0.913	-0.931	15.197	9.517	7.672	12.463	10.527
643	0	11.041	2.788	0.870	-0.890	17.710	10.806	9.047	14.263	12.415
643	0.75	6.865	1.959	1.133	-1.129	11.372	7.312	5.049	9.632	7.256
643	1.5	-0.089	0.183	1.397	-1.369	0.186	1.317	-1.449	1.488	-1.416
643	2.25	-10.352	-2.831	1.660	-1.609	-16.952	-7.657	-10.926	-10.910	-14.342
643	3	-23.393	-6.791	1.923	-1.849	-38.937	-19.131	-22.903	-26.822	-30.782
644	0	-8.606	-2.666	-1.335	1.679	-14.593	-9.080	-6.066	-12.117	-8.953
644	0.56	-3.826	-1.187	-0.859	1.168	-6.491	-4.303	-2.276	-5.668	-3.539
644	1.13	-0.427	-0.140	-0.384	0.657	-0.736	-0.768	0.273	-0.939	0.153
644	1.69	1.165	0.241	0.091	0.146	1.784	1.140	1.194	1.471	1.528

644	2.25	1.377	0.190	0.567	-0.366	1.957	1.806	0.874	2.161	1.182
645	0	2.573	0.491	0.875	-0.540	3.873	3.190	1.776	3.930	2.444
645	0.56	-0.307	-0.077	1.381	-1.126	-0.491	1.105	-1.402	1.080	-1.553
645	1.13	-4.567	-1.076	1.888	-1.711	-7.203	-2.222	-5.822	-3.491	-7.271
645	1.69	-10.635	-2.742	2.395	-2.297	-17.149	-7.176	-11.868	-10.379	-15.306
645	2.25	-18.083	-4.840	2.902	-2.883	-29.443	-13.372	-19.157	-18.989	-25.063
646	0	-12.507	-3.430	0.167	-0.736	-20.497	-11.089	-11.992	-15.118	-16.066
646	0.45	-7.960	-2.053	0.265	-0.599	-12.837	-6.899	-7.763	-9.373	-10.281
646	0.9	-4.200	-0.900	0.363	-0.463	-6.479	-3.417	-4.243	-4.596	-5.463
646	1.35	-1.498	-0.119	0.460	-0.327	-1.987	-0.888	-1.675	-1.164	-1.991
646	1.8	0.417	0.439	0.558	-0.191	1.203	0.933	0.184	1.301	0.514
647	0	0.474	0.454	0.493	-0.235	1.295	0.920	0.192	1.301	0.537
647	0.45	-1.770	-0.198	0.691	-0.148	-2.440	-0.902	-1.741	-1.257	-2.138
647	0.9	-4.801	-1.073	0.889	-0.061	-7.478	-3.432	-4.382	-4.783	-5.781
647	1.35	-8.890	-2.320	1.087	0.025	-14.380	-6.914	-7.976	-9.654	-10.770
647	1.8	-13.766	-3.791	1.286	0.112	-22.585	-11.104	-12.278	-15.493	-16.726
648	0	-21.607	-5.919	6.034	-0.956	-35.398	-13.412	-20.402	-20.080	-27.419
648	0.75	-9.927	-2.439	4.309	-0.680	-15.815	-4.626	-9.615	-7.436	-12.675
648	1.5	-1.026	0.095	2.583	-0.405	-1.080	1.660	-1.329	1.695	-1.443
648	2.25	4.566	1.390	0.858	-0.130	7.703	4.967	3.979	6.571	5.534
648	3	7.380	1.739	-0.867	0.146	11.639	5.774	6.787	7.934	8.997
649	0	6.234	1.518	0.988	-0.196	9.909	6.599	5.414	8.539	7.295
649	0.75	6.262	1.824	-0.617	0.077	10.433	5.019	5.713	7.077	7.806
649	1.5	3.512	1.184	-2.222	0.351	6.110	0.940	3.512	2.102	4.803
649	2.25	-2.546	-0.694	-3.827	0.624	-4.165	-6.118	-1.667	-7.129	-2.455
649	3	-11.383	-3.518	-5.432	0.898	-19.288	-15.677	-9.347	-19.872	-13.226
650	0	-16.787	-4.684	1.146	-0.172	-27.639	-13.962	-15.280	-19.374	-20.758
650	0.75	-5.627	-1.453	0.712	-0.109	-9.077	-4.353	-5.173	-6.076	-6.938
650	1.5	2.754	0.832	0.277	-0.047	4.637	2.756	2.432	3.708	3.368
650	2.25	7.827	1.879	-0.157	0.016	12.398	6.887	7.060	9.237	9.419
650	3	10.121	1.980	-0.592	0.079	15.313	8.517	9.187	11.253	11.957
651	0	9.477	1.878	0.266	-0.055	14.378	8.795	8.475	11.413	11.077
651	0.75	7.756	1.884	-0.413	0.042	12.322	6.567	7.023	8.897	9.375
651	1.5	3.257	0.943	-1.092	0.140	5.418	1.839	3.071	2.868	4.161
651	2.25	-4.551	-1.236	-1.771	0.237	-7.438	-5.867	-3.859	-7.417	-5.308
651	3	-15.137	-4.361	-2.450	0.334	-25.142	-16.073	-13.290	-21.214	-18.291
652	0	-18.266	-4.919	0.439	-0.211	-29.791	-16.001	-16.651	-21.818	-22.500
652	0.75	-7.101	-1.639	0.264	-0.144	-11.143	-6.126	-6.534	-8.211	-6.639
652	1.5	1.287	0.696	0.090	-0.076	2.658	1.248	1.082	1.884	1.710
652	2.25	6.365	1.793	-0.085	-0.009	10.506	5.643	5.720	7.723	7.803
652	3	8.665	1.943	-0.260	0.059	13.507	7.539	7.857	10.049	10.384
653	0	8.091	1.829	0.110	-0.042	12.636	7.392	7.240	9.763	9.604
653	0.75	6.974	1.871	-0.170	0.035	11.363	6.107	6.311	8.323	8.538
653	1.5	3.079	0.967	-0.450	0.112	5.242	2.322	2.883	3.370	3.959
653	2.25	-4.125	-1.175	-0.729	0.188	-6.831	-4.442	-3.524	-5.838	-4.874
653	3	-14.108	-4.263	-1.009	0.265	-23.751	-13.706	-12.432	-18.559	-17.221
654	0	-16.768	-4.535	0.328	-0.145	-27.378	-14.763	-15.236	-20.119	-20.616
654	0.56	-9.339	-2.451	0.201	-0.094	-15.128	-8.203	-8.499	-11.138	-11.449
654	1.13	-3.289	-0.798	0.075	-0.044	-5.225	-2.886	-3.004	-3.879	-4.003
654	1.69	0.952	0.187	-0.052	0.007	1.443	0.805	0.864	1.064	1.125
654	2.25	3.814	0.741	-0.179	0.058	5.763	3.254	3.490	4.284	4.532
655	0	2.354	0.345	0.000	-0.006	3.376	2.118	2.113	2.689	2.683
655	0.56	2.645	0.531	-0.166	0.055	4.024	2.215	2.436	2.938	3.170
655	1.13	1.557	0.285	-0.331	0.117	2.325	1.070	1.518	1.467	1.937
655	1.69	-1.339	-0.627	-0.497	0.178	-2.610	-1.702	-1.027	-2.322	-1.614
655	2.25	-5.615	-1.971	-0.662	0.239	-9.891	-5.716	-4.815	-7.833	-6.887
657	0	-16.338	-5.778	-0.122	0.045	-28.851	-14.826	-14.660	-20.923	-20.748
657	0.75	-2.706	-0.960	-0.113	0.042	-4.783	-2.549	-2.394	-3.565	-3.402
657	1.5	7.987	2.824	-0.105	0.039	14.103	7.083	7.227	10.055	10.207
657	2.25	14.490	4.884	-0.097	0.036	25.203	12.944	13.077	18.190	18.329
657	3	18.054	5.910	-0.089	0.033	31.121	16.160	16.282	22.587	22.715
658	0	18.054	5.910	-0.089	0.033	31.121	16.160	16.282	22.587	22.715
658	0.75	14.490	4.884	-0.097	0.036	25.203	12.944	13.077	18.190	18.329
658	1.5	7.987	2.824	-0.105	0.039	14.103	7.083	7.227	10.055	10.207
658	2.25	-2.706	-0.960	-0.113	0.042	-4.783	-2.549	-2.394	-3.565	-3.402
658	3	-16.338	-5.778	-0.122	0.045	-28.851	-14.826	-14.660	-20.923	-20.748
660	0	-5.615	-1.971	-0.662	0.239	-9.892	-5.716	-4.815	-7.833	-6.887

660	0.56	-1.339	-0.627	-0.497	0.178	-2.610	-1.702	-1.027	-2.322	-1.614
660	1.13	1.557	0.285	-0.331	0.117	2.325	1.070	1.518	1.467	1.937
660	1.69	2.645	0.531	-0.166	0.055	4.024	2.215	2.436	2.938	3.170
660	2.25	2.354	0.345	0.000	-0.006	3.376	2.118	2.113	2.689	2.683
661	0	3.814	0.741	-0.179	0.058	5.763	3.254	3.490	4.284	4.532
661	0.56	0.952	0.187	-0.052	0.007	1.443	0.805	0.864	1.064	1.125
661	1.13	-3.289	-0.798	0.075	-0.044	-5.225	-2.886	-3.004	-3.879	-4.003
661	1.69	-9.339	-2.451	0.201	-0.094	-15.128	-8.203	-8.499	-11.138	-11.449
661	2.25	-16.768	-4.535	0.328	-0.145	-27.378	-14.763	-15.236	-20.119	-20.616
662	0	-14.108	-4.263	-1.009	0.265	-23.751	-13.706	-12.432	-18.559	-17.221
662	0.75	-4.125	-1.175	-0.729	0.188	-6.831	-4.442	-3.524	-5.838	-4.874
662	1.5	3.079	0.967	-0.450	0.112	5.242	2.322	2.883	3.370	3.959
662	2.25	6.974	1.871	-0.170	0.035	11.363	6.107	6.311	8.323	8.538
662	3	8.091	1.829	0.110	-0.042	12.636	7.392	7.240	9.763	9.604
663	0	8.665	1.943	-0.260	0.059	13.507	7.539	7.857	10.049	10.384
663	0.75	6.365	1.793	-0.085	-0.009	10.506	5.643	5.720	7.723	7.803
663	1.5	1.287	0.696	0.090	-0.076	2.658	1.248	1.082	1.884	1.710
663	2.25	-7.101	-1.639	0.264	-0.144	-11.143	-6.126	-6.534	-8.211	-8.639
663	3	-18.266	-4.919	0.439	-0.211	-29.791	-16.001	-16.651	-21.818	-22.501
664	0	-15.137	-4.361	-2.450	0.334	-25.142	-16.073	-13.290	-21.214	-18.291
664	0.75	-4.551	-1.236	-1.771	0.237	-7.438	-5.867	-3.859	-7.417	-5.308
664	1.5	3.257	0.943	-1.092	0.140	5.418	1.839	3.071	2.868	4.161
664	2.25	7.756	1.884	-0.413	0.042	12.322	6.567	7.023	8.897	9.375
664	3	9.477	1.878	0.266	-0.055	14.378	8.795	8.475	11.413	11.077
665	0	10.121	1.980	-0.592	0.079	15.313	8.517	9.187	11.253	11.957
665	0.75	7.827	1.879	-0.157	0.016	12.398	6.887	7.060	9.237	9.419
665	1.5	2.754	0.832	0.277	-0.047	4.637	2.756	2.432	3.708	3.368
665	2.25	-5.627	-1.453	0.712	-0.109	-9.077	-4.353	-5.173	-6.076	-6.938
665	3	-16.787	-4.684	1.146	-0.172	-27.639	-13.962	-15.280	-19.374	-20.758
666	0	-11.383	-3.518	-5.432	0.898	-19.288	-15.677	-9.347	-19.872	-13.226
666	0.75	-2.546	-0.694	-3.827	0.624	-4.165	-6.118	-1.667	-7.129	-2.455
666	1.5	3.512	1.184	-2.222	0.351	6.110	0.940	3.512	2.102	4.803
666	2.25	6.262	1.824	-0.617	0.077	10.433	5.019	5.713	7.077	7.806
666	3	6.234	1.518	0.988	-0.196	9.909	6.599	5.414	8.539	7.295
667	0	7.380	1.739	-0.867	0.146	11.639	5.774	6.787	7.934	8.997
667	0.75	4.566	1.390	0.858	-0.130	7.703	4.967	3.979	6.571	5.534
667	1.5	-1.026	0.095	2.583	-0.405	-1.080	1.660	-1.329	1.695	-1.443
667	2.25	-9.927	-2.439	4.309	-0.680	-15.815	-4.626	-9.615	-7.436	-12.675
667	3	-21.607	-5.919	6.034	-0.956	-35.398	-13.412	-20.402	-20.080	-27.419
668	0	-13.766	-3.791	1.286	0.112	-22.585	-11.104	-12.278	-15.493	-16.726
668	0.45	-8.890	-2.320	1.087	0.025	-14.380	-6.914	-7.976	-9.654	-10.770
668	0.9	-4.801	-1.073	0.889	-0.061	-7.478	-3.432	-4.382	-4.783	-5.781
668	1.35	-1.770	-0.198	0.691	-0.148	-2.440	-0.902	-1.741	-1.257	-2.138
668	1.8	0.474	0.454	0.493	-0.235	1.295	0.920	0.192	1.301	0.537
669	0	0.417	0.439	0.558	-0.191	1.203	0.933	0.184	1.301	0.514
669	0.45	-1.498	-0.119	0.460	-0.327	-1.987	-0.888	-1.675	-1.164	-1.991
669	0.9	-4.200	-0.900	0.363	-0.463	-6.479	-3.417	-4.243	-4.596	-5.463
669	1.35	-7.960	-2.053	0.265	-0.599	-12.837	-6.899	-7.763	-9.373	-10.281
669	1.8	-12.507	-3.430	0.167	-0.736	-20.497	-11.089	-11.992	-15.118	-16.066
671	0	-18.083	-4.840	2.902	-2.883	-29.443	-13.372	-19.157	-18.989	-25.063
671	0.56	-10.635	-2.742	2.395	-2.297	-17.150	-7.176	-11.869	-10.379	-15.306
671	1.13	-4.567	-1.076	1.888	-1.711	-7.203	-2.222	-5.822	-3.491	-7.271
671	1.69	-0.307	-0.077	1.381	-1.126	-0.491	1.105	-1.402	1.080	-1.553
671	2.25	2.573	0.491	0.875	-0.540	3.873	3.190	1.776	3.930	2.444
672	0	1.377	0.190	0.567	-0.366	1.957	1.806	0.874	2.161	1.182
672	0.56	1.165	0.241	0.091	0.146	1.784	1.140	1.194	1.471	1.528
672	1.13	-0.427	-0.140	-0.384	0.657	-0.736	-0.768	0.273	-0.939	0.153
672	1.69	-3.826	-1.187	-0.859	1.168	-6.491	-4.303	-2.276	-5.668	-3.539
672	2.25	-8.606	-2.666	-1.335	1.679	-14.593	-9.080	-6.066	-12.117	-8.953
673	0	-23.393	-6.791	1.923	-1.849	-38.937	-19.131	-22.903	-26.822	-30.782
673	0.75	-10.352	-2.831	1.660	-1.609	-16.952	-7.657	-10.926	-10.910	-14.342
673	1.5	-0.089	0.183	1.397	-1.369	0.186	1.317	-1.449	1.488	-1.416
673	2.25	6.865	1.959	1.133	-1.129	11.372	7.312	5.049	9.632	7.256
673	3	11.041	2.788	0.870	-0.890	17.710	10.806	9.047	14.263	12.415
674	0	9.560	2.328	0.913	-0.931	15.197	9.517	7.672	12.463	10.527
674	0.75	14.012	3.897	0.453	-0.471	23.049	13.063	12.140	17.642	16.673
674	1.5	15.686	4.519	-0.008	-0.010	26.053	14.109	14.107	19.308	19.306

674	2.25	14.051	3.903	-0.469	0.451	23.105	12.177	13.096	16.720	17.685
674	3	9.637	2.341	-0.930	0.911	15.310	7.744	9.585	10.618	12.551
675	0	11.062	2.790	-0.886	0.870	17.739	9.070	10.825	12.443	14.286
675	0.75	6.955	1.973	-1.126	1.129	11.502	5.133	7.388	7.363	9.731
675	1.5	0.070	0.209	-1.366	1.388	0.418	-1.304	1.451	-1.230	1.662
675	2.25	-10.125	-2.793	-1.607	1.647	-16.618	-10.719	-7.465	-14.077	-10.661
675	3	-23.097	-6.741	-1.847	1.906	-38.502	-22.635	-18.881	-30.438	-26.497
676	0	-8.439	-2.632	1.691	-1.391	-14.338	-5.905	-8.986	-8.744	-11.980
676	0.56	-3.689	-1.160	1.176	-0.900	-6.283	-2.144	-4.220	-3.369	-5.549
676	1.13	-0.319	-0.119	0.662	-0.409	-0.574	0.374	-0.697	0.284	-0.840
676	1.69	1.243	0.254	0.147	0.082	1.898	1.266	1.201	1.620	1.551
676	2.25	1.425	0.196	-0.367	0.573	2.024	0.915	1.856	1.234	2.222
677	0	2.675	0.506	-0.537	0.869	4.020	1.871	3.277	2.564	4.041
677	0.56	-0.232	-0.068	-1.126	1.392	-0.387	-1.335	1.183	-1.469	1.175
677	1.13	-4.519	-1.074	-1.716	1.915	-7.141	-5.783	-2.153	-7.223	-3.411
677	1.69	-10.614	-2.747	-2.305	2.437	-17.131	-11.858	-7.115	-15.295	-10.316
677	2.25	-18.089	-4.851	-2.895	2.960	-29.468	-19.174	-13.320	-25.089	-18.941
678	0	-12.590	-3.444	-0.746	0.193	-20.618	-12.077	-11.138	-16.172	-15.187
678	0.45	-8.009	-2.062	-0.607	0.284	-12.910	-7.815	-6.924	-10.345	-9.410
678	0.9	-4.215	-0.903	-0.467	0.375	-6.504	-4.261	-3.419	-5.486	-4.601
678	1.35	-1.480	-0.117	-0.328	0.466	-1.963	-1.660	-0.865	-1.972	-1.138
678	1.8	0.469	0.446	-0.189	0.558	1.276	0.233	0.979	0.575	1.358
679	0	-71.602	-15.931	2.273	-6.514	-111.412	-62.168	-70.956	-82.832	-92.059
679	0.75	-39.798	-9.367	1.627	-4.647	-62.744	-34.192	-40.465	-45.981	-52.569
679	1.5	-12.893	-3.748	0.980	-2.780	-21.468	-10.624	-14.384	-14.870	-18.818
679	2.25	8.583	0.632	0.333	-0.913	11.311	8.058	6.811	9.760	8.451
679	3	25.160	4.066	-0.314	0.954	36.698	22.330	23.598	28.650	29.981
680	0	26.058	4.254	0.034	-0.913	38.075	23.486	22.539	30.076	29.082
680	0.75	17.807	3.623	-0.612	0.836	27.166	15.414	16.863	20.338	21.858
680	1.5	4.658	2.047	-1.258	2.585	8.864	2.934	6.778	4.859	8.895
680	2.25	-13.921	-0.768	-1.905	4.335	-17.934	-14.433	-8.194	-17.100	-10.549
680	3	-37.398	-4.529	-2.551	6.084	-52.124	-36.209	-27.574	-44.799	-35.733
681	0	-67.916	-9.598	0.794	-3.093	-96.857	-60.331	-64.217	-76.526	-80.606
681	0.75	-27.065	-3.897	0.575	-2.325	-38.714	-23.784	-26.683	-30.270	-33.315
681	1.5	8.887	0.858	0.356	-1.557	12.037	8.354	6.441	10.245	8.237
681	2.25	39.410	4.374	0.137	-0.789	54.291	35.606	34.680	44.280	43.308
681	3	65.034	6.945	-0.082	-0.021	89.153	58.448	58.509	72.575	72.639
682	0	65.288	6.988	0.058	-0.887	89.527	58.818	57.872	73.016	72.024
682	0.75	38.654	4.627	-0.195	0.125	53.789	34.594	34.914	43.297	43.634
682	1.5	7.122	1.320	-0.449	1.138	10.658	5.961	7.548	7.838	9.505
682	2.25	-29.840	-3.226	-0.702	2.151	-40.969	-27.558	-24.705	-34.102	-31.106
682	3	-71.701	-8.717	-0.955	3.164	-99.989	-65.486	-61.367	-81.781	-77.456
683	0	-63.533	-8.928	0.769	-1.835	-90.524	-56.411	-59.015	-71.527	-74.261
683	0.75	-28.623	-3.455	0.584	-1.408	-39.877	-25.177	-27.169	-31.619	-33.710
683	1.5	1.387	1.071	0.399	-0.981	3.379	1.648	0.268	2.550	1.102
683	2.25	25.969	4.359	0.214	-0.554	38.137	23.586	22.818	30.238	29.432
683	3	45.651	6.701	0.029	-0.127	65.503	41.115	40.959	52.186	52.022
684	0	45.535	6.698	0.131	-0.498	65.359	41.113	40.483	52.169	51.509
684	0.75	28.965	4.485	-0.067	0.042	41.934	26.002	26.111	33.169	33.283
684	1.5	7.497	1.325	-0.265	0.582	11.117	6.483	7.329	8.429	9.318
684	2.25	-19.401	-3.073	-0.463	1.122	-28.197	-17.923	-16.338	-22.792	-21.128
684	3	-51.197	-8.416	-0.661	1.662	-74.903	-46.738	-44.415	-59.753	-57.314
685	0	-28.507	-2.769	0.618	-1.250	-38.638	-25.038	-26.906	-31.027	-32.989
685	0.56	-13.805	-0.783	0.478	-0.967	-17.819	-11.947	-13.392	-14.487	-16.005
685	1.13	-1.677	0.771	0.337	-0.685	-0.779	-1.172	-2.194	-0.921	-1.994
685	1.69	7.451	1.658	0.197	-0.403	11.595	6.903	6.303	9.075	8.446
685	2.25	14.007	2.114	0.056	-0.121	20.191	12.662	12.486	16.098	15.913
686	0	13.950	2.128	0.099	-0.257	20.145	12.654	12.298	16.092	15.718
686	0.56	12.941	0.549	-0.052	0.065	16.408	11.595	11.711	13.879	14.002
686	1.13	-2.342	-1.923	-0.203	0.386	-5.887	-2.310	-1.721	-3.883	-3.265
686	1.69	-26.475	-5.292	-0.353	0.708	-40.238	-24.181	-23.119	-31.504	-30.389
686	2.25	-53.181	-9.093	-0.504	1.030	-78.367	-48.367	-46.832	-62.098	-60.487
687	0	-65.959	-8.948	0.089	-0.147	-93.468	-59.275	-59.510	-74.801	-75.048
687	0.75	-20.899	-3.072	0.094	-0.167	-29.994	-18.715	-18.976	-23.780	-24.055
687	1.5	19.263	1.858	0.099	-0.188	26.088	17.436	17.149	21.501	21.200
687	2.25	30.595	4.626	0.104	-0.208	44.116	27.640	27.327	35.149	34.820
687	3	37.028	6.449	0.110	-0.229	54.751	33.435	33.096	43.057	42.701

688	0	37.028	6.449	0.110	-0.229	54.751	33.435	33.096	43.057	42.701
688	0.75	30.594	4.626	0.104	-0.208	44.115	27.639	27.327	35.148	34.820
688	1.5	19.262	1.857	0.099	-0.188	26.087	17.435	17.148	21.500	21.199
688	2.25	-20.900	-3.073	0.094	-0.167	-29.996	-18.716	-18.977	-23.782	-24.056
688	3	-65.961	-8.949	0.089	-0.147	-93.171	-59.276	-59.511	-74.803	-75.050
689	0	-53.182	-9.094	-0.504	1.030	-78.369	-48.368	-46.834	-62.100	-60.489
689	0.56	-26.476	-5.293	-0.353	0.708	-40.240	-24.182	-23.120	-31.505	-30.390
689	1.13	-2.343	-1.923	-0.203	0.386	-5.889	-2.311	-1.722	-3.884	-3.266
689	1.69	12.940	0.549	-0.052	0.065	16.407	11.594	11.711	13.879	14.001
689	2.25	13.950	2.128	0.099	-0.257	20.144	12.654	12.298	16.092	15.718
690	0	14.007	2.114	0.056	-0.121	20.190	12.662	12.486	16.098	15.912
690	0.56	7.452	1.658	0.197	-0.403	11.595	6.903	6.304	9.075	8.446
690	1.13	-1.677	0.771	0.337	-0.685	-0.778	-1.172	-2.194	-0.921	-1.994
690	1.69	-13.805	-0.783	0.478	-0.967	-17.818	-11.947	-13.392	-14.487	-16.004
690	2.25	-28.506	-2.768	0.618	-1.250	-38.636	-25.037	-26.905	-31.026	-32.987
691	0	-51.197	-8.416	-0.661	1.662	-74.902	-46.738	-44.415	-59.752	-57.313
691	0.75	-19.400	-3.072	-0.463	1.122	-28.196	-17.923	-16.338	-22.792	-21.128
691	1.5	7.497	1.325	-0.265	0.582	11.117	6.483	7.330	8.429	9.318
691	2.25	28.965	4.485	-0.067	0.042	41.934	26.002	26.111	33.169	33.283
691	3	45.535	6.698	0.131	-0.498	65.359	41.113	40.483	52.169	51.509
692	0	45.651	6.701	0.029	-0.127	65.504	41.116	40.960	52.186	52.023
692	0.75	25.969	4.359	0.214	-0.554	38.137	23.586	22.818	30.238	29.432
692	1.5	1.387	1.071	0.399	-0.981	3.379	1.648	0.268	2.550	1.102
692	2.25	-28.623	-3.455	0.584	-1.408	-39.877	-25.177	-27.169	-31.619	-33.710
692	3	-63.533	-8.928	0.769	-1.835	-90.524	-56.411	-59.015	-71.527	-74.261
693	0	-71.701	-8.717	-0.955	3.164	-99.989	-65.486	-61.367	-81.781	-77.456
693	0.75	-29.840	-3.226	-0.702	2.151	-40.969	-27.558	-24.705	-34.102	-31.106
693	1.5	7.122	1.320	-0.449	1.138	10.658	5.961	7.548	7.838	9.505
693	2.25	38.654	4.627	-0.195	0.125	53.789	34.594	34.914	43.297	43.634
693	3	65.288	6.988	0.058	-0.887	89.527	58.818	57.872	73.016	72.024
694	0	65.034	6.945	-0.082	-0.021	89.153	58.448	58.509	72.575	72.639
694	0.75	39.410	4.374	0.137	-0.789	54.291	35.606	34.680	44.280	43.308
694	1.5	8.887	0.858	0.356	-1.557	12.037	8.354	6.441	10.245	8.237
694	2.25	-27.065	-3.897	0.575	-2.325	-38.714	-23.784	-26.683	-30.270	-33.315
694	3	-67.916	-9.598	0.794	-3.093	-96.857	-60.331	-64.217	-76.526	-80.606
695	0	-37.398	-4.529	-2.551	6.084	-52.123	-36.209	-27.574	-44.799	-35.733
695	0.75	-13.921	-0.768	-1.905	4.335	-17.933	-14.433	-8.194	-17.100	-10.549
695	1.5	4.658	2.047	-1.258	2.585	8.865	2.934	6.778	4.859	8.895
695	2.25	17.807	3.623	-0.612	0.836	27.166	15.414	16.863	20.338	21.858
695	3	26.058	4.254	0.034	-0.913	38.075	23.486	22.539	30.076	29.082
696	0	25.160	4.066	-0.314	0.954	36.698	22.330	23.598	28.650	29.981
696	0.75	8.583	0.632	0.333	-0.913	11.311	8.058	6.811	9.760	8.451
696	1.5	-12.893	-3.748	0.980	-2.780	-21.468	-10.624	-14.384	-14.870	-18.818
696	2.25	-39.798	-9.367	1.627	-4.647	-62.744	-34.192	-40.466	-45.981	-52.569
696	3	-71.602	-15.931	2.273	-6.514	-111.412	-62.168	-70.956	-82.832	-92.059
697	0	-52.791	-13.246	-35.192	42.743	-84.542	-82.703	-4.768	-100.726	-18.895
697	0.56	-36.490	-9.566	-26.961	33.177	-59.093	-59.802	0.336	-72.650	-9.505
697	1.13	-22.762	-6.318	-18.731	23.610	-37.423	-39.217	3.125	-47.548	-3.039
697	1.69	-12.034	-3.736	-10.501	14.044	-20.419	-21.331	3.214	-26.015	-0.243
697	2.25	-3.878	-1.587	-2.270	4.477	-7.193	-5.761	0.987	-7.456	-0.371
698	0	-2.629	-1.277	-2.440	4.774	-5.197	-4.805	2.408	-6.126	1.448
698	0.56	-2.194	-1.136	5.865	-4.824	-4.450	3.891	-6.799	3.139	-8.085
698	1.13	-4.460	-1.431	14.171	-14.422	-7.642	10.157	-18.437	9.294	-20.728
698	1.69	-9.790	-2.396	22.476	-24.021	-15.581	13.665	-32.831	11.811	-37.010
698	2.25	-17.692	-3.792	30.781	-33.619	-27.298	14.858	-49.542	11.354	-56.266
703	0	42.003	10.462	6.448	-6.596	67.143	44.251	31.207	57.465	43.769
703	0.75	18.036	4.483	9.879	-10.058	28.816	26.111	6.174	32.135	11.201
703	1.5	-10.831	-2.442	13.311	-13.519	-16.904	3.563	-23.267	1.065	-27.106
703	2.25	-45.200	-10.608	16.742	-16.980	-71.213	-23.938	-57.660	-36.564	-71.973
703	3	-84.467	-19.721	20.173	-20.442	-132.914	-55.848	-96.463	-79.933	-122.579
704	0	-16.132	-3.590	-33.575	30.886	-25.103	-48.094	16.367	-54.454	13.229
704	0.56	-8.746	-2.262	-23.986	22.551	-14.114	-31.857	14.680	-35.793	13.071
704	1.13	-3.933	-1.365	-14.397	14.217	-6.904	-17.936	10.677	-20.106	9.938
704	1.69	-2.183	-1.138	-4.808	5.883	-4.440	-6.773	3.918	-8.057	3.167
704	2.25	-3.134	-1.347	4.781	-2.452	-5.915	1.961	-5.272	0.881	-6.714
705	0	-4.330	-1.648	4.473	-2.277	-7.832	0.576	-6.175	-0.888	-7.976
705	0.56	-12.999	-3.865	14.031	-10.537	-21.782	2.332	-22.236	-1.351	-27.148

705	1.13	-24.241	-6.513	23.588	-18.797	-39.511	1.771	-40.614	-4.789	-49.293
705	1.69	-38.483	-9.829	33.146	-27.057	-61.906	-1.489	-61.691	-11.796	-75.009
705	2.25	-55.298	-13.576	42.703	-35.317	-88.079	-7.065	-85.085	-21.777	-103.698
706	0	-70.329	-15.732	-5.569	1.610	-109.565	-68.865	-61.686	-89.604	-82.066
706	0.75	-38.889	-9.223	-3.925	1.119	-61.423	-38.925	-33.881	-50.765	-45.469
706	1.5	-12.347	-3.659	-2.282	0.628	-20.672	-13.394	-10.485	-17.666	-14.611
706	2.25	8.765	0.665	-0.638	0.137	11.582	7.250	8.025	8.952	9.766
706	3	24.978	4.044	1.006	-0.354	36.444	23.486	22.126	29.831	28.403
707	0	26.124	4.266	-0.850	-0.012	38.174	22.662	23.499	29.225	30.105
707	0.75	17.570	3.589	0.674	-0.501	26.827	16.487	15.312	21.417	20.183
707	1.5	4.118	1.967	2.197	-0.991	8.088	5.903	2.715	7.870	4.523
707	2.25	-14.764	-0.894	3.721	-1.480	-19.148	-9.567	-14.767	-12.159	-17.620
707	3	-38.545	-4.701	5.244	-1.969	-53.776	-29.446	-36.659	-37.927	-45.501
708	0	-66.469	-9.372	-2.347	0.277	-94.757	-62.169	-59.545	-78.161	-75.406
708	0.75	-26.073	-3.742	-1.766	0.187	-37.275	-25.231	-23.278	-31.588	-29.538
708	1.5	9.424	0.941	-1.184	0.098	12.815	7.298	8.580	9.245	10.591
708	2.25	39.492	4.385	-0.603	0.008	54.408	34.940	35.551	43.597	44.239
708	3	64.661	6.885	-0.021	-0.081	88.610	58.174	58.114	72.210	72.147
709	0	65.305	6.987	-0.878	0.052	89.544	57.896	58.827	72.049	73.027
709	0.75	38.287	4.567	-0.052	-0.071	53.251	34.406	34.387	43.023	43.003
709	1.5	6.370	1.201	0.774	-0.195	9.565	6.507	5.537	8.258	7.240
709	2.25	-30.976	-3.403	1.600	-0.319	-42.617	-26.279	-28.198	-32.989	-35.005
709	3	-73.221	-8.954	2.426	-0.443	-102.191	-63.473	-66.343	-79.976	-82.989
710	0	-61.529	-8.573	-1.223	0.345	-87.551	-56.599	-55.031	-71.290	-69.644
710	0.75	-27.482	-3.293	-0.933	0.255	-38.247	-25.667	-24.479	-31.911	-30.663
710	1.5	1.665	1.041	-0.643	0.166	3.665	0.855	1.664	1.729	2.578
710	2.25	25.383	4.137	-0.354	0.076	37.080	22.491	22.921	28.888	29.339
710	3	44.203	6.287	-0.064	-0.014	63.103	39.719	39.769	50.307	50.359
711	0	44.777	6.401	-0.434	0.087	63.974	39.865	40.386	50.593	51.140
711	0.75	27.591	4.068	-0.039	-0.012	39.618	24.793	24.820	31.493	31.521
711	1.5	5.507	0.788	0.356	-0.111	7.870	5.312	4.845	6.653	6.162
711	2.25	-22.007	-3.729	0.751	-0.210	-32.375	-19.056	-20.016	-24.669	-25.678
711	3	-54.419	-9.193	1.145	-0.309	-80.012	-47.832	-49.287	-61.729	-63.257
712	0	-35.395	-5.567	-0.731	0.267	-51.381	-32.587	-31.589	-41.440	-40.392
712	0.56	-19.042	-2.939	-0.569	0.206	-27.552	-17.707	-16.932	-22.443	-21.629
712	1.13	-5.262	-0.742	-0.407	0.146	-7.502	-5.143	-4.590	-6.420	-5.839
712	1.69	5.518	0.788	-0.245	0.086	7.883	4.722	5.052	6.034	6.381
712	2.25	13.725	1.886	-0.082	0.026	19.488	12.270	12.378	15.513	15.627
713	0	15.185	2.283	-0.261	0.089	21.875	13.406	13.756	17.109	17.476
713	0.56	15.152	1.224	-0.060	0.018	20.141	13.577	13.656	16.618	16.700
713	1.13	0.846	-0.728	0.142	-0.052	-0.150	0.903	0.709	0.578	0.375
713	1.69	-22.311	-3.577	0.343	-0.123	-32.497	-19.737	-20.203	-25.320	-25.809
713	2.25	-48.040	-6.859	0.544	-0.194	-68.622	-42.692	-43.430	-54.192	-54.967
714	0	-72.474	-12.302	-0.059	0.031	-106.653	-65.286	-65.196	-83.911	-83.816
714	0.75	-22.542	-4.131	-0.068	0.034	-33.660	-20.355	-20.254	-26.342	-26.236
714	1.5	22.332	3.007	-0.076	0.036	31.608	20.023	20.135	25.263	25.380
714	2.25	37.493	7.497	-0.084	0.039	56.987	33.660	33.783	44.003	44.132
714	3	47.596	10.953	-0.092	0.042	74.640	42.744	42.879	56.779	56.921
715	0	47.596	10.953	-0.092	0.042	74.640	42.744	42.879	56.779	56.921
715	0.75	37.493	7.497	-0.084	0.039	56.987	33.660	33.783	44.003	44.132
715	1.5	22.332	3.007	-0.076	0.036	31.608	20.023	20.135	25.263	25.380
715	2.25	-22.542	-4.131	-0.068	0.034	-33.660	-20.355	-20.254	-26.343	-26.236
715	3	-72.474	-12.302	-0.059	0.031	-106.653	-65.286	-65.196	-83.911	-83.816
716	0	-48.040	-6.859	0.544	-0.194	-68.622	-42.692	-43.430	-54.192	-54.967
716	0.56	-22.311	-3.577	0.343	-0.123	-32.497	-19.737	-20.203	-25.320	-25.809
716	1.13	0.846	-0.728	0.142	-0.052	-0.150	0.903	0.709	0.578	0.375
716	1.69	15.152	1.224	-0.060	0.018	20.141	13.577	13.656	16.618	16.700
716	2.25	15.185	2.283	-0.261	0.089	21.875	13.406	13.756	17.109	17.476
717	0	13.725	1.886	-0.082	0.026	19.488	12.270	12.378	15.513	15.627
717	0.56	5.518	0.788	-0.245	0.086	7.882	4.722	5.052	6.034	6.381
717	1.13	-5.262	-0.742	-0.407	0.146	-7.502	-5.143	-4.590	-6.420	-5.839
717	1.69	-19.042	-2.939	-0.569	0.206	-27.552	-17.707	-16.932	-22.443	-21.629
717	2.25	-35.395	-5.567	-0.731	0.267	-51.381	-32.587	-31.589	-41.440	-40.392
718	0	-54.419	-9.193	1.145	-0.309	-80.012	-47.832	-49.287	-61.729	-63.257
718	0.75	-22.007	-3.729	0.751	-0.210	-32.375	-19.056	-20.016	-24.669	-25.678
718	1.5	5.507	0.788	0.356	-0.111	7.870	5.312	4.845	6.653	6.162
718	2.25	27.591	4.068	-0.039	-0.012	39.618	24.793	24.820	31.493	31.521



718	3	44.777	6.401	-0.434	0.087	63.974	39.865	40.386	50.593	51.140
719	0	44.203	6.287	-0.064	-0.014	63.103	39.719	39.769	50.307	50.359
719	0.75	25.383	4.137	-0.354	0.076	37.080	22.491	22.921	28.888	29.339
719	1.5	1.665	1.041	-0.643	0.166	3.665	0.855	1.664	1.729	2.578
719	2.25	-27.482	-3.293	-0.933	0.255	-38.247	-25.667	-24.479	-31.911	-30.663
719	3	-61.529	-8.573	-1.223	0.345	-87.551	-56.599	-55.031	-71.290	-69.644
720	0	-73.221	-8.954	2.426	-0.443	-102.191	-63.473	-66.343	-79.976	-82.989
720	0.75	-30.976	-3.403	1.600	-0.319	-42.617	-26.279	-28.198	-32.989	-35.005
720	1.5	6.370	1.201	0.774	-0.195	9.565	6.507	5.537	8.258	7.240
720	2.25	38.287	4.567	-0.052	-0.071	53.251	34.406	34.387	43.023	43.003
720	3	65.305	6.987	-0.878	0.052	89.544	57.896	58.827	72.049	73.027
721	0	64.661	6.885	-0.021	-0.081	88.610	58.174	58.114	72.210	72.147
721	0.75	39.492	4.386	-0.603	0.008	54.408	34.940	35.551	43.597	44.239
721	1.5	9.424	0.941	-1.184	0.098	12.815	7.298	8.580	9.245	10.591
721	2.25	-26.073	-3.742	-1.766	0.187	-37.275	-25.231	-23.278	-31.588	-29.538
721	3	-66.469	-9.372	-2.347	0.277	-94.757	-62.169	-59.545	-78.161	-75.406
722	0	-38.545	-4.701	5.244	-1.969	-53.776	-29.446	-36.659	-37.927	-45.501
722	0.75	-14.764	-0.894	3.721	-1.480	-19.148	-9.567	-14.767	-12.159	-17.620
722	1.5	4.118	1.967	2.197	-0.991	8.088	5.903	2.715	7.870	4.523
722	2.25	17.570	3.589	0.674	-0.501	26.827	16.487	15.312	21.417	20.183
722	3	26.124	4.266	-0.850	-0.012	38.174	22.662	23.499	29.225	30.105
723	0	24.978	4.044	1.006	-0.354	36.444	23.486	22.126	29.831	28.403
723	0.75	8.765	0.665	-0.638	0.137	11.582	7.250	8.025	8.952	9.766
723	1.5	-12.347	-3.659	-2.282	0.628	-20.672	-13.394	-10.485	-17.666	-14.611
723	2.25	-38.889	-9.223	-3.925	1.119	-61.423	-38.925	-33.881	-50.765	-45.469
723	3	-70.329	-15.732	-5.569	1.610	-109.565	-68.865	-61.686	-89.604	-82.066
724	0	-55.298	-13.576	42.703	-35.317	-88.079	-7.065	-85.085	-21.777	-103.698
724	0.56	-38.483	-9.829	33.146	-27.057	-61.906	-1.489	-61.691	-11.796	-75.009
724	1.13	-24.241	-6.513	23.588	-18.797	-39.511	1.771	-40.614	-4.789	-49.293
724	1.69	-12.999	-3.865	14.031	-10.537	-24.782	2.332	-22.236	-1.351	-27.148
724	2.25	-4.330	-1.648	4.473	-2.277	-7.832	0.576	-6.175	-0.888	-7.976
725	0	-3.134	-1.347	4.781	-2.452	-5.915	1.961	-5.272	0.881	-6.714
725	0.56	-2.183	-1.138	-4.808	5.883	-4.440	-6.773	3.918	-8.057	3.167
725	1.13	-3.933	-1.365	-14.397	14.217	-6.904	-17.936	10.677	-20.106	9.938
725	1.69	-8.746	-2.262	-23.986	22.551	-14.114	-31.857	14.680	-35.793	13.071
725	2.25	-16.132	-3.590	-33.575	30.886	-25.103	-48.094	16.367	-54.454	13.229
726	0	-84.467	-19.721	20.173	-20.442	-132.914	-55.848	-96.463	-79.933	-122.579
726	0.75	-45.200	-10.608	16.742	-16.980	-71.213	-23.938	-57.660	-36.564	-71.973
726	1.5	-10.831	-2.442	13.311	-13.519	-16.904	3.563	-23.267	1.066	-27.106
726	2.25	18.036	4.483	9.879	-10.058	28.816	26.111	6.174	32.135	11.201
726	3	42.003	10.462	6.448	-6.596	67.143	44.251	31.207	57.465	43.769
727	0	43.484	10.922	6.405	-6.554	69.657	45.541	32.582	59.265	45.657
727	0.75	51.154	12.494	3.171	-3.314	81.376	49.209	42.725	64.912	58.104
727	1.5	53.925	13.120	-0.063	-0.073	85.703	48.469	48.459	64.821	64.810
727	2.25	51.267	12.508	-3.297	3.167	81.533	42.843	49.307	58.248	65.036
727	3	43.709	10.950	-6.531	6.408	69.971	32.808	45.747	45.936	59.522
728	0	42.285	10.500	-6.575	6.449	67.541	31.482	44.506	44.110	57.786
728	0.75	18.400	4.528	-10.029	9.892	29.326	6.531	26.452	11.642	32.559
728	1.5	-10.383	-2.389	-13.483	13.334	-16.282	-22.828	3.989	-26.565	1.593
728	2.25	-44.670	-10.548	-16.938	16.776	-70.480	-57.140	-23.427	-71.333	-35.933
728	3	-83.854	-19.652	-20.392	20.218	-132.069	-95.861	-55.251	-121.840	-79.199
729	0	-17.692	-3.792	30.781	-33.619	-27.298	14.858	-49.542	11.354	-56.266
729	0.56	-9.790	-2.396	22.476	-24.021	-15.581	13.665	-32.831	11.811	-37.010
729	1.13	-4.460	-1.431	14.171	-14.422	-7.642	10.157	-18.437	9.294	-20.728
729	1.69	-2.194	-1.136	5.865	-4.824	-4.450	3.891	-6.799	3.139	-8.085
729	2.25	-2.629	-1.277	-2.440	4.774	-5.197	-4.805	2.408	-6.126	1.448
730	0	-3.878	-1.587	-2.270	4.477	-7.193	-5.761	0.987	-7.456	-0.371
730	0.56	-12.034	-3.736	-10.501	14.044	-20.419	-21.331	3.214	-26.015	-0.243
730	1.13	-22.762	-6.318	-18.731	23.610	-37.423	-39.217	3.125	-47.548	-3.089
730	1.69	-36.490	-9.566	-26.961	33.177	-59.093	-59.802	0.336	-72.650	-9.505
730	2.25	-52.791	-13.246	-35.192	42.743	-84.543	-82.703	-4.768	-100.727	-18.895
731	0	-20.314	-1.944	0.173	0.187	-27.487	-18.109	-18.095	-22.373	-22.358
731	0.75	-1.532	0.163	-0.064	0.427	-1.578	-1.443	-0.951	-1.574	-1.057
731	1.5	9.507	1.323	-0.302	0.667	13.526	8.255	9.224	10.500	11.517
731	2.25	12.273	1.246	-0.539	0.907	16.720	10.506	11.953	13.105	14.624
731	3	7.295	0.222	-0.777	1.148	9.110	5.789	7.714	6.984	9.005
732	0	7.089	0.196	-0.912	1.513	8.821	5.468	7.893	6.609	9.155



732	0.75	10.383	0.993	-0.377	0.525	14.048	8.967	9.869	11.131	12.079
732	1.5	5.934	0.844	0.157	-0.463	8.471	5.498	4.878	6.928	6.276
732	2.25	-6.789	-0.543	0.692	-1.450	-9.016	-5.418	-7.560	-6.744	-8.994
732	3	-27.255	-2.876	1.227	-2.438	-37.308	-23.302	-26.967	-29.141	-32.989
733	0	-27.076	-2.908	0.802	-1.402	-37.144	-23.566	-25.771	-29.420	-31.734
733	0.75	-6.561	-0.552	0.380	-0.693	-8.756	-5.524	-6.598	-6.837	-7.964
733	1.5	6.212	0.859	-0.042	0.016	8.828	5.549	5.607	7.020	7.080
733	2.25	10.711	1.031	-0.463	0.726	14.502	9.176	10.365	11.409	12.657
733	3	7.466	0.257	-0.885	1.435	9.370	5.835	8.155	7.072	9.508
734	0	7.741	0.270	-0.964	1.584	9.721	6.003	8.551	7.286	9.962
734	0.75	12.549	1.292	-0.500	0.811	17.126	10.794	12.105	13.465	14.842
734	1.5	9.614	1.368	-0.036	0.037	13.726	8.616	8.690	10.919	10.995
734	2.25	-1.594	0.206	0.427	-0.737	-1.584	-1.008	-2.172	-1.096	-2.318
734	3	-20.546	-1.903	0.891	-1.511	-27.700	-17.600	-20.002	-21.836	-24.358
735	0	-20.546	-1.903	0.891	-1.511	-27.700	-17.600	-20.002	-21.836	-24.358
735	0.75	-1.595	0.206	0.427	-0.737	-1.584	-1.008	-2.172	-1.096	-2.318
735	1.5	9.614	1.368	-0.036	0.037	13.726	8.616	8.689	10.919	10.995
735	2.25	12.549	1.292	-0.500	0.811	17.126	10.794	12.105	13.465	14.842
735	3	7.741	0.270	-0.964	1.584	9.721	6.003	8.551	7.286	9.962
736	0	7.466	0.257	-0.885	1.435	9.370	5.835	8.155	7.072	9.508
736	0.75	10.711	1.031	-0.463	0.726	14.502	9.176	10.365	11.409	12.657
736	1.5	6.212	0.859	-0.042	0.016	8.828	5.549	5.607	7.020	7.081
736	2.25	-6.561	-0.552	0.380	-0.693	-8.755	-5.524	-6.597	-6.837	-7.964
736	3	-27.076	-2.908	0.802	-1.402	-37.144	-23.566	-25.770	-29.420	-31.734
737	0	-27.255	-2.876	1.227	-2.438	-37.308	-23.302	-26.967	-29.141	-32.989
737	0.75	-6.789	-0.543	0.692	-1.450	-9.016	-5.418	-7.560	-6.744	-8.993
737	1.5	5.934	0.844	0.157	-0.463	8.471	5.498	4.878	6.928	6.277
737	2.25	10.383	0.993	-0.377	0.525	14.048	8.967	9.869	11.131	12.079
737	3	7.089	0.196	-0.912	1.513	8.821	5.468	7.893	6.609	9.155
738	0	7.295	0.222	-0.777	1.148	9.110	5.789	7.714	6.984	9.005
738	0.75	12.273	1.246	-0.539	0.907	16.720	10.506	11.953	13.105	14.624
738	1.5	9.507	1.323	-0.302	0.667	13.526	8.255	9.224	10.500	11.517
738	2.25	-1.532	0.163	-0.064	0.427	-1.578	-1.443	-0.951	-1.574	-1.057
738	3	-20.314	-1.944	0.173	0.187	-27.487	-18.109	-18.095	-22.373	-22.358
744	0	-65.644	-11.748	0.971	-1.234	-97.570	-58.109	-60.314	-75.308	-77.623
744	0.75	-21.882	-4.190	1.102	-1.388	-32.962	-18.592	-21.082	-24.459	-27.073
744	1.5	11.856	2.335	1.233	-1.541	17.963	11.903	9.129	15.214	12.301
744	2.25	34.318	7.135	1.364	-1.695	52.598	32.250	29.192	41.961	38.750
744	3	46.757	10.901	1.495	-1.849	73.551	43.576	40.233	57.532	54.022
745	0	48.147	11.347	1.488	-1.725	75.931	44.820	41.608	59.265	55.892
745	0.75	33.241	6.280	0.213	-0.185	49.937	30.130	29.732	39.083	38.665
745	1.5	8.311	0.179	-1.062	1.355	10.260	6.418	8.835	7.725	10.262
745	2.25	-27.894	-7.646	-2.337	2.894	-45.706	-27.441	-22.210	-36.559	-31.066
745	3	-74.122	-16.505	-3.612	4.434	-115.355	-70.322	-62.276	-92.019	-83.571
746	0	-86.160	-26.223	-1.438	1.594	-145.349	-78.982	-75.949	-108.498	-105.314
746	0.75	-35.805	-10.547	-0.658	0.596	-59.841	-32.882	-31.629	-44.930	-43.614
746	1.5	7.773	3.149	0.123	-0.403	14.367	7.119	6.593	10.275	9.723
746	2.25	42.791	13.883	0.903	-1.401	73.563	39.415	37.111	54.626	52.206
746	3	71.032	22.637	1.684	-2.400	121.458	65.613	61.529	90.613	86.325
747	0	71.026	22.623	1.810	-2.703	121.428	65.733	61.220	90.730	85.991
747	0.75	41.701	13.256	0.769	-1.045	71.252	38.300	36.486	52.945	51.040
747	1.5	5.600	1.909	-0.272	0.612	9.774	4.769	5.652	6.798	7.726
747	2.25	-39.061	-12.401	-1.312	2.270	-66.714	-36.467	-32.885	-50.204	-46.443
747	3	-90.499	-28.690	-2.353	3.928	-154.504	-83.802	-77.521	-115.570	-108.975
748	0	-88.323	-28.401	-1.606	2.111	-151.429	-81.096	-77.379	-112.317	-108.415
748	0.75	-37.268	-12.166	-0.682	0.767	-64.188	-34.223	-32.774	-47.512	-45.991
748	1.5	7.009	2.088	0.242	-0.577	11.752	6.550	5.731	8.929	8.069
748	2.25	42.726	13.381	1.166	-1.920	72.680	39.620	36.533	54.517	51.276
748	3	71.666	22.693	2.090	-3.264	122.308	66.590	61.236	91.741	86.119
749	0	71.458	22.676	2.158	-3.387	122.031	66.470	60.925	91.583	85.761
749	0.75	43.684	13.998	1.016	-1.553	74.818	40.332	37.763	55.755	53.057
749	1.5	9.134	3.340	-0.126	0.281	16.304	8.095	8.502	11.563	11.990
749	2.25	-33.976	-10.281	-1.267	2.114	-57.221	-31.846	-28.464	-43.483	-39.932
749	3	-83.863	-25.882	-2.409	3.948	-142.047	-77.886	-71.529	-106.892	-100.216
750	0	-51.161	-11.317	-0.750	0.897	-79.500	-46.795	-45.148	-61.636	-59.907
750	0.56	-22.920	-5.858	-0.301	0.298	-36.877	-20.928	-20.330	-28.072	-27.444
750	1.13	-0.052	-0.836	0.148	-0.301	-1.400	0.101	-0.348	-0.426	-0.897

750	1.69	16.913	3.459	0.597	-0.899	25.830	15.819	14.322	20.565	18.993
750	2.25	28.504	7.318	1.046	-1.498	45.913	26.700	24.155	35.638	32.966
751	0	28.400	7.152	1.046	-1.491	45.524	26.606	24.069	35.424	32.761
751	0.56	18.220	4.140	0.555	-0.755	28.488	16.954	15.643	22.322	20.947
751	1.13	2.667	0.691	0.064	-0.019	4.306	2.464	2.381	3.303	3.215
751	1.69	-18.789	-3.485	-0.427	0.716	-28.123	-17.337	-16.194	-22.372	-21.172
751	2.25	-45.619	-8.098	-0.918	1.452	-67.699	-41.975	-39.605	-53.965	-51.477
752	0	-45.621	-8.098	-0.918	1.452	-67.702	-41.976	-39.606	-53.967	-51.479
752	0.56	-18.790	-3.486	-0.427	0.716	-28.125	-17.338	-16.195	-22.374	-21.173
752	1.13	2.666	0.691	0.064	-0.019	4.305	2.464	2.380	3.302	3.214
752	1.69	18.220	4.140	0.555	-0.755	28.488	16.953	15.643	22.322	20.947
752	2.25	28.400	7.152	1.046	-1.491	45.524	26.606	24.069	35.425	32.761
753	0	28.504	7.318	1.046	-1.498	45.913	26.700	24.155	35.638	32.966
753	0.56	16.913	3.459	0.597	-0.899	25.831	15.819	14.322	20.565	18.994
753	1.13	-0.052	-0.836	0.148	-0.301	-1.399	0.102	-0.347	-0.425	-0.896
753	1.69	-22.919	-5.858	-0.301	0.298	-36.875	-20.927	-20.329	-28.071	-27.442
753	2.25	-51.160	-11.316	-0.750	0.897	-79.498	-46.793	-45.147	-61.634	-59.906
754	0	-83.863	-25.882	-2.409	3.948	-142.048	-77.886	-71.529	-106.892	-100.217
754	0.75	-33.976	-10.281	-1.267	2.114	-57.221	-31.846	-28.464	-43.483	-39.932
754	1.5	9.134	3.339	-0.126	0.281	16.304	8.095	8.501	11.563	11.989
754	2.25	43.684	13.998	1.016	-1.553	74.818	40.332	37.763	55.755	53.057
754	3	71.458	22.676	2.158	-3.387	122.031	66.470	60.925	91.583	85.760
755	0	71.666	22.693	2.090	-3.264	122.308	66.590	61.235	91.741	86.118
755	0.75	42.726	13.381	1.166	-1.920	72.680	39.620	36.533	54.517	51.276
755	1.5	7.009	2.088	0.242	-0.577	11.752	6.550	5.731	8.929	8.070
755	2.25	-37.268	-12.166	-0.682	0.767	-64.188	-34.223	-32.774	-47.512	-45.991
755	3	-88.322	-28.401	-1.606	2.111	-151.429	-81.096	-77.379	-112.317	-108.415
756	0	-90.499	-28.690	-2.353	3.928	-154.504	-83.802	-77.521	-115.570	-108.975
756	0.75	-39.061	-12.401	-1.312	2.270	-66.714	-36.467	-32.885	-50.204	-46.443
756	1.5	5.600	1.909	-0.272	0.612	9.775	4.769	5.652	6.798	7.726
756	2.25	41.701	13.256	0.769	-1.045	71.252	38.300	36.486	52.946	51.040
756	3	71.026	22.623	1.810	-2.703	121.428	65.733	61.220	90.730	85.991
757	0	71.032	22.637	1.684	-2.400	121.458	65.613	61.529	90.613	86.325
757	0.75	42.791	13.883	0.903	-1.401	73.563	39.415	37.111	54.626	52.206
757	1.5	7.773	3.149	0.123	-0.403	14.367	7.119	6.593	10.275	9.723
757	2.25	-35.805	-10.547	-0.658	0.596	-59.841	-32.882	-31.629	-44.930	-43.614
757	3	-86.160	-26.223	-1.438	1.594	-145.349	-78.982	-75.950	-108.498	-105.315
758	0	-74.122	-16.505	-3.612	4.434	-115.355	-70.322	-62.276	-92.019	-83.571
758	0.75	-27.894	-7.646	-2.337	2.894	-45.706	-27.441	-22.210	-36.559	-31.066
758	1.5	8.311	0.179	-1.062	1.355	10.260	6.418	8.835	7.725	10.262
758	2.25	33.241	6.280	0.213	-0.185	49.937	30.130	29.732	39.083	38.665
758	3	48.147	11.347	1.488	-1.725	75.931	44.820	41.608	59.265	55.892
759	0	46.757	10.901	1.495	-1.849	73.551	43.576	40.233	57.532	54.022
759	0.75	34.318	7.135	1.364	-1.695	52.598	32.250	29.192	41.961	38.750
759	1.5	11.856	2.335	1.233	-1.541	17.963	11.903	9.129	15.214	12.301
759	2.25	-21.882	-4.190	1.102	-1.388	-32.962	-18.592	21.082	-24.459	-27.073
759	3	-65.644	-11.748	0.971	-1.234	-97.570	-58.109	-60.314	-75.308	-77.623
760	0	-1.380	-0.135	0.008	0.005	-1.872	-1.233	-1.237	-1.525	-1.529
760	0.45	-22.576	-3.010	-0.380	0.408	-31.907	-20.698	-19.910	-26.000	-25.173
760	0.9	-47.110	-6.108	-0.768	0.811	-66.305	-43.167	-41.588	-54.120	-52.462
760	1.35	-75.252	-9.579	-1.156	1.213	-105.628	-68.883	-66.514	-86.263	-83.775
760	1.8	-106.733	-13.272	-1.545	1.616	-149.315	-97.604	-94.443	-122.053	-118.734
761	0	-165.346	-49.500	2.866	-11.164	-277.615	-145.946	-159.975	-201.789	-216.520
761	0.75	-101.924	-28.619	1.997	-8.772	-168.099	-89.734	-100.503	-122.953	-134.260
761	1.5	-45.438	-9.807	1.129	-6.379	-70.218	-39.766	-47.274	-52.704	-60.587
761	2.25	1.606	5.557	0.260	-3.987	10.818	1.705	-2.542	5.460	1.000
761	3	41.712	18.852	-0.608	-1.595	80.219	36.933	35.946	55.036	54.000
762	0	37.200	17.577	-0.568	-1.874	72.763	32.912	31.606	49.537	48.166
762	0.75	36.703	14.183	-0.491	-0.625	66.736	32.542	32.407	46.958	46.817
762	1.5	29.268	8.721	-0.413	0.623	49.075	25.928	26.964	35.792	36.880
762	2.25	12.391	-0.189	-0.335	1.872	14.568	10.817	13.024	12.540	14.858
762	3	-11.422	-11.167	-0.257	3.121	-31.574	-10.537	-7.159	-19.299	-15.752
763	0	-29.352	-16.730	0.294	0.301	-61.990	-26.123	-26.116	-41.050	-41.043
763	0.75	-7.320	-5.482	0.116	0.339	-17.555	-6.471	-6.249	-11.017	-10.783
763	1.5	9.896	3.698	-0.062	0.377	17.791	8.845	9.283	12.656	13.116
763	2.25	19.791	9.429	-0.240	0.414	38.836	17.572	18.226	26.469	27.155
763	3	24.868	13.093	-0.417	0.452	50.790	21.964	22.833	33.922	34.834

764	0	25.301	13.174	-0.397	0.326	51.440	22.374	23.096	34.449	35.208
764	0.75	16.847	8.570	-0.214	0.286	33.930	14.949	15.449	22.865	23.390
764	1.5	3.577	1.898	-0.030	0.246	7.329	3.189	3.466	4.920	5.211
764	2.25	-17.014	-8.222	0.154	0.207	-33.573	-15.159	-15.106	-22.884	-22.828
764	3	-42.422	-20.411	0.337	0.167	-83.564	-37.843	-38.013	-57.048	-57.227
765	0	-41.534	-20.257	0.510	-0.339	-82.252	-36.870	-37.720	-55.837	-56.729
765	0.75	-16.283	-8.045	0.270	-0.199	-32.412	-14.385	-14.854	-21.882	-22.375
765	1.5	4.151	2.099	0.030	-0.060	8.339	3.766	3.676	5.712	5.618
765	2.25	17.263	8.795	-0.210	0.080	34.787	15.327	15.617	23.446	23.751
765	3	25.560	13.422	-0.450	0.220	52.146	22.553	23.223	34.820	35.524
766	0	25.473	13.435	-0.429	0.164	52.065	22.497	23.090	34.761	35.384
766	0.75	18.844	9.522	-0.245	0.143	37.847	16.714	17.102	25.527	25.934
766	1.5	7.397	3.540	-0.062	0.121	14.540	6.596	6.778	9.932	10.124
766	2.25	-11.371	-5.890	0.122	0.099	-23.069	-10.112	-10.135	-15.522	-15.546
766	3	-34.955	-17.388	0.305	0.077	-69.767	-31.154	-31.382	-47.337	-47.576
767	0	-27.787	-12.752	0.314	-0.108	-53.748	-24.695	-25.116	-36.881	-37.323
767	0.56	-13.098	-5.858	0.162	-0.061	-25.091	-11.626	-11.849	-17.274	-17.508
767	1.13	-0.590	0.163	0.010	-0.014	-0.447	-0.521	-0.546	-0.506	-0.532
767	1.69	8.680	4.730	-0.141	0.032	17.983	7.670	7.844	11.945	12.127
767	2.25	15.768	8.424	-0.293	0.079	32.401	13.898	14.271	21.556	21.947
768	0	16.027	8.771	-0.292	0.063	33.267	14.132	14.488	22.048	22.421
768	0.56	10.248	5.353	-0.174	0.085	20.864	9.049	9.309	13.951	14.223
768	1.13	2.289	1.063	-0.056	0.107	4.447	2.003	2.167	3.014	3.185
768	1.69	-8.909	-4.682	0.062	0.129	-18.182	-7.956	-7.889	-12.239	-12.169
768	2.25	-22.287	-11.300	0.179	0.151	-44.825	-19.879	-19.908	-30.332	-30.363
772	0	-22.287	-11.300	0.179	0.151	-44.823	-19.879	-19.907	-30.331	-30.362
772	0.56	-8.908	-4.682	0.062	0.129	-18.181	-7.956	-7.889	-12.239	-12.168
772	1.13	2.289	1.063	-0.056	0.107	4.448	2.004	2.167	3.014	3.186
772	1.69	10.249	5.354	-0.174	0.085	20.864	9.050	9.309	13.951	14.223
772	2.25	16.027	8.771	-0.292	0.063	33.267	14.132	14.488	22.048	22.421
773	0	15.769	8.424	-0.293	0.079	32.401	13.899	14.271	21.556	21.947
773	0.56	8.680	4.730	-0.141	0.032	17.983	7.670	7.844	11.945	12.127
773	1.13	-0.590	0.163	0.010	-0.014	-0.448	-0.521	-0.546	-0.507	-0.532
773	1.69	-13.098	-5.858	0.162	-0.061	-25.091	-11.627	-11.850	-17.274	-17.508
773	2.25	-27.787	-12.752	0.314	-0.108	-53.748	-24.695	-25.116	-36.881	-37.324
774	0	-34.955	-17.388	0.305	0.077	-69.767	-31.154	-31.382	-47.337	-47.576
774	0.75	-11.371	-5.890	0.122	0.099	-23.069	-10.112	-10.135	-15.522	-15.546
774	1.5	7.397	3.540	-0.062	0.121	14.540	6.596	6.778	9.932	10.124
774	2.25	18.844	9.522	-0.245	0.143	37.847	16.714	17.102	25.527	25.934
774	3	25.473	13.435	-0.429	0.164	52.065	22.497	23.090	34.761	35.384
775	0	25.560	13.422	-0.450	0.220	52.146	22.553	23.223	34.820	35.524
775	0.75	17.263	8.794	-0.210	0.080	34.787	15.327	15.617	23.446	23.751
775	1.5	4.151	2.099	0.030	-0.060	8.339	3.765	3.676	5.712	5.618
775	2.25	-16.283	-8.045	0.270	-0.199	-32.412	-14.385	-14.854	-21.882	-22.375
775	3	-41.534	-20.257	0.510	-0.339	-82.252	-36.870	-37.720	-55.837	-56.729
776	0	-42.422	-20.411	0.337	0.167	-83.564	-37.843	-38.013	-57.048	-57.227
776	0.75	-17.014	-8.222	0.154	0.207	-33.573	-15.159	-15.106	-22.884	-22.828
776	1.5	3.577	1.898	-0.030	0.246	7.329	3.189	3.466	4.920	5.211
776	2.25	16.847	8.570	-0.214	0.286	33.930	14.949	15.449	22.865	23.390
776	3	25.301	13.174	-0.397	0.326	51.440	22.374	23.096	34.449	35.208
777	0	24.868	13.093	-0.417	0.452	50.790	21.964	22.833	33.922	34.834
777	0.75	19.791	9.429	-0.240	0.414	38.836	17.572	18.226	26.469	27.155
777	1.5	9.896	3.698	-0.062	0.377	17.791	8.845	9.283	12.656	13.116
777	2.25	-7.320	-5.482	0.116	0.339	-17.555	-6.471	-6.249	-11.017	-10.783
777	3	-29.352	-16.730	0.294	0.301	-61.990	-26.123	-26.116	-41.050	-41.043
778	0	-11.422	-11.167	-0.257	3.121	-31.574	-10.537	-7.159	-19.299	-15.752
778	0.75	12.391	-0.189	-0.335	1.872	14.568	10.817	13.024	12.540	14.858
778	1.5	29.268	8.721	-0.413	0.623	49.075	25.928	26.964	35.792	36.880
778	2.25	36.703	14.183	-0.491	-0.625	66.736	32.542	32.407	46.958	46.817
778	3	37.200	17.577	-0.568	-1.874	72.763	32.912	31.606	49.537	48.166
779	0	41.712	18.852	-0.608	-1.595	80.219	36.933	35.946	55.036	54.000
779	0.75	1.606	5.557	0.260	-3.987	10.818	1.705	-2.542	5.460	1.000
779	1.5	-45.438	-9.807	1.129	-6.379	-70.218	-39.766	-47.274	-52.704	-60.587
779	2.25	-101.924	-28.619	1.997	-8.772	-168.099	-89.734	-100.503	-122.953	-134.260
779	3	-165.346	-49.500	2.866	-11.164	-277.615	-145.946	-159.975	-201.789	-216.520
780	0	-106.733	-13.272	-1.545	1.616	-149.315	-97.604	-94.443	-122.053	-118.734
780	0.45	-75.252	-9.579	-1.156	1.213	-105.628	-68.883	-66.514	-86.263	-83.775

780	0.9	-47.110	-6.108	-0.768	0.811	-66.305	-43.167	-41.588	-54.120	-52.462
780	1.35	-22.576	-3.010	-0.380	0.408	-31.907	-20.698	-19.910	-26.000	-25.173
780	1.8	-1.380	-0.135	0.008	0.005	-1.872	-1.233	-1.237	-1.525	-1.529
781	0	2.771	0.270	-0.012	-0.013	3.758	2.482	2.480	3.067	3.066
781	0.45	-15.843	-1.276	-0.024	-0.028	-21.053	-14.283	-14.286	-17.465	-17.468
781	0.9	-38.200	-3.270	-0.037	-0.042	-51.071	-34.417	-34.422	-42.209	-42.214
781	1.35	-64.842	-6.008	-0.050	-0.056	-87.423	-58.407	-58.414	-71.921	-71.928
781	1.8	-95.227	-9.193	-0.062	-0.070	-128.982	-85.767	-85.775	-105.846	-105.854
782	0	-63.840	-5.509	-0.203	-0.230	-85.421	-57.659	-57.685	-70.716	-70.743
782	0.75	-18.744	4.883	-0.202	-0.223	-14.680	-17.071	-17.093	-16.816	-16.839
782	1.5	14.450	13.206	-0.200	-0.217	38.470	12.805	12.788	23.283	23.265
782	2.25	33.238	18.082	-0.198	-0.211	68.816	29.716	29.704	46.084	46.070
782	3	40.124	20.889	-0.196	-0.204	81.571	35.916	35.908	55.084	55.076
783	0	46.349	22.546	-0.076	-0.083	91.692	41.638	41.631	62.791	62.783
783	0.75	7.700	7.449	-0.165	-0.165	21.158	6.765	6.765	12.604	12.604
783	1.5	-42.851	-9.717	-0.254	-0.248	-66.968	-38.820	-38.814	-51.382	-51.375
783	2.25	-107.808	-30.330	-0.344	-0.330	-177.898	-97.371	-97.357	-132.667	-132.653
783	3	-184.667	-53.012	-0.433	-0.413	-306.419	-166.633	-166.613	-227.752	-227.731
784	0	-136.816	-40.337	-0.282	-0.303	-228.719	-123.416	-123.437	-169.365	-169.388
784	0.75	-60.957	-18.814	-0.026	-0.040	-103.251	-54.887	-54.901	-75.885	-75.900
784	1.5	3.001	0.640	0.231	0.223	4.625	2.931	2.924	3.796	3.788
784	2.25	52.552	16.646	0.487	0.486	89.697	47.784	47.783	66.179	66.177
784	3	90.201	30.585	0.744	0.749	157.177	81.925	81.930	114.761	114.766
785	0	89.727	30.495	0.797	0.803	156.465	81.551	81.558	114.262	114.269
785	0.75	55.458	17.301	0.393	0.401	94.231	50.305	50.313	69.543	69.552
785	1.5	9.287	2.038	-0.011	-0.001	14.405	8.347	8.357	11.023	11.034
785	2.25	-51.290	-16.673	-0.415	-0.403	-88.225	-46.577	-46.565	-64.795	-64.782
785	3	-123.769	-37.452	-0.820	-0.806	-208.446	-112.212	-112.198	-154.413	-154.398
786	0	-129.058	-38.932	-0.774	-0.798	-217.160	-116.926	-116.950	-160.850	-160.875
786	0.75	-53.833	-17.307	-0.387	-0.404	-92.291	-48.837	-48.853	-67.835	-67.852
786	1.5	9.490	2.249	0.000	-0.010	14.987	8.540	8.531	11.381	11.371
786	2.25	58.407	18.358	0.386	0.384	99.460	52.952	52.950	73.298	73.296
786	3	95.421	32.397	0.773	0.778	166.342	86.653	86.657	121.415	121.420
787	0	95.340	32.354	0.790	0.796	166.174	86.596	86.602	121.319	121.325
787	0.75	62.268	19.661	0.407	0.410	106.180	56.448	56.451	78.195	78.199
787	1.5	17.296	4.899	0.024	0.024	28.594	15.590	15.590	21.272	21.272
787	2.25	-42.084	-13.310	-0.360	-0.363	-71.796	-38.235	-38.238	-52.951	-52.954
787	3	-113.364	-33.588	-0.743	-0.749	-189.778	-102.771	-102.777	-140.973	-140.979
788	0	-81.194	-23.444	-0.577	-0.729	-134.943	-73.652	-73.803	-100.629	-100.788
788	0.56	-40.220	-12.534	-0.301	-0.370	-68.319	-36.499	-36.568	-50.444	-50.516
788	1.13	-5.413	-2.497	-0.024	-0.012	-10.491	-4.896	-4.883	-7.282	-7.269
788	1.69	22.171	6.086	0.252	0.347	36.343	20.206	20.301	27.379	27.478
788	2.25	43.589	13.796	0.529	0.705	74.380	39.759	39.935	55.015	55.200
789	0	43.389	13.633	0.542	0.709	73.879	39.592	39.759	54.716	54.891
789	0.56	22.493	6.267	0.194	0.420	37.019	20.438	20.664	27.770	28.007
789	1.13	-4.569	-1.972	-0.153	0.132	-8.638	-4.264	-3.980	-6.200	-5.901
789	1.69	-38.854	-11.665	-0.500	-0.157	-65.289	-35.468	-35.125	-48.670	-48.310
789	2.25	-79.305	-22.231	-0.847	-0.445	-130.736	-72.222	-71.820	-98.165	-97.744
790	0	-108.313	-30.367	-1.445	-0.026	-178.563	-98.927	-97.508	-134.377	-132.888
790	0.75	-40.296	-12.175	-0.662	-0.063	-67.835	-36.929	-36.329	-50.676	-50.047
790	1.5	15.819	3.949	0.121	-0.099	25.302	14.358	14.138	19.225	18.994
790	2.25	57.529	16.625	0.904	-0.136	95.634	52.680	51.640	71.828	70.737
790	3	87.336	27.232	1.687	-0.172	148.375	80.289	78.431	110.631	108.679
791	0	87.336	27.232	1.687	-0.172	148.375	80.289	78.431	110.631	108.679
791	0.75	57.528	16.624	0.904	-0.136	95.632	52.679	51.639	71.826	70.735
791	1.5	15.817	3.948	0.121	-0.099	25.297	14.356	14.136	19.222	18.991
791	2.25	-40.300	-12.177	-0.662	-0.063	-67.842	-36.932	-36.333	-50.681	-50.052
791	3	-108.318	-30.369	-1.445	-0.026	-178.573	-98.932	-97.513	-134.384	-132.895
792	0	-79.308	-22.233	-0.847	-0.445	-130.742	-72.224	-71.823	-98.169	-97.748
792	0.56	-38.856	-11.666	-0.500	-0.157	-65.293	-35.470	-35.127	-48.673	-48.313
792	1.13	-4.570	-1.973	-0.153	0.132	-8.640	-4.266	-3.981	-6.202	-5.903
792	1.69	22.493	6.266	0.194	0.420	37.018	20.438	20.664	27.769	28.006
792	2.25	43.389	13.633	0.542	0.709	73.879	39.592	39.759	54.716	54.891
793	0	43.589	13.796	0.529	0.705	74.380	39.759	39.935	55.015	55.200
793	0.56	22.172	6.086	0.252	0.347	36.344	20.207	20.301	27.380	27.479
793	1.13	-5.412	-2.496	-0.024	-0.012	-10.488	-4.895	-4.882	-7.280	-7.267
793	1.69	-40.218	-12.533	-0.301	-0.370	-68.314	-36.497	-36.566	-50.441	-50.513

793	2.25	-81.191	-23.413	-0.577	-0.729	-134.937	-73.649	-73.800	-100.626	-100.784
794	0	-113.364	-33.588	-0.743	-0.749	-189.778	-102.771	-102.777	-140.973	-140.979
794	0.75	-42.084	-13.310	-0.360	-0.363	-71.796	-38.235	-38.238	-52.951	-52.954
794	1.5	17.296	4.899	0.024	0.024	28.594	15.590	15.590	21.272	21.272
794	2.25	62.268	19.661	0.407	0.410	106.180	56.449	56.451	78.196	78.199
794	3	95.340	32.354	0.790	0.796	166.174	86.596	86.602	121.319	121.325
795	0	95.422	32.398	0.773	0.778	166.342	86.653	86.657	121.415	121.420
795	0.75	58.407	18.358	0.386	0.384	99.460	52.952	52.950	73.298	73.296
795	1.5	9.490	2.249	0.000	-0.010	14.987	8.540	8.531	11.381	11.371
795	2.25	-53.833	-17.307	-0.387	-0.404	-92.290	-48.837	-48.853	-67.834	-67.852
795	3	-129.058	-38.931	-0.774	-0.798	-217.159	-116.926	-116.950	-160.850	-160.875
796	0	-123.769	-37.452	-0.820	-0.806	-208.446	-112.212	-112.198	-154.413	-154.398
796	0.75	-51.290	-16.673	-0.415	-0.403	-88.225	-46.577	-46.565	-64.795	-64.782
796	1.5	9.287	2.038	-0.011	-0.001	14.405	8.347	8.357	11.023	11.034
796	2.25	55.458	17.301	0.393	0.401	94.231	50.305	50.313	69.543	69.552
796	3	89.727	30.495	0.797	0.803	156.465	81.551	81.558	114.262	114.269
797	0	90.201	30.585	0.744	0.749	157.177	81.925	81.930	114.761	114.766
797	0.75	52.552	16.647	0.487	0.486	89.697	47.784	47.783	66.179	66.177
797	1.5	3.001	0.640	0.231	0.223	4.625	2.931	2.921	3.796	3.788
797	2.25	-60.957	-18.814	-0.026	-0.040	-103.251	-54.887	-54.901	-75.884	-75.900
797	3	-136.816	-40.337	-0.282	-0.303	-228.718	-123.416	-123.437	-169.365	-169.387
798	0	-184.667	-53.012	-0.433	-0.413	-306.419	-166.633	-166.613	-227.753	-227.731
798	0.75	-107.808	-30.330	-0.344	-0.330	-177.898	-97.371	-97.357	-132.667	-132.653
798	1.5	-42.851	-9.717	-0.254	-0.248	-66.968	-38.820	-38.814	-51.382	-51.375
798	2.25	7.700	7.449	-0.165	-0.165	21.158	6.765	6.765	12.604	12.604
798	3	46.349	22.546	-0.076	-0.083	91.692	41.638	41.631	62.791	62.783
799	0	40.124	20.889	-0.196	-0.204	81.571	35.916	35.908	55.084	55.076
799	0.75	33.238	18.082	-0.198	-0.211	68.816	29.716	29.704	46.084	46.070
799	1.5	14.450	13.206	-0.200	-0.217	38.470	12.805	12.788	23.283	23.265
799	2.25	-18.744	4.883	-0.202	-0.223	-14.680	-17.071	-17.093	-16.816	-16.839
799	3	-63.840	-5.509	-0.203	-0.230	-85.421	-57.659	-57.685	-70.716	-70.743
800	0	-95.227	-9.193	-0.062	-0.070	-128.982	-85.767	-85.775	-105.846	-105.854
800	0.45	-64.842	-6.008	-0.050	-0.056	-87.423	-58.407	-58.414	-71.921	-71.928
800	0.9	-38.200	-3.270	-0.037	-0.042	-51.071	-34.417	-34.422	-42.209	-42.214
800	1.35	-15.843	-1.276	-0.024	-0.028	-21.053	-14.283	-14.286	-17.465	-17.468
800	1.8	2.771	0.270	-0.012	-0.013	3.758	2.482	2.480	3.067	3.066
801	0	-1.391	-0.135	0.003	0.009	-1.885	-1.248	-1.243	-1.542	-1.537
801	0.45	-22.612	-3.012	0.404	-0.380	-31.953	-19.946	-20.731	-25.215	-26.039
801	0.9	-47.171	-6.112	0.805	-0.769	-66.384	-41.648	-43.222	-52.534	-54.187
801	1.35	-75.338	-9.584	1.206	-1.157	-105.740	-66.598	-68.962	-83.876	-86.358
801	1.8	-106.843	-13.280	1.607	-1.546	-149.460	-94.552	-97.705	-118.864	-122.175
802	0	-163.511	-49.345	-11.012	2.821	-275.165	-158.173	-144.339	-214.337	-199.812
802	0.75	-100.421	-28.494	-8.648	1.961	-166.096	-99.027	-88.418	-132.474	-121.335
802	1.5	-44.268	-9.712	-6.284	1.100	-68.661	-46.125	-38.741	-59.198	-51.445
802	2.25	2.444	5.622	-3.920	0.240	11.928	-1.720	2.440	1.992	6.360
802	3	42.218	18.887	-1.555	-0.620	80.882	36.441	37.376	54.595	55.577
803	0	37.746	17.617	-1.835	-0.579	73.482	32.136	33.392	48.805	50.124
803	0.75	37.019	14.203	-0.609	-0.493	67.148	32.708	32.824	47.178	47.300
803	1.5	29.355	8.720	0.617	-0.406	49.178	27.036	26.013	36.964	35.890
803	2.25	12.249	-0.210	1.843	-0.320	14.363	12.867	10.705	14.664	12.394
803	3	-11.794	-11.209	3.069	-0.233	-32.086	-7.546	-10.847	-16.223	-19.690
804	0	-29.188	-16.704	0.307	0.289	-61.752	-25.962	-25.980	-40.848	-40.868
804	0.75	-7.208	-5.462	0.343	0.112	-17.389	-6.144	-6.375	-10.649	-10.892
804	1.5	9.956	3.711	0.379	-0.064	17.884	9.339	8.896	13.189	12.723
804	2.25	19.798	9.436	0.415	-0.241	38.855	18.233	17.577	27.168	26.479
804	3	24.823	13.093	0.450	-0.418	50.737	22.791	21.923	34.786	33.874
805	0	25.324	13.185	0.324	-0.397	51.484	23.115	22.394	35.236	34.479
805	0.75	16.871	8.583	0.281	-0.211	33.979	15.466	14.973	23.418	22.901
805	1.5	3.603	1.913	0.238	-0.025	7.384	3.481	3.217	5.238	4.962
805	2.25	-16.987	-8.205	0.196	0.161	-33.512	-15.093	-15.128	-22.800	-22.837
805	3	-42.394	-20.391	0.153	0.347	-83.499	-38.002	-37.807	-57.200	-56.996
806	0	-40.622	-20.061	-0.324	0.502	-80.845	-36.884	-36.058	-55.632	-54.765
806	0.75	-15.609	-7.913	-0.189	0.264	-31.391	-14.237	-13.784	-21.573	-21.097
806	1.5	4.587	2.168	-0.053	0.026	8.972	4.075	4.154	6.126	6.209
806	2.25	17.462	8.800	0.082	-0.212	35.034	15.798	15.504	23.966	23.656
806	3	25.520	13.364	0.218	-0.450	52.007	23.186	22.518	35.444	34.743
807	0	25.690	13.423	0.162	-0.429	52.305	23.283	22.692	35.601	34.981

807	0.75	18.841	9.409	0.127	-0.237	37.663	17.084	16.720	25.844	25.162
807	1.5	7.176	3.326	0.092	-0.045	13.932	6.550	6.414	9.726	9.583
807	2.25	-11.811	-6.205	0.057	0.147	-24.101	-10.573	-10.482	-16.250	-16.156
807	3	-35.614	-17.804	0.022	0.339	-71.223	-32.031	-31.713	-48.588	-48.255
808	0	-26.171	-13.358	-0.239	0.392	-52.777	-23.793	-23.162	-36.145	-35.483
808	0.56	-12.957	-6.792	-0.129	0.205	-26.416	-11.790	-11.456	-18.020	-17.668
808	1.13	-1.924	-1.100	-0.019	0.019	-4.069	-1.751	-1.712	-2.734	-2.693
808	1.69	5.871	3.139	0.090	-0.167	12.066	5.374	5.117	8.236	7.966
808	2.25	11.484	6.504	0.200	-0.353	24.188	10.536	9.983	16.366	15.786
809	0	11.641	6.489	0.173	-0.343	24.352	10.650	10.134	16.493	15.951
809	0.56	5.641	3.141	0.121	-0.177	11.795	5.198	4.899	8.029	7.715
809	1.13	-2.540	-1.080	0.070	-0.012	-4.776	-2.217	-2.298	-3.275	-3.360
809	1.69	-13.959	-6.755	0.018	0.154	-27.560	-12.545	-12.409	-18.894	-18.751
809	2.25	-27.559	-13.303	-0.034	0.320	-54.357	-24.837	-24.483	-37.354	-36.982
810	0	-36.580	-18.259	-0.097	0.365	-73.110	-33.019	-32.557	-50.014	-49.528
810	0.75	-12.091	-6.299	-0.039	0.175	-24.587	-10.921	-10.708	-16.705	-16.481
810	1.5	7.580	3.593	0.020	-0.016	14.844	6.842	6.806	10.243	10.206
810	2.25	19.931	10.037	0.078	-0.207	39.976	18.016	17.731	27.332	27.034
810	3	27.465	14.412	0.136	-0.397	56.017	24.855	24.321	38.061	37.501
811	0	27.465	14.412	0.136	-0.397	56.017	24.855	24.321	38.061	37.501
811	0.75	19.931	10.037	0.078	-0.207	39.976	18.016	17.731	27.332	27.034
811	1.5	7.580	3.593	0.020	-0.016	14.844	6.842	6.806	10.243	10.206
811	2.25	-12.092	-6.299	-0.039	0.175	-24.589	-10.921	-10.708	-16.706	-16.482
811	3	-36.581	-18.259	-0.097	0.365	-73.112	-33.020	-32.558	-50.015	-49.530
812	0	-27.560	-13.304	-0.034	0.320	-54.358	-24.838	-24.484	-37.355	-36.984
812	0.56	-13.960	-6.756	0.018	0.154	-27.561	-12.546	-12.410	-18.895	-18.752
812	1.13	-2.541	-1.080	0.070	-0.012	-4.777	-2.217	-2.298	-3.275	-3.361
812	1.69	5.641	3.141	0.121	-0.177	11.794	5.198	4.899	8.029	7.715
812	2.25	11.641	6.489	0.173	-0.343	24.352	10.650	10.133	16.493	15.951
813	0	11.484	6.504	0.200	-0.353	24.187	10.536	9.983	16.366	15.786
813	0.56	5.871	3.139	0.090	-0.167	12.067	5.374	5.117	8.236	7.966
813	1.13	-1.924	-1.100	-0.019	0.019	-4.068	-1.751	-1.712	-2.733	-2.693
813	1.69	-12.957	-6.792	-0.129	0.205	-26.415	-11.790	-11.455	-18.019	-17.668
813	2.25	-26.170	-13.357	-0.239	0.392	-52.776	-23.792	-23.162	-36.145	-35.483
814	0	-35.614	-17.804	0.022	0.339	-71.223	-32.030	-31.713	-48.588	-48.255
814	0.75	-11.811	-6.205	0.057	0.147	-24.100	-10.573	-10.482	-16.250	-16.156
814	1.5	7.176	3.326	0.092	-0.045	13.932	6.550	6.414	9.727	9.583
814	2.25	18.841	9.409	0.127	-0.237	37.663	17.084	16.720	25.844	25.462
814	3	25.690	13.423	0.162	-0.429	52.305	23.283	22.692	35.601	34.981
815	0	25.520	13.364	0.218	-0.450	52.007	23.186	22.518	35.444	34.743
815	0.75	17.462	8.800	0.082	-0.212	35.035	15.798	15.504	23.966	23.656
815	1.5	4.587	2.168	-0.053	0.026	8.973	4.075	4.154	6.126	6.209
815	2.25	-15.609	-7.913	-0.189	0.264	-31.391	-14.237	-13.784	-21.573	-21.097
815	3	-40.622	-20.061	-0.324	0.502	-80.845	-36.884	-36.058	-55.632	-54.765
816	0	-42.394	-20.391	0.153	0.347	-83.499	-38.002	-37.807	-57.200	-56.996
816	0.75	-16.987	-8.205	0.196	0.161	-33.512	-15.093	-15.128	-22.800	-22.837
816	1.5	3.603	1.913	0.238	-0.025	7.384	3.481	3.217	5.238	4.962
816	2.25	16.871	8.583	0.281	-0.211	33.979	15.466	14.973	23.418	22.901
816	3	25.324	13.185	0.324	-0.397	51.484	23.115	22.394	35.236	34.479
817	0	24.823	13.093	0.450	-0.418	50.737	22.791	21.923	34.786	33.874
817	0.75	19.798	9.436	0.415	-0.241	38.855	18.233	17.577	27.168	26.479
817	1.5	9.956	3.711	0.379	-0.064	17.884	9.339	8.896	13.189	12.723
817	2.25	-7.208	-5.462	0.343	0.112	-17.389	-6.144	-6.375	-10.649	-10.892
817	3	-29.188	-16.704	0.307	0.289	-61.752	-25.962	-25.980	-40.848	-40.868
818	0	-11.794	-11.209	3.069	-0.233	-32.086	-7.546	-10.847	-16.223	-19.690
818	0.75	12.249	-0.210	1.843	-0.320	14.363	12.867	10.705	14.664	12.394
818	1.5	29.355	8.720	0.617	-0.406	49.178	27.036	26.013	36.964	35.890
818	2.25	37.019	14.203	-0.609	-0.493	67.148	32.708	32.824	47.178	47.300
818	3	37.746	17.617	-1.835	-0.579	73.482	32.136	33.392	48.805	50.124
819	0	42.218	18.887	-1.555	-0.620	80.882	36.441	37.376	54.595	55.577
819	0.75	2.414	5.622	-3.920	0.240	11.928	-1.720	2.440	1.992	6.360
819	1.5	-44.268	-9.712	-6.284	1.100	-68.661	-46.125	-38.741	-59.198	-51.445
819	2.25	-100.421	-28.494	-8.648	1.961	-166.096	-99.027	-88.418	-132.474	-121.335
819	3	-163.511	-49.345	-11.012	2.821	-275.165	-158.173	-144.339	-214.337	-199.812
821	0	-65.362	-11.687	-0.670	0.647	-97.134	-59.496	-58.179	-76.697	-75.314
821	0.75	-21.648	-4.142	-0.957	0.856	-32.605	-20.440	-18.627	-26.345	-24.441
821	1.5	12.043	2.369	-1.244	1.065	18.242	9.595	11.904	12.831	15.256



821	2.25	34.459	7.156	-1.531	1.274	52.800	29.482	32.286	39.082	42.027
821	3	46.850	10.909	-1.818	1.483	73.675	40.347	43.648	54.157	57.622
822	0	48.221	11.352	-1.692	1.475	76.029	41.707	44.874	56.007	59.333
822	0.75	33.138	6.257	-0.290	0.277	49.778	29.535	30.101	38.433	39.028
822	1.5	8.032	0.128	1.112	-0.922	9.844	8.341	6.307	9.683	7.546
822	2.25	-28.350	-7.725	2.515	-2.121	-46.379	-23.000	-27.636	-31.993	-36.861
822	3	-74.755	-16.612	3.917	-3.320	-116.285	-63.362	-70.599	-84.845	-92.444
823	0	-85.927	-26.166	2.041	-1.705	-144.977	-75.293	-79.039	-104.564	-108.498
823	0.75	-35.559	-10.493	0.935	-0.860	-59.460	-31.068	-32.864	-42.966	-44.851
823	1.5	8.031	3.199	-0.171	-0.015	14.756	7.058	7.213	10.269	10.432
823	2.25	43.062	13.930	-1.276	0.830	73.961	37.479	39.585	52.650	54.862
823	3	71.315	22.679	-2.382	1.675	121.866	61.802	65.859	86.668	90.928
824	0	71.470	22.688	-2.680	1.798	122.066	61.643	66.121	86.523	91.225
824	0.75	-11.770	13.266	-1.137	0.825	71.350	36.456	38.418	51.022	53.082
824	1.5	5.294	1.863	0.406	-0.149	9.334	5.170	4.615	7.158	6.576
824	2.25	-39.743	-12.501	1.949	-1.122	-67.694	-33.820	-36.891	-47.560	-50.785
824	3	-91.557	-28.846	3.492	-2.096	-156.022	-78.910	-84.497	-110.642	-116.509
827	0	-87.619	-28.186	2.519	-1.848	-150.241	-76.338	-80.705	-107.113	-111.697
827	0.75	-36.974	-12.090	1.065	-0.858	-63.713	-32.211	-34.135	-45.321	-47.340
827	1.5	6.894	2.025	-0.388	0.132	11.513	5.817	6.336	8.107	8.653
827	2.25	42.202	13.178	-1.841	1.121	71.728	36.141	39.103	50.681	53.792
827	3	70.733	22.351	-3.295	2.111	120.642	60.365	65.771	84.892	90.568
828	0	70.955	22.391	-3.419	2.180	120.971	60.440	66.039	85.019	90.897
828	0.75	42.542	13.536	-1.638	1.067	72.709	36.650	39.355	51.477	54.318
828	1.5	7.353	2.702	0.143	-0.045	13.146	6.761	6.573	9.573	9.375
828	2.25	-36.396	-11.095	1.924	-1.157	-61.428	-30.833	-33.914	-43.186	-46.421
828	3	-86.923	-26.873	3.705	-2.269	-147.303	-74.525	-80.500	-104.308	-110.582
829	0	-58.123	-17.510	2.467	-1.688	-97.764	-49.844	-53.999	-69.471	-73.833
829	0.56	-29.332	-8.951	1.154	-0.812	-49.520	-25.245	-27.211	-35.226	-37.291
829	1.13	-3.907	-1.260	-0.158	0.064	-6.704	-3.674	-3.452	-5.062	-4.829
829	1.69	17.198	5.037	-1.471	0.940	28.697	14.008	16.418	19.687	22.218
829	2.25	34.938	10.466	-2.783	1.816	58.671	28.661	33.260	40.356	45.185
830	0	35.609	10.586	-2.854	1.857	59.669	29.195	33.906	41.063	46.009
830	0.56	19.364	5.439	-1.375	0.906	31.939	16.052	18.333	22.315	24.710
830	1.13	-0.247	-0.576	0.103	-0.046	-1.217	-0.119	-0.268	-0.514	-0.670
830	1.69	-24.178	-7.984	1.581	-0.998	-41.789	-20.179	-22.758	-28.757	-31.465
830	2.25	-51.475	-16.261	3.059	-1.949	-87.787	-43.268	-48.277	-61.081	-66.340
831	0	-89.219	-30.404	2.753	-1.829	-155.709	-77.545	-82.126	-109.944	-114.755
831	0.75	-36.042	-12.333	1.341	-0.894	-62.984	-31.097	-33.332	-44.206	-46.553
831	1.5	10.198	3.669	-0.071	0.040	18.108	9.107	9.218	12.945	13.061
831	2.25	46.996	16.223	-1.483	0.974	82.353	40.814	43.271	58.010	60.590
831	3	76.858	26.709	-2.895	1.909	134.964	66.277	71.081	94.488	99.532
832	0	76.858	26.709	-2.895	1.909	134.964	66.277	71.081	94.488	99.532
832	0.75	46.996	16.223	-1.483	0.974	82.353	40.814	43.271	58.010	60.590
832	1.5	10.198	3.669	-0.071	0.040	18.108	9.107	9.218	12.945	13.061
832	2.25	-36.042	-12.333	1.341	-0.894	-62.984	-31.097	-33.332	-44.206	-46.553
832	3	-89.219	-30.404	2.753	-1.829	-155.709	-77.545	-82.126	-109.944	-114.755
833	0	-51.475	-16.261	3.059	-1.949	-87.787	-43.268	-48.276	-61.081	-66.340
833	0.56	-24.178	-7.984	1.581	-0.998	-41.788	-20.179	-22.758	-28.757	-31.465
833	1.13	-0.247	-0.576	0.103	-0.046	-1.217	-0.119	-0.268	-0.514	-0.670
833	1.69	19.364	5.439	-1.375	0.906	31.939	16.052	18.333	22.315	24.710
833	2.25	35.609	10.586	-2.854	1.857	59.668	29.195	33.906	41.063	46.009
834	0	34.938	10.466	-2.783	1.816	58.671	28.661	33.260	40.356	45.185
834	0.56	17.198	5.037	-1.471	0.940	28.697	14.008	16.418	19.687	22.218
834	1.13	-3.907	-1.260	-0.158	0.064	-6.704	-3.674	-3.452	-5.062	-4.829
834	1.69	-29.332	-8.951	1.154	-0.812	-49.520	-25.245	-27.211	-35.226	-37.291
834	2.25	-58.123	-17.510	2.467	-1.688	-97.764	-49.844	-53.999	-69.471	-73.833
835	0	-86.923	-26.873	3.705	-2.269	-147.303	-74.525	-80.500	-104.308	-110.581
835	0.75	-36.396	-11.095	1.924	-1.157	-61.428	-30.833	-33.914	-43.186	-46.421
835	1.5	7.353	2.702	0.143	-0.045	13.146	6.761	6.573	9.573	9.375
835	2.25	42.542	13.536	-1.638	1.067	72.709	36.650	39.355	51.477	54.318
835	3	70.955	22.391	-3.419	2.180	120.971	60.440	66.039	85.019	90.897
836	0	70.733	22.351	-3.295	2.111	120.642	60.366	65.771	84.892	90.568
836	0.75	42.202	13.178	-1.841	1.121	71.728	36.141	39.103	50.681	53.792
836	1.5	6.894	2.025	-0.388	0.132	11.513	5.817	6.336	8.107	8.653
836	2.25	-36.974	-12.090	1.065	-0.858	-63.713	-32.211	-34.135	-45.321	-47.340
836	3	-87.619	-28.186	2.519	-1.848	-150.241	-76.338	-80.705	-107.113	-111.697

837	0	-91.557	-28.846	3.492	-2.096	-156.022	-78.910	-84.497	-110.642	-116.509
837	0.75	-39.743	-12.501	1.949	-1.122	-67.694	-33.820	-36.891	-47.560	-50.785
837	1.5	5.294	1.863	0.406	-0.149	9.334	5.170	4.615	7.158	6.576
837	2.25	-41.770	13.266	-1.137	0.825	71.350	36.456	38.418	51.022	53.082
838	0	71.470	22.688	-2.680	1.798	122.066	61.643	66.121	86.523	91.225
838	0.75	43.062	13.930	-1.276	0.830	73.961	37.479	39.585	52.650	54.862
838	1.5	8.031	3.199	-0.171	-0.015	14.756	7.058	7.213	10.269	10.432
838	2.25	-35.559	-10.493	0.935	-0.860	-59.460	-31.068	-32.864	-42.966	-44.851
839	0	-74.755	-16.612	3.917	-3.320	-116.285	-63.363	-70.599	-84.845	-108.498
839	0.75	-28.350	-7.725	2.515	-2.121	-46.379	-23.000	-27.636	-31.993	-36.861
839	1.5	8.032	0.128	1.112	-0.922	9.844	8.341	6.307	9.683	7.546
839	2.25	33.138	6.277	-0.290	0.277	49.778	29.535	30.101	38.433	39.028
840	0	46.850	10.909	-1.818	1.483	76.029	41.707	44.874	56.007	59.333
840	0.75	34.459	7.156	-1.531	1.274	52.800	29.482	32.286	39.082	42.027
840	1.5	12.043	2.369	-1.244	1.065	18.242	9.595	11.904	12.831	15.256
840	2.25	-21.648	-4.142	-0.957	0.856	-32.605	-20.440	-18.627	-26.345	-24.441
841	0	-20.741	-2.003	0.221	0.154	-28.094	-18.446	-18.513	-22.807	-22.878
841	0.75	-1.887	0.114	0.454	-0.079	-2.081	-1.244	-1.778	-1.433	-1.993
841	1.5	9.225	1.285	0.686	-0.313	13.126	8.988	7.989	11.216	10.167
841	2.25	12.062	1.218	0.919	-0.546	16.423	11.775	10.310	14.397	12.859
842	0	6.756	0.151	1.512	-0.780	8.915	7.593	5.662	8.852	6.825
842	0.75	10.274	0.977	0.522	-0.376	13.892	9.768	8.870	11.951	11.008
842	1.5	6.048	0.858	-0.468	0.160	8.631	4.975	5.604	6.400	7.060
842	2.25	-6.451	-0.500	-1.458	0.697	-8.541	-7.264	-5.109	-8.619	-6.356
843	0	-27.729	-3.016	-1.331	0.761	-36.517	-26.472	-22.790	-32.364	-28.498
843	0.75	-7.361	-0.676	-0.649	0.355	-38.100	-26.287	-24.195	-32.413	-30.216
843	1.5	5.263	0.719	0.033	-0.051	7.465	4.770	4.686	6.014	5.926
843	2.25	9.614	0.874	0.715	-0.457	12.936	9.368	8.196	11.396	10.166
844	0	5.934	0.018	1.549	-0.942	7.149	6.889	4.737	8.053	5.681
844	0.75	10.313	1.012	0.694	-0.429	13.994	9.976	8.852	12.195	11.015
844	1.5	6.949	1.059	-0.161	0.084	10.034	6.093	6.338	7.795	8.052
844	2.25	-4.689	-0.132	-1.015	0.597	-5.837	-5.235	-3.623	-6.072	-4.379
845	0	-21.038	-2.235	-1.200	0.736	-28.822	-20.134	-18.198	-28.665	-25.536
845	0.56	-8.933	-1.032	-0.586	0.359	-12.371	-8.626	-7.681	-10.645	-9.653
845	1.13	-1.001	-0.261	0.028	-0.018	-1.619	-0.873	-0.919	-1.186	-1.235
845	1.69	2.331	-0.157	0.642	-0.395	2.547	2.740	1.703	3.023	1.934
846	0	0.707	-0.608	1.256	-0.772	1.014	2.597	0.569	2.579	0.449
846	0.56	3.121	-0.164	0.619	-0.819	-0.124	1.977	-0.182	1.767	-0.500
846	1.13	1.362	-0.151	-0.102	0.053	1.393	1.124	1.280	1.228	1.391
846	1.69	-4.996	-0.806	-0.823	0.490	-7.285	-5.320	-4.007	-6.618	-5.240
848	0	-31.397	-5.143	-0.995	0.601	-45.906	-29.253	-27.657	-37.252	-35.577
848	0.75	-5.537	-0.885	-0.494	0.297	-8.060	-5.477	-4.686	-6.889	-6.059
848	1.5	12.420	2.340	0.008	-0.006	18.647	11.186	11.172	14.523	14.508
848	2.25	21.222	3.840	0.509	-0.310	31.610	19.609	18.790	25.237	24.377
849	0	22.121	4.306	1.010	-0.613	33.434	20.919	19.295	27.000	25.296
849	0.75	21.222	3.840	0.509	-0.310	31.610	19.609	18.790	25.237	24.377
849	1.5	12.420	2.340	0.008	-0.006	18.647	11.186	11.172	14.523	14.509
849	2.25	-5.537	-0.885	-0.494	0.297	-8.060	-5.477	-4.686	-6.889	-6.059
849	3	-31.397	-5.143	-0.995	0.601	-45.905	-29.253	-27.657	-37.252	-35.576
851	0	-15.528	-1.892	-1.544	0.926	-21.660	-15.519	-13.049	-19.118	-16.524
851	0.56	-4.996	-0.806	-0.823	0.490	-7.285	-5.320	-4.007	-6.618	-5.240
851	1.13	1.362	-0.151	-0.102	0.053	1.393	1.124	1.280	1.228	1.391
851	1.69	3.121	-0.164	0.619	-0.383	3.484	3.428	2.427	3.824	2.773
852	0	1.490	-0.484	1.256	-0.772	1.014	2.597	0.569	2.579	0.449
852	0.56	2.331	-0.157	0.642	-0.395	2.547	2.740	1.703	3.023	1.934



852	1.13	-1.001	-0.261	0.028	-0.018	-1.619	-0.873	-0.919	-1.186	-1.235
852	1.69	-8.933	-1.032	-0.586	0.359	-12.371	-8.626	-7.681	-10.645	-9.653
852	2.25	-21.038	-2.235	-1.200	0.736	-28.822	-20.134	-18.198	-24.758	-22.725
853	0	-24.069	-2.269	-1.870	1.110	-32.512	-23.532	-20.552	-28.665	-25.536
853	0.75	-4.689	-0.132	-1.015	0.597	-5.837	-5.235	-3.623	-6.072	-4.379
853	1.5	6.949	1.059	-0.161	0.084	10.034	6.093	6.338	7.795	8.052
853	2.25	10.313	1.012	0.694	-0.429	13.994	9.976	8.852	12.195	11.015
853	3	5.934	0.018	1.549	-0.942	7.149	6.889	4.398	7.868	5.253
854	0	6.222	0.084	1.397	-0.863	7.601	6.997	4.737	8.053	5.681
854	0.75	9.614	0.874	0.715	-0.457	12.936	9.368	8.196	11.396	10.166
854	1.5	5.263	0.719	0.033	-0.051	7.465	4.770	4.686	6.014	5.926
854	2.25	-7.361	-0.676	-0.649	0.355	-9.915	-7.274	-6.270	-8.837	-7.782
854	3	-27.729	-3.016	-1.331	0.761	-38.100	-26.287	-24.195	-32.413	-30.217
855	0	-26.693	-2.803	-2.448	1.234	-36.517	-26.472	-22.790	-32.364	-28.498
855	0.75	-6.451	-0.500	-1.458	0.697	-8.541	-7.264	-5.109	-8.619	-6.556
855	1.5	6.048	0.858	-0.468	0.160	8.631	4.975	5.604	6.400	7.060
855	2.25	10.274	0.977	0.522	-0.376	13.892	9.768	8.870	11.951	11.008
855	3	6.756	0.151	1.512	-0.913	8.349	7.593	5.168	8.777	6.231
856	0	7.157	0.204	1.151	-0.780	8.915	7.593	5.652	8.852	6.825
856	0.75	12.062	1.218	0.919	-0.546	16.423	11.775	10.310	14.397	12.859
856	1.5	9.225	1.285	0.686	-0.313	13.126	8.988	7.989	11.216	10.167
856	2.25	-1.887	0.114	0.454	-0.079	-2.081	-1.244	-1.778	-1.433	-1.993
856	3	-20.741	-2.003	0.221	0.154	-28.094	-18.446	-18.513	-22.807	-22.378
857	0	-143.076	-29.025	-69.884	115.212	-218.132	-198.653	-13.557	-241.894	-47.544
857	1.13	-42.321	-10.537	-53.463	90.151	-67.645	-91.552	52.052	-107.212	43.583
857	2.25	34.825	5.042	-37.043	65.089	49.857	-5.700	96.432	0.848	108.087
857	3.38	87.306	17.130	-20.622	40.028	132.175	57.953	118.603	80.810	144.492
857	4.5	116.176	26.309	-4.201	14.966	181.507	100.357	119.525	134.149	154.275
859	0	-143.073	-29.024	-69.884	115.212	-218.125	-198.650	-13.554	-241.890	-47.539
859	1.13	-42.318	-10.536	-53.463	90.151	-67.638	-91.549	52.064	-107.208	43.587
859	2.25	34.828	5.043	-37.043	65.089	49.863	-5.697	96.434	0.852	108.090
859	3.38	87.308	17.131	-20.622	40.028	132.180	57.955	118.605	80.813	144.495
859	4.5	116.179	26.311	-4.201	14.966	181.511	100.359	119.527	134.152	154.278
860	0	115.718	26.112	-4.424	15.250	180.641	99.723	119.396	133.310	153.967
860	0.26	113.051	24.954	-0.537	9.412	175.587	101.209	111.158	133.860	144.307
860	0.53	109.300	23.748	3.349	3.575	169.157	101.719	101.945	133.243	133.480
860	0.79	104.378	22.448	7.236	-2.263	161.171	101.176	91.678	131.337	121.364
860	1.05	98.200	21.005	11.122	-8.100	151.448	99.502	80.280	128.021	107.838
863	0	115.716	26.111	-4.424	15.250	180.636	99.721	119.394	133.306	153.964
863	0.26	113.049	24.953	-0.537	9.412	175.583	101.207	111.156	133.857	144.304
863	0.53	109.298	23.747	3.349	3.575	169.153	101.717	101.943	133.240	133.477
863	0.79	104.376	22.447	7.236	-2.263	161.166	101.174	91.676	131.334	121.360
863	1.05	98.198	21.003	11.122	-8.100	151.443	99.500	80.278	128.018	107.835
864	0	-244.760	-31.422	-4.249	2.569	-343.987	-224.533	-217.715	-281.255	-274.096
864	0.45	-192.108	-24.535	-3.371	2.038	-269.785	-176.268	-170.858	-220.710	-215.029
864	0.9	-143.390	-18.094	-2.494	1.508	-201.018	-131.544	-127.543	-164.577	-160.376
864	1.35	-99.282	-12.473	-1.616	0.977	-139.096	-90.970	-88.377	-113.801	-111.079
864	1.8	-59.881	-7.724	-0.738	0.446	-84.215	-54.631	-53.447	-68.516	-67.273
865	0	-60.969	-7.983	-0.708	0.430	-85.936	-55.580	-54.443	-69.790	-68.596
865	0.3	-43.695	-5.803	-0.507	0.308	-61.718	-39.833	-39.018	-50.068	-49.212
865	0.6	-28.170	-3.821	-0.307	0.187	-39.917	-25.660	-25.166	-32.308	-31.790
865	0.9	-14.274	-1.971	-0.106	0.065	-20.282	-12.953	-12.781	-16.341	-16.160
865	1.2	-1.885	-0.188	0.094	-0.056	-2.563	-1.602	-1.753	-1.999	-2.157
866	0	-244.760	-31.421	-4.249	2.569	-343.986	-224.533	-217.715	-281.255	-274.096
866	0.45	-192.107	-24.534	-3.371	2.038	-269.784	-176.268	-170.858	-220.709	-215.029
866	0.9	-143.389	-18.094	-2.494	1.508	-201.018	-131.544	-127.543	-164.576	-160.375
866	1.35	-99.282	-12.473	-1.616	0.977	-139.096	-90.970	-88.377	-113.801	-111.079
866	1.8	-59.881	-7.724	-0.738	0.446	-84.215	-54.631	-53.447	-68.516	-67.273
867	0	-60.969	-7.983	-0.708	0.430	-85.935	-55.580	-54.442	-69.790	-68.596
867	0.3	-43.695	-5.802	-0.507	0.308	-61.718	-39.833	-39.017	-50.068	-49.212
867	0.6	-28.170	-3.821	-0.307	0.187	-39.917	-25.660	-25.166	-32.308	-31.789
867	0.9	-14.274	-1.971	-0.106	0.065	-20.282	-12.952	-12.781	-16.341	-16.160
867	1.2	-1.885	-0.188	0.094	-0.056	-2.562	-1.602	-1.753	-1.999	-2.156
868	0	-106.843	-13.280	1.607	-1.546	-149.460	-94.552	-97.705	-118.864	-122.175
868	0.45	-75.338	-9.584	1.206	-1.157	-105.740	-66.598	-68.962	-83.876	-86.358
868	0.9	-47.171	-6.112	0.805	-0.769	-66.384	-41.648	-43.222	-52.534	-54.187
868	1.35	-22.612	-3.012	0.404	-0.380	-31.953	-19.946	-20.731	-25.215	-26.039

868	1.8	-1.391	-0.135	0.093	0.009	-1.885	-1.248	-1.243	-1.542	-1.537
869	0	-215.317	-60.089	-53.391	83.038	-354.522	-247.176	-110.747	-319.999	-176.748
869	1.13	-75.808	-21.082	-40.307	63.582	-124.700	-108.534	-4.645	-135.202	-26.118
869	2.25	33.322	11.288	-27.223	44.127	58.048	2.767	71.116	13.516	88.433
869	3.38	107.377	34.436	-14.138	24.671	183.950	82.501	121.310	119.595	160.345
869	4.50	151.053	50.947	-1.054	5.215	262.778	134.893	141.163	189.595	196.178
870	0	156.772	52.223	-5.982	11.230	271.683	135.113	152.325	191.230	209.303
870	1.13	104.068	32.032	7.486	-6.409	176.133	101.147	87.252	137.312	122.722
870	2.25	20.984	5.205	20.954	-24.048	33.509	39.839	-5.162	47.314	0.062
870	3.38	-97.175	-30.844	34.422	-41.687	-165.960	-53.036	-129.144	-85.322	-165.236
870	4.5	-245.712	-73.530	47.890	-59.326	-412.503	-173.252	-280.467	-254.038	-366.614
871	0	-215.316	-60.089	-53.391	83.038	-354.521	-247.176	-110.747	-319.999	-176.748
871	1.13	-75.808	-21.082	-40.307	63.582	-124.700	-108.534	-4.645	-135.202	-26.118
871	2.25	33.322	11.288	-27.223	44.127	58.048	2.767	71.116	13.516	88.433
871	3.38	107.377	34.436	-14.138	24.671	183.950	82.501	121.310	119.595	160.345
871	4.5	151.053	50.947	-1.054	5.215	262.778	134.893	141.163	189.595	196.178
872	0	156.772	52.223	-5.982	11.230	271.683	135.113	152.325	191.230	209.303
872	1.13	104.068	32.032	7.486	-6.409	176.133	101.147	87.252	137.312	122.722
872	2.25	20.984	5.205	20.954	-24.048	33.509	39.839	-5.162	47.314	0.062
872	3.38	-97.175	-30.844	34.422	-41.687	-165.960	-53.036	-129.144	-85.323	-165.237
872	4.5	-245.713	-73.530	47.890	-59.326	-412.503	-173.252	-280.467	-254.038	-366.614
873	0	-239.900	-72.771	-59.279	47.911	-404.313	-275.189	-167.999	-359.984	-247.434
873	1.13	-93.107	-30.318	-41.652	34.436	-160.237	-125.449	-49.360	-160.598	-80.705
873	2.25	23.307	5.498	-24.025	20.962	36.765	-3.049	41.938	2.710	49.946
873	3.38	104.646	32.091	-6.398	7.487	176.922	87.783	101.668	123.378	137.957
873	4.5	155.606	52.048	11.229	-5.988	270.004	151.275	134.058	207.967	189.890
874	0	150.344	50.831	5.223	-1.057	261.743	140.533	134.253	195.369	188.775
874	1.13	104.658	34.065	24.635	-14.137	180.094	118.828	80.056	157.220	116.509
874	2.25	28.593	10.663	44.048	-27.217	51.373	69.782	-1.483	82.991	8.163
874	3.38	-82.546	-21.962	63.460	-40.297	-134.194	-10.831	-114.588	-33.876	-142.821
874	4.5	-224.065	-61.223	82.873	-53.377	-366.835	-118.786	-255.035	-186.823	-329.884
875	0	-224.065	-61.223	82.873	-53.377	-366.836	-118.786	-255.035	-186.823	-329.884
875	1.13	-82.546	-21.962	63.460	-40.297	-134.195	-10.831	-114.588	-33.876	-142.821
875	2.25	28.593	10.663	44.048	-27.217	51.373	69.782	-1.483	82.991	8.163
875	3.38	104.658	34.065	24.635	-14.137	180.094	118.828	80.056	157.220	116.509
875	4.5	150.344	50.831	5.223	-1.057	261.743	140.533	134.253	195.369	188.775
876	0	155.606	52.048	11.229	-5.988	270.004	151.275	134.058	207.967	189.890
876	1.13	104.646	32.091	-6.398	7.487	176.922	87.783	101.668	123.378	137.957
876	2.25	23.307	5.498	-24.025	20.962	36.765	-3.049	41.938	2.710	49.946
876	3.38	-93.107	-30.318	-41.652	34.436	-160.237	-125.449	-49.360	-160.597	-80.704
876	4.5	-239.900	-72.770	-59.279	47.911	-404.313	-275.189	-167.999	-359.984	-247.434
877	0	-21.494	-8.630	0.058	0.365	-39.601	-19.287	-18.979	-27.945	-27.622
877	0.75	-1.615	-3.329	0.127	-0.038	-7.264	-1.326	-1.492	-3.659	-3.833
877	1.50	13.206	0.937	0.196	-0.442	17.347	12.082	11.443	14.663	13.993
877	2.25	21.716	3.480	0.266	-0.846	31.627	19.810	18.698	25.273	24.106
877	3	25.167	4.988	0.335	-1.250	38.181	22.985	21.400	29.919	28.255
878	0	25.166	4.988	0.335	-1.250	38.181	22.985	21.400	29.919	28.255
878	0.75	21.716	3.480	0.266	-0.846	31.628	19.810	18.698	25.273	24.106
878	1.5	13.207	0.938	0.196	-0.442	17.348	12.082	11.444	14.664	13.993
878	2.25	-1.614	-3.329	0.127	-0.038	-7.262	-1.325	-1.491	-3.658	-3.832
878	3	-21.493	-8.629	0.058	0.365	-39.598	-19.286	-18.978	-27.943	-27.620
879	0	43.709	10.950	-6.531	6.408	69.971	32.808	45.747	45.936	59.522
879	0.75	51.267	12.508	-3.297	3.167	81.533	42.843	49.307	58.248	65.036
879	1.5	53.925	13.120	-0.063	-0.073	85.703	48.469	48.459	64.821	64.810
879	2.25	51.154	12.494	3.171	-3.314	81.376	49.209	42.725	64.912	58.104
879	3	43.484	10.922	6.405	-6.554	69.657	45.541	32.582	59.265	45.657
880	0	-5.526	0.061	0.003	-0.005	-6.533	-4.970	-4.978	-5.761	-5.769
880	1.5	0.835	0.061	0.003	-0.005	1.100	0.755	0.747	0.918	0.910
880	3	2.956	0.061	0.003	-0.005	3.645	2.663	2.655	3.145	3.137
880	4.5	0.835	0.061	0.003	-0.005	1.100	0.754	0.747	0.918	0.910
880	6	-5.526	0.061	0.003	-0.005	-6.534	-4.971	-4.979	-5.761	-5.769
881	0	-206.995	-59.925	-82.803	78.361	-344.274	-269.098	-107.935	-342.040	-172.818
881	1.13	-67.698	-20.740	-62.006	58.482	-114.422	-122.934	-2.446	-149.256	-22.743
881	2.25	41.219	11.808	-41.210	38.604	68.356	-4.112	75.702	7.449	91.254
881	3.38	115.062	35.133	-20.413	18.726	194.288	83.143	122.282	121.516	162.612
881	4.5	158.526	51.822	0.384	-1.152	273.146	143.057	141.522	199.503	197.891
882	0	164.109	52.934	-6.997	6.081	281.626	140.702	153.779	198.317	212.048

882	1.13	106.750	32.249	14.639	-14.840	179.698	110.714	81.235	147.775	116.822
882	2.25	19.011	4.927	36.275	-35.760	30.696	53.385	-18.650	61.154	-14.483
882	3.38	-103.803	-31.618	57.911	-56.680	-175.152	-35.512	-150.103	-68.106	-188.426
882	4.5	-256.995	-74.799	79.547	-77.600	-428.073	-151.749	-308.896	-233.445	-398.449
884	0	-206.994	-59.925	-82.803	78.361	-344.273	-269.098	-107.934	-342.040	-172.818
884	1.13	-67.698	-20.740	-62.006	58.482	-114.422	-122.934	-2.446	-149.256	-22.743
884	2.25	41.219	11.808	-41.210	38.604	68.356	-4.112	75.702	7.449	91.254
884	3.38	115.062	35.133	-20.413	18.726	194.288	83.143	122.282	121.516	162.612
884	4.5	158.526	51.822	0.384	-1.152	273.146	143.057	141.521	199.503	197.891
885	0	164.109	52.934	-6.997	6.081	281.626	140.702	153.779	198.317	212.048
885	1.13	106.750	32.249	14.639	-14.840	179.698	110.714	81.235	147.775	116.822
885	2.25	19.011	4.927	36.275	-35.760	30.696	53.384	-18.650	61.154	-14.483
885	3.38	-103.803	-31.618	57.911	-56.680	-175.152	-35.512	-150.103	-68.106	-188.426
885	4.5	-256.996	-74.799	79.547	-77.600	-428.073	-151.749	-308.896	-233.445	-398.449
886	0	-139.471	-28.389	-103.365	95.460	-212.787	-228.889	-30.064	-272.863	-64.097
886	1.13	-39.505	-9.930	-77.958	71.580	-63.293	-113.512	36.025	-129.592	27.423
886	2.25	36.852	5.621	-52.551	47.700	53.215	-19.384	80.867	-12.943	92.320
886	3.38	88.542	17.680	-27.144	23.820	134.539	52.544	103.508	75.607	129.119
886	4.5	116.624	26.830	-1.737	-0.060	182.877	103.225	104.902	137.535	139.295
888	0	96.604	22.093	19.707	-20.125	151.273	106.650	66.818	136.045	94.221
888	0.86	40.795	9.550	39.107	-38.458	64.234	75.822	-1.742	89.913	8.471
888	1.73	-32.359	-6.613	58.506	-56.790	-49.412	29.383	-85.913	23.288	-97.773
888	2.59	-124.582	-27.344	77.906	-75.122	-193.250	-34.218	-187.246	-66.237	-226.916
888	3.45	-233.122	-51.129	97.305	-93.454	-361.553	-112.504	-303.264	-174.818	-375.116
889	0	-232.938	-51.028	97.305	-93.454	-361.170	-112.339	-303.098	-174.562	-374.859
889	0.86	-124.489	-27.293	77.906	-75.122	-193.056	-34.134	-187.162	-66.107	-226.786
889	1.73	-32.357	-6.612	58.506	-56.790	-49.407	29.385	-85.911	23.291	-97.769
889	2.59	40.707	9.501	39.107	-38.458	64.051	75.743	-1.821	89.790	8.348
889	3.45	96.430	21.997	19.707	-20.125	150.911	106.494	66.661	135.801	93.977
891	0	116.525	26.776	-1.737	-0.060	182.671	103.136	104.813	137.396	139.157
891	1.13	88.495	17.654	-27.144	23.820	134.441	52.502	103.466	75.542	129.054
891	2.25	36.857	5.623	-52.551	47.700	53.226	-19.380	80.871	-12.936	92.328
891	3.38	-39.448	-9.898	-77.958	71.580	-63.174	-113.461	36.077	-129.512	27.503
891	4.5	-139.362	-28.328	-103.365	95.460	-212.559	-228.790	-29.965	-272.710	-63.944
892	0	116.131	26.629	-2.044	0.237	181.963	102.473	104.755	136.567	138.962
892	0.26	113.218	25.474	3.954	-5.416	176.620	105.850	96.481	139.079	129.242
892	0.53	109.222	24.272	9.952	-11.068	169.901	108.251	87.231	140.423	118.352
892	0.79	104.055	22.975	15.950	-16.720	161.625	109.599	76.929	140.479	106.175
892	1.05	97.631	21.535	21.948	-22.373	151.612	109.816	65.495	139.125	92.588
893	0	116.033	26.575	-2.044	0.237	181.760	102.385	104.667	136.430	138.826
893	0.26	113.104	25.411	3.954	-5.416	176.383	105.747	96.378	138.920	129.082
893	0.53	109.091	24.200	9.952	-11.068	169.628	108.133	87.114	140.241	118.170
893	0.79	103.907	22.893	15.950	-16.720	161.318	109.466	76.796	140.273	105.969
893	1.05	97.467	21.444	21.948	-22.373	151.271	109.668	65.347	138.896	92.359
895	0	-40.198	-5.432	-6.836	6.873	-56.930	-43.015	-29.305	-52.809	-38.414
895	1.13	-4.561	-1.220	-5.162	5.191	-7.426	-9.267	1.086	-10.978	-0.107
895	2.25	15.053	1.633	-3.488	3.509	20.675	10.059	17.057	13.171	20.518
895	3.38	18.575	3.089	-1.814	1.827	27.232	14.903	18.544	19.545	23.368
895	4.5	6.073	3.187	-0.140	0.145	12.386	5.326	5.611	8.237	8.536
896	0	6.066	3.181	0.151	-0.139	12.369	5.611	5.321	8.532	8.228
896	1.13	18.498	3.078	1.828	-1.816	27.122	18.477	14.833	23.282	19.456
896	2.25	14.906	1.615	3.506	-3.492	20.472	16.921	9.924	20.350	13.002
896	3.38	-4.777	-1.244	5.183	-5.169	-7.722	0.883	-9.468	-0.358	-11.227
896	4.5	-40.484	-5.462	6.860	-6.846	-57.320	-29.576	-43.281	-38.746	-53.137
897	0	-40.198	-5.432	-6.836	6.873	-56.930	-43.015	-29.305	-52.809	-38.414
897	1.13	-4.561	-1.220	-5.162	5.191	-7.426	-9.267	1.086	-10.978	-0.107
897	2.25	15.053	1.633	-3.488	3.509	20.675	10.059	17.057	13.171	20.518
897	3.38	18.575	3.089	-1.814	1.827	27.232	14.903	18.544	19.545	23.368
897	4.5	6.073	3.187	-0.140	0.145	12.386	5.326	5.611	8.237	8.536
898	0	6.066	3.181	0.151	-0.139	12.369	5.611	5.321	8.532	8.228
898	1.13	18.498	3.078	1.828	-1.816	27.122	18.477	14.833	23.282	19.456
898	2.25	14.906	1.615	3.506	-3.492	20.472	16.921	9.924	20.350	13.002
898	3.38	-4.777	-1.244	5.183	-5.169	-7.722	0.883	-9.468	-0.358	-11.227
898	4.5	-40.484	-5.462	6.860	-6.846	-57.320	-29.576	-43.281	-38.747	-53.137
899	0	-250.297	-73.952	-77.597	79.595	-418.679	-302.864	-145.672	-390.878	-225.827
899	1.13	-98.877	-30.999	-56.669	57.947	-168.250	-145.658	-31.042	-182.853	-62.506
899	2.25	22.164	5.318	-35.742	36.298	35.105	-15.794	56.246	-10.906	64.736

899	3.38	108.130	32.411	-14.814	14.650	181.615	82.503	111.967	118.401	149.339
899	4.5	163.718	52.868	6.114	-6.998	281.051	153.460	140.347	211.630	197.862
900	0	158.605	51.815	-1.115	0.388	273.229	141.629	143.133	198.008	199.586
900	1.13	113.499	34.933	18.743	-20.425	192.091	120.892	81.724	160.862	119.735
900	2.25	38.014	11.414	38.602	-41.238	63.879	72.814	-7.026	87.637	3.805
900	3.38	-72.546	-21.327	58.460	-62.052	-121.178	-6.832	-127.343	-28.226	-154.764
900	4.5	-213.485	-60.704	78.318	-82.865	-353.309	-113.818	-275.001	-180.169	-349.411
901	0	-250.297	-73.952	-77.597	79.595	-418.679	-302.864	-145.672	-390.878	-225.826
901	1.13	-98.877	-30.999	-56.669	57.947	-168.250	-145.658	-31.042	-182.853	-62.506
901	2.25	22.164	5.318	-35.742	36.298	35.105	-15.794	56.246	-10.906	64.736
901	3.38	108.130	32.411	-14.814	14.650	181.615	82.503	111.967	118.402	149.339
901	4.5	163.718	52.868	6.114	-6.998	281.051	153.460	140.347	211.630	197.862
902	0	158.605	51.815	-1.115	0.388	273.229	141.629	143.133	198.008	199.586
902	1.13	113.499	34.933	18.743	-20.425	192.091	120.892	81.724	160.862	119.735
902	2.25	38.014	11.414	38.602	-41.238	63.879	72.814	-7.026	87.637	3.805
902	3.38	-72.546	-21.327	58.460	-62.052	-121.178	-6.832	-127.343	-28.226	-154.764
902	4.5	-213.485	-60.705	78.318	-82.865	-353.309	-113.818	-275.002	-180.169	-349.411
903	0	-217.453	-26.577	-3.034	3.287	-303.466	-198.742	-192.426	-248.254	-241.617
903	0.23	-192.370	-23.750	-2.604	2.821	-268.844	-175.737	-170.312	-219.686	-213.989
903	0.45	-168.170	-20.979	-2.174	2.355	-235.371	-153.527	-148.998	-192.078	-187.323
903	0.68	-144.937	-18.311	-1.744	1.889	-203.221	-132.187	-128.554	-165.551	-161.736
903	0.9	-122.687	-15.754	-1.314	1.423	-172.430	-111.732	-108.995	-140.126	-137.252
904	0	-124.749	-16.302	-1.074	1.162	-175.782	-113.349	-111.112	-142.385	-140.037
904	0.53	-85.680	-11.168	-0.789	0.854	-120.685	-77.901	-76.258	-97.829	-96.103
904	1.05	-52.475	-6.923	-0.504	0.545	-74.047	-47.732	-46.682	-59.990	-58.888
904	1.58	-24.809	-3.388	-0.219	0.237	-35.190	-22.547	-22.091	-28.413	-27.934
904	2.1	-2.037	-0.206	0.066	-0.071	-2.775	-1.768	-1.905	-2.200	-2.344
905	0	-217.453	-26.577	-3.034	3.287	-303.466	-198.742	-192.421	-248.255	-241.618
905	0.23	-192.370	-23.750	-2.604	2.821	-268.845	-175.738	-170.312	-219.686	-213.989
905	0.45	-168.170	-20.979	-2.174	2.355	-235.371	-153.527	-148.998	-192.079	-187.323
905	0.68	-144.937	-18.311	-1.744	1.889	-203.221	-132.187	-128.554	-165.551	-161.736
905	0.9	-122.687	-15.754	-1.314	1.423	-172.431	-111.733	-108.995	-140.126	-137.252
906	0	-124.749	-16.302	-1.074	1.162	-175.782	-113.349	-111.112	-142.385	-140.037
906	0.53	-85.680	-11.168	-0.789	0.854	-120.685	-77.901	-76.258	-97.829	-96.103
906	1.05	-52.475	-6.923	-0.504	0.545	-74.047	-47.732	-46.682	-59.990	-58.888
906	1.58	-24.809	-3.388	-0.219	0.237	-35.190	-22.547	-22.091	-28.413	-27.934
907	0	-65.752	-12.158	-1.035	1.052	-98.355	-60.212	-58.125	-77.786	-75.594
907	0.75	-22.074	-4.460	-0.212	0.231	-33.624	-20.079	-19.636	-26.210	-25.745
907	1.5	11.581	2.205	0.611	-0.591	17.425	11.034	9.832	14.190	12.929
907	2.25	33.960	7.145	1.434	-1.412	52.184	31.998	29.152	41.665	38.677
907	3	46.316	11.051	2.256	-2.233	73.260	43.940	39.451	57.963	53.248
908	0	47.757	11.497	2.244	-2.238	75.703	45.225	40.743	59.744	55.038
908	0.75	32.251	6.484	0.895	-0.901	49.077	29.922	28.125	38.889	37.003
908	1.5	6.723	0.438	-0.453	0.436	8.767	5.597	6.486	6.859	7.792
908	2.25	-30.082	-7.333	-1.801	1.772	-47.831	-28.875	-25.301	-38.097	-34.345
908	3	-76.910	-16.138	-3.150	3.109	-118.112	-72.369	-66.110	-94.229	-87.658
909	0	-80.686	-22.320	-3.224	3.134	-132.535	-75.841	-69.483	-102.167	-95.491
909	0.75	-33.349	-9.131	-1.740	1.700	-54.629	-31.754	-28.314	-42.596	-38.984
909	1.5	7.870	2.440	-0.255	0.265	13.348	6.828	7.348	9.532	10.079
909	2.25	41.650	11.667	1.229	-1.170	68.648	38.715	36.316	52.374	49.855
909	3	69.313	19.276	2.714	-2.604	114.018	65.095	59.777	87.772	82.188
910	0	68.908	19.216	2.875	-2.730	113.435	64.892	59.287	87.478	81.593
910	0.75	39.849	11.124	1.474	-1.420	65.618	37.338	34.444	50.398	47.359
910	1.5	4.672	1.415	0.073	-0.110	7.870	4.278	4.095	5.874	5.682
910	2.25	-37.943	-10.639	-1.327	1.200	-62.554	-35.476	-32.949	-47.936	-45.283
910	3	-86.676	-24.311	-2.728	2.510	-142.908	-80.736	-75.499	-109.190	-103.690
911	0	-84.875	-23.827	-3.326	3.197	-139.974	-79.713	-73.190	-107.622	-100.773
911	0.75	-36.617	-10.256	-1.695	1.649	-60.351	-34.650	-31.306	-46.689	-43.177
911	1.5	5.523	1.697	-0.064	0.101	9.343	4.907	5.072	6.801	6.974
911	2.25	40.225	11.306	1.567	-1.447	66.359	37.770	34.756	51.004	47.840
911	3	68.809	19.297	3.198	-2.995	113.446	65.126	58.933	87.764	81.261
912	0	68.933	19.310	3.257	-3.042	113.616	65.296	58.997	87.964	81.350
912	0.75	41.659	11.749	1.690	-1.586	68.789	39.183	35.907	52.918	49.478
912	1.5	8.267	2.570	0.123	-0.130	14.032	7.563	7.311	10.428	10.163
912	2.25	-32.562	-8.954	-1.444	1.326	-53.401	-30.751	-27.980	-41.348	-38.439
912	3	-79.511	-22.095	-3.011	2.782	-130.765	-74.571	-68.777	-100.568	-94.485

913	0	-50.643	-10.795	-1.729	1.647	-78.044	-47.307	-43.931	-61.791	-58.246
913	0.56	-22.525	-5.425	-0.929	0.886	-35.711	-21.202	-19.387	-28.045	-26.140
913	1.13	0.218	-0.492	-0.129	0.124	-0.526	0.067	0.320	-0.217	0.049
913	1.69	17.059	3.714	0.670	-0.638	26.414	16.023	14.715	20.956	19.582
913	2.25	28.526	7.484	1.470	-1.399	46.206	27.143	24.274	36.211	33.198
914	0	28.346	7.321	1.475	-1.405	45.729	26.986	24.107	35.924	32.901
914	0.56	18.163	4.231	0.814	-0.776	28.565	17.161	15.571	22.591	20.922
914	1.13	2.607	0.703	0.153	-0.147	4.254	2.499	2.198	3.341	3.025
914	1.69	-18.852	-3.551	-0.508	0.481	-28.304	-17.475	-16.486	-22.565	-21.527
914	2.25	-45.686	-8.241	-1.168	1.110	-68.009	-42.286	-40.007	-54.389	-51.997
915	0	-45.685	-8.241	-1.168	1.110	-68.008	-42.285	-40.007	-54.388	-51.996
915	0.56	-18.853	-3.551	-0.508	0.481	-28.306	-17.475	-16.487	-22.566	-21.528
915	1.13	2.605	0.702	0.153	-0.147	4.250	2.497	2.197	3.338	3.023
915	1.69	18.160	4.229	0.814	-0.776	28.558	17.158	15.568	22.587	20.917
915	2.25	28.342	7.319	1.475	-1.405	45.720	26.982	24.103	35.918	32.894
916	0	28.523	7.483	1.470	-1.399	46.200	27.141	24.271	36.207	33.194
916	0.56	17.057	3.714	0.670	-0.638	26.410	16.022	14.714	20.954	19.580
916	1.13	0.218	-0.492	-0.129	0.124	-0.526	0.067	0.320	-0.217	0.049
916	1.69	-22.524	-5.425	-0.929	0.886	-35.709	-21.201	-19.386	-28.043	-26.138
916	2.25	-50.640	-10.794	-1.729	1.647	-78.039	-47.305	-43.929	-61.788	-58.243
917	0	-79.510	-22.095	-3.011	2.782	-130.763	-74.570	-68.776	-100.567	-94.483
917	0.75	-32.562	-8.953	-1.444	1.326	-53.399	-30.750	-27.979	-41.347	-38.438
917	1.5	8.268	2.570	0.123	-0.130	14.034	7.564	7.311	10.430	10.164
917	2.25	41.660	11.749	1.690	-1.586	68.791	39.184	35.908	52.919	49.480
917	3	68.934	19.311	3.257	-3.042	113.618	65.297	58.998	87.965	81.352
918	0	68.810	19.297	3.198	-2.995	113.447	65.126	58.934	87.765	81.262
918	0.75	40.226	11.306	1.567	-1.447	66.360	37.770	34.756	51.005	47.840
918	1.5	5.523	1.697	-0.064	0.101	9.343	4.907	5.072	6.801	6.975
918	2.25	-36.617	-10.257	-1.695	1.649	-60.351	-34.650	-31.306	-46.689	-43.178
918	3	-84.876	-23.828	-3.326	3.197	-139.975	-79.714	-73.191	-107.623	-100.774
919	0	-86.676	-24.311	-2.728	2.510	-142.908	-80.736	-75.499	-109.190	-103.690
919	0.75	-37.943	-10.639	-1.327	1.200	-62.554	-35.476	-32.949	-47.936	-45.283
919	1.5	4.672	1.415	0.073	-0.110	7.870	4.278	4.095	5.874	5.681
919	2.25	39.849	11.124	1.474	-1.420	65.618	37.338	34.444	50.398	47.359
919	3	68.908	19.216	2.875	-2.730	113.435	64.892	59.287	87.478	81.593
920	0	69.313	19.276	2.714	-2.604	114.017	65.095	59.777	87.772	82.188
920	0.75	41.650	11.667	1.229	-1.170	68.648	38.715	36.316	52.374	49.855
920	1.5	7.870	2.440	-0.255	0.265	13.348	6.828	7.348	9.532	10.079
920	2.25	-33.349	-9.131	-1.740	1.700	-54.629	-31.754	-28.314	-42.596	-38.984
920	3	-80.685	-22.320	-3.224	3.134	-132.535	-75.841	-69.483	-102.167	-95.491
921	0	-76.910	-16.138	-3.150	3.109	-118.112	-72.369	-66.110	-94.229	-87.658
921	0.75	-30.082	-7.333	-1.801	1.772	-47.831	-28.875	-25.301	-38.097	-34.345
921	1.5	6.723	0.438	-0.453	0.436	8.767	5.597	6.486	6.859	7.792
921	2.25	32.251	6.484	0.895	-0.901	49.077	29.922	28.125	38.889	37.003
921	3	47.757	11.497	2.244	-2.238	75.703	45.225	40.743	59.744	55.038
922	0	46.316	11.051	2.256	-2.233	73.260	43.940	39.451	57.963	53.248
922	0.75	33.960	7.145	1.434	-1.412	52.184	31.998	29.152	41.665	38.677
922	1.5	11.581	2.205	0.611	-0.591	17.425	11.034	9.832	14.190	12.929
922	2.25	-22.074	-4.460	-0.212	0.231	-33.624	-20.079	-19.635	-26.210	-25.745
922	3	-65.752	-12.158	-1.035	1.052	-98.355	-60.212	-58.124	-77.786	-75.594
923	0	-65.956	-12.174	0.787	-0.759	-98.626	-58.574	-60.120	-76.098	-77.721
923	0.75	-22.202	-4.470	0.031	-0.002	-33.794	-19.951	-19.984	-26.095	-26.130
923	1.5	11.528	2.201	-0.725	0.755	17.355	9.651	11.131	12.730	14.284
923	2.25	33.983	7.147	-1.480	1.512	52.216	29.104	32.097	38.631	41.773
923	3	46.414	11.060	-2.236	2.269	73.393	39.537	44.042	53.355	58.086
924	0	47.856	11.506	-2.242	2.258	75.836	40.828	45.328	55.143	59.868
924	0.75	32.313	6.488	-0.846	0.842	49.156	28.236	29.924	37.128	38.901
924	1.5	6.746	0.436	0.551	-0.573	8.793	6.622	5.499	7.937	6.757
924	2.25	-30.096	-7.339	1.947	-1.988	-47.858	-25.139	-29.075	-34.180	-38.313
924	3	-76.962	-16.150	3.343	-3.404	-118.193	-65.922	-72.670	-87.474	-94.558
925	0	-81.099	-22.345	2.919	-3.003	-133.071	-70.070	-75.992	-96.166	-102.385
925	0.75	-33.584	-9.142	1.539	-1.574	-54.929	-28.687	-31.800	-39.407	-42.676
925	1.5	7.812	2.443	0.159	-0.145	13.283	7.190	6.886	9.908	9.589
925	2.25	41.770	11.684	-1.221	1.284	68.818	36.372	38.877	49.937	52.568
925	3	69.610	19.307	-2.601	2.713	114.423	60.048	65.362	82.522	88.103
926	0	69.298	19.257	-2.729	2.876	113.969	59.639	65.244	82.029	87.915
926	0.75	40.079	11.138	-1.364	1.418	65.915	34.707	37.489	47.667	50.589

926	1.5	4.743	1.400	0.000	-0.041	7.932	4.268	4.228	5.862	5.819
926	2.25	-38.032	-10.681	1.365	-1.499	-62.729	-32.864	-35.728	-45.230	-48.237
926	3	-86.925	-24.380	2.729	-2.957	-143.319	-75.503	-81.190	-103.765	-109.736
927	0	-84.925	-23.901	3.083	-3.209	-140.151	-73.350	-79.641	-100.992	-107.598
927	0.75	-36.829	-10.339	1.539	-1.581	-60.737	-31.607	-34.727	-43.568	-46.844
927	1.5	5.150	1.605	-0.005	0.047	8.748	4.630	4.681	6.413	6.467
927	2.25	39.690	11.205	-1.549	1.674	65.555	34.172	37.395	47.107	50.491
927	3	68.112	19.187	-3.093	3.302	112.433	58.208	64.603	80.358	87.072
928	0	68.242	19.202	-3.160	3.381	112.614	58.257	64.799	80.433	87.301
928	0.75	40.951	11.600	-1.601	1.705	67.701	35.255	38.561	48.625	52.097
928	1.5	7.542	2.379	-0.042	0.029	12.858	6.746	6.817	9.374	9.449
928	2.25	-33.305	-9.185	1.517	-1.647	-54.662	-28.457	-31.621	-39.164	-42.486
928	3	-80.270	-22.368	3.076	-3.322	-132.112	-69.167	-75.565	-95.145	-101.864
929	0	-53.351	-14.271	3.020	-3.210	-86.855	-44.995	-51.226	-61.838	-68.380
929	0.56	-26.850	-7.260	1.522	-1.615	-43.835	-22.643	-25.780	-31.168	-34.462
929	1.13	-3.497	-0.996	0.023	-0.020	-5.790	-3.124	-3.168	-4.275	-4.321
929	1.69	16.112	4.191	-1.476	1.574	26.041	13.025	16.076	18.009	21.212
929	2.25	32.574	8.630	-2.974	3.169	52.897	26.342	32.486	36.517	42.967
930	0	33.432	8.742	-3.000	3.199	54.106	27.089	33.288	37.461	43.970
930	0.56	16.458	3.785	-1.496	1.590	25.806	13.316	16.403	18.095	21.336
930	1.13	-3.664	-1.920	0.007	-0.018	-7.469	-3.290	-3.315	-5.049	-5.075
930	1.69	-27.530	-8.701	1.511	-1.626	-46.958	-23.265	-26.402	-32.801	-36.095
930	2.25	-54.543	-16.231	3.015	-3.234	-91.421	-46.074	-52.323	-64.330	-70.891
931	0	-86.867	-29.647	2.650	-2.809	-151.676	-75.531	-80.989	-107.106	-112.838
931	0.75	-34.109	-11.664	1.314	-1.391	-59.593	-29.384	-32.089	-41.783	-44.623
931	1.5	11.712	4.251	-0.022	0.027	20.856	10.519	10.568	14.952	15.004
931	2.25	48.092	16.718	-1.359	1.445	84.458	41.924	44.727	59.602	62.546
931	3	77.534	27.116	-2.695	2.863	136.427	67.086	72.644	95.665	101.500
932	0	77.534	27.116	-2.695	2.863	136.427	67.086	72.644	95.665	101.500
932	0.75	48.092	16.718	-1.359	1.445	84.459	41.924	44.728	59.602	62.546
932	1.5	11.712	4.251	-0.022	0.027	20.856	10.519	10.568	14.952	15.004
932	2.25	-34.109	-11.664	1.314	-1.391	-59.593	-29.384	-32.089	-41.783	-44.623
932	3	-86.867	-29.647	2.650	-2.809	-151.676	-75.531	-80.989	-107.106	-112.838
933	0	-54.543	-16.231	3.015	-3.234	-91.422	-46.074	-52.323	-64.330	-70.892
933	0.56	-27.530	-8.701	1.511	-1.626	-46.958	-23.265	-26.403	-32.801	-36.095
933	1.13	-3.664	-1.920	0.007	-0.018	-7.468	-3.290	-3.315	-5.049	-5.075
933	1.69	16.458	3.785	-1.496	1.590	25.807	13.316	16.403	18.095	21.336
933	2.25	33.433	8.743	-3.000	3.199	54.107	27.089	33.288	37.462	43.970
934	0	32.574	8.630	-2.974	3.169	52.898	26.342	32.486	36.517	42.968
934	0.56	16.113	4.191	-1.476	1.574	26.041	13.026	16.076	18.009	21.212
934	1.13	-3.497	-0.996	0.023	-0.020	-5.790	-3.124	-3.167	-4.275	-4.321
934	1.69	-26.850	-7.260	1.522	-1.615	-43.835	-22.643	-25.780	-31.168	-34.462
934	2.25	-53.351	-14.271	3.020	-3.210	-86.855	-44.995	-51.226	-61.838	-68.380
935	0	-80.270	-22.368	3.076	-3.322	-132.113	-69.167	-75.565	-95.145	-101.864
935	0.75	-33.305	-9.185	1.517	-1.647	-54.662	-28.457	-31.621	-39.164	-42.486
935	1.5	7.542	2.379	-0.042	0.029	12.858	6.746	6.817	9.374	9.449
935	2.25	40.951	11.600	-1.601	1.705	67.701	35.255	38.561	48.625	52.097
935	3	68.242	19.202	-3.160	3.381	112.614	58.257	64.799	80.433	87.301
936	0	68.112	19.187	-3.093	3.302	112.433	58.208	64.603	80.358	87.072
936	0.75	39.690	11.205	-1.549	1.674	65.555	34.172	37.395	47.107	50.491
936	1.5	5.150	1.605	-0.005	0.047	8.748	4.630	4.681	6.413	6.467
936	2.25	-36.829	-10.339	1.539	-1.581	-60.737	-31.607	-34.727	-43.568	-46.844
936	3	-84.925	-23.901	3.083	-3.209	-140.151	-73.350	-79.641	-100.992	-107.598
937	0	-86.925	-24.381	2.729	-2.957	-143.319	-75.503	-81.190	-103.766	-109.736
937	0.75	-38.032	-10.681	1.365	-1.499	-62.729	-32.864	-35.728	-45.230	-48.237
937	1.5	4.743	1.400	0.000	-0.041	7.932	4.268	4.228	5.862	5.819
937	2.25	40.079	11.138	-1.364	1.418	65.915	34.707	37.489	47.667	50.589
937	3	69.298	19.257	-2.729	2.876	113.969	59.639	65.244	82.029	87.915
938	0	69.610	19.307	-2.601	2.713	114.423	60.048	65.362	82.522	88.103
938	0.75	41.770	11.684	-1.221	1.284	68.818	36.372	38.877	49.937	52.568
938	1.5	7.812	2.443	0.159	-0.145	13.283	7.190	6.886	9.908	9.589
938	2.25	-33.584	-9.142	1.539	-1.574	-54.929	-28.687	-31.800	-39.407	-42.676
938	3	-81.098	-22.345	2.919	-3.003	-133.071	-70.070	-75.992	-96.166	-102.385
939	0	-76.962	-16.150	3.343	-3.404	-118.194	-65.922	-72.670	-87.474	-94.558
939	0.75	-30.096	-7.340	1.947	-1.988	-47.859	-25.139	-29.075	-34.180	-38.313
939	1.5	6.746	0.436	0.551	-0.573	8.793	6.622	5.499	7.937	6.757
939	2.25	32.313	6.488	-0.846	0.842	49.156	28.236	29.924	37.128	38.901



939	3	47.856	11.506	-2.242	2.258	75.836	40.828	45.328	55.143	59.868
940	0	46.414	11.060	-2.236	2.269	73.393	39.537	44.042	53.355	58.086
940	0.75	33.983	7.147	-1.480	1.512	52.216	29.104	32.097	38.631	41.773
940	1.5	11.528	2.201	-0.725	0.755	17.356	9.651	11.131	12.730	14.284
940	2.25	-22.202	-4.469	0.031	-0.002	-33.794	-19.951	-19.984	-26.095	-26.130
940	3	-65.956	-12.174	0.787	-0.759	-98.626	-58.574	-60.120	-76.097	-77.721
941	0	-13.500	-0.322	0.694	-0.717	-16.715	-11.455	-12.867	-13.649	-15.131
941	0.75	0.227	0.442	0.210	-0.243	0.980	0.415	-0.038	0.738	0.262
941	1.5	6.870	0.623	-0.274	0.232	9.241	5.909	6.415	7.318	7.849
941	2.25	6.361	0.184	-0.759	0.706	7.927	4.967	6.431	5.999	7.536
941	3	-1.232	-0.839	-1.243	1.180	-2.821	-2.352	0.072	-3.127	-0.583
942	0	-0.980	-0.809	-1.401	1.294	-2.469	-2.282	0.412	-3.009	-0.180
942	0.75	5.305	0.076	-0.630	0.593	6.487	4.144	5.368	4.956	6.241
942	1.5	4.506	0.377	0.140	-0.107	6.010	4.196	3.948	5.116	4.856
942	2.25	-3.445	0.057	0.911	-0.808	-4.043	-2.190	-3.909	-2.625	-4.430
942	3	-18.481	-0.845	1.682	-1.508	-23.529	-14.951	-18.141	-18.172	-21.521
943	0	-18.305	-0.820	1.331	-1.235	-23.278	-15.144	-17.710	-18.340	-21.034
943	0.75	-3.248	0.092	0.646	-0.599	-3.749	-2.277	-3.522	-2.674	-3.981
943	1.5	4.726	0.421	-0.040	0.037	6.345	4.213	4.290	5.186	5.267
943	2.25	5.547	0.130	-0.725	0.673	6.865	4.268	5.666	5.145	6.614
943	3	-0.715	-0.745	-1.410	1.310	-2.050	-2.054	0.666	-2.701	0.155
944	0	-0.843	-0.768	-1.474	1.358	-2.241	-2.232	0.599	-2.916	0.056
944	0.75	6.543	0.227	-0.764	0.708	8.214	5.124	6.596	6.210	7.756
944	1.5	6.844	0.639	-0.055	0.058	9.235	6.105	6.217	7.531	7.649
944	2.25	-0.006	0.430	0.654	-0.593	0.680	0.649	-0.598	0.951	-0.358
944	3	-13.941	-0.362	1.363	-1.243	-17.308	-11.183	-13.789	-13.434	-16.170
945	0	-13.940	-0.362	1.363	-1.243	-17.308	-11.183	-13.789	-13.434	-16.170
945	0.75	-0.006	0.430	0.654	-0.593	0.681	0.649	-0.598	0.952	-0.357
945	1.5	6.844	0.639	-0.055	0.058	9.235	6.105	6.217	7.531	7.649
945	2.25	6.543	0.227	-0.764	0.708	8.214	5.124	6.596	6.210	7.756
945	3	-0.843	-0.768	-1.474	1.358	-2.241	-2.232	0.599	-2.916	0.056
946	0	-0.715	-0.745	-1.410	1.310	-2.050	-2.054	0.666	-2.701	0.155
946	0.75	5.547	0.130	-0.725	0.673	6.865	4.268	5.666	5.145	6.614
946	1.5	4.726	0.421	-0.040	0.037	6.345	4.213	4.290	5.186	5.267
946	2.25	-3.248	0.092	0.646	-0.599	-3.750	-2.277	-3.522	-2.674	-3.981
946	3	-18.305	-0.820	1.331	-1.235	-23.279	-15.144	-17.710	-18.340	-21.034
947	0	-18.481	-0.845	1.682	-1.508	-23.530	-14.951	-18.141	-18.172	-21.521
947	0.75	-3.446	0.057	0.911	-0.808	-4.043	-2.190	-3.909	-2.625	-4.430
947	1.5	4.506	0.377	0.140	-0.107	6.010	4.196	3.943	5.116	4.856
947	2.25	5.305	0.076	-0.630	0.593	6.487	4.144	5.368	4.956	6.241
947	3	-0.980	-0.809	-1.401	1.294	-2.469	-2.282	0.412	-3.009	-0.180
949	0	-1.232	-0.839	-1.243	1.180	-2.821	-2.352	0.072	-3.127	-0.583
949	0.75	6.361	0.184	-0.759	0.706	7.927	4.967	6.431	5.999	7.536
949	1.5	6.870	0.623	-0.274	0.232	9.241	5.909	6.415	7.318	7.849
949	2.25	0.227	0.442	0.210	-0.243	0.980	0.415	-0.038	0.738	0.262
949	3	-13.500	-0.322	0.694	-0.717	-16.715	-11.455	-12.867	-13.649	-15.131
950	0	-134.179	-39.635	-0.082	-0.101	-224.431	-120.844	-120.862	-165.945	-165.964
950	0.75	-58.526	-18.193	-0.095	-0.109	-99.339	-52.768	-52.782	-73.013	-73.028
950	1.5	5.226	1.181	-0.108	-0.118	8.162	4.596	4.586	6.119	6.108
950	2.25	54.572	17.108	-0.120	-0.126	92.859	48.994	48.988	67.952	67.946
950	3	92.016	30.966	-0.133	-0.135	159.964	82.681	82.679	115.985	115.983
951	0	91.689	30.902	-0.144	-0.147	159.470	82.376	82.374	115.591	115.588
951	0.75	56.574	17.575	-0.049	-0.046	96.009	50.868	50.871	70.423	70.427
951	1.5	9.558	2.179	0.045	0.054	14.956	8.647	8.656	11.456	11.465
951	2.25	-51.865	-16.664	0.140	0.154	-88.900	-46.539	-46.525	-64.810	-64.795
951	3	-125.190	-37.575	0.235	0.254	-210.349	-112.436	-112.417	-154.876	-154.855
952	0	-128.642	-38.690	0.114	0.099	-216.275	-115.663	-115.678	-159.329	-159.345
952	0.75	-53.730	-17.250	0.052	0.041	-92.076	-48.304	-48.316	-67.229	-67.241
952	1.5	9.281	2.122	-0.010	-0.018	14.531	8.343	8.335	11.071	11.063
952	2.25	57.885	18.046	-0.072	-0.076	98.335	52.025	52.020	72.072	72.068
952	3	94.587	31.901	-0.134	-0.135	164.546	84.995	84.994	119.274	119.273
953	0	94.528	31.869	-0.138	-0.139	164.424	84.937	84.936	119.187	119.186
953	0.75	60.025	18.829	-0.065	-0.064	102.156	53.958	53.959	74.820	74.822
953	1.5	13.621	3.719	0.008	0.011	22.296	12.267	12.270	16.654	16.657
953	2.25	-47.189	-14.838	0.081	0.085	-80.367	-42.390	-42.385	-58.812	-58.807
953	3	-119.901	-35.463	0.154	0.160	-200.623	-107.758	-107.751	-148.077	-148.070
954	0	-77.345	-21.961	0.155	0.041	-127.952	-69.456	-69.569	-94.885	-95.005

954	0.56	-36.090	-11.082	0.073	0.019	-61.039	-32.408	-32.461	-44.799	-44.856
954	1.13	-1.001	-1.075	-0.009	-0.003	-2.921	-0.910	-0.903	-1.737	-1.731
954	1.69	26.865	7.477	-0.091	-0.024	44.201	24.088	24.154	32.824	32.893
954	2.25	48.564	15.157	-0.172	-0.046	82.528	43.536	43.662	60.360	60.493
955	0	48.253	14.986	-0.169	-0.053	81.881	43.259	43.375	59.930	60.052
955	0.56	27.043	7.509	-0.133	0.030	44.466	24.206	24.369	32.986	33.157
955	1.13	-0.334	-0.840	-0.097	0.113	-1.745	-0.398	-0.188	-0.982	-0.762
955	1.69	-34.934	-10.644	-0.061	0.195	-58.951	-31.501	-31.245	-43.450	-43.181
955	2.25	-75.700	-21.321	-0.025	0.278	-124.953	-68.155	-67.852	-92.944	-92.625
956	0	-112.502	-31.390	-0.716	0.970	-185.226	-101.968	-100.282	-138.654	-136.884
956	0.75	-43.953	-13.090	-0.319	0.443	-73.688	-39.877	-39.115	-54.733	-53.933
956	1.5	12.694	3.141	0.077	-0.085	20.259	11.502	11.340	15.389	15.219
956	2.25	54.935	15.925	0.474	-0.612	91.402	49.915	48.829	68.212	67.072
956	3	85.274	26.640	0.871	-1.139	144.953	77.617	75.607	107.235	105.125
957	0	85.272	26.640	0.871	-1.139	144.950	77.616	75.606	107.233	105.123
957	0.75	54.934	15.925	0.474	-0.612	91.401	49.915	48.829	68.211	67.071
957	1.5	12.694	3.141	0.077	-0.085	20.259	11.502	11.340	15.389	15.219
957	2.25	-43.952	-13.090	-0.319	0.443	-73.686	-39.876	-39.114	-54.731	-53.932
957	3	-112.500	-31.389	-0.716	0.970	-185.223	-101.966	-100.280	-138.652	-136.882
958	0	-75.703	-21.323	-0.025	0.278	-124.961	-68.158	-67.855	-92.949	-92.630
958	0.56	-34.938	-10.647	-0.061	0.195	-58.960	-31.505	-31.249	-43.456	-43.187
958	1.13	-0.339	-0.843	-0.097	0.113	-1.755	-0.402	-0.192	-0.988	-0.768
958	1.69	27.038	7.506	-0.133	0.030	44.455	24.201	24.364	32.979	33.150
958	2.25	48.247	14.983	-0.169	-0.053	81.869	43.254	43.370	59.922	60.044
959	0	48.560	15.154	-0.172	-0.046	82.519	43.532	43.658	60.354	60.487
959	0.56	26.863	7.476	-0.091	-0.024	44.198	24.086	24.153	32.821	32.891
959	1.13	-1.000	-1.075	-0.009	-0.003	-2.920	-0.909	-0.903	-1.736	-1.730
959	1.69	-36.086	-11.080	0.073	0.019	-61.032	-32.405	-32.458	-44.794	-44.851
959	2.25	-77.339	-21.958	0.155	0.041	-127.940	-69.450	-69.564	-94.877	-94.996
960	0	-119.900	-35.462	0.154	0.160	-200.620	-107.756	-107.750	-148.075	-148.069
960	0.75	-47.188	-14.837	0.081	0.085	-80.365	-42.388	-42.384	-58.810	-58.805
960	1.5	13.622	3.720	0.008	0.011	22.299	12.268	12.271	16.655	16.658
960	2.25	60.026	18.829	-0.065	-0.064	102.158	53.959	53.960	74.822	74.823
960	3	94.529	31.870	-0.138	-0.139	164.426	84.938	84.937	119.188	119.188
961	0	94.588	31.901	-0.134	-0.135	164.548	84.995	84.995	119.275	119.274
961	0.75	57.885	18.046	-0.072	-0.076	98.336	52.025	52.021	72.073	72.069
961	1.5	9.281	2.122	-0.010	-0.018	14.532	8.343	8.335	11.071	11.063
961	2.25	-53.730	-17.250	0.052	0.041	-92.076	-48.305	-48.316	-67.229	-67.241
961	3	-128.643	-38.691	0.114	0.099	-216.276	-115.664	-115.679	-159.330	-159.345
962	0	-125.191	-37.576	0.235	0.254	-210.350	-112.437	-112.417	-154.876	-154.856
962	0.75	-51.866	-16.664	0.140	0.154	-88.901	-46.539	-46.525	-64.810	-64.796
962	1.5	9.557	2.179	0.045	0.054	14.956	8.647	8.655	11.456	11.465
962	2.25	56.574	17.575	-0.049	-0.046	96.009	50.867	50.870	70.423	70.426
962	3	91.689	30.902	-0.144	-0.147	159.470	82.376	82.374	115.591	115.588
963	0	92.016	30.966	-0.133	-0.135	159.964	82.681	82.679	115.985	115.983
963	0.75	54.572	17.108	-0.120	-0.126	92.859	48.994	48.988	67.952	67.946
963	1.5	5.226	1.181	-0.108	-0.118	8.162	4.596	4.586	6.119	6.108
963	2.25	-58.525	-18.193	-0.095	-0.109	-99.339	-52.768	-52.782	-73.013	-73.028
963	3	-134.179	-39.635	-0.082	-0.101	-224.431	-120.843	-120.862	-165.944	-165.964
964	0	-197.588	-53.439	0.123	0.149	-322.608	-177.706	-177.680	-241.005	-240.977
964	0.75	-112.894	-29.866	0.085	0.102	-183.259	-101.520	-101.502	-137.265	-137.247
964	1.5	-40.101	-8.362	0.046	0.055	-61.501	-36.045	-36.036	-47.326	-47.317
964	2.25	18.285	9.694	0.008	0.008	37.453	16.465	16.465	25.315	25.315
964	3	64.770	25.682	-0.030	-0.040	118.815	58.263	58.254	84.156	84.147
965	0	58.758	24.134	-0.014	-0.023	109.124	52.869	52.860	76.886	76.876
965	0.75	58.463	21.903	-0.021	-0.034	105.200	52.595	52.582	75.162	75.149
965	1.5	46.265	17.604	-0.029	-0.046	83.684	41.610	41.593	59.638	59.621
965	2.25	19.661	9.857	-0.037	-0.058	39.365	17.659	17.638	26.816	26.794
965	3	-18.844	0.042	-0.044	-0.069	-22.546	-17.004	-17.029	-19.806	-19.832
966	0	-30.162	-4.926	-0.740	0.801	-44.077	-27.886	-26.345	-35.551	-33.933
966	0.75	-4.147	-0.639	-0.333	0.361	-5.999	-4.065	-3.372	-5.106	-4.379
966	1.5	13.964	2.614	0.075	-0.080	20.940	12.643	12.488	16.388	16.226
966	2.25	22.921	4.144	0.482	-0.521	34.135	21.111	20.108	27.183	26.131
966	3	23.974	4.639	0.889	-0.961	36.191	22.466	20.616	29.029	27.086
967	0	23.974	4.639	0.889	-0.961	36.191	22.466	20.616	29.029	27.086
967	0.75	22.921	4.144	0.482	-0.521	34.135	21.111	20.108	27.183	26.131
967	1.5	13.964	2.614	0.075	-0.080	20.940	12.642	12.488	16.388	16.226



967	2.25	-4.147	-0.639	-0.333	0.361	-5.999	-4.065	-3.372	-5.107	-4.379
967	3	-30.162	-4.927	-0.740	0.801	-44.077	-27.886	-26.345	-35.551	-33.933
968	0	-13.586	-0.327	-0.741	0.720	-16.827	-12.968	-11.507	-15.249	-13.715
968	0.75	0.137	0.435	-0.261	0.229	0.860	-0.137	0.353	0.144	0.659
968	1.5	6.776	0.614	0.220	-0.262	9.113	6.318	5.837	7.732	7.226
968	2.25	6.263	0.172	0.700	-0.753	7.791	6.336	4.884	7.419	5.894
968	3	-1.335	-0.853	1.180	-1.244	-2.966	-0.021	-2.445	-0.700	-3.245
969	0	-1.173	-0.832	1.295	-1.403	-2.739	0.239	-2.458	-0.396	-3.228
969	0.75	5.244	0.066	0.600	-0.637	6.399	5.319	4.083	6.178	4.879
969	1.5	4.577	0.382	-0.096	0.128	6.103	4.024	4.247	4.946	5.181
969	2.25	-3.242	0.077	-0.791	0.894	-3.768	-3.709	-2.024	-4.186	-2.418
969	3	-18.145	-0.812	-1.486	1.659	-23.074	-17.817	-14.672	-21.124	-17.822
970	0	-18.299	-0.822	-1.243	1.343	-23.274	-17.712	-15.127	-21.037	-18.322
970	0.75	-3.271	0.081	-0.599	0.648	-3.794	-3.542	-2.296	-4.012	-2.703
970	1.5	4.674	0.402	0.045	-0.047	6.251	4.252	4.159	5.208	5.111
970	2.25	5.466	0.101	0.689	-0.742	6.722	5.609	4.178	6.527	5.025
970	3	-0.825	-0.782	1.333	-1.436	-2.242	0.590	-2.179	0.040	-2.868
971	0	-0.982	-0.815	1.400	-1.518	-2.483	0.516	-2.402	-0.074	-3.139
971	0.75	5.863	0.179	0.664	-0.717	7.322	5.940	4.559	6.966	5.515
971	1.5	5.623	0.590	-0.072	0.084	7.691	4.989	5.144	6.200	6.364
971	2.25	-1.768	0.380	-0.809	0.884	-1.514	-2.400	-0.707	-2.466	-0.688
971	3	-16.243	-0.413	-1.545	1.685	-20.153	-16.164	-12.934	-18.938	-15.546
972	0	-13.492	-0.350	-1.500	1.618	-16.751	-13.643	-10.525	-15.962	-12.689
972	0.56	-4.752	-0.117	-0.734	0.791	-5.890	-5.011	-3.486	-5.834	-4.232
972	1.13	0.033	-0.196	0.031	-0.035	-0.274	0.061	-0.005	-0.056	-0.126
972	1.69	0.795	-0.624	0.797	-0.861	-0.044	1.512	-0.146	1.278	-0.463
972	2.25	-2.398	-1.364	1.562	-1.688	-5.060	-0.596	-3.846	-1.737	-5.149
973	0	-3.394	-1.486	1.586	-1.717	-6.450	-1.468	-4.772	-2.834	-6.303
973	0.56	0.814	-0.804	0.817	-0.883	-0.310	1.549	-0.151	1.205	0.795
973	1.13	1.066	-0.434	0.047	-0.049	0.585	1.007	0.911	0.896	0.795
973	1.69	-2.704	-0.413	-0.722	0.786	-3.906	-3.156	-1.648	-3.858	-2.274
973	2.25	-10.429	-0.704	-1.492	1.620	-13.642	-10.878	-7.766	-12.961	-9.693
974	0	-5.613	0.022	-0.003	0.004	-6.700	-5.055	-5.048	-5.883	-5.875
974	1.5	0.748	0.022	-0.003	0.004	0.933	0.670	0.678	0.796	0.804
974	3	2.869	0.022	-0.003	0.004	3.477	2.578	2.586	3.022	3.030
974	4.5	0.748	0.022	-0.003	0.004	0.933	0.670	0.677	0.796	0.804
974	6	-5.613	0.022	-0.003	0.004	-6.701	-5.055	-5.048	-5.883	-5.876
975	0	-17.884	-0.807	-46.538	46.932	-22.751	-62.653	30.836	-68.171	29.992
975	1.13	3.069	-0.361	-23.378	23.586	3.106	-20.616	26.349	-21.551	27.761
975	2.25	9.124	0.085	-0.198	0.241	11.085	8.014	8.453	9.426	9.887
975	3.38	0.282	0.531	22.982	-23.104	1.188	23.235	-22.850	24.761	-23.629
975	4.5	-23.458	0.977	46.161	-46.449	-26.587	25.049	-67.562	24.454	-72.788
976	0	-102.942	-0.196	-24.829	24.893	-123.845	-117.476	-67.755	-134.283	-82.075
976	1.13	-38.424	-0.157	-18.282	18.336	-46.360	-52.863	-16.245	-59.640	-21.190
976	2.25	11.197	-0.118	-11.735	11.780	13.248	-1.658	21.857	-0.639	24.052
976	3.38	45.920	-0.078	-5.188	5.224	54.979	36.140	46.552	42.719	53.651
976	4.5	65.745	-0.039	1.358	-1.333	78.832	60.529	57.838	70.434	67.609
977	0	65.828	-0.029	-1.333	1.360	78.948	57.913	60.606	67.702	70.530
977	1.13	45.709	-0.104	5.219	-5.192	54.683	46.356	35.945	53.408	42.476
977	2.25	10.691	-0.180	11.771	-11.745	12.542	21.392	-2.123	23.471	-1.220
977	3.38	-39.224	-0.255	18.322	-18.297	-47.477	-16.980	-53.599	-22.108	-60.558
977	4.5	-104.037	-0.330	24.874	-24.849	-125.373	-68.759	-118.483	-83.329	-135.539
978	0	-21.444	1.224	-46.412	46.197	-23.774	-65.711	26.898	-70.477	26.762
978	1.13	1.285	0.654	-23.085	22.999	2.588	-21.929	24.156	-22.479	25.910
978	2.25	9.115	0.084	0.241	-0.198	11.073	8.445	8.006	9.877	9.416
978	3.38	2.048	-0.486	23.567	-23.396	1.681	25.411	-21.552	26.591	-22.721
978	4.5	-19.916	-1.056	46.894	-46.593	-25.588	28.969	-64.518	27.662	-70.500
979	0	-19.916	-1.056	46.894	-46.593	-25.589	28.969	-64.518	27.662	-70.500
979	1.13	2.048	-0.486	23.567	-23.396	1.681	25.411	-21.552	26.591	-22.721
979	2.25	9.115	0.084	0.241	-0.198	11.073	8.445	8.006	9.877	9.416
979	3.38	1.285	0.654	-23.085	22.999	2.588	-21.929	24.156	-22.479	25.910
979	4.5	-21.444	1.224	-46.412	46.197	-23.774	-65.711	26.898	-70.477	26.762
980	0	-104.037	-0.330	24.874	-24.849	-125.373	-68.759	-118.483	-83.329	-135.539
980	1.13	-39.224	-0.255	18.322	-18.297	-47.477	-16.980	-53.599	-22.108	-60.558
980	2.25	10.691	-0.180	11.771	-11.745	12.542	21.392	-2.123	23.471	-1.220
980	3.38	45.709	-0.104	5.219	-5.192	54.683	46.356	35.945	53.408	42.476
980	4.5	65.828	-0.029	-1.333	1.360	78.948	57.913	60.606	67.702	70.530

981	0	65.745	-0.039	1.358	-1.333	78.832	60.529	57.838	70.434	67.609
981	1.13	45.920	-0.078	-5.188	5.224	54.979	36.140	46.552	42.719	53.651
981	2.25	11.197	-0.118	-11.735	11.780	13.248	-1.658	21.857	-0.639	24.052
981	3.38	-38.424	-0.157	-18.282	18.336	-46.360	-52.863	-16.245	-59.640	-21.190
981	4.5	-102.942	-0.196	-24.829	24.893	-123.844	-117.476	-67.755	-134.283	-82.075
983	0	-23.458	0.977	46.161	-46.449	-26.587	25.049	-67.562	24.454	-72.788
983	1.13	0.282	0.531	22.982	-23.104	1.188	23.235	-22.850	24.761	-23.629
983	2.25	9.124	0.085	-0.198	0.241	11.085	8.014	8.453	9.426	9.887
983	3.38	3.069	-0.361	-23.378	23.586	3.106	-20.615	26.349	-21.551	27.761
983	4.5	-17.883	-0.807	-46.558	46.932	-22.751	-62.653	30.836	-68.171	29.992



## GESER BALOK

BTG	STA	VD	VL	VE KA	VE KI	1,2.VD+ 1,6.VL	0,9.VD+ VE KA	0,9.VD+ VE KI	1,05(VD+ 0,6.VL+VE KA)	1,05(VD+ 0,6.VL+VE KI)
41	0	-52.638	-0.152	-5.929	5.994	-63.408	-53.303	-41.380	-61.590	-49.072
41	2.25	-26.153	-0.152	-5.929	5.994	-31.627	-29.466	-17.544	-33.781	-21.263
41	4.5	0.332	-0.152	-5.929	5.994	0.155	-5.630	6.292	-5.972	6.546
41	6.75	26.816	-0.152	-5.929	5.994	31.937	18.206	30.128	21.837	34.355
41	9	53.301	-0.152	-5.929	5.994	63.718	42.042	53.965	49.646	62.164
42	0	-52.881	0.202	-5.991	5.931	-63.133	-53.584	-41.662	-61.688	-49.170
42	2.25	-26.396	0.202	-5.991	5.931	-31.352	-29.748	-17.826	-33.879	-21.361
42	4.5	0.089	0.202	-5.991	5.931	0.430	-5.912	6.010	-6.070	6.448
42	6.75	26.573	0.202	-5.991	5.931	32.212	17.925	29.847	21.739	34.257
42	9	53.058	0.202	-5.991	5.931	63.993	41.761	53.683	49.548	62.066
43	0	-52.419	-0.140	-6.450	6.531	-63.126	-53.627	-40.646	-61.900	-48.270
43	2.25	-25.934	-0.140	-6.450	6.531	-31.345	-29.791	-16.810	-34.091	-20.461
43	4.5	0.550	-0.140	-6.450	6.531	0.437	-5.955	7.027	-6.282	7.348
43	6.75	27.035	-0.140	-6.450	6.531	32.219	17.882	30.863	21.527	35.157
43	9	53.520	-0.140	-6.450	6.531	64.000	41.718	54.699	49.335	62.966
44	0	-14.563	-5.421	-0.223	0.110	-26.150	-13.330	-12.997	-18.941	-18.591
44	0.64	-11.561	-4.428	-0.223	0.110	-20.958	-10.627	-10.294	-15.162	-14.813
44	1.27	-4.952	-1.450	-0.223	0.110	-8.262	-4.679	-4.346	-6.346	-5.997
44	1.91	1.657	1.529	-0.223	0.110	4.435	1.269	1.602	2.470	2.819
44	2.55	4.660	2.522	-0.223	0.110	9.627	3.971	4.304	6.248	6.597
45	0	-43.441	0.000	0.000	0.000	-52.129	-39.097	-39.097	-45.613	-45.613
45	1.5	-21.721	0.000	0.000	0.000	-26.065	-19.549	-19.549	-22.807	-22.807
45	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	4.5	21.721	0.000	0.000	0.000	26.065	19.548	19.548	22.807	22.807
45	6	43.441	0.000	0.000	0.000	52.129	39.097	39.097	45.613	45.613
46	0	-52.735	0.226	-6.531	6.450	-62.919	-53.992	-41.011	-62.086	-48.457
46	2.25	-26.250	0.226	-6.531	6.450	-31.138	-30.156	-17.175	-34.277	-20.648
46	4.5	0.235	0.226	-6.531	6.450	0.644	-6.320	6.661	-6.468	7.161
46	6.75	26.720	0.226	-6.531	6.450	32.426	17.517	30.497	21.341	34.970
46	9	53.204	0.226	-6.531	6.450	64.207	41.353	54.334	49.150	62.779
47	0	-52.419	-0.131	-6.832	6.916	-63.112	-54.009	-40.261	-62.296	-47.861
47	2.25	-25.934	-0.131	-6.832	6.916	-31.330	-30.172	-16.425	-34.487	-20.052
47	4.5	0.551	-0.131	-6.832	6.916	0.451	-6.336	7.411	-6.678	7.757
47	6.75	27.036	-0.131	-6.832	6.916	32.233	17.500	31.248	21.131	35.566
47	9	53.520	-0.131	-6.832	6.916	64.015	41.336	55.084	48.940	63.375
48	0	-52.745	0.196	-6.921	6.827	-62.980	-54.392	-40.643	-62.526	-48.090
48	2.25	-26.260	0.196	-6.921	6.827	-31.198	-30.556	-16.807	-34.717	-20.231
48	4.5	0.224	0.196	-6.921	6.827	0.583	-6.719	7.029	-6.908	7.528
48	6.75	26.709	0.196	-6.921	6.827	32.365	17.117	30.866	20.901	35.337
48	9	53.194	0.196	-6.921	6.827	64.147	40.953	54.702	48.710	63.146
49	0	-52.699	-0.145	-6.940	7.026	-63.471	-54.369	-40.403	-62.712	-48.048
49	2.25	-26.215	-0.145	-6.940	7.026	-31.689	-30.533	-16.567	-34.903	-20.239
49	4.5	0.270	-0.145	-6.940	7.026	0.093	-6.697	7.269	-7.094	7.570
49	6.75	26.755	-0.145	-6.940	7.026	31.874	17.140	31.105	20.715	35.379
49	9	53.239	-0.145	-6.940	7.026	63.656	40.976	54.942	48.524	63.188
50	0	-53.408	0.071	-7.039	6.943	-63.976	-55.106	-41.124	-63.424	-48.744
50	2.25	-26.923	0.071	-7.039	6.943	-32.194	-31.270	-17.288	-35.615	-20.935
50	4.5	-0.439	0.071	-7.039	6.943	-0.412	-7.434	6.548	-7.807	6.874
50	6.75	26.046	0.071	-7.039	6.943	31.369	16.403	30.384	20.002	34.683
50	9	52.531	0.071	-7.039	6.943	63.151	40.239	54.221	47.811	62.492
51	0	-52.699	-0.145	-6.940	7.026	-63.471	-54.369	-40.403	-62.712	-48.048
51	2.25	-26.215	-0.145	-6.940	7.026	-31.689	-30.533	-16.567	-34.903	-20.239
51	4.5	0.270	-0.145	-6.940	7.026	0.093	-6.697	7.269	-7.094	7.570
51	6.75	26.755	-0.145	-6.940	7.026	31.874	17.139	31.105	20.715	35.379
51	9	53.239	-0.145	-6.940	7.026	63.656	40.976	54.942	48.524	63.188
52	0	-53.408	0.071	-7.039	6.943	-63.976	-55.107	-41.125	-63.425	-48.744
52	2.25	-26.924	0.071	-7.039	6.943	-32.195	-31.270	-17.288	-35.616	-20.935
52	4.5	-0.439	0.071	-7.039	6.943	-0.413	-7.434	5.548	-7.807	6.874
52	6.75	26.046	0.071	-7.039	6.943	31.369	16.402	30.384	20.002	34.683
52	9	52.530	0.071	-7.039	6.943	63.150	40.238	54.220	47.811	62.492
53	0	-52.419	-0.131	-6.832	6.916	-63.112	-54.009	-40.261	-62.296	-47.861
53	2.25	-25.934	-0.131	-6.832	6.916	-31.330	-30.172	-16.425	-34.487	-20.052

53	4.5	0.551	-0.131	-6.832	6.916	0.451	-6.336	7.412	-6.678	7.757
53	6.75	27.036	-0.131	-6.832	6.916	32.233	17.500	31.248	21.131	35.566
53	9	53.520	-0.131	-6.832	6.916	64.015	41.336	55.084	48.940	63.375
54	0	-52.745	0.196	-6.921	6.827	-62.980	-54.392	-40.643	-62.526	-48.090
54	2.25	-26.260	0.196	-6.921	6.827	-31.198	-30.556	-16.807	-34.717	-20.281
54	4.5	0.224	0.196	-6.921	6.827	0.583	-6.719	7.029	-6.908	7.528
54	6.75	26.709	0.196	-6.921	6.827	32.365	17.117	30.865	20.901	35.337
54	9	53.194	0.196	-6.921	6.827	64.147	40.953	54.702	48.710	63.146
55	0	-52.419	-0.140	-6.450	6.531	-63.126	-53.627	-40.646	-61.900	-48.270
55	2.25	-25.934	-0.140	-6.450	6.531	-31.345	-29.791	-16.810	-34.091	-20.461
55	4.5	0.550	-0.140	-6.450	6.531	0.437	-5.954	7.027	-6.282	7.348
55	6.75	27.035	-0.140	-6.450	6.531	32.219	17.882	30.863	21.527	35.157
55	9	53.520	-0.140	-6.450	6.531	64.000	41.718	54.699	49.336	62.966
56	0	-52.735	0.226	-6.531	6.450	-62.919	-53.992	-41.011	-62.086	-48.457
56	2.25	-26.250	0.226	-6.531	6.450	-31.138	-30.156	-17.175	-34.277	-20.648
56	4.5	0.235	0.226	-6.531	6.450	0.644	-6.320	6.661	-6.468	7.161
56	6.75	26.720	0.226	-6.531	6.450	32.426	17.517	30.497	21.341	34.970
56	9	53.204	0.226	-6.531	6.450	64.207	41.353	54.334	49.150	62.779
57	0	-0.530	-0.659	-0.133	0.056	-1.691	-0.610	-0.421	-1.112	-0.912
57	0.45	1.220	-0.163	-0.133	0.056	1.204	0.965	1.154	1.038	1.238
57	0.9	4.773	1.327	-0.133	0.056	7.850	4.162	4.352	5.707	5.907
57	1.35	8.326	2.816	-0.133	0.056	14.497	7.360	7.550	10.376	10.576
57	1.8	10.076	3.313	-0.133	0.056	17.391	8.935	9.125	12.526	12.726
58	0	-52.638	-0.152	-5.929	5.994	-63.408	-53.303	-41.380	-61.590	-49.072
58	2.25	-26.153	-0.152	-5.929	5.994	-31.627	-29.466	-17.544	-33.781	-21.263
58	4.5	0.332	-0.152	-5.929	5.994	0.155	-5.630	6.292	-5.972	6.546
58	6.75	26.816	-0.152	-5.929	5.994	31.937	18.206	30.128	21.837	34.355
58	9	53.301	-0.152	-5.929	5.994	63.718	42.042	53.965	49.646	62.164
59	0	-52.881	0.202	-5.991	5.931	-63.133	-53.584	-41.662	-61.688	-49.170
59	2.25	-26.396	0.202	-5.991	5.931	-31.352	-29.748	-17.826	-33.879	-21.361
59	4.5	0.089	0.202	-5.991	5.931	0.430	-5.912	6.010	-6.070	6.448
59	6.75	26.573	0.202	-5.991	5.931	32.212	17.925	29.847	21.739	34.257
59	9	53.058	0.202	-5.991	5.931	63.993	41.761	53.683	49.548	62.066
62	0	-54.784	-12.369	-4.606	4.589	-85.532	-53.912	-44.716	-70.152	-60.497
62	0.75	-49.291	-11.680	-4.606	4.589	-77.837	-48.968	-39.773	-63.950	-54.295
62	1.5	-42.095	-10.053	-4.606	4.589	-66.599	-42.492	-33.296	-55.369	-45.714
62	2.25	-34.802	-8.421	-4.606	4.589	-55.236	-35.927	-26.732	-46.683	-37.028
62	3	-29.309	-7.732	-4.606	4.589	-47.541	-30.984	-21.788	-40.481	-30.826
63	0	-43.441	0.000	0.000	0.000	-52.129	-39.097	-39.097	-45.613	-45.613
63	1.5	-21.720	0.000	0.000	0.000	-26.064	-19.548	-19.548	-22.806	-22.806
63	3	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001
63	4.5	21.721	0.000	0.000	0.000	26.065	19.549	19.549	22.807	22.807
63	6	43.442	0.000	0.000	0.000	52.130	39.097	39.097	45.614	45.614
89	0	26.330	2.934	-1.840	1.994	36.290	21.856	25.691	27.562	31.588
89	0.23	26.979	3.058	-1.840	1.994	37.268	22.441	26.275	28.322	32.349
89	0.45	28.079	3.430	-1.840	1.994	39.184	23.431	27.266	29.712	33.738
89	0.68	29.180	3.803	-1.840	1.994	41.100	24.421	28.256	31.102	35.128
89	0.9	29.829	3.927	-1.840	1.994	42.078	25.006	28.840	31.862	35.888
90	0	-35.619	-0.226	-0.046	0.051	-43.105	-32.103	-32.007	-37.591	-37.489
90	1.5	-17.963	-0.226	-0.046	0.051	-21.917	-16.213	-16.116	-19.052	-18.950
90	3	-0.306	-0.226	-0.046	0.051	-0.729	-0.322	-0.225	-0.512	-0.411
90	4.5	17.350	-0.226	-0.046	0.051	20.459	15.569	15.666	18.027	18.129
90	6	35.006	-0.226	-0.046	0.051	41.647	31.460	31.557	36.566	36.668
91	0	-35.560	-0.101	0.010	-0.007	-42.834	-31.994	-32.011	-37.391	-37.409
91	1.5	-17.903	-0.101	0.010	-0.007	-21.646	-16.103	-16.120	-18.852	-18.870
91	3	-0.247	-0.101	0.010	-0.007	-0.458	-0.212	-0.229	-0.312	-0.330
91	4.5	17.410	-0.101	0.010	-0.007	20.729	15.679	15.662	18.227	18.209
91	6	35.066	-0.101	0.010	-0.007	41.917	31.570	31.553	36.766	36.748
102	0	-35.401	0.024	0.011	-0.009	-42.443	-31.850	-31.870	-37.145	-37.165
102	1.5	-17.745	0.024	0.011	-0.009	-21.255	-15.959	-15.979	-18.605	-18.626
102	3	-0.088	0.024	0.011	-0.009	-0.067	-0.069	-0.088	-0.066	-0.087
102	4.5	17.568	0.024	0.011	-0.009	21.121	15.822	15.803	18.473	18.453
102	6	35.225	0.024	0.011	-0.009	42.308	31.713	31.693	37.013	36.992
103	0	-26.908	-0.150	0.014	-0.011	-32.531	-24.204	-24.229	-28.334	-28.360
103	1.13	-13.666	-0.150	0.014	-0.011	-16.640	-12.286	-12.311	-14.430	-14.456
103	2.25	-0.424	-0.150	0.014	-0.011	-0.749	-0.368	-0.393	-0.525	-0.551
103	3.38	12.819	-0.150	0.014	-0.011	15.142	11.551	11.526	13.379	13.353

103	4.5	26.061	-0.150	0.014	-0.011	31.033	23.469	23.444	27.284	27.258
104	0	-35.313	0.000	0.000	0.000	-42.376	-31.782	-31.782	-37.079	-37.079
104	1.5	-17.656	0.000	0.000	0.000	-21.188	-15.891	-15.891	-18.539	-18.539
104	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	4.5	17.656	0.000	0.000	0.000	21.188	15.891	15.891	18.539	18.539
104	6	35.313	0.000	0.000	0.000	42.376	31.782	31.782	37.079	37.079
123	0	-30.285	-2.789	32.711	-32.609	-40.804	5.454	-59.865	0.790	-67.795
123	1.13	-11.177	-1.238	32.711	-32.609	-15.392	22.651	-42.668	21.831	-46.755
123	2.25	12.314	2.727	32.711	-32.609	19.140	43.793	-21.527	48.993	-19.592
123	3.38	35.804	6.692	32.711	-32.609	53.672	64.934	-0.385	76.156	7.571
123	4.5	54.912	8.243	32.711	-32.609	79.084	82.131	16.812	97.197	28.612
124	0	-128.848	-29.781	9.976	-10.027	-202.267	-105.987	-125.990	-143.578	-164.580
124	1.13	-116.965	-26.740	9.976	-10.027	-183.142	-95.292	-115.295	-129.184	-150.187
124	2.25	-98.896	-20.293	9.976	-10.027	-151.143	-79.030	-99.033	-106.150	-127.153
124	3.38	-80.826	-13.846	9.976	-10.027	-119.145	-62.768	-82.771	-83.116	-104.119
124	4.5	-68.943	-10.805	9.976	-10.027	-100.020	-52.073	-72.076	-68.723	-89.725
125	0	68.532	10.754	10.007	-9.987	99.444	71.685	51.692	89.240	68.247
125	1.13	80.415	13.795	10.007	-9.987	118.570	82.380	62.387	103.633	82.641
125	2.25	98.484	20.242	10.007	-9.987	150.568	98.642	78.649	126.668	105.675
125	3.38	116.553	26.689	10.007	-9.987	182.566	114.905	94.911	149.702	128.709
125	4.5	128.437	29.730	10.007	-9.987	201.692	125.600	105.606	164.095	143.102
126	0	-56.236	-8.407	32.552	-32.762	-80.934	-18.060	-83.374	-30.164	-98.744
126	1.13	-37.128	-6.856	32.552	-32.762	-55.522	-0.863	-66.177	-9.124	-77.703
126	2.25	-13.637	-2.891	32.552	-32.762	-20.990	20.278	-45.035	18.039	-50.540
126	3.38	9.853	1.074	32.552	-32.762	13.542	41.420	-23.894	45.202	-23.377
126	4.5	28.961	2.626	32.552	-32.762	38.954	58.617	-6.697	66.243	-2.337
127	0	-34.097	-3.591	49.879	-49.548	-46.663	19.191	-80.236	14.308	-90.090
127	1.13	-14.990	-2.040	49.879	-49.548	-21.251	36.388	-63.039	35.349	-69.050
127	2.25	8.501	1.925	49.879	-49.548	13.281	57.529	-41.897	62.511	-41.887
127	3.38	31.992	5.890	49.879	-49.548	47.814	78.671	-20.756	89.674	-14.724
127	4.5	51.099	7.441	49.879	-49.548	73.226	95.868	-3.559	110.715	6.317
128	0	-107.970	-23.125	13.777	-13.807	-166.564	-83.396	-110.979	-113.471	-142.434
128	1.13	-96.988	-20.581	13.777	-13.807	-149.315	-73.512	-101.096	-100.337	-129.300
128	2.25	-81.173	-15.375	13.777	-13.807	-122.007	-59.278	-86.862	-80.452	-109.415
128	3.38	-65.357	-10.169	13.777	-13.807	-94.699	-45.045	-72.628	-60.566	-89.529
128	4.5	-54.376	-7.625	13.777	-13.807	-77.450	-35.161	-62.745	-47.432	-76.395
129	0	53.751	7.547	13.790	-13.786	76.577	62.166	34.589	75.673	46.718
129	1.13	64.733	10.092	13.790	-13.786	93.826	72.049	44.473	88.807	59.851
129	2.25	80.548	15.298	13.790	-13.786	121.134	86.283	58.707	108.692	79.737
129	3.38	96.363	20.504	13.790	-13.786	148.442	100.517	72.940	128.578	99.623
129	4.5	107.345	23.048	13.790	-13.786	165.691	110.400	82.824	141.712	112.757
130	0	-53.245	-7.706	49.505	-49.930	-76.223	1.584	-97.851	-8.782	-113.189
130	1.13	-34.138	-6.154	49.505	-49.930	-50.812	18.781	-80.654	12.259	-92.148
130	2.25	-10.647	-2.189	49.505	-49.930	-16.279	39.923	-59.513	39.422	-64.986
130	3.38	12.843	1.775	49.505	-49.930	18.253	61.064	-38.371	66.584	-37.823
130	4.5	31.951	3.327	49.505	-49.930	43.665	78.261	-21.174	87.625	-16.782
135	0	-30.285	-2.789	32.711	-32.609	-40.804	5.454	-59.865	0.790	-67.795
135	1.13	-11.177	-1.238	32.711	-32.609	-15.392	22.651	-42.668	21.831	-46.755
135	2.25	12.314	2.727	32.711	-32.609	19.140	43.793	-21.527	48.993	-19.592
135	3.38	35.804	6.692	32.711	-32.609	53.672	64.934	-0.385	76.156	7.571
135	4.5	54.912	8.244	32.711	-32.609	79.084	82.131	16.812	97.197	28.612
136	0	-128.848	-29.781	9.976	-10.027	-202.267	-105.987	-125.990	-143.578	-164.580
136	1.13	-116.965	-26.740	9.976	-10.027	-183.142	-95.292	-115.295	-129.184	-150.187
136	2.25	-98.896	-20.293	9.976	-10.027	-151.143	-79.030	-99.033	-106.150	-127.153
136	3.38	-80.826	-13.846	9.976	-10.027	-119.145	-62.768	-82.771	-83.116	-104.119
136	4.5	-68.943	-10.805	9.976	-10.027	-100.020	-52.073	-72.076	-68.723	-89.725
137	0	68.532	10.754	10.007	-9.987	99.444	71.685	51.692	89.240	68.247
137	1.13	80.415	13.795	10.007	-9.987	118.570	82.380	62.387	103.633	82.641
137	2.25	98.484	20.242	10.007	-9.987	150.568	98.642	78.649	126.668	105.675
137	3.38	116.553	26.689	10.007	-9.987	182.566	114.905	94.911	149.702	128.709
137	4.5	128.437	29.730	10.007	-9.987	201.692	125.600	105.606	164.095	143.102
138	0	-56.236	-8.407	32.552	-32.762	-80.934	-18.060	-83.374	-30.164	-98.744
138	1.13	-37.128	-6.856	32.552	-32.762	-55.522	-0.863	-66.177	-9.124	-77.703
138	2.25	-13.637	-2.891	32.552	-32.762	-20.990	20.278	-45.035	18.039	-50.540
138	3.38	9.853	1.074	32.552	-32.762	13.542	41.420	-23.894	45.202	-23.377
138	4.5	28.961	2.626	32.552	-32.762	38.954	58.617	-6.697	66.243	-2.337
139	0	-34.097	-3.591	49.879	-49.548	-46.662	19.191	-80.236	14.308	-90.090

139	1.13	-14.989	-2.040	49.879	-49.548	-21.251	36.388	-63.039	35.349	-69.050
139	2.25	8.501	1.925	49.879	-49.548	13.282	57.529	-41.897	62.511	-41.887
139	3.38	31.992	5.890	49.879	-49.548	47.814	78.671	-20.756	89.674	-14.724
139	4.5	51.099	7.441	49.879	-49.548	73.226	95.868	-3.559	110.715	6.317
140	0	-107.970	-23.125	13.777	-13.807	-166.564	-83.396	-110.979	-113.471	-142.434
140	1.13	-96.988	-20.581	13.777	-13.807	-149.315	-73.512	-101.096	-100.337	-129.300
140	2.25	-81.173	-15.375	13.777	-13.807	-122.007	-59.278	-86.862	-80.452	-109.415
140	3.38	-65.357	-10.169	13.777	-13.807	-94.699	-45.045	-72.628	-60.566	-89.529
140	4.5	-54.376	-7.625	13.777	-13.807	-77.450	-35.161	-62.745	-47.432	-76.395
141	0	53.751	7.547	13.790	-13.786	76.577	62.166	34.589	75.673	46.718
141	1.13	64.733	10.092	13.790	-13.786	93.826	72.049	44.473	88.807	59.851
141	2.25	80.548	15.298	13.790	-13.786	121.134	86.283	58.707	108.692	79.737
141	3.38	96.363	20.504	13.790	-13.786	148.442	100.517	72.940	128.578	99.623
141	4.5	107.345	23.048	13.790	-13.786	165.691	110.400	82.824	141.712	112.757
142	0	-53.245	-7.706	49.505	-49.930	-76.223	1.584	-97.851	-8.782	-113.189
142	1.13	-34.138	-6.154	49.505	-49.930	-50.812	18.781	-80.654	12.259	-92.148
142	2.25	-10.647	-2.189	49.505	-49.930	-16.279	39.923	-59.513	39.422	-64.935
142	3.38	12.844	1.775	49.505	-49.930	18.253	61.064	-38.371	66.584	-37.823
142	4.5	31.951	3.327	49.505	-49.930	43.665	78.261	-21.174	87.625	-16.782
143	0	-26.061	0.150	-0.014	0.011	-31.033	-23.469	-23.444	-27.284	-27.258
143	1.13	-12.819	0.150	-0.014	0.011	-15.142	-11.551	-11.526	-13.379	-13.353
143	2.25	0.424	0.150	-0.014	0.011	0.749	0.368	0.393	0.525	0.551
143	3.38	13.666	0.150	-0.014	0.011	16.640	12.286	12.311	14.430	14.456
143	4.5	26.908	0.150	-0.014	0.011	32.531	24.204	24.229	28.334	28.360
144	0	-35.225	-0.024	-0.011	0.009	-42.308	-31.713	-31.693	-37.013	-36.992
144	1.5	-17.568	-0.024	-0.011	0.009	-21.121	-15.822	-15.803	-18.473	-18.453
144	3	0.088	-0.024	-0.011	0.009	0.067	0.069	0.088	0.066	0.087
144	4.5	17.745	-0.024	-0.011	0.009	21.255	15.959	15.979	18.605	18.626
144	6	35.401	-0.024	-0.011	0.009	42.443	31.850	31.870	37.145	37.165
145	0	-35.066	0.101	-0.010	0.007	-41.917	-31.570	-31.553	-36.766	-36.748
145	1.5	-17.410	0.101	-0.010	0.007	-20.729	-15.679	-15.662	-18.227	-18.209
145	3	0.247	0.101	-0.010	0.007	0.458	0.212	0.229	0.312	0.330
145	4.5	17.903	0.101	-0.010	0.007	21.646	16.103	16.120	18.852	18.870
145	6	35.560	0.101	-0.010	0.007	42.834	31.994	32.011	37.391	37.409
146	0	-35.007	0.226	0.046	-0.051	-41.647	-31.460	-31.557	-36.566	-36.668
146	1.5	-17.350	0.226	0.046	-0.051	-20.459	-15.569	-15.666	-18.027	-18.129
146	3	0.306	0.226	0.046	-0.051	0.729	0.322	0.225	0.512	0.411
146	4.5	17.963	0.226	0.046	-0.051	21.917	16.213	16.116	19.052	18.950
146	6	35.619	0.226	0.046	-0.051	43.104	32.103	32.007	37.591	37.489
156	0	-4.126	-3.562	-0.185	1.077	-10.651	-3.898	-2.636	-6.771	-5.446
156	0.86	0.812	-1.739	-0.185	1.077	-1.808	0.546	1.807	-0.437	0.888
156	1.73	12.148	3.609	-0.185	1.077	20.352	10.748	12.010	14.835	16.160
156	2.59	23.484	8.956	-0.185	1.077	42.511	20.951	22.213	30.107	31.432
156	3.45	28.422	10.780	-0.185	1.077	51.354	25.395	26.657	36.440	37.765
157	0	-38.537	-16.588	-2.272	1.174	-72.785	-36.956	-33.509	-53.300	-49.681
157	1.13	-30.781	-13.485	-2.272	1.174	-58.514	-29.976	-26.529	-43.202	-39.583
157	2.25	-14.261	-5.556	-2.272	1.174	-26.002	-15.107	-11.661	-20.860	-17.241
157	3.38	2.260	2.374	-2.272	1.174	6.510	-0.239	3.208	1.482	5.101
157	4.5	10.015	5.477	-2.272	1.174	20.781	6.741	10.188	11.580	15.199
158	0	-6.992	-5.271	-2.428	1.682	-16.825	-8.721	-4.611	-13.213	-8.897
158	1.13	0.763	-2.169	-2.428	1.682	-2.554	-1.742	2.369	-3.115	1.201
158	2.25	17.283	5.761	-2.428	1.682	29.958	13.127	17.237	19.227	23.543
158	3.38	33.804	13.691	-2.428	1.682	62.470	27.995	32.106	41.570	45.886
158	4.5	41.559	16.793	-2.428	1.682	76.740	34.975	39.086	51.668	55.984
160	0	55.083	13.127	-14.713	21.700	87.103	34.861	71.274	50.658	88.892
160	0.86	73.548	16.418	-14.713	21.700	114.526	51.480	87.893	72.120	110.354
160	1.73	95.213	21.470	-14.713	21.700	148.608	70.979	107.392	98.051	136.285
160	2.59	116.725	26.438	-14.713	21.700	182.371	90.339	126.752	123.768	162.001
160	3.45	132.526	28.262	-14.713	21.700	204.250	104.560	140.973	141.508	179.742
161	0	-122.522	-33.583	-21.886	14.718	-200.758	-132.156	-95.551	-172.786	-134.351
161	1.13	-100.596	-30.480	-21.886	14.718	-169.483	-112.423	-75.819	-147.809	-109.374
161	2.25	-71.471	-23.412	-21.886	14.718	-123.224	-86.210	-49.606	-112.775	-74.340
161	3.38	-42.346	-16.344	-21.886	14.718	-76.966	-59.998	-23.393	-77.741	-39.306
161	4.5	-20.420	-13.241	-21.886	14.718	-45.691	-40.265	-3.660	-52.764	-14.330
162	0	38.950	15.065	-21.717	14.169	70.844	13.338	49.224	27.586	65.266
162	1.13	60.875	18.168	-21.717	14.169	102.119	33.071	68.957	52.562	90.242
162	2.25	90.001	25.235	-21.717	14.169	148.377	59.284	95.170	87.596	125.277

162	3.38	119.126	32.303	-21.717	14.169	194.636	85.497	121.382	122.631	160.311
162	4.5	141.051	35.406	-21.717	14.169	225.911	105.229	141.115	147.607	185.287
164	0	55.083	13.127	-14.713	21.700	87.102	34.861	71.274	50.657	88.891
164	0.86	73.548	16.417	-14.713	21.700	114.525	51.480	87.893	72.119	110.353
164	1.73	95.213	21.470	-14.713	21.700	148.607	70.978	107.391	98.050	136.284
164	2.59	116.724	26.438	-14.713	21.700	182.370	90.338	126.751	123.767	162.001
164	3.45	132.525	28.262	-14.713	21.700	204.249	104.560	140.972	141.508	179.741
165	0	-122.523	-33.583	-21.886	14.718	-200.761	-132.157	-95.553	-172.788	-134.353
165	1.13	-100.598	-30.480	-21.886	14.718	-169.486	-112.425	-75.820	-147.811	-109.377
165	2.25	-71.473	-23.413	-21.886	14.718	-123.228	-86.212	-49.607	-112.777	-74.342
165	3.38	-42.347	-16.345	-21.886	14.718	-76.969	-59.999	-22.394	-77.743	-39.308
165	4.5	-20.422	-13.242	-21.886	14.718	-45.694	-40.266	-3.662	-52.766	-14.332
166	0	38.949	15.064	-21.717	14.169	70.842	13.338	49.223	27.585	65.265
166	1.13	60.874	18.167	-21.717	14.169	102.117	33.070	68.956	52.561	90.241
166	2.25	90.000	25.235	-21.717	14.169	148.376	59.283	95.169	87.595	123.275
166	3.38	119.125	32.303	-21.717	14.169	194.634	85.496	121.382	122.630	160.310
166	4.5	141.050	35.405	-21.717	14.169	225.909	105.229	141.115	147.606	185.286
209	0	-24.765	-11.317	-1.875	2.258	-47.825	-24.163	-20.031	-35.101	-30.763
209	1.13	-17.010	-8.214	-1.875	2.258	-33.555	-17.183	-13.051	-25.004	-20.665
209	2.25	-0.489	-0.285	-1.875	2.258	-1.043	-2.315	1.817	-2.661	1.677
209	3.38	16.032	7.645	-1.875	2.258	31.469	12.554	16.686	19.681	24.020
209	4.5	23.787	10.748	-1.875	2.258	45.740	19.533	23.666	29.779	34.118
210	0	-24.442	-10.585	-0.613	0.733	-46.267	-22.611	-21.265	-32.976	-31.563
210	1.13	-16.687	-7.482	-0.613	0.733	-31.996	-15.631	-14.285	-22.879	-21.465
210	2.25	-0.166	0.447	-0.613	0.733	0.516	-0.763	0.584	-0.536	0.877
210	3.38	16.354	8.377	-0.613	0.733	33.028	14.106	15.452	21.806	23.219
210	4.5	24.110	11.480	-0.613	0.733	47.299	21.086	22.432	31.904	33.317
211	0	-24.074	-11.473	-0.735	0.615	-47.245	-22.401	-21.052	-33.277	-31.860
211	1.13	-16.319	-8.370	-0.735	0.615	-32.974	-15.422	-14.072	-23.179	-21.762
211	2.25	0.202	-0.440	-0.735	0.615	-0.462	-0.553	0.796	-0.837	0.580
211	3.38	16.722	7.489	-0.735	0.615	32.050	14.315	15.665	21.505	22.922
211	4.5	24.478	10.592	-0.735	0.615	46.321	21.295	22.644	31.603	33.020
212	0	-23.614	-10.728	-2.252	1.877	-45.501	-23.505	-19.376	-33.918	-29.582
212	1.13	-15.859	-7.625	-2.252	1.877	-31.230	-16.525	-12.396	-23.820	-19.485
212	2.25	0.662	0.305	-2.252	1.877	1.282	-1.657	2.473	-1.478	2.858
212	3.38	17.182	8.234	-2.252	1.877	33.794	13.212	17.341	20.864	25.200
212	4.5	24.938	11.337	-2.252	1.877	48.064	20.192	24.321	30.962	35.298
213	0	-40.342	-16.382	-1.398	1.905	-74.622	-37.706	-34.403	-54.148	-50.680
213	1.13	-32.587	-13.279	-1.398	1.905	-60.351	-30.726	-27.423	-44.050	-40.582
213	2.25	-16.066	-5.350	-1.398	1.905	-27.839	-15.858	-12.555	-21.708	-18.240
213	3.38	0.455	2.580	-1.398	1.905	4.673	-0.989	2.314	0.634	4.102
213	4.5	8.210	5.683	-1.398	1.905	18.944	5.990	9.293	10.732	14.200
214	0	-6.749	-4.421	-0.916	1.802	-15.172	-6.990	-4.272	-10.834	-7.979
214	1.13	1.006	-1.318	-0.916	1.802	-0.901	-0.011	2.708	-0.736	2.118
214	2.25	17.527	6.612	-0.916	1.802	31.611	14.858	17.576	21.607	24.461
214	3.38	34.048	14.541	-0.916	1.802	64.123	29.726	32.445	43.949	46.803
214	4.5	41.803	17.644	-0.916	1.802	78.394	36.706	39.424	54.047	56.901
215	0	-41.559	-17.613	-1.797	0.915	-78.051	-39.200	-36.488	-56.620	-53.773
215	1.13	-33.804	-14.510	-1.797	0.915	-63.780	-32.221	-29.509	-46.522	-43.675
215	2.25	-17.283	-6.580	-1.797	0.915	-31.268	-17.352	-14.640	-24.180	-21.333
215	3.38	-0.763	1.349	-1.797	0.915	1.244	-2.484	0.228	-1.838	1.010
215	4.5	6.993	4.452	-1.797	0.915	15.515	4.496	7.208	8.260	11.107
216	0	-7.894	-5.640	-1.902	1.398	-18.497	-9.007	-5.706	-13.839	-10.374
216	1.13	-0.139	-2.537	-1.902	1.398	-4.226	-2.027	1.273	-3.741	-0.276
216	2.25	16.382	5.393	-1.902	1.398	28.286	12.842	16.142	18.601	22.066
216	3.38	32.902	13.322	-1.902	1.398	60.798	27.710	31.010	40.943	44.409
216	4.5	40.657	16.425	-1.902	1.398	75.069	34.690	37.990	51.041	54.506
217	0	-138.812	-37.435	-12.611	19.251	-226.470	-137.543	-105.680	-182.579	-149.123
217	1.13	-116.887	-34.332	-12.611	19.251	-195.195	-117.810	-85.947	-157.603	-124.147
217	2.25	-86.197	-26.402	-12.611	19.251	-145.679	-90.188	-58.326	-120.382	-86.926
217	3.38	-55.506	-18.473	-12.611	19.251	-96.163	-62.567	-30.704	-83.161	-49.705
217	4.5	-33.581	-15.370	-12.611	19.251	-64.888	-42.834	-10.971	-58.185	-24.729
218	0	37.048	18.084	-13.176	19.490	73.392	20.167	52.833	36.458	70.758
218	1.13	58.973	21.187	-13.176	19.490	104.667	39.899	72.566	61.434	95.734
218	2.25	89.664	29.117	-13.176	19.490	154.183	67.521	100.188	98.655	132.955
218	3.38	120.354	37.046	-13.176	19.490	203.699	95.142	127.809	135.876	170.176
218	4.5	142.279	40.149	-13.176	19.490	234.974	114.875	147.542	160.852	195.152



219	0	-138.281	-39.595	-19.451	13.165	-229.288	-143.904	-111.288	-190.563	-155.316
219	1.13	-116.355	-36.492	-19.451	13.165	-198.013	-124.171	-91.555	-165.587	-131.340
219	2.25	-85.665	-28.562	-19.451	13.165	-148.497	-96.550	-63.933	-128.366	-94.119
219	3.38	-54.974	-20.632	-19.451	13.165	-98.981	-68.928	-36.312	-91.145	-56.898
219	4.5	-33.049	-17.530	-19.451	13.165	-67.706	-49.195	-16.579	-66.169	-31.922
220	0	37.261	15.837	-19.214	12.599	70.051	14.321	46.134	28.926	62.330
220	1.13	59.186	18.940	-19.214	12.599	101.326	34.054	65.867	53.903	87.306
220	2.25	89.876	26.869	-19.214	12.599	150.842	61.675	93.488	91.123	124.527
220	3.38	120.567	34.799	-19.214	12.599	200.358	89.297	121.110	128.344	161.748
220	4.5	142.492	37.902	-19.214	12.599	231.633	109.029	140.842	153.321	186.724
221	0	-39.498	-16.241	-1.574	2.259	-73.384	-37.122	-33.289	-53.358	-49.333
221	1.13	-31.743	-13.139	-1.574	2.259	-59.113	-30.142	-26.309	-43.260	-39.235
221	2.25	-15.222	-5.209	-1.574	2.259	-26.601	-15.274	-11.441	-20.918	-16.893
221	3.38	1.298	2.721	-1.574	2.259	5.911	-0.406	3.428	1.425	5.450
221	4.5	9.054	5.824	-1.574	2.259	20.182	6.574	10.408	11.522	15.547
222	0	-7.764	-4.645	-1.009	2.044	-16.749	-7.997	-4.944	-12.138	-8.933
222	1.13	-0.009	-1.542	-1.009	2.044	-2.478	-1.017	2.036	-2.041	1.165
222	2.25	16.511	6.388	-1.009	2.044	30.034	13.851	16.904	20.302	23.508
222	3.38	33.032	14.317	-1.009	2.044	62.546	28.720	31.773	42.644	45.850
222	4.5	40.787	17.420	-1.009	2.044	76.817	35.699	38.753	52.742	55.948
223	0	-40.131	-17.304	-2.036	1.004	-75.844	-38.154	-35.114	-55.177	-51.985
223	1.13	-32.376	-14.201	-2.036	1.004	-61.573	-31.174	-28.134	-45.079	-41.887
223	2.25	-15.855	-6.272	-2.036	1.004	-29.061	-16.306	-13.266	-22.737	-19.545
223	3.38	0.665	1.658	-2.036	1.004	3.451	-1.437	1.603	-0.395	2.797
223	4.5	8.421	4.761	-2.036	1.004	17.722	5.543	8.582	9.703	12.895
224	0	-8.372	-5.758	-2.263	1.577	-19.259	-9.798	-5.958	-14.794	-10.762
224	1.13	-0.617	-2.655	-2.263	1.577	-4.988	-2.818	1.022	-4.697	-0.664
224	2.25	15.904	5.275	-2.263	1.577	27.524	12.050	15.891	17.646	21.678
224	3.38	32.424	13.204	-2.263	1.577	60.036	26.919	30.759	39.988	44.020
224	4.5	40.180	16.307	-2.263	1.577	74.307	33.898	37.739	50.086	54.118
225	0	-127.762	-33.047	-13.755	21.104	-206.189	-128.741	-93.882	-169.412	-132.810
225	1.13	-105.837	-29.944	-13.755	21.104	-174.915	-109.008	-74.149	-144.436	-107.834
225	2.25	-76.711	-22.876	-13.755	21.104	-128.656	-82.795	-47.936	-109.402	-72.800
225	3.38	-47.586	-15.809	-13.755	21.104	-82.397	-56.582	-21.723	-74.367	-37.766
225	4.5	-25.661	-12.706	-13.755	21.104	-51.122	-36.849	-1.991	-49.391	-12.739
226	0	34.440	15.599	-14.269	21.216	66.287	16.727	52.212	31.007	68.267
226	1.13	56.365	18.702	-14.269	21.216	97.562	36.460	71.945	55.983	93.213
226	2.25	85.491	25.770	-14.269	21.216	143.821	62.672	98.158	91.018	128.277
226	3.38	114.616	32.838	-14.269	21.216	190.080	88.885	124.371	126.052	163.311
226	4.5	136.541	35.941	-14.269	21.216	221.355	108.618	144.103	151.028	188.288
227	0	-125.952	-34.463	-21.230	14.278	-206.283	-134.586	-99.079	-176.252	-138.969
227	1.13	-104.027	-31.360	-21.230	14.278	-175.008	-114.853	-79.346	-151.276	-113.993
227	2.25	-74.901	-24.292	-21.230	14.278	-128.749	-88.641	-53.133	-116.241	-78.958
227	3.38	-45.776	-17.225	-21.230	14.278	-82.490	-62.428	-26.920	-81.207	-43.924
227	4.5	-23.851	-14.122	-21.230	14.278	-51.215	-42.695	-7.188	-56.231	-18.948
228	0	33.920	13.734	-20.988	13.691	62.678	9.540	44.219	22.231	58.644
228	1.13	55.845	16.837	-20.988	13.691	93.953	29.273	63.951	47.207	83.620
228	2.25	84.970	23.904	-20.988	13.691	140.211	55.485	90.164	82.241	118.654
228	3.38	114.096	30.972	-20.988	13.691	186.470	81.698	116.377	117.276	153.688
228	4.5	136.021	34.075	-20.988	13.691	217.745	101.431	136.110	142.252	178.665
229	0	-30.088	-11.957	-1.671	2.372	-55.237	-28.751	-24.707	-40.880	-36.635
229	1.13	-22.333	-8.854	-1.671	2.372	-40.966	-21.771	-17.727	-30.783	-26.537
229	2.25	-8.943	-2.648	-1.671	2.372	-14.969	-9.720	-5.676	-12.813	-8.568
229	3.38	4.447	3.557	-1.671	2.372	11.028	2.331	6.375	5.156	9.401
229	4.5	12.202	6.660	-1.671	2.372	25.299	9.311	13.354	15.254	19.499
230	0	-8.674	-5.466	-1.192	2.328	-19.154	-8.998	-5.478	-13.803	-10.107
230	1.13	-0.918	-2.363	-1.192	2.328	-4.883	-2.018	1.501	-3.705	-0.009
230	2.25	12.472	3.842	-1.192	2.328	21.114	10.033	13.552	14.265	17.960
230	3.38	25.862	10.048	-1.192	2.328	47.111	22.084	25.604	32.234	35.930
230	4.5	33.617	13.151	-1.192	2.328	61.382	29.063	32.583	42.332	46.027
231	0	-32.522	-13.134	-2.301	1.178	-60.041	-31.570	-28.092	-44.838	-41.186
231	1.13	-24.767	-10.031	-2.301	1.178	-45.770	-24.591	-21.112	-34.740	-31.088
231	2.25	-11.376	-3.825	-2.301	1.178	-19.772	-12.539	-9.061	-16.771	-13.119
231	3.38	2.014	2.380	-2.301	1.178	6.225	-0.488	2.990	1.198	4.850
231	4.5	9.769	5.483	-2.301	1.178	20.496	6.491	9.970	11.296	14.948
232	0	-8.879	-5.935	-2.588	1.803	-20.150	-10.578	-6.187	-15.779	-11.168
232	1.13	-1.123	-2.832	-2.588	1.803	-5.879	-3.599	0.792	-5.681	-1.070



232	2.25	12.267	3.374	-2.588	1.803	20.118	8.452	12.843	12.288	16.899
232	3.38	25.657	9.579	-2.588	1.803	46.115	20.503	24.894	30.258	34.868
232	4.5	33.412	12.682	-2.588	1.803	60.386	27.483	31.874	40.355	44.966
233	0	-30.088	-11.957	-1.671	2.372	-55.237	-28.751	-24.707	-40.880	-36.635
233	1.13	-22.333	-8.854	-1.671	2.372	-40.967	-21.771	-17.728	-30.783	-26.537
233	2.25	-8.943	-2.648	-1.671	2.372	-14.969	-9.720	-5.676	-12.813	-8.568
233	3.38	4.447	3.557	-1.671	2.372	11.028	2.331	6.375	5.156	9.401
233	4.5	12.202	6.660	-1.671	2.372	25.299	9.311	13.354	15.254	19.499
234	0	-8.674	-5.466	-1.192	2.328	-19.154	-8.998	-5.478	-13.802	-10.107
234	1.13	-0.918	-2.363	-1.192	2.328	-4.883	-2.018	1.501	-3.705	-0.009
234	2.25	12.472	3.842	-1.192	2.328	21.114	10.033	13.553	14.265	17.960
234	3.38	25.862	10.048	-1.192	2.328	47.111	22.084	25.604	32.234	35.930
234	4.5	33.617	13.151	-1.192	2.328	61.382	29.064	32.583	42.332	46.027
235	0	-32.522	-13.134	-2.301	1.178	-60.041	-31.570	-28.092	-44.838	-41.186
235	1.13	-24.767	-10.031	-2.301	1.178	-45.770	-24.591	-21.112	-34.740	-31.088
235	2.25	-11.376	-3.825	-2.301	1.178	-19.772	-12.540	-9.061	-16.771	-13.119
235	3.38	2.014	2.380	-2.301	1.178	6.225	-0.488	2.990	1.198	4.850
235	4.5	9.769	5.483	-2.301	1.178	20.496	6.491	9.970	11.296	14.948
236	0	-8.879	-5.935	-2.588	1.803	-20.150	-10.579	-6.188	-15.779	-11.168
236	1.13	-1.123	-2.832	-2.588	1.803	-5.880	-3.599	0.792	-5.681	-1.070
236	2.25	12.267	3.374	-2.588	1.803	20.118	8.452	12.843	12.288	16.899
236	3.38	25.657	9.579	-2.588	1.803	46.115	20.503	24.894	30.257	34.868
236	4.5	33.412	12.682	-2.588	1.803	60.386	27.483	31.874	40.355	44.966
237	0	-127.762	-33.047	-13.755	21.104	-206.190	-128.741	-93.882	-169.412	-132.810
237	1.13	-105.837	-29.944	-13.755	21.104	-174.915	-109.008	-74.149	-144.436	-107.834
237	2.25	-76.711	-22.876	-13.755	21.104	-128.656	-82.795	-47.936	-109.402	-72.800
237	3.38	-47.586	-15.809	-13.755	21.104	-82.397	-56.582	-21.723	-74.367	-37.766
237	4.5	-25.661	-12.706	-13.755	21.104	-51.122	-36.849	-1.991	-49.391	-12.789
238	0	34.440	15.600	-14.269	21.216	66.288	16.727	52.212	31.007	68.267
238	1.13	56.366	18.702	-14.269	21.216	97.563	36.460	71.945	55.984	93.243
238	2.25	85.491	25.770	-14.269	21.216	143.821	62.673	98.158	91.018	128.277
238	3.38	114.616	32.838	-14.269	21.216	190.080	88.885	124.371	126.052	163.312
238	4.5	136.542	35.941	-14.269	21.216	221.355	108.618	144.103	151.029	188.288
239	0	-125.952	-34.463	-21.230	14.278	-206.282	-134.586	-99.079	-176.252	-138.969
239	1.13	-104.026	-31.360	-21.230	14.278	-175.008	-114.853	-79.346	-151.276	-113.993
239	2.25	-74.901	-24.292	-21.230	14.278	-128.749	-88.641	-53.133	-116.241	-78.958
239	3.38	-45.776	-17.224	-21.230	14.278	-82.490	-62.428	-26.920	-81.207	-43.924
239	4.5	-23.850	-14.122	-21.230	14.278	-51.215	-42.695	-7.188	-56.231	-18.948
240	0	33.919	13.734	-20.988	13.691	62.677	9.540	44.218	22.230	58.643
240	1.13	55.845	16.837	-20.988	13.691	93.952	29.272	63.951	47.207	83.620
240	2.25	84.970	23.904	-20.988	13.691	140.211	55.485	90.164	82.241	118.654
240	3.38	114.095	30.972	-20.988	13.691	186.470	81.698	116.377	117.275	153.688
240	4.5	136.021	34.075	-20.988	13.691	217.745	101.431	136.110	142.252	178.664
241	0	-39.498	-16.241	-1.574	2.259	-73.384	-37.122	-33.289	-53.358	-49.333
241	1.13	-31.743	-13.139	-1.574	2.259	-59.113	-30.142	-26.309	-43.260	-39.235
241	2.25	-15.222	-5.209	-1.574	2.259	-26.601	-15.274	-11.441	-20.918	-16.893
241	3.38	1.298	2.721	-1.574	2.259	5.911	-0.405	3.428	1.425	5.450
241	4.5	9.054	5.824	-1.574	2.259	20.182	6.574	10.408	11.522	15.547
242	0	-7.764	-4.645	-1.009	2.044	-16.749	-7.997	-4.944	-12.138	-8.933
242	1.13	-0.009	-1.542	-1.009	2.044	-2.478	-1.017	2.036	-2.041	1.165
242	2.25	16.511	6.388	-1.009	2.044	30.034	13.851	16.904	20.302	23.508
242	3.38	33.032	14.317	-1.009	2.044	62.546	28.720	31.773	42.644	45.850
242	4.5	40.787	17.420	-1.009	2.044	76.817	35.699	38.753	52.742	55.948
243	0	-40.131	-17.304	-2.036	1.004	-75.844	-38.154	-35.114	-55.177	-51.985
243	1.13	-32.376	-14.201	-2.036	1.004	-61.573	-31.174	-28.134	-45.079	-41.887
243	2.25	-15.855	-6.272	-2.036	1.004	-29.061	-16.306	-13.266	-22.737	-19.545
243	3.38	0.665	1.658	-2.036	1.004	3.451	-1.437	1.603	-0.395	2.797
243	4.5	8.421	4.761	-2.036	1.004	17.722	5.543	8.582	9.703	12.895
244	0	-8.372	-5.758	-2.263	1.577	-19.259	-9.798	-5.958	-14.794	-10.762
244	1.13	-0.617	-2.655	-2.263	1.577	-4.988	-2.818	1.022	-4.697	-0.664
244	2.25	15.904	5.275	-2.263	1.577	27.524	12.050	15.891	17.646	21.678
244	3.38	32.424	13.204	-2.263	1.577	60.036	26.919	30.759	39.988	44.021
244	4.5	40.180	16.307	-2.263	1.577	74.307	33.898	37.739	50.086	54.118
245	0	-138.812	-37.435	-12.611	19.251	-226.470	-137.543	-105.680	-182.579	-149.123
245	1.13	-116.887	-34.332	-12.611	19.251	-195.195	-117.810	-85.947	-157.602	-124.147
245	2.25	-86.196	-26.402	-12.611	19.251	-145.679	-90.188	-58.326	-120.382	-86.926
245	3.38	-55.506	-18.473	-12.611	19.251	-96.163	-62.567	-30.704	-83.161	-49.705

245	4.5	-33.581	-15.370	-12.611	19.251	-64.888	-42.834	-10.971	-58.185	-24.729
246	0	37.048	18.084	-13.176	19.490	73.392	20.167	52.833	36.458	70.758
246	1.13	58.973	21.187	-13.176	19.490	104.667	39.899	72.566	61.434	95.734
246	2.25	89.664	29.117	-13.176	19.490	154.183	67.521	100.188	98.655	132.255
246	3.38	120.354	37.046	-13.176	19.490	203.699	95.142	127.809	135.876	170.176
246	4.5	142.280	40.149	-13.176	19.490	234.974	114.875	147.542	160.852	195.152
247	0	-138.281	-39.595	-19.451	13.165	-229.288	-143.904	-111.288	-190.563	-156.316
247	1.13	-116.355	-36.492	-19.451	13.165	-198.013	-124.171	-91.555	-165.587	-131.340
247	2.25	-85.665	-28.562	-19.451	13.165	-148.497	-96.550	-63.933	-128.366	-94.119
247	3.38	-54.974	-20.632	-19.451	13.165	-98.981	-68.928	-36.312	-91.145	-56.898
247	4.5	-33.049	-17.530	-19.451	13.165	-67.706	-49.195	-16.579	-66.169	-31.922
248	0	37.261	15.837	-19.214	12.599	70.051	14.321	46.134	28.926	62.330
248	1.13	59.186	18.940	-19.214	12.599	101.326	34.054	65.867	53.903	87.306
248	2.25	89.876	26.869	-19.214	12.599	150.843	61.675	93.488	91.124	124.527
248	3.38	120.567	34.799	-19.214	12.599	200.359	89.297	121.110	128.344	161.748
248	4.5	142.492	37.902	-19.214	12.599	231.633	109.029	140.842	153.321	186.724
249	0	-40.342	-16.382	-1.398	1.905	-74.622	-37.706	-34.403	-54.148	-50.680
249	1.13	-32.587	-13.279	-1.398	1.905	-60.351	-30.726	-27.423	-44.050	-40.582
249	2.25	-16.066	-5.350	-1.398	1.905	-27.839	-15.858	-12.555	-21.708	-18.240
249	3.38	0.455	2.580	-1.398	1.905	4.673	-0.989	2.314	0.634	4.102
249	4.5	8.210	5.683	-1.398	1.905	18.944	5.990	9.293	10.732	14.200
250	0	-6.749	-4.421	-0.916	1.802	-15.172	-6.990	-4.272	-10.834	-7.979
250	1.13	1.006	-1.318	-0.916	1.802	-0.901	-0.011	2.708	-0.736	2.118
250	2.25	17.527	6.612	-0.916	1.802	31.611	14.858	17.576	21.607	24.461
250	3.38	34.048	14.541	-0.916	1.802	64.123	29.726	32.445	43.949	46.803
250	4.5	41.803	17.644	-0.916	1.802	78.394	36.706	39.424	54.047	56.901
251	0	-41.559	-17.613	-1.797	0.915	-78.051	-39.200	-36.488	-56.620	-53.773
251	1.13	-33.804	-14.510	-1.797	0.915	-63.780	-32.221	-29.509	-46.522	-43.675
251	2.25	-17.283	-6.580	-1.797	0.915	-31.268	-17.352	-14.640	-24.180	-21.333
251	3.38	-0.763	1.349	-1.797	0.915	1.244	-2.484	0.228	-1.838	1.010
251	4.5	6.993	4.452	-1.797	0.915	15.515	4.496	7.208	8.260	11.107
252	0	-7.894	-5.640	-1.902	1.398	-18.497	-9.007	-5.706	-13.839	-10.374
252	1.13	-0.139	-2.537	-1.902	1.398	-4.226	-2.027	1.273	-3.741	-0.276
252	2.25	16.382	5.393	-1.902	1.398	28.286	12.842	16.142	18.601	22.066
252	3.38	32.902	13.322	-1.902	1.398	60.798	27.710	31.010	40.943	44.409
252	4.5	40.657	16.425	-1.902	1.398	75.069	34.690	37.990	51.041	54.506
253	0	-24.765	-11.317	-1.875	2.258	-47.825	-24.163	-20.031	-35.101	-30.763
253	1.13	-17.010	-8.214	-1.875	2.258	-33.555	-17.183	-13.051	-25.004	-20.665
253	2.25	-0.489	-0.285	-1.875	2.258	-1.043	-2.315	1.817	-2.661	1.677
253	3.38	16.032	7.645	-1.875	2.258	31.469	12.554	16.686	19.681	24.020
253	4.5	23.787	10.748	-1.875	2.258	45.740	19.533	23.666	29.779	34.118
254	0	-24.442	-10.585	-0.613	0.733	-46.267	-22.611	-21.265	-32.976	-31.563
254	1.13	-16.687	-7.482	-0.613	0.733	-31.996	-15.631	-14.285	-22.879	-21.465
254	2.25	-0.166	0.447	-0.613	0.733	0.516	-0.763	0.584	-0.536	0.877
254	3.38	16.354	8.377	-0.613	0.733	33.028	14.106	15.452	21.806	23.219
254	4.5	24.110	11.480	-0.613	0.733	47.299	21.086	22.432	31.904	33.317
255	0	-24.074	-11.473	-0.735	0.615	-47.245	-22.401	-21.052	-33.277	-31.860
255	1.13	-16.319	-8.370	-0.735	0.615	-32.974	-15.422	-14.072	-23.179	-21.762
255	2.25	0.202	-0.440	-0.735	0.615	-0.462	-0.553	0.796	-0.837	0.580
255	3.38	16.722	7.489	-0.735	0.615	32.050	14.315	15.565	21.505	22.922
255	4.5	24.478	10.592	-0.735	0.615	46.321	21.295	22.644	31.603	33.020
256	0	-23.614	-10.728	-2.252	1.877	-45.501	-23.505	-19.376	-33.918	-29.582
256	1.13	-15.859	-7.625	-2.252	1.877	-31.230	-16.525	-12.396	-23.820	-19.485
256	2.25	0.662	0.305	-2.252	1.877	1.282	-1.657	2.473	-1.478	2.858
256	3.38	17.182	8.234	-2.252	1.877	33.794	13.212	17.341	20.864	25.200
256	4.5	24.938	11.337	-2.252	1.877	48.064	20.192	24.321	30.962	35.298
257	0	-82.807	-27.562	1.408	-1.280	-143.467	-73.118	-75.806	-102.833	-105.655
257	0.75	-76.062	-26.183	1.408	-1.280	-133.166	-67.048	-69.735	-94.882	-97.703
257	1.50	-64.308	-22.045	1.408	-1.280	-112.442	-56.469	-59.157	-79.933	-82.755
257	2.25	-52.554	-17.908	1.408	-1.280	-91.718	-45.891	-48.378	-64.985	-67.807
257	3	-45.809	-16.529	1.408	-1.280	-81.417	-39.820	-42.508	-57.034	-59.856
258	0	0.884	4.477	-0.512	0.668	8.224	0.284	1.463	3.212	4.450
258	0.75	7.629	5.856	-0.512	0.668	18.525	6.354	7.534	11.163	12.401
258	1.5	19.383	9.994	-0.512	0.668	39.249	16.933	18.113	26.111	27.349
258	2.25	31.137	14.131	-0.512	0.668	59.974	27.512	28.691	41.059	42.297
258	3	37.882	15.510	-0.512	0.668	70.274	33.582	34.762	49.010	50.249
259	0	-31.692	-15.643	0.234	-0.258	-63.059	-28.288	-28.781	-42.885	-43.403

259	0.75	-27.774	-14.264	0.234	-0.258	-56.151	-24.762	-25.255	-37.903	-38.420
259	1.5	-18.847	-10.127	0.234	-0.258	-38.819	-16.728	-17.221	-25.923	-26.441
259	2.25	-9.920	-5.990	0.234	-0.258	-21.488	-8.694	-9.187	-13.944	-14.461
259	3	-6.002	-4.610	0.234	-0.258	-14.580	-5.168	-5.661	-8.961	-9.479
260	0	9.948	5.767	-0.318	0.357	21.164	8.635	9.309	13.744	14.452
260	0.75	13.866	7.146	-0.318	0.357	28.072	12.161	12.836	18.727	19.435
260	1.5	22.792	11.283	-0.318	0.357	45.403	20.195	20.870	30.706	31.415
260	2.25	31.719	15.420	-0.318	0.357	62.735	28.229	28.904	42.686	43.394
260	3	35.637	16.799	-0.318	0.357	69.643	31.755	32.430	47.669	48.377
261	0	-35.429	-16.823	0.333	-0.357	-69.432	-31.553	-32.244	-47.450	-48.174
261	0.75	-31.511	-15.444	0.333	-0.357	-62.524	-28.027	-28.717	-42.467	-43.192
261	1.5	-22.584	-11.307	0.333	-0.357	-45.192	-19.993	-20.683	-30.487	-31.212
261	2.25	-13.658	-7.170	0.333	-0.357	-27.860	-11.959	-12.649	-18.508	-19.233
261	3	-9.740	-5.791	0.333	-0.357	-20.952	-8.433	-9.123	-13.525	-14.250
262	0	7.864	4.906	-0.300	0.341	17.287	6.778	7.418	11.034	11.706
262	0.75	11.782	6.285	-0.300	0.341	24.195	10.304	10.944	16.016	16.689
262	1.5	20.709	10.423	-0.300	0.341	41.527	18.338	18.978	27.996	28.668
262	2.25	29.636	14.560	-0.300	0.341	58.858	26.372	27.012	39.975	40.648
262	3	33.554	1.939	-0.300	0.341	65.766	29.898	30.539	44.958	45.630
263	0	-22.265	-0.102	0.004	0.004	-26.881	-20.034	-20.034	-23.437	-23.438
263	1.5	-4.608	-0.102	0.004	0.004	-5.693	-4.143	-4.144	-4.898	-4.899
263	3	13.048	-0.102	0.004	0.004	15.495	11.748	11.747	13.641	13.640
263	4.5	30.705	-0.102	0.004	0.004	36.683	27.639	27.638	32.181	32.180
263	6	48.361	-0.102	0.004	0.004	57.871	43.530	43.529	50.720	50.719
264	0	-26.813	-12.543	0.301	-0.335	-52.244	-23.830	-24.466	-35.739	-36.407
264	0.56	-24.344	-11.767	0.301	-0.335	-48.040	-21.608	-22.244	-32.658	-33.326
264	1.13	-19.057	-9.440	0.301	-0.335	-37.973	-16.851	-17.486	-25.642	-26.309
264	1.69	-13.771	-7.113	0.301	-0.335	-27.906	-12.093	-12.728	-18.625	-19.292
264	2.25	-11.302	-6.337	0.301	-0.335	-23.702	-9.871	-10.506	-15.544	-16.211
265	0	9.507	5.780	-0.266	0.307	20.656	8.290	8.863	13.344	13.945
265	0.56	11.976	6.556	-0.266	0.307	24.860	10.512	11.085	16.425	17.026
265	1.13	17.262	8.883	-0.266	0.307	34.927	15.270	15.842	23.442	24.043
265	1.69	22.548	11.210	-0.266	0.307	44.994	20.028	20.600	30.459	31.060
265	2.25	25.017	11.986	-0.266	0.307	49.198	22.250	22.822	33.540	34.141
266	0	-82.807	-27.562	1.408	-1.280	-143.467	-73.118	-75.806	-102.833	-105.655
266	0.75	-76.062	-26.183	1.408	-1.280	-133.166	-67.048	-69.735	-94.882	-97.703
266	1.5	-64.308	-22.045	1.408	-1.280	-112.442	-56.469	-59.157	-79.933	-82.755
266	2.25	-52.554	-17.908	1.408	-1.280	-91.718	-45.891	-48.578	-64.985	-67.807
266	3	-45.808	-16.529	1.408	-1.280	-81.417	-39.820	-42.508	-57.034	-59.856
267	0	0.884	4.477	-0.512	0.668	8.224	0.284	1.463	3.212	4.450
267	0.75	7.629	5.856	-0.512	0.668	18.525	6.354	7.531	11.163	12.401
267	1.5	19.383	9.994	-0.512	0.668	39.249	16.933	18.113	26.111	27.349
267	2.25	31.137	14.131	-0.512	0.668	59.974	27.512	28.691	41.059	42.297
267	3	37.882	15.510	-0.512	0.668	70.274	33.582	34.762	49.010	50.249
268	0	-35.789	0.048	-0.003	-0.004	-42.871	-32.213	-32.214	-37.552	-37.553
268	1.5	-18.133	0.048	-0.003	-0.004	-21.683	-16.323	-16.324	-19.013	-19.014
268	3	-0.477	0.048	-0.003	-0.004	-0.495	-0.432	-0.433	-0.473	-0.474
268	4.5	17.180	0.048	-0.003	-0.004	20.692	15.459	15.458	18.066	18.065
268	6	34.836	0.048	-0.003	-0.004	41.880	31.350	31.349	36.605	36.604
269	0	-31.692	-15.643	0.234	-0.258	-63.059	-28.288	-28.781	-42.885	-43.403
269	0.75	-27.774	-14.264	0.234	-0.258	-56.151	-24.762	-25.255	-37.903	-38.420
269	1.5	-18.847	-10.127	0.234	-0.258	-38.819	-16.728	-17.221	-25.923	-26.441
269	2.25	-9.920	-5.989	0.234	-0.258	-21.488	-8.694	-9.187	-13.944	-14.461
269	3	-6.002	-4.610	0.234	-0.258	-14.580	-5.168	-5.661	-8.961	-9.479
270	0	9.948	5.767	-0.318	0.357	21.164	8.635	9.310	13.744	14.453
270	0.75	13.866	7.146	-0.318	0.357	28.072	12.161	12.836	18.727	19.435
270	1.5	22.792	11.283	-0.318	0.357	45.404	20.195	20.870	30.706	31.415
270	2.25	31.719	15.420	-0.318	0.357	62.735	28.229	28.904	42.686	43.394
270	3	35.637	16.799	-0.318	0.357	69.643	31.755	32.430	47.669	48.377
271	0	-35.430	-16.823	0.333	-0.357	-69.433	-31.554	-32.244	-47.450	-48.175
271	0.75	-31.512	-15.444	0.333	-0.357	-62.525	-28.028	-28.718	-42.468	-43.192
271	1.5	-22.585	-11.307	0.333	-0.357	-45.193	-19.994	-20.684	-30.488	-31.213
271	2.25	-13.658	-7.170	0.333	-0.357	-27.862	-11.960	-12.650	-18.509	-19.233
271	3	-9.740	-5.791	0.333	-0.357	-20.954	-8.434	-9.124	-13.526	-14.251
272	0	7.863	4.906	-0.300	0.341	17.284	6.777	7.417	11.032	11.704
272	0.75	11.781	6.285	-0.300	0.341	24.193	10.303	10.943	16.015	16.687
272	1.5	20.708	10.422	-0.300	0.341	41.524	18.337	18.977	27.994	28.666

272	2.25	29.634	14.559	-0.300	0.341	58.856	26.371	27.011	39.974	40.646
272	3	33.552	15.938	-0.300	0.341	65.764	29.897	30.537	44.956	45.628
273	0	-26.805	-12.539	0.301	-0.335	-52.229	-23.824	-21.459	-35.729	-36.397
273	0.56	-24.336	-11.763	0.301	-0.335	-48.025	-21.602	-22.237	-32.648	-33.316
273	1.13	-19.050	-9.436	0.301	-0.335	-37.958	-16.844	-17.480	-25.632	-26.299
273	1.69	-13.764	-7.109	0.301	-0.335	-27.891	-12.087	-12.722	-18.615	-19.282
273	2.25	-11.295	-6.333	0.301	-0.335	-23.687	-9.865	-10.509	-15.534	-16.201
274	0	9.523	5.789	-0.266	0.307	20.690	8.305	8.878	13.368	13.968
274	0.56	11.992	6.565	-0.266	0.307	24.894	10.527	11.100	16.449	17.049
274	1.13	17.278	8.892	-0.266	0.307	34.961	15.285	15.857	23.465	24.066
274	1.69	22.565	11.219	-0.266	0.307	45.028	20.043	20.615	30.482	31.083
274	2.25	25.034	11.995	-0.266	0.307	49.232	22.265	22.837	33.563	34.164
275	0	1.794	1.716	0.357	-0.279	4.898	1.972	1.336	3.340	2.672
275	0.75	7.287	2.405	0.357	-0.279	12.593	6.916	6.280	9.542	8.874
275	1.5	15.284	4.474	0.357	-0.279	25.499	14.113	13.477	19.242	18.574
275	2.25	23.282	6.542	0.357	-0.279	38.406	21.311	20.675	28.943	28.275
275	3	28.775	7.232	0.357	-0.279	46.100	26.254	25.618	35.145	34.477
276	0	1.814	1.727	0.357	-0.279	4.939	1.990	1.354	3.367	2.700
276	0.75	7.307	2.416	0.357	-0.279	12.634	6.933	6.297	9.569	8.902
276	1.5	15.304	4.485	0.357	-0.279	25.540	14.131	13.495	19.270	18.602
276	2.25	23.301	6.553	0.357	-0.279	38.447	21.329	20.693	28.970	28.302
276	3	28.794	7.243	0.357	-0.279	46.142	26.272	25.636	35.172	34.504
279	0	-128.876	-34.886	-21.263	22.497	-210.469	-137.251	-93.491	-179.624	-133.676
279	1.13	-106.951	-31.783	-21.263	22.497	-179.194	-117.518	-73.758	-154.647	-108.699
279	2.25	-77.825	-24.715	-21.263	22.497	-132.935	-91.306	-47.545	-119.613	-73.665
279	3.38	-48.700	-17.648	-21.263	22.497	-86.676	-65.093	-21.333	-84.579	-38.631
279	4.5	-26.775	-14.545	-21.263	22.497	-55.401	-45.360	-1.600	-59.603	-13.654
280	0	32.980	13.916	-20.507	21.808	61.812	9.175	51.490	21.864	66.295
280	1.13	54.906	17.019	-20.507	21.808	93.117	28.908	71.223	46.840	91.271
280	2.25	84.031	24.086	-20.507	21.808	139.375	55.121	97.436	81.874	126.205
280	3.38	113.156	31.154	-20.507	21.808	185.634	81.333	123.649	116.909	161.340
280	4.5	135.082	34.257	-20.507	21.808	216.909	101.066	143.382	141.885	186.316
283	0	-128.871	-34.883	-21.263	22.497	-210.458	-137.247	-93.486	-179.617	-133.669
283	1.13	-106.946	-31.780	-21.263	22.497	-179.183	-117.514	-73.754	-154.640	-108.692
283	2.25	-77.820	-24.713	-21.263	22.497	-132.924	-91.301	-47.541	-119.606	-73.658
283	3.38	-48.695	-17.645	-21.263	22.497	-86.666	-65.088	-21.328	-84.572	-38.624
283	4.5	-26.770	-14.542	-21.263	22.497	-55.391	-45.355	-1.595	-59.596	-13.647
284	0	32.984	13.918	-20.507	21.808	61.849	9.178	51.493	21.868	66.300
284	1.13	54.909	17.021	-20.507	21.808	93.124	28.911	71.226	46.845	91.276
284	2.25	84.034	24.088	-20.507	21.808	139.382	55.124	97.459	81.879	126.310
284	3.38	113.160	31.156	-20.507	21.808	185.641	81.336	123.652	116.913	161.344
284	4.5	135.085	34.259	-20.507	21.808	216.916	101.069	143.385	141.890	186.321
287	0	-35.302	0.094	-0.002	-0.003	-42.212	-31.774	-31.774	-37.010	-37.011
287	1.5	-17.645	0.094	-0.002	-0.003	-21.024	-15.883	-15.884	-18.470	-18.471
287	3	0.011	0.094	-0.002	-0.003	0.164	0.008	0.007	0.069	0.068
287	4.5	17.668	0.094	-0.002	-0.003	21.352	15.899	15.898	18.608	18.607
287	6	35.324	0.094	-0.002	-0.003	42.539	31.790	31.789	37.147	37.147
288	0	-57.606	-13.547	-0.010	-0.015	-90.801	-51.855	-51.860	-69.031	-69.036
288	0.75	-44.241	-12.168	-0.010	-0.015	-72.557	-39.827	-39.832	-54.129	-54.135
288	1.5	-25.867	-8.031	-0.010	-0.015	-43.890	-23.291	-23.296	-32.231	-32.236
288	2.25	-7.494	-5.893	-0.010	-0.015	-15.222	-6.755	-6.760	-10.332	-10.338
288	3	5.871	-2.514	-0.010	-0.015	3.022	5.273	5.268	4.569	4.564
289	0	55.715	20.857	-0.051	-0.063	100.229	50.092	50.086	71.587	71.574
289	0.75	69.079	22.236	-0.051	-0.063	118.473	62.120	62.108	86.488	86.476
289	1.5	87.453	26.374	-0.051	-0.063	147.141	78.656	78.644	108.387	108.375
289	2.25	105.826	30.511	-0.051	-0.063	175.809	95.192	95.180	130.286	130.273
289	3	119.191	31.890	-0.051	-0.063	194.053	107.221	107.209	145.187	145.175
294	0	-82.814	-27.587	-1.245	1.413	-143.516	-75.777	-73.119	-105.641	-102.851
294	0.75	-76.069	-26.208	-1.245	1.413	-133.216	-69.706	-67.048	-97.690	-94.899
294	1.5	-64.315	-22.071	-1.245	1.413	-112.492	-59.128	-56.470	-82.742	-79.951
294	2.25	-52.561	-17.934	-1.245	1.413	-91.767	-48.549	-45.891	-67.794	-65.003
294	3	-45.816	-16.555	-1.245	1.413	-81.467	-42.479	-39.821	-59.843	-57.052
295	0	0.798	4.448	0.690	-0.506	8.074	1.408	0.212	4.364	3.108
295	0.75	7.543	5.827	0.690	-0.506	18.375	7.478	6.282	12.316	11.060
295	1.5	19.297	9.965	0.690	-0.506	39.099	18.057	16.861	27.264	26.008
295	2.25	31.051	14.102	0.690	-0.506	59.823	28.636	27.439	42.212	40.956
295	3	37.796	15.481	0.690	-0.506	70.124	34.706	33.510	50.163	48.907

296	0	-31.662	-15.641	-0.260	0.236	-63.020	-28.757	-28.260	-43.373	-42.851
296	0.75	-27.744	-14.262	-0.260	0.236	-56.112	-25.231	-24.734	-38.390	-37.869
296	1.5	-18.818	-10.125	-0.260	0.236	-38.781	-17.196	-16.700	-26.411	-25.889
296	2.25	-9.891	-5.987	-0.260	0.236	-21.449	-9.162	-8.666	-14.431	-13.910
296	3	-5.973	-4.608	-0.260	0.236	-14.541	-5.636	-5.140	-9.448	-8.927
297	0	9.893	5.757	0.354	-0.316	21.082	9.257	8.588	14.386	13.683
297	0.75	13.811	7.136	0.354	-0.316	27.990	12.784	12.114	19.368	18.665
297	1.5	22.738	11.273	0.354	-0.316	45.322	20.818	20.148	31.348	30.645
297	2.25	31.664	15.410	0.354	-0.316	62.653	28.852	28.182	43.327	42.624
297	3	35.582	16.789	0.354	-0.316	69.562	32.378	31.708	48.310	47.607
298	0	-35.391	-16.794	-0.358	0.333	-69.340	-32.211	-31.519	-48.117	-47.392
298	0.75	-31.473	-15.415	-0.358	0.333	-62.432	-28.684	-27.993	-43.135	-42.409
298	1.5	-22.547	-11.278	-0.358	0.333	-45.101	-20.650	-19.959	-31.155	-30.429
298	2.25	-13.620	-7.141	-0.358	0.333	-27.769	-12.616	-11.925	-19.176	-18.450
298	3	-9.702	-5.762	-0.358	0.333	-20.861	-9.090	-8.399	-14.193	-13.467
299	0	7.785	4.966	0.347	-0.307	17.287	7.353	6.699	11.667	10.980
299	0.75	11.703	6.345	0.347	-0.307	24.195	10.880	10.225	16.650	15.963
299	1.5	20.630	10.482	0.347	-0.307	41.527	18.914	18.259	28.629	27.942
299	2.25	29.556	14.619	0.347	-0.307	58.858	26.948	26.294	40.609	39.922
299	3	33.474	17.998	0.347	-0.307	65.766	30.474	29.820	45.591	44.904
300	0	-24.467	-11.927	-0.385	0.358	-48.444	-22.405	-21.663	-33.608	-32.829
300	0.56	-21.998	-11.151	-0.385	0.358	-44.240	-20.183	-19.441	-30.527	-29.748
300	1.13	-16.712	-8.824	-0.385	0.358	-34.173	-15.425	-14.683	-23.511	-22.731
300	1.69	-11.426	-6.497	-0.385	0.358	-24.106	-10.668	-9.925	-16.494	-15.714
300	2.25	-8.957	-5.721	-0.385	0.358	-19.902	-8.446	-7.703	-13.413	-12.633
301	0	10.146	5.853	0.403	-0.368	21.541	9.535	8.764	14.765	13.955
301	0.56	12.615	6.629	0.403	-0.368	25.745	11.757	10.986	17.846	17.036
301	1.13	17.902	8.956	0.403	-0.368	35.812	16.515	15.744	24.863	24.053
301	1.69	23.188	11.283	0.403	-0.368	45.879	21.273	20.502	31.879	31.070
301	2.25	25.657	12.059	0.403	-0.368	50.083	23.495	22.724	34.961	34.151
302	0	-34.098	-16.402	-0.352	0.322	-67.160	-31.040	-30.367	-46.506	-45.798
302	0.75	-30.180	-15.023	-0.352	0.322	-60.252	-27.514	-26.840	-41.523	-40.816
302	1.5	-21.253	-10.886	-0.352	0.322	-42.921	-19.480	-18.805	-29.544	-28.836
302	2.25	-12.326	-6.748	-0.352	0.322	-25.589	-11.446	-10.772	-17.564	-16.857
302	3	-8.408	-5.369	-0.352	0.322	-18.681	-7.920	-7.246	-12.581	-11.874
303	0	8.407	5.369	0.352	-0.322	18.679	7.919	7.245	12.580	11.873
303	0.75	12.325	6.748	0.352	-0.322	25.587	11.445	10.771	17.563	16.855
303	1.5	21.252	10.885	0.352	-0.322	42.919	19.479	18.805	29.542	28.835
303	2.25	30.179	15.022	0.352	-0.322	60.250	27.513	26.839	41.522	40.814
303	3	34.097	16.401	0.352	-0.322	67.158	31.039	30.366	46.504	45.797
304	0	-25.656	-12.059	-0.403	0.368	-50.081	-23.494	-22.723	-34.960	-34.150
304	0.56	-23.187	-11.283	-0.403	0.368	-45.877	-21.272	-20.501	-31.879	-31.069
304	1.13	-17.901	-8.956	-0.403	0.368	-35.810	-16.514	-15.743	-24.862	-24.052
304	1.69	-12.615	-6.628	-0.403	0.368	-25.743	-11.757	-10.986	-17.845	-17.035
304	2.25	-10.146	-5.853	-0.403	0.368	-21.539	-9.535	-8.764	-14.764	-13.951
305	0	8.958	5.722	0.385	-0.358	19.904	8.447	7.704	13.414	12.635
305	0.56	11.427	6.498	0.385	-0.358	24.108	10.669	9.926	16.495	15.716
305	1.13	16.713	8.825	0.385	-0.358	34.175	15.426	14.684	23.512	22.733
305	1.69	21.999	11.152	0.385	-0.358	44.242	20.184	19.442	30.529	29.749
305	2.25	24.468	11.928	0.385	-0.358	48.446	22.406	21.664	33.610	32.830
306	0	-33.474	-15.998	-0.347	0.307	-65.766	-30.474	-29.820	-45.591	-44.904
306	0.75	-29.556	-14.619	-0.347	0.307	-58.858	-26.948	-26.294	-40.609	-39.922
306	1.5	-20.630	-10.482	-0.347	0.307	-41.527	-18.914	-18.260	-28.629	-27.942
306	2.25	-11.703	-6.345	-0.347	0.307	-24.195	-10.880	-10.225	-16.650	-15.963
306	3	-7.785	-4.966	-0.347	0.307	-17.287	-7.353	-6.699	-11.667	-10.980
307	0	9.702	5.762	0.358	-0.333	20.861	9.090	8.399	14.193	13.467
307	0.75	13.620	7.141	0.358	-0.333	27.769	12.616	11.925	19.176	18.450
307	1.5	22.547	11.278	0.358	-0.333	45.101	20.650	19.959	31.155	30.429
307	2.25	31.473	15.415	0.358	-0.333	62.432	28.684	27.993	43.135	42.409
307	3	35.391	16.794	0.358	-0.333	69.340	32.211	31.519	48.117	47.392
308	0	-35.582	-16.789	-0.354	0.316	-69.562	-32.378	-31.708	-48.310	-47.607
308	0.75	-31.664	-15.410	-0.354	0.316	-62.653	-28.852	-28.182	-43.327	-42.624
308	1.5	-22.738	-11.273	-0.354	0.316	-45.322	-20.818	-20.148	-31.348	-30.645
308	2.25	-13.811	-7.136	-0.354	0.316	-27.990	-12.784	-12.114	-19.368	-18.665
308	3	-9.893	-5.757	-0.354	0.316	-21.082	-9.257	-8.588	-14.386	-13.683
309	0	5.973	4.608	0.260	-0.236	14.541	5.636	5.140	9.448	8.927
309	0.75	9.891	5.987	0.260	-0.236	21.449	9.162	8.666	14.431	13.910

309	1.5	18.818	10.125	0.260	-0.236	38.780	17.196	16.700	26.411	25.889
309	2.25	27.744	14.262	0.260	-0.236	56.112	25.231	24.734	38.390	37.869
309	3	31.662	15.641	0.260	-0.236	63.020	28.757	28.260	43.373	42.851
310	0	-37.796	-15.481	-0.690	0.506	-70.124	-34.706	-33.510	-50.163	-48.907
310	0.75	-31.051	-14.102	-0.690	0.506	-59.823	-28.636	-27.439	-42.212	-40.956
310	1.5	-19.297	-9.965	-0.690	0.506	-39.099	-18.057	-16.861	-27.264	-26.008
310	2.25	-7.543	-5.827	-0.690	0.506	-18.375	-7.478	-6.282	-12.316	-11.060
310	3	-0.798	-4.448	-0.690	0.506	-8.074	-1.408	-0.212	-4.364	-3.108
311	0	45.816	16.555	1.245	-1.413	81.467	42.479	39.821	59.843	57.052
311	0.75	52.561	17.934	1.245	-1.413	91.767	48.549	45.891	67.794	65.003
311	1.5	64.315	22.071	1.245	-1.413	112.491	59.128	56.470	82.742	79.951
311	2.25	76.069	26.208	1.245	-1.413	133.216	69.706	67.048	97.690	94.899
311	3	82.814	27.587	1.245	-1.413	143.516	75.777	73.119	105.641	102.851
312	0	-25.453	-11.432	-2.895	2.878	-48.834	-25.802	-20.030	-36.967	-30.966
312	1.13	-17.698	-8.329	-2.895	2.878	-34.563	-18.823	-13.050	-26.869	-20.808
312	2.25	-1.177	-0.399	-2.895	2.878	-2.051	-3.954	1.818	-4.527	1.534
312	3.38	15.344	7.531	-2.895	2.878	30.461	10.914	16.687	17.815	23.876
312	4.5	23.099	10.633	-2.895	2.878	44.732	17.894	23.666	27.913	33.974
313	0	-23.594	-10.373	-0.976	0.930	-44.909	-22.210	-20.304	32.333	-30.332
313	1.13	-15.838	-7.270	-0.976	0.930	-30.638	-15.230	-13.325	-22.235	-20.234
313	2.25	0.682	0.659	-0.976	0.930	1.874	-0.362	1.544	0.107	2.108
313	3.38	17.203	8.589	-0.976	0.930	34.386	14.507	16.412	22.449	24.450
313	4.5	24.958	11.692	-0.976	0.930	48.657	21.487	23.392	32.547	34.548
314	0	-24.886	-11.680	-0.935	0.977	-48.551	-23.332	-21.420	-34.470	-32.462
314	1.13	-17.131	-8.577	-0.935	0.977	-34.280	-16.352	-14.440	-24.372	-22.365
314	2.25	-0.610	-0.647	-0.935	0.977	-1.768	-1.484	0.428	-2.030	-0.022
314	3.38	15.910	7.282	-0.935	0.977	30.744	13.385	15.297	20.312	22.320
314	4.5	23.666	10.385	-0.935	0.977	45.015	20.364	22.276	30.410	32.418
315	0	-22.947	-10.618	-2.869	2.897	-44.526	-23.522	-17.756	-33.797	-27.742
315	1.13	-15.192	-7.515	-2.869	2.897	-30.255	-16.543	-10.776	-23.699	-17.645
315	2.25	1.328	0.414	-2.869	2.897	2.257	-1.674	4.092	-1.357	4.698
315	3.38	17.849	8.344	-2.869	2.897	34.769	13.194	18.961	20.985	27.040
315	4.5	25.604	11.447	-2.869	2.897	49.040	20.174	25.941	31.083	37.138
316	0	-38.953	-16.079	-2.174	2.093	-72.470	-37.232	-32.965	-53.313	-48.833
316	1.13	-31.198	-12.976	-2.174	2.093	-58.199	-30.252	-25.985	-43.215	-38.735
316	2.25	-14.678	-5.046	-2.174	2.093	-25.687	-15.384	-11.117	-20.873	-16.393
316	3.38	1.843	2.883	-2.174	2.093	6.825	-0.515	3.752	1.469	5.949
316	4.5	9.598	5.986	-2.174	2.093	21.096	6.465	10.731	11.567	16.047
317	0	-6.352	-4.391	-1.621	1.478	-14.648	-7.338	-4.239	-11.138	-7.884
317	1.13	1.403	-1.288	-1.621	1.478	-0.377	-0.358	2.741	-1.040	2.214
317	2.25	17.924	6.642	-1.621	1.478	32.135	14.510	17.609	21.302	24.556
317	3.38	34.444	14.571	-1.621	1.478	64.647	29.379	32.478	43.644	46.898
317	4.5	42.200	17.674	-1.621	1.478	78.918	36.358	39.458	53.742	56.996
318	0	-42.016	-17.653	-1.478	1.623	-78.663	-39.292	-36.191	-56.790	-53.534
318	1.13	-34.261	-14.550	-1.478	1.623	-64.392	-32.313	-29.212	-46.692	-43.436
318	2.25	-17.740	-6.620	-1.478	1.623	-31.880	-17.444	-14.343	-24.350	-21.094
318	3.38	-1.219	1.309	-1.478	1.623	0.632	-2.576	0.525	-2.008	1.249
318	4.5	6.536	4.412	-1.478	1.623	14.903	4.404	7.505	8.090	11.346
319	0	-9.330	-5.953	-2.092	2.175	-20.721	-10.490	-6.222	-15.744	-11.263
319	1.13	-1.575	-2.850	-2.092	2.175	-6.450	-3.510	0.757	-5.646	-1.166
319	2.25	14.946	5.080	-2.092	2.175	26.062	11.359	15.626	16.696	21.177
319	3.38	31.466	13.009	-2.092	2.175	58.574	26.227	30.494	39.038	43.519
319	4.5	39.221	16.112	-2.092	2.175	72.845	33.207	37.474	49.136	53.617
320	0	-134.365	-36.973	-19.943	18.816	-220.394	-140.871	-102.113	-185.315	-144.619
320	1.13	-112.439	-33.870	-19.943	18.816	-189.119	-121.138	-82.380	-160.339	-119.643
320	2.25	-81.749	-25.940	-19.943	18.816	-139.603	-93.516	-54.758	-123.118	-82.422
320	3.38	-51.058	-18.011	-19.943	18.816	-90.087	-65.895	-27.137	-85.898	-45.202
320	4.5	-29.133	-14.908	-19.943	18.816	-58.812	-46.162	-7.404	-60.921	-20.225
321	0	41.933	18.715	-20.593	19.530	80.263	17.147	57.269	34.197	76.326
321	1.13	63.858	21.817	-20.593	19.530	111.538	36.879	77.002	59.173	101.302
321	2.25	94.549	29.747	-20.593	19.530	161.054	64.501	104.624	96.394	138.523
321	3.38	125.239	37.677	-20.593	19.530	210.570	92.122	132.245	133.615	175.744
321	4.5	147.165	40.779	-20.593	19.530	241.845	111.855	151.978	158.591	200.720
322	0	-143.984	-40.385	-19.529	20.603	-237.397	-149.114	-108.983	-197.131	-154.993
322	1.13	-122.059	-37.282	-19.529	20.603	-206.122	-129.381	-89.250	-172.154	-130.016
322	2.25	-91.368	-29.353	-19.529	20.603	-156.606	-101.760	-61.628	-134.934	-92.795
322	3.38	-60.678	-21.423	-19.529	20.603	-107.090	-74.138	-34.007	-97.713	-55.575



322	4.5	-38.752	-18.320	-19.529	20.603	-75.815	-54.406	-14.274	-72.736	-30.598
323	0	32.221	15.263	-18.817	19.954	63.087	10.183	48.953	23.691	64.400
323	1.13	54.147	18.366	-18.817	19.954	94.362	29.916	68.686	48.667	89.377
323	2.25	84.837	26.296	-18.817	19.954	143.878	57.537	96.308	85.888	126.597
323	3.38	115.528	34.225	-18.817	19.954	193.394	85.159	123.929	123.109	163.818
323	4.5	137.453	37.328	-18.817	19.954	224.669	104.891	143.662	148.085	188.795
324	0	-38.108	-15.931	-2.404	2.291	-71.218	-36.701	-32.006	-52.574	-47.644
324	1.13	-30.353	-12.828	-2.404	2.291	-56.947	-29.722	-25.027	-42.476	-37.546
324	2.25	-13.832	-4.898	-2.404	2.291	-24.435	-14.853	-10.158	-20.134	-15.204
324	3.38	2.688	3.032	-2.404	2.291	8.077	0.015	4.710	2.208	7.138
324	4.5	10.444	6.134	-2.404	2.291	22.347	6.995	11.690	12.306	17.236
325	0	-7.160	-4.562	-1.772	1.593	-15.892	-8.216	-4.851	-12.253	-8.720
325	1.13	0.595	-1.460	-1.772	1.593	-1.621	-1.236	2.128	-2.155	1.378
325	2.25	17.116	6.470	-1.772	1.593	30.891	13.632	16.997	20.187	23.720
325	3.38	33.636	14.400	-1.772	1.593	63.403	28.501	31.865	42.529	46.062
325	4.5	41.391	17.502	-1.772	1.593	77.674	35.480	38.845	52.627	56.160
326	0	-41.019	-17.440	-1.592	1.770	-77.126	-38.509	-35.146	-55.728	-52.198
326	1.13	-33.263	-14.337	-1.592	1.770	-62.855	-31.529	-28.167	-45.630	-42.100
326	2.25	-16.743	-6.407	-1.592	1.770	-30.343	-16.660	-13.298	-23.288	-19.758
326	3.38	-0.222	1.522	-1.592	1.770	2.169	-1.792	1.570	-0.946	2.585
326	4.5	7.533	4.625	-1.592	1.770	16.440	5.188	8.550	9.152	12.682
327	0	-9.954	-6.102	-2.297	2.410	-21.708	-11.256	-6.548	-16.708	-11.765
327	1.13	-2.199	-2.999	-2.297	2.410	-7.437	-4.276	0.432	-6.610	-1.667
327	2.25	14.322	4.930	-2.297	2.410	25.075	10.593	15.300	15.732	20.675
327	3.38	30.842	12.860	-2.297	2.410	57.587	25.461	30.169	38.074	43.017
327	4.5	38.598	15.963	-2.297	2.410	71.858	32.441	37.148	48.172	53.115
328	0	-26.372	0.088	-0.008	0.005	-31.506	-23.743	-23.730	-27.644	-27.630
328	1.13	-13.129	0.088	-0.008	0.005	-15.615	-11.825	-11.812	-13.739	-13.725
328	2.25	0.113	0.088	-0.008	0.005	0.276	0.093	0.107	0.165	0.179
328	3.38	13.355	0.088	-0.008	0.005	16.167	12.011	12.025	14.070	14.083
328	4.5	26.598	0.088	-0.008	0.005	32.058	23.930	23.943	27.974	27.988
329	0	-124.748	-32.758	-21.387	20.093	-202.110	-133.660	-92.181	-174.079	-130.526
329	1.13	-102.823	-29.655	-21.387	20.093	-170.835	-113.927	-72.448	-149.103	-105.549
329	2.25	-73.698	-22.587	-21.387	20.093	-124.576	-87.715	-46.235	-114.068	-70.515
329	3.38	-44.572	-15.519	-21.387	20.093	-78.318	-61.502	-20.022	-79.034	-35.481
329	4.5	-22.647	-12.416	-21.387	20.093	-47.043	-41.769	-0.290	-54.058	-10.504
330	0	37.719	16.065	-21.987	20.768	70.968	11.960	54.715	26.640	71.532
330	1.13	59.644	19.168	-21.987	20.768	102.243	31.693	74.448	51.616	96.509
330	2.25	88.770	26.236	-21.987	20.768	148.501	57.906	100.661	86.650	131.543
330	3.38	117.895	33.304	-21.987	20.768	194.760	84.118	126.873	121.685	166.577
330	4.5	139.820	36.407	-21.987	20.768	226.035	103.851	146.606	146.661	191.554
331	0	-132.752	-35.527	-20.802	22.004	-216.145	-140.278	-97.473	-183.613	-138.668
331	1.13	-110.827	-32.424	-20.802	22.004	-184.870	-120.546	-77.740	-158.637	-113.691
331	2.25	-81.701	-25.356	-20.802	22.004	-138.612	-94.333	-51.527	-123.603	-78.657
331	3.38	-52.576	-18.289	-20.802	22.004	-92.353	-68.120	-25.315	-88.568	-43.623
331	4.5	-30.651	-15.186	-20.802	22.004	-61.078	-48.387	-5.582	-63.592	-18.646
332	0	27.291	12.740	-20.070	21.339	53.132	4.492	45.900	15.608	59.087
332	1.13	49.216	15.843	-20.070	21.339	84.407	24.224	65.633	40.584	84.063
332	2.25	78.341	22.910	-20.070	21.339	130.666	50.437	91.846	75.618	119.098
332	3.38	107.467	29.978	-20.070	21.339	176.925	76.650	118.059	110.653	154.132
332	4.5	129.392	33.081	-20.070	21.339	208.200	96.383	137.792	135.629	179.108
333	0	-29.873	-11.938	-2.596	2.472	-54.949	-29.482	-24.414	-41.614	-36.293
333	1.13	-22.118	-8.835	-2.596	2.472	-40.678	-22.503	-17.435	-31.516	-26.195
333	2.25	-8.728	-2.629	-2.596	2.472	-14.680	-10.452	-5.383	-13.547	-8.226
333	3.38	4.662	3.576	-2.596	2.472	11.317	1.600	6.668	4.422	9.744
333	4.5	12.417	6.679	-2.596	2.472	25.588	8.579	13.647	14.520	19.842
334	0	-8.391	-5.438	-2.030	1.830	-18.770	-9.582	-5.722	-14.368	-10.315
334	1.13	-0.636	-2.335	-2.030	1.830	-4.499	-2.602	1.258	-4.270	-0.217
334	2.25	12.754	3.871	-2.030	1.830	21.498	9.449	13.309	13.699	17.752
334	3.38	26.144	10.077	-2.030	1.830	47.496	21.500	25.360	31.668	35.722
334	4.5	33.899	13.180	-2.030	1.830	61.767	28.479	32.340	41.766	45.819
335	0	-33.300	-13.248	-1.821	2.016	-61.157	-31.791	-27.954	-45.223	-41.194
335	1.13	-25.545	-10.145	-1.821	2.016	-46.886	-24.811	-20.974	-35.125	-31.096
335	2.25	-12.155	-3.939	-1.821	2.016	-20.888	-12.760	-8.923	-17.156	-13.127
335	3.38	1.235	2.267	-1.821	2.016	5.109	-0.709	3.128	0.813	4.842
335	4.5	8.991	5.369	-1.821	2.016	19.380	6.271	10.108	10.911	14.940
336	0	-10.113	-6.205	-2.609	2.742	-22.063	-11.710	-6.360	-17.267	-11.649

336	1.13	-2.357	-3.102	-2.609	2.742	-7.792	-4.730	0.620	-7.169	-1.551
336	2.25	11.033	3.104	-2.609	2.742	18.205	7.321	12.671	10.800	16.418
336	3.38	24.423	9.309	-2.609	2.742	44.202	19.372	24.722	28.770	34.388
336	4.5	32.178	12.412	-2.609	2.742	58.473	26.351	31.702	38.867	44.485
337	0	-3.607	-3.442	-0.715	0.557	-9.837	-3.961	-2.689	-6.707	-5.371
337	0.86	1.330	-1.618	-0.715	0.557	-0.993	0.482	1.754	-0.373	0.962
337	1.73	12.667	3.729	-0.715	0.557	21.166	10.685	11.957	14.899	16.234
337	2.59	24.003	9.076	-0.715	0.557	43.325	20.888	22.160	30.171	31.506
337	3.45	28.941	10.900	-0.715	0.557	52.169	25.332	26.604	36.504	37.840
338	0	-39.432	-16.754	-1.773	1.963	-74.125	-37.262	-33.526	-53.821	-49.898
338	1.13	-31.677	-13.651	-1.773	1.963	-59.854	-30.282	-26.546	-43.723	-39.800
338	2.25	-15.157	-5.721	-1.773	1.963	-27.342	-15.414	-11.678	-21.380	-17.458
338	3.38	1.364	2.208	-1.773	1.963	5.170	-0.545	3.191	0.962	4.884
338	4.5	9.119	5.311	-1.773	1.963	19.441	6.434	10.170	11.060	14.982
339	0	-7.697	-5.427	-2.477	2.606	-17.920	-9.404	-4.321	-14.102	-8.764
339	1.13	0.058	-2.324	-2.477	2.606	-3.649	-2.425	2.659	-4.004	1.333
339	2.25	16.579	5.605	-2.477	2.606	28.863	12.444	17.527	18.338	23.676
339	3.38	33.100	13.535	-2.477	2.606	61.375	27.312	32.396	40.680	46.018
339	4.5	40.855	16.638	-2.477	2.606	75.646	34.292	39.375	50.778	56.116
340	0	-29.869	-11.935	-2.596	2.472	-54.939	-29.478	-24.410	-41.608	-36.286
340	1.13	-22.113	-8.833	-2.596	2.472	-40.668	-22.498	-17.430	-31.510	-26.188
340	2.25	-8.723	-2.627	-2.596	2.472	-14.671	-10.447	-5.379	-13.541	-8.219
340	3.38	4.667	3.579	-2.596	2.472	11.326	1.604	6.672	4.429	9.750
340	4.5	12.422	6.682	-2.596	2.472	25.597	8.583	13.651	14.526	19.848
341	0	-8.396	-5.440	-2.030	1.830	-18.780	-9.586	-5.726	-14.375	-10.321
341	1.13	-0.641	-2.338	-2.030	1.830	-4.509	-2.607	1.254	-4.277	-0.224
341	2.25	12.749	3.868	-2.030	1.830	21.488	9.444	13.305	13.692	17.746
341	3.38	26.139	10.074	-2.030	1.830	47.486	21.495	25.356	31.661	35.715
341	4.5	33.894	13.177	-2.030	1.830	61.756	28.475	32.335	41.759	45.813
342	0	-33.299	-13.247	-1.821	2.016	-61.155	-31.790	-27.953	-45.222	-41.193
342	1.13	-25.544	-10.145	-1.821	2.016	-46.884	-24.811	-20.974	-35.124	-31.095
342	2.25	-12.154	-3.939	-1.821	2.016	-20.887	-12.759	-8.922	-17.155	-13.126
342	3.38	1.236	2.267	-1.821	2.016	5.110	-0.708	3.129	0.814	4.843
342	4.5	8.991	5.370	-1.821	2.016	19.381	6.271	10.108	10.912	14.941
343	0	-10.112	-6.205	-2.609	2.742	-22.063	-11.710	-6.359	-17.266	-11.648
343	1.13	-2.357	-3.102	-2.609	2.742	-7.792	-4.730	0.620	-7.168	-1.550
343	2.25	11.033	3.104	-2.609	2.742	18.206	7.321	12.671	10.801	16.419
343	3.38	24.423	9.310	-2.609	2.742	44.203	19.372	24.722	28.770	34.388
343	4.5	32.178	12.412	-2.609	2.742	58.474	26.352	31.702	38.868	44.486
344	0	-124.744	-32.755	-21.387	20.093	-202.101	-133.656	-92.177	-174.073	-130.520
344	1.13	-102.819	-29.652	-21.387	20.093	-170.826	-113.924	-72.444	-149.097	-105.543
344	2.25	-73.693	-22.585	-21.387	20.093	-124.567	-87.711	-46.231	-114.062	-70.509
344	3.38	-44.568	-15.517	-21.387	20.093	-78.309	-61.498	-20.019	-79.028	-35.475
344	4.5	-22.643	-12.414	-21.387	20.093	-47.034	-41.765	-0.286	-54.052	-10.498
345	0	37.715	16.063	-21.987	20.768	70.959	11.956	54.711	26.634	71.527
345	1.13	59.640	19.166	-21.987	20.768	102.234	31.689	74.444	51.610	96.503
345	2.25	88.765	26.234	-21.987	20.768	148.493	57.902	100.657	86.644	131.537
345	3.38	117.891	33.301	-21.987	20.768	194.751	84.115	126.870	121.679	165.571
345	4.5	139.816	36.404	-21.987	20.768	226.026	103.847	146.602	146.655	191.548
346	0	-132.752	-35.527	-20.802	22.004	-216.146	-140.278	-97.473	-183.613	-138.668
346	1.13	-110.827	-32.424	-20.802	22.004	-184.871	-120.546	-77.740	-158.637	-113.691
346	2.25	-81.701	-25.356	-20.802	22.004	-138.612	-94.333	-51.528	-123.603	-78.657
346	3.38	-52.576	-18.289	-20.802	22.004	-92.353	-68.120	-25.315	-88.568	-43.623
346	4.5	-30.651	-15.186	-20.802	22.004	-61.078	-48.387	-5.582	-63.592	-18.647
347	0	27.292	12.740	-20.070	21.339	53.134	4.492	45.901	15.609	59.088
347	1.13	49.217	15.843	-20.070	21.339	84.409	24.225	65.634	40.585	84.065
347	2.25	78.342	22.911	-20.070	21.339	130.668	50.438	91.847	75.620	119.099
347	3.38	107.468	29.978	-20.070	21.339	176.927	76.651	118.060	110.654	154.133
347	4.5	129.393	33.081	-20.070	21.339	208.202	96.384	137.792	135.630	179.110
348	0	-38.598	-15.963	2.297	-2.410	-71.858	-32.441	-37.148	-48.172	-53.115
348	1.13	-30.842	-12.860	2.297	-2.410	-57.587	-25.461	-30.169	-38.074	-43.017
348	2.25	-14.322	-4.930	2.297	-2.410	-25.075	-10.593	-15.300	-15.732	-20.675
348	3.38	2.199	2.999	2.297	-2.410	7.437	4.276	-0.432	6.610	1.667
348	4.5	9.954	6.102	2.297	-2.410	21.708	11.256	6.548	16.708	11.765
349	0	-7.533	-4.625	1.592	-1.770	-16.440	-5.188	-8.550	-9.152	-12.682
349	1.13	0.222	-1.523	1.592	-1.770	-2.169	1.792	-1.570	0.946	-2.585
349	2.25	16.743	6.407	1.592	-1.770	30.343	16.660	13.298	23.288	19.758



349	3.38	33.263	14.337	1.592	-1.770	62.855	31.529	28.167	45.630	42.100
349	4.5	41.019	17.440	1.592	-1.770	77.126	38.509	35.146	55.728	52.198
350	0	-41.392	-17.503	1.772	-1.593	-77.674	-35.481	-38.845	-52.628	-56.161
350	1.13	-33.637	-14.400	1.772	-1.593	-63.404	-28.501	-31.866	-42.530	-46.063
350	2.25	-17.116	-6.470	1.772	-1.593	-30.892	-13.632	-16.997	-20.187	-23.721
350	3.38	-0.595	1.459	1.772	-1.593	1.620	1.236	-2.129	2.155	-1.378
350	4.5	7.160	4.562	1.772	-1.593	15.891	8.216	4.851	12.253	8.720
351	0	-10.443	-6.134	2.404	-2.291	-22.347	-6.995	-11.690	-12.306	-17.235
351	1.13	-2.688	-3.031	2.404	-2.291	-8.076	-0.015	-4.710	-2.208	-7.138
351	2.25	13.833	4.898	2.404	-2.291	24.436	14.854	10.158	20.135	15.295
351	3.38	30.353	12.828	2.404	-2.291	56.948	29.722	25.027	42.477	37.547
351	4.5	38.108	15.931	2.404	-2.291	71.219	36.702	32.007	52.575	47.645
352	0	-134.365	-36.973	-19.943	18.816	-220.395	-140.871	-102.113	-185.316	-144.620
352	1.13	-112.440	-33.870	-19.943	18.816	-189.120	-121.138	-82.380	-160.339	-119.644
352	2.25	-81.749	-25.940	-19.943	18.816	-139.604	-93.517	-54.759	-123.119	-82.423
352	3.38	-51.059	-18.011	-19.943	18.816	-90.088	-65.895	-27.137	-85.898	-45.202
352	4.5	-29.133	-14.908	-19.943	18.816	-58.813	-46.162	-7.404	-60.922	-20.226
353	0	41.933	18.715	-20.593	19.530	80.264	17.147	57.270	34.198	76.326
353	1.13	63.859	21.818	-20.593	19.530	111.539	36.880	77.002	59.174	101.303
353	2.25	94.549	29.747	-20.593	19.530	161.055	64.501	104.624	96.395	138.524
353	3.38	125.240	37.677	-20.593	19.530	210.571	92.123	132.245	133.615	175.744
353	4.5	147.165	40.780	-20.593	19.530	241.846	111.855	151.978	158.592	200.721
354	0	-143.984	-40.385	-19.529	20.603	-237.397	-149.114	-108.983	-197.131	-154.992
354	1.13	-122.059	-37.282	-19.529	20.603	-206.122	-129.381	-89.250	-172.154	-130.016
354	2.25	-91.368	-29.352	-19.529	20.603	-156.606	-101.760	-61.628	-134.934	-92.795
354	3.38	-60.677	-21.423	-19.529	20.603	-107.090	-74.138	-34.007	-97.713	-55.575
354	4.5	-38.752	-18.320	-19.529	20.603	-75.815	-54.405	-14.274	-72.736	-30.598
355	0	32.222	15.263	-18.817	19.954	63.087	10.183	48.953	23.691	64.400
355	1.13	54.147	18.366	-18.817	19.954	94.362	29.916	68.686	48.668	89.377
355	2.25	84.837	26.296	-18.817	19.954	143.878	57.537	96.308	85.888	126.597
355	3.38	115.528	34.225	-18.817	19.954	193.394	85.159	123.929	123.109	163.818
355	4.5	137.453	37.328	-18.817	19.954	224.669	104.891	143.662	148.085	188.795
356	0	-39.221	-16.112	2.092	-2.175	-72.845	-33.207	-37.474	-49.136	-53.617
356	1.13	-31.466	-13.009	2.092	-2.175	-58.574	-26.227	-30.494	-39.038	-43.519
356	2.25	-14.946	-5.080	2.092	-2.175	-26.062	-11.359	-15.626	-16.696	-21.177
356	3.38	1.575	2.850	2.092	-2.175	6.450	3.510	-0.757	5.646	1.166
356	4.5	9.330	5.953	2.092	-2.175	20.721	10.490	6.222	15.744	11.263
357	0	-6.536	-4.412	1.478	-1.623	-14.903	-4.404	-7.505	-8.090	-11.346
357	1.13	1.219	-1.309	1.478	-1.623	-0.632	2.576	-0.525	2.008	-1.249
357	2.25	17.740	6.620	1.478	-1.623	31.880	17.444	14.343	24.350	21.094
357	3.38	34.260	14.550	1.478	-1.623	64.392	32.313	29.212	46.692	43.436
357	4.5	42.016	17.653	1.478	-1.623	78.663	39.292	36.191	56.790	53.534
358	0	-42.200	-17.674	1.621	-1.478	-78.918	-36.358	-39.457	-53.742	-56.996
358	1.13	-34.444	-14.571	1.621	-1.478	-64.647	-29.379	-32.478	-43.644	-46.898
358	2.25	-17.924	-6.642	1.621	-1.478	-32.135	-14.510	-17.609	-21.302	-24.556
358	3.38	-1.403	1.288	1.621	-1.478	0.377	0.358	-2.741	1.040	-2.214
358	4.5	6.352	4.391	1.621	-1.478	14.648	7.338	4.239	11.138	7.884
359	0	-9.598	-5.986	2.174	-2.093	-21.096	-6.465	-10.731	-11.567	-16.047
359	1.13	-1.843	-2.883	2.174	-2.093	-6.825	0.515	-3.752	-1.469	-5.949
359	2.25	14.678	5.046	2.174	-2.093	25.687	15.384	11.117	20.873	16.393
359	3.38	31.198	12.976	2.174	-2.093	58.199	30.252	25.985	43.215	38.735
359	4.5	38.953	16.079	2.174	-2.093	72.470	37.232	32.965	53.313	48.833
360	0	-25.453	-11.432	-2.895	2.878	-48.834	-25.802	-20.030	-36.967	-30.906
360	1.13	-17.698	-8.329	-2.895	2.878	-34.563	-18.823	-13.050	-26.869	-20.808
360	2.25	-1.177	-0.399	-2.895	2.878	-2.051	-3.954	1.818	-4.527	1.534
360	3.38	15.344	7.531	-2.895	2.878	30.461	10.914	16.687	17.815	23.876
360	4.5	23.099	10.633	-2.895	2.878	44.732	17.894	23.666	27.913	33.974
361	0	-23.594	-10.373	-0.976	0.930	-44.909	-22.210	-20.304	-32.333	-30.332
361	1.13	-15.838	-7.270	-0.976	0.930	-30.638	-15.230	-13.325	-22.235	-20.234
361	2.25	0.682	0.659	-0.976	0.930	1.874	-0.362	1.544	0.107	2.108
361	3.38	17.203	8.589	-0.976	0.930	34.386	14.507	16.412	22.450	24.450
361	4.5	24.958	11.692	-0.976	0.930	48.657	21.487	23.392	32.547	34.548
362	0	-24.886	-11.680	-0.935	0.977	-48.551	-23.332	-21.420	-34.470	-32.462
362	1.13	-17.131	-8.577	-0.935	0.977	-34.280	-16.352	-14.440	-24.372	-22.365
362	2.25	-0.610	-0.647	-0.935	0.977	-1.768	-1.484	0.428	-2.030	-0.022
362	3.38	15.910	7.282	-0.935	0.977	30.744	13.385	15.297	20.312	22.320
362	4.5	23.666	10.385	-0.935	0.977	45.015	20.364	22.276	30.410	32.418

363	0	-22.947	-10.618	-2.869	2.897	-44.526	-23.522	-17.756	-33.797	-27.742
363	1.13	-15.192	-7.515	-2.869	2.897	-30.255	-16.543	-10.776	-23.699	-17.645
363	2.25	1.328	0.414	-2.869	2.897	2.257	-1.674	4.092	-1.357	4.698
363	3.38	17.849	8.344	-2.869	2.897	34.769	13.194	18.961	20.985	27.040
363	4.5	25.604	11.447	-2.869	2.897	49.040	20.174	25.941	31.083	37.138
364	0	-35.313	0.000	0.000	0.000	-42.375	-31.782	-31.782	-37.078	-37.078
364	1.5	-17.656	0.000	0.000	0.000	-21.187	-15.891	-15.891	-18.539	-18.539
364	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
364	4.5	17.657	0.000	0.000	0.000	21.188	15.891	15.891	18.539	18.539
364	6	35.313	0.000	0.000	0.000	42.376	31.782	31.782	37.079	37.079
413	0	-26.598	-0.088	0.008	-0.005	-32.058	-23.930	-23.943	-27.974	-27.988
413	1.13	-13.355	-0.088	0.008	-0.005	-16.167	-12.012	-12.025	-14.070	-14.084
413	2.25	-0.113	-0.088	0.008	-0.005	-0.276	-0.093	-0.107	-0.165	-0.179
413	3.38	13.129	-0.088	0.008	-0.005	15.614	11.825	11.811	13.739	13.725
413	4.5	26.372	-0.088	0.008	-0.005	31.505	23.743	23.730	27.644	27.630
414	0	-35.324	-0.094	0.002	0.003	-42.539	-31.790	-31.789	-37.148	-37.147
414	1.5	-17.668	-0.094	0.002	0.003	-21.352	-15.899	-15.898	-18.608	-18.607
414	3	-0.011	-0.094	0.002	0.003	-0.164	-0.008	-0.007	-0.069	-0.068
414	4.5	17.645	-0.094	0.002	0.003	21.024	15.883	15.884	18.470	18.471
414	6	35.302	-0.094	0.002	0.003	42.212	31.774	31.774	37.010	37.010
415	0	-34.836	-0.048	0.003	0.004	-41.880	-31.350	-31.349	-36.605	-36.604
415	1.5	-17.180	-0.048	0.003	0.004	-20.692	-15.459	-15.458	-18.066	-18.065
415	3	0.477	-0.048	0.003	0.004	0.495	0.432	0.433	0.473	0.474
415	4.5	18.133	-0.048	0.003	0.004	21.683	16.323	16.321	19.013	19.014
415	6	35.789	-0.048	0.003	0.004	42.871	32.213	32.214	37.552	37.553
416	0	-48.361	0.102	-0.004	-0.004	-57.871	-43.530	-43.529	-50.720	-50.719
416	1.5	-30.705	0.102	-0.004	-0.004	-36.683	-27.639	-27.638	-32.181	-32.180
416	3	-13.048	0.102	-0.004	-0.004	-15.495	-11.748	-11.747	-13.641	-13.640
416	4.5	4.608	0.102	-0.004	-0.004	5.693	4.143	4.144	4.898	4.899
416	6	22.265	0.102	-0.004	-0.004	26.880	20.034	20.034	23.437	23.438
427	0	-35.593	-0.218	0.031	-0.026	-43.060	-32.003	-32.059	-37.477	-37.537
427	1.5	-17.936	-0.218	0.031	-0.026	-21.872	-16.112	-16.168	-18.938	-18.997
427	3	-0.280	-0.218	0.031	-0.026	-0.684	-0.221	-0.278	-0.399	-0.458
427	4.5	17.377	-0.218	0.031	-0.026	20.504	15.670	15.613	18.141	18.081
427	6	35.033	-0.218	0.031	-0.026	41.691	31.561	31.504	36.680	36.621
428	0	-35.532	-0.092	-0.024	0.028	-42.785	-32.003	-31.951	-37.392	-37.337
428	1.5	-17.875	-0.092	-0.024	0.028	-21.597	-16.112	-16.060	-18.853	-18.798
428	3	-0.219	-0.092	-0.024	0.028	-0.409	-0.221	-0.169	-0.313	-0.258
428	4.5	17.438	-0.092	-0.024	0.028	20.778	15.669	15.722	18.226	18.281
428	6	35.094	-0.092	-0.024	0.028	41.966	31.560	31.612	36.765	36.820
429	0	-35.315	0.051	-0.021	0.024	-42.296	-31.805	-31.760	-37.071	-37.023
429	1.5	-17.658	0.051	-0.021	0.024	-21.109	-15.914	-15.869	-18.532	-18.484
429	3	-0.002	0.051	-0.021	0.024	0.079	-0.023	0.022	0.008	0.055
429	4.5	17.655	0.051	-0.021	0.024	21.267	15.868	15.913	18.547	18.594
429	6	35.311	0.051	-0.021	0.024	42.455	31.759	31.804	37.086	37.134
430	0	-26.025	0.203	-0.011	0.014	-30.905	-23.433	-23.409	-27.210	-27.184
430	1.13	-12.782	0.203	-0.011	0.014	-15.014	-11.515	-11.491	-13.305	-13.279
430	2.25	0.460	0.203	-0.011	0.014	0.877	0.403	0.428	0.599	0.625
430	3.38	13.702	0.203	-0.011	0.014	16.768	12.321	12.346	14.504	14.530
430	4.5	26.945	0.203	-0.011	0.014	32.658	24.239	24.264	28.408	28.434
431	0	-35.313	0.000	0.000	0.000	-42.375	-31.782	-31.782	-37.079	-37.079
431	1.5	-17.656	0.000	0.000	0.000	-21.188	-15.891	-15.891	-18.539	-18.539
431	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
431	4.5	17.657	0.000	0.000	0.000	21.188	15.891	15.891	18.539	18.539
431	6	35.313	0.000	0.000	0.000	42.376	31.782	31.782	37.079	37.079
432	0	-26.945	-0.203	0.011	-0.014	-32.659	-24.239	-24.264	-28.408	-28.434
432	1.13	-13.702	-0.203	0.011	-0.014	-16.768	-12.321	-12.346	-14.504	-14.530
432	2.25	-0.460	-0.203	0.011	-0.014	-0.877	-0.403	-0.428	-0.599	-0.625
432	3.38	12.782	-0.203	0.011	-0.014	15.014	11.515	11.491	13.305	13.279
432	4.5	26.025	-0.203	0.011	-0.014	30.905	23.433	23.409	27.210	27.184
433	0	-35.311	-0.051	0.021	-0.024	-42.455	-31.759	-31.804	-37.086	-37.134
433	1.5	-17.655	-0.051	0.021	-0.024	-21.267	-15.868	-15.913	-18.547	-18.595
433	3	0.002	-0.051	0.021	-0.024	-0.079	0.023	-0.022	-0.008	-0.055
433	4.5	17.658	-0.051	0.021	-0.024	21.108	15.914	15.869	18.532	18.484
433	6	35.315	-0.051	0.021	-0.024	42.296	31.805	31.760	37.071	37.023
434	0	-35.094	0.092	0.024	-0.028	-41.966	-31.560	-31.612	-36.765	-36.820
434	1.5	-17.438	0.092	0.024	-0.028	-20.778	-15.669	-15.722	-18.226	-18.281

434	3	0.219	0.092	0.024	-0.028	0.409	0.221	0.169	0.313	0.258
434	4.5	17.875	0.092	0.024	-0.028	21.597	16.112	16.060	18.853	18.798
434	6	35.532	0.092	0.024	-0.028	42.785	32.003	31.951	37.392	37.337
435	0	-35.033	0.218	-0.031	0.026	-41.691	-31.561	-31.504	-36.680	-36.621
435	1.5	-17.377	0.218	-0.031	0.026	-20.504	-15.670	-15.613	-18.141	-18.081
435	3	0.280	0.218	-0.031	0.026	0.684	0.221	0.278	0.398	0.458
435	4.5	17.936	0.218	-0.031	0.026	21.872	16.112	16.168	18.938	18.977
435	6	35.593	0.218	-0.031	0.026	43.060	32.003	32.059	37.477	37.537
452	0	-16.979	-0.646	-1.368	1.483	-21.408	-16.650	-13.798	-19.672	-16.678
452	0.56	-10.278	-0.273	-1.368	1.483	-12.771	-10.619	-7.767	-12.401	-9.407
452	1.13	-3.127	0.347	-1.368	1.483	-3.196	-4.182	-1.331	-4.501	-1.597
452	1.69	4.025	0.968	-1.368	1.483	15.016	8.285	11.137	10.670	13.664
452	2.25	10.726	1.340	-1.368	1.483	32.739	29.462	29.447	39.675	39.660
455	0	-32.723	-8.419	-0.011	0.004	-52.739	-29.462	-29.447	-35.935	-35.919
455	0.3	-29.625	-7.647	-0.011	0.004	-47.785	-26.673	-26.658	-32.754	-32.739
455	0.6	-26.926	-7.096	-0.011	0.004	-43.665	-24.245	-24.230	-30.134	-30.118
455	0.9	-24.629	-6.765	-0.011	0.004	-40.378	-22.177	-22.162	-28.073	-28.057
455	1.2	-22.732	-6.654	-0.011	0.004	-37.926	-20.470	-20.455	-28.073	-28.057
457	0	22.732	6.654	0.011	-0.004	37.926	20.470	20.455	28.073	28.057
457	0.3	24.629	6.765	0.011	-0.004	40.378	22.177	22.162	30.134	30.118
457	0.6	26.926	7.096	0.011	-0.004	43.665	24.245	24.230	32.754	32.739
457	0.9	29.625	7.647	0.011	-0.004	47.785	26.673	26.658	35.935	35.919
457	1.2	32.723	8.419	0.011	-0.004	52.739	29.462	29.447	39.675	39.660
461	0	-45.631	-10.996	-1.358	0.726	-72.351	-42.426	-40.341	-56.266	-54.077
461	0.45	-42.185	-10.500	-1.358	0.726	-67.421	-39.324	-37.240	-52.334	-50.146
461	0.9	-36.935	-9.010	-1.358	0.726	-58.739	-34.600	-32.515	-45.884	-43.696
461	1.35	-31.686	-7.521	-1.358	0.726	-50.057	-29.875	-27.791	-39.434	-37.246
461	1.8	-28.240	-7.024	-1.358	0.726	-45.127	-26.774	-24.690	-35.503	-33.315
462	0	-48.557	-12.141	-0.151	2.706	-77.694	-43.853	-40.996	-58.792	-55.793
462	0.45	-45.111	-11.644	-0.151	2.706	-72.764	-40.751	-37.894	-54.861	-51.861
462	0.9	-39.862	-10.155	-0.151	2.706	-64.082	-36.027	-33.170	-48.411	-45.411
462	1.35	-34.612	-8.666	-0.151	2.706	-55.400	-31.302	-28.445	-41.961	-38.961
462	1.8	-31.166	-8.169	-0.151	2.706	-50.470	-28.201	-25.344	-38.030	-35.030
463	0	-14.582	-5.424	0.108	-0.221	-26.176	-13.016	-13.344	-18.614	-18.960
463	0.64	-11.579	-4.431	0.108	-0.221	-20.984	-10.313	-10.642	-14.836	-15.181
463	1.27	-9.970	-1.452	0.108	-0.221	-8.287	-4.365	-4.694	-6.020	-6.365
463	1.91	1.639	1.527	0.108	-0.221	4.409	1.583	1.254	2.796	2.451
463	2.55	4.641	2.520	0.108	-0.221	9.601	4.285	3.956	6.574	6.229
464	0	-48.557	-12.141	-0.151	2.706	-77.694	-43.853	-40.996	-58.792	-55.793
464	0.45	-45.111	-11.644	-0.151	2.706	-72.764	-40.751	-37.894	-54.861	-51.861
464	0.9	-39.862	-10.155	-0.151	2.706	-64.082	-36.027	-33.170	-48.411	-45.411
464	1.35	-34.612	-8.666	-0.151	2.706	-55.400	-31.302	-28.445	-41.961	-38.961
464	1.8	-31.166	-8.169	-0.151	2.706	-50.470	-28.201	-25.344	-38.030	-35.030
465	0	-45.631	-10.996	-1.358	0.726	-72.351	-42.426	-40.341	-56.266	-54.077
465	0.45	-42.185	-10.500	-1.358	0.726	-67.421	-39.324	-37.240	-52.334	-50.146
465	0.9	-36.935	-9.010	-1.358	0.726	-58.739	-34.600	-32.515	-45.884	-43.696
465	1.35	-31.686	-7.521	-1.358	0.726	-50.057	-29.875	-27.791	-39.434	-37.246
465	1.8	-28.240	-7.024	-1.358	0.726	-45.127	-26.774	-24.690	-35.503	-33.315
466	0	-14.582	-5.424	0.108	-0.221	-26.176	-13.016	-13.344	-18.614	-18.960
466	0.64	-11.579	-4.431	0.108	-0.221	-20.984	-10.313	-10.642	-14.836	-15.181
466	1.27	-9.970	-1.452	0.108	-0.221	-8.287	-4.365	-4.694	-6.020	-6.365
466	1.91	1.639	1.527	0.108	-0.221	4.409	1.583	1.254	2.796	2.451
466	2.55	4.641	2.520	0.108	-0.221	9.601	4.285	3.956	6.574	6.229
467	0	-45.508	-10.973	0.684	-1.344	-72.167	-40.274	-42.301	-53.979	-56.108
467	0.45	-42.062	-10.477	0.684	-1.344	-67.237	-37.172	-39.200	-50.048	-52.177
467	0.9	-36.813	-8.987	0.684	-1.344	-58.555	-32.448	-34.475	-43.597	-45.726
467	1.35	-31.563	-7.498	0.684	-1.344	-49.873	-27.723	-29.751	-37.147	-39.276
467	1.8	-28.117	-7.001	0.684	-1.344	-44.943	-24.622	-26.649	-33.216	-35.345
468	0	-48.931	-12.192	2.741	-0.175	-78.225	-41.297	-44.212	-56.181	-59.242
468	0.45	-45.485	-11.696	2.741	-0.175	-73.295	-38.196	-41.111	-52.250	-55.311
468	0.9	-40.235	-10.206	2.741	-0.175	-64.613	-33.471	-36.386	-45.800	-48.860
468	1.35	-34.986	-8.717	2.741	-0.175	-55.930	-28.747	-31.662	-39.349	-42.410
468	1.8	-31.540	-8.221	2.741	-0.175	-51.001	-25.645	-28.560	-35.418	-38.479
469	0	-14.563	-5.421	-0.223	0.110	-26.150	-13.330	-12.997	-18.941	-18.591
469	0.64	-11.561	-4.428	-0.223	0.110	-20.958	-10.627	-10.294	-15.162	-14.813
469	1.27	-9.952	-1.450	-0.223	0.110	-8.262	-4.679	-4.346	-6.346	-5.997
469	1.91	1.657	1.529	-0.223	0.110	4.435	1.269	1.602	2.470	2.819

469	2.55	4.660	2.522	-0.223	0.110	9.627	3.971	4.304	6.248	6.597
470	0	-48.931	-12.192	2.741	-0.175	-78.225	-41.297	-14.212	-56.181	-59.242
470	0.45	-45.485	-11.696	2.741	-0.175	-73.295	-38.196	-41.111	-52.250	-55.311
470	0.9	-40.235	-10.206	2.741	-0.175	-64.613	-33.471	-36.386	-45.800	-48.860
470	1.35	-34.986	-8.717	2.741	-0.175	-55.930	-28.747	-31.662	-39.349	-42.410
470	1.8	-31.540	-8.221	2.741	-0.175	-51.001	-25.645	-28.560	-35.418	-38.479
471	0	-45.508	-10.973	0.684	-1.344	-72.167	-40.274	-42.301	-53.979	-56.108
471	0.45	-42.062	-10.477	0.684	-1.344	-67.237	-37.172	-39.209	-50.048	-52.177
471	0.9	-36.813	-8.987	0.684	-1.344	-58.555	-32.448	-34.475	-43.597	-45.726
471	1.35	-31.563	-7.498	0.684	-1.344	-49.873	-27.723	-29.751	-37.147	-39.276
471	1.8	-28.117	-7.001	0.684	-1.344	-44.943	-24.622	-26.649	-33.216	-35.345
473	0	-48.454	-12.212	0.594	-0.527	-77.683	-43.014	-44.136	-57.946	-59.123
473	0.45	-45.007	-11.715	0.594	-0.527	-72.754	-39.912	-41.034	-54.014	-55.192
473	0.9	-39.758	-10.226	0.594	-0.527	-64.071	-35.188	-36.310	-47.564	-48.742
473	1.35	-34.509	-8.737	0.594	-0.527	-55.389	-30.464	-31.585	-41.114	-42.292
473	1.8	-31.063	-8.240	0.594	-0.527	-50.459	-27.362	-28.484	-37.183	-38.361
474	0	-48.454	-12.212	0.594	-0.527	-77.683	-43.014	-44.136	-57.946	-59.123
474	0.45	-45.007	-11.715	0.594	-0.527	-72.754	-39.912	-41.034	-54.014	-55.192
474	0.9	-39.758	-10.226	0.594	-0.527	-64.071	-35.188	-36.310	-47.564	-48.742
474	1.35	-34.509	-8.737	0.594	-0.527	-55.389	-30.464	-31.585	-41.114	-42.292
474	1.8	-31.063	-8.240	0.594	-0.527	-50.459	-27.362	-28.484	-37.183	-38.361
475	0	-48.598	-12.241	-0.494	0.589	-77.902	-44.232	-43.149	-59.258	-58.121
475	0.45	-45.152	-11.744	-0.494	0.589	-72.972	-41.130	-40.047	-55.327	-54.189
475	0.9	-39.902	-10.255	-0.494	0.589	-64.290	-36.406	-35.323	-48.876	-47.739
475	1.35	-34.653	-8.765	-0.494	0.589	-55.608	-31.682	-30.599	-42.426	-41.289
475	1.8	-31.207	-8.269	-0.494	0.589	-50.678	-28.580	-27.497	-38.495	-37.358
476	0	-48.598	-12.241	-0.494	0.589	-77.902	-44.232	-43.149	-59.258	-58.121
476	0.45	-45.152	-11.744	-0.494	0.589	-72.972	-41.130	-40.047	-55.327	-54.189
476	0.9	-39.902	-10.255	-0.494	0.589	-64.290	-36.406	-35.323	-48.876	-47.739
476	1.35	-34.653	-8.765	-0.494	0.589	-55.608	-31.682	-30.599	-42.426	-41.289
476	1.8	-31.207	-8.269	-0.494	0.589	-50.678	-28.580	-27.497	-38.495	-37.358
477	0	-8.922	-1.444	1.361	-1.469	-13.016	-6.669	-9.499	-8.848	-11.820
477	0.56	-2.221	-1.071	1.361	-1.469	-4.379	-0.638	-3.468	-1.578	-4.549
477	1.13	4.931	-0.451	1.361	-1.469	5.196	5.799	2.969	6.322	3.351
477	1.69	12.083	0.170	1.361	-1.469	14.771	12.235	9.405	14.223	11.251
477	2.25	18.784	0.542	1.361	-1.469	23.408	18.266	15.436	21.493	18.522
478	0	-23.708	-1.273	-0.982	1.068	-30.486	-22.319	-20.269	-26.726	-24.574
478	0.75	-14.623	-0.694	-0.982	1.068	-18.657	-14.142	-12.092	-16.822	-14.669
478	1.5	-5.087	0.134	-0.982	1.068	-5.890	-5.560	-3.510	-6.288	-4.136
478	2.25	4.449	0.961	-0.982	1.068	6.876	3.022	5.072	4.246	6.398
478	3	13.534	1.540	-0.982	1.068	18.705	11.198	13.248	14.150	16.302
479	0	-63.559	-3.813	-1.785	1.947	-82.371	-58.989	-55.256	-71.014	-67.095
479	0.23	-60.076	-3.688	-1.785	1.947	-77.992	-55.853	-52.121	-67.278	-63.359
479	0.45	-56.141	-3.316	-1.785	1.947	-72.675	-52.313	-48.580	-62.912	-58.993
479	0.68	-52.207	-2.944	-1.785	1.947	-67.358	-48.772	-45.040	-58.547	-54.628
479	0.9	-48.724	-2.820	-1.785	1.947	-62.980	-45.637	-41.904	-54.811	-50.892
480	0	-0.535	-0.660	0.056	-0.133	-1.698	-0.425	-0.614	-0.919	-1.117
480	0.45	1.215	-0.164	0.056	-0.133	1.196	1.150	0.961	1.232	1.034
480	0.9	4.768	1.326	0.056	-0.133	7.843	4.347	4.159	5.901	5.703
480	1.35	8.321	2.815	0.056	-0.133	14.490	7.545	7.357	10.570	10.372
480	1.8	10.071	3.311	0.056	-0.133	17.384	9.120	8.931	12.720	12.522
481	0	6.049	1.445	-0.263	0.294	9.571	5.181	5.739	6.986	7.571
481	0.45	7.799	1.941	-0.263	0.294	12.465	6.756	7.314	9.136	9.721
481	0.9	11.352	3.431	-0.263	0.294	19.112	9.954	10.512	13.805	14.390
481	1.35	14.905	4.920	-0.263	0.294	25.758	13.152	13.709	18.474	19.059
481	1.8	16.655	5.416	-0.263	0.294	28.652	14.726	15.284	20.624	21.209
482	0	6.089	1.452	0.294	-0.269	9.631	5.774	5.211	7.617	7.026
482	0.45	7.839	1.949	0.294	-0.269	12.525	7.349	6.786	9.767	9.176
482	0.9	11.392	3.438	0.294	-0.269	19.172	10.547	9.984	14.436	13.846
482	1.35	14.945	4.928	0.294	-0.269	25.818	13.744	13.182	19.105	18.515
482	1.8	16.695	5.424	0.294	-0.269	28.712	15.319	14.757	21.255	20.665
483	0	-12.653	-4.386	0.001	-0.157	-22.202	-11.387	-11.545	-16.049	-16.214
483	0.45	-10.904	-3.890	0.001	-0.157	-19.308	-9.813	-9.970	-13.899	-14.064
483	0.9	-7.350	-2.401	0.001	-0.157	-12.662	-6.615	-6.773	-9.230	-9.395
483	1.35	-3.797	-0.911	0.001	-0.157	-6.015	-3.417	-3.575	-4.561	-4.726
483	1.8	-2.048	-0.415	0.001	-0.157	-3.121	-1.842	-2.000	-2.411	-2.576
484	0	-49.546	-12.473	0.275	-1.556	-79.412	-44.316	-46.148	-59.592	-61.515

484	0.45	-46.100	-11.976	0.275	-1.556	-74.482	-41.215	-43.046	-55.661	-57.584
484	0.9	-40.851	-10.487	0.275	-1.556	-65.800	-36.490	-38.322	-49.211	-51.134
484	1.35	-35.601	-8.997	0.275	-1.556	-57.118	-31.766	-33.597	-42.761	-44.684
484	1.8	-32.155	-8.501	0.275	-1.556	-52.188	-28.665	-30.496	-38.830	-40.753
485	0	-11.028	-4.321	-0.046	0.326	-20.148	-9.971	-9.598	-14.350	-13.959
485	0.45	-9.278	-3.825	-0.046	0.326	-17.253	-8.396	-8.024	-12.200	-11.809
485	0.9	-5.725	-2.336	-0.046	0.326	-10.607	-5.198	-4.826	-7.531	-7.140
485	1.35	-2.172	-0.846	-0.046	0.326	-3.960	-2.001	-1.628	-2.862	-2.471
485	1.8	-0.422	-0.350	-0.046	0.326	-1.066	-0.426	-0.053	-0.712	-0.321
486	0	-51.717	-12.917	0.041	-0.674	-82.726	-46.504	-47.219	-62.397	-63.147
486	0.45	-48.271	-12.420	0.041	-0.674	-77.797	-43.403	-44.117	-58.466	-59.216
486	0.9	-43.021	-10.931	0.041	-0.674	-69.115	-38.678	-39.393	-52.016	-52.766
486	1.35	-37.772	-9.441	0.041	-0.674	-60.432	-33.954	-34.668	-45.565	-46.315
486	1.8	-34.326	-8.945	0.041	-0.674	-55.503	-30.852	-31.567	-41.634	-42.385
487	0	-12.060	-4.383	-0.018	0.151	-21.485	-10.871	-10.703	-15.443	-15.266
487	0.45	-10.310	-3.887	-0.018	0.151	-18.591	-9.296	-9.128	-13.293	-13.116
487	0.9	-6.757	-2.398	-0.018	0.151	-11.944	-6.099	-5.931	-8.624	-8.447
487	1.35	-3.204	-0.908	-0.018	0.151	-5.298	-2.901	-2.733	-3.955	-3.778
487	1.8	-1.454	-0.412	-0.018	0.151	-2.404	-1.326	-1.158	-1.805	-1.628
488	0	-47.011	-11.499	0.065	-0.252	-74.811	-42.244	-42.562	-56.537	-56.870
488	0.45	-43.564	-11.002	0.065	-0.252	-69.881	-39.143	-39.460	-52.606	-52.939
488	0.9	-38.315	-9.513	0.065	-0.252	-61.199	-34.418	-34.736	-46.156	-46.489
488	1.35	-33.066	-8.024	0.065	-0.252	-52.517	-29.694	-30.011	-39.705	-40.039
488	1.8	-29.620	-7.527	0.065	-0.252	-47.587	-26.592	-26.910	-35.774	-36.107
489	0	-9.799	-3.358	-0.018	0.071	-17.131	-8.837	-8.748	-12.423	-12.330
489	0.45	-8.049	-2.861	-0.018	0.071	-14.237	-7.262	-7.173	-10.273	-10.180
489	0.9	-4.496	-1.372	-0.018	0.071	-7.590	-4.064	-3.976	-5.604	-5.511
489	1.35	-0.943	0.117	-0.018	0.071	-0.944	-0.867	-0.778	-0.935	-0.842
489	1.8	0.807	0.614	-0.018	0.071	1.950	0.708	0.797	1.215	1.308
490	0	-47.979	-11.783	0.059	-0.218	-76.429	-43.122	-43.399	-57.739	-58.031
490	0.45	-44.533	-11.287	0.059	-0.218	-71.499	-40.020	-40.298	-53.808	-54.099
490	0.9	-39.284	-9.798	0.059	-0.218	-62.817	-35.296	-35.573	-47.358	-47.649
490	1.35	-34.034	-8.308	0.059	-0.218	-54.134	-30.571	-30.849	-40.908	-41.199
490	1.8	-30.588	-7.812	0.059	-0.218	-49.205	-27.470	-27.747	-36.977	-37.268
491	0	-12.079	-4.400	-0.014	0.055	-21.536	-10.886	-10.817	-15.470	-15.398
491	0.45	-10.330	-3.904	-0.014	0.055	-18.642	-9.311	-9.242	-13.320	-13.248
491	0.9	-6.777	-2.414	-0.014	0.055	-11.995	-6.113	-6.044	-8.651	-8.579
491	1.35	-3.224	-0.925	-0.014	0.055	-5.348	-2.915	-2.846	-3.982	-3.910
491	1.8	-1.474	-0.429	-0.014	0.055	-2.454	-1.340	-1.271	-1.832	-1.760
492	0	-47.979	-11.783	0.059	-0.218	-76.429	-43.122	-43.399	-57.739	-58.031
492	0.45	-44.533	-11.287	0.059	-0.218	-71.499	-40.020	-40.298	-53.808	-54.100
492	0.9	-39.284	-9.798	0.059	-0.218	-62.817	-35.296	-35.573	-47.358	-47.649
492	1.35	-34.034	-8.308	0.059	-0.218	-54.135	-30.572	-30.849	-40.908	-41.199
492	1.8	-30.588	-7.812	0.059	-0.218	-49.205	-27.470	-27.748	-36.977	-37.268
493	0	-9.799	-3.358	-0.018	0.071	-17.131	-8.837	-8.748	-12.423	-12.330
493	0.45	-8.049	-2.861	-0.018	0.071	-14.237	-7.262	-7.173	-10.273	-10.180
493	0.9	-4.496	-1.372	-0.018	0.071	-7.590	-4.064	-3.976	-5.604	-5.511
493	1.35	-0.943	0.117	-0.018	0.071	-0.944	-0.867	-0.778	-0.935	-0.842
493	1.8	0.807	0.614	-0.018	0.071	1.950	0.708	0.797	1.215	1.308
494	0	-30.999	-3.988	1.567	-1.675	-43.581	-26.332	-29.575	-33.416	-36.821
494	0.23	-30.350	-3.864	1.567	-1.675	-42.603	-25.748	-28.990	-32.656	-36.061
494	0.45	-29.250	-3.492	1.567	-1.675	-40.686	-24.758	-28.000	-31.266	-34.671
494	0.68	-28.149	-3.119	1.567	-1.675	-38.770	-23.767	-27.010	-29.877	-33.281
494	0.9	-27.500	-2.995	1.567	-1.675	-37.792	-23.183	-26.425	-29.116	-32.521
495	0	-47.011	-11.499	0.065	-0.252	-74.811	-42.244	-42.562	-56.537	-56.870
495	0.45	-43.564	-11.002	0.065	-0.252	-69.881	-39.143	-39.460	-52.606	-52.939
495	0.9	-38.315	-9.513	0.065	-0.252	-61.199	-34.418	-34.736	-46.156	-46.489
495	1.35	-33.066	-8.024	0.065	-0.252	-52.517	-29.694	-30.011	-39.705	-40.039
495	1.8	-29.620	-7.527	0.065	-0.252	-47.587	-26.592	-26.910	-35.774	-36.107
496	0	-12.060	-4.383	-0.018	0.151	-21.485	-10.871	-10.703	-15.443	-15.266
496	0.45	-10.310	-3.887	-0.018	0.151	-18.591	-9.296	-9.128	-13.293	-13.116
496	0.9	-6.757	-2.398	-0.018	0.151	-11.944	-6.099	-5.931	-8.624	-8.447
496	1.35	-3.204	-0.908	-0.018	0.151	-5.298	-2.901	-2.733	-3.955	-3.778
496	1.8	-1.454	-0.412	-0.018	0.151	-2.404	-1.326	-1.158	-1.805	-1.628
497	0	-51.717	-12.917	0.041	-0.674	-82.726	-46.504	-47.219	-62.397	-63.147
497	0.45	-48.271	-12.420	0.041	-0.674	-77.797	-43.403	-44.117	-58.466	-59.216
497	0.9	-43.021	-10.931	0.041	-0.674	-69.115	-38.678	-39.393	-52.016	-52.766

497	1.35	-37.772	-9.441	0.041	-0.674	-60.432	-33.954	-34.668	-45.565	-46.316
497	1.8	-34.326	-8.945	0.041	-0.674	-55.503	-30.852	-31.567	-41.634	-42.385
498	0	-11.028	-4.321	-0.046	0.326	-20.148	-9.971	-9.598	-14.350	-13.959
498	0.45	-9.278	-3.825	-0.046	0.326	-17.253	-8.396	-8.024	-12.200	-11.809
498	0.9	-5.725	-2.336	-0.046	0.326	-10.607	-5.198	-4.826	-7.531	-7.140
498	1.35	-2.172	-0.846	-0.046	0.326	-3.960	-2.001	-1.628	-2.862	-2.471
498	1.8	-0.422	-0.350	-0.046	0.326	-1.066	-0.426	-0.053	-0.712	-0.321
499	0	-49.546	-12.473	0.275	-1.556	-79.412	-44.316	-46.148	-59.592	-61.515
499	0.45	-46.100	-11.976	0.275	-1.556	-74.482	-41.215	-43.046	-55.661	-57.584
499	0.9	-40.851	-10.487	0.275	-1.556	-65.800	-36.490	-38.322	-49.211	-51.134
499	1.35	-35.601	-8.997	0.275	-1.556	-57.118	-31.766	-33.597	-42.761	-44.684
499	1.8	-32.155	-8.501	0.275	-1.556	-52.188	-28.665	-30.496	-38.830	-40.753
500	0	-12.653	-4.386	0.001	-0.157	-22.202	-11.387	-11.545	-16.049	-16.214
500	0.45	-10.904	-3.890	0.001	-0.157	-19.308	-9.813	-9.970	-13.899	-14.064
500	0.9	-7.350	-2.401	0.001	-0.157	-12.662	-6.615	-6.773	-9.230	-9.395
500	1.35	-3.797	-0.911	0.001	-0.157	-6.015	-3.417	-3.575	-4.561	-4.726
500	1.8	-2.048	-0.415	0.001	-0.157	-3.121	-1.842	-2.000	-2.411	-2.576
501	0	-10.076	-3.313	0.133	-0.056	-17.391	-8.935	-9.125	-12.526	-12.726
501	0.45	-8.326	-2.816	0.133	-0.056	-14.497	-7.360	-7.550	-10.376	-10.576
501	0.9	-4.773	-1.327	0.133	-0.056	-7.850	-4.162	-4.352	-5.707	-5.907
501	1.35	-1.220	0.163	0.133	-0.056	-1.204	-0.965	-1.154	-1.038	-1.238
501	1.8	0.530	0.659	0.133	-0.056	1.691	0.610	0.421	1.112	0.912
502	0	-10.071	-3.311	-0.056	0.133	-17.384	-9.120	-8.931	-12.720	-12.522
502	0.45	-8.321	-2.815	-0.056	0.133	-14.490	-7.545	-7.357	-10.570	-10.372
502	0.9	-4.768	-1.326	-0.056	0.133	-7.843	-4.347	-4.159	-5.901	-5.703
502	1.35	-1.215	0.164	-0.056	0.133	-1.196	-1.150	-0.961	-1.232	-1.034
502	1.8	0.535	0.660	-0.056	0.133	1.698	0.425	0.614	0.919	1.117
503	0	-16.655	-5.416	0.263	-0.294	-28.652	-14.726	-15.284	-20.624	-21.209
503	0.45	-14.905	-4.920	0.263	-0.294	-25.758	-13.152	-13.709	-18.474	-19.059
503	0.9	-11.352	-3.431	0.263	-0.294	-19.112	-9.954	-10.512	-13.805	-14.390
503	1.35	-7.799	-1.941	0.263	-0.294	-12.465	-6.756	-7.314	-9.136	-9.721
503	1.8	-6.049	-1.445	0.263	-0.294	-9.571	-5.181	-5.729	-6.986	-7.571
504	0	-16.695	-5.424	-0.294	0.269	-28.712	-15.319	-14.757	-21.255	-20.665
504	0.45	-14.945	-4.928	-0.294	0.269	-25.818	-13.744	-13.182	-19.105	-18.515
504	0.9	-11.392	-3.438	-0.294	0.269	-19.172	-10.547	-9.984	-14.436	-13.846
504	1.35	-7.839	-1.949	-0.294	0.269	-12.525	-7.349	-6.786	-9.767	-9.176
504	1.8	-6.089	-1.452	-0.294	0.269	-9.631	-5.774	-5.211	-7.617	-7.026
505	0	-12.796	-1.393	0.858	-0.926	-17.585	-10.658	-12.443	-13.412	-15.286
505	0.75	-3.711	-0.814	0.858	-0.926	-5.756	-2.481	-4.265	-3.508	-5.382
505	1.5	5.825	0.013	0.858	-0.926	7.011	6.101	4.316	7.026	5.152
505	2.25	15.360	0.841	0.858	-0.926	19.777	14.683	12.898	17.559	15.685
505	3	24.445	1.420	0.858	-0.926	31.606	22.859	21.075	27.464	25.590
506	0	-24.278	-1.400	-0.927	1.020	-31.374	-22.777	-20.830	-27.347	-25.302
506	0.75	-15.193	-0.821	-0.927	1.020	-19.545	-14.601	-12.653	-17.443	-15.398
506	1.5	-5.658	0.007	-0.927	1.020	-6.778	-6.019	-4.071	-6.909	-4.865
506	2.25	3.878	0.834	-0.927	1.020	5.989	2.563	4.511	3.624	5.669
506	3	12.963	1.413	-0.927	1.020	17.817	10.740	12.687	13.528	15.573
507	0	-49.734	-12.505	-1.561	0.281	-79.689	-46.321	-44.479	-61.738	-59.804
507	0.45	-46.288	-12.009	-1.561	0.281	-74.759	-43.220	-41.378	-57.806	-55.872
507	0.9	-41.038	-10.519	-1.561	0.281	-66.077	-38.495	-36.653	-51.356	-49.422
507	1.35	-35.789	-9.030	-1.561	0.281	-57.395	-33.771	-31.929	-44.906	-42.972
507	1.8	-32.343	-8.533	-1.561	0.281	-52.465	-30.669	-28.827	-40.975	-39.041
508	0	-14.537	-1.582	0.640	-0.655	-19.975	-12.443	-13.738	-15.588	-16.948
508	0.75	-5.452	-1.003	0.640	-0.655	-8.147	-4.267	-5.561	-5.684	-7.044
508	1.5	4.084	-0.175	0.640	-0.655	4.620	4.316	3.021	4.850	3.490
508	2.25	13.619	0.652	0.640	-0.655	17.387	12.898	11.603	15.384	14.024
508	3	22.704	1.231	0.640	-0.655	29.216	21.074	19.779	25.288	23.928
509	0	1.967	0.403	0.160	-0.002	3.004	1.931	1.768	2.487	2.316
509	0.45	3.717	0.899	0.160	-0.002	5.899	3.505	3.343	4.637	4.466
509	0.9	7.270	2.388	0.160	-0.002	12.545	6.703	6.540	9.306	9.135
509	1.35	10.823	3.878	0.160	-0.002	19.192	9.901	9.738	13.975	13.804
509	1.8	12.573	4.374	0.160	-0.002	22.086	11.476	11.313	16.125	15.955
510	0	0.328	0.333	-0.326	0.046	0.925	-0.031	0.341	0.211	0.602
510	0.45	2.077	0.829	-0.326	0.046	3.819	1.544	1.916	2.361	2.752
510	0.9	5.630	2.318	-0.326	0.046	10.466	4.741	5.113	7.030	7.421
510	1.35	9.183	3.808	-0.326	0.046	17.113	7.939	8.311	11.699	12.090
510	1.8	10.933	4.304	-0.326	0.046	20.007	9.514	9.886	13.849	14.240



511	0	34.683	9.001	0.672	-0.040	56.021	31.887	31.175	42.794	42.046
511	0.45	38.129	9.497	0.672	-0.040	60.951	34.989	34.277	46.725	45.978
511	0.9	43.379	10.987	0.672	-0.040	69.633	39.713	39.001	53.175	52.428
511	1.35	48.628	12.476	0.672	-0.040	78.315	44.438	43.726	59.625	58.878
511	1.8	52.074	12.972	0.672	-0.040	83.245	47.539	46.827	63.557	62.809
512	0	1.125	0.315	-0.140	0.013	1.854	0.872	1.025	1.233	1.392
512	0.45	2.874	0.812	-0.140	0.013	4.748	2.447	2.599	3.383	3.543
512	0.9	6.427	2.301	-0.140	0.013	11.395	5.645	5.797	8.052	8.212
512	1.35	9.980	3.791	-0.140	0.013	18.042	8.842	8.995	12.721	12.881
512	1.8	11.730	4.287	-0.140	0.013	20.936	10.417	10.570	14.871	15.031
513	0	31.839	8.182	0.148	-0.012	51.298	28.803	28.643	38.741	38.573
513	0.45	35.285	8.679	0.148	-0.012	56.228	31.905	31.744	42.672	42.504
513	0.9	40.535	10.168	0.148	-0.012	64.910	36.629	36.469	49.123	48.954
513	1.35	45.784	11.657	0.148	-0.012	73.593	41.354	41.193	55.573	55.404
513	1.8	49.230	12.154	0.148	-0.012	78.522	44.455	44.295	59.504	59.336
514	0	0.393	-0.396	-0.069	0.019	-0.161	0.285	0.373	0.091	0.183
514	0.45	2.143	0.101	-0.069	0.019	2.733	1.860	1.947	2.241	2.333
514	0.9	5.696	1.590	-0.069	0.019	9.380	5.057	5.145	6.910	7.002
514	1.35	9.249	3.080	-0.069	0.019	16.026	8.255	8.343	11.579	11.671
514	1.8	10.999	3.576	-0.069	0.019	18.921	9.830	9.918	13.729	13.821
515	0	44.522	10.938	0.305	-0.113	70.928	40.375	39.958	53.960	53.521
515	0.45	50.272	12.703	0.305	-0.113	80.652	45.550	45.133	61.110	60.671
515	0.9	56.423	14.689	0.305	-0.113	91.211	51.086	50.668	68.819	68.380
515	1.35	61.672	16.179	0.305	-0.113	99.893	55.810	55.393	75.269	74.830
515	1.8	65.118	16.675	0.305	-0.113	104.822	58.912	58.494	79.200	78.761
516	0	-3.824	-2.276	-0.022	0.008	-8.231	-3.463	-3.434	-5.472	-5.441
516	0.75	0.094	-0.897	-0.022	0.008	-1.323	0.063	0.092	-0.489	-0.458
516	1.5	9.021	3.240	-0.022	0.008	16.009	8.097	8.126	11.490	11.521
516	2.25	17.947	7.377	-0.022	0.008	33.341	16.131	16.160	23.470	23.501
516	3	21.865	8.756	-0.022	0.008	40.249	19.657	19.686	28.452	28.483
517	0	44.522	10.938	0.305	-0.113	70.928	40.375	39.958	53.960	53.521
517	0.45	50.272	12.703	0.305	-0.113	80.652	45.550	45.133	61.110	60.671
517	0.9	56.423	14.689	0.305	-0.113	91.211	51.086	50.668	68.819	68.380
517	1.35	61.672	16.179	0.305	-0.113	99.893	55.810	55.393	75.269	74.830
517	1.8	65.118	16.675	0.305	-0.113	104.822	58.912	58.494	79.200	78.762
518	0	0.393	-0.396	-0.069	0.019	-0.161	0.285	0.373	0.091	0.183
518	0.45	2.143	0.101	-0.069	0.019	2.733	1.860	1.947	2.241	2.333
518	0.9	5.696	1.590	-0.069	0.019	9.380	5.057	5.145	6.910	7.002
518	1.35	9.249	3.080	-0.069	0.019	16.026	8.255	8.343	11.579	11.671
518	1.8	10.999	3.576	-0.069	0.019	18.921	9.830	9.918	13.729	13.821
519	0	-49.230	-12.154	-0.148	0.012	-78.522	-44.455	-44.295	-59.504	-59.336
519	0.45	-45.784	-11.657	-0.148	0.012	-73.593	-41.354	-41.193	-55.573	-55.404
519	0.9	-40.535	-10.168	-0.148	0.012	-64.910	-36.629	-36.469	-49.122	-48.954
519	1.35	-35.285	-8.679	-0.148	0.012	-56.228	-31.905	-31.744	-42.672	-42.504
519	1.8	-31.839	-8.182	-0.148	0.012	-51.298	-28.803	-28.643	-38.741	-38.573
520	0	-11.730	-4.287	0.140	-0.013	-20.936	-10.417	-10.570	-14.871	-15.031
520	0.45	-9.980	-3.791	0.140	-0.013	-18.042	-8.842	-8.995	-12.721	-12.881
520	0.9	-6.427	-2.301	0.140	-0.013	-11.395	-5.645	-5.797	-8.052	-8.212
520	1.35	-2.874	-0.812	0.140	-0.013	-4.748	-2.447	-2.599	-3.383	-3.543
520	1.8	-1.125	-0.315	0.140	-0.013	-1.854	-0.872	-1.025	-1.233	-1.393
521	0	-52.074	-12.972	-0.672	0.040	-83.245	-47.539	-46.827	-63.557	-62.809
521	0.45	-48.628	-12.476	-0.672	0.040	-78.315	-44.438	-43.726	-59.625	-58.878
521	0.9	-43.379	-10.987	-0.672	0.040	-69.633	-39.713	-39.001	-53.175	-52.428
521	1.35	-38.129	-9.497	-0.672	0.040	-60.951	-34.989	-34.277	-46.725	-45.978
521	1.8	-34.683	-9.001	-0.672	0.040	-56.021	-31.887	-31.175	-42.794	-42.046
522	0	-10.933	-4.304	0.326	-0.046	-20.007	-9.514	-9.886	-13.849	-14.240
522	0.45	-9.183	-3.808	0.326	-0.046	-17.113	-7.939	-8.311	-11.699	-12.090
522	0.9	-5.630	-2.318	0.326	-0.046	-10.466	-4.741	-5.113	-7.030	-7.421
522	1.35	-2.077	-0.829	0.326	-0.046	-3.819	-1.544	-1.916	-2.361	-2.752
522	1.8	-0.328	-0.333	0.326	-0.046	-0.925	0.031	-0.341	-0.211	-0.602
523	0	-49.734	-12.505	-1.561	0.281	-79.689	-46.321	-44.479	-61.738	-59.804
523	0.45	-46.288	-12.009	-1.561	0.281	-74.759	-43.220	-41.378	-57.806	-55.872
523	0.9	-41.038	-10.519	-1.561	0.281	-66.077	-38.495	-36.653	-51.356	-49.422
523	1.35	-35.789	-9.030	-1.561	0.281	-57.395	-33.771	-31.929	-44.906	-42.972
523	1.8	-32.343	-8.533	-1.561	0.281	-52.465	-30.669	-28.827	-40.975	-39.041
524	0	1.967	0.403	0.160	-0.002	3.004	1.931	1.768	2.487	2.316
524	0.45	3.717	0.899	0.160	-0.002	5.899	3.505	3.343	4.637	4.466

524	0.9	7.270	2.388	0.160	-0.002	12.545	6.703	6.540	9.306	9.135
524	1.35	10.823	3.878	0.160	-0.002	19.192	9.901	9.738	13.975	13.804
524	1.8	12.573	4.374	0.160	-0.002	22.086	11.476	11.313	16.125	15.955
526	0	-43.694	-6.305	-0.863	0.895	-62.521	-40.187	-38.429	-50.757	-48.911
526	1.13	-28.939	-4.816	-0.863	0.895	-42.433	-26.908	-25.150	-34.327	-32.481
526	2.25	-12.382	-2.334	-0.863	0.895	-18.592	-12.007	-10.249	-15.377	-13.531
526	3.38	4.176	0.149	-0.863	0.895	5.248	2.895	4.653	3.572	5.418
526	4.5	18.930	1.638	-0.863	0.895	25.337	16.174	17.932	20.002	21.848
527	0	-18.875	-1.634	-0.891	0.864	-25.263	-17.878	-16.123	-21.783	-19.941
527	1.13	-4.120	-0.144	-0.891	0.864	-5.175	-4.599	-2.845	-5.353	-3.510
527	2.25	12.437	2.338	-0.891	0.864	18.665	10.303	12.057	13.597	15.439
527	3.38	28.995	4.820	-0.891	0.864	42.506	25.204	26.959	32.546	34.388
527	4.5	43.749	6.310	-0.891	0.864	62.594	38.483	40.238	48.976	50.819
531	0	-43.694	-6.305	-0.863	0.895	-62.521	-40.187	-38.429	-50.757	-48.911
531	1.13	-28.939	-4.816	-0.863	0.895	-42.433	-26.908	-25.150	-34.327	-32.481
531	2.25	-12.382	-2.334	-0.863	0.895	-18.592	-12.007	-10.249	-15.377	-13.531
531	3.38	4.176	0.149	-0.863	0.895	5.248	2.895	4.653	3.572	5.418
531	4.5	18.930	1.638	-0.863	0.895	25.337	16.174	17.932	20.002	21.848
532	0	-18.875	-1.634	-0.891	0.864	-25.263	-17.878	-16.123	-21.783	-19.941
532	1.13	-4.120	-0.144	-0.891	0.864	-5.175	-4.599	-2.845	-5.353	-3.510
532	2.25	12.437	2.338	-0.891	0.864	18.665	10.303	12.057	13.597	15.439
532	3.38	28.995	4.820	-0.891	0.864	42.506	25.204	26.959	32.546	34.388
532	4.5	43.749	6.310	-0.891	0.864	62.594	38.483	40.238	48.976	50.819
535	0	-59.147	-5.025	0.317	-0.320	-79.017	-52.916	-53.553	-64.938	-65.607
535	0.45	-52.181	-4.776	0.317	-0.320	-70.259	-46.646	-47.283	-57.466	-58.135
535	0.9	-44.312	-4.032	0.317	-0.320	-59.625	-39.564	-40.201	-48.735	-49.404
535	1.35	-36.443	-3.287	0.317	-0.320	-48.992	-32.483	-33.119	-40.004	-40.673
535	1.8	-29.476	-3.039	0.317	-0.320	-40.234	-26.212	-26.849	-32.532	-33.201
537	0	29.702	3.041	-0.618	1.032	40.509	26.114	27.764	32.454	34.187
537	0.45	36.669	3.289	-0.618	1.032	49.266	32.384	34.034	39.926	41.658
537	0.9	44.538	4.034	-0.618	1.032	59.900	39.466	41.116	48.657	50.389
537	1.35	52.406	4.779	-0.618	1.032	70.534	46.547	48.197	57.388	59.121
537	1.8	59.373	5.027	-0.618	1.032	79.291	52.818	54.468	64.860	66.592
538	0	-30.502	-6.859	-1.030	1.637	-47.577	-28.481	-25.815	-37.429	-34.629
538	0.45	-28.752	-6.363	-1.030	1.637	-44.683	-26.907	-24.240	-35.279	-32.479
538	0.9	-25.199	-4.873	-1.030	1.637	-38.036	-23.709	-21.042	-30.610	-27.810
538	1.35	-21.646	-3.384	-1.030	1.637	-31.389	-20.511	-17.844	-25.941	-23.141
538	1.8	-19.896	-2.887	-1.030	1.637	-28.495	-18.936	-16.269	-23.791	-20.991
539	0	-96.787	-10.684	1.276	-2.263	-133.239	-85.833	-89.371	-107.018	-110.733
539	0.45	-89.369	-10.188	1.276	-2.263	-123.544	-79.157	-82.695	-98.917	-102.632
539	0.9	-80.148	-8.699	1.276	-2.263	-110.095	-70.858	-74.396	-88.296	-92.011
539	1.35	-70.927	-7.209	1.276	-2.263	-96.647	-62.559	-66.097	-77.676	-81.391
539	1.8	-63.509	-6.713	1.276	-2.263	-86.951	-55.883	-59.421	-69.574	-73.289
540	0	-30.210	-6.826	-1.181	1.977	-47.173	-28.369	-25.211	-37.260	-33.944
540	0.45	-28.460	-6.330	-1.181	1.977	-44.279	-26.795	-23.637	-35.110	-31.794
540	0.9	-24.907	-4.840	-1.181	1.977	-37.633	-23.597	-20.439	-30.441	-27.125
540	1.35	-21.354	-3.351	-1.181	1.977	-30.986	-20.399	-17.241	-25.772	-22.456
540	1.8	-19.604	-2.854	-1.181	1.977	-28.092	-18.824	-15.666	-23.622	-20.306
541	0	-59.373	-5.027	0.618	-1.032	-79.291	-52.818	-54.468	-64.860	-66.592
541	0.45	-52.406	-4.779	0.618	-1.032	-70.534	-46.547	-48.197	-57.388	-59.121
541	0.9	-44.538	-4.034	0.618	-1.032	-59.900	-39.466	-41.116	-48.657	-50.390
541	1.35	-36.669	-3.290	0.618	-1.032	-49.266	-32.384	-34.034	-39.926	-41.658
541	1.8	-29.702	-3.041	0.618	-1.032	-40.509	-26.114	-27.764	-32.454	-34.187
543	0	29.476	3.039	-0.317	0.320	40.234	26.212	26.849	32.532	33.201
543	0.45	36.443	3.287	-0.317	0.320	48.992	32.483	33.119	40.004	40.673
543	0.9	44.312	4.032	-0.317	0.320	59.625	39.564	40.201	48.735	49.404
543	1.35	52.181	4.776	-0.317	0.320	70.259	46.646	47.283	57.466	58.135
543	1.8	59.147	5.025	-0.317	0.320	79.017	52.916	53.553	64.938	65.607
544	0	-30.210	-6.826	-1.181	1.977	-47.173	-28.369	-25.211	-37.260	-33.944
544	0.45	-28.460	-6.330	-1.181	1.977	-44.279	-26.795	-23.637	-35.110	-31.794
544	0.9	-24.907	-4.840	-1.181	1.977	-37.633	-23.597	-20.439	-30.441	-27.125
544	1.35	-21.354	-3.351	-1.181	1.977	-30.986	-20.399	-17.241	-25.772	-22.456
544	1.8	-19.604	-2.854	-1.181	1.977	-28.092	-18.824	-15.666	-23.622	-20.306
545	0	-96.787	-10.684	1.276	-2.263	-133.239	-85.833	-89.371	-107.018	-110.733
545	0.45	-89.369	-10.188	1.276	-2.263	-123.543	-79.156	-82.695	-98.916	-102.632
545	0.9	-80.148	-8.699	1.276	-2.263	-110.095	-70.858	-74.396	-88.296	-92.011
545	1.35	-70.927	-7.209	1.276	-2.263	-96.647	-62.559	-66.097	-77.676	-81.391



545	1.8	-63.509	-6.713	1.276	-2.263	-86.951	-55.883	-59.421	-69.574	-73.289
546	0	-30.502	-6.859	-1.030	1.637	-47.577	-28.481	-25.815	-37.429	-34.629
546	0.45	-28.752	-6.363	-1.030	1.637	-44.683	-26.907	-24.240	-35.279	-32.479
546	0.9	-25.199	-4.873	-1.030	1.637	-38.036	-23.709	-21.042	-30.610	-27.810
546	1.35	-21.646	-3.384	-1.030	1.637	-31.389	-20.511	-17.844	-25.941	-23.141
546	1.8	-19.896	-2.887	-1.030	1.637	-28.495	-18.936	-16.269	-23.791	-20.991
550	0	6.471	-0.783	-1.337	0.809	6.513	4.487	6.633	4.898	7.151
550	0.75	10.389	0.596	-1.337	0.809	13.421	8.013	10.160	9.880	12.134
550	1.5	19.316	4.733	-1.337	0.809	30.752	16.047	18.194	21.860	24.113
550	2.25	28.243	8.870	-1.337	0.809	48.084	24.081	26.228	33.839	36.093
550	3	32.161	10.249	-1.337	0.809	54.992	27.608	29.754	38.822	41.076
551	0	-59.244	-5.038	-0.310	0.311	-79.154	-53.629	-53.008	-65.706	-65.054
551	0.45	-52.277	-4.790	-0.310	0.311	-70.397	-47.359	-46.738	-58.234	-57.582
551	0.9	-44.409	-4.045	-0.310	0.311	-59.763	-40.277	-39.657	-49.503	-48.851
551	1.35	-36.540	-3.301	-0.310	0.311	-49.129	-33.196	-32.575	-40.772	-40.120
551	1.8	-29.573	-3.052	-0.310	0.311	-40.372	-26.926	-26.305	-33.300	-32.648
553	0	-59.244	-5.038	-0.310	0.311	-79.154	-53.629	-53.008	-65.706	-65.054
553	0.45	-52.277	-4.790	-0.310	0.311	-70.397	-47.359	-46.738	-58.234	-57.582
553	0.9	-44.409	-4.045	-0.310	0.311	-59.763	-40.277	-39.657	-49.503	-48.851
553	1.35	-36.540	-3.301	-0.310	0.311	-49.129	-33.196	-32.575	-40.772	-40.120
553	1.8	-29.573	-3.052	-0.310	0.311	-40.372	-26.926	-26.305	-33.300	-32.648
560	0	-22.886	-5.602	2.374	-1.446	-36.426	-18.224	-22.043	-25.067	-29.077
560	0.45	-21.136	-5.105	2.374	-1.446	-33.532	-16.649	-20.468	-22.917	-26.927
560	0.9	-17.583	-3.616	2.374	-1.446	-26.885	-13.451	-17.271	-18.248	-22.258
560	1.35	-14.030	-2.126	2.374	-1.446	-20.238	-10.254	-14.073	-13.579	-17.589
560	1.8	-12.280	-1.630	2.374	-1.446	-17.344	-8.679	-12.498	-11.429	-15.439
561	0	-88.319	-9.318	-2.231	1.354	-120.892	-81.719	-78.133	-100.949	-97.184
561	0.45	-80.901	-8.822	-2.231	1.354	-111.197	-75.043	-71.457	-92.847	-89.082
561	0.9	-71.680	-7.333	-2.231	1.354	-97.748	-66.744	-63.158	-82.227	-78.462
561	1.35	-62.459	-5.843	-2.231	1.354	-84.300	-58.445	-54.859	-71.606	-67.811
561	1.8	-55.041	-5.347	-2.231	1.354	-74.604	-51.769	-48.183	-63.505	-59.740
562	0	-29.835	-6.810	2.049	-1.225	-46.697	-24.802	-28.077	-33.465	-36.903
562	0.45	-28.085	-6.313	2.049	-1.225	-43.803	-23.227	-26.502	-31.315	-34.753
562	0.9	-24.532	-4.824	2.049	-1.225	-37.157	-20.030	-23.304	-26.646	-30.084
562	1.35	-20.979	-3.334	2.049	-1.225	-30.510	-16.832	-20.106	-21.977	-25.415
562	1.8	-19.229	-2.838	2.049	-1.225	-27.616	-15.257	-18.531	-19.827	-23.265
563	0	-96.292	-10.623	-2.229	1.257	-132.548	-88.892	-85.406	-110.140	-106.480
563	0.45	-88.874	-10.127	-2.229	1.257	-122.852	-82.216	-78.730	-102.038	-98.378
563	0.9	-79.653	-8.638	-2.229	1.257	-109.404	-73.917	-70.431	-91.418	-87.758
563	1.35	-70.432	-7.148	-2.229	1.257	-95.955	-65.618	-62.132	-80.797	-77.137
563	1.8	-63.014	-6.652	-2.229	1.257	-86.259	-58.942	-55.456	-72.696	-69.036
564	0	-30.703	-6.885	1.630	-1.027	-47.860	-26.003	-28.660	-34.865	-37.654
564	0.45	-28.954	-6.388	1.630	-1.027	-44.966	-24.429	-27.085	-32.715	-35.504
564	0.9	-25.401	-4.899	1.630	-1.027	-38.319	-21.231	-23.887	-28.046	-30.835
564	1.35	-21.848	-3.410	1.630	-1.027	-31.673	-18.033	-20.689	-23.377	-26.156
564	1.8	-20.098	-2.913	1.630	-1.027	-28.779	-16.458	-19.115	-21.227	-24.016
568	0	-31.748	-10.172	1.086	-1.175	-54.373	-27.488	-29.748	-38.604	-40.977
568	0.75	-27.830	-8.793	1.086	-1.175	-47.465	-23.961	-26.222	-33.621	-35.995
568	1.5	-18.904	-4.656	1.086	-1.175	-30.133	-15.927	-18.188	-21.642	-24.015
568	2.25	-9.977	-0.518	1.086	-1.175	-12.801	-7.893	-10.154	-9.662	-12.036
568	3	-6.059	0.861	1.086	-1.175	-5.893	-4.367	-6.628	-4.679	-7.053
569	0	-52.373	-4.646	-1.488	1.495	-70.281	-48.624	-45.640	-59.481	-56.348
569	0.23	-49.002	-4.584	-1.488	1.495	-66.136	-45.590	-42.607	-55.902	-52.770
569	0.45	-45.406	-4.398	-1.488	1.495	-61.523	-42.353	-39.370	-52.009	-48.877
569	0.68	-41.810	-4.211	-1.488	1.495	-56.910	-39.117	-36.134	-48.116	-44.983
569	0.9	-38.439	-4.149	-1.488	1.495	-52.766	-36.083	-33.100	-44.537	-41.405
571	0	38.501	4.155	-1.491	1.490	52.849	33.160	36.141	41.478	44.608
571	0.23	41.872	4.217	-1.491	1.490	56.993	36.194	39.175	45.056	48.187
571	0.45	45.468	4.403	-1.491	1.490	61.606	39.430	42.411	48.950	52.080
571	0.68	49.064	4.589	-1.491	1.490	66.219	42.667	45.648	52.843	55.973
571	0.9	52.435	4.651	-1.491	1.490	70.364	45.701	48.682	56.421	59.552
572	0	-50.521	-1.625	-0.003	-0.005	-63.226	-45.472	-45.474	-54.074	-54.076
572	0.23	-47.038	-1.501	-0.003	-0.005	-58.847	-42.337	-42.339	-50.338	-50.340
572	0.45	-43.103	-1.129	-0.003	-0.005	-53.530	-38.796	-38.798	-45.973	-45.975
572	0.68	-39.169	-0.756	-0.003	-0.005	-48.213	-35.255	-35.257	-41.607	-41.609
572	0.9	-35.686	-0.632	-0.003	-0.005	-43.834	-32.120	-32.122	-37.871	-37.873
573	0	-52.373	-4.646	-1.488	1.495	-70.281	-48.624	-45.640	-59.481	-56.348

573	0.23	-49.002	-4.584	-1.488	1.495	-66.136	-45.590	-42.607	-55.902	-52.770
573	0.45	-45.406	-4.398	-1.488	1.495	-61.523	-42.353	-39.370	-52.009	-48.877
573	0.68	-41.810	-4.211	-1.488	1.495	-56.910	-39.117	-36.134	-48.116	-44.983
573	0.9	-38.439	-4.149	-1.488	1.495	-52.766	-36.083	-33.100	-44.537	-41.405
575	0	38.501	4.155	-1.491	1.490	52.849	33.160	36.141	41.478	44.608
575	0.23	41.872	4.217	-1.491	1.490	56.993	36.194	39.175	45.056	48.187
575	0.45	45.468	4.403	-1.491	1.490	61.606	39.430	42.411	48.950	52.080
575	0.68	49.064	4.589	-1.491	1.490	66.219	42.667	45.648	52.843	55.973
575	0.9	52.435	4.651	-1.491	1.490	70.364	45.701	48.682	56.421	59.552
576	0	-50.521	-1.625	-0.003	-0.005	-63.226	-45.472	-45.174	-54.074	-54.076
576	0.23	-47.038	-1.501	-0.003	-0.005	-58.847	-42.337	-42.339	-50.338	-50.340
576	0.45	-43.103	-1.129	-0.003	-0.005	-53.530	-38.796	-38.798	-45.973	-45.975
576	0.68	-39.169	-0.756	-0.003	-0.005	-48.213	-35.255	-35.257	-41.607	-41.609
576	0.9	-35.686	-0.632	-0.003	-0.005	-43.834	-32.120	-32.122	-37.871	-37.873
577	0	-36.644	-1.731	0.646	-0.632	-46.742	-32.334	-33.612	-38.888	-40.231
577	0.23	-33.273	-1.669	0.646	-0.632	-42.598	-29.300	-30.578	-35.310	-36.652
577	0.45	-29.677	-1.483	0.646	-0.632	-37.984	-26.063	-27.342	-31.417	-32.759
577	0.68	-26.081	-1.296	0.646	-0.632	-33.371	-22.827	-24.105	-27.523	-28.866
577	0.9	-22.710	-1.234	0.646	-0.632	-29.227	-19.793	-21.071	-23.945	-25.287
579	0	22.986	1.271	-0.946	0.867	29.618	19.742	21.554	23.944	25.847
579	0.23	26.357	1.333	-0.946	0.867	33.762	22.776	24.588	27.522	29.425
579	0.45	29.953	1.520	-0.946	0.867	38.375	26.012	27.825	31.416	33.318
579	0.68	33.550	1.706	-0.946	0.867	42.989	29.249	31.061	35.309	37.212
579	0.9	36.920	1.768	-0.946	0.867	47.133	32.283	34.095	38.887	40.790
580	0	-30.512	-3.916	-1.859	1.715	-42.880	-29.320	-25.745	-36.457	-32.704
580	0.23	-29.862	-3.792	-1.859	1.715	-41.902	-28.735	-25.161	-35.697	-31.944
580	0.45	-28.762	-3.420	-1.859	1.715	-39.986	-27.745	-24.171	-34.307	-30.554
580	0.68	-27.662	-3.048	-1.859	1.715	-38.070	-26.755	-23.180	-32.917	-29.164
580	0.9	-27.012	-2.924	-1.859	1.715	-37.092	-26.170	-22.596	-32.157	-28.404
581	0	-63.774	-3.843	1.941	-1.782	-82.678	-55.455	-59.179	-67.346	-71.255
581	0.23	-60.290	-3.719	1.941	-1.782	-78.299	-52.320	-56.044	-63.610	-67.520
581	0.45	-56.356	-3.347	1.941	-1.782	-72.983	-48.779	-52.503	-59.244	-63.154
581	0.68	-52.422	-2.975	1.941	-1.782	-67.666	-45.238	-48.962	-54.879	-58.788
581	0.9	-48.938	-2.851	1.941	-1.782	-63.287	-42.103	-45.827	-51.143	-55.053
582	0.00	-30.818	-3.966	-1.673	1.566	-43.327	-29.409	-26.169	-36.614	-33.213
582	0.23	-30.168	-3.842	-1.673	1.566	-42.349	-28.825	-25.585	-35.854	-32.452
582	0.45	-29.068	-3.470	-1.673	1.566	-40.433	-27.834	-24.595	-34.464	-31.063
582	0.68	-27.968	-3.098	-1.673	1.566	-38.517	-26.844	-23.604	-33.074	-29.673
582	0.9	-27.318	-2.973	-1.673	1.566	-37.539	-26.260	-23.020	-32.314	-28.913
584	0	-36.920	-1.768	0.946	-0.867	-47.133	-32.283	-34.095	-38.887	-40.790
584	0.23	-33.549	-1.706	0.946	-0.867	-42.988	-29.249	-31.061	-35.309	-37.212
584	0.45	-29.953	-1.520	0.946	-0.867	-38.375	-26.012	-27.825	-31.415	-33.318
584	0.68	-26.357	-1.333	0.946	-0.867	-33.762	-22.776	-24.588	-27.522	-29.425
584	0.9	-22.986	-1.271	0.946	-0.867	-29.618	-19.742	-21.554	-23.944	-25.847
586	0	22.710	1.234	-0.646	0.632	29.227	19.793	21.071	23.945	25.287
586	0.23	26.081	1.296	-0.646	0.632	33.371	22.827	24.105	27.523	28.866
586	0.45	29.677	1.483	-0.646	0.632	37.984	26.063	27.342	31.417	32.759
586	0.68	33.273	1.669	-0.646	0.632	42.598	29.300	30.578	35.310	36.652
586	0.9	36.644	1.731	-0.646	0.632	46.742	32.334	33.612	38.888	40.231
587	0	-30.818	-3.966	-1.673	1.566	-43.327	-29.409	-26.169	-36.614	-33.213
587	0.23	-30.168	-3.842	-1.673	1.566	-42.349	-28.825	-25.585	-35.854	-32.452
587	0.45	-29.068	-3.470	-1.673	1.566	-40.433	-27.834	-24.595	-34.464	-31.063
587	0.68	-27.968	-3.097	-1.673	1.566	-38.517	-26.844	-23.604	-33.074	-29.673
587	0.9	-27.318	-2.973	-1.673	1.566	-37.539	-26.260	-23.020	-32.314	-28.913
588	0	-63.774	-3.843	1.941	-1.782	-82.678	-55.455	-59.179	-67.346	-71.255
588	0.23	-60.290	-3.719	1.941	-1.782	-78.300	-52.320	-56.044	-63.610	-67.520
588	0.45	-56.356	-3.347	1.941	-1.782	-72.983	-48.779	-52.503	-59.244	-63.154
588	0.68	-52.422	-2.975	1.941	-1.782	-67.666	-45.239	-48.962	-54.879	-58.788
588	0.9	-48.938	-2.851	1.941	-1.782	-63.287	-42.103	-45.827	-51.143	-55.053
589	0	-30.512	-3.917	-1.859	1.715	-42.880	-29.320	-25.746	-36.457	-32.704
589	0.23	-29.862	-3.792	-1.859	1.715	-41.902	-28.735	-25.161	-35.697	-31.944
589	0.45	-28.762	-3.420	-1.859	1.715	-39.986	-27.745	-24.171	-34.307	-30.554
589	0.68	-27.662	-3.048	-1.859	1.715	-38.070	-26.755	-23.181	-32.917	-29.164
589	0.9	-27.012	-2.924	-1.859	1.715	-37.092	-26.170	-22.596	-32.157	-28.404
590	0	-36.638	-1.728	-0.640	0.655	-46.731	-33.615	-32.320	-40.231	-38.871
590	0.23	-33.268	-1.666	-0.640	0.655	-42.586	-30.581	-29.286	-36.653	-35.293
590	0.45	-29.671	-1.480	-0.640	0.655	-37.973	-27.344	-26.050	-32.759	-31.400

590	0.68	-26.075	-1.294	-0.640	0.655	-33.360	-24.108	-22.813	-28.866	-27.506
590	0.9	-22.704	-1.231	-0.640	0.655	-29.216	-21.074	-19.779	-25.288	-23.928
592	0	19.648	2.784	-2.729	2.952	28.032	14.954	20.635	19.519	25.484
592	0.23	20.297	2.908	-2.729	2.952	29.010	15.539	21.220	20.279	26.244
592	0.45	21.398	2.280	-2.729	2.952	30.926	16.529	22.210	21.669	27.634
592	0.68	22.498	3.653	-2.729	2.952	32.842	17.519	23.200	23.059	29.024
592	0.9	23.147	3.777	-2.729	2.952	33.820	18.104	23.785	23.819	29.784
593	0	42.492	1.815	2.343	-2.537	53.894	40.585	35.705	48.219	43.096
593	0.23	45.975	1.939	2.343	-2.537	58.273	43.720	38.840	51.955	46.831
593	0.45	49.909	2.312	2.343	-2.537	63.590	47.261	42.381	56.321	51.197
593	0.68	53.844	2.684	2.343	-2.537	68.906	50.802	45.922	60.686	55.563
593	0.9	57.327	2.808	2.343	-2.537	73.285	53.937	49.057	64.422	59.298
596	0	-30.703	-6.885	1.630	-1.027	-47.860	-26.003	-28.660	-34.865	-37.654
596	0.45	-28.954	-6.388	1.630	-1.027	-44.966	-24.429	-27.085	-32.715	-35.504
596	0.9	-25.401	-4.899	1.630	-1.027	-38.319	-21.231	-23.887	-28.046	-30.835
596	1.35	-21.848	-3.410	1.630	-1.027	-31.673	-18.033	-20.689	-23.377	-26.166
596	1.8	-20.098	-2.913	1.630	-1.027	-28.779	-16.458	-19.115	-21.227	-24.016
597	0	-36.638	-1.728	-0.640	0.655	-46.731	-33.615	-32.320	-40.231	-38.871
597	0.23	-33.268	-1.666	-0.640	0.655	-42.586	-30.581	-29.286	-36.653	-35.293
597	0.45	-29.671	-1.480	-0.640	0.655	-37.973	-27.344	-26.050	-32.759	-31.400
597	0.68	-26.075	-1.294	-0.640	0.655	-33.360	-24.108	-22.813	-28.866	-27.506
597	0.9	-22.704	-1.231	-0.640	0.655	-29.216	-21.074	-19.779	-25.288	-23.928
599	0	19.648	2.784	-2.729	2.952	28.032	14.954	20.636	19.519	25.484
599	0.23	20.297	2.908	-2.729	2.952	29.010	15.539	21.220	20.279	26.244
599	0.45	21.398	3.280	-2.729	2.952	30.926	16.529	22.210	21.669	27.634
599	0.68	22.498	3.653	-2.729	2.952	32.842	17.519	23.201	23.059	29.024
599	0.9	23.147	3.777	-2.729	2.952	33.820	18.104	23.785	23.819	29.784
600	0	42.491	1.815	2.343	-2.537	53.894	40.585	35.705	48.219	43.095
600	0.23	45.975	1.939	2.343	-2.537	58.272	43.720	38.840	51.955	46.831
600	0.45	49.909	2.311	2.343	-2.537	63.589	47.261	42.381	56.320	51.197
600	0.68	53.843	2.684	2.343	-2.537	68.906	50.802	45.922	60.686	55.562
600	0.9	57.327	2.808	2.343	-2.537	73.285	53.937	49.057	64.422	59.298
601	0	26.330	2.934	-1.840	1.994	36.290	21.856	25.691	27.562	31.588
601	0.23	26.979	3.058	-1.840	1.994	37.268	22.441	26.275	28.322	32.349
601	0.45	28.079	3.430	-1.840	1.994	39.184	23.431	27.266	29.712	33.738
601	0.68	29.180	3.803	-1.840	1.994	41.100	24.421	28.256	31.102	35.128
601	0.9	29.829	3.927	-1.840	1.994	42.078	25.006	28.840	31.862	35.888
602	0	48.724	2.820	1.785	-1.947	62.980	45.637	41.904	54.811	50.892
602	0.23	52.207	2.944	1.785	-1.947	67.358	48.772	45.040	58.547	54.628
602	0.45	56.141	3.316	1.785	-1.947	72.675	52.313	48.580	62.912	58.993
602	0.68	60.076	3.688	1.785	-1.947	77.992	55.853	52.121	67.278	63.359
602	0.9	63.559	3.813	1.785	-1.947	82.371	58.989	55.256	71.014	67.095
603	0	27.500	2.995	-1.567	1.675	37.792	23.183	26.425	29.117	32.521
603	0.23	28.149	3.119	-1.567	1.675	38.770	23.767	27.010	29.877	33.231
603	0.45	29.250	3.492	-1.567	1.675	40.687	24.758	28.000	31.266	34.671
603	0.68	30.350	3.864	-1.567	1.675	42.603	25.748	28.990	32.656	36.061
603	0.9	30.999	3.988	-1.567	1.675	43.581	26.332	29.575	33.416	36.821
606	0	-96.292	-10.623	-2.229	1.257	-132.548	-88.892	-85.406	-110.140	-106.480
606	0.45	-88.874	-10.127	-2.229	1.257	-122.852	-82.216	-78.730	-102.038	-98.378
606	0.9	-79.653	-8.638	-2.229	1.257	-109.404	-73.917	-70.431	-91.418	-87.758
606	1.35	-70.432	-7.148	-2.229	1.257	-95.955	-65.618	-62.132	-80.797	-77.137
606	1.8	-63.014	-6.652	-2.229	1.257	-86.259	-58.942	-55.456	-72.696	-69.036
607	0	-29.835	-6.810	2.049	-1.225	-46.697	-24.802	-28.077	-33.465	-36.903
607	0.45	-28.085	-6.313	2.049	-1.225	-43.803	-23.227	-26.502	-31.315	-34.753
607	0.9	-24.532	-4.824	2.049	-1.225	-37.157	-20.030	-23.304	-26.646	-30.084
607	1.35	-20.979	-3.334	2.049	-1.225	-30.510	-16.832	-20.106	-21.977	-25.415
607	1.8	-19.229	-2.838	2.049	-1.225	-27.616	-15.257	-18.531	-19.827	-23.265
608	0	-88.319	-9.318	-2.231	1.354	-120.892	-81.719	-78.133	-100.949	-97.183
608	0.45	-80.901	-8.822	-2.231	1.354	-111.197	-75.043	-71.457	-92.847	-89.082
608	0.9	-71.680	-7.332	-2.231	1.354	-97.748	-66.744	-63.158	-82.227	-78.462
608	1.35	-62.459	-5.843	-2.231	1.354	-84.300	-58.445	-54.859	-71.606	-67.841
608	1.8	-55.041	-5.347	-2.231	1.354	-74.604	-51.769	-48.183	-63.505	-59.740
609	0	-22.886	-5.602	2.374	-1.446	-36.426	-18.224	-22.043	-25.067	-29.077
609	0.45	-21.136	-5.105	2.374	-1.446	-33.532	-16.649	-20.468	-22.917	-26.927
609	0.9	-17.583	-3.616	2.374	-1.446	-26.885	-13.451	-17.271	-18.248	-22.258
609	1.35	-14.030	-2.126	2.374	-1.446	-20.238	-10.254	-14.073	-13.579	-17.589
609	1.8	-12.280	-1.630	2.374	-1.446	-17.344	-8.679	-12.498	-11.429	-15.439

617	0	4.318	1.352	-0.202	-0.424	7.345	3.685	3.463	5.174	4.941
617	0.45	5.617	1.600	-0.202	-0.424	9.301	4.854	4.632	6.694	6.461
617	0.9	7.818	2.345	-0.202	-0.424	13.133	6.834	6.613	9.474	9.241
617	1.35	10.018	3.089	-0.202	-0.424	16.965	8.815	8.593	12.254	12.021
617	1.8	11.317	3.338	-0.202	-0.424	18.921	9.984	9.762	13.774	13.541
618	0	-16.416	-4.832	-0.353	2.282	-27.430	-15.128	-12.493	-20.652	-17.885
618	0.75	-13.751	-4.142	-0.353	2.282	-23.128	-12.728	-10.093	-17.418	-14.651
618	1.5	-9.382	-2.515	-0.353	2.282	-15.282	-8.797	-6.162	-11.806	-9.039
618	2.25	-5.013	-0.887	-0.353	2.282	-7.436	-4.865	-2.230	-6.193	-3.427
618	3	-2.347	-0.198	-0.353	2.282	-3.133	-2.465	0.170	-2.960	-0.193
619	0	-0.963	-0.613	-0.352	2.125	-2.135	-1.219	1.259	-1.767	0.834
619	0.75	1.703	0.077	-0.352	2.125	2.167	1.180	3.658	1.467	4.068
619	1.5	6.072	1.704	-0.352	2.125	10.013	5.112	7.590	7.079	9.680
619	2.25	10.441	3.331	-0.352	2.125	17.859	9.044	11.522	12.692	15.293
619	3	13.106	4.021	-0.352	2.125	22.161	11.443	13.921	15.925	18.526
620	0	-15.617	-4.480	-0.077	0.569	-25.908	-14.132	-13.436	-19.301	-18.623
620	0.75	-12.951	-3.791	-0.077	0.569	-21.606	-11.733	-11.087	-16.067	-15.389
620	1.5	-8.582	-2.163	-0.077	0.569	-13.760	-7.801	-7.155	-10.455	-9.777
620	2.25	-4.213	-0.536	-0.077	0.569	-5.913	-3.869	-3.223	-4.842	-4.164
620	3	-1.547	0.154	-0.077	0.569	-1.611	-1.470	-0.824	-1.609	-0.931
621	0	1.463	-0.196	-0.123	0.895	1.442	1.194	2.212	1.283	2.353
621	0.75	4.129	0.493	-0.123	0.895	5.744	3.593	4.611	4.517	5.586
621	1.5	8.497	2.121	-0.123	0.895	13.590	7.525	8.543	10.129	11.198
621	2.25	12.866	3.748	-0.123	0.895	21.436	11.457	12.475	15.742	16.811
621	3	15.532	4.437	-0.123	0.895	25.738	13.856	14.874	18.975	20.044
622	0	-15.361	-4.507	-0.082	0.222	-25.646	-13.907	-13.604	-19.055	-18.736
622	0.75	-12.696	-3.818	-0.082	0.222	-21.343	-11.508	-11.204	-15.822	-15.503
622	1.5	-8.327	-2.191	-0.082	0.222	-13.497	-7.576	-7.273	-10.209	-9.891
622	2.25	-3.958	-0.563	-0.082	0.222	-5.651	-3.644	-3.341	-4.597	-4.278
622	3	-1.292	0.126	-0.082	0.222	-1.349	-1.245	-0.941	-1.364	-1.045
623	0	0.686	-0.285	-0.100	0.372	0.366	0.518	0.990	0.436	0.931
623	0.75	3.352	0.404	-0.100	0.372	4.669	2.917	3.389	3.669	4.165
623	1.5	7.721	2.031	-0.100	0.372	12.515	6.849	7.321	9.282	9.777
623	2.25	12.089	3.659	-0.100	0.372	20.361	10.781	11.253	14.894	15.389
623	3	14.755	4.348	-0.100	0.372	24.663	13.180	13.652	18.128	18.623
624	0	-11.432	-3.179	-0.034	0.120	-18.805	-10.323	-10.169	-14.043	-13.881
624	0.56	-9.668	-2.791	-0.034	0.120	-16.067	-8.735	-8.581	-11.946	-11.783
624	1.13	-6.607	-1.690	-0.034	0.120	-10.632	-5.981	-5.826	-8.038	-7.876
624	1.69	-3.547	-0.588	-0.034	0.120	-5.197	-3.226	-3.072	-4.130	-3.968
624	2.25	-1.782	-0.200	-0.034	0.120	-2.459	-1.638	-1.484	-2.033	-1.871
625	0	2.457	0.414	-0.052	0.191	3.611	2.159	2.402	2.786	3.041
625	0.56	4.222	0.801	-0.052	0.191	6.349	3.747	3.990	4.883	5.138
625	1.13	7.282	1.903	-0.052	0.191	11.784	6.502	6.745	8.790	9.046
625	1.69	10.343	3.005	-0.052	0.191	17.219	9.256	9.499	12.698	12.953
625	2.25	12.108	3.392	-0.052	0.191	19.957	10.844	11.087	14.795	15.050
627	0	-15.048	-4.419	0.007	-0.027	-25.129	-13.536	-13.571	-18.578	-18.614
627	0.75	-12.383	-3.730	0.007	-0.027	-20.827	-11.137	-11.172	-15.344	-15.380
627	1.5	-8.014	-2.103	0.007	-0.027	-12.981	-7.205	-7.240	-9.732	-9.768
627	2.25	-3.645	-0.475	0.007	-0.027	-5.134	-3.274	-3.308	-4.119	-4.156
627	3	-0.979	0.214	0.007	-0.027	-0.832	-0.874	-0.909	-0.886	-0.922
628	0	0.979	-0.214	-0.007	0.027	0.832	0.874	0.909	0.886	0.922
628	0.75	3.645	0.475	-0.007	0.027	5.135	3.274	3.308	4.119	4.156
628	1.5	8.014	2.103	-0.007	0.027	12.981	7.205	7.240	9.732	9.768
628	2.25	12.383	3.730	-0.007	0.027	20.827	11.137	11.172	15.344	15.380
628	3	15.048	4.419	-0.007	0.027	25.129	13.537	13.571	18.578	18.614
629	0	-12.108	-3.392	0.052	-0.191	-19.957	-10.844	-11.087	-14.795	-15.050
629	0.56	-10.343	-3.005	0.052	-0.191	-17.219	-9.256	-9.499	-12.698	-12.953
629	1.13	-7.283	-1.903	0.052	-0.191	-11.784	-6.502	-6.745	-8.790	-9.046
629	1.69	-4.222	-0.801	0.052	-0.191	-6.349	-3.747	-3.990	-4.883	-5.138
629	2.25	-2.457	-0.414	0.052	-0.191	-3.611	-2.159	-2.402	-2.786	-3.041
630	0	1.782	0.200	0.034	-0.120	2.459	1.638	1.484	2.033	1.871
630	0.56	3.546	0.588	0.034	-0.120	5.197	3.226	3.072	4.130	3.968
630	1.13	6.607	1.690	0.034	-0.120	10.632	5.981	5.826	8.038	7.876
630	1.69	9.668	2.791	0.034	-0.120	16.067	8.735	8.581	11.946	11.783
630	2.25	11.432	3.179	0.034	-0.120	18.805	10.323	10.169	14.043	13.881
631	0	-14.755	-4.348	0.100	-0.372	-24.663	-13.180	-13.652	-18.128	-18.623
631	0.75	-12.089	-3.659	0.100	-0.372	-20.361	-10.781	-11.253	-14.894	-15.390

631	1.5	-7.721	-2.031	0.100	-0.372	-12.515	-6.849	-7.321	-9.282	-9.777
631	2.25	-3.352	-0.404	0.100	-0.372	4.669	-2.917	-3.389	-3.669	-4.165
631	3	-0.686	0.285	0.100	-0.372	-0.366	-0.518	-0.990	-0.436	-0.931
632	0	1.292	-0.126	0.082	-0.222	1.349	1.245	0.941	1.364	1.045
632	0.75	3.958	0.563	0.082	-0.222	5.651	3.644	3.341	4.597	4.278
632	1.5	8.327	2.191	0.082	-0.222	13.497	7.576	7.273	10.209	9.891
632	2.25	12.696	3.818	0.082	-0.222	21.343	11.508	11.204	15.822	15.505
632	3	15.361	4.507	0.082	-0.222	25.646	13.907	13.604	19.055	18.736
633	0	-15.532	-4.437	0.123	-0.895	-25.738	-13.856	-14.874	-18.975	-20.044
633	0.75	-12.866	-3.748	0.123	-0.895	-21.436	-11.457	-12.475	-15.742	-16.811
633	1.5	-8.497	-2.121	0.123	-0.895	-13.590	-7.525	-8.543	-10.129	-11.198
633	2.25	-4.129	-0.493	0.123	-0.895	-5.744	-3.593	-4.611	-4.517	-5.586
633	3	-1.463	0.196	0.123	-0.895	-1.442	-1.194	-2.212	-1.283	-2.353
634	0	1.547	-0.154	0.077	-0.569	1.611	1.470	0.824	1.609	0.931
634	0.75	4.213	0.536	0.077	-0.569	5.913	3.869	3.223	4.842	4.164
634	1.5	8.582	2.163	0.077	-0.569	13.760	7.801	7.155	10.455	9.777
634	2.25	12.951	3.791	0.077	-0.569	21.606	11.733	11.087	16.067	15.389
634	3	15.617	4.480	0.077	-0.569	25.908	14.132	13.486	19.301	18.623
635	0	-13.106	-4.021	0.352	-2.125	-22.161	-11.443	-13.921	-15.925	-18.526
635	0.75	-10.441	-3.331	0.352	-2.125	-17.859	-9.044	-11.522	-12.692	-15.293
635	1.5	-6.072	-1.704	0.352	-2.125	-10.013	-5.112	-7.590	-7.079	-9.680
635	2.25	-1.703	-0.077	0.352	-2.125	-2.167	-1.180	-3.658	-1.467	-4.068
635	3	0.963	0.613	0.352	-2.125	2.135	1.219	-1.259	1.767	-0.834
636	0	2.347	0.198	0.353	-2.282	3.133	2.465	-0.170	2.960	0.193
636	0.75	5.013	0.887	0.353	-2.282	7.436	4.865	2.230	6.193	3.427
636	1.5	9.382	2.515	0.353	-2.282	15.282	8.797	6.162	11.806	9.039
636	2.25	13.751	4.142	0.353	-2.282	23.128	12.728	10.093	17.418	14.651
636	3	16.416	4.832	0.353	-2.282	27.430	15.128	12.493	20.652	17.885
637	0	-11.317	-5.338	0.202	0.424	-18.921	-9.984	-9.762	-13.774	-13.541
637	0.45	-10.018	-3.089	0.202	0.424	-16.965	-8.815	-8.593	-12.254	-12.021
637	0.9	-7.818	-2.345	0.202	0.424	-13.133	-6.834	-6.613	-9.474	-9.241
637	1.35	-5.617	-1.600	0.202	0.424	-9.301	-4.854	-4.632	-6.694	-6.461
637	1.8	-4.318	-1.352	0.202	0.424	-7.345	-3.685	-3.463	-5.174	-4.941
638	0	3.755	1.168	0.310	0.203	6.375	3.689	3.583	5.004	4.892
638	0.45	5.054	1.416	0.310	0.203	8.331	4.859	4.752	6.524	6.412
638	0.9	7.255	2.161	0.310	0.203	12.163	6.839	6.732	9.304	9.192
638	1.35	9.455	2.906	0.310	0.203	15.995	8.819	8.713	12.084	11.972
638	1.8	10.754	3.154	0.310	0.203	17.951	9.989	9.882	13.604	13.492
639	0	-14.053	-3.870	-1.048	0.929	-23.057	-13.696	-11.719	-18.295	-16.219
639	0.56	-12.289	-3.483	-1.048	0.929	-20.319	-12.108	-10.131	-16.198	-14.122
639	1.13	-9.228	-2.381	-1.048	0.929	-14.884	-9.353	-7.376	-12.290	-10.214
639	1.69	-6.168	-1.280	-1.048	0.929	-9.449	-6.599	-4.622	-8.383	-6.307
639	2.25	-4.403	-0.892	-1.048	0.929	-6.710	-5.011	-3.034	-6.286	-4.209
640	0	-0.441	-0.233	-0.915	0.873	-0.901	-1.312	0.476	-1.570	0.307
640	0.56	1.324	0.155	-0.915	0.873	1.837	0.277	2.064	0.527	2.404
640	1.13	4.384	1.257	-0.915	0.873	7.272	3.031	4.819	4.435	6.312
640	1.69	7.445	2.358	-0.915	0.873	12.707	5.786	7.573	8.342	10.219
640	2.25	9.209	2.746	-0.915	0.873	15.445	7.374	9.161	10.439	12.316
641	0	-18.421	-5.494	-0.320	0.345	-30.895	-16.899	-16.233	-23.140	-22.440
641	0.75	-15.755	-4.804	-0.320	0.345	-26.593	-14.500	-13.834	-19.906	-19.207
641	1.5	-11.386	-3.177	-0.320	0.345	-18.747	-10.568	-9.902	-14.294	-13.595
641	2.25	-7.018	-1.550	-0.320	0.345	-10.901	-6.636	-5.970	-8.681	-7.982
641	3	-4.352	-0.860	-0.320	0.345	-6.599	-4.237	-3.571	-5.448	-4.749
642	0	-7.009	-2.313	-0.614	0.614	-12.111	-6.922	-5.694	-9.461	-8.171
642	0.75	-4.343	-1.623	-0.614	0.614	-7.809	-4.523	-3.294	-6.228	-4.938
642	1.5	0.026	0.004	-0.614	0.614	0.038	-0.591	0.638	-0.615	0.675
642	2.25	4.395	1.631	-0.614	0.614	7.884	3.341	4.569	4.997	6.287
642	3	7.060	2.321	-0.614	0.614	12.186	5.740	6.969	8.231	9.521
643	0	4.443	0.876	-0.351	0.320	6.734	3.648	4.319	4.849	5.553
643	0.75	7.109	1.566	-0.351	0.320	11.036	6.047	6.718	8.082	8.787
643	1.5	11.478	3.193	-0.351	0.320	18.882	9.979	10.650	13.695	14.399
643	2.25	15.847	4.820	-0.351	0.320	26.729	13.911	14.582	19.307	20.012
643	3	18.512	5.510	-0.351	0.320	31.031	16.310	16.981	22.541	23.245
644	0	-9.262	-2.759	-0.845	0.909	-15.529	-9.181	-7.427	-12.351	-10.509
644	0.56	-7.497	-2.371	-0.845	0.909	-12.791	-7.593	-5.839	-10.253	-8.412
644	1.13	-4.437	-1.270	-0.845	0.909	-7.355	-4.838	-3.084	-6.346	-4.504
644	1.69	-1.376	-0.168	-0.845	0.909	-1.920	-2.084	-0.330	-2.438	-0.597

644	2.25	0.388	0.220	-0.845	0.909	0.818	-0.496	1.258	-0.341	1.500
645	0	4.355	0.880	-0.901	1.041	6.634	3.019	4.961	4.181	6.221
645	0.56	6.120	1.268	-0.901	1.041	9.372	4.607	6.549	6.278	8.318
645	1.13	9.180	2.369	-0.901	1.041	14.808	7.361	9.304	10.186	12.226
645	1.69	12.241	3.471	-0.901	1.041	20.243	10.116	12.058	14.094	16.133
645	2.25	14.005	3.859	-0.901	1.041	22.981	11.704	13.646	16.191	18.230
646	0	-10.679	-3.143	-0.217	-0.303	-17.843	-9.829	-9.914	-13.421	-13.511
646	0.45	-9.380	-2.894	-0.217	-0.303	-15.887	-8.660	-8.745	-11.901	-11.991
646	0.9	-7.180	-2.150	-0.217	-0.303	-12.055	-6.679	-6.765	-9.121	-9.211
646	1.35	-4.979	-1.405	-0.217	-0.303	-8.223	-4.699	-4.784	-6.342	-6.431
646	1.8	-3.680	-1.157	-0.217	-0.303	-6.267	-3.530	-3.615	-4.821	-4.911
647	0	4.412	1.365	-0.440	-0.193	7.479	3.531	3.778	5.030	5.290
647	0.45	5.711	1.614	-0.440	-0.193	9.435	4.700	4.947	6.551	6.811
647	0.9	7.911	2.358	-0.440	-0.193	13.267	6.680	6.928	9.330	9.590
647	1.35	10.112	3.103	-0.440	-0.193	17.099	8.661	8.908	12.110	12.370
647	1.8	11.411	3.351	-0.440	-0.193	19.055	9.830	10.077	13.630	13.890
648	0	-16.697	-4.869	2.300	-0.367	-27.827	-12.727	-15.394	-18.184	-20.985
648	0.75	-14.031	-4.180	2.300	-0.367	-23.525	-10.327	-12.995	-14.950	-17.751
648	1.5	-9.662	-2.553	2.300	-0.367	-15.679	-6.396	-9.063	-9.338	-12.139
648	2.25	-5.293	-0.925	2.300	-0.367	-7.833	-2.464	-5.131	-3.726	-6.527
648	3	-2.628	-0.236	2.300	-0.367	-3.530	-0.064	-2.732	-0.492	-3.293
649	0	-1.162	-0.638	2.140	-0.365	-2.416	1.094	-1.411	0.625	-2.005
649	0.75	1.504	0.051	2.140	-0.365	1.886	3.493	0.988	3.858	1.228
649	1.5	5.872	1.678	2.140	-0.365	9.732	7.425	4.920	9.470	6.840
649	2.25	10.241	3.306	2.140	-0.365	17.578	11.357	8.852	15.083	12.453
649	3	12.907	3.995	2.140	-0.365	21.881	13.756	11.251	18.316	15.686
650	0	-16.004	-4.538	0.579	-0.084	-26.466	-13.824	-14.487	-19.055	-19.751
650	0.75	-13.338	-3.849	0.579	-0.084	-22.163	-11.425	-12.088	-15.821	-16.517
650	1.5	-8.969	-2.221	0.579	-0.084	-14.317	-7.493	-8.156	-10.209	-10.905
650	2.25	-4.600	-0.594	0.579	-0.084	-6.471	-3.561	-4.224	-4.597	-5.292
650	3	-1.935	0.095	0.579	-0.084	-2.169	-1.162	-1.825	-1.363	-2.059
651	0	1.170	-0.237	0.905	-0.130	1.025	1.958	0.924	2.030	0.943
651	0.75	3.836	0.452	0.905	-0.130	5.327	4.358	3.323	5.263	4.177
651	1.5	8.205	2.080	0.905	-0.130	13.173	8.290	7.255	10.876	9.789
651	2.25	12.573	3.707	0.905	-0.130	21.019	12.221	11.187	16.488	15.402
651	3	15.239	4.397	0.905	-0.130	25.322	14.621	13.586	19.722	18.635
652	0	-16.012	-4.604	0.233	-0.090	-26.581	-14.178	-14.501	-19.468	-19.807
652	0.75	-13.346	-3.915	0.233	-0.090	-22.279	-11.778	-12.101	-16.235	-16.574
652	1.5	-8.977	-2.287	0.233	-0.090	-14.432	-7.846	-8.169	-10.622	-10.962
652	2.25	-4.608	-0.660	0.233	-0.090	-6.586	-3.915	-4.238	-5.010	-5.349
652	3	-1.943	0.029	0.233	-0.090	-2.284	-1.515	-1.838	-1.777	-2.116
653	0	0.365	-0.286	0.373	-0.102	-0.020	0.702	0.226	0.595	0.096
653	0.75	3.031	0.403	0.373	-0.102	4.283	3.101	2.625	3.828	3.329
653	1.5	7.400	2.031	0.373	-0.102	12.129	7.033	6.557	9.441	8.941
653	2.25	11.768	3.658	0.373	-0.102	19.975	10.965	10.489	15.053	14.554
653	3	14.434	4.348	0.373	-0.102	24.277	13.364	12.888	18.287	17.787
654	0	-13.973	-3.834	0.225	-0.090	-22.902	-12.350	-12.666	-16.851	-17.182
654	0.56	-12.208	-3.447	0.225	-0.090	-20.164	-10.762	-11.077	-14.754	-15.085
654	1.13	-9.148	-2.345	0.225	-0.090	-14.729	-8.008	-8.323	-10.846	-11.177
654	1.69	-6.087	-1.244	0.225	-0.090	-9.294	-5.253	-5.568	-6.938	-7.269
654	2.25	-4.322	-0.856	0.225	-0.090	-6.556	-3.665	-3.980	-4.841	-5.172
655	0	-1.284	-0.460	0.294	-0.109	-2.276	-0.861	-1.264	-1.328	-1.752
655	0.56	0.481	-0.072	0.294	-0.109	0.462	0.727	0.324	0.769	0.345
655	1.13	3.542	1.029	0.294	-0.109	5.897	3.482	3.079	4.676	4.253
655	1.69	6.602	2.131	0.294	-0.109	11.332	6.236	5.833	8.584	8.161
655	2.25	8.367	2.519	0.294	-0.109	14.070	7.824	7.421	10.681	10.258
657	0	-19.300	-6.654	-0.011	0.004	-33.807	-17.381	-17.366	-24.469	-24.453
657	0.75	-16.634	-5.965	-0.011	0.004	-29.505	-14.982	-14.967	-21.235	-21.220
657	1.5	-11.464	-3.896	-0.011	0.004	-19.991	-10.329	-10.314	-14.505	-14.488
657	2.25	-6.294	-1.828	-0.011	0.004	-10.477	-5.675	-5.661	-7.772	-7.756
657	3	-3.628	-1.138	-0.011	0.004	-6.175	-3.276	-3.262	-4.538	-4.523
658	0	3.628	1.138	0.011	-0.004	6.175	3.276	3.262	4.538	4.523
658	0.75	6.294	1.828	0.011	-0.004	10.477	5.676	5.661	7.772	7.756
658	1.5	11.464	3.896	0.011	-0.004	19.991	10.329	10.314	14.503	14.488
658	2.25	16.634	5.965	0.011	-0.004	29.505	14.982	14.967	21.235	21.220
658	3	19.300	6.654	0.011	-0.004	33.807	17.381	17.366	24.469	24.453
660	0	-8.367	-2.519	-0.294	0.109	-14.070	-7.824	-7.421	-10.681	-10.258



660	0.56	-6.602	-2.131	-0.294	0.109	-11.332	-6.236	-5.833	-8.584	-8.161
660	1.13	-3.542	-1.029	-0.294	0.109	-5.897	-3.482	-3.079	-4.676	-4.253
660	1.69	-0.481	0.072	-0.294	0.109	-0.462	-0.727	-0.324	-0.769	-0.345
660	2.25	1.283	0.460	-0.294	0.109	2.276	0.861	1.264	1.328	1.752
661	0	4.322	0.856	-0.225	0.090	6.556	3.665	3.980	4.841	5.172
661	0.56	6.087	1.244	-0.225	0.090	9.294	5.253	5.568	6.938	7.269
661	1.13	9.148	2.345	-0.225	0.090	14.729	8.008	8.323	10.846	11.177
661	1.69	12.208	3.447	-0.225	0.090	20.164	10.762	11.077	14.754	15.084
661	2.25	13.973	3.834	-0.225	0.090	22.902	12.350	12.666	16.851	17.182
662	0	-14.434	-4.348	-0.373	0.102	-24.277	-13.364	-12.888	-18.287	-17.787
662	0.75	-11.768	-3.658	-0.373	0.102	-19.975	-10.965	-10.489	-15.053	-14.554
662	1.5	-7.400	-2.031	-0.373	0.102	-12.129	-7.033	-6.557	-9.441	-8.941
662	2.25	-3.031	-0.403	-0.373	0.102	-4.283	-3.101	-2.625	-3.828	-3.329
662	3	-0.365	0.286	-0.373	0.102	0.020	-0.702	-0.226	-0.595	-0.096
663	0	1.943	-0.029	-0.233	0.090	2.284	1.515	1.838	1.777	2.116
663	0.75	4.608	0.660	-0.233	0.090	6.586	3.915	4.238	5.010	5.349
663	1.5	8.977	2.287	-0.233	0.090	14.432	7.846	8.169	10.622	10.962
663	2.25	13.346	3.915	-0.233	0.090	22.279	11.778	12.101	16.235	16.574
663	3	16.012	4.604	-0.233	0.090	26.581	14.178	14.501	19.468	19.807
664	0	-15.239	-4.397	-0.905	0.130	-25.322	-14.621	-13.586	-19.722	-18.635
664	0.75	-12.573	-3.707	-0.905	0.130	-21.019	-12.221	-11.187	-16.488	-15.402
664	1.5	-8.205	-2.080	-0.905	0.130	-13.173	-8.290	-7.255	-10.876	-9.789
664	2.25	-3.836	-0.452	-0.905	0.130	-5.327	-4.358	-3.323	-5.263	-4.177
664	3	-1.170	0.237	-0.905	0.130	-1.025	-1.958	-0.924	-2.030	-0.943
665	0	1.935	-0.095	-0.579	0.084	2.169	1.162	1.825	1.363	2.059
665	0.75	4.600	0.594	-0.579	0.084	6.471	3.561	4.224	4.597	5.292
665	1.5	8.969	2.221	-0.579	0.084	14.317	7.493	8.156	10.209	10.905
665	2.25	13.338	3.849	-0.579	0.084	22.163	11.425	12.088	15.821	16.517
665	3	16.004	4.538	-0.579	0.084	26.466	13.824	14.487	19.055	19.751
666	0	-12.907	-3.995	-2.140	0.365	-21.881	-13.756	-11.251	-18.316	-15.686
666	0.75	-10.241	-3.306	-2.140	0.365	-17.578	-11.357	-8.852	-15.083	-12.453
666	1.5	-5.872	-1.678	-2.140	0.365	-9.732	-7.425	-4.920	-9.470	-6.840
666	2.25	-1.504	-0.051	-2.140	0.365	-1.886	-3.493	-0.988	-3.858	-1.228
666	3	1.162	0.638	-2.140	0.365	2.416	-1.094	1.411	-0.625	2.005
667	0	2.628	0.236	-2.300	0.367	3.530	0.064	2.732	0.492	3.293
667	0.75	5.293	0.925	-2.300	0.367	7.833	2.464	5.131	3.726	6.527
667	1.5	9.662	2.553	-2.300	0.367	15.679	6.396	9.063	9.338	12.139
667	2.25	14.031	4.180	-2.300	0.367	23.525	10.327	12.995	14.950	17.751
667	3	16.697	4.869	-2.300	0.367	27.827	12.727	15.394	18.184	20.985
668	0	-11.411	-3.351	0.440	0.193	-19.055	-9.830	-10.077	-13.630	-13.890
668	0.45	-10.112	-3.103	0.440	0.193	-17.099	-8.661	-8.908	-12.110	-12.370
668	0.9	-7.911	-2.358	0.440	0.193	-13.267	-6.680	-6.928	-9.330	-9.590
668	1.35	-5.711	-1.614	0.440	0.193	-9.435	-4.700	-4.947	-6.551	-6.811
668	1.8	-4.412	-1.365	0.440	0.193	-7.479	-3.531	-3.778	-5.030	-5.290
669	0	3.680	1.157	0.217	0.303	6.267	3.530	3.615	4.821	4.911
669	0.45	4.979	1.405	0.217	0.303	8.223	4.699	4.784	6.342	6.431
669	0.9	7.180	2.150	0.217	0.303	12.055	6.679	6.765	9.121	9.211
669	1.35	9.380	2.894	0.217	0.303	15.887	8.660	8.745	11.901	11.991
669	1.8	10.679	3.143	0.217	0.303	17.843	9.829	9.914	13.421	13.511
671	0	-14.005	-3.859	0.901	-1.041	-22.981	-11.704	-13.646	-16.191	-18.230
671	0.56	-12.241	-3.471	0.901	-1.041	-20.243	-10.116	-12.058	-14.094	-16.133
671	1.13	-9.180	-2.369	0.901	-1.041	-14.808	-7.361	-9.304	-10.186	-12.226
671	1.69	-6.120	-1.268	0.901	-1.041	-9.372	-4.607	-6.549	-6.278	-8.318
671	2.25	-4.355	-0.880	0.901	-1.041	-6.634	-3.019	-4.961	-4.181	-6.221
672	0	-0.388	-0.220	0.845	-0.909	-0.818	0.496	-1.258	0.341	-1.500
672	0.56	1.376	0.168	0.845	-0.909	1.920	2.084	0.330	2.438	0.597
672	1.13	4.437	1.270	0.845	-0.909	7.355	4.838	3.084	6.346	4.504
672	1.69	7.497	2.371	0.845	-0.909	12.791	7.593	5.839	10.253	8.412
672	2.25	9.262	2.759	0.845	-0.909	15.529	9.181	7.427	12.351	10.509
673	0	-18.512	-5.510	0.351	-0.320	-31.031	-16.310	-16.981	-22.541	-23.245
673	0.75	-15.847	-4.820	0.351	-0.320	-26.729	-13.911	-14.582	-19.307	-20.012
673	1.5	-11.478	-3.193	0.351	-0.320	-18.882	-9.979	-10.650	-13.695	-14.399
673	2.25	-7.109	-1.566	0.351	-0.320	-11.036	-6.047	-6.718	-8.082	-8.787
673	3	-4.443	-0.876	0.351	-0.320	-6.734	-3.648	-4.319	-4.849	-5.553
674	0	-7.060	-2.321	0.614	-0.614	-12.186	-5.740	-6.969	-8.231	-9.521
674	0.75	-4.395	-1.631	0.614	-0.614	-7.884	-3.341	-4.569	-4.997	-6.287
674	1.5	-0.026	-0.004	0.614	-0.614	-0.038	0.591	-0.638	0.615	-0.675

674	2.25	4.343	1.623	0.614	-0.614	7.809	4.523	3.294	6.228	4.938
674	3	7.009	2.313	0.614	-0.614	12.111	6.922	5.694	9.461	8.171
675	0	4.352	0.860	0.320	-0.345	6.599	4.237	3.571	5.448	4.749
675	0.75	7.018	1.550	0.320	-0.345	10.901	6.636	5.970	8.681	7.982
675	1.5	11.386	3.177	0.320	-0.345	18.747	10.568	9.902	14.294	13.595
675	2.25	15.755	4.804	0.320	-0.345	26.593	14.500	13.834	19.906	19.207
675	3	18.421	5.494	0.320	-0.345	30.895	16.899	16.233	23.140	22.440
676	0	-9.209	-2.746	0.915	-0.873	-15.445	-7.374	-9.161	-10.439	-12.316
676	0.56	-7.445	-2.358	0.915	-0.873	-12.707	-5.786	-7.573	-8.342	-10.219
676	1.13	-4.384	-1.257	0.915	-0.873	-7.272	-3.031	-4.819	-4.435	-6.312
676	1.69	-1.324	-0.155	0.915	-0.873	-1.837	-0.277	-2.064	-0.527	-2.404
676	2.25	0.441	0.233	0.915	-0.873	0.901	1.312	-0.476	1.570	-0.307
677	0	4.403	0.892	1.048	-0.929	6.710	5.011	3.034	6.286	4.209
677	0.56	6.168	1.280	1.048	-0.929	9.449	6.599	4.622	8.383	6.507
677	1.13	9.228	2.381	1.048	-0.929	14.884	9.353	7.376	12.290	10.214
677	1.69	12.289	3.483	1.048	-0.929	20.319	12.108	10.131	16.198	14.122
677	2.25	14.053	3.870	1.048	-0.929	23.057	13.696	11.719	18.295	16.219
678	0	-10.754	-3.154	-0.310	-0.203	-17.951	-9.989	-9.882	-13.604	-13.492
678	0.45	-9.455	-2.906	-0.310	-0.203	-15.995	-8.819	-8.713	-12.084	-11.972
678	0.9	-7.255	-2.161	-0.310	-0.203	-12.163	-6.839	-6.732	-9.304	-9.192
678	1.35	-5.054	-1.416	-0.310	-0.203	-8.331	-4.859	-4.752	-6.524	-6.412
678	1.8	-3.755	-1.168	-0.310	-0.203	-6.375	-3.689	-3.583	-5.004	-4.892
679	0	-44.943	-8.983	0.862	-2.489	-68.304	-39.586	-42.938	-51.944	-55.463
679	0.75	-39.450	-8.293	0.862	-2.489	-60.609	-34.643	-37.994	-45.742	-49.261
679	1.5	-32.254	-6.666	0.862	-2.489	-49.370	-28.166	-31.518	-37.161	-40.680
679	2.25	-25.058	-5.039	0.862	-2.489	-38.131	-21.690	-25.042	-28.580	-32.099
679	3	-19.565	-4.349	0.862	-2.489	-30.436	-16.746	-20.098	-22.378	-25.897
680	0	8.463	0.611	0.862	-2.332	11.133	8.478	5.284	10.176	6.822
680	0.75	13.956	1.300	0.862	-2.332	18.827	13.422	10.228	16.378	13.024
680	1.5	21.152	2.927	0.862	-2.332	30.066	19.898	16.704	24.959	21.605
680	2.25	28.348	4.555	0.862	-2.332	41.305	26.375	23.181	33.540	30.186
680	3	33.841	5.244	0.862	-2.332	49.000	31.318	28.124	39.742	36.388
681	0	-57.006	-7.831	0.292	-1.024	-80.937	-51.013	-52.329	-64.483	-65.865
681	0.75	-51.513	-7.142	0.292	-1.024	-73.242	-46.070	-47.385	-58.281	-59.663
681	1.5	-44.317	-5.514	0.292	-1.024	-62.003	-39.593	-40.909	-49.700	-51.082
681	2.25	-37.121	-3.887	0.292	-1.024	-50.764	-33.117	-34.432	-41.119	-42.501
681	3	-31.628	-3.198	0.292	-1.024	-43.069	-28.173	-29.489	-34.917	-36.299
682	0	32.974	2.918	0.338	-1.350	44.238	30.015	28.327	36.816	35.044
682	0.75	38.467	3.608	0.338	-1.350	51.933	34.958	33.270	43.018	41.246
682	1.5	45.663	5.235	0.338	-1.350	63.172	41.435	39.747	51.599	49.827
682	2.25	52.859	6.862	0.338	-1.350	74.411	47.911	46.223	60.180	58.408
682	3	58.352	7.552	0.338	-1.350	82.106	52.855	51.167	66.382	64.610
683	0	-49.084	-7.526	0.246	-0.569	-70.943	-43.929	-44.745	-56.021	-56.877
683	0.75	-43.591	-6.837	0.246	-0.569	-63.248	-38.985	-39.801	-49.819	-50.675
683	1.5	-36.395	-5.210	0.246	-0.569	-52.009	-32.509	-33.325	-41.238	-42.094
683	2.25	-29.199	-3.582	0.246	-0.569	-40.770	-26.032	-26.848	-32.657	-33.514
683	3	-23.706	-2.893	0.246	-0.569	-33.075	-21.089	-21.905	-26.455	-27.311
684	0	19.555	2.721	0.264	-0.720	27.820	17.863	16.879	22.524	21.491
684	0.75	25.048	3.411	0.264	-0.720	35.515	22.807	21.823	28.726	27.693
684	1.5	32.244	5.038	0.264	-0.720	46.754	29.283	28.299	37.307	36.274
684	2.25	39.440	6.666	0.264	-0.720	57.993	35.760	34.776	45.888	44.855
684	3	44.933	7.355	0.264	-0.720	65.687	40.704	39.720	52.090	51.057
685	0	-27.961	-3.659	0.250	-0.502	-39.408	-24.915	-25.667	-31.402	-32.191
685	0.56	-24.076	-3.272	0.250	-0.502	-34.126	-21.419	-22.170	-27.079	-27.868
685	1.13	-18.895	-2.170	0.250	-0.502	-26.146	-16.756	-17.507	-20.945	-21.734
685	1.69	-13.714	-1.069	0.250	-0.502	-18.167	-12.093	-12.845	-14.811	-15.600
685	2.25	-9.829	-0.681	0.250	-0.502	-12.884	-8.596	-9.348	-10.487	-11.276
686	0	-0.030	2.677	0.268	-0.572	4.247	0.240	-0.600	1.936	1.054
686	0.56	3.855	3.065	0.268	-0.572	9.530	3.737	2.897	6.259	5.377
686	1.13	40.237	5.397	0.268	-0.572	56.920	36.481	35.640	45.930	45.048
686	1.69	45.418	6.499	0.268	-0.572	64.899	41.144	40.303	52.064	51.182
686	2.25	49.302	6.887	0.268	-0.572	70.182	44.640	43.800	56.387	55.505
687	0	-62.618	-8.064	-0.007	0.027	-88.045	-56.364	-56.329	-70.837	-70.801
687	0.75	-57.125	-7.375	-0.007	0.027	-80.350	-51.420	-51.385	-64.635	-64.599
687	1.5	-49.929	-5.748	-0.007	0.027	-69.112	-44.944	-44.909	-56.054	-56.018
687	2.25	-41.532	-2.890	-0.007	0.027	-48.462	-33.386	-33.352	-43.937	-43.901
687	3	-36.040	-2.200	-0.007	0.027	-40.767	-27.443	-27.408	-36.735	-36.699



688	0	6.040	2.200	0.007	-0.027	10.768	5.443	5.409	7.735	7.699
688	0.75	11.533	2.890	0.007	-0.027	18.463	10.387	10.352	13.938	13.901
688	1.5	18.729	4.517	0.007	-0.027	29.702	16.863	16.829	22.518	22.482
688	2.25	57.126	7.375	0.007	-0.027	80.351	51.420	51.386	64.636	64.600
688	3	62.619	8.065	0.007	-0.027	88.046	56.364	56.330	70.838	70.802
689	0	-49.303	-6.887	-0.268	0.572	-70.183	-44.640	-43.800	-56.388	-55.506
689	0.56	-45.418	-6.499	-0.268	0.572	-64.900	-41.144	-40.304	-52.065	-51.182
689	1.13	-40.237	-5.398	-0.268	0.572	-56.921	-36.481	-35.641	-45.931	-45.048
689	1.69	-3.855	-3.065	-0.268	0.572	-9.531	-3.737	-2.897	-6.260	-5.378
689	2.25	0.030	-2.678	-0.268	0.572	-4.248	-0.241	0.599	-1.937	-1.054
690	0	9.829	0.680	-0.250	0.502	12.883	8.596	9.348	10.486	11.276
690	0.56	13.714	1.068	-0.250	0.502	18.166	12.092	12.844	14.810	15.599
690	1.13	18.895	2.170	-0.250	0.502	26.145	16.755	17.507	20.944	21.733
690	1.69	24.076	3.271	-0.250	0.502	34.125	21.418	22.170	27.078	27.867
690	2.25	27.960	3.659	-0.250	0.502	39.407	24.915	25.666	31.402	32.191
691	0	-14.933	-7.355	-0.264	0.720	-65.687	-40.703	-39.719	-52.090	-51.057
691	0.75	-39.440	-6.666	-0.264	0.720	-57.993	-35.760	-34.776	-45.888	-44.855
691	1.5	-32.244	-5.038	-0.264	0.720	-46.754	-29.283	-28.299	-37.307	-36.274
691	2.25	-25.048	-3.411	-0.264	0.720	-35.515	-22.807	-21.823	-28.726	-27.693
691	3	-19.555	-2.721	-0.264	0.720	-27.820	-17.863	-16.879	-22.524	-21.491
692	0	23.706	2.893	-0.246	0.569	33.076	21.089	21.905	26.455	27.312
692	0.75	29.199	3.582	-0.246	0.569	40.770	26.033	26.848	32.657	33.514
692	1.5	36.395	5.210	-0.246	0.569	52.009	32.509	33.325	41.238	42.095
692	2.25	43.591	6.837	-0.246	0.569	63.248	38.985	39.801	49.819	50.675
692	3	49.084	7.527	-0.246	0.569	70.943	43.929	44.745	56.021	56.878
693	0	-58.352	-7.552	-0.338	1.350	-82.106	-52.855	-51.167	-66.382	-64.610
693	0.75	-52.859	-6.862	-0.338	1.350	-74.411	-47.911	-46.223	-60.180	-58.408
693	1.5	-45.663	-5.235	-0.338	1.350	-63.172	-41.435	-39.747	-51.599	-49.827
693	2.25	-38.467	-3.608	-0.338	1.350	-51.933	-34.958	-33.270	-43.018	-41.246
693	3	-32.974	-2.918	-0.338	1.350	-44.238	-30.015	-28.327	-36.816	-35.044
694	0	31.628	3.198	-0.292	1.024	43.070	28.173	29.489	34.917	36.299
694	0.75	37.121	3.887	-0.292	1.024	50.764	33.117	34.432	41.119	42.501
694	1.5	44.317	5.514	-0.292	1.024	62.003	39.593	40.909	49.700	51.082
694	2.25	51.513	7.142	-0.292	1.024	73.242	46.070	47.385	58.281	59.663
694	3	57.006	7.831	-0.292	1.024	80.937	51.013	52.329	64.483	65.865
695	0	-33.841	-5.244	-0.862	2.332	-49.000	-31.318	-28.124	-39.742	-36.388
695	0.75	-28.348	-4.555	-0.862	2.332	-41.305	-26.375	-23.181	-33.540	-30.186
695	1.5	-21.152	-2.927	-0.862	2.332	-30.066	-19.898	-16.704	-24.959	-21.605
695	2.25	-13.956	-1.300	-0.862	2.332	-18.827	-13.422	-10.228	-16.378	-13.024
695	3	-8.463	-0.611	-0.862	2.332	-11.132	-8.478	-5.284	-10.176	-6.822
696	0	19.565	4.349	-0.862	2.489	30.436	16.746	20.098	22.378	25.897
696	0.75	25.058	5.039	-0.862	2.489	38.131	21.690	25.042	28.580	32.099
696	1.5	32.254	6.666	-0.862	2.489	49.370	28.166	31.518	37.161	40.680
696	2.25	39.450	8.293	-0.862	2.489	60.609	34.643	37.994	45.742	49.261
696	3	44.943	8.983	-0.862	2.489	68.304	39.586	42.938	51.944	55.463
697	0	-30.805	-6.671	-14.632	17.007	-47.640	-42.356	-10.717	-51.911	-18.690
697	0.56	-26.920	-6.283	-14.632	17.007	-42.357	-38.859	-7.221	-47.588	-14.367
697	1.13	-21.739	-5.182	-14.632	17.007	-34.378	-34.197	-2.558	-41.454	-8.233
697	1.69	-16.558	-4.080	-14.632	17.007	-26.398	-29.534	2.105	-35.320	-2.099
697	2.25	-12.673	-3.692	-14.632	17.007	-21.115	-26.037	5.601	-30.996	2.225
698	0	-2.597	-0.380	-14.765	17.063	-3.724	-17.102	14.726	-18.470	14.950
698	0.56	1.288	0.008	-14.765	17.063	1.558	-13.606	18.222	-14.146	19.274
698	1.13	6.808	1.122	-14.765	17.063	9.965	-8.638	23.191	-7.648	25.772
698	1.69	11.989	2.224	-14.765	17.063	17.945	-3.975	27.854	-1.514	31.906
698	2.25	15.874	2.612	-14.765	17.063	23.227	-0.478	31.350	2.810	36.230
703	0	29.419	7.742	-4.575	4.615	47.691	21.902	31.092	30.964	40.614
703	0.75	34.912	8.432	-4.575	4.615	55.385	26.846	36.036	37.166	46.816
703	1.5	42.108	10.059	-4.575	4.615	66.624	33.322	42.512	45.747	55.397
703	2.25	49.402	11.690	-4.575	4.615	77.987	39.887	49.077	54.433	64.083
703	3	54.895	12.380	-4.575	4.615	85.681	44.830	54.021	60.635	70.285
704	0	-14.956	-2.491	-17.047	14.817	-21.933	-30.507	1.356	-35.172	-1.715
704	0.56	-11.071	-2.103	-17.047	14.817	-16.650	-27.011	4.853	-30.849	2.608
704	1.13	-5.890	-1.001	-17.047	14.817	-8.670	-22.348	9.516	-24.715	8.742
704	1.69	-0.370	0.113	-17.047	14.817	-0.263	-17.380	14.484	-18.216	15.241
704	2.25	3.515	0.501	-17.047	14.817	5.019	-13.883	17.981	-13.893	19.564
705	0	13.586	3.812	-16.991	14.684	22.403	-4.763	26.912	-1.173	32.086
705	0.56	17.471	4.200	-16.991	14.684	27.686	-1.267	39.408	3.150	36.409

718	3	-20.376	-2.881	0.526	-0.132	-29.062	-17.812	-18.471	-22.658	-23.349
719	0	22.555	2.637	0.386	-0.120	31.284	20.686	20.180	25.749	25.218
719	0.75	28.048	3.326	0.386	-0.120	38.979	25.629	25.123	31.951	31.420
719	1.5	35.244	4.953	0.386	-0.120	50.218	32.106	31.600	40.532	40.001
719	2.25	42.440	6.581	0.386	-0.120	61.457	38.582	38.076	49.113	48.582
719	3	47.933	7.270	0.386	-0.120	69.152	43.526	43.020	55.315	54.784
720	0	-58.864	-7.630	1.102	-0.165	-82.846	-51.876	-53.143	-65.458	-66.788
720	0.75	-53.371	-6.941	1.102	-0.165	-75.151	-46.933	-48.199	-59.256	-60.586
720	1.5	-46.175	-5.313	1.102	-0.165	-63.912	-40.456	-41.723	-50.675	-52.005
720	2.25	-38.979	-3.686	1.102	-0.165	-52.673	-33.980	-35.247	-42.094	-43.424
720	3	-33.486	-2.997	1.102	-0.165	-44.978	-29.036	-30.303	-35.892	-37.222
721	0	31.021	3.102	0.775	-0.119	42.189	28.694	27.800	35.341	34.401
721	0.75	36.514	3.792	0.775	-0.119	49.884	33.638	32.743	41.543	40.603
721	1.5	43.710	5.419	0.775	-0.119	61.122	40.114	39.220	50.124	49.184
721	2.25	50.906	7.046	0.775	-0.119	72.361	46.591	45.696	58.705	57.765
721	3	56.399	7.736	0.775	-0.119	80.056	51.534	50.640	64.907	63.967
722	0	-34.245	-5.306	2.031	-0.652	-49.584	-28.789	-31.473	-37.167	-39.985
722	0.75	-28.752	-4.616	2.031	-0.652	-41.889	-23.846	-26.529	-30.965	-33.783
722	1.5	-21.556	-2.989	2.031	-0.652	-30.650	-17.369	-20.053	-22.384	-25.202
722	2.25	-14.360	-1.362	2.031	-0.652	-19.411	-10.893	-13.576	-13.803	-16.621
722	3	-8.867	-0.672	2.031	-0.652	-11.716	-5.949	-8.653	-7.601	-10.419
723	0	19.080	4.275	2.192	-0.655	29.736	19.364	16.517	25.029	22.040
723	0.75	24.573	4.965	2.192	-0.655	37.431	24.307	21.461	31.231	28.242
723	1.5	31.769	6.592	2.192	-0.655	48.670	30.784	27.937	39.812	36.823
723	2.25	38.965	8.219	2.192	-0.655	59.909	37.260	34.414	48.393	45.404
723	3	44.458	8.909	2.192	-0.655	67.603	42.204	39.357	54.595	51.606
724	0	-31.718	-6.791	16.991	-14.684	-48.927	-11.555	-43.231	-19.742	-53.001
724	0.56	-27.833	-6.403	16.991	-14.684	-43.645	-8.059	-39.734	-15.418	-48.677
724	1.13	-22.652	-5.302	16.991	-14.684	-35.665	-3.396	-35.071	-9.284	-42.543
724	1.69	-17.471	-4.200	16.991	-14.684	-27.686	1.267	-30.408	-3.150	-36.409
724	2.25	-13.586	-3.812	16.991	-14.684	-22.403	4.763	-26.912	1.173	-32.086
725	0	-3.515	-0.501	17.047	-14.817	-5.019	13.883	-17.980	13.893	-19.564
725	0.56	0.370	-0.113	17.047	-14.817	0.263	17.380	-14.484	18.216	-15.240
725	1.13	5.890	1.001	17.047	-14.817	8.670	22.348	-9.516	24.715	-8.742
725	1.69	11.071	2.103	17.047	-14.817	16.650	27.011	-4.853	30.849	-2.608
725	2.25	14.956	2.491	17.047	-14.817	21.933	30.507	-1.356	35.172	1.715
726	0	-54.895	-12.380	4.575	-4.615	-85.681	-44.830	-54.021	-60.635	-70.285
726	0.75	-49.402	-11.690	4.575	-4.615	-77.987	-39.887	-49.077	-54.433	-64.083
726	1.5	-42.206	-10.063	4.575	-4.615	-66.748	-33.410	-42.600	-45.852	-55.502
726	2.25	-34.912	-8.432	4.575	-4.615	-55.385	-26.846	-36.036	-37.166	-46.816
726	3	-29.419	-7.742	4.575	-4.615	-47.691	-21.902	-31.092	-30.964	-40.614
727	0	-12.764	-2.326	4.312	-4.321	-19.038	-7.176	-15.808	-10.340	-19.404
727	0.75	-7.271	-1.636	4.312	-4.321	-11.343	-2.232	-10.865	-4.138	-13.202
727	1.5	-0.075	-0.009	4.312	-4.321	-0.105	4.244	-4.388	4.443	-4.621
727	2.25	7.121	1.618	4.312	-4.321	11.134	10.721	2.088	13.024	3.960
727	3	12.614	2.308	4.312	-4.321	18.829	15.664	7.032	19.226	10.162
728	0	29.309	7.732	4.606	-4.589	47.541	30.984	21.788	40.481	30.826
728	0.75	34.802	8.421	4.606	-4.589	55.236	35.927	26.732	46.683	37.028
728	1.5	41.998	10.049	4.606	-4.589	66.475	42.404	33.208	55.264	45.609
728	2.25	49.291	11.680	4.606	-4.589	77.837	48.968	39.773	63.950	54.295
728	3	54.784	12.369	4.606	-4.589	85.532	53.912	44.716	70.152	60.497
729	0	-15.874	-2.612	14.765	-17.063	-23.227	0.478	-31.350	-2.810	-56.230
729	0.56	-11.989	-2.224	14.765	-17.063	-17.945	3.975	-27.854	1.514	-51.906
729	1.13	-6.808	-1.122	14.765	-17.063	-9.965	8.638	-23.191	7.648	-45.772
729	1.69	-1.288	-0.008	14.765	-17.063	-1.558	13.606	-18.222	14.146	-39.274
729	2.25	2.597	0.380	14.765	-17.063	3.725	17.102	-14.726	18.470	-32.950
730	0	12.673	3.692	14.632	-17.007	21.116	26.037	-5.601	30.996	-2.225
730	0.56	16.558	4.080	14.632	-17.007	26.398	29.534	-2.105	35.320	2.099
730	1.13	21.739	5.182	14.632	-17.007	34.378	34.197	2.558	41.454	8.233
730	1.69	26.920	6.283	14.632	-17.007	42.357	38.859	7.221	47.588	14.367
730	2.25	30.805	6.671	14.632	-17.007	47.640	42.356	10.717	51.911	18.691
731	0	-29.476	-3.039	0.317	-0.320	-40.234	-26.212	-26.849	-32.532	-33.201
731	0.75	-20.191	-2.349	0.317	-0.320	-27.988	-17.856	-18.492	-22.349	-23.017
731	1.5	-9.203	-0.722	0.317	-0.320	-12.199	-7.966	-8.603	-9.786	-10.454
731	2.25	1.785	0.905	0.317	-0.320	3.591	1.923	1.286	2.777	2.109
731	3	11.071	1.595	0.317	-0.320	15.836	10.280	9.643	12.961	12.292
732	0	-8.826	-1.293	-0.713	1.317	-12.659	-8.656	-6.626	-10.830	-8.699

750	1.69	-25.148	-7.119	-0.798	1.064	-41.568	-23.432	-21.569	-31.729	-29.773
750	2.25	-16.299	-6.731	-0.798	1.064	-30.328	-15.467	-13.604	-22.192	-20.236
751	0	13.790	5.226	0.873	-1.308	24.910	13.284	11.103	18.688	16.398
751	0.56	22.639	5.614	0.873	-1.308	36.150	21.248	19.067	28.225	25.935
751	1.13	32.898	6.778	0.873	-1.308	50.321	30.481	28.300	39.729	37.439
751	1.69	43.156	7.941	0.873	-1.308	64.493	39.713	37.532	51.233	48.943
751	2.25	52.005	8.329	0.873	-1.308	75.733	47.678	45.497	60.770	58.480
752	0	-52.006	-8.330	-0.873	1.308	-75.734	-47.678	-45.497	-60.770	-58.481
752	0.56	-43.156	-7.942	-0.873	1.308	-64.494	-39.714	-37.533	-51.234	-48.944
752	1.13	-32.898	-6.778	-0.873	1.308	-50.323	-30.481	-28.300	-39.730	-37.440
752	1.69	-22.640	-5.614	-0.873	1.308	-36.151	-21.249	-19.068	-28.225	-25.936
752	2.25	-13.790	-5.227	-0.873	1.308	-24.911	-13.284	-11.103	-18.689	-16.399
753	0	16.298	6.731	0.798	-1.064	30.327	15.467	13.604	22.191	20.236
753	0.56	25.148	7.118	0.798	-1.064	41.567	23.431	21.569	31.728	29.772
753	1.13	35.406	8.282	0.798	-1.064	55.738	32.664	30.861	43.232	41.276
753	1.69	45.664	9.446	0.798	-1.064	69.910	41.896	40.033	54.736	52.781
753	2.25	54.514	9.833	0.798	-1.064	81.150	49.861	47.998	64.273	62.317
754	0	-69.471	-21.261	-1.523	2.445	-117.383	-64.047	-60.079	-87.938	-83.772
754	0.75	-62.726	-19.882	-1.523	2.445	-107.083	-57.976	-54.009	-79.987	-75.821
754	1.5	-51.774	-16.186	-1.523	2.445	-88.026	-48.119	-44.151	-66.158	-61.992
754	2.25	-40.821	-12.490	-1.523	2.445	-68.970	-38.262	-34.294	-52.330	-48.164
754	3	-34.076	-11.111	-1.523	2.445	-58.669	-32.191	-28.223	-44.379	-40.213
755	0	35.632	11.956	1.232	-1.792	61.888	33.301	30.277	46.239	43.065
755	0.75	42.377	13.335	1.232	-1.792	72.189	39.371	36.348	54.191	51.016
755	1.5	53.330	17.031	1.232	-1.792	91.245	49.229	46.205	68.019	64.844
755	2.25	64.282	20.727	1.232	-1.792	110.302	59.086	56.062	81.848	78.673
755	3	71.027	22.106	1.232	-1.792	120.603	65.156	62.133	89.799	86.624
756	0	-71.539	-22.180	-1.388	2.210	-121.334	-65.773	-62.175	-90.546	-86.768
756	0.75	-64.794	-20.800	-1.388	2.210	-111.034	-59.702	-56.104	-82.595	-78.817
756	1.5	-53.842	-17.105	-1.388	2.210	-91.977	-49.845	-46.247	-68.767	-64.989
756	2.25	-42.889	-13.409	-1.388	2.210	-72.921	-39.988	-36.390	-54.938	-51.160
756	3	-36.144	-12.030	-1.388	2.210	-62.620	-33.917	-30.319	-46.987	-43.209
757	0	34.700	11.212	1.041	-1.331	59.579	32.270	29.898	44.591	42.100
757	0.75	41.445	12.591	1.041	-1.331	69.879	38.341	35.969	52.542	50.051
757	1.5	52.397	16.287	1.041	-1.331	88.936	48.198	45.826	66.370	63.880
757	2.25	63.350	19.983	1.041	-1.331	107.992	58.055	55.684	80.199	77.709
757	3	70.095	21.362	1.041	-1.331	118.293	64.126	61.754	88.150	85.660
758	0	-67.486	-12.042	-1.700	2.053	-100.250	-62.437	-58.684	-80.232	-76.291
758	0.75	-55.373	-11.352	-1.700	2.053	-84.612	-51.536	-47.783	-67.079	-63.139
758	1.5	-40.756	-9.284	-1.700	2.053	-63.762	-38.381	-34.628	-50.428	-46.488
758	2.25	-26.140	-7.215	-1.700	2.053	-42.912	-25.226	-21.473	-33.777	-29.837
758	3	-14.027	-6.526	-1.700	2.053	-27.274	-14.324	-10.572	-20.625	-16.684
759	0	10.738	4.792	0.175	-0.205	20.552	9.839	9.459	14.477	14.078
759	0.75	22.850	5.481	0.175	-0.205	36.190	20.740	20.360	27.629	27.231
759	1.5	37.467	7.550	0.175	-0.205	57.040	33.895	33.516	44.280	43.882
759	2.25	52.084	9.618	0.175	-0.205	77.890	47.050	46.671	60.931	60.533
759	3	64.196	10.308	0.175	-0.205	93.528	57.951	57.572	74.084	73.685
760	0	43.694	6.305	0.863	-0.895	62.521	40.187	38.429	50.757	48.911
760	0.45	50.661	6.554	0.863	-0.895	71.279	46.458	44.700	58.229	56.383
760	0.9	58.529	7.298	0.863	-0.895	81.913	53.539	51.781	66.960	65.114
760	1.35	66.398	8.043	0.863	-0.895	92.546	60.621	58.863	75.691	73.845
760	1.8	73.365	8.291	0.863	-0.895	101.304	66.891	65.133	83.163	81.317
761	0	-87.518	-28.300	1.158	-3.189	-150.303	-77.609	-81.956	-108.508	-113.073
761	0.75	-80.773	-26.921	1.158	-3.189	-140.002	-71.538	-75.885	-100.557	-105.121
761	1.5	-69.019	-22.784	1.158	-3.189	-119.278	-60.959	-65.307	-85.608	-90.173
761	2.25	-57.265	-18.647	1.158	-3.189	-98.554	-50.381	-54.728	-70.660	-75.225
761	3	-50.520	-17.268	1.158	-3.189	-88.253	-44.310	-48.658	-62.709	-67.274
762	0	-2.292	4.065	-0.104	-1.665	3.754	-2.166	-3.727	0.046	-1.593
762	0.75	4.453	5.444	-0.104	-1.665	14.055	3.904	2.343	7.997	6.358
762	1.5	16.207	9.581	-0.104	-1.665	34.779	14.483	12.922	22.945	21.306
762	2.25	27.961	13.719	-0.104	-1.665	55.503	25.062	23.500	37.893	36.254
762	3	34.707	15.098	-0.104	-1.665	65.804	31.132	29.571	45.845	44.205
763	0	-30.918	-15.457	0.237	-0.050	-61.833	-27.589	-27.876	-41.953	-42.255
763	0.75	-27.000	-14.078	0.237	-0.050	-54.925	-24.063	-24.350	-36.970	-37.272
763	1.5	-18.074	-9.941	0.237	-0.050	-37.593	-16.029	-16.316	-24.991	-25.292
763	2.25	-9.147	-5.804	0.237	-0.050	-20.262	-7.995	-8.282	-13.011	-13.313
763	3	-5.229	-4.425	0.237	-0.050	-13.354	-4.469	-4.756	-8.029	-8.330

764	0	9.730	5.679	-0.245	0.053	20.762	8.512	8.810	13.537	13.849
764	0.75	13.648	7.058	-0.245	0.053	27.670	12.038	12.336	18.520	18.832
764	1.5	22.574	11.195	-0.245	0.053	45.002	20.072	20.370	30.499	30.811
764	2.25	31.501	15.332	-0.245	0.053	62.333	28.106	28.404	42.479	42.791
764	3	35.419	16.711	-0.245	0.053	69.241	31.633	31.930	47.461	47.774
765	0	-35.209	-16.742	0.320	-0.186	-69.039	-31.368	-31.875	-47.181	-47.713
765	0.75	-31.291	-15.363	0.320	-0.186	-62.131	-27.842	-28.348	-42.199	-42.730
765	1.5	-22.365	-11.226	0.320	-0.186	-44.799	-19.808	-20.314	-30.219	-30.751
765	2.25	-13.438	-7.089	0.320	-0.186	-27.468	-11.774	-12.280	-18.240	-18.771
765	3	-9.520	-5.710	0.320	-0.186	-20.560	-8.248	-8.754	-13.257	-13.789
766	0	7.298	4.758	-0.245	0.029	16.371	6.324	6.597	10.404	10.691
766	0.75	11.216	6.137	-0.245	0.029	23.279	9.850	10.124	15.387	15.674
766	1.5	20.143	10.275	-0.245	0.029	40.611	17.884	18.158	27.366	27.653
766	2.25	29.070	14.412	-0.245	0.029	57.942	25.918	26.192	39.345	39.633
766	3	32.988	15.791	-0.245	0.029	64.850	29.444	29.718	44.328	44.616
767	0	-27.113	-12.515	0.270	-0.083	-52.559	-24.132	-24.485	-36.070	-36.440
767	0.56	-24.644	-11.739	0.270	-0.083	-48.355	-21.910	-22.263	-32.989	-33.359
767	1.13	-19.358	-9.412	0.270	-0.083	-38.288	-17.152	-17.505	-25.972	-26.342
767	1.69	-14.072	-7.084	0.270	-0.083	-28.221	-12.395	-12.747	-18.955	-19.326
767	2.25	-11.603	-6.309	0.270	-0.083	-24.017	-10.173	-10.525	-15.874	-16.245
768	0	9.273	5.818	-0.210	-0.039	20.436	8.136	8.307	13.182	13.361
768	0.56	11.742	6.593	-0.210	-0.039	24.640	10.358	10.529	16.263	16.443
768	1.13	17.029	8.921	-0.210	-0.039	34.707	15.116	15.287	23.280	23.459
768	1.69	22.315	11.248	-0.210	-0.039	44.774	19.874	20.045	30.297	30.476
768	2.25	24.784	12.024	-0.210	-0.039	48.978	22.096	22.267	33.378	33.557
772	0	-24.783	-12.023	0.210	0.039	-48.978	-22.096	-22.266	-33.377	-33.557
772	0.56	-22.315	-11.248	0.210	0.039	-44.774	-19.874	-20.044	-30.296	-30.476
772	1.13	-17.028	-8.920	0.210	0.039	-34.707	-15.116	-15.287	-23.280	-23.459
772	1.69	-11.742	-6.593	0.210	0.039	-24.640	-10.358	-10.529	-16.263	-16.442
772	2.25	-9.273	-5.818	0.210	0.039	-20.436	-8.136	-8.307	-13.182	-13.361
773	0	11.603	6.309	-0.270	0.083	24.018	10.173	10.526	15.874	16.245
773	0.56	14.072	7.085	-0.270	0.083	28.221	12.395	12.748	18.956	19.326
773	1.13	19.358	9.412	-0.270	0.083	38.289	17.153	17.505	25.972	26.343
773	1.69	24.644	11.739	-0.270	0.083	48.356	21.910	22.263	32.989	33.359
773	2.25	27.113	12.515	-0.270	0.083	52.559	24.132	24.485	36.070	36.440
774	0	-32.988	-15.791	0.245	-0.029	-64.850	-29.444	-29.718	-44.328	-44.616
774	0.75	-29.070	-14.412	0.245	-0.029	-57.942	-25.918	-26.192	-39.345	-39.633
774	1.5	-20.143	-10.275	0.245	-0.029	-40.611	-17.884	-18.158	-27.366	-27.653
774	2.25	-11.216	-6.137	0.245	-0.029	-23.279	-9.850	-10.124	-15.386	-15.674
774	3	-7.298	-4.758	0.245	-0.029	-16.371	-6.324	-6.597	-10.404	-10.691
775	0	9.520	5.710	-0.320	0.186	20.560	8.248	8.754	13.257	13.789
775	0.75	13.438	7.089	-0.320	0.186	27.468	11.774	12.280	18.240	18.771
775	1.5	22.365	11.226	-0.320	0.186	44.799	19.808	20.314	30.219	30.751
775	2.25	31.291	15.363	-0.320	0.186	62.131	27.842	28.348	42.199	42.730
775	3	35.209	16.742	-0.320	0.186	69.039	31.368	31.875	47.181	47.713
776	0	-35.419	-16.711	0.245	-0.053	-69.241	-31.633	-31.930	-47.461	-47.774
776	0.75	-31.501	-15.332	0.245	-0.053	-62.333	-28.106	-28.404	-42.479	-42.791
776	1.5	-22.574	-11.195	0.245	-0.053	-45.002	-20.072	-20.370	-30.499	-30.811
776	2.25	-13.648	-7.058	0.245	-0.053	-27.670	-12.038	-12.336	-18.520	-18.832
776	3	-9.730	-5.679	0.245	-0.053	-20.762	-8.512	-8.810	-13.537	-13.849
777	0	5.229	4.425	-0.237	0.050	13.354	4.469	4.756	8.029	8.330
777	0.75	9.147	5.804	-0.237	0.050	20.262	7.995	8.282	13.011	13.313
777	1.5	18.074	9.941	-0.237	0.050	37.593	16.029	16.316	24.991	25.292
777	2.25	27.000	14.078	-0.237	0.050	54.925	24.063	24.350	36.970	37.272
777	3	30.918	15.457	-0.237	0.050	61.833	27.589	27.876	41.953	42.255
778	0	-34.707	-15.098	0.104	1.665	-65.804	-31.132	-29.571	-45.845	-44.205
778	0.75	-27.961	-13.719	0.104	1.665	-55.503	-25.062	-23.500	-37.893	-36.254
778	1.5	-16.207	-9.581	0.104	1.665	-34.779	-14.483	-12.922	-22.945	-21.306
778	2.25	-4.453	-5.444	0.104	1.665	-14.055	-3.904	-2.343	-7.997	-6.358
778	3	2.292	-4.065	0.104	1.665	-3.754	2.166	3.727	-0.046	1.593
779	0	50.520	17.268	-1.158	3.189	88.253	44.310	48.658	62.709	67.274
779	0.75	57.265	18.647	-1.158	3.189	98.554	50.381	54.728	70.660	75.225
779	1.5	69.019	22.784	-1.158	3.189	119.278	60.959	65.307	85.608	90.173
779	2.25	80.773	26.921	-1.158	3.189	140.002	71.538	75.885	100.557	105.121
779	3	87.518	28.300	-1.158	3.189	150.303	77.609	81.956	108.508	113.073
780	0	-73.365	-8.291	-0.863	0.895	-101.304	-66.891	-65.133	-83.163	-81.317
780	0.45	-66.398	-8.043	-0.863	0.895	-92.546	-60.621	-58.863	-75.691	-73.845

780	0.9	-58.529	-7.298	-0.863	0.895	-81.913	-53.539	-51.781	-66.960	-65.114
780	1.35	-50.661	-6.554	-0.863	0.895	-71.279	-46.458	-44.700	-58.229	-56.383
780	1.8	-43.694	-6.305	-0.863	0.895	-62.521	-40.187	-38.429	-50.757	-48.911
781	0	37.804	3.272	0.028	0.032	50.600	34.052	34.056	41.785	41.789
781	0.45	45.222	3.768	0.028	0.032	60.296	40.728	40.732	49.887	49.890
781	0.9	54.443	5.258	0.028	0.032	73.744	49.027	49.031	60.507	60.511
781	1.35	63.664	6.747	0.028	0.032	87.192	57.326	57.429	71.128	71.131
781	1.8	71.082	7.243	0.028	0.032	96.888	64.002	64.006	79.229	79.233
782	0	-66.393	-14.315	-0.002	-0.009	-102.576	-59.756	-59.762	-78.734	-78.740
782	0.75	-53.028	-12.936	-0.002	-0.009	-84.332	-47.728	-47.734	-63.832	-63.838
782	1.5	-34.655	-8.799	-0.002	-0.009	-55.664	-31.192	-31.198	-41.933	-41.940
782	2.25	-16.281	-4.662	-0.002	-0.009	-26.997	-14.655	-14.662	-20.035	-20.041
782	3	-2.917	-3.283	-0.002	-0.009	-8.752	-2.627	-2.633	-5.133	-5.140
783	0	45.267	19.670	0.119	0.110	85.792	40.860	40.850	60.047	60.038
783	0.75	58.632	21.049	0.119	0.110	104.036	52.888	52.878	74.949	74.939
783	1.5	77.005	25.186	0.119	0.110	132.704	69.424	69.415	96.848	96.838
783	2.25	95.379	29.323	0.119	0.110	161.371	85.960	85.951	118.746	118.736
783	3	108.743	30.702	0.119	0.110	179.615	97.988	97.979	133.648	133.638
784	0	-107.410	-29.157	-0.342	-0.351	-175.543	-97.011	-97.020	-131.509	-131.518
784	0.75	-94.046	-27.778	-0.342	-0.351	-157.299	-84.983	-84.992	-116.607	-116.616
784	1.5	-75.672	-23.641	-0.342	-0.351	-128.632	-68.447	-68.456	-94.709	-94.718
784	2.25	-57.299	-19.503	-0.342	-0.351	-99.964	-51.911	-51.920	-72.810	-72.819
784	3	-43.934	-18.124	-0.342	-0.351	-81.720	-39.883	-39.892	-57.908	-57.918
785	0	39.427	17.133	0.539	0.536	74.725	36.023	36.021	52.758	52.756
785	0.75	52.792	18.512	0.539	0.536	92.969	48.052	48.049	67.660	67.657
785	1.5	71.165	22.649	0.539	0.536	121.637	64.588	64.585	89.558	89.556
785	2.25	89.539	26.786	0.539	0.536	150.305	81.124	81.121	111.457	111.454
785	3	102.904	28.165	0.539	0.536	168.549	93.152	93.150	126.359	126.356
786	0	-106.564	-29.293	-0.516	-0.525	-174.745	-96.424	-96.433	-130.889	-130.899
786	0.75	-93.200	-27.914	-0.516	-0.525	-156.501	-84.396	-84.405	-115.987	-115.997
786	1.5	-74.826	-23.776	-0.516	-0.525	-127.834	-67.859	-67.869	-94.088	-94.098
786	2.25	-56.453	-19.639	-0.516	-0.525	-99.166	-51.323	-51.333	-72.190	-72.200
786	3	-43.088	-18.260	-0.516	-0.525	-80.922	-39.295	-39.305	-57.288	-57.298
787	0	37.830	16.464	0.511	0.515	71.739	34.558	34.562	50.630	50.635
787	0.75	51.195	17.843	0.511	0.515	89.983	46.586	46.590	65.532	65.536
787	1.5	69.568	21.981	0.511	0.515	118.651	63.122	63.126	87.431	87.435
787	2.25	87.941	26.118	0.511	0.515	147.318	79.658	79.662	109.329	109.333
787	3	101.306	27.497	0.511	0.515	165.562	91.686	91.690	124.231	124.235
788	0	-77.384	-19.654	-0.492	-0.637	-124.307	-70.137	-70.283	-94.151	-94.304
788	0.56	-67.830	-18.878	-0.492	-0.637	-111.601	-61.539	-61.684	-83.631	-83.784
788	1.13	-55.459	-16.551	-0.492	-0.637	-93.032	-50.405	-50.550	-69.175	-69.328
788	1.69	-43.087	-14.224	-0.492	-0.637	-74.463	-39.270	-39.416	-54.719	-54.872
788	2.25	-33.533	-13.448	-0.492	-0.637	-61.757	-30.672	-30.817	-44.199	-44.352
789	0	32.605	12.837	0.617	0.513	59.665	29.962	29.858	42.971	42.861
789	0.56	42.159	13.612	0.617	0.513	72.371	38.561	38.456	53.491	53.382
789	1.13	54.531	15.940	0.617	0.513	90.940	49.695	49.591	67.947	67.838
789	1.69	66.902	18.267	0.617	0.513	109.509	60.829	60.725	82.403	82.294
789	2.25	76.456	19.042	0.617	0.513	122.215	69.427	69.323	92.923	92.814
790	0	-96.955	-24.716	-1.044	0.049	-155.891	-88.303	-87.211	-118.470	-117.322
790	0.75	-83.590	-23.337	-1.044	0.049	-137.647	-76.275	-75.182	-103.568	-102.421
790	1.5	-65.217	-19.200	-1.044	0.049	-108.979	-59.739	-58.646	-81.669	-80.522
790	2.25	-46.843	-15.063	-1.044	0.049	-80.312	-43.203	-42.110	-59.771	-58.624
790	3	-33.479	-13.683	-1.044	0.049	-62.068	-31.175	-30.082	-44.869	-43.722
791	0	33.480	13.684	1.044	-0.049	62.071	31.176	30.084	44.871	43.724
791	0.75	46.845	15.063	1.044	-0.049	80.315	43.204	42.112	59.773	58.626
791	1.5	65.218	19.201	1.044	-0.049	108.983	59.740	58.648	81.672	80.525
791	2.25	83.592	23.338	1.044	-0.049	137.651	76.276	75.184	103.570	102.423
791	3	96.956	24.717	1.044	-0.049	155.895	88.305	87.212	118.472	117.325
792	0	-76.457	-19.043	-0.617	-0.513	-122.218	-69.429	-69.324	-92.925	-92.816
792	0.56	-66.903	-18.267	-0.617	-0.513	-109.512	-60.830	-60.726	-82.405	-82.296
792	1.13	-54.532	-15.940	-0.617	-0.513	-90.943	-49.696	-49.592	-67.949	-67.840
792	1.69	-42.161	-13.613	-0.617	-0.513	-72.374	-38.562	-38.458	-53.493	-53.384
792	2.25	-32.607	-12.837	-0.617	-0.513	-59.668	-29.963	-29.859	-42.973	-42.863
793	0	33.532	13.448	0.492	0.637	61.755	30.671	30.816	44.197	44.350
793	0.56	43.086	14.223	0.492	0.637	74.461	39.269	39.415	54.717	54.870
793	1.13	55.458	16.551	0.492	0.637	93.030	50.403	50.549	69.173	69.326
793	1.69	67.829	18.878	0.492	0.637	111.599	61.538	61.683	83.630	83.782

793	2.25	77.383	19.653	0.492	0.637	124.305	70.136	70.282	94.150	94.303
794	0	-101.306	-27.497	-0.511	-0.515	-165.562	-91.686	-91.690	-124.231	-124.235
794	0.75	-87.941	-26.118	-0.511	-0.515	-147.318	-79.658	-79.662	-109.329	-109.333
794	1.5	-69.568	-21.981	-0.511	-0.515	-118.651	-63.122	-63.126	-87.431	-87.435
794	2.25	-51.195	-17.843	-0.511	-0.515	-89.983	-46.586	-46.590	-65.532	-65.536
794	3	-37.830	-16.464	-0.511	-0.515	-71.739	-34.558	-34.562	-50.631	-50.635
795	0	43.088	18.260	0.516	0.525	80.922	39.295	39.305	57.288	57.298
795	0.75	56.453	19.639	0.516	0.525	99.166	51.323	51.333	72.190	72.200
795	1.5	74.826	23.776	0.516	0.525	127.834	67.859	67.869	94.088	94.098
795	2.25	93.200	27.914	0.516	0.525	156.501	84.396	84.405	115.987	115.997
795	3	106.564	29.293	0.516	0.525	174.745	96.424	96.433	130.889	130.899
796	0	-102.904	-28.165	-0.539	-0.536	-168.549	-93.152	-93.150	-126.359	-126.356
796	0.75	-89.539	-26.786	-0.539	-0.536	-150.305	-81.124	-81.121	-111.457	-111.454
796	1.5	-71.165	-22.649	-0.539	-0.536	-121.637	-64.588	-64.585	-89.558	-89.556
796	2.25	-52.792	-18.512	-0.539	-0.536	-92.969	-48.052	-48.049	-67.660	-67.657
796	3	-39.427	-17.133	-0.539	-0.536	-74.725	-36.023	-36.021	-52.758	-52.756
797	0	43.934	18.124	0.342	0.351	81.720	39.883	39.892	57.908	57.918
797	0.75	57.299	19.503	0.342	0.351	99.964	51.911	51.920	72.810	72.819
797	1.5	75.672	23.641	0.342	0.351	128.632	68.447	68.456	94.709	94.718
797	2.25	94.046	27.778	0.342	0.351	157.299	84.983	84.992	116.607	116.616
797	3	107.410	29.157	0.342	0.351	175.543	97.011	97.020	131.509	131.518
798	0	-108.743	-30.702	-0.119	-0.110	-179.615	-97.988	-97.979	-133.648	-133.638
798	0.75	-95.379	-29.323	-0.119	-0.110	-161.371	-85.960	-85.951	-118.746	-118.736
798	1.5	-77.005	-25.186	-0.119	-0.110	-132.704	-69.424	-69.415	-96.848	-96.838
798	2.25	-58.632	-21.049	-0.119	-0.110	-104.036	-52.888	-52.878	-74.949	-74.939
798	3	-45.267	-19.670	-0.119	-0.110	-85.792	-40.860	-40.850	-60.047	-60.038
799	0	2.917	3.283	0.002	0.009	8.752	2.627	2.633	5.133	5.140
799	0.75	16.281	4.662	0.002	0.009	26.997	14.655	14.662	20.035	20.041
799	1.5	34.655	8.799	0.002	0.009	55.664	31.192	31.198	41.933	41.940
799	2.25	53.028	12.936	0.002	0.009	84.332	47.728	47.734	63.832	63.838
799	3	66.393	14.315	0.002	0.009	102.576	59.756	59.762	78.733	78.740
800	0	-71.082	-7.243	-0.028	-0.032	-96.888	-64.002	-64.006	-79.229	-79.233
800	0.45	-63.664	-6.747	-0.028	-0.032	-87.192	-57.326	-57.329	-71.128	-71.131
800	0.9	-54.443	-5.258	-0.028	-0.032	-73.744	-49.027	-49.031	-60.507	-60.511
800	1.35	-45.222	-3.768	-0.028	-0.032	-60.296	-40.728	-40.732	-49.887	-49.890
800	1.8	-37.804	-3.272	-0.028	-0.032	-50.600	-34.052	-34.056	-41.785	-41.789
801	0	43.749	6.310	-0.891	0.864	62.594	38.483	40.278	48.976	50.819
801	0.45	50.716	6.558	-0.891	0.864	71.352	44.754	46.508	56.448	58.290
801	0.9	58.585	7.303	-0.891	0.864	81.986	51.835	53.590	65.179	67.021
801	1.35	66.453	8.047	-0.891	0.864	92.619	58.917	60.672	73.910	75.752
801	1.8	73.420	8.296	-0.891	0.864	101.377	65.187	66.942	81.382	83.224
802	0	-87.076	-28.260	-3.152	1.147	-149.707	-81.520	-77.221	-112.543	-108.029
802	0.75	-80.330	-26.881	-3.152	1.147	-139.407	-75.450	-71.150	-104.592	-100.078
802	1.5	-68.577	-22.744	-3.152	1.147	-118.682	-64.871	-60.572	-89.644	-85.130
802	2.25	-56.823	-18.607	-3.152	1.147	-97.958	-54.293	-49.993	-74.696	-70.182
802	3	-50.077	-17.228	-3.152	1.147	-87.657	-48.222	-43.923	-66.745	-62.231
803	0	-1.986	4.092	-1.635	-0.115	4.165	-3.422	-1.903	-1.223	0.372
803	0.75	4.759	5.471	-1.635	-0.115	14.465	2.649	4.168	6.728	8.323
803	1.5	16.513	9.609	-1.635	-0.115	35.190	13.227	14.746	21.676	23.271
803	2.25	28.267	13.746	-1.635	-0.115	55.914	23.806	25.325	36.624	38.219
803	3	35.012	15.125	-1.635	-0.115	66.214	29.876	31.396	44.575	46.170
804	0	-30.848	-15.449	-0.048	0.235	-61.736	-27.811	-27.528	-42.173	-41.876
804	0.75	-26.930	-14.070	-0.048	0.235	-54.828	-24.285	-24.002	-37.191	-36.893
804	1.5	-18.004	-9.932	-0.048	0.235	-37.496	-16.251	-15.968	-25.211	-24.914
804	2.25	-9.077	-5.795	-0.048	0.235	-20.165	-8.217	-7.934	-13.232	-12.934
804	3	-5.159	-4.416	-0.048	0.235	-13.257	-4.691	-4.408	-8.249	-7.952
805	0	9.728	5.676	0.057	-0.248	20.755	8.812	8.507	13.850	13.529
805	0.75	13.646	7.055	0.057	-0.248	27.663	12.338	12.033	18.833	18.512
805	1.5	22.573	11.192	0.057	-0.248	44.994	20.372	20.067	30.812	30.492
805	2.25	31.499	15.329	0.057	-0.248	62.326	28.406	28.101	42.791	42.471
805	3	35.417	16.708	0.057	-0.248	69.234	31.933	31.627	47.774	47.454
806	0	-34.892	-16.658	-0.181	0.317	-68.523	-31.584	-31.085	-47.321	-46.798
806	0.75	-30.974	-15.279	-0.181	0.317	-61.615	-28.057	-27.559	-42.338	-41.815
806	1.5	-22.047	-11.142	-0.181	0.317	-44.284	-20.023	-19.525	-30.359	-29.836
806	2.25	-13.121	-7.005	-0.181	0.317	-26.952	-11.989	-11.491	-18.379	-17.856
806	3	-9.203	-5.626	-0.181	0.317	-20.044	-8.463	-7.965	-13.397	-12.874
807	0	7.590	4.893	0.047	-0.256	16.936	6.878	6.575	11.101	10.783



807	0.75	11.508	6.272	0.047	-0.256	23.844	10.404	10.101	16.084	15.766
807	1.5	20.435	10.409	0.047	-0.256	41.176	18.438	18.135	28.063	27.745
807	2.25	29.361	14.546	0.047	-0.256	58.507	26.472	26.169	40.043	39.725
807	3	33.279	15.925	0.047	-0.256	65.416	29.998	29.695	45.025	44.707
808	0	-24.491	-11.930	-0.195	0.331	-48.477	-22.237	-21.711	-33.436	-32.884
808	0.56	-22.022	-11.155	-0.195	0.331	-44.274	-20.015	-19.489	-30.355	-29.803
808	1.13	-16.736	-8.827	-0.195	0.331	-34.206	-15.257	-14.731	-23.339	-22.786
808	1.69	-11.449	-6.500	-0.195	0.331	-24.139	-10.499	-9.973	-16.322	-15.769
808	2.25	-8.980	-5.724	-0.195	0.331	-19.936	-8.277	-7.751	-13.241	-12.688
809	0	9.667	5.694	0.092	-0.295	20.711	8.792	8.406	13.834	13.428
809	0.56	12.136	6.470	0.092	-0.295	24.914	11.014	10.628	16.915	16.509
809	1.13	17.422	8.797	0.092	-0.295	34.982	15.772	15.385	23.932	23.526
809	1.69	22.709	11.124	0.092	-0.295	45.049	20.530	20.143	30.949	30.543
809	2.25	25.178	11.900	0.092	-0.295	49.252	22.752	22.365	34.030	33.624
810	0	-34.193	-16.407	-0.078	0.254	-67.282	-30.851	-30.519	-46.320	-45.972
810	0.75	-30.275	-15.028	-0.078	0.254	-60.374	-27.325	-26.993	-41.338	-40.989
810	1.5	-21.348	-10.890	-0.078	0.254	-43.042	-19.291	-18.959	-29.358	-29.010
810	2.25	-12.421	-6.753	-0.078	0.254	-25.711	-11.257	-10.925	-17.379	-17.030
810	3	-8.503	-5.374	-0.078	0.254	-18.803	-7.731	-7.399	-12.396	-12.048
811	0	8.504	5.374	0.078	-0.254	18.804	7.731	7.399	12.397	12.048
811	0.75	12.422	6.753	0.078	-0.254	25.712	11.257	10.926	17.379	17.031
811	1.5	21.349	10.891	0.078	-0.254	43.043	19.291	18.960	29.359	29.010
811	2.25	30.275	15.028	0.078	-0.254	60.375	27.326	26.994	41.338	40.990
811	3	34.193	16.407	0.078	-0.254	67.283	30.852	30.520	46.321	45.972
812	0	-25.178	-11.900	-0.092	0.295	-49.253	-22.752	-22.365	-34.030	-33.624
812	0.56	-22.709	-11.124	-0.092	0.295	-45.049	-20.530	-20.143	-30.949	-30.543
812	1.13	-17.423	-8.797	-0.092	0.295	-34.982	-15.772	-15.386	-23.932	-23.526
812	1.69	-12.136	-6.470	-0.092	0.295	-24.915	-11.015	-10.628	-16.916	-16.510
812	2.25	-9.667	-5.694	-0.092	0.295	-20.711	-8.793	-8.406	-13.835	-13.428
813	0	8.980	5.724	0.195	-0.331	19.935	8.277	7.751	13.240	12.688
813	0.56	11.449	6.500	0.195	-0.331	24.139	10.499	9.973	16.321	15.769
813	1.13	16.735	8.827	0.195	-0.331	34.206	15.257	14.731	23.338	22.786
813	1.69	22.022	11.154	0.195	-0.331	44.273	20.015	19.489	30.355	29.803
813	2.25	24.491	11.930	0.195	-0.331	48.477	22.237	21.711	33.436	32.884
814	0	-33.279	-15.925	-0.047	0.256	-65.416	-29.998	-29.695	-45.025	-44.707
814	0.75	-29.361	-14.546	-0.047	0.256	-58.507	-26.472	-26.169	-40.043	-39.725
814	1.5	-20.435	-10.409	-0.047	0.256	-41.176	-18.438	-18.135	-28.063	-27.745
814	2.25	-11.508	-6.272	-0.047	0.256	-23.844	-10.404	-10.101	-16.084	-15.766
814	3	-7.590	-4.893	-0.047	0.256	-16.936	-8.277	-7.751	-11.101	-10.783
815	0	9.203	5.626	0.181	-0.317	20.044	8.463	7.965	13.397	12.874
815	0.75	13.121	7.005	0.181	-0.317	26.952	11.989	11.491	18.379	17.856
815	1.5	22.047	11.142	0.181	-0.317	44.284	20.023	19.525	30.359	29.836
815	2.25	30.974	15.279	0.181	-0.317	61.615	28.057	27.559	42.338	41.815
815	3	34.892	16.658	0.181	-0.317	68.523	31.584	31.085	47.321	46.798
816	0	-35.417	-16.708	-0.057	0.248	-69.234	-31.933	-31.627	-47.774	-47.454
816	0.75	-31.499	-15.329	-0.057	0.248	-62.326	-28.406	-28.101	-42.791	-42.471
816	1.5	-22.573	-11.192	-0.057	0.248	-44.994	-20.372	-20.067	-30.812	-30.492
816	2.25	-13.646	-7.055	-0.057	0.248	-27.663	-12.338	-12.033	-18.833	-18.512
816	3	-9.728	-5.676	-0.057	0.248	-20.755	-8.812	-8.507	-13.850	-13.529
817	0	5.159	4.416	0.048	-0.235	13.257	4.691	4.408	8.249	7.952
817	0.75	9.077	5.795	0.048	-0.235	20.165	8.217	7.934	13.232	12.934
817	1.5	18.004	9.932	0.048	-0.235	37.496	16.251	15.968	25.211	24.914
817	2.25	26.930	14.070	0.048	-0.235	54.828	24.285	24.002	37.191	36.893
817	3	30.848	15.449	0.048	-0.235	61.736	27.811	27.528	42.173	41.876
818	0	-35.012	-15.125	1.635	0.115	-66.214	-29.876	-31.396	-44.575	-46.170
818	0.75	-28.267	-13.746	1.635	0.115	-55.914	-23.806	-25.325	-36.624	-38.219
818	1.5	-16.513	-9.609	1.635	0.115	-35.190	-13.227	-14.746	-21.676	-23.271
818	2.25	-4.759	-5.471	1.635	0.115	-14.465	-2.649	-4.168	-6.728	-8.323
818	3	1.986	-4.092	1.635	0.115	-4.165	3.422	1.903	1.223	-0.372
819	0	50.077	17.228	3.152	-1.147	87.657	48.222	45.923	66.745	62.231
819	0.75	56.823	18.607	3.152	-1.147	97.958	54.293	49.993	74.696	70.182
819	1.5	68.577	22.744	3.152	-1.147	118.682	64.871	60.572	89.644	85.130
819	2.25	80.330	26.881	3.152	-1.147	139.406	75.450	71.150	104.592	100.078
819	3	87.076	28.260	3.152	-1.147	149.707	81.520	77.221	112.543	108.029
821	0	-64.134	-10.290	0.383	-0.279	-93.425	-57.338	-57.999	-73.421	-74.116
821	0.75	-52.021	-9.601	0.383	-0.279	-77.786	-46.436	-47.098	-60.269	-60.963
821	1.5	-37.404	-7.532	0.383	-0.279	-56.936	-33.281	-33.942	-43.618	-44.312

837	0	-72.040	-22.253	2.057	-1.298	-122.053	-62.779	-66.134	-87.501	-91.024
837	0.75	-65.295	-20.874	2.057	-1.298	-111.752	-56.708	-60.063	-79.550	-83.073
837	1.5	-54.342	-17.178	2.057	-1.298	-92.696	-46.851	-50.206	-65.722	-69.245
837	2.25	-43.390	-13.482	2.057	-1.298	-73.640	-36.994	-40.349	-51.893	-55.416
837	3	-36.645	-12.103	2.057	-1.298	-63.339	-30.923	-34.278	-43.942	-47.465
838	0	34.716	11.207	-1.474	1.127	59.590	29.770	32.371	41.964	44.696
838	0.75	41.461	12.586	-1.474	1.127	69.891	35.841	38.442	49.916	52.647
838	1.5	52.414	16.282	-1.474	1.127	88.948	45.698	48.299	63.744	66.475
838	2.25	63.366	19.978	-1.474	1.127	108.004	55.555	58.157	77.573	80.304
838	3	70.112	21.357	-1.474	1.127	118.305	61.626	64.227	85.524	88.255
839	0	-67.721	-12.079	1.870	-1.598	-100.593	-59.079	-62.548	-76.754	-80.396
839	0.75	-55.609	-11.390	1.870	-1.598	-84.954	-48.178	-51.646	-63.602	-67.243
839	1.5	-40.992	-9.321	1.870	-1.598	-64.105	-35.023	-38.491	-46.951	-50.592
839	2.25	-26.375	-7.253	1.870	-1.598	-43.255	-21.868	-25.336	-30.300	-33.941
839	3	-14.263	-6.563	1.870	-1.598	-27.616	-10.967	-14.435	-17.147	-20.789
840	0	10.675	4.774	-0.383	0.279	20.448	9.225	9.886	13.815	14.509
840	0.75	22.787	5.463	-0.383	0.279	36.086	20.126	20.787	26.967	27.661
840	1.5	37.404	7.532	-0.383	0.279	56.936	33.281	33.942	43.618	44.312
840	2.25	52.021	9.601	-0.383	0.279	77.786	46.436	47.098	60.269	60.963
840	3	64.134	10.290	-0.383	0.279	93.425	57.338	57.999	73.421	74.116
841	0	-29.573	-3.052	-0.310	0.311	-40.372	-26.926	-26.305	-33.300	-32.648
841	0.75	-20.288	-3.363	-0.310	0.311	-28.126	-18.569	-17.948	-23.116	-22.464
841	1.5	-9.300	-0.736	-0.310	0.311	-12.336	-8.679	-8.058	-10.553	-9.901
841	2.25	1.689	0.892	-0.310	0.311	3.453	1.210	1.831	2.010	2.662
841	3	10.974	1.581	-0.310	0.311	15.699	9.567	10.188	12.194	12.846
842	0	-9.124	-1.332	1.320	-0.715	-13.080	-6.891	-8.927	-9.033	-11.170
842	0.75	0.162	-0.643	1.320	-0.715	-0.834	1.465	-0.570	1.151	-0.986
842	1.5	11.150	0.985	1.320	-0.715	14.955	11.355	9.319	13.714	11.576
842	2.25	22.138	2.612	1.320	-0.715	30.745	21.244	19.209	26.276	24.139
842	3	31.423	3.302	1.320	-0.715	42.990	29.601	27.566	36.460	34.323
843	0	-31.591	-3.350	-0.909	0.541	-43.269	-29.341	-27.890	-36.236	-34.713
843	0.75	-22.305	-2.661	-0.909	0.541	-31.023	-20.984	-19.534	-26.052	-24.529
843	1.5	-11.317	-1.033	-0.909	0.541	-15.234	-11.095	-9.644	-13.489	-11.966
843	2.25	-0.329	0.594	-0.909	0.541	0.556	-1.205	0.245	-0.926	0.597
843	3	8.957	1.283	-0.909	0.541	12.801	7.152	8.602	9.258	10.781
844	0	-10.273	-1.555	1.140	-0.684	-14.815	-8.106	-9.929	-10.569	-12.484
844	0.75	-0.987	-0.865	1.140	-0.684	-2.569	0.251	-1.573	-0.385	-2.300
844	1.5	10.001	0.762	1.140	-0.684	13.221	10.141	8.317	12.178	10.263
844	2.25	20.989	2.390	1.140	-0.684	29.010	20.030	18.206	24.741	22.826
844	3	30.274	3.079	1.140	-0.684	41.256	28.387	26.563	34.925	33.010
845	0	-24.767	-2.268	-1.092	0.670	-33.349	-23.382	-21.620	-28.580	-26.730
845	0.56	-18.038	-1.880	-1.092	0.670	-24.653	-17.326	-15.564	-21.270	-19.420
845	1.13	-10.013	-0.778	-1.092	0.670	-13.260	-10.103	-8.341	-12.150	-10.300
845	1.69	-1.988	0.323	-1.092	0.670	-1.868	-2.880	-1.118	-3.029	-1.179
845	2.25	4.742	0.711	-1.092	0.670	6.828	3.176	4.938	4.281	6.131
846	0	-7.539	-0.919	1.282	-0.775	-10.516	-5.503	-7.560	-7.148	-9.308
846	0.56	-0.810	-0.531	1.282	-0.775	-1.821	0.553	-1.504	0.162	-1.998
846	1.13	7.216	0.571	1.282	-0.775	9.572	7.776	5.719	9.282	7.122
846	1.69	15.241	1.672	1.282	-0.775	20.965	14.999	12.941	18.402	16.242
846	2.25	21.970	2.060	1.282	-0.775	29.660	21.055	18.998	25.712	23.552
848	0	-38.914	-5.908	-0.669	0.405	-56.150	-35.691	-34.618	-45.284	-44.157
848	0.75	-29.629	-5.218	-0.669	0.405	-43.904	-27.335	-26.261	-35.100	-33.973
848	1.5	-17.839	-3.150	-0.669	0.405	-26.447	-16.724	-15.651	-21.418	-20.291
848	2.25	-6.050	-1.081	-0.669	0.405	-8.989	-6.113	-5.040	-7.735	-6.608
848	3	3.236	-0.392	-0.669	0.405	3.256	2.244	3.317	2.449	3.576
849	0	-3.236	0.392	0.669	-0.405	-3.256	-2.244	-3.317	-2.449	-3.576
849	0.75	6.050	1.081	0.669	-0.405	8.989	6.113	5.040	7.735	6.608
849	1.5	17.839	3.150	0.669	-0.405	26.447	16.724	15.651	21.417	20.291
849	2.25	29.629	5.218	0.669	-0.405	43.904	27.335	26.261	35.100	33.973
849	3	38.914	5.908	0.669	-0.405	56.149	35.691	34.618	45.284	44.157
851	0	-21.970	-2.060	-1.282	0.775	-29.660	-21.055	-18.998	-25.712	-23.552
851	0.56	-15.241	-1.672	-1.282	0.775	-20.965	-14.999	-12.941	-18.402	-16.242
851	1.13	-7.216	-0.571	-1.282	0.775	-9.572	-7.776	-5.719	-9.282	-7.122
851	1.69	0.810	0.531	-1.282	0.775	1.821	-0.553	1.504	-0.162	1.998
851	2.25	7.539	0.919	-1.282	0.775	10.516	5.503	7.560	7.148	9.308
852	0	-4.742	-0.711	1.092	-0.670	-6.828	-3.176	-4.938	-4.281	-6.131
852	0.56	1.988	-0.323	1.092	-0.670	1.868	2.880	1.118	3.029	1.179



852	1.13	10.013	0.778	1.092	-0.670	13.260	10.103	8.341	12.150	10.300
852	1.69	18.038	1.880	1.092	-0.670	24.653	17.326	15.564	21.270	19.420
852	2.25	24.767	2.268	1.092	-0.670	33.349	23.382	21.620	28.580	26.730
853	0	-30.274	-3.079	-1.140	0.684	-41.256	-28.387	-26.563	-34.925	-33.010
853	0.75	-20.989	-2.390	-1.140	0.684	-29.010	-20.030	-18.206	-24.741	-22.826
853	1.5	-10.001	-0.762	-1.140	0.684	-13.221	-10.141	-8.317	-12.178	-10.263
853	2.25	0.987	0.865	-1.140	0.684	2.569	-0.251	1.573	0.385	2.300
853	3	10.273	1.555	-1.140	0.684	14.815	8.106	9.929	10.569	12.484
854	0	-8.957	-1.283	0.909	-0.541	-12.801	-7.152	-8.602	-9.258	-10.781
854	0.75	0.329	-0.594	0.909	-0.541	-0.556	1.205	-0.245	0.926	-0.597
854	1.5	11.317	1.033	0.909	-0.541	15.234	11.095	9.644	13.489	11.966
854	2.25	22.305	2.661	0.909	-0.541	31.023	20.984	19.534	26.052	24.529
854	3	31.591	3.350	0.909	-0.541	43.269	29.341	27.890	36.236	34.713
855	0	-31.423	-3.302	-1.320	0.715	-42.990	-29.601	-27.566	-36.460	-34.323
855	0.75	-22.138	-2.612	-1.320	0.715	-30.745	-21.244	-19.209	-26.276	-24.139
855	1.5	-11.150	-0.985	-1.320	0.715	-14.955	-11.355	-9.319	-13.714	-11.576
855	2.25	-0.162	0.643	-1.320	0.715	0.834	-1.465	0.570	-1.151	0.986
855	3	9.124	1.332	-1.320	0.715	13.080	6.891	8.927	9.033	11.170
856	0	-10.974	-1.581	0.310	-0.311	-15.699	-9.567	-10.188	-12.194	-12.846
856	0.75	-1.689	-0.892	0.310	-0.311	-3.453	-1.210	-1.831	-2.010	-2.662
856	1.5	9.300	0.736	0.310	-0.311	12.336	8.679	8.058	10.553	9.901
856	2.25	20.288	2.363	0.310	-0.311	28.126	18.569	17.948	23.116	22.454
856	3	29.573	3.052	0.310	-0.311	40.372	26.926	26.305	33.300	32.648
857	0	-98.645	-16.951	-14.596	22.277	-145.495	-103.377	-66.504	-129.582	-90.866
857	1.13	-79.537	-15.400	-14.596	22.277	-120.084	-86.179	-49.306	-108.542	-69.825
857	2.25	-57.612	-12.297	-14.596	22.277	-88.809	-66.447	-29.574	-83.565	-44.849
857	3.38	-35.686	-9.194	-14.596	22.277	-57.534	-46.714	-9.841	-58.589	-19.872
857	4.5	-16.579	-7.642	-14.596	22.277	-32.122	-29.517	7.356	-37.548	1.168
859	0	-98.645	-16.951	-14.596	22.277	-145.495	-103.376	-66.503	-129.582	-90.865
859	1.13	-79.537	-15.399	-14.596	22.277	-120.083	-86.179	-49.306	-108.541	-69.825
859	2.25	-57.612	-12.296	-14.596	22.277	-88.808	-66.446	-29.574	-83.565	-44.848
859	3.38	-35.686	-9.194	-14.596	22.277	-57.533	-46.714	-9.841	-58.588	-19.872
859	4.5	-16.578	-7.642	-14.596	22.277	-32.122	-29.517	7.356	-37.548	1.169
860	0	8.205	4.381	-14.806	22.238	16.856	-7.421	29.623	-4.170	34.725
860	0.26	12.171	4.472	-14.806	22.238	21.759	-3.852	33.192	0.050	38.946
860	0.53	16.465	4.743	-14.806	22.238	27.347	0.013	37.056	4.730	43.626
860	0.79	21.088	5.196	-14.806	22.238	33.618	4.173	41.217	9.869	48.765
860	1.05	26.039	5.829	-14.806	22.238	40.574	8.630	45.673	15.467	54.363
863	0	8.205	4.381	-14.806	22.238	16.856	-7.421	29.623	-4.170	34.726
863	0.26	12.171	4.472	-14.806	22.238	21.760	-3.852	33.192	0.050	38.946
863	0.53	16.465	4.743	-14.806	22.238	27.347	0.013	37.056	4.730	43.626
863	0.79	21.088	5.196	-14.806	22.238	33.618	4.173	41.217	9.869	48.765
863	1.05	26.039	5.829	-14.806	22.238	40.574	8.630	45.673	15.468	54.364
864	0	-120.776	-15.470	-1.951	1.180	-169.684	-110.649	-107.519	-138.609	-135.322
864	0.45	-112.935	-14.974	-1.951	1.180	-159.479	-103.592	-100.461	-130.063	-126.776
864	0.9	-103.290	-13.484	-1.951	1.180	-145.522	-94.911	-91.781	-118.997	-115.710
864	1.35	-92.743	-11.498	-1.951	1.180	-129.689	-85.419	-82.289	-106.672	-103.385
864	1.8	-82.597	-9.733	-1.951	1.180	-114.690	-76.288	-73.158	-94.907	-91.620
865	0	-60.627	-7.673	-0.669	0.405	-85.029	-55.233	-54.160	-69.194	-68.068
865	0.3	-54.598	-6.901	-0.669	0.405	-76.559	-49.807	-48.733	-62.377	-61.250
865	0.6	-48.969	-6.349	-0.669	0.405	-68.922	-44.741	-43.668	-56.120	-54.993
865	0.9	-43.741	-6.018	-0.669	0.405	-62.119	-40.036	-38.963	-50.422	-49.295
865	1.2	-38.914	-5.908	-0.669	0.405	-56.150	-35.691	-34.618	-45.284	-44.157
866	0	-120.776	-15.470	-1.951	1.180	-169.684	-110.649	-107.519	-138.609	-135.322
866	0.45	-112.934	-14.974	-1.951	1.180	-159.479	-103.592	-100.461	-130.063	-126.776
866	0.9	-103.290	-13.484	-1.951	1.180	-145.522	-94.911	-91.781	-118.997	-115.710
866	1.35	-92.743	-11.498	-1.951	1.180	-129.689	-85.419	-82.289	-106.672	-103.385
866	1.8	-82.597	-9.733	-1.951	1.180	-114.689	-76.288	-73.157	-94.907	-91.620
867	0	-60.627	-7.673	-0.669	0.405	-85.029	-55.233	-54.160	-69.194	-68.068
867	0.3	-54.598	-6.901	-0.669	0.405	-76.558	-49.807	-48.733	-62.377	-61.250
867	0.6	-48.969	-6.349	-0.669	0.405	-68.922	-44.741	-43.668	-56.120	-54.993
867	0.9	-43.741	-6.018	-0.669	0.405	-62.119	-40.036	-38.963	-50.422	-49.295
867	1.2	-38.914	-5.908	-0.669	0.405	-56.149	-35.691	-34.618	-45.284	-44.157
868	0	-73.420	-8.296	0.891	-0.864	-101.377	-65.187	-66.942	-81.382	-83.224
868	0.45	-66.453	-8.047	0.891	-0.864	-92.619	-58.917	-60.572	-73.910	-75.752
868	0.9	-58.585	-7.303	0.891	-0.864	-81.986	-51.835	-53.590	-65.179	-67.021
868	1.35	-50.716	-6.558	0.891	-0.864	-71.352	-44.754	-46.508	-56.448	-58.290

868	1.8	-43.749	-6.310	0.891	-0.864	-62.594	-38.483	-40.238	-48.976	-50.819
869	0	-134.031	-35.707	-11.630	17.294	-217.969	-132.259	-103.334	-175.440	-145.070
869	1.13	-112.106	-32.604	-11.630	17.294	-186.694	-112.526	-83.601	-150.464	-120.093
869	2.25	-81.415	-24.675	-11.630	17.294	-137.178	-84.904	-55.980	-113.243	-82.873
869	3.38	-50.725	-16.745	-11.630	17.294	-87.662	-57.283	-28.358	-76.022	-45.652
869	4.50	-28.800	-13.642	-11.630	17.294	-56.387	-37.550	-8.626	-51.046	-20.675
870	0	36.825	16.913	-11.971	15.679	71.250	21.171	48.822	36.751	65.784
870	1.13	58.750	20.015	-11.971	15.679	102.525	40.904	68.555	61.728	90.761
870	2.25	89.441	27.945	-11.971	15.679	152.041	68.526	96.176	98.949	127.982
870	3.38	120.132	35.875	-11.971	15.679	201.557	96.147	123.798	136.169	165.202
870	4.5	142.057	38.978	-11.971	15.679	232.832	115.880	143.530	161.146	190.179
871	0	-134.031	-35.707	-11.630	17.294	-217.969	-132.259	-103.334	-175.440	-145.070
871	1.13	-112.106	-32.604	-11.630	17.294	-186.694	-112.526	-83.601	-150.464	-120.093
871	2.25	-81.415	-24.675	-11.630	17.294	-137.178	-84.904	-55.980	-113.243	-82.872
871	3.38	-50.725	-16.745	-11.630	17.294	-87.662	-57.283	-28.358	-76.022	-45.652
871	4.5	-28.800	-13.642	-11.630	17.294	-56.387	-37.550	-8.626	-51.046	-20.675
872	0	36.825	16.913	-11.971	15.679	71.250	21.171	48.822	36.751	65.784
872	1.13	58.750	20.015	-11.971	15.679	102.525	40.904	68.555	61.728	90.761
872	2.25	89.441	27.945	-11.971	15.679	152.041	68.526	96.176	98.949	127.982
872	3.38	120.132	35.875	-11.971	15.679	201.557	96.147	123.798	136.169	165.202
872	4.5	142.057	38.978	-11.971	15.679	232.832	115.880	143.530	161.146	190.179
873	0	-140.506	-38.770	-15.668	11.978	-230.639	-142.124	-114.478	-188.408	-159.380
873	1.13	-118.581	-35.667	-15.668	11.978	-199.364	-122.391	-94.745	-163.432	-134.404
873	2.25	-87.890	-27.737	-15.668	11.978	-149.848	-94.770	-67.124	-126.211	-97.183
873	3.38	-57.200	-19.808	-15.668	11.978	-100.332	-67.148	-39.502	-88.991	-59.962
873	4.5	-35.274	-16.705	-15.668	11.978	-69.057	-47.415	-19.769	-64.014	-34.986
874	0	30.586	13.868	-17.255	11.627	58.893	10.272	39.154	22.734	53.061
874	1.13	52.511	16.971	-17.255	11.627	90.168	30.005	58.887	47.711	78.037
874	2.25	83.202	24.901	-17.255	11.627	139.684	57.626	86.508	84.931	115.258
874	3.38	113.893	32.831	-17.255	11.627	189.200	85.248	114.130	122.152	152.478
874	4.5	135.818	35.933	-17.255	11.627	220.475	104.981	133.863	147.129	177.455
875	0	-135.818	-35.933	17.255	-11.627	-220.475	-104.981	-133.863	-147.129	-177.455
875	1.13	-113.893	-32.831	17.255	-11.627	-189.200	-85.248	-114.130	-122.152	-152.479
875	2.25	-83.202	-24.901	17.255	-11.627	-139.684	-57.626	-86.508	-84.932	-115.258
875	3.38	-52.511	-16.971	17.255	-11.627	-90.168	-30.005	-58.887	-47.711	-78.037
875	4.5	-30.586	-13.868	17.255	-11.627	-58.893	-10.272	-39.154	-22.734	-53.061
876	0	35.274	16.705	15.668	-11.978	69.057	47.415	19.769	64.014	34.986
876	1.13	57.200	19.808	15.668	-11.978	100.332	67.148	39.502	88.991	59.962
876	2.25	87.890	27.737	15.668	-11.978	149.848	94.770	67.124	126.211	97.183
876	3.38	118.581	35.667	15.668	-11.978	199.364	122.391	94.745	163.432	134.404
876	4.5	140.506	38.770	15.668	-11.978	230.639	142.124	114.478	188.408	159.380
877	0	-29.044	-7.298	-0.092	0.538	-46.529	-26.232	-25.601	-35.191	-34.528
877	0.75	-23.551	-6.608	-0.092	0.538	-38.834	-21.288	-20.657	-28.989	-28.326
877	1.50	-15.554	-4.539	-0.092	0.538	-25.927	-14.091	-13.460	-19.288	-18.626
877	2.25	-7.556	-2.471	-0.092	0.538	-13.021	-6.893	-6.262	-9.588	-8.925
877	3	-2.063	-1.781	-0.092	0.538	-5.326	-1.949	-1.318	-3.386	-2.723
878	0	2.063	1.781	0.092	-0.538	5.325	1.949	1.318	3.385	2.723
878	0.75	7.556	2.471	0.092	-0.538	13.020	6.893	6.262	9.587	8.925
878	1.5	15.553	4.539	0.092	-0.538	25.926	14.090	13.459	19.287	18.625
878	2.25	23.551	6.608	0.092	-0.538	38.833	21.288	20.657	28.988	28.326
878	3	29.043	7.297	0.092	-0.538	46.528	26.231	25.601	35.190	34.528
879	0	-12.614	-2.308	-4.312	4.321	-18.829	-15.664	-7.032	-19.226	-10.162
879	0.75	-7.121	-1.618	-4.312	4.321	-11.134	-10.721	-2.088	-13.024	-3.960
879	1.5	0.075	0.009	-4.312	4.321	0.105	-4.244	4.388	-4.443	4.621
879	2.25	7.271	1.636	-4.312	4.321	11.343	2.232	10.865	4.138	13.202
879	3	12.764	2.326	-4.312	4.321	19.038	7.176	15.808	10.340	19.404
880	0	-5.654	0.000	0.000	0.000	-6.785	-5.089	-5.089	-5.937	-5.937
880	1.5	-2.827	0.000	0.000	0.000	-3.393	-2.544	-2.544	-2.968	-2.968
880	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
880	4.5	2.827	0.000	0.000	0.000	3.393	2.545	2.545	2.969	2.969
880	6	5.654	0.000	0.000	0.000	6.785	5.089	5.089	5.937	5.937
881	0	-133.843	-35.865	-18.486	17.669	-217.995	-138.944	-102.789	-182.540	-144.577
881	1.13	-111.917	-32.762	-18.486	17.669	-186.721	-119.211	-83.056	-157.564	-119.601
881	2.25	-81.227	-24.833	-18.486	17.669	-137.204	-91.590	-55.435	-120.343	-82.380
881	3.38	-50.536	-16.903	-18.486	17.669	-87.688	-63.968	-27.813	-83.122	-45.159
881	4.5	-28.611	-13.800	-18.486	17.669	-56.413	-44.236	-8.080	-58.146	-20.183
882	0	40.963	17.353	-19.232	18.596	76.920	17.635	55.462	33.750	73.469

882	1.13	62.888	20.456	-19.232	18.596	108.195	37.368	75.195	58.726	98.445
882	2.25	93.579	28.385	-19.232	18.596	157.711	64.989	102.817	95.947	135.666
882	3.38	124.269	36.315	-19.232	18.596	207.227	92.611	130.438	133.168	172.887
882	4.5	146.195	39.418	-19.232	18.596	238.502	112.343	150.171	158.144	197.863
884	0	-133.843	-35.865	-18.486	17.669	-217.995	-138.944	-102.739	-182.540	-144.577
884	1.13	-111.917	-32.762	-18.486	17.669	-186.720	-119.211	-83.056	-157.564	-119.601
884	2.25	-81.227	-24.833	-18.486	17.669	-137.204	-91.590	-55.435	-120.343	-82.380
884	3.38	-50.536	-16.903	-18.486	17.669	-87.688	-63.968	-27.813	-83.122	-45.159
884	4.5	-28.611	-13.800	-18.486	17.669	-56.413	-44.236	-8.080	-58.146	-20.183
885	0	40.963	17.353	-19.232	18.596	76.920	17.635	55.462	33.750	73.469
885	1.13	62.888	20.456	-19.232	18.596	108.195	37.368	75.195	58.726	98.445
885	2.25	93.579	28.385	-19.232	18.596	157.711	64.989	102.817	95.947	135.666
885	3.38	124.269	36.315	-19.232	18.596	207.227	92.611	130.438	133.168	172.887
885	4.5	146.195	39.418	-19.232	18.596	238.502	112.343	150.171	158.144	197.863
886	0	-97.943	-16.925	-22.584	21.227	-144.612	-110.733	-66.922	-137.216	-91.215
886	1.13	-78.835	-15.374	-22.584	21.227	-119.200	-93.536	-49.725	-116.176	-70.175
886	2.25	-56.910	-12.271	-22.584	21.227	-87.925	-73.803	-29.992	-91.199	-45.198
886	3.38	-34.985	-9.168	-22.584	21.227	-56.650	-54.070	-10.260	-66.223	-20.222
886	4.5	-15.877	-7.617	-22.584	21.227	-31.239	-36.873	6.937	-45.182	0.819
888	0	55.749	13.049	-22.492	21.255	87.777	27.682	71.429	43.140	89.074
888	0.86	74.214	16.340	-22.492	21.255	115.201	44.300	88.047	64.602	110.536
888	1.73	95.879	21.392	-22.492	21.255	149.282	63.799	107.545	90.533	136.467
888	2.59	117.390	26.360	-22.492	21.255	183.045	83.159	126.906	116.250	162.184
888	3.45	133.192	28.184	-22.492	21.255	204.925	97.380	141.127	133.990	179.925
889	0	-133.087	-28.126	22.492	-21.255	-204.706	-97.286	-141.033	-133.843	-179.778
889	0.86	-117.285	-26.302	22.492	-21.255	-182.826	-83.064	-126.811	-116.103	-162.037
889	1.73	-95.774	-21.334	22.492	-21.255	-149.064	-63.704	-107.451	-90.386	-136.321
889	2.59	-74.109	-16.282	22.492	-21.255	-114.982	-44.206	-87.953	-64.455	-110.390
889	3.45	-55.832	-13.095	22.492	-21.255	-87.949	-27.756	-71.503	-43.256	-89.190
891	0	15.831	7.591	22.584	-21.227	31.142	36.832	-6.979	45.118	-0.884
891	1.13	34.938	9.143	22.584	-21.227	56.554	54.029	10.218	66.158	20.157
891	2.25	56.864	12.245	22.584	-21.227	87.829	73.761	29.951	91.135	45.133
891	3.38	78.789	15.348	22.584	-21.227	119.104	93.494	49.683	116.111	70.110
891	4.5	97.897	16.900	22.584	-21.227	144.516	110.691	66.880	137.152	91.150
892	0	9.140	4.369	-22.850	21.533	17.959	-14.623	29.759	-11.642	34.960
892	0.26	13.106	4.460	-22.850	21.533	22.862	-11.055	33.328	-7.422	39.180
892	0.53	17.400	4.731	-22.850	21.533	28.450	-7.190	57.193	-2.742	43.860
892	0.79	22.023	5.184	-22.850	21.533	34.721	-3.029	41.354	2.397	48.999
892	1.05	26.974	5.817	-22.850	21.533	41.676	1.427	45.810	7.996	54.598
893	0	9.203	4.404	-22.850	21.533	18.090	-14.567	29.816	-11.555	35.048
893	0.26	13.169	4.494	-22.850	21.533	22.993	-10.998	33.385	-7.334	39.268
893	0.53	17.463	4.766	-22.850	21.533	28.581	-7.133	37.250	-2.654	43.948
893	0.79	22.086	5.218	-22.850	21.533	34.852	-2.973	41.410	2.485	49.087
893	1.05	27.037	5.852	-22.850	21.533	41.807	1.484	45.867	8.083	54.686
895	0	-38.439	-4.149	-1.488	1.495	-52.766	-36.083	-33.100	-44.537	-41.405
895	1.13	-24.586	-3.156	-1.488	1.495	-34.554	-23.616	-20.632	-29.366	-26.234
895	2.25	-10.283	-1.915	-1.488	1.495	-15.403	-10.742	-7.759	-13.566	-10.433
895	3.38	4.021	-0.674	-1.488	1.495	3.747	2.131	5.114	2.235	5.367
895	4.5	17.874	0.319	-1.488	1.495	21.959	14.598	17.582	17.406	20.538
896	0	-17.812	-0.313	-1.491	1.490	-21.876	-17.521	-14.540	-20.465	-17.335
896	1.13	-3.959	0.679	-1.491	1.490	-3.664	-5.054	-2.073	-5.294	-2.164
896	2.25	10.344	1.921	-1.491	1.490	15.486	7.819	10.800	10.506	13.637
896	3.38	24.648	3.162	-1.491	1.490	34.636	20.693	23.674	26.307	29.437
896	4.5	38.501	4.155	-1.491	1.490	52.849	33.160	36.141	41.478	44.608
897	0	-38.439	-4.149	-1.488	1.495	-52.766	-36.083	-33.100	-44.537	-41.405
897	1.13	-24.586	-3.156	-1.488	1.495	-34.554	-23.616	-20.632	-29.366	-26.234
897	2.25	-10.282	-1.915	-1.488	1.495	-15.403	-10.742	-7.759	-13.566	-10.433
897	3.38	4.021	-0.674	-1.488	1.495	3.747	2.131	5.114	2.235	5.367
897	4.5	17.874	0.319	-1.488	1.495	21.959	14.598	17.582	17.406	20.538
898	0	-17.812	-0.313	-1.491	1.490	-21.876	-17.521	-14.540	-20.465	-17.335
898	1.13	-3.959	0.679	-1.491	1.490	-3.664	-5.054	-2.073	-5.294	-2.164
898	2.25	10.344	1.921	-1.491	1.490	15.486	7.819	10.800	10.506	13.637
898	3.38	24.648	3.162	-1.491	1.490	34.636	20.693	23.674	26.307	29.437
898	4.5	38.501	4.155	-1.491	1.490	52.849	33.160	36.141	41.478	44.608
899	0	-144.619	-39.215	-18.602	19.243	-236.287	-148.760	-110.914	-196.088	-156.350
899	1.13	-122.694	-36.112	-18.602	19.243	-205.012	-129.027	-91.181	-171.111	-131.374
899	2.25	-92.003	-28.182	-18.602	19.243	-155.496	-101.405	-63.560	-133.891	-94.153

899	3.38	-61.313	-20.253	-18.602	19.243	-105.979	-73.784	-35.938	-96.670	-56.932
899	4.5	-39.387	-17.150	-18.602	19.243	-74.704	-54.051	-16.206	-71.694	-31.956
900	0	30.071	13.972	-17.652	18.501	58.440	9.412	45.564	21.842	59.802
900	1.13	51.996	17.075	-17.652	18.501	89.715	29.145	65.297	46.818	84.779
900	2.25	82.687	25.004	-17.652	18.501	139.231	56.766	92.919	84.039	121.999
900	3.38	113.377	32.934	-17.652	18.501	188.747	84.388	120.540	121.260	159.220
900	4.5	135.303	36.037	-17.652	18.501	220.022	104.120	140.273	146.236	184.197
901	0	-144.619	-39.215	-18.602	19.243	-236.286	-148.760	-110.914	-196.088	-156.350
901	1.13	-122.694	-36.112	-18.602	19.243	-205.012	-129.027	-91.181	-171.111	-131.374
901	2.25	-92.003	-28.182	-18.602	19.243	-155.495	-101.405	-63.560	-133.891	-94.153
901	3.38	-61.313	-20.253	-18.602	19.243	-105.979	-73.784	-35.938	-96.670	-56.932
901	4.5	-39.387	-17.150	-18.602	19.243	-74.704	-54.051	-16.206	-71.694	-31.956
902	0	30.071	13.972	-17.652	18.501	58.440	9.412	45.564	21.842	59.802
902	1.13	51.996	17.075	-17.652	18.501	89.715	29.145	65.297	46.819	84.779
902	2.25	82.687	25.004	-17.652	18.501	139.231	56.766	92.919	84.039	122.000
902	3.38	113.377	32.934	-17.652	18.501	188.747	84.388	120.540	121.260	159.220
902	4.5	135.303	36.037	-17.652	18.501	220.022	104.120	140.273	146.236	184.197
903	0	-113.287	-12.605	-1.911	2.071	-156.113	-103.870	-99.888	-128.899	-124.718
903	0.23	-109.592	-12.481	-1.911	2.071	-151.479	-100.544	-96.562	-124.941	-120.760
903	0.45	-105.445	-12.108	-1.911	2.071	-145.908	-96.812	-92.830	-120.353	-116.172
903	0.68	-101.074	-11.612	-1.911	2.071	-139.868	-92.877	-88.896	-115.450	-111.269
903	0.9	-96.702	-11.115	-1.911	2.071	-133.827	-88.943	-84.961	-110.547	-106.366
904	0	-79.723	-10.470	-0.543	0.587	-112.419	-72.293	-71.163	-90.875	-89.688
904	0.53	-68.908	-8.974	-0.543	0.587	-97.048	-62.560	-61.430	-78.577	-77.390
904	1.05	-57.769	-7.298	-0.543	0.587	-80.999	-52.535	-51.404	-65.825	-64.638
904	1.58	-47.831	-6.284	-0.543	0.587	-67.452	-43.591	-42.460	-54.752	-53.565
904	2.1	-39.120	-5.947	-0.543	0.587	-56.459	-35.751	-34.621	-45.393	-44.206
905	0	-113.287	-12.605	-1.911	2.071	-156.113	-103.870	-99.888	-128.899	-124.718
905	0.23	-109.592	-12.481	-1.911	2.071	-151.479	-100.544	-96.562	-124.941	-120.760
905	0.45	-105.446	-12.108	-1.911	2.071	-145.908	-96.812	-92.830	-120.353	-116.172
905	0.68	-101.074	-11.612	-1.911	2.071	-139.868	-92.877	-88.896	-115.450	-111.269
905	0.9	-96.702	-11.115	-1.911	2.071	-133.827	-88.943	-84.961	-110.547	-106.366
906	0	-79.723	-10.470	-0.543	0.587	-112.419	-72.293	-71.163	-90.875	-89.688
906	0.53	-68.908	-8.974	-0.543	0.587	-97.048	-62.560	-61.430	-78.577	-77.390
906	1.05	-57.769	-7.298	-0.543	0.587	-80.999	-52.535	-51.404	-65.825	-64.638
906	1.58	-47.831	-6.284	-0.543	0.587	-67.452	-43.591	-42.460	-54.752	-53.565
906	2.1	-39.120	-5.947	-0.543	0.587	-56.459	-35.751	-34.621	-45.393	-44.206
907	0	-64.085	-10.495	-1.097	1.095	-93.693	-58.774	-56.581	-75.053	-72.751
907	0.75	-51.973	-9.805	-1.097	1.095	-78.055	-47.873	-45.680	-61.901	-59.598
907	1.5	-37.356	-7.736	-1.097	1.095	-57.205	-34.717	-32.525	-45.250	-42.948
907	2.25	-22.739	-5.668	-1.097	1.095	-36.355	-21.562	-19.370	-28.599	-26.297
907	3	-10.626	-4.978	-1.097	1.095	-20.717	-10.661	-8.469	-15.446	-13.144
908	0	14.826	6.453	1.798	-1.782	28.117	15.141	11.561	21.521	17.762
908	0.75	26.939	7.143	1.798	-1.782	43.755	26.043	22.463	34.673	30.914
908	1.5	41.556	9.211	1.798	-1.782	64.605	39.198	35.618	51.324	47.565
908	2.25	56.172	11.280	1.798	-1.782	85.455	52.353	48.773	67.975	64.216
908	3	68.285	11.970	1.798	-1.782	101.093	63.254	59.674	81.128	77.369
909	0	-66.044	-18.030	-1.979	1.913	-108.102	-61.419	-57.527	-82.784	-78.697
909	0.75	-59.499	-16.762	-1.979	1.913	-98.218	-55.529	-51.637	-75.113	-71.026
909	1.5	-49.999	-13.866	-1.979	1.913	-82.184	-46.979	-43.087	-63.313	-59.226
909	2.25	-40.499	-10.970	-1.979	1.913	-66.151	-38.429	-34.537	-51.514	-47.427
909	3	-33.955	-9.701	-1.979	1.913	-56.267	-32.539	-28.646	-43.842	-39.755
910	0	35.816	10.344	1.867	-1.747	59.530	34.102	30.488	46.085	42.290
910	0.75	42.361	11.613	1.867	-1.747	69.414	39.993	36.379	53.756	49.962
910	1.5	51.861	14.509	1.867	-1.747	85.448	48.543	44.929	65.556	61.761
910	2.25	61.361	17.405	1.867	-1.747	101.481	57.093	53.479	77.355	73.561
910	3	67.906	18.674	1.867	-1.747	111.365	62.983	59.369	85.027	81.232
911	0	-67.273	-18.539	-2.174	2.064	-110.391	-62.720	-58.481	-84.599	-80.149
911	0.75	-60.728	-17.271	-2.174	2.064	-100.507	-56.830	-52.591	-76.928	-72.478
911	1.5	-51.228	-14.375	-2.174	2.064	-84.473	-48.280	-44.041	-65.129	-60.678
911	2.25	-41.728	-11.479	-2.174	2.064	-68.439	-39.730	-35.491	-53.329	-48.879
911	3	-35.183	-10.210	-2.174	2.064	-58.556	-33.839	-29.601	-45.658	-41.207
912	0	33.436	9.637	2.089	-1.942	55.543	32.182	28.151	43.373	39.141
912	0.75	39.981	10.906	2.089	-1.942	65.427	38.072	34.041	51.045	46.812
912	1.5	49.481	13.802	2.089	-1.942	81.460	46.622	42.591	62.844	58.612
912	2.25	58.981	16.698	2.089	-1.942	97.494	55.172	51.141	74.644	70.411
912	3	65.526	17.967	2.089	-1.942	107.378	61.063	57.032	82.315	78.083

913	0	-54.294	-9.676	-1.422	1.354	-80.634	-50.286	-47.510	-64.597	-61.682
913	0.56	-45.444	-9.288	-1.422	1.354	-69.394	-42.322	-39.546	-55.061	-52.146
913	1.13	-35.186	-8.124	-1.422	1.354	-55.222	-33.089	-30.313	-43.556	-40.642
913	1.69	-24.928	-6.961	-1.422	1.354	-41.050	-23.857	-21.081	-32.052	-29.138
913	2.25	-16.078	-6.573	-1.422	1.354	-29.810	-15.892	-13.116	-22.516	-19.601
914	0	13.795	5.365	1.175	-1.118	25.139	13.590	11.298	19.098	16.691
914	0.56	22.645	5.753	1.175	-1.118	36.379	21.555	19.263	28.635	26.228
914	1.13	32.903	6.917	1.175	-1.118	50.550	30.787	28.495	40.139	37.732
914	1.69	43.161	8.080	1.175	-1.118	64.722	40.020	37.727	51.643	49.236
914	2.25	52.011	8.468	1.175	-1.118	75.962	47.984	45.692	61.180	58.773
915	0	-52.009	-8.467	-1.175	1.118	-75.957	-47.982	-45.690	-61.177	-58.770
915	0.56	-43.159	-8.079	-1.175	1.118	-64.717	-40.018	-37.725	-51.640	-49.233
915	1.13	-32.901	-6.915	-1.175	1.118	-50.546	-30.785	-28.493	-40.136	-37.729
915	1.69	-22.642	-5.752	-1.175	1.118	-36.374	-21.553	-19.260	-28.632	-26.225
915	2.25	-13.793	-5.364	-1.175	1.118	-25.134	-13.588	-11.296	-19.095	-16.688
916	0	16.076	5.71	1.422	-1.354	29.805	15.890	13.114	22.512	19.598
916	0.56	24.925	6.959	1.422	-1.354	41.045	23.855	21.079	32.049	29.134
916	1.13	35.184	8.123	1.422	-1.354	55.217	33.087	30.311	43.553	40.639
916	1.69	45.442	9.286	1.422	-1.354	69.389	42.319	39.544	55.057	52.143
916	2.25	54.292	9.674	1.422	-1.354	80.629	50.284	47.508	64.594	61.679
917	0	-65.526	-17.967	-2.089	1.942	-107.378	-61.063	-57.032	-82.315	-78.082
917	0.75	-58.981	-16.698	-2.089	1.942	-97.494	-55.172	-51.141	-74.643	-70.411
917	1.5	-49.481	-13.802	-2.089	1.942	-81.460	-46.622	-42.591	-62.844	-58.612
917	2.25	-39.981	-10.906	-2.089	1.942	-65.427	-38.072	-34.041	-51.045	-46.812
917	3	-33.436	-9.637	-2.089	1.942	-55.543	-32.182	-28.151	-43.373	-39.141
918	0	35.184	10.210	2.174	-2.064	58.557	33.840	29.601	45.658	41.208
918	0.75	41.729	11.479	2.174	-2.064	68.441	39.730	35.491	53.330	48.879
918	1.5	51.229	14.375	2.174	-2.064	84.474	48.280	44.041	65.129	60.679
918	2.25	60.729	17.271	2.174	-2.064	100.508	56.830	52.591	76.929	72.478
918	3	67.273	18.540	2.174	-2.064	110.392	62.720	58.482	84.600	80.150
919	0	-67.906	-18.674	-1.867	1.747	-111.365	-62.983	-59.369	-85.027	-81.232
919	0.75	-61.361	-17.405	-1.867	1.747	-101.482	-57.093	-53.479	-77.355	-73.561
919	1.5	-51.861	-14.509	-1.867	1.747	-85.448	-48.543	-44.929	-65.556	-61.761
919	2.25	-42.361	-11.613	-1.867	1.747	-69.414	-39.993	-36.379	-53.756	-49.962
919	3	-35.817	-10.344	-1.867	1.747	-59.531	-34.102	-30.488	-46.085	-42.290
920	0	33.955	9.701	1.979	-1.913	56.267	32.538	28.646	43.842	39.755
920	0.75	40.499	10.970	1.979	-1.913	66.151	38.429	34.537	51.514	47.427
920	1.5	49.999	13.866	1.979	-1.913	82.184	46.979	43.087	63.313	59.226
920	2.25	59.499	16.762	1.979	-1.913	98.218	55.529	51.637	75.112	71.026
920	3	66.044	18.030	1.979	-1.913	108.102	61.419	57.527	82.784	78.697
921	0	-68.285	-11.970	-1.798	1.782	-101.093	-63.254	-59.674	-81.128	-77.369
921	0.75	-56.172	-11.280	-1.798	1.782	-85.455	-52.353	-48.773	-67.975	-64.216
921	1.5	-41.556	-9.211	-1.798	1.782	-64.605	-39.198	-35.618	-51.324	-47.565
921	2.25	-26.939	-7.143	-1.798	1.782	-43.755	-26.043	-22.463	-34.673	-30.914
921	3	-14.826	-6.453	-1.798	1.782	-28.117	-15.141	-11.561	-21.521	-17.762
922	0	10.626	4.978	1.097	-1.095	20.717	10.661	8.469	15.446	13.144
922	0.75	22.739	5.668	1.097	-1.095	36.355	21.562	19.370	28.599	26.297
922	1.5	37.356	7.736	1.097	-1.095	57.205	34.717	32.525	45.250	42.948
922	2.25	51.973	9.805	1.097	-1.095	78.055	47.873	45.680	61.900	59.598
922	3	64.085	10.495	1.097	-1.095	93.693	58.774	56.581	75.053	72.751
923	0	-64.186	-10.503	1.008	-1.010	-93.828	-56.760	-58.777	-72.954	-75.072
923	0.75	-52.074	-9.813	1.008	-1.010	-78.190	-45.859	-47.876	-59.802	-61.920
923	1.5	-37.457	-7.745	1.008	-1.010	-57.340	-32.703	-34.721	-43.151	-45.269
923	2.25	-22.840	-5.676	1.008	-1.010	-36.490	-19.548	-21.566	-26.500	-28.618
923	3	-10.727	-4.987	1.008	-1.010	-20.851	-8.647	-10.664	-13.347	-15.465
924	0	14.877	6.460	-1.862	1.887	28.188	11.527	15.276	17.736	21.672
924	0.75	26.989	7.150	-1.862	1.887	43.827	22.428	26.177	30.888	34.825
924	1.5	41.606	9.218	-1.862	1.887	64.677	35.584	39.333	47.539	51.476
924	2.25	56.223	11.287	-1.862	1.887	85.527	48.739	52.488	64.190	68.126
924	3	68.335	11.977	-1.862	1.887	101.165	59.640	63.389	77.342	81.279
925	0	-66.281	-18.049	1.840	-1.906	-108.415	-57.813	-51.558	-79.034	-82.967
925	0.75	-59.736	-16.780	1.840	-1.906	-98.531	-51.922	-55.668	-71.362	-75.295
925	1.5	-50.236	-13.884	1.840	-1.906	-82.498	-43.372	-47.118	-59.563	-63.496
925	2.25	-40.736	-10.988	1.840	-1.906	-66.464	-34.822	-38.568	-47.763	-51.696
925	3	-34.191	-9.719	1.840	-1.906	-56.580	-28.932	-32.678	-40.092	-44.025
926	0	36.030	10.381	-1.819	1.944	59.845	30.607	34.371	42.461	46.413
926	0.75	42.574	11.650	-1.819	1.944	69.729	36.497	40.261	50.132	54.084

926	1.5	52.074	14.546	-1.819	1.944	85.763	45.047	48.811	61.932	65.884
926	2.25	61.574	17.442	-1.819	1.944	101.796	53.597	57.361	73.731	77.683
926	3	68.119	18.711	-1.819	1.944	111.680	59.488	63.252	81.402	85.354
927	0	-67.057	-18.527	2.059	-2.170	-110.112	-58.293	-62.522	-79.921	-84.361
927	0.75	-60.512	-17.259	2.059	-2.170	-100.229	-52.403	-56.631	-72.249	-76.690
927	1.5	-51.012	-14.363	2.059	-2.170	-84.195	-43.853	-48.081	-60.450	-64.890
927	2.25	-41.512	-11.466	2.059	-2.170	-68.161	-35.303	-39.531	-48.650	-53.091
927	3	-34.968	-10.198	2.059	-2.170	-58.277	-29.412	-33.641	-40.979	-45.419
928	0	33.459	9.692	-2.079	2.234	55.658	28.034	32.348	39.055	43.584
928	0.75	40.004	10.961	-2.079	2.234	65.542	33.925	38.238	46.727	51.256
928	1.5	49.504	13.857	-2.079	2.234	81.575	42.475	46.788	58.526	63.055
928	2.25	59.004	16.753	-2.079	2.234	97.609	51.025	55.338	70.326	74.854
928	3	65.549	18.021	-2.079	2.234	107.493	56.915	61.228	77.997	82.526
929	0	-49.171	-12.723	2.664	-2.835	-79.361	-41.589	-47.089	-56.847	-62.621
929	0.56	-44.609	-11.963	2.664	-2.835	-72.671	-37.484	-42.984	-51.579	-57.353
929	1.13	-38.189	-10.178	2.664	-2.835	-62.112	-31.706	-37.205	-43.713	-49.488
929	1.69	-31.768	-8.394	2.664	-2.835	-51.553	-25.927	-31.426	-35.847	-41.622
929	2.25	-27.207	-7.634	2.664	-2.835	-44.863	-21.822	-27.321	-30.579	-36.354
930	0	28.118	8.555	-2.673	2.859	47.430	22.633	28.165	32.107	37.916
930	0.56	32.679	9.315	-2.673	2.859	54.120	26.738	32.270	37.375	45.184
930	1.13	39.100	11.099	-2.673	2.859	64.679	32.517	38.049	45.241	51.050
930	1.69	45.521	12.884	-2.673	2.859	75.238	38.295	43.828	53.106	58.915
930	2.25	50.082	13.644	-2.673	2.859	81.928	42.400	47.933	58.374	64.183
931	0	-73.300	-24.437	1.782	-1.890	-127.059	-64.188	-67.860	-90.490	-94.345
931	0.75	-66.554	-23.058	1.782	-1.890	-116.759	-58.117	-61.790	-82.538	-86.394
931	1.5	-54.801	-18.921	1.782	-1.890	-96.034	-47.539	-51.211	-67.590	-71.446
931	2.25	-43.047	-14.784	1.782	-1.890	-75.310	-36.960	-40.632	-52.642	-56.498
931	3	-36.301	-13.405	1.782	-1.890	-65.009	-30.890	-34.562	-44.691	-48.547
932	0	36.302	13.405	-1.782	1.890	65.010	30.890	34.562	44.691	48.547
932	0.75	43.047	14.784	-1.782	1.890	75.310	36.960	40.632	52.642	56.498
932	1.5	54.801	18.921	-1.782	1.890	96.034	47.539	51.211	67.590	71.446
932	2.25	66.555	23.058	-1.782	1.890	116.759	58.118	61.790	82.538	86.394
932	3	73.300	24.437	-1.782	1.890	127.059	64.188	67.860	90.490	94.345
933	0	-50.082	-13.644	2.673	-2.859	-81.929	-42.401	-47.933	-58.375	-64.184
933	0.56	-45.521	-12.884	2.673	-2.859	-75.239	-38.295	-43.828	-53.107	-58.916
933	1.13	-39.100	-11.100	2.673	-2.859	-64.680	-32.517	-38.049	-45.241	-51.050
933	1.69	-32.680	-9.315	2.673	-2.859	-54.120	-26.738	-32.271	-37.375	-43.184
933	2.25	-28.119	-8.555	2.673	-2.859	-47.431	-22.633	-28.166	-32.107	-37.916
934	0	27.207	7.634	-2.664	2.835	44.863	21.822	27.322	30.580	36.354
934	0.56	31.768	8.394	-2.664	2.835	51.553	25.927	31.427	35.848	41.622
934	1.13	38.189	10.179	-2.664	2.835	62.112	31.706	37.205	43.713	49.488
934	1.69	44.610	11.963	-2.664	2.835	72.672	37.484	42.984	51.579	57.353
934	2.25	49.171	12.723	-2.664	2.835	79.361	41.589	47.089	56.847	62.622
935	0	-65.549	-18.021	2.079	-2.234	-107.493	-56.915	-61.228	-77.997	-82.526
935	0.75	-59.004	-16.753	2.079	-2.234	-97.609	-51.025	-55.338	-70.326	-74.855
935	1.5	-49.504	-13.857	2.079	-2.234	-81.576	-42.475	-46.788	-58.526	-63.055
935	2.25	-40.004	-10.961	2.079	-2.234	-65.542	-33.925	-38.238	-46.727	-51.256
935	3	-33.459	-9.692	2.079	-2.234	-55.658	-28.034	-32.348	-39.055	-43.584
936	0	34.968	10.198	-2.059	2.170	58.277	29.412	33.641	40.979	45.419
936	0.75	41.512	11.466	-2.059	2.170	68.161	35.303	39.531	48.650	53.091
936	1.5	51.012	14.362	-2.059	2.170	84.195	43.853	48.081	60.450	64.890
936	2.25	60.512	17.259	-2.059	2.170	100.229	52.403	56.631	72.249	76.690
936	3	67.057	18.527	-2.059	2.170	110.112	58.293	62.522	79.921	84.361
937	0	-68.119	-18.711	1.819	-1.944	-111.680	-59.488	-63.252	-81.402	-85.354
937	0.75	-61.574	-17.442	1.819	-1.944	-101.796	-53.597	-57.361	-73.731	-77.683
937	1.5	-52.074	-14.546	1.819	-1.944	-85.763	-45.047	-48.811	-61.932	-65.884
937	2.25	-42.574	-11.650	1.819	-1.944	-69.729	-36.497	-40.261	-50.132	-54.084
937	3	-36.030	-10.381	1.819	-1.944	-59.845	-30.607	-34.371	-42.461	-46.413
938	0	34.191	9.719	-1.840	1.906	56.580	28.932	32.678	40.092	44.025
938	0.75	40.736	10.988	-1.840	1.906	66.464	34.822	38.568	47.763	51.696
938	1.5	50.236	13.884	-1.840	1.906	82.498	43.372	47.118	59.563	63.496
938	2.25	59.736	16.780	-1.840	1.906	98.531	51.922	55.668	71.362	75.295
938	3	66.281	18.049	-1.840	1.906	108.415	57.813	61.558	79.034	82.967
939	0	-68.335	-11.977	1.862	-1.887	-101.165	-59.640	-63.389	-77.342	-81.279
939	0.75	-56.223	-11.287	1.862	-1.887	-85.527	-48.739	-52.488	-64.190	-68.126
939	1.5	-41.606	-9.218	1.862	-1.887	-64.677	-35.584	-39.333	-47.539	-51.476
939	2.25	-26.989	-7.150	1.862	-1.887	-43.827	-22.428	-26.178	-30.888	-34.825



939	3	-14.877	-6.460	1.862	-1.887	-28.188	-11.527	-15.276	-17.736	-21.672
940	0	10.727	4.987	-1.008	1.010	20.851	8.647	10.664	13.347	15.465
940	0.75	22.840	5.676	-1.008	1.010	36.490	19.548	21.566	26.500	28.618
940	1.5	37.457	7.745	-1.008	1.010	57.340	32.703	34.721	43.151	45.269
940	2.25	52.074	9.813	-1.008	1.010	78.190	45.859	47.876	59.802	61.920
940	3	64.186	10.503	-1.008	1.010	93.828	56.760	58.777	72.954	75.072
941	0	-22.710	-1.234	0.646	-0.632	-29.227	-19.793	-21.071	-23.945	-25.287
941	0.75	-13.625	-0.655	0.646	-0.632	-17.398	-11.617	-12.895	-14.041	-15.383
941	1.5	-4.089	0.172	0.646	-0.632	-4.631	-3.035	-4.313	-3.507	-4.849
941	2.25	5.446	1.000	0.646	-0.632	8.135	5.547	4.269	7.027	5.684
941	3	14.531	1.579	0.646	-0.632	19.964	13.724	12.446	16.931	15.589
942	0	-12.787	-1.394	-1.027	0.934	-17.575	-12.536	-10.574	-15.384	-13.324
942	0.75	-3.702	-0.815	-1.027	0.934	-5.747	-4.359	-2.398	-5.479	-3.420
942	1.5	5.834	0.012	-1.027	0.934	7.020	4.223	6.184	5.054	7.114
942	2.25	15.369	0.840	-1.027	0.934	19.787	12.805	14.767	15.588	17.648
942	3	24.454	1.419	-1.027	0.934	31.615	20.982	22.943	25.492	27.552
943	0	-24.484	-1.432	0.914	-0.848	-31.671	-21.122	-22.884	-25.651	-27.501
943	0.75	-15.399	-0.852	0.914	-0.848	-19.843	-12.945	-14.707	-15.747	-17.597
943	1.5	-5.863	-0.025	0.914	-0.848	-7.076	-4.363	-6.125	-5.213	-7.063
943	2.25	3.672	0.802	0.914	-0.848	5.691	4.219	2.457	5.321	3.471
943	3	12.757	1.382	0.914	-0.848	17.519	12.395	10.633	15.225	13.375
944	0	-14.255	-1.542	-0.946	0.867	-19.573	-13.775	-11.963	-16.932	-15.029
944	0.75	-5.170	-0.963	-0.946	0.867	-7.744	-5.599	-3.786	-7.028	-5.125
944	1.5	4.366	-0.135	-0.946	0.867	5.023	2.984	4.796	3.506	5.409
944	2.25	13.902	0.692	-0.946	0.867	17.789	11.566	13.378	14.040	15.943
944	3	22.986	1.271	-0.946	0.867	29.618	19.742	21.554	23.944	25.847
945	0	-22.986	-1.271	0.946	-0.867	-29.618	-19.742	-21.554	-23.944	-25.847
945	0.75	-13.901	-0.692	0.946	-0.867	-17.789	-11.566	-13.378	-14.040	-15.943
945	1.5	-4.366	0.135	0.946	-0.867	-5.022	-2.983	-4.796	-3.506	-5.409
945	2.25	5.170	0.963	0.946	-0.867	7.744	5.599	3.786	7.028	5.125
945	3	14.255	1.542	0.946	-0.867	19.573	13.775	11.963	16.932	15.029
946	0	-12.757	-1.382	-0.914	0.848	-17.519	-12.395	-10.633	-15.225	-13.375
946	0.75	-3.672	-0.802	-0.914	0.848	-5.691	-4.219	-2.457	-5.321	-3.471
946	1.5	5.863	0.025	-0.914	0.848	7.076	4.363	6.125	5.213	7.063
946	2.25	15.399	0.852	-0.914	0.848	19.843	12.945	14.708	15.747	17.597
946	3	24.484	1.432	-0.914	0.848	31.672	21.122	22.884	25.651	27.501
947	0	-24.454	-1.419	1.027	-0.934	-31.615	-20.982	-22.943	-25.492	-27.552
947	0.75	-15.369	-0.840	1.027	-0.934	-19.787	-12.805	-14.767	-15.588	-17.648
947	1.5	-5.834	-0.012	1.027	-0.934	-7.020	-4.223	-6.184	-5.054	-7.114
947	2.25	3.702	0.815	1.027	-0.934	5.747	4.359	2.398	5.479	3.420
947	3	12.787	1.394	1.027	-0.934	17.575	12.536	10.574	15.384	13.324
949	0	-14.531	-1.579	-0.646	0.632	-19.964	-13.724	-12.446	-16.931	-15.589
949	0.75	-5.446	-1.000	-0.646	0.632	-8.135	-5.547	-4.269	-7.027	-5.684
949	1.5	4.089	-0.172	-0.646	0.632	4.631	3.035	4.313	3.507	4.849
949	2.25	13.625	0.655	-0.646	0.632	17.398	11.617	12.895	14.041	15.383
949	3	22.710	1.234	-0.646	0.632	29.227	19.793	21.071	23.945	25.287
950	0	-107.136	-29.050	0.017	0.011	-175.043	-96.406	-96.411	-130.777	-130.783
950	0.75	-93.772	-27.671	0.017	0.011	-156.799	-84.378	-84.383	-115.875	-115.881
950	1.5	-75.398	-23.534	0.017	0.011	-128.132	-67.842	-67.847	-93.977	-93.982
950	2.25	-57.025	-19.396	0.017	0.011	-99.464	-51.305	-51.311	-72.078	-72.084
950	3	-43.660	-18.017	0.017	0.011	-81.220	-39.277	-39.283	-57.176	-57.182
951	0	40.555	17.309	-0.126	-0.134	76.361	36.373	36.366	53.355	53.348
951	0.75	53.920	18.689	-0.126	-0.134	94.605	48.402	48.394	68.257	68.249
951	1.5	72.293	22.826	-0.126	-0.134	123.273	64.938	64.930	90.155	90.148
951	2.25	90.667	26.963	-0.126	-0.134	151.941	81.474	81.466	112.054	112.046
951	3	104.031	28.342	-0.126	-0.134	170.185	93.502	93.495	126.956	126.948
952	0	-106.148	-29.047	0.083	0.078	-173.852	-95.450	-95.455	-129.668	-129.673
952	0.75	-92.783	-27.668	0.083	0.078	-155.608	-83.422	-83.427	-114.766	-114.771
952	1.5	-74.410	-23.530	0.083	0.078	-126.940	-66.886	-66.891	-92.867	-92.873
952	2.25	-56.036	-19.393	0.083	0.078	-98.273	-50.350	-50.355	-70.969	-70.974
952	3	-42.672	-18.014	0.083	0.078	-80.029	-38.322	-38.327	-56.067	-56.072
953	0	39.738	16.928	-0.097	-0.100	74.771	35.667	35.665	52.288	52.285
953	0.75	53.103	18.307	-0.097	-0.100	93.015	47.695	47.693	67.189	67.187
953	1.5	71.476	22.444	-0.097	-0.100	121.682	64.231	64.229	89.088	89.086
953	2.25	89.850	26.581	-0.097	-0.100	150.350	80.768	80.765	110.986	110.984
953	3	103.215	27.960	-0.097	-0.100	168.594	92.796	92.794	125.888	125.886
954	0	-77.885	-19.600	0.145	0.039	-124.822	-69.951	-70.058	-93.974	-94.086

954	0.56	-68.331	-18.824	0.145	0.039	-112.116	-61.353	-61.459	-83.454	-83.566
954	1.13	-55.960	-16.497	0.145	0.039	-93.547	-50.218	-50.325	-68.998	-69.110
954	1.69	-43.588	-14.170	0.145	0.039	-74.978	-39.084	-39.191	-54.542	-54.654
954	2.25	-34.034	-13.394	0.145	0.039	-62.272	-30.486	-30.592	-44.022	-44.134
955	0	33.165	13.033	-0.064	-0.147	60.652	29.785	29.702	42.967	42.880
955	0.56	42.719	13.809	-0.064	-0.147	73.357	38.383	38.300	53.488	53.400
955	1.13	55.090	16.136	-0.064	-0.147	91.927	49.517	49.434	67.944	67.856
955	1.69	67.462	18.464	-0.064	-0.147	110.496	60.652	60.569	82.400	82.312
955	2.25	77.016	19.239	-0.064	-0.147	123.202	69.250	69.167	92.920	92.833
956	0	-97.663	-24.860	-0.529	0.703	-156.971	-88.426	-87.194	-118.763	-117.470
956	0.75	-84.298	-23.481	-0.529	0.703	-138.727	-76.398	-75.166	-103.862	-102.568
956	1.5	-65.925	-19.343	-0.529	0.703	-110.060	-59.862	-58.630	-81.963	-80.670
956	2.25	-47.552	-15.206	-0.529	0.703	-81.392	-43.326	-42.094	-60.065	-58.771
956	3	-34.187	-13.827	-0.529	0.703	-63.148	-31.297	-30.065	-45.163	-43.869
957	0	34.186	13.827	0.529	-0.703	63.146	31.296	30.065	45.162	43.868
957	0.75	47.551	15.206	0.529	-0.703	81.390	43.325	42.093	60.063	58.770
957	1.5	65.924	19.343	0.529	-0.703	110.058	59.861	58.629	81.962	80.668
957	2.25	84.298	23.480	0.529	-0.703	138.725	76.397	75.165	103.860	102.567
957	3	97.662	24.859	0.529	-0.703	156.969	88.425	87.193	118.762	117.469
958	0	-77.015	-19.239	0.064	0.147	-123.199	-69.249	-69.166	-92.919	-92.831
958	0.56	-67.461	-18.463	0.064	0.147	-110.494	-60.651	-60.568	-82.398	-82.311
958	1.13	-55.089	-16.136	0.064	0.147	-91.924	-49.517	-49.433	-67.942	-67.855
958	1.69	-42.718	-13.809	0.064	0.147	-73.355	-38.382	-38.299	-53.486	-53.399
958	2.25	-33.164	-13.033	0.064	0.147	-60.650	-29.784	-29.701	-42.966	-42.879
959	0	34.030	13.392	-0.145	-0.039	62.262	30.482	30.588	44.015	44.127
959	0.56	43.584	14.167	-0.145	-0.039	74.968	39.080	39.187	54.536	54.648
959	1.13	55.955	16.494	-0.145	-0.039	93.537	50.214	50.321	68.992	69.104
959	1.69	68.326	18.822	-0.145	-0.039	112.106	61.348	61.455	83.448	83.560
959	2.25	77.880	19.597	-0.145	-0.039	124.812	69.947	70.054	93.968	94.080
960	0	-103.214	-27.960	0.097	0.100	-168.594	-92.796	-92.793	-125.888	-125.886
960	0.75	-89.850	-26.581	0.097	0.100	-150.350	-80.767	-80.765	-110.986	-110.984
960	1.5	-71.476	-22.444	0.097	0.100	-121.682	-64.231	-64.229	-89.088	-89.085
960	2.25	-53.103	-18.307	0.097	0.100	-93.014	-47.695	-47.693	-67.189	-67.187
960	3	-39.738	-16.928	0.097	0.100	-74.770	-35.667	-35.665	-52.287	-52.285
961	0	42.672	18.014	-0.083	-0.078	80.030	38.322	38.327	56.068	56.073
961	0.75	56.037	19.394	-0.083	-0.078	98.274	50.350	50.355	70.970	70.975
961	1.5	74.410	23.531	-0.083	-0.078	126.941	66.886	66.891	92.868	92.873
961	2.25	92.784	27.668	-0.083	-0.078	155.609	83.422	83.427	114.767	114.772
961	3	106.148	29.047	-0.083	-0.078	173.853	95.451	95.456	129.668	129.674
962	0	-104.031	-28.342	0.126	0.134	-170.185	-93.502	-93.495	-126.956	-126.948
962	0.75	-90.667	-26.963	0.126	0.134	-151.941	-81.474	-81.466	-112.054	-112.046
962	1.5	-72.293	-22.826	0.126	0.134	-123.273	-64.938	-64.930	-90.156	-90.148
962	2.25	-53.920	-18.689	0.126	0.134	-94.606	-48.402	-48.394	-68.257	-68.249
962	3	-40.555	-17.310	0.126	0.134	-76.362	-36.373	-36.366	-53.355	-53.348
963	0	43.660	18.017	-0.017	-0.011	81.220	39.277	39.283	57.176	57.182
963	0.75	57.025	19.396	-0.017	-0.011	99.464	51.305	51.311	72.078	72.084
963	1.5	75.398	23.534	-0.017	-0.011	128.132	67.841	67.847	93.976	93.982
963	2.25	93.772	27.671	-0.017	-0.011	156.799	84.378	84.383	115.875	115.881
963	3	107.136	29.050	-0.017	-0.011	175.043	96.406	96.411	130.777	130.782
964	0	-119.191	-31.890	0.051	0.063	-194.053	-107.221	-107.209	-145.187	-145.175
964	0.75	-105.826	-30.511	0.051	0.063	-175.809	-95.192	-95.180	-130.286	-130.273
964	1.5	-87.453	-26.374	0.051	0.063	-147.141	-78.656	-78.644	-108.387	-108.375
964	2.25	-69.079	-22.236	0.051	0.063	-118.474	-62.120	-62.108	-86.489	-86.476
964	3	-55.715	-20.857	0.051	0.063	-100.229	-50.092	-50.080	-71.587	-71.574
965	0	-5.871	2.514	0.010	0.015	-3.022	-5.273	-5.268	-4.569	-4.564
965	0.75	7.494	3.893	0.010	0.015	15.222	6.755	6.760	10.332	10.338
965	1.5	25.867	8.031	0.010	0.015	43.890	23.291	23.296	32.231	32.236
965	2.25	44.241	12.168	0.010	0.015	72.557	39.827	39.832	54.129	54.135
965	3	57.605	13.547	0.010	0.015	90.801	51.855	51.860	69.031	69.036
966	0	-39.120	-5.947	-0.543	0.587	-56.459	-35.751	-34.621	-45.393	-44.206
966	0.75	-29.835	-5.257	-0.543	0.587	-44.213	-27.395	-26.264	-35.209	-34.022
966	1.5	-18.045	-3.188	-0.543	0.587	-26.756	-16.784	-15.653	-21.527	-20.340
966	2.25	-6.256	-1.120	-0.543	0.587	-9.299	-6.173	-5.043	-7.844	-6.657
966	3	3.029	-0.430	-0.543	0.587	2.947	2.184	3.314	2.340	3.527
967	0	-3.029	0.430	0.543	-0.587	-2.947	-2.184	-3.314	-2.340	-3.527
967	0.75	6.256	1.120	0.543	-0.587	9.299	6.173	5.043	7.844	6.657
967	1.5	18.046	3.189	0.543	-0.587	26.756	16.784	15.654	21.527	20.340



967	2.25	29.835	5.257	0.543	-0.587	44.214	27.395	26.264	35.209	34.022
967	3	39.120	5.947	0.543	-0.587	56.459	35.751	34.621	45.393	44.206
968	0	-22.704	-1.231	-0.640	0.655	-29.216	-21.074	-19.779	-25.288	-23.928
968	0.75	-13.619	-0.652	-0.640	0.655	-17.387	-12.898	-11.603	-15.384	-14.024
968	1.5	-4.084	0.175	-0.640	0.655	-4.620	-4.316	-3.021	-4.850	-3.490
968	2.25	5.452	1.003	-0.640	0.655	8.147	4.267	5.561	5.684	7.044
968	3	14.537	1.582	-0.640	0.655	19.975	12.443	13.738	15.588	16.948
969	0	-12.963	-1.413	0.927	-1.020	-17.817	-10.740	-12.687	-13.528	-15.573
969	0.75	-3.878	-0.834	0.927	-1.020	-5.989	-2.563	-4.511	-3.624	-5.669
969	1.5	5.658	-0.007	0.927	-1.020	6.778	6.019	4.071	6.909	4.865
969	2.25	15.193	0.821	0.927	-1.020	19.545	14.601	12.653	17.443	15.398
969	3	24.278	1.400	0.927	-1.020	31.374	22.777	20.830	27.347	25.302
970	0	-24.445	-1.420	-0.858	0.926	-31.606	-22.859	-21.075	-27.463	-25.589
970	0.75	-15.360	-0.841	-0.858	0.926	-19.777	-14.683	-12.898	-17.559	-15.685
970	1.5	-5.825	-0.013	-0.858	0.926	-7.011	-6.101	-4.316	-7.026	-5.152
970	2.25	3.711	0.814	-0.858	0.926	5.756	2.481	4.266	3.508	5.382
970	3	12.796	1.393	-0.858	0.926	17.585	10.658	12.443	13.412	15.286
971	0	-13.534	-1.540	0.982	-1.068	-18.705	-11.199	-13.248	-14.150	-16.302
971	0.75	-4.449	-0.961	0.982	-1.068	-6.876	-3.022	-5.072	-4.246	-6.398
971	1.5	5.087	-0.134	0.982	-1.068	5.890	5.560	3.510	6.288	4.136
971	2.25	14.623	0.694	0.982	-1.068	18.657	14.142	12.092	16.822	14.669
971	3	23.708	1.273	0.982	-1.068	30.486	22.319	20.269	26.726	24.574
972	0	-18.784	-0.542	-1.361	1.469	-23.408	-18.266	-15.456	-21.493	-18.522
972	0.56	-12.083	-0.170	-1.361	1.469	-14.771	-12.235	-9.405	-14.223	-11.251
972	1.13	-4.931	0.451	-1.361	1.469	-5.196	-5.799	-2.969	-6.322	-3.351
972	1.69	2.221	1.071	-1.361	1.469	4.379	0.638	3.468	1.578	4.549
972	2.25	8.922	1.444	-1.361	1.469	13.016	6.669	9.499	8.849	11.820
973	0	-10.726	-1.340	1.368	-1.483	-15.016	-8.285	-11.137	-10.670	-13.664
973	0.56	-4.025	-0.968	1.368	-1.483	-6.379	-2.254	-5.106	-3.400	-6.394
973	1.13	3.127	-0.347	1.368	-1.483	3.196	4.182	1.331	4.501	1.507
973	1.69	10.278	0.273	1.368	-1.483	12.771	10.619	7.767	12.401	9.407
973	2.25	16.979	0.646	1.368	-1.483	21.408	16.650	13.798	19.672	16.678
974	0	-5.654	0.000	0.000	0.000	-6.785	-5.089	-5.089	-5.937	-5.937
974	1.5	-2.827	0.000	0.000	0.000	-3.393	-2.544	-2.544	-2.969	-2.969
974	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
974	4.5	2.827	0.000	0.000	0.000	3.393	2.545	2.545	2.969	2.969
974	6	5.654	0.000	0.000	0.000	6.785	5.089	5.089	5.937	5.937
975	0	-25.246	-0.396	-20.604	20.751	-30.929	-43.326	-1.970	-48.392	-4.969
975	1.13	-12.004	-0.396	-20.604	20.751	-15.038	-31.407	9.948	-34.488	8.935
975	2.25	1.239	-0.396	-20.604	20.751	0.852	-19.489	21.806	-20.583	22.840
975	3.38	14.481	-0.396	-20.604	20.751	16.743	-7.571	33.784	-6.679	36.744
975	4.5	27.724	-0.396	-20.604	20.751	32.634	4.347	45.703	7.226	50.649
976	0	-63.971	-0.035	-5.819	5.828	-76.821	-63.393	-51.746	-73.302	-61.072
976	1.13	-50.728	-0.035	-5.819	5.828	-60.930	-51.475	-39.828	-59.397	-47.168
976	2.25	-37.486	-0.035	-5.819	5.828	-45.039	-39.557	-27.910	-45.493	-33.263
976	3.38	-24.244	-0.035	-5.819	5.828	-29.148	-27.639	-15.991	-31.588	-19.359
976	4.5	-11.001	-0.035	-5.819	5.828	-13.258	-15.721	-4.073	-17.684	-5.454
977	0	11.263	0.067	-5.824	5.824	13.623	4.313	15.961	5.754	17.984
977	1.13	24.506	0.067	-5.824	5.824	29.514	16.231	27.879	19.658	31.888
977	2.25	37.748	0.067	-5.824	5.824	45.405	28.149	39.797	33.562	45.793
977	3.38	50.990	0.067	-5.824	5.824	61.295	40.067	51.716	47.467	59.697
977	4.5	64.233	0.067	-5.824	5.824	77.186	51.986	63.634	61.371	73.602
978	0	-26.824	0.507	-20.735	20.620	-31.379	-44.876	-3.522	-49.618	-6.195
978	1.13	-13.582	0.507	-20.735	20.620	-15.488	-32.958	8.396	-35.713	7.709
978	2.25	-0.339	0.507	-20.735	20.620	0.403	-21.040	20.315	-21.809	21.614
978	3.38	12.903	0.507	-20.735	20.620	16.294	-9.122	32.233	-7.904	35.518
978	4.5	26.145	0.507	-20.735	20.620	32.185	2.796	44.151	6.000	49.423
979	0	-26.145	-0.507	20.735	-20.620	-32.185	-2.796	-44.151	-6.000	-49.423
979	1.13	-12.903	-0.507	20.735	-20.620	-16.294	9.122	-32.233	7.904	-35.518
979	2.25	0.339	-0.507	20.735	-20.620	-0.403	21.040	-20.315	21.809	-21.614
979	3.38	13.582	-0.507	20.735	-20.620	15.488	32.958	-8.396	35.713	-7.709
979	4.5	26.824	-0.507	20.735	-20.620	31.378	44.876	3.522	49.618	6.195
980	0	-64.233	-0.067	5.824	-5.824	-77.186	-51.986	-63.634	-61.371	-73.602
980	1.13	-50.990	-0.067	5.824	-5.824	-61.295	-40.067	-51.716	-47.467	-59.697
980	2.25	-37.748	-0.067	5.824	-5.824	-45.405	-28.149	-39.797	-33.562	-45.793
980	3.38	-24.506	-0.067	5.824	-5.824	-29.514	-16.231	-27.879	-19.658	-31.888
980	4.5	-11.263	-0.067	5.824	-5.824	-13.623	-4.313	-15.961	-5.754	-17.984

981	0	11.001	0.035	5.819	-5.828	13.258	15.721	4.073	17.684	5.454
981	1.13	24.244	0.035	5.819	-5.828	29.148	27.639	15.991	31.588	19.359
981	2.25	37.486	0.035	5.819	-5.828	45.039	39.557	27.910	45.493	33.263
981	3.38	50.728	0.035	5.819	-5.828	60.930	51.475	39.828	59.397	47.168
981	4.5	63.971	0.035	5.819	-5.828	76.821	63.393	51.746	73.302	61.072
983	0	-27.724	0.396	20.604	-20.751	-32.634	-4.347	-45.703	-7.226	-50.649
983	1.13	-14.481	0.396	20.604	-20.751	-16.743	7.571	-33.784	6.679	-36.744
983	2.25	-1.239	0.396	20.604	-20.751	-0.852	19.489	-21.866	20.583	-22.840
983	3.38	12.003	0.396	20.604	-20.751	15.038	31.407	-9.948	34.488	-8.936
983	4.5	25.246	0.396	20.604	-20.751	30.929	43.326	1.970	48.392	4.969



## MOMEN KOLOM

BTG	STA	DL	LL	EL KA	EL KI	1,2.MD+ 1,6.ML	0,9.MD+ MEKA	0,9.MD+ MEKI	1,05(MD+ 0,6.ML+MEKA)	1,05(MD+ 0,6.ML+MEKI)
1	0	-53.828	-7.041	74.941	-72.048	-75.859	26.496	-120.494	17.733	-136.606
1	2.1	21.231	10.402	2.521	-6.756	42.121	21.629	12.352	31.493	21.752
1	4.2	96.290	27.845	-69.900	58.536	160.101	16.762	145.197	45.253	180.110
2	0	-108.834	-42.817	18.025	-34.676	-199.109	-79.925	-132.627	-122.324	-177.660
2	2.1	-12.548	-0.822	10.298	15.184	-16.373	-0.996	3.891	-2.881	2.250
2	4.2	83.738	41.174	2.570	65.044	166.363	77.934	140.408	116.563	182.160
3	0	-55.961	-7.825	82.620	-78.968	-79.674	32.255	-129.333	23.062	-146.606
3	2.1	21.011	11.381	3.029	-9.370	43.422	21.939	9.539	32.412	19.393
3	4.2	97.982	30.587	-76.562	60.228	166.518	11.622	148.412	41.761	185.391
4	0	-92.948	-44.284	19.762	-43.742	-182.392	-63.891	-127.395	-104.744	-171.424
4	2.1	-28.904	-3.491	21.212	15.727	-40.270	-4.801	-10.286	-10.275	-16.035
4	4.2	35.141	37.302	22.662	75.196	101.852	54.289	106.823	84.193	139.354
5	0	-56.524	-7.055	87.810	-83.801	-79.116	36.938	-134.673	28.406	-151.786
5	2.1	16.094	9.813	3.226	-10.357	35.013	17.710	4.127	26.467	12.206
5	4.2	88.711	26.681	-81.359	63.087	149.143	-1.519	142.927	24.529	176.197
6	0	-89.306	-38.825	21.613	-48.293	-169.287	-58.762	-128.668	-95.537	-168.938
6	2.1	-36.482	-5.272	25.221	15.696	-52.213	-7.613	-17.137	-15.145	-25.146
6	4.2	16.342	28.281	28.829	79.685	64.861	43.537	94.393	65.247	118.646
7	0	-43.603	-4.981	89.542	-85.432	-60.292	50.300	-124.674	45.098	-138.624
7	2.1	-10.763	5.944	3.374	-10.723	-3.405	-6.312	-20.410	-4.013	-18.816
7	4.2	22.077	16.869	-82.794	63.985	53.482	-62.925	83.854	-53.125	100.992
8	0	-14.195	-26.509	22.382	-49.819	-59.449	9.606	-62.594	-8.105	-83.916
8	2.1	-32.584	-5.023	26.894	15.405	-47.137	-2.431	-13.921	-9.138	-21.203
8	4.2	-50.973	16.463	31.407	80.628	-34.826	-14.468	34.753	-10.172	41.510
9	0	-43.607	-4.983	89.542	-85.432	-60.301	50.296	-124.678	45.093	-138.630
9	2.1	-10.762	5.944	3.374	-10.723	-3.404	-6.312	-20.409	-4.013	-18.815
9	4.2	22.082	16.872	-82.794	63.985	53.493	-62.920	83.359	-53.118	101.000
10	0	-14.200	-26.512	22.382	-49.819	-59.458	9.602	-62.598	-8.111	-83.921
10	2.1	-32.586	-5.024	26.894	15.405	-47.141	-2.433	-13.922	-9.141	-21.205
10	4.2	-50.972	16.464	31.407	80.628	-34.824	-14.468	34.754	-10.171	41.511
11	0	-56.525	-7.055	87.810	-83.801	-79.118	36.938	-134.673	28.405	-151.787
11	2.1	16.094	9.814	3.226	-10.357	35.014	17.710	4.127	26.468	12.206
11	4.2	88.713	26.682	-81.359	63.087	149.146	-1.518	142.928	24.531	176.199
12	0	-89.307	-38.826	21.613	-48.293	-169.290	-58.763	-128.669	-95.539	-168.940
12	2.1	-36.482	-5.272	25.221	15.696	-52.215	-7.613	-17.138	-15.146	-25.147
12	4.2	16.342	28.281	28.829	79.685	64.860	43.536	94.393	65.246	118.645
13	0	-55.961	-7.825	82.620	-78.968	-79.674	32.255	-129.334	23.062	-146.606
13	2.1	21.011	11.381	3.029	-9.370	43.422	21.939	9.539	32.412	19.393
13	4.2	97.982	30.587	-76.562	60.228	166.519	11.622	148.412	41.762	185.391
14	0	-92.948	-44.284	19.762	-43.742	-182.392	-63.891	-127.396	-104.744	-171.424
14	2.1	-28.904	-3.491	21.212	15.727	-40.270	-4.801	-10.286	-10.275	-16.035
14	4.2	35.141	37.302	22.662	75.196	101.852	54.289	106.823	84.193	139.354
15	0	-53.828	-7.041	74.941	-72.048	-75.859	26.495	-120.494	17.732	-136.606
15	2.1	21.231	10.402	2.521	-6.756	42.121	21.629	12.352	31.493	21.752
15	4.2	96.290	27.845	-69.900	58.536	160.101	16.762	145.197	45.253	180.110
16	0	-108.834	-42.817	18.025	-34.676	-199.109	-79.926	-132.627	-122.324	-177.660
16	2.1	-12.548	-0.822	10.298	15.184	-16.373	-0.996	3.891	-2.881	2.250
16	4.2	83.738	41.174	2.570	65.044	166.363	77.934	140.408	116.563	182.160
17	0	48.439	6.387	72.020	-74.978	68.347	115.615	-31.383	130.506	-23.842
17	2.1	-21.899	-10.491	6.738	-2.502	-43.063	-12.971	-22.211	-22.528	-32.230
17	4.2	-92.236	-27.368	-58.544	69.974	-154.473	-141.557	-13.039	-175.562	-40.617
18	0	106.075	42.467	34.592	-17.992	195.237	130.060	77.476	174.455	119.242
18	2.1	10.277	0.483	-15.141	-10.400	13.105	-5.892	-1.151	-4.803	0.175
18	4.2	-85.522	-41.501	-64.874	-2.808	-169.028	-141.844	-79.778	-184.062	-118.892
19	0	45.266	6.608	78.970	-82.640	64.893	119.710	-41.900	134.612	-35.079
19	2.1	-23.014	-11.644	9.333	-3.008	-46.246	-11.379	-23.720	-21.700	-34.658
19	4.2	-91.294	-29.896	-60.304	76.624	-157.385	-142.468	-5.540	-178.012	-34.237
20	0	84.594	43.212	43.628	-19.721	170.652	119.763	56.414	161.857	95.340
20	2.1	21.855	2.360	-15.624	-21.406	30.001	4.045	-1.737	8.028	1.958
20	4.2	-40.885	-38.492	-74.877	-23.090	-110.650	-111.673	-59.887	-145.800	-91.424
21	0	43.852	5.774	83.842	-87.740	61.861	123.308	-48.274	137.716	-42.445
21	2.1	-26.058	-10.745	10.375	-3.243	-48.463	-13.078	-26.696	-23.237	-37.536

21	4.2	-95.968	-27.265	-63.092	81.254	-158.786	-149.464	-5.118	-184.191	-32.627
22	0	84.205	37.591	48.014	-21.335	161.191	123.798	54.449	162.512	89.695
22	2.1	12.772	1.386	-15.622	-25.473	17.544	-4.128	-13.979	-2.120	-12.463
22	4.2	-58.662	-34.819	-79.258	-29.611	-126.104	-132.054	-82.407	-166.752	-114.622
23	0	60.278	17.100	79.070	33.455	99.693	133.320	87.706	157.088	109.193
23	1.05	29.046	8.182	47.431	30.158	47.946	73.572	56.300	85.456	67.319
23	2.1	-2.186	-0.736	15.792	26.861	-3.800	13.825	24.894	13.823	25.446
24	0	-2.186	-0.736	15.792	26.861	-3.800	13.825	24.894	13.823	25.446
24	1.05	-33.418	-9.654	-15.847	23.564	-55.547	-45.922	-6.511	-57.809	-16.427
24	2.1	-64.649	-18.571	-47.486	20.268	-107.293	-105.670	-37.917	-129.442	-58.301
25	0	90.844	16.775	62.336	-81.137	135.853	144.096	0.624	171.407	20.761
25	1.05	58.195	11.855	25.475	-38.581	88.801	77.850	13.794	95.322	28.063
25	2.1	25.545	6.935	-11.385	3.975	41.750	11.605	26.965	19.237	35.365
26	0	25.545	6.935	-11.385	3.975	41.750	11.605	26.965	19.237	35.365
26	1.05	-7.105	2.016	-48.245	46.531	-5.301	-54.640	40.136	-56.848	42.667
26	2.1	-39.755	-2.904	-85.105	89.087	-52.353	-120.885	53.307	-132.933	49.968
27	0	43.850	5.773	83.842	-87.740	61.856	123.307	-48.276	137.713	-42.448
27	2.1	-26.056	-10.744	10.375	-3.243	-48.457	-13.075	-26.693	-23.233	-37.532
27	4.2	-95.961	-27.261	-63.092	81.254	-158.770	-149.457	-5.111	-184.180	-32.617
28	0	84.197	37.587	48.014	-21.335	161.176	123.791	54.442	162.501	89.685
28	2.1	12.768	1.384	-15.622	-25.473	17.536	-4.131	-13.982	-2.125	-12.468
28	4.2	-58.661	-34.819	-79.258	-29.611	-126.103	-132.054	-82.406	-166.751	-114.622
29	0	45.266	6.608	78.970	-82.640	64.893	119.710	-41.900	134.612	-35.079
29	2.1	-23.014	-11.644	9.333	-3.008	-46.246	-11.379	-23.720	-21.700	-34.658
29	4.2	-91.294	-29.896	-60.304	76.624	-157.386	-142.468	-5.540	-178.012	-34.237
30	0	84.594	43.212	43.628	-19.721	170.652	119.763	56.414	161.857	95.340
30	2.1	21.854	2.360	-15.624	-21.406	30.001	4.045	-1.737	8.028	1.958
30	4.2	-40.886	-38.493	-74.877	-23.090	-110.651	-111.674	-59.887	-145.801	-91.425
31	0	48.439	6.387	72.020	-74.978	68.346	115.615	-31.383	130.506	-23.842
31	2.1	-21.899	-10.491	6.738	-2.502	-43.063	-12.971	-22.211	-22.528	-32.230
31	4.2	-92.236	-27.368	-58.544	69.974	-154.473	-141.557	-13.039	-175.562	-40.617
32	0	106.075	42.467	34.592	-17.992	195.237	130.060	77.476	174.455	119.242
32	2.1	10.276	0.483	-15.141	-10.400	13.105	-5.892	-1.151	-4.803	0.175
32	4.2	-85.522	-41.501	-64.874	-2.808	-169.028	-141.844	-79.778	-184.062	-118.893
33	0	-3.169	-0.382	90.943	-90.974	-4.414	88.091	-93.826	91.922	-99.091
33	2.1	-0.370	-0.052	-0.093	0.082	-0.526	-0.426	-0.251	-0.518	-0.335
33	4.2	2.429	0.279	-91.129	91.138	3.361	-88.943	93.324	-92.959	98.421
34	0	-4.827	-0.639	85.457	-85.509	-6.815	81.112	-89.854	84.259	-95.256
34	2.1	0.755	0.096	-17.285	17.298	1.059	-16.606	17.977	-17.296	19.016
34	4.2	6.337	0.831	-120.027	120.105	8.934	-114.324	125.809	-118.851	133.288
35	0	-3.169	-0.382	90.943	-90.974	-4.414	88.091	-93.826	91.922	-99.091
35	2.1	-0.370	-0.052	-0.093	0.082	-0.526	-0.426	-0.251	-0.518	-0.335
35	4.2	2.429	0.279	-91.129	91.138	3.361	-88.943	93.324	-92.959	98.421
36	0	-4.828	-0.639	85.457	-85.509	-6.816	81.112	-89.854	84.258	-95.256
36	2.1	0.755	0.096	-17.285	17.298	1.059	-16.606	17.977	-17.296	19.016
36	4.2	6.337	0.831	-120.027	120.105	8.934	-114.324	125.809	-118.851	133.288
37	0	39.741	2.896	85.105	-89.087	52.322	120.872	-53.320	132.913	-49.989
37	1.05	7.107	-2.015	48.245	-46.531	5.305	54.642	-40.134	56.851	-42.664
37	2.1	-25.526	-6.925	11.385	-3.975	-41.712	-11.589	-26.949	-19.211	-35.339
38	0	-25.526	-6.925	11.385	-3.975	-41.712	-11.589	-26.949	-19.211	-35.339
38	1.05	-58.159	-11.836	-25.475	38.581	-88.728	-77.819	-13.763	-95.273	-28.014
38	2.1	-90.793	-16.746	-62.336	81.137	-135.745	-144.049	-0.577	-171.335	-20.689
39	0	64.597	18.542	47.486	-20.268	107.184	105.623	37.870	129.368	58.228
39	1.05	33.382	9.634	15.847	-23.564	55.472	45.890	6.479	57.759	16.377
39	2.1	2.166	0.725	-15.792	-26.861	3.760	-13.843	-24.912	-13.850	-25.473
40	0	2.166	0.725	-15.792	-26.861	3.759	-13.843	-24.912	-13.851	-25.473
40	1.05	-29.049	-8.184	-47.431	-30.158	-47.953	-73.575	-56.303	-85.460	-67.324
40	2.1	-60.265	-17.092	-79.070	-33.455	-99.665	-133.308	-87.694	-157.070	-109.174
60	0	23.373	6.455	65.392	-66.133	38.376	86.428	-45.097	97.270	-40.832
60	2.1	2.318	0.630	12.012	-12.196	3.789	14.098	-10.110	15.444	-9.976
60	4.2	-18.738	-5.194	-41.367	41.741	-30.797	-58.231	24.877	-66.383	20.881
61	0	13.907	2.881	77.212	-78.615	21.298	89.728	-66.099	97.490	-66.129
61	2.1	2.505	1.235	-0.174	0.264	4.983	2.081	2.519	3.226	3.687
61	4.2	-8.896	-0.411	-77.560	79.144	-11.332	-85.567	71.138	-91.038	73.502
73	0	-15.763	-2.112	139.349	-139.451	-22.296	125.162	-153.638	128.434	-164.306
73	2.1	-1.782	-0.232	20.203	-20.210	-2.509	18.599	-21.814	19.196	-23.238
73	4.2	12.199	1.649	-98.943	99.031	17.277	-87.964	110.010	-90.043	117.830

74	0	-3.254	-0.262	92.051	-92.024	-4.324	89.122	-94.953	93.072	-100.207
74	2.1	1.365	0.200	-2.680	2.696	1.958	-1.452	3.925	-1.255	4.390
74	4.2	5.985	0.661	-97.412	97.416	8.240	-92.025	102.803	-95.582	108.988
75	0	-37.443	-4.382	151.570	-151.564	-51.943	117.871	-185.263	117.072	-201.218
75	2.1	-3.006	-0.307	21.673	-21.657	-4.098	18.967	-24.363	19.407	-26.090
75	4.2	31.431	3.768	-108.224	108.249	43.746	-79.936	136.537	-78.259	149.038
76	0	0.649	0.604	96.403	-96.294	1.746	96.987	-95.710	102.286	-100.047
76	2.1	4.334	0.626	-3.414	3.429	6.202	0.487	7.330	1.361	8.546
76	4.2	8.019	0.647	-103.231	103.153	10.658	-96.014	110.370	-99.565	117.139
77	0	-39.068	9.454	155.467	-155.210	-31.755	120.306	-190.371	128.175	-198.036
77	2.1	-1.313	1.087	22.158	-22.061	0.163	20.976	-23.243	22.572	-23.859
77	4.2	36.441	-7.280	-111.150	111.087	32.081	-78.354	143.884	-83.031	150.318
78	0	13.416	8.053	97.272	-97.213	28.984	109.347	-85.138	121.296	-82.913
78	2.1	10.849	3.333	-3.899	3.885	18.353	5.866	13.649	9.398	17.571
78	4.2	8.283	-1.386	-105.070	104.982	7.722	-97.615	112.436	-102.500	118.055
79	0	-39.051	9.463	155.467	-155.210	-31.721	120.321	-190.356	128.198	-198.013
79	2.1	-1.341	1.072	22.158	-22.061	0.106	20.951	-23.268	22.533	-23.897
79	4.2	36.369	-7.319	-111.150	111.087	31.932	-78.418	143.820	-83.131	150.218
80	0	13.489	8.093	97.272	-97.213	29.136	109.412	-85.073	121.398	-82.811
80	2.1	10.876	3.348	-3.899	3.885	18.407	5.889	13.673	9.435	17.607
80	4.2	8.262	-1.397	-105.070	104.982	7.679	-97.634	112.418	-102.528	118.026
81	0	-37.443	-4.382	151.570	-151.564	-51.943	117.871	-185.263	117.072	-201.218
81	2.1	-3.009	-0.309	21.673	-21.657	-4.105	18.964	-24.366	19.402	-26.095
81	4.2	31.424	3.765	-108.224	108.249	43.733	-79.942	136.531	-78.267	149.029
82	0	0.657	0.609	96.403	-96.294	1.762	96.994	-95.703	102.296	-100.036
82	2.1	4.337	0.627	-3.414	3.429	6.208	0.489	7.333	1.364	8.550
82	4.2	8.017	0.646	-103.231	103.153	10.654	-96.015	110.369	-99.567	117.136
83	0	-15.764	-2.113	139.349	-139.451	-22.297	125.162	-153.638	128.434	-164.306
83	2.1	-1.782	-0.232	20.203	-20.210	-2.509	18.599	-21.814	19.196	-23.238
83	4.2	12.199	1.649	-98.943	99.031	17.278	-87.964	110.010	-90.042	117.831
84	0	-3.255	-0.262	92.051	-92.024	-4.325	89.122	-94.953	93.071	-100.208
84	2.1	1.365	0.200	-2.680	2.696	1.958	-1.452	3.925	-1.255	4.390
84	4.2	5.986	0.661	-97.412	97.416	8.241	-92.025	102.803	-95.581	108.989
101	0	-12.255	-0.822	79.079	-77.623	-16.021	68.049	-88.653	69.647	-94.890
101	2.1	2.490	1.233	0.258	-0.180	4.961	2.499	2.061	3.662	3.202
101	4.2	17.235	3.288	-78.563	77.262	25.943	-63.051	92.774	-62.323	101.294
105	0	-20.337	-5.391	41.657	-41.422	-33.030	23.354	-59.725	18.990	-68.243
105	2.1	2.893	0.701	-12.191	11.998	4.593	-9.587	14.602	-9.321	16.077
105	4.2	26.123	6.793	-66.039	65.417	42.217	-42.528	88.928	-37.632	100.397
109	0	-26.123	-6.793	66.039	-65.417	-42.217	42.528	-88.928	37.632	-100.397
109	2.1	-2.893	-0.701	12.191	-11.998	-4.593	9.587	-14.602	9.321	-16.077
109	4.2	20.337	5.391	-41.657	41.422	33.030	-23.354	59.725	-18.990	68.243
110	0	-17.235	-3.288	78.563	-77.262	-25.943	63.051	-92.774	62.323	-101.294
110	2.1	-2.490	-1.233	-0.258	0.180	-4.961	-2.499	-2.061	-3.662	-3.202
110	4.2	12.255	0.822	-79.079	77.623	16.022	-68.049	88.653	-69.647	94.890
112	0	8.896	0.411	77.560	-79.144	11.332	85.567	-71.138	91.038	-73.502
112	2.1	-2.505	-1.235	0.174	-0.264	-4.983	-2.081	-2.519	-3.226	-3.687
112	4.2	-13.907	-2.882	-77.212	78.615	-21.299	-89.728	66.099	-97.490	66.129
113	0	18.738	5.195	41.367	-41.741	30.797	58.231	-24.877	66.383	-20.880
113	2.1	-2.318	-0.630	-12.012	12.196	-3.789	-14.098	10.110	-15.444	9.976
113	4.2	-23.373	-6.455	-65.392	66.133	-38.376	-86.428	45.097	-97.270	40.832
119	0	-49.966	-4.025	95.415	-94.792	-66.399	50.445	-139.762	45.185	-154.532
119	2.1	11.988	4.188	-6.271	6.317	21.086	4.518	17.106	8.641	21.859
119	4.2	73.942	12.402	-107.956	107.427	108.572	-41.409	173.975	-27.902	198.250
120	0	-46.233	-22.406	-2.291	2.192	-91.329	-43.901	-39.418	-65.066	-60.359
120	2.1	-14.514	-1.650	-1.157	0.373	-20.056	-14.219	-12.689	-17.494	-15.887
120	4.2	17.206	19.106	-0.024	-1.447	51.217	15.462	14.039	30.078	28.584
121	0	45.804	3.515	94.716	-95.493	60.589	135.939	-54.270	149.760	-49.959
121	2.1	-11.689	-4.152	-6.318	6.270	-20.669	-16.838	-4.250	-21.523	-8.305
121	4.2	-69.181	-11.819	-107.351	108.034	-101.928	-169.614	45.771	-192.805	33.349
122	0	95.304	20.448	76.548	-76.762	147.082	162.321	9.011	193.327	32.351
122	2.1	-3.787	-0.849	-8.382	8.374	-5.902	-11.790	4.966	-13.312	4.282
122	4.2	-102.877	-22.146	-93.312	93.510	-158.886	-185.901	0.921	-219.951	-23.787
131	0	-49.966	-4.025	95.415	-94.792	-66.399	50.445	-139.762	45.185	-154.532
131	2.1	11.988	4.188	-6.271	6.317	21.086	4.518	17.106	8.641	21.859
131	4.2	73.941	12.402	-107.956	107.427	108.572	-41.409	173.975	-27.902	198.250
132	0	-98.634	-20.856	76.654	-76.650	-151.730	-12.116	-165.421	-36.218	-197.188

32	2.1	4.201	0.900	-8.375	8.373	6.481	-4.593	12.154	-3.815	13.770
32	4.2	107.037	22.655	-93.404	93.396	164.692	2.929	189.729	28.587	224.727
33	0	45.804	3.515	94.716	-95.493	60.589	135.939	-54.270	149.760	-49.959
33	2.1	-11.689	-4.152	-6.318	6.270	-20.669	-16.838	-4.250	-21.523	-8.305
33	4.2	-69.181	-11.819	-107.351	108.034	-101.928	-169.614	45.771	-192.805	33.349
34	0	95.304	20.449	76.548	-76.762	147.082	162.321	9.011	193.327	32.351
34	2.1	-3.787	-0.849	-8.382	8.374	-5.902	-11.790	4.966	-13.312	4.282
34	4.2	-102.878	-22.146	-93.312	93.510	-158.886	-185.902	0.920	-219.951	-23.788
47	0	-7.345	-1.677	115.679	-115.585	-11.498	109.069	-122.195	112.694	-130.133
47	1.05	0.178	-0.766	74.037	-73.399	-1.011	74.197	-73.239	77.443	-77.364
47	2.1	7.701	0.146	32.395	-31.213	9.475	39.326	-24.282	42.193	-24.595
148	0	-21.972	-2.964	117.721	-116.759	-31.109	97.946	-136.534	98.669	-147.535
148	1.05	1.848	-4.397	82.725	-80.990	-4.817	84.388	-79.327	86.032	-85.869
148	2.1	25.668	-5.829	47.730	-45.221	21.475	70.831	-22.120	73.395	-24.204
149	0	-25.421	-3.525	127.648	-126.185	-36.146	104.769	-149.064	105.118	-161.407
149	1.05	-0.529	-5.025	90.287	-87.980	-8.676	89.810	-88.456	91.079	-96.101
149	2.1	24.363	-6.526	52.925	-49.775	18.794	74.851	-27.849	77.041	-30.794
150	0	-23.950	-2.936	135.192	-133.454	-33.437	113.637	-155.009	114.955	-167.123
150	1.05	0.033	-4.420	95.750	-93.161	-7.032	95.780	-93.132	97.788	-100.569
150	2.1	24.015	-5.904	56.309	-52.868	19.373	77.923	-31.255	80.622	-34.015
151	0	-8.260	-0.714	137.355	-135.575	-11.054	129.921	-143.009	135.101	-151.476
151	1.05	12.245	-2.621	97.440	-94.784	10.499	108.460	-83.764	113.517	-88.318
151	2.1	32.749	-4.529	57.524	-53.993	32.053	86.998	-24.519	91.933	-25.160
152	0	-8.255	-0.711	137.355	-135.575	-11.043	129.926	-143.004	135.108	-151.468
152	1.05	12.245	-2.621	97.440	-94.784	10.500	108.460	-83.764	113.517	-88.318
152	2.1	32.744	-4.532	57.524	-53.993	32.042	86.994	-24.524	91.926	-25.167
153	0	-23.950	-2.936	135.192	-133.454	-33.437	113.637	-155.009	114.955	-167.123
153	1.05	0.032	-4.420	95.750	-93.161	-7.033	95.780	-93.132	97.788	-100.570
153	2.1	24.015	-5.904	56.309	-52.868	19.371	77.923	-31.255	80.621	-34.016
154	0	-25.421	-3.525	127.648	-126.185	-36.146	104.769	-149.064	105.117	-161.408
154	1.05	-0.529	-5.026	90.287	-87.980	-8.676	89.810	-88.456	91.079	-96.101
154	2.1	24.363	-6.526	52.925	-49.775	18.794	74.851	-27.849	77.041	-30.794
182	0	-21.973	-2.964	117.721	-116.759	-31.110	97.946	-136.534	98.668	-147.535
182	1.05	1.848	-4.397	82.725	-80.990	-4.818	84.388	-79.327	86.032	-85.869
182	2.1	25.668	-5.829	47.730	-45.221	21.475	70.831	-22.120	73.395	-24.204
184	0	-7.345	-1.678	115.679	-115.585	-11.498	109.068	-122.195	112.694	-130.133
184	1.05	0.178	-0.766	74.037	-73.399	-1.011	74.197	-73.239	77.443	-77.364
184	2.1	7.701	0.146	32.395	-31.213	9.475	39.326	-24.282	42.193	-24.595
389	0	39.027	10.927	23.998	-34.314	64.316	59.123	0.810	73.061	11.833
389	2.1	19.607	5.372	7.995	-11.211	32.123	25.641	6.435	32.366	12.200
389	4.2	0.186	-0.182	-8.007	11.893	-0.069	-7.840	12.060	-8.328	12.568
390	0	80.453	21.917	11.687	-2.345	131.611	84.095	70.063	110.555	95.822
390	2.1	75.859	21.711	-42.326	-3.862	125.768	25.947	64.412	48.887	89.275
390	4.2	71.266	21.504	-96.340	-5.379	119.925	-32.201	58.760	-12.781	82.729
391	0	88.235	23.983	5.659	-0.375	144.255	85.071	79.037	113.698	107.363
391	2.1	87.509	24.571	-65.608	-3.388	144.324	13.150	75.370	38.476	103.806
391	4.2	86.783	25.159	-136.875	-6.402	144.393	-58.771	71.702	-36.747	100.250
392	0	88.750	23.547	1.998	-0.354	144.174	81.873	79.521	110.119	107.650
392	2.1	101.805	26.679	-75.320	-2.540	164.852	16.304	89.084	44.616	121.035
392	4.2	114.860	29.811	-152.638	-4.727	185.529	-49.264	98.647	-20.886	134.421
393	0	141.055	37.968	2.263	-0.812	230.015	129.212	126.137	174.404	171.175
393	2.1	118.696	33.004	-78.711	-1.871	195.241	28.115	104.955	62.777	143.459
393	4.2	96.337	28.039	-159.685	-2.930	160.468	-72.982	83.773	-48.850	115.742
394	0	141.055	37.969	2.263	-0.812	230.015	129.213	126.138	174.404	171.175
394	2.1	118.695	33.003	-78.711	-1.871	195.239	28.114	104.954	62.775	143.457
394	4.2	96.335	28.038	-159.685	-2.930	160.463	-72.984	83.771	-48.854	115.739
395	0	88.750	23.546	1.998	-0.354	144.174	81.872	79.521	110.119	107.650
395	2.1	101.805	26.679	-75.320	-2.540	164.851	16.304	89.084	44.616	121.035
395	4.2	114.860	29.811	-152.638	-4.727	185.529	-49.264	98.647	-20.887	134.421
396	0	88.235	23.983	5.659	-0.375	144.255	85.071	79.037	113.698	107.363
396	2.1	87.509	24.571	-65.608	-3.388	144.324	13.150	75.370	38.476	103.806
396	4.2	86.783	25.159	-136.875	-6.402	144.393	-58.770	71.703	-36.747	100.250
397	0	80.453	21.917	11.687	-2.345	131.611	84.095	70.063	110.555	95.822
397	2.1	75.859	21.711	-42.326	-3.862	125.768	25.947	64.412	48.887	89.275
397	4.2	71.266	21.504	-96.340	-5.379	119.925	-32.201	58.760	-12.781	82.729
398	0	39.027	10.927	23.998	-34.314	64.316	59.123	0.810	73.060	11.833
398	2.1	19.607	5.372	7.995	-11.211	32.123	25.641	6.435	32.366	12.200

398	4.2	0.186	-0.182	-8.007	11.893	-0.069	-7.840	12.060	-8.328	12.568
399	0	-83.123	-20.255	57.006	-54.855	-132.155	-17.805	-129.666	-40.183	-157.638
399	2.1	8.265	1.168	11.598	-11.138	11.787	19.036	-3.699	21.592	-2.280
399	4.2	99.652	22.591	-33.810	32.580	155.729	55.877	122.268	83.367	153.077
400	0	-84.074	-22.657	1.921	-0.562	-137.140	-73.746	-76.229	-100.535	-103.142
400	2.1	-54.813	-18.515	-5.538	1.166	-95.399	-54.870	-48.165	-75.033	-67.993
400	4.2	-25.551	-14.373	-12.997	2.894	-53.658	-35.993	-20.102	-49.531	-32.845
401	0	80.820	19.969	54.711	-57.134	128.935	127.449	15.604	154.888	37.451
401	2.1	-8.811	-1.237	11.133	-11.618	-12.552	3.204	-19.548	1.659	-22.229
401	4.2	-98.442	-22.443	-32.444	33.899	-154.039	-121.042	-54.699	-151.570	-81.910
402	0	80.820	19.969	54.711	-57.134	128.935	127.449	15.604	154.888	37.451
402	2.1	-8.811	-1.237	11.133	-11.618	-12.552	3.204	-19.548	1.659	-22.229
402	4.2	-98.442	-22.443	-32.444	33.899	-154.039	-121.042	-54.699	-151.569	-81.910
403	0	-38.691	-10.857	34.189	-24.058	-63.800	-0.633	-58.880	-11.567	-72.726
403	2.1	-19.581	-5.360	11.211	-8.018	-32.074	-6.413	-25.641	-12.166	-32.356
403	4.2	-0.472	0.136	-11.768	8.021	-0.347	-12.192	7.597	-12.765	8.013
404	0	-78.817	-21.637	2.332	-11.697	-129.199	-68.602	-82.632	-93.940	-108.670
404	2.1	-69.827	-20.854	3.760	42.538	-117.159	-59.084	-20.306	-82.508	-41.792
404	4.2	-60.837	-20.072	5.188	96.772	-105.119	-49.565	42.019	-71.077	25.087
405	0	-84.811	-23.333	0.425	-5.729	-139.106	-75.905	-82.059	-103.306	-109.767
405	2.1	-72.818	-22.332	3.182	65.958	-123.114	-62.354	0.421	-87.187	-21.273
405	4.2	-60.826	-21.332	5.940	137.645	-107.122	-48.803	82.902	-71.069	67.222
406	0	-80.122	-20.673	0.651	-2.581	-129.224	-71.459	-74.691	-96.469	-99.863
406	2.1	-80.124	-22.261	2.453	75.486	-131.765	-69.658	3.375	-95.578	-18.893
406	4.2	-80.125	-23.848	4.255	153.554	-134.307	-67.858	81.441	-94.688	62.076
407	0	-80.972	-20.980	0.489	-1.638	-130.734	-72.386	-74.513	-97.724	-99.958
407	2.1	-88.773	-19.882	2.605	77.207	-138.339	-77.290	-2.689	-103.002	-24.670
407	4.2	-96.574	-18.784	4.721	156.052	-145.944	-82.195	69.136	-108.279	50.618
408	0	-80.972	-20.980	0.489	-1.638	-130.734	-72.386	-74.514	-97.724	-99.958
408	2.1	-88.777	-19.884	2.605	77.207	-138.347	-77.294	-2.692	-103.007	-24.675
408	4.2	-96.581	-18.789	4.721	156.052	-145.959	-82.202	69.129	-108.290	50.608
409	0	-80.122	-20.673	0.651	-2.581	-129.224	-71.459	-74.692	-96.469	-99.863
409	2.1	-80.124	-22.261	2.453	75.486	-131.765	-69.658	3.375	-95.578	-18.894
409	4.2	-80.125	-23.848	4.255	153.554	-134.307	-67.858	81.441	-94.688	62.076
410	0	-84.811	-23.333	0.425	-5.729	-139.106	-75.905	-82.059	-103.305	-109.767
410	2.1	-72.818	-22.332	3.182	65.958	-123.113	-62.354	0.422	-87.187	-21.272
410	4.2	-60.825	-21.331	5.940	137.645	-107.120	-48.802	82.903	-71.068	67.223
411	0	-78.817	-21.637	2.332	-11.697	-129.199	-68.602	-82.632	-93.939	-108.670
411	2.1	-69.827	-20.854	3.760	42.538	-117.159	-59.084	-20.306	-82.508	-41.792
411	4.2	-60.837	-20.072	5.188	96.772	-105.119	-49.565	42.019	-71.076	25.087
412	0	-38.691	-10.857	34.189	-24.058	-63.800	-0.633	-58.880	-11.567	-72.726
412	2.1	-19.581	-5.360	11.211	-8.018	-32.074	-6.413	-25.641	-12.166	-32.356
412	4.2	-0.472	0.136	-11.768	8.021	-0.347	-12.192	7.597	-12.765	8.013
417	0	-4.240	-0.508	122.390	-122.439	-5.901	118.574	-126.255	123.737	-133.333
417	1.05	-2.755	-0.331	78.759	-78.788	-3.834	76.280	-81.267	79.597	-85.828
417	2.1	-1.269	-0.153	35.128	-35.137	-1.768	33.986	-36.279	35.456	-38.323
418	0	-7.788	-0.853	132.153	-132.155	-10.710	125.143	-139.164	130.046	-147.477
418	1.05	-5.114	-0.560	85.743	-85.745	-7.034	81.140	-90.348	84.307	-95.756
418	2.1	-2.441	-0.268	39.334	-39.336	-3.358	37.137	-41.532	38.569	-44.034
419	0	-6.354	-0.554	139.937	-139.834	-8.512	134.218	-145.553	139.913	-153.847
419	1.05	-5.362	-0.440	90.809	-90.742	-7.138	85.984	-95.568	89.443	-101.186
419	2.1	-4.370	-0.325	41.681	-41.650	-5.763	37.749	-45.583	38.973	-48.525
420	0	7.256	0.539	142.081	-141.991	9.570	148.612	-135.460	157.143	-141.132
420	1.05	-0.817	0.728	92.308	-92.241	0.184	91.573	-92.977	96.524	-97.253
420	2.1	-8.891	0.917	42.535	-42.492	-9.202	34.534	-50.494	35.904	-53.374
421	0	7.256	0.539	142.081	-141.991	9.569	148.612	-135.460	157.143	-141.132
421	1.05	-0.809	0.732	92.308	-92.241	0.201	91.580	-92.969	96.535	-97.241
421	2.1	-8.874	0.926	42.535	-42.492	-9.168	34.549	-50.479	35.928	-53.351
422	0	-6.355	-0.555	139.937	-139.834	-8.514	134.218	-145.553	139.912	-153.848
422	1.05	-5.361	-0.439	90.809	-90.742	-7.136	85.984	-95.567	89.444	-101.185
422	2.1	-4.367	-0.324	41.681	-41.650	-5.759	37.751	-45.581	38.976	-48.522
423	0	-7.788	-0.853	132.153	-132.155	-10.711	125.143	-139.164	130.045	-147.478
423	1.05	-5.115	-0.561	85.743	-85.745	-7.034	81.140	-90.348	84.307	-95.756
423	2.1	-2.441	-0.268	39.334	-39.336	-3.358	37.137	-41.532	38.569	-44.034
424	0	-4.240	-0.508	122.390	-122.439	-5.901	118.574	-126.255	123.737	-133.333
424	1.05	-2.755	-0.331	78.759	-78.788	-3.835	76.280	-81.267	79.597	-85.828
424	2.1	-1.269	-0.153	35.128	-35.137	-1.768	33.986	-36.279	35.456	-38.323

425	0	12.564	-0.083	119.435	-119.753	14.944	130.743	-108.445	138.547	-112.601
425	1.05	-10.558	1.130	71.580	-71.952	-10.862	62.078	-81.454	64.785	-85.924
425	2.1	-33.680	2.342	23.725	-24.151	-36.668	-6.586	-54.463	-8.977	-59.247
426	0	12.563	-0.083	119.435	-119.753	14.944	130.743	-108.446	138.547	-112.601
426	1.05	-10.558	1.130	71.580	-71.952	-10.862	62.078	-81.454	64.785	-85.924
426	2.1	-33.680	2.342	23.725	-24.151	-36.668	-6.586	-54.463	-8.977	-59.247
436	0	2.325	1.063	115.494	-115.768	4.492	117.587	-113.675	124.380	-118.444
436	1.05	-3.383	0.374	73.340	-74.095	-3.462	70.296	-77.139	73.691	-81.116
436	2.1	-9.091	-0.316	31.187	-32.422	-11.415	23.005	-40.604	23.001	-43.787
437	0	13.869	1.993	116.716	-117.770	19.832	129.198	-105.287	138.370	-107.840
437	1.05	-7.670	3.697	80.960	-82.763	-3.289	74.057	-89.666	79.283	-92.625
437	2.1	-29.209	5.400	45.203	-47.756	-26.410	18.916	-74.044	20.197	-77.411
438	0	10.544	1.901	126.188	-127.655	15.694	135.678	-118.165	144.766	-121.768
438	1.05	-10.404	3.811	87.982	-90.298	-6.386	78.619	-99.661	83.859	-103.335
438	2.1	-31.352	5.722	49.777	-52.940	-28.467	21.560	-81.157	22.951	-84.902
439	0	11.591	1.901	133.552	-135.087	16.951	143.984	-124.655	153.598	-128.474
439	1.05	-10.586	3.420	93.217	-95.673	-7.230	83.690	-105.200	88.917	-109.417
439	2.1	-32.762	4.939	52.881	-56.259	-31.411	23.396	-85.745	24.237	-90.360
440	0	20.890	2.319	135.517	-137.124	28.779	154.318	-118.323	165.688	-120.585
440	1.05	-8.610	2.262	94.609	-97.135	-6.713	86.861	-104.884	91.725	-109.607
440	2.1	-38.109	2.204	53.702	-57.147	-42.204	19.404	-91.445	17.761	-98.630
441	0	20.891	2.320	135.517	-137.124	28.782	154.319	-118.322	165.690	-120.583
441	1.05	-8.616	2.258	94.609	-97.135	-6.725	86.855	-104.890	91.716	-109.616
441	2.1	-38.123	2.197	53.702	-57.147	-42.233	19.392	-91.457	17.742	-98.649
442	0	11.590	1.901	133.552	-135.087	16.949	143.984	-124.656	153.597	-128.474
442	1.05	-10.587	3.419	93.217	-95.673	-7.233	83.689	-105.201	88.916	-109.419
442	2.1	-32.764	4.938	52.881	-56.259	-31.415	23.394	-85.747	24.234	-90.363
443	0	10.544	1.901	126.188	-127.655	15.694	135.678	-118.165	144.766	-121.769
443	1.05	-10.404	3.811	87.982	-90.298	-6.387	78.619	-99.661	83.858	-103.336
443	2.1	-31.352	5.722	49.777	-52.940	-28.467	21.560	-81.157	22.951	-84.902
444	0	13.869	1.993	116.716	-117.770	19.832	129.198	-105.287	138.370	-107.840
444	1.05	-7.670	3.696	80.960	-82.763	-3.289	74.057	-89.666	79.283	-92.625
444	2.1	-29.209	5.400	45.203	-47.756	-26.410	18.916	-74.044	20.197	-77.411
445	0	2.325	1.063	115.494	-115.768	4.491	117.587	-113.675	124.380	-118.445
445	1.05	-3.383	0.374	73.340	-74.095	-3.462	70.296	-77.139	73.691	-81.116
445	2.1	-9.091	-0.316	31.187	-32.422	-11.415	23.005	-40.604	23.001	-43.787
446	0	-17.762	-0.554	119.661	-119.529	-22.200	103.675	-135.514	106.645	-144.504
446	1.05	7.433	-1.512	71.895	-71.637	6.500	78.584	-64.948	82.341	-68.368
446	2.1	32.628	-2.471	24.129	-23.746	35.199	53.494	5.618	58.037	7.769
447	0	-22.286	-9.606	-0.672	1.010	-42.114	-20.730	-19.048	-30.158	-28.392
447	1.05	-11.422	-5.008	-0.371	0.543	-21.720	-10.651	-9.737	-15.539	-14.579
447	2.1	-0.558	-0.410	-0.070	0.075	-1.326	-0.573	-0.427	-0.919	-0.766



## GESER KOLOM

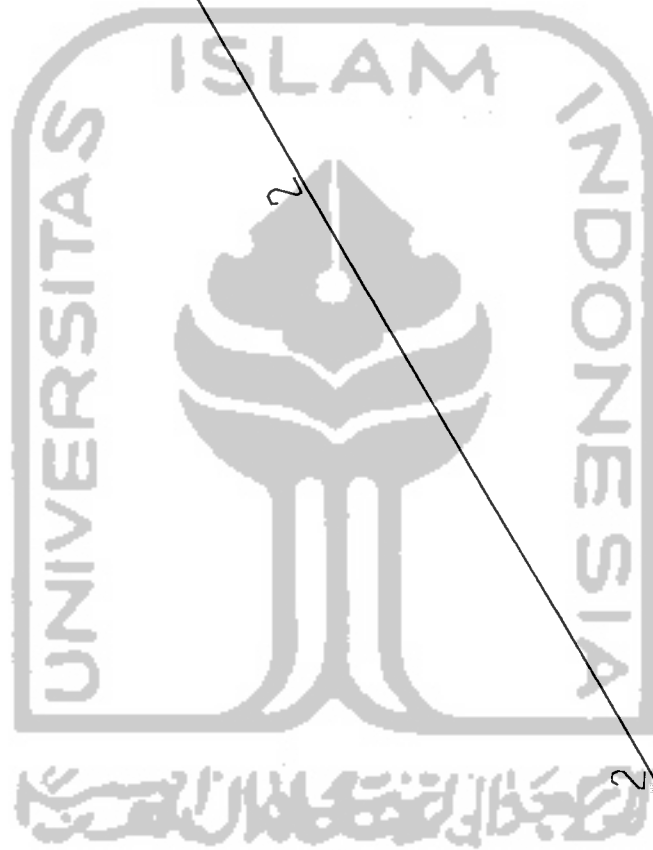
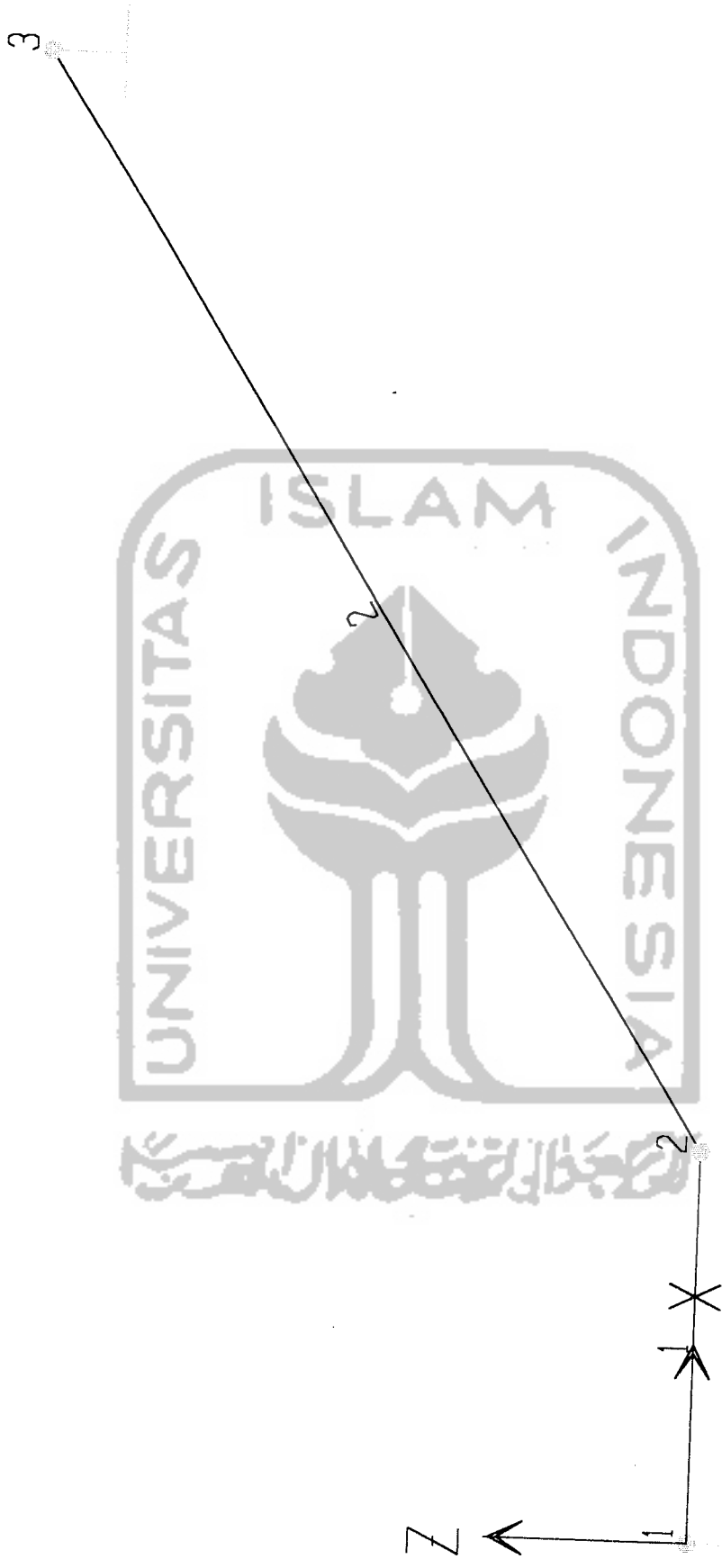
BTG	STA	VD	VL	VE KA	VE KI	1,2.VD+ 1,6.VL	0,9.VD+ VE KA	0,9.VD+ VE KI	1,05(VD+ 0,6.VL+VE KA)	1,05(VD+ 0,6.VL+VE KI)
1	0	-35.742	-8.306	34.486	-31.091	-56.181	2.318	-63.260	-6.552	-75.409
1	2.1	-35.742	-8.306	34.486	-31.091	-56.181	2.318	-63.260	-6.552	-75.409
1	4.2	-35.742	-8.306	34.486	-31.091	-56.181	2.318	-63.260	-6.552	-75.409
2	0	-45.851	-19.998	3.680	-23.743	-87.017	-37.586	-65.008	-56.878	-85.672
2	2.1	-45.851	-19.998	3.680	-23.743	-87.017	-37.586	-65.008	-56.878	-85.672
2	4.2	-45.851	-19.998	3.680	-23.743	-87.017	-37.586	-65.008	-56.878	-85.672
3	0	-36.653	-9.146	37.901	-33.142	-58.617	4.913	-66.130	-4.452	-79.047
3	2.1	-36.653	-9.146	37.901	-33.142	-58.617	4.913	-66.130	-4.452	-79.047
3	4.2	-36.653	-9.146	37.901	-33.142	-58.617	4.913	-66.130	-4.452	-79.047
4	0	-30.497	-19.425	-0.690	-28.319	-67.677	-28.138	-55.766	-44.985	-73.995
4	2.1	-30.497	-19.425	-0.690	-28.319	-67.677	-28.138	-55.766	-44.985	-73.995
4	4.2	-30.497	-19.425	-0.690	-28.319	-67.677	-28.138	-55.766	-44.985	-73.995
5	0	-34.580	-8.032	40.278	-34.973	-54.348	9.157	-66.095	0.923	-78.091
5	2.1	-34.580	-8.032	40.278	-34.973	-54.348	9.157	-66.095	0.923	-78.091
5	4.2	-34.580	-8.032	40.278	-34.973	-54.348	9.157	-66.095	0.923	-78.091
6	0	-25.154	-15.978	-1.718	-30.471	-55.749	-24.357	-53.110	-38.282	-68.472
6	2.1	-25.154	-15.978	-1.718	-30.471	-55.749	-24.357	-53.110	-38.282	-68.472
6	4.2	-25.154	-15.978	-1.718	-30.471	-55.749	-24.357	-53.110	-38.282	-68.472
7	0	-15.638	-5.202	41.032	-35.575	-27.089	26.958	-49.650	23.387	-57.052
7	2.1	-15.638	-5.202	41.032	-35.575	-27.089	26.958	-49.650	23.387	-57.052
7	4.2	-15.638	-5.202	41.032	-35.575	-27.089	26.958	-49.650	23.387	-57.052
8	0	8.756	-10.232	-2.149	-31.059	-5.863	5.732	-23.178	0.492	-29.863
8	2.1	8.756	-10.232	-2.149	-31.059	-5.863	5.732	-23.178	0.492	-29.863
8	4.2	8.756	-10.232	-2.149	-31.059	-5.863	5.732	-23.178	0.492	-29.863
9	0	-15.640	-5.203	41.032	-35.575	-27.094	26.956	-49.652	23.384	-57.055
9	2.1	-15.640	-5.203	41.032	-35.575	-27.094	26.956	-49.652	23.384	-57.055
9	4.2	-15.640	-5.203	41.032	-35.575	-27.094	26.956	-49.652	23.384	-57.055
10	0	8.755	-10.232	-2.149	-31.059	-5.865	5.731	-23.179	0.490	-29.865
10	2.1	8.755	-10.232	-2.149	-31.059	-5.865	5.731	-23.179	0.490	-29.865
10	4.2	8.755	-10.232	-2.149	-31.059	-5.865	5.731	-23.179	0.490	-29.865
11	0	-34.580	-8.033	40.278	-34.973	-54.349	9.156	-66.095	0.922	-78.092
11	2.1	-34.580	-8.033	40.278	-34.973	-54.349	9.156	-66.095	0.922	-78.092
11	4.2	-34.580	-8.033	40.278	-34.973	-54.349	9.156	-66.095	0.922	-78.092
12	0	-25.154	-15.978	-1.718	-30.471	-55.750	-24.357	-53.110	-38.282	-68.473
12	2.1	-25.154	-15.978	-1.718	-30.471	-55.750	-24.357	-53.110	-38.282	-68.473
12	4.2	-25.154	-15.978	-1.718	-30.471	-55.750	-24.357	-53.110	-38.282	-68.473
13	0	-36.653	-9.146	37.901	-33.142	-58.617	4.913	-66.130	-4.452	-79.047
13	2.1	-36.653	-9.146	37.901	-33.142	-58.617	4.913	-66.130	-4.452	-79.047
13	4.2	-36.653	-9.146	37.901	-33.142	-58.617	4.913	-66.130	-4.452	-79.047
14	0	-30.497	-19.425	-0.690	-28.319	-67.677	-28.138	-55.766	-44.985	-73.995
14	2.1	-30.497	-19.425	-0.690	-28.319	-67.677	-28.138	-55.766	-44.985	-73.995
14	4.2	-30.497	-19.425	-0.690	-28.319	-67.677	-28.138	-55.766	-44.985	-73.995
15	0	-35.743	-8.306	34.486	-31.091	-56.181	2.318	-63.260	-6.552	-75.409
15	2.1	-35.743	-8.306	34.486	-31.091	-56.181	2.318	-63.260	-6.552	-75.409
15	4.2	-35.743	-8.306	34.486	-31.091	-56.181	2.318	-63.260	-6.552	-75.409
16	0	-45.851	-19.998	3.680	-23.743	-87.017	-37.586	-65.008	-56.878	-85.672
16	2.1	-45.851	-19.998	3.680	-23.743	-87.017	-37.586	-65.008	-56.878	-85.672
16	4.2	-45.851	-19.998	3.680	-23.743	-87.017	-37.586	-65.008	-56.878	-85.672
17	0	33.494	8.037	31.087	-34.513	53.052	61.232	-4.368	72.873	3.994
17	2.1	33.494	8.037	31.087	-34.513	53.052	61.232	-4.368	72.873	3.994
17	4.2	33.494	8.037	31.087	-34.513	53.052	61.232	-4.368	72.873	3.994
18	0	45.618	19.992	23.683	-3.615	86.730	64.739	37.441	85.361	56.699
18	2.1	45.618	19.992	23.683	-3.615	86.730	64.739	37.441	85.361	56.699
18	4.2	45.618	19.992	23.683	-3.615	86.730	64.739	37.441	85.361	56.699
19	0	32.514	8.691	33.160	-37.920	52.924	62.423	-8.657	74.434	-0.200
19	2.1	32.514	8.691	33.160	-37.920	52.924	62.423	-8.657	74.434	-0.200
19	4.2	32.514	8.691	33.160	-37.920	52.924	62.423	-8.657	74.434	-0.200
20	0	29.876	19.453	28.215	0.802	66.976	55.104	27.691	73.252	44.468
20	2.1	29.876	19.453	28.215	0.802	66.976	55.104	27.691	73.252	44.468
20	4.2	29.876	19.453	28.215	0.802	66.976	55.104	27.691	73.252	44.468
21	0	33.290	7.866	34.984	-40.237	52.535	64.946	-10.275	76.644	-2.338
21	2.1	33.290	7.866	34.984	-40.237	52.535	64.946	-10.275	76.644	-2.338

21	4.2	33.290	7.866	34.984	-40.237	52.535	64.946	-10.275	76.644	-2.338
22	0	34.016	17.240	30.303	1.970	68.404	60.917	32.585	78.396	48.647
22	2.1	34.016	17.240	30.303	1.970	68.404	60.917	32.585	78.396	48.647
22	4.2	34.016	17.240	30.303	1.970	68.404	60.917	32.585	78.396	48.647
23	0	29.745	8.493	30.132	3.140	49.282	56.902	29.910	68.221	39.879
23	1.05	29.745	8.493	30.132	3.140	49.282	56.902	29.910	68.221	39.879
23	2.1	29.745	8.493	30.132	3.140	49.282	56.902	29.910	68.221	39.879
24	0	29.745	8.493	30.132	3.140	49.283	56.902	29.910	68.221	39.879
24	1.05	29.745	8.493	30.132	3.140	49.283	56.902	29.910	68.221	39.879
24	2.1	29.745	8.493	30.132	3.140	49.283	56.902	29.910	68.221	39.879
25	0	31.095	4.685	35.105	-40.529	44.811	63.091	-12.544	72.462	-6.954
25	1.05	31.095	4.685	35.105	-40.529	44.811	63.091	-12.544	72.462	-6.954
25	2.1	31.095	4.685	35.105	-40.529	44.811	63.091	-12.544	72.462	-6.954
26	0	31.095	4.685	35.105	-40.529	44.811	63.091	-12.544	72.462	-6.954
26	1.05	31.095	4.685	35.105	-40.529	44.811	63.091	-12.544	72.462	-6.954
26	2.1	31.095	4.685	35.105	-40.529	44.811	63.091	-12.544	72.462	-6.954
27	0	33.288	7.865	34.984	-40.237	52.530	64.944	-10.277	76.641	-2.341
27	2.1	33.288	7.865	34.984	-40.237	52.530	64.944	-10.277	76.641	-2.341
27	4.2	33.288	7.865	34.984	-40.237	52.530	64.944	-10.277	76.641	-2.341
28	0	34.014	17.239	30.303	1.970	68.400	60.915	32.583	78.393	48.644
28	2.1	34.014	17.239	30.303	1.970	68.400	60.915	32.583	78.393	48.644
28	4.2	34.014	17.239	30.303	1.970	68.400	60.915	32.583	78.393	48.644
29	0	32.514	8.691	33.160	-37.920	52.924	62.423	-8.657	74.434	-0.200
29	2.1	32.514	8.691	33.160	-37.920	52.924	62.423	-8.657	74.434	-0.200
29	4.2	32.514	8.691	33.160	-37.920	52.924	62.423	-8.657	74.434	-0.200
30	0	29.876	19.453	28.215	0.802	66.977	55.104	27.691	73.252	44.468
30	2.1	29.876	19.453	28.215	0.802	66.977	55.104	27.691	73.252	44.468
30	4.2	29.876	19.453	28.215	0.802	66.977	55.104	27.691	73.252	44.468
31	0	33.494	8.037	31.087	-34.513	53.052	61.231	-4.368	72.873	3.994
31	2.1	33.494	8.037	31.087	-34.513	53.052	61.231	-4.368	72.873	3.994
31	4.2	33.494	8.037	31.087	-34.513	53.052	61.231	-4.368	72.873	3.994
32	0	45.618	19.992	23.683	-3.615	86.730	64.739	37.441	85.361	56.699
32	2.1	45.618	19.992	23.683	-3.615	86.730	64.739	37.441	85.361	56.699
32	4.2	45.618	19.992	23.683	-3.615	86.730	64.739	37.441	85.361	56.699
33	0	-1.333	-0.157	43.350	-43.360	-1.851	42.151	-44.559	44.019	-47.027
33	2.1	-1.333	-0.157	43.350	-43.360	-1.851	42.151	-44.559	44.019	-47.027
33	4.2	-1.333	-0.157	43.350	-43.360	-1.851	42.151	-44.559	44.019	-47.027
34	0	-2.658	-0.350	48.925	-48.956	-3.750	46.532	-51.348	48.359	-54.415
34	2.1	-2.658	-0.350	48.925	-48.956	-3.750	46.532	-51.348	48.359	-54.415
34	4.2	-2.658	-0.350	48.925	-48.956	-3.750	46.532	-51.348	48.359	-54.415
35	0	-1.333	-0.158	43.350	-43.360	-1.851	42.151	-44.560	44.019	-47.027
35	2.1	-1.333	-0.158	43.350	-43.360	-1.851	42.151	-44.560	44.019	-47.027
35	4.2	-1.333	-0.158	43.350	-43.360	-1.851	42.151	-44.560	44.019	-47.027
36	0	-2.658	-0.350	48.925	-48.956	-3.750	46.532	-51.348	48.359	-54.415
36	2.1	-2.658	-0.350	48.925	-48.956	-3.750	46.532	-51.348	48.359	-54.415
36	4.2	-2.658	-0.350	48.925	-48.956	-3.750	46.532	-51.348	48.359	-54.415
37	0	31.079	4.677	35.105	-40.529	44.778	63.076	-12.558	72.440	-6.976
37	1.05	31.079	4.677	35.105	-40.529	44.778	63.076	-12.558	72.440	-6.976
37	2.1	31.079	4.677	35.105	-40.529	44.778	63.076	-12.558	72.440	-6.976
38	0	31.079	4.677	35.105	-40.529	44.778	63.076	-12.558	72.440	-6.976
38	1.05	31.079	4.677	35.105	-40.529	44.778	63.076	-12.558	72.440	-6.976
38	2.1	31.079	4.677	35.105	-40.529	44.778	63.076	-12.558	72.440	-6.976
39	0	29.729	8.484	30.132	3.140	49.250	56.888	29.896	68.199	39.858
39	1.05	29.729	8.484	30.132	3.140	49.250	56.888	29.896	68.199	39.858
39	2.1	29.729	8.484	30.132	3.140	49.250	56.888	29.896	68.199	39.858
40	0	29.729	8.484	30.132	3.140	49.250	56.888	29.896	68.200	39.858
40	1.05	29.729	8.484	30.132	3.140	49.250	56.888	29.896	68.200	39.858
40	2.1	29.729	8.484	30.132	3.140	49.250	56.888	29.896	68.200	39.858
60	0	10.027	2.774	25.419	-25.684	16.470	34.443	-16.661	38.965	-14.693
60	2.1	10.027	2.774	25.419	-25.684	16.470	34.443	-16.661	38.965	-14.693
60	4.2	10.027	2.774	25.419	-25.684	16.470	34.443	-16.661	38.965	-14.693
61	0	5.429	0.784	36.851	-37.562	7.769	41.737	-32.675	44.888	-33.245
61	2.1	5.429	0.784	36.851	-37.562	7.769	41.737	-32.675	44.888	-33.245
61	4.2	5.429	0.784	36.851	-37.562	7.769	41.737	-32.675	44.888	-33.245
73	0	-6.657	-0.896	56.736	-56.781	-9.422	50.744	-62.773	52.018	-67.175
73	2.1	-6.657	-0.896	56.736	-56.781	-9.422	50.744	-62.773	52.018	-67.175
73	4.2	-6.657	-0.896	56.736	-56.781	-9.422	50.744	-62.773	52.018	-67.175

74	0	-2.200	-0.220	45.110	-45.105	-2.992	43.130	-47.085	44.917	-49.808
74	2.1	-2.200	-0.220	45.110	-45.105	-2.992	43.130	-47.085	44.917	-49.808
74	4.2	-2.200	-0.220	45.110	-45.105	-2.992	43.130	-47.085	44.917	-49.808
75	0	-16.399	-1.940	61.856	-61.860	-22.783	47.097	-76.619	46.507	-83.394
75	2.1	-16.399	-1.940	61.856	-61.860	-22.783	47.097	-76.619	46.507	-83.394
75	4.2	-16.399	-1.940	61.856	-61.860	-22.783	47.097	-76.619	46.507	-83.394
76	0	-1.755	-0.010	47.532	-47.487	-2.122	45.953	-49.067	48.060	-51.711
76	2.1	-1.755	-0.010	47.532	-47.487	-2.122	45.953	-49.067	48.060	-51.711
76	4.2	-1.755	-0.010	47.532	-47.487	-2.122	45.953	-49.067	48.060	-51.711
77	0	-17.978	3.984	63.480	-63.404	-15.199	47.300	-79.585	50.287	-82.941
77	2.1	-17.978	3.984	63.480	-63.404	-15.199	47.300	-79.585	50.287	-82.941
77	4.2	-17.978	3.984	63.480	-63.404	-15.199	47.300	-79.585	50.287	-82.941
78	0	1.222	2.247	48.177	-48.142	5.062	49.277	-47.042	53.285	-47.850
78	2.1	1.222	2.247	48.177	-48.142	5.062	49.277	-47.042	53.285	-47.850
78	4.2	1.222	2.247	48.177	-48.142	5.062	49.277	-47.042	53.285	-47.850
79	0	-17.957	3.996	63.480	-63.404	-15.156	47.319	-79.566	50.316	-82.912
79	2.1	-17.957	3.996	63.480	-63.404	-15.156	47.319	-79.566	50.316	-82.912
79	4.2	-17.957	3.996	63.480	-63.404	-15.156	47.319	-79.566	50.316	-82.912
80	0	1.244	2.260	48.177	-48.142	5.109	49.297	-47.022	53.316	-47.818
80	2.1	1.244	2.260	48.177	-48.142	5.109	49.297	-47.022	53.316	-47.818
80	4.2	1.244	2.260	48.177	-48.142	5.109	49.297	-47.022	53.316	-47.818
81	0	-16.397	-1.940	61.856	-61.860	-22.780	47.098	-76.618	46.509	-83.392
81	2.1	-16.397	-1.940	61.856	-61.860	-22.780	47.098	-76.618	46.509	-83.392
81	4.2	-16.397	-1.940	61.856	-61.860	-22.780	47.098	-76.618	46.509	-83.392
82	0	-1.753	-0.009	47.532	-47.487	-2.117	45.955	-49.065	48.063	-51.708
82	2.1	-1.753	-0.009	47.532	-47.487	-2.117	45.955	-49.065	48.063	-51.708
82	4.2	-1.753	-0.009	47.532	-47.487	-2.117	45.955	-49.065	48.063	-51.708
83	0	-6.658	-0.896	56.736	-56.781	-9.423	50.744	-62.773	52.018	-67.176
83	2.1	-6.658	-0.896	56.736	-56.781	-9.423	50.744	-62.773	52.018	-67.176
83	4.2	-6.658	-0.896	56.736	-56.781	-9.423	50.744	-62.773	52.018	-67.176
84	0	-2.200	-0.220	45.110	-45.105	-2.992	43.130	-47.085	44.917	-49.809
84	2.1	-2.200	-0.220	45.110	-45.105	-2.992	43.130	-47.085	44.917	-49.809
84	4.2	-2.200	-0.220	45.110	-45.105	-2.992	43.130	-47.085	44.917	-49.809
101	0	-7.022	-0.979	37.534	-36.878	-9.992	31.214	-43.197	31.421	-46.710
101	2.1	-7.022	-0.979	37.534	-36.878	-9.992	31.214	-43.197	31.421	-46.710
101	4.2	-7.022	-0.979	37.534	-36.878	-9.992	31.214	-43.197	31.421	-46.710
105	0	-11.062	-2.901	25.642	-25.438	-17.916	15.686	-35.393	13.481	-40.152
105	2.1	-11.062	-2.901	25.642	-25.438	-17.916	15.686	-35.393	13.481	-40.152
105	4.2	-11.062	-2.901	25.642	-25.438	-17.916	15.686	-35.393	13.481	-40.152
109	0	-11.062	-2.901	25.642	-25.438	-17.916	15.686	-35.393	13.481	-40.152
109	2.1	-11.062	-2.901	25.642	-25.438	-17.916	15.686	-35.393	13.481	-40.152
109	4.2	-11.062	-2.901	25.642	-25.438	-17.916	15.686	-35.393	13.481	-40.152
110	0	-7.022	-0.979	37.534	-36.878	-9.992	31.214	-43.197	31.421	-46.711
110	2.1	-7.022	-0.979	37.534	-36.878	-9.992	31.214	-43.197	31.421	-46.711
110	4.2	-7.022	-0.979	37.534	-36.878	-9.992	31.214	-43.197	31.421	-46.711
112	0	5.429	0.784	36.851	-37.562	7.769	41.737	-32.675	44.888	-33.245
112	2.1	5.429	0.784	36.851	-37.562	7.769	41.737	-32.675	44.888	-33.245
112	4.2	5.429	0.784	36.851	-37.562	7.769	41.737	-32.675	44.888	-33.245
113	0	10.027	2.774	25.419	-25.684	16.470	34.443	-16.660	38.965	-14.693
113	2.1	10.027	2.774	25.419	-25.684	16.470	34.443	-16.660	38.965	-14.693
113	4.2	10.027	2.774	25.419	-25.684	16.470	34.443	-16.660	38.965	-14.693
119	0	-29.502	-3.911	48.422	-48.148	-41.660	21.870	-74.699	17.402	-83.996
119	2.1	-29.502	-3.911	48.422	-48.148	-41.660	21.870	-74.699	17.402	-83.996
119	4.2	-29.502	-3.911	48.422	-48.148	-41.660	21.870	-74.699	17.402	-83.996
120	0	-15.105	-9.884	-0.540	0.866	-33.940	-14.134	-12.728	-22.653	-21.177
120	2.1	-15.105	-9.884	-0.540	0.866	-33.940	-14.134	-12.728	-22.653	-21.177
120	4.2	-15.105	-9.884	-0.540	0.866	-33.940	-14.134	-12.728	-22.653	-21.177
121	0	27.377	3.651	48.111	-48.459	38.694	72.751	-23.819	81.563	-19.835
121	2.1	27.377	3.651	48.111	-48.459	38.694	72.751	-23.819	81.563	-19.835
121	4.2	27.377	3.651	48.111	-48.459	38.694	72.751	-23.819	81.563	-19.835
122	0	47.186	10.142	40.443	-40.541	72.850	82.910	1.926	98.399	13.366
122	2.1	47.186	10.142	40.443	-40.541	72.850	82.910	1.926	98.399	13.366
122	4.2	47.186	10.142	40.443	-40.541	72.850	82.910	1.926	98.399	13.366
131	0	-29.502	-3.911	48.422	-48.148	-41.660	21.870	-74.699	17.402	-83.996
131	2.1	-29.502	-3.911	48.422	-48.148	-41.660	21.870	-74.699	17.402	-83.996
131	4.2	-29.502	-3.911	48.422	-48.148	-41.660	21.870	-74.699	17.402	-83.996
132	0	-48.969	-10.360	40.490	-40.487	-75.339	-3.582	-84.559	-15.430	-100.456

132	2.1	-48.969	-10.360	40.490	-40.487	-75.339	-3.582	-84.559	-15.430	-100.456
132	4.2	-48.969	-10.360	40.490	-40.487	-75.339	-3.582	-84.559	-15.430	-100.456
133	0	27.377	3.651	48.111	-48.459	38.695	72.751	-23.819	81.563	-19.835
133	2.1	27.377	3.651	48.111	-48.459	38.695	72.751	-23.819	81.563	-19.835
133	4.2	27.377	3.651	48.111	-48.459	38.695	72.751	-23.819	81.563	-19.835
134	0	47.186	10.142	40.443	-40.541	72.850	82.910	1.926	98.399	13.366
134	2.1	47.186	10.142	40.443	-40.541	72.850	82.910	1.926	98.399	13.366
134	4.2	47.186	10.142	40.443	-40.541	72.850	82.910	1.926	98.399	13.366
147	0	-7.165	-0.868	39.659	-40.177	-9.987	33.211	-46.625	33.572	-50.256
147	1.05	-7.165	-0.868	39.659	-40.177	-9.987	33.211	-46.625	33.572	-50.256
147	2.1	-7.165	-0.868	39.659	-40.177	-9.987	33.211	-46.625	33.572	-50.256
148	0	-22.686	1.364	33.329	-34.065	-25.040	12.912	-54.483	12.035	-58.729
148	1.05	-22.686	1.364	33.329	-34.065	-25.040	12.912	-54.483	12.035	-58.729
148	2.1	-22.686	1.364	33.329	-34.065	-25.040	12.912	-54.483	12.035	-58.729
149	0	-23.707	1.429	35.582	-36.386	-26.162	14.247	-57.722	13.370	-62.197
149	1.05	-23.707	1.429	35.582	-36.386	-26.162	14.247	-57.722	13.370	-62.197
149	2.1	-23.707	1.429	35.582	-36.386	-26.162	14.247	-57.722	13.370	-62.197
150	0	-22.840	1.413	37.563	-38.374	-25.147	17.007	-58.930	16.349	-63.385
150	1.05	-22.840	1.413	37.563	-38.374	-25.147	17.007	-58.930	16.349	-63.385
150	2.1	-22.840	1.413	37.563	-38.374	-25.147	17.007	-58.930	16.349	-63.385
151	0	-19.528	1.817	38.015	-38.848	-20.527	20.440	-56.424	20.556	-60.151
151	1.05	-19.528	1.817	38.015	-38.848	-20.527	20.440	-56.424	20.556	-60.151
151	2.1	-19.528	1.817	38.015	-38.848	-20.527	20.440	-56.424	20.556	-60.151
152	0	-19.523	1.820	38.015	-38.848	-20.516	20.444	-56.419	20.563	-60.144
152	1.05	-19.523	1.820	38.015	-38.848	-20.516	20.444	-56.419	20.563	-60.144
152	2.1	-19.523	1.820	38.015	-38.848	-20.516	20.444	-56.419	20.563	-60.144
153	0	-22.840	1.413	37.563	-38.374	-25.147	17.007	-58.930	16.349	-63.384
153	1.05	-22.840	1.413	37.563	-38.374	-25.147	17.007	-58.930	16.349	-63.384
153	2.1	-22.840	1.413	37.563	-38.374	-25.147	17.007	-58.930	16.349	-63.384
154	0	-23.707	1.429	35.582	-36.386	-26.162	14.247	-57.722	13.370	-62.197
154	1.05	-23.707	1.429	35.582	-36.386	-26.162	14.247	-57.722	13.370	-62.197
154	2.1	-23.707	1.429	35.582	-36.386	-26.162	14.247	-57.722	13.370	-62.197
182	0	-22.686	1.364	33.329	-34.065	-25.040	12.912	-54.483	12.035	-58.729
182	1.05	-22.686	1.364	33.329	-34.065	-25.040	12.912	-54.483	12.035	-58.729
182	2.1	-22.686	1.364	33.329	-34.065	-25.040	12.912	-54.483	12.035	-58.729
184	0	-7.165	-0.868	39.659	-40.177	-9.987	33.211	-46.625	33.572	-50.256
184	1.05	-7.165	-0.868	39.659	-40.177	-9.987	33.211	-46.625	33.572	-50.256
184	2.1	-7.165	-0.868	39.659	-40.177	-9.987	33.211	-46.625	33.572	-50.256
389	0	9.248	2.645	7.620	-11.002	15.330	15.944	-2.679	19.378	-0.175
389	2.1	9.248	2.645	7.620	-11.002	15.330	15.944	-2.679	19.378	-0.175
389	4.2	9.248	2.645	7.620	-11.002	15.330	15.944	-2.679	19.378	-0.175
390	0	2.187	0.098	25.721	0.722	2.782	27.689	2.691	29.366	3.117
390	2.1	2.187	0.098	25.721	0.722	2.782	27.689	2.691	29.366	3.117
390	4.2	2.187	0.098	25.721	0.722	2.782	27.689	2.691	29.366	3.117
391	0	0.346	-0.280	33.937	1.435	-0.033	34.248	1.746	35.820	1.694
391	2.1	0.346	-0.280	33.937	1.435	-0.033	34.248	1.746	35.820	1.694
391	4.2	0.346	-0.280	33.937	1.435	-0.033	34.248	1.746	35.820	1.694
392	0	-6.217	-1.492	36.818	1.041	-9.846	31.223	-4.554	31.192	-6.374
392	2.1	-6.217	-1.492	36.818	1.041	-9.846	31.223	-4.554	31.192	-6.374
392	4.2	-6.217	-1.492	36.818	1.041	-9.846	31.223	-4.554	31.192	-6.374
393	0	10.647	2.364	38.559	0.504	16.559	48.141	10.087	53.156	13.198
393	2.1	10.647	2.364	38.559	0.504	16.559	48.141	10.087	53.156	13.198
393	4.2	10.647	2.364	38.559	0.504	16.559	48.141	10.087	53.156	13.198
394	0	10.648	2.364	38.559	0.504	16.560	48.142	10.087	53.157	13.199
394	2.1	10.648	2.364	38.559	0.504	16.560	48.142	10.087	53.157	13.199
394	4.2	10.648	2.364	38.559	0.504	16.560	48.142	10.087	53.157	13.199
395	0	-6.217	-1.492	36.818	1.041	-9.846	31.223	-4.554	31.192	-6.374
395	2.1	-6.217	-1.492	36.818	1.041	-9.846	31.223	-4.554	31.192	-6.374
395	4.2	-6.217	-1.492	36.818	1.041	-9.846	31.223	-4.554	31.192	-6.374
396	0	0.346	-0.280	33.937	1.435	-0.033	34.248	1.746	35.820	1.693
396	2.1	0.346	-0.280	33.937	1.435	-0.033	34.248	1.746	35.820	1.693
396	4.2	0.346	-0.280	33.937	1.435	-0.033	34.248	1.746	35.820	1.693
397	0	2.187	0.098	25.721	0.722	2.782	27.689	2.691	29.366	3.117
397	2.1	2.187	0.098	25.721	0.722	2.782	27.689	2.691	29.366	3.117
397	4.2	2.187	0.098	25.721	0.722	2.782	27.689	2.691	29.366	3.117
398	0	9.248	2.645	7.620	-11.002	15.330	15.944	-2.679	19.378	-0.175
398	2.1	9.248	2.645	7.620	-11.002	15.330	15.944	-2.679	19.378	-0.175

425	0	22.021	-1.155	45.576	-45.525	24.577	65.395	-25.706	70.249	-25.406
425	1.05	22.021	-1.155	45.576	-45.525	24.577	65.395	-25.706	70.249	-25.406
425	2.1	22.021	-1.155	45.576	-45.525	24.577	65.395	-25.706	70.249	-25.406
426	0	22.021	-1.155	45.576	-45.525	24.577	65.395	-25.706	70.249	-25.406
426	1.05	22.021	-1.155	45.576	-45.525	24.577	65.395	-25.706	70.249	-25.407
426	2.1	22.021	-1.155	45.576	-45.525	24.577	65.395	-25.706	70.249	-25.407
436	0	5.436	0.657	40.146	-39.689	7.574	45.039	-34.796	48.276	-35.551
436	1.05	5.436	0.657	40.146	-39.689	7.574	45.039	-34.796	48.276	-35.551
436	2.1	5.436	0.657	40.146	-39.689	7.574	45.039	-34.796	48.276	-35.551
437	0	20.513	-1.622	34.054	-33.340	22.020	52.516	-14.878	56.273	-14.499
437	1.05	20.513	-1.622	34.054	-33.340	22.020	52.516	-14.878	56.273	-14.499
437	2.1	20.513	-1.622	34.054	-33.340	22.020	52.516	-14.878	56.273	-14.499
438	0	19.951	-1.820	36.386	-35.578	21.029	54.342	-17.623	58.007	-17.555
438	1.05	19.951	-1.820	36.386	-35.578	21.029	54.342	-17.623	58.007	-17.555
438	2.1	19.951	-1.820	36.386	-35.578	21.029	54.342	-17.623	58.007	-17.555
439	0	21.120	-1.447	38.415	-37.537	23.029	57.423	-18.529	61.600	-18.149
439	1.05	21.120	-1.447	38.415	-37.537	23.029	57.423	-18.529	61.600	-18.149
439	2.1	21.120	-1.447	38.415	-37.537	23.029	57.423	-18.529	61.600	-18.149
440	0	28.095	0.055	38.959	-38.084	33.801	64.245	-12.799	70.441	-10.455
440	1.05	28.095	0.055	38.959	-38.084	33.801	64.245	-12.799	70.441	-10.455
440	2.1	28.095	0.055	38.959	-38.084	33.801	64.245	-12.799	70.441	-10.455
441	0	28.102	0.059	38.959	-38.084	33.816	64.251	-12.793	70.451	-10.445
441	1.05	28.102	0.059	38.959	-38.084	33.816	64.251	-12.793	70.451	-10.445
441	2.1	28.102	0.059	38.959	-38.084	33.816	64.251	-12.793	70.451	-10.445
442	0	21.121	-1.447	38.415	-37.537	23.031	57.424	-18.528	61.601	-18.148
442	1.05	21.121	-1.447	38.415	-37.537	23.031	57.424	-18.528	61.601	-18.148
442	2.1	21.121	-1.447	38.415	-37.537	23.031	57.424	-18.528	61.601	-18.148
443	0	19.951	-1.820	36.386	-35.578	21.029	54.342	-17.623	58.007	-17.555
443	1.05	19.951	-1.820	36.386	-35.578	21.029	54.342	-17.623	58.007	-17.555
443	2.1	19.951	-1.820	36.386	-35.578	21.029	54.342	-17.623	58.007	-17.555
444	0	20.513	-1.622	34.054	-33.340	22.020	52.516	-14.878	56.273	-14.499
444	1.05	20.513	-1.622	34.054	-33.340	22.020	52.516	-14.878	56.273	-14.499
444	2.1	20.513	-1.622	34.054	-33.340	22.020	52.516	-14.878	56.273	-14.499
445	0	5.436	0.657	40.146	-39.689	7.574	45.039	-34.796	48.276	-35.551
445	1.05	5.436	0.657	40.146	-39.689	7.574	45.039	-34.796	48.276	-35.551
445	2.1	5.436	0.657	40.146	-39.689	7.574	45.039	-34.796	48.276	-35.551
446	0	-23.995	0.913	45.491	-45.611	-27.333	23.896	-67.206	23.147	-72.511
446	1.05	-23.995	0.913	45.491	-45.611	-27.333	23.896	-67.206	23.147	-72.511
446	2.1	-23.995	0.913	45.491	-45.611	-27.333	23.896	-67.206	23.147	-72.511
447	0	-10.347	-4.379	-0.287	0.445	-19.423	-9.599	-8.867	-13.924	-13.155
447	1.05	-10.347	-4.379	-0.287	0.445	-19.423	-9.599	-8.867	-13.924	-13.155
447	2.1	-10.347	-4.379	-0.287	0.445	-19.423	-9.599	-8.867	-13.924	-13.155



UII DJOGJA

LOAD COMBINATION MULTIPLIERS

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
COMB1	ADD	DL	1.2000	STATIC (DEAD)	COMB1
		LL	1.6000	STATIC (LIVE)	

UII DJOGJA

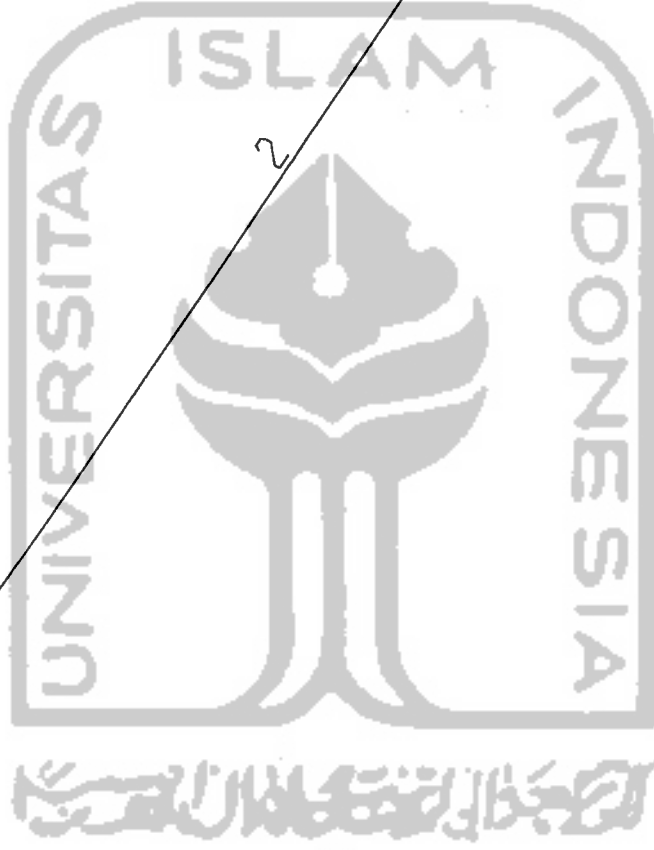
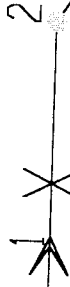
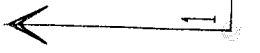
JOINT REACTIONS

JOINT	LOAD	F1	F2	F3	M1	M2	M3
1	DL	-53.0885	0.0000	-4.3120	0.0000	0.6484	0.0000
1	LL	-14.2037	0.0000	-8.080E-03	0.0000	-0.1276	0.0000
1	COMB1	-86.4322	0.0000	-5.1873	0.0000	0.5739	0.0000
3	DL	53.0885	0.0000	59.0565	0.0000	14.9860	0.0000
3	LL	14.2037	0.0000	15.3426	0.0000	3.7382	0.0000
3	COMB1	86.4322	0.0000	95.4160	0.0000	23.9644	0.0000

UII DJOGJA

FRAME ELEMENT FORCES

FRAME	LOAD	LOC	P	V2	V3	T	M2	M3
1	DL	0.00	53.09	4.31	0.00	0.00	0.00	6.484E-01
		3.0E-01	53.09	6.24	0.00	0.00	0.00	-9.349E-01
		6.0E-01	53.09	8.18	0.00	0.00	0.00	-3.10
		9.0E-01	53.09	10.11	0.00	0.00	0.00	-5.84
		1.20	53.09	12.04	0.00	0.00	0.00	-9.16
1	LL	0.00	14.20	8.080E-03	0.00	0.00	0.00	-1.276E-01
		3.0E-01	14.20	9.081E-01	0.00	0.00	0.00	-2.651E-01
		6.0E-01	14.20	1.81	0.00	0.00	0.00	-6.725E-01
		9.0E-01	14.20	2.71	0.00	0.00	0.00	-1.35
		1.20	14.20	3.61	0.00	0.00	0.00	-2.30
1	COMB1	0.00	86.43	5.19	0.00	0.00	0.00	5.739E-01
		3.0E-01	86.43	8.95	0.00	0.00	0.00	-1.55
		6.0E-01	86.43	12.70	0.00	0.00	0.00	-4.79
		9.0E-01	86.43	16.46	0.00	0.00	0.00	-9.17
		1.20	86.43	20.22	0.00	0.00	0.00	-14.67
2	DL	0.00	51.25	-18.34	0.00	0.00	0.00	-9.16
		1.96	63.87	1.49	0.00	0.00	0.00	7.32
		3.91	76.49	21.32	0.00	0.00	0.00	-14.99
2	LL	0.00	13.92	-4.58	0.00	0.00	0.00	-2.30
		1.96	17.07	3.684E-01	0.00	0.00	0.00	1.82
		3.91	20.22	5.32	0.00	0.00	0.00	-3.74
2	COMB1	0.00	83.78	-29.34	0.00	0.00	0.00	-14.67
		1.96	103.96	2.38	0.00	0.00	0.00	11.70
		3.91	124.15	34.10	0.00	0.00	0.00	-23.96





UII DJOGJA

LOAD COMBINATION MULTIPLIERS

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
COMB1	ADD	DL	1.2000	STATIC (DEAD)	COMB1
		LL	1.6000	STATIC (LIVE)	

UII DJOGJA

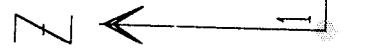
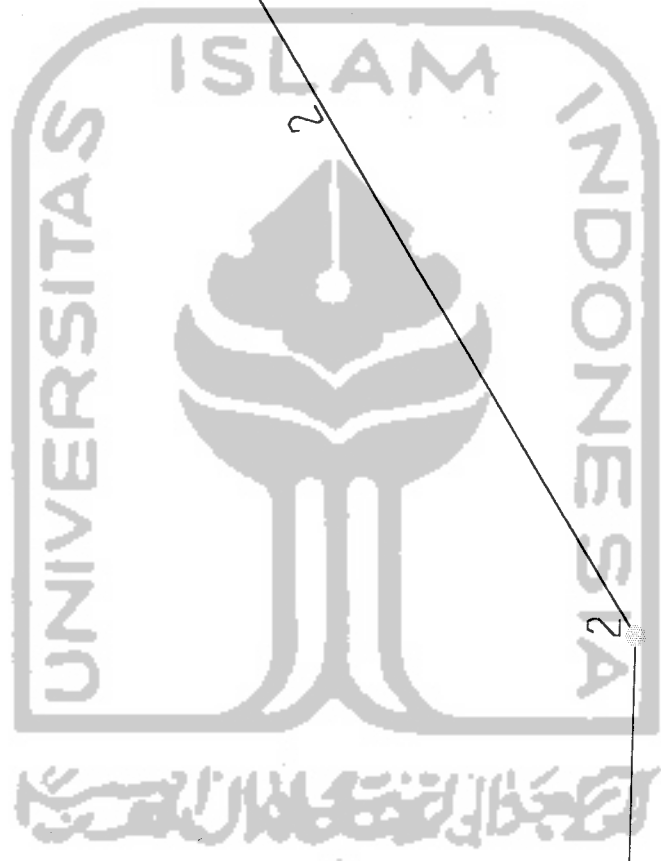
JOINT REACTIONS

JOINT	LOAD	F1	F2	F3	M1	M2	M3
1	DL	73.4754	0.0000	-10.9399	0.0000	2.6475	0.0000
1	LL	19.2892	0.0000	-1.6614	0.0000	0.3710	0.0000
1	COMB1	119.0332	0.0000	-15.7861	0.0000	3.7707	0.0000
3	DL	-73.4754	0.0000	65.6844	0.0000	0.0000	0.0000
3	LL	-19.2892	0.0000	16.9960	0.0000	0.0000	0.0000
3	COMB1	-119.0332	0.0000	106.0148	0.0000	0.0000	0.0000

UII DJOGJA

FRAME ELEMENT FORCES

FRAME	LOAD	LOC	P	V2	V3	T	M2	M3
1	DL	0.00	-73.48	10.94	0.00	0.00	0.00	2.65
		3.0E-01	-73.48	12.87	0.00	0.00	0.00	-9.242E-01
		6.0E-01	-73.48	14.80	0.00	0.00	0.00	-5.08
		9.0E-01	-73.48	16.74	0.00	0.00	0.00	-9.81
		1.20	-73.48	18.67	0.00	0.00	0.00	-15.12
1	LL	0.00	-19.29	1.66	0.00	0.00	0.00	3.710E-01
		3.0E-01	-19.29	2.56	0.00	0.00	0.00	-2.624E-01
		6.0E-01	-19.29	3.46	0.00	0.00	0.00	-1.17
		9.0E-01	-19.29	4.36	0.00	0.00	0.00	-2.34
		1.20	-19.29	5.26	0.00	0.00	0.00	-3.78
1	COMB1	0.00	-119.03	15.79	0.00	0.00	0.00	3.77
		3.0E-01	-119.03	19.54	0.00	0.00	0.00	-1.53
		6.0E-01	-119.03	23.30	0.00	0.00	0.00	-7.96
		9.0E-01	-119.03	27.06	0.00	0.00	0.00	-15.51
		1.20	-119.03	30.82	0.00	0.00	0.00	-24.19
2	DL	0.00	-72.01	-23.70	0.00	0.00	0.00	-15.12
		1.96	-84.63	-3.86	0.00	0.00	0.00	11.84
		3.91	-97.25	15.97	0.00	0.00	0.00	0.00
2	LL	0.00	-19.10	-5.92	0.00	0.00	0.00	-3.78
		1.96	-22.25	-9.671E-01	0.00	0.00	0.00	2.95
		3.91	-25.40	3.98	0.00	0.00	0.00	0.00
2	COMB1	0.00	-116.97	-37.90	0.00	0.00	0.00	-24.19
		1.96	-137.16	-6.19	0.00	0.30	0.00	18.92
		3.91	-157.34	25.53	0.00	0.00	0.00	0.00



3

2

2

UII DJOGJA

LOAD COMBINATION MULTIPLIERS

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
COMB1	ADD	DL	1.2000	STATIC (DEAD)	COMB1
		LL	1.6000	STATIC (LIVE)	

UII DJOGJA

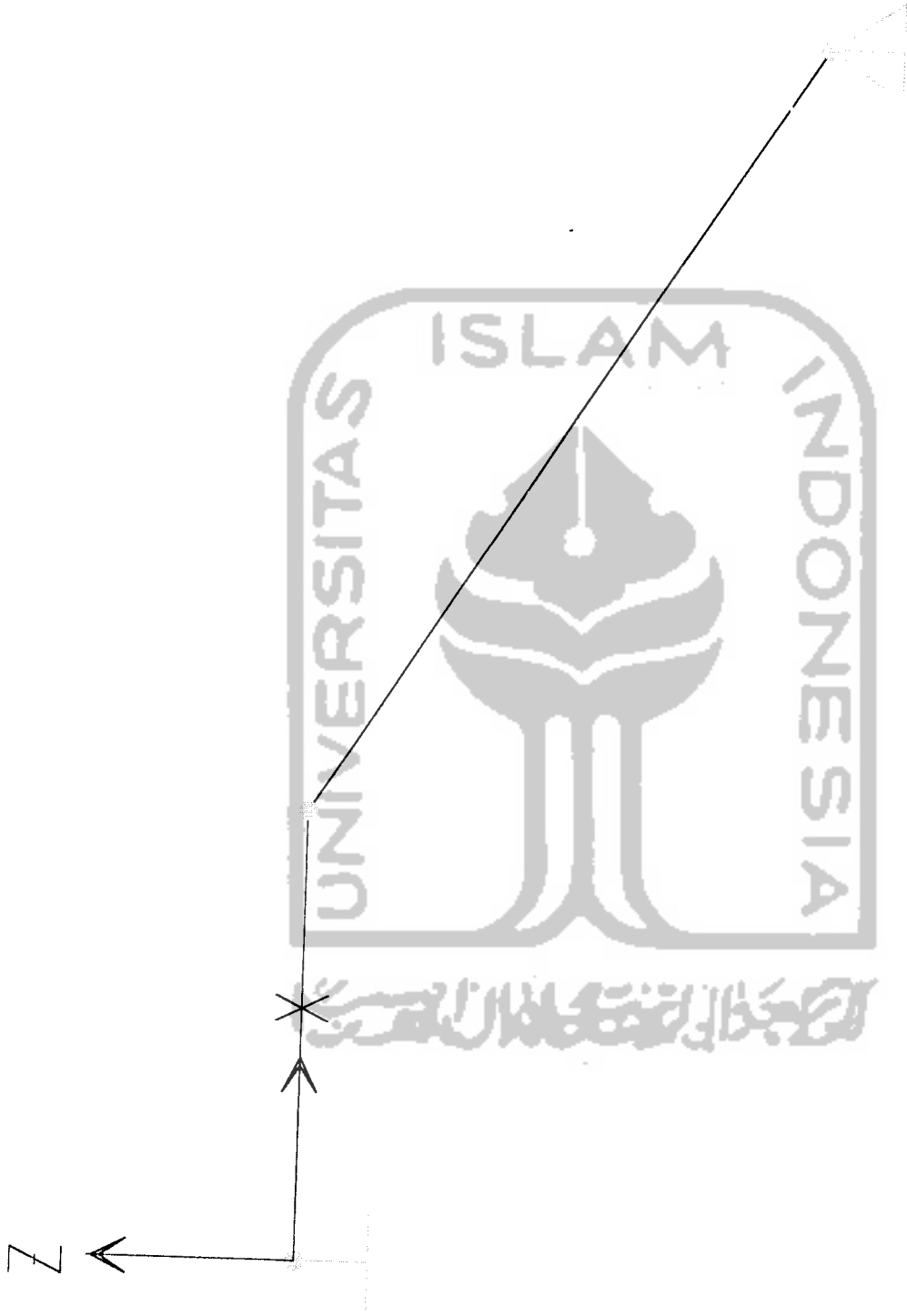
JOINT REACTIONS

JOINT	LOAD	F1	F2	F3	M1	M2	M3
1	DL	-41.0225	0.0000	1.4257	0.0000	0.1480	0.0000
1	LL	-16.2888	0.0000	1.6552	0.0000	-0.3310	0.0000
1	COMB1	-75.2991	0.0000	4.3590	0.0000	-0.4320	0.0000
3	DL	41.0225	0.0000	46.2319	0.0000	11.9974	0.0000
3	LL	16.2888	0.0000	17.7352	0.0000	4.3818	0.0000
3	COMB1	75.2991	0.0000	83.8545	0.0000	21.4077	0.0000

UII DJOGJA

FRAME ELEMENT FORCES

FRAME	LOAD	LOC	P	V2	V3	T	M2	M3
1	DL	0.00	41.02	-1.43	0.00	0.00	0.00	1.480E-01
		4.8E-01	41.02	1.18	0.00	0.00	0.00	2.070E-01
		9.5E-01	41.02	3.73	0.00	0.00	0.00	-9.705E-01
		1.43	41.02	6.38	0.00	0.00	0.00	-3.38
		1.90	41.02	8.99	0.00	0.00	0.00	-7.03
1	LL	0.00	16.29	-1.66	0.00	0.00	0.00	-3.810E-01
		4.8E-01	16.29	-2.302E-01	0.00	0.00	0.00	6.678E-02
		9.5E-01	16.29	1.19	0.00	0.00	0.00	-1.623E-01
		1.43	16.29	2.62	0.00	0.00	0.00	-1.07
		1.90	16.29	4.04	0.00	0.00	0.00	-2.65
1	COMB1	0.00	75.29	-4.36	0.00	0.00	0.00	-4.320E-01
		4.8E-01	75.29	1.04	0.00	0.00	0.00	3.552E-01
		9.5E-01	75.29	6.45	0.00	0.00	0.00	-1.42
		1.43	75.29	11.85	0.00	0.00	0.00	-5.77
		1.90	75.29	17.26	0.00	0.00	0.00	-12.68
2	DL	0.00	39.43	-14.44	0.00	0.00	0.00	-7.03
		1.96	49.43	1.27	0.00	0.00	0.00	5.85
		3.91	59.43	16.98	0.00	0.00	0.00	-12.00
2	LL	0.00	15.91	-5.33	0.00	0.00	0.00	-2.65
		1.96	19.59	4.424E-01	0.00	0.00	0.00	2.13
		3.91	23.26	6.22	0.00	0.00	0.00	-4.38
2	COMB1	0.00	72.78	-25.86	0.00	0.00	0.00	-12.68
		1.96	90.66	2.23	0.00	0.00	0.00	10.43
		3.91	108.54	30.32	0.00	0.00	0.00	-21.41



UII DJOGJA

LOAD COMBINATION MULTIPLIERS

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
COMB1	ADD	DL	1.2000	STATIC(DEAD)	COMB1
		LL	1.6000	STATIC(DEAD)	

UII DJOGJA

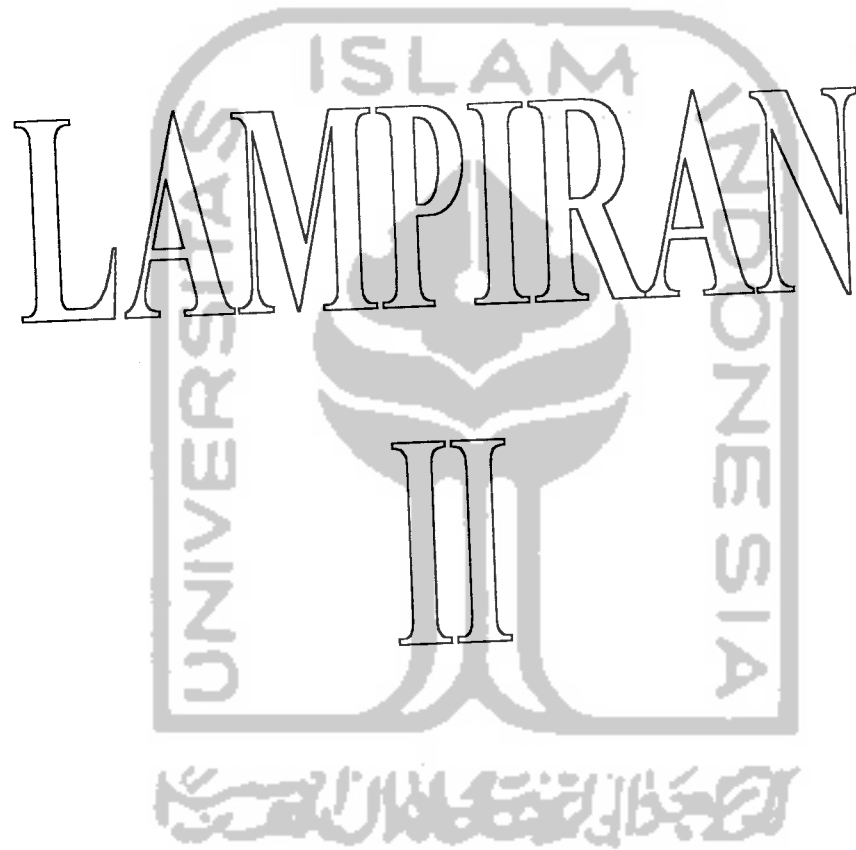
JOINT REACTIONS

JOINT	LOAD	F1	F2	F3	M1	M2	M3
1	DL	54.1251	0.0000	-1.9338	0.0000	2.0991	0.0000
1	LL	21.0742	0.0000	0.4282	0.0000	0.3316	0.0000
1	COMB1	98.6688	0.0000	-1.6354	0.0000	3.0496	0.0000
3	DL	-54.1251	0.0000	49.5913	0.0000	0.0000	0.0000
3	LL	-21.0742	0.0000	18.9621	0.0000	0.0000	0.0000
3	COMB1	-98.6688	0.0000	89.8490	0.0000	0.0000	0.0000

UII DJOGJA

FRAME ELEMENT FORCES

FRAME	LOAD	LOC	P	V2	V3	M1	M2	M3
1	DL	0.00	-54.13	1.93	0.00	0.00	0.00	2.10
		4.8E-01	-54.13	4.54	0.00	0.00	0.00	5.624E-01
		9.5E-01	-54.13	7.14	0.00	0.00	0.00	-2.21
		1.43	-54.13	9.74	0.00	0.00	0.00	-6.22
		1.90	-54.13	12.35	0.00	0.00	0.00	-11.47
1	LL	0.00	-21.07	-4.282E-01	0.00	0.00	0.00	3.216E-01
		4.8E-01	-21.07	9.968E-01	0.00	0.00	0.00	1.966E-01
		9.5E-01	-21.07	2.42	0.00	0.00	0.00	-6.153E-01
		1.43	-21.07	3.85	0.00	0.00	0.00	-2.10
		1.90	-21.07	5.27	0.00	0.00	0.00	-4.27
1	COMB1	0.00	-98.67	1.64	0.00	0.00	0.00	3.05
		4.8E-01	-98.67	7.04	0.00	0.00	0.00	9.894E-01
		9.5E-01	-98.67	12.44	0.00	0.00	0.00	-3.64
		1.43	-98.67	17.85	0.00	0.00	0.00	-10.83
		1.90	-98.67	23.25	0.00	0.00	0.00	-20.59
2	DL	0.00	-52.29	-18.64	0.00	0.00	0.00	-11.47
		1.96	-62.29	-2.93	0.00	0.00	0.00	9.63
		3.91	-72.29	12.78	0.00	0.00	0.00	0.00
2	LL	0.00	-20.61	-6.87	0.00	0.00	0.00	-4.27
		1.96	-24.28	-1.09	0.00	0.00	0.00	3.51
		3.91	-27.96	4.68	0.00	0.00	0.00	0.00
2	COMB1	0.00	-95.73	-33.36	0.00	0.00	0.00	-20.59
		1.96	-113.60	-5.26	0.00	0.00	0.00	17.18
		3.91	-131.48	22.83	0.00	0.00	0.00	0.00



# LAMPIRAN

III

LAPORAN  
PENYELIDIKAN TANAH

UNTUK  
RENCANA GEDUNG FAKULTAS HUKUM  
UNIVERSITAS GADJAH MADA

BANGUNAN 3 LANTAI SELUAS 3000 M<sup>2</sup>

LOKASI :  
FAKULTAS HUKUM UGM  
BULAKSUMUR YOGYAKARTA



Dilaksanakan oleh

Laboratorium Mekanika Tanah  
PT MUMPUNI

Jln. Flamboyan CT.X/47 Karangasem Yogyakarta,  
Telp.(0274)584032 Fax.(0274)589683

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YOGYAKARTA  
2002

# LAPORAN PENYELIDIKAN TANAH

UNTUK  
PERENCANAAN GEDUNG FAKULTAS HUKUM UGM  
BANGUNAN 3 LANTAI SELUAS 3000 M2  
LOKASI : FAKULTAS HUKUM UGM BULAKSUMUR YOGYAKARTA

## I. PENDAHULUAN

### A. Umum

Serangkaian penyelidikan tanah telah dilaksanakan oleh Laboratorium Mekanika Tanah, PT Mumpuni di lokasi rencana pembangunan gedung Fakultas Hukum UGM, Bulaksumur, Yogyakarta.

Penyelidikan tanah yang dilakukan bertujuan untuk mengetahui keadaan, jenis, sifat, dan parameter-parameter teknis tanah dasar bangunan. Data yang didapatkan akan digunakan untuk analisis penentuan kedalaman dan daya dukung fondasi serta perkiraan penurunan yang mungkin terjadi.

Pekerjaan penyelidikan tanah yang terdiri atas pekerjaan lapangan laboratorium dilaksanakan dalam bulan Februari 2002. Lokasi yang diselidiki terletak di dalam kompleks Fakultas Hukum UGM, Bulaksumur Yogyakarta.

### B. Lingkup Pekerjaan

Pekerjaan penyelidikan tanah yang telah dilaksanakan meliputi :

- 1) 11 (sebelas) titik pengujian sondir berkapasitas 2,5 ton. Pengujian dilakukan sampai kedalaman lapisan tanah dengan nilai perlawanan konis mencapai  $200 \text{ kg/cm}^2$ .
- 2) 3 (tiga) titik pemboran dengan alat bor tangan sampai kedalaman sekitar 2,5 meter.
- 3) Pengujian laboratorium atas sampel tanah yang diambil untuk menentukan parameter kuat geser tanah yang meliputi berat jenis, berat volume, sudut gesek dalam, dan kohesi tanah.



## II. HASIL PENYELIDIKAN DAN ANALISIS

### A. Kondisi Lapisan Tanah

Sebagaimana umumnya daerah Sleman, Yogyakarta, kondisi tanah di lokasi Fakultas Hukum UGM yang diselidiki ini berupa endapan vulkanik, dengan kondisi yang agak bervariasi, baik jenis tanah, ketebalan, maupun kepadatannya. Secara umum deposit di lahan ini tersusun atas lapisan-lapisan pasir tipis yang berganti-ganti kondisi lapisan dan variasi campurannya. Hampir seluruh deposit berupa pasir, dari ukuran halus sampai kasar dan sebagian kecil lapisan mengandung kerikil dan fraksi halus yang non-plastis sebagai pengikat.

Lapisan bagian atas cukup bervariasi, dari yang relatif lepas sampai agak padat. Lapisan bagian atas yang kurang padat ini mempunyai ketebalan 0,70 m sampai 1,00 m dengan nilai perlawanan konis mencapai 11 kg/cm<sup>2</sup>. Lapisan di bawahnya pada kedalaman 1,50 m sampai 1,80 m kondisinya lebih baik dengan nilai perlawanan konis sekitar 140 kg/cm<sup>2</sup> sampai 200 kg/cm<sup>2</sup>.

Hasil uji laboratorium menunjukkan bahwa tanah setempat mempunyai parameter kuat geser yang berupa kohesi yang sangat rendah dan sudut gesek dalam sekitar 30°.

### B. Fondasi

Mengingat tanah cukup keras tidak terlalu dalam, yaitu sekitar 1,80 m sampai 2,00 m, maka fondasi footplat dapat digunakan untuk bangunan yang lahannya diselidiki ini. Dasar fondasi diletakkan pada kedalaman -2,00 m di bawah muka tanah setempat. Kapasitas daya dukung tanah dasar yang diijinkan ( $q_a$ ) untuk bangunan 3 lantai dapat diambil sebesar :

$$q_a = 6,0 - 7,0 \text{ kg/cm}^2$$

Jika pada saat penggalian ternyata pada elevasi tersebut belum mencapai tanah keras, maka disarankan untuk meneruskan sedikit sampai lapisan tanah keras.

### III. PENUTUP

Dalam pelaksanaan pekerjaan nanti, apabila dijumpai hal-hal yang menyimpang, meragukan, atau tak terduga, maka perlu diadakan penyesuaian dengan keadaan tersebut. Keputusan hendaknya diambil oleh pihak-pihak yang menguasai permasalahan.

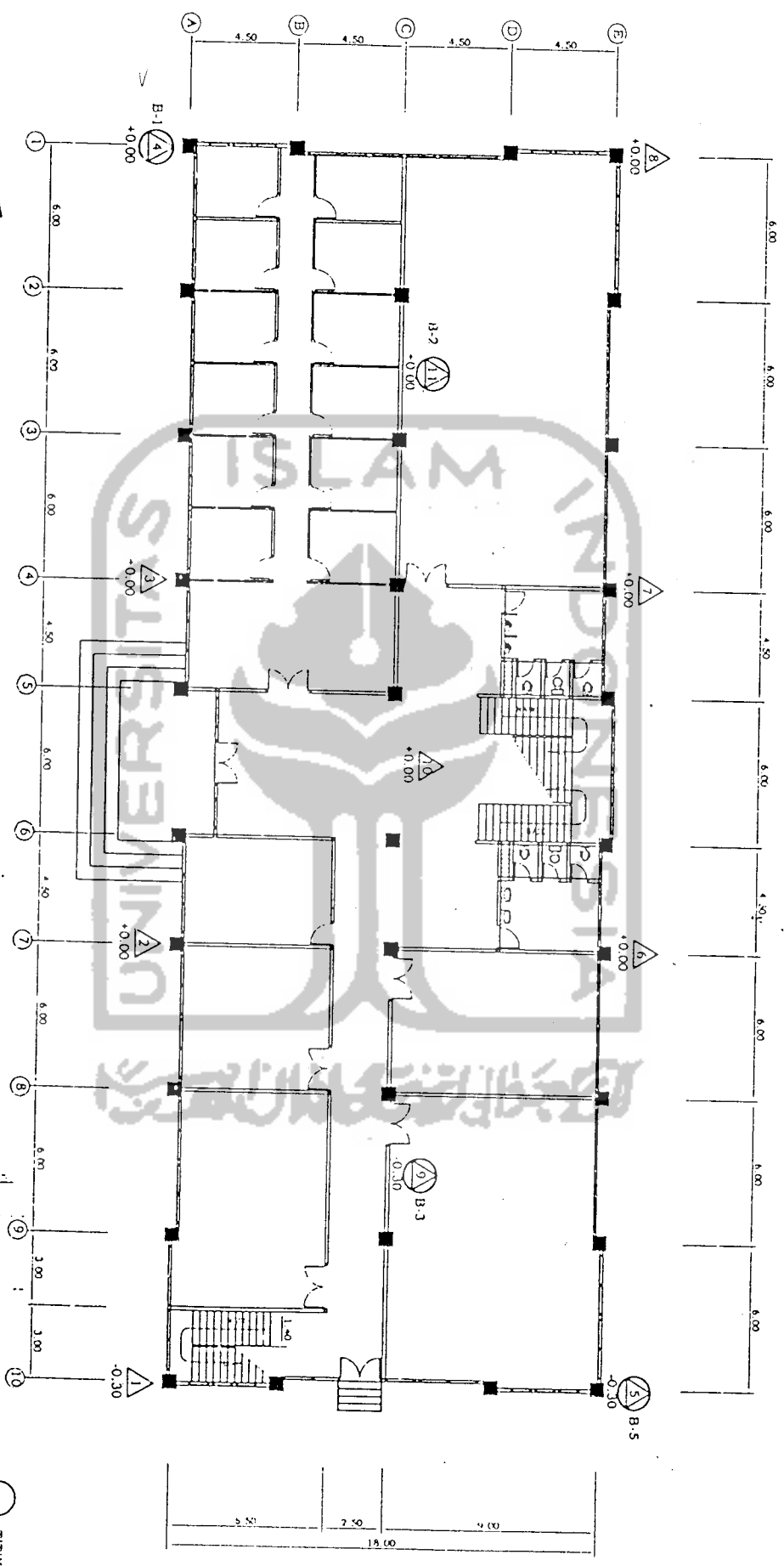
Yogyakarta, Februari 2002



UTARA

DENAH TITIK PENYELIDIKAN TANAH  
RENCANA GEDUNG FAKULTAS HUKUM UGM 3 LANTAI

○ TITIK BOR  
△ TITIK SONDIR



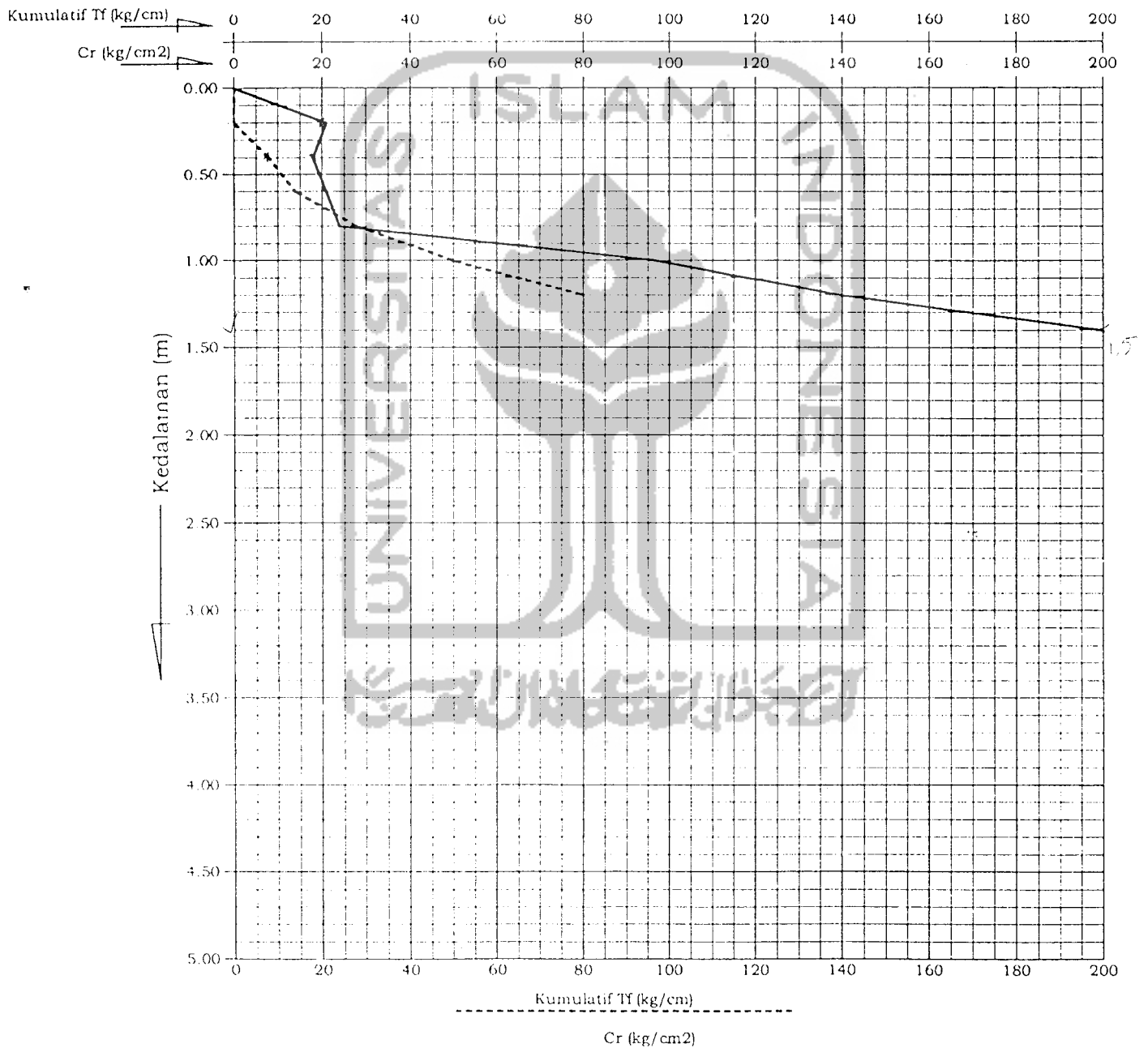
## HASIL PENGUJIAN LABORATORIUM

NO. TTK BOR	KEDALAMAN (m)	BERAT/VOLUME (kg/dm <sup>3</sup> )	$\sigma$ (kg/cm <sup>2</sup> )	$\phi$ (°)	c (kg/cm <sup>2</sup> )
B-1	-0,70	1,66	0,543	29,915	0,131
	-0,90	1,78	1,958	31,183	0,513
B-2	-0,70	1,64	0,435	31,117	0,115
	-1,30	1,79	1,867	32,142	0,449
B-3	-0,70	1,65	0,765	29,292	0,234
	-1,10	1,81	2,355	31,692	0,619
B-4	-0,70	1,63	0,338	29,817	0,102
	-1,30	1,79	2,513	31,183	0,635



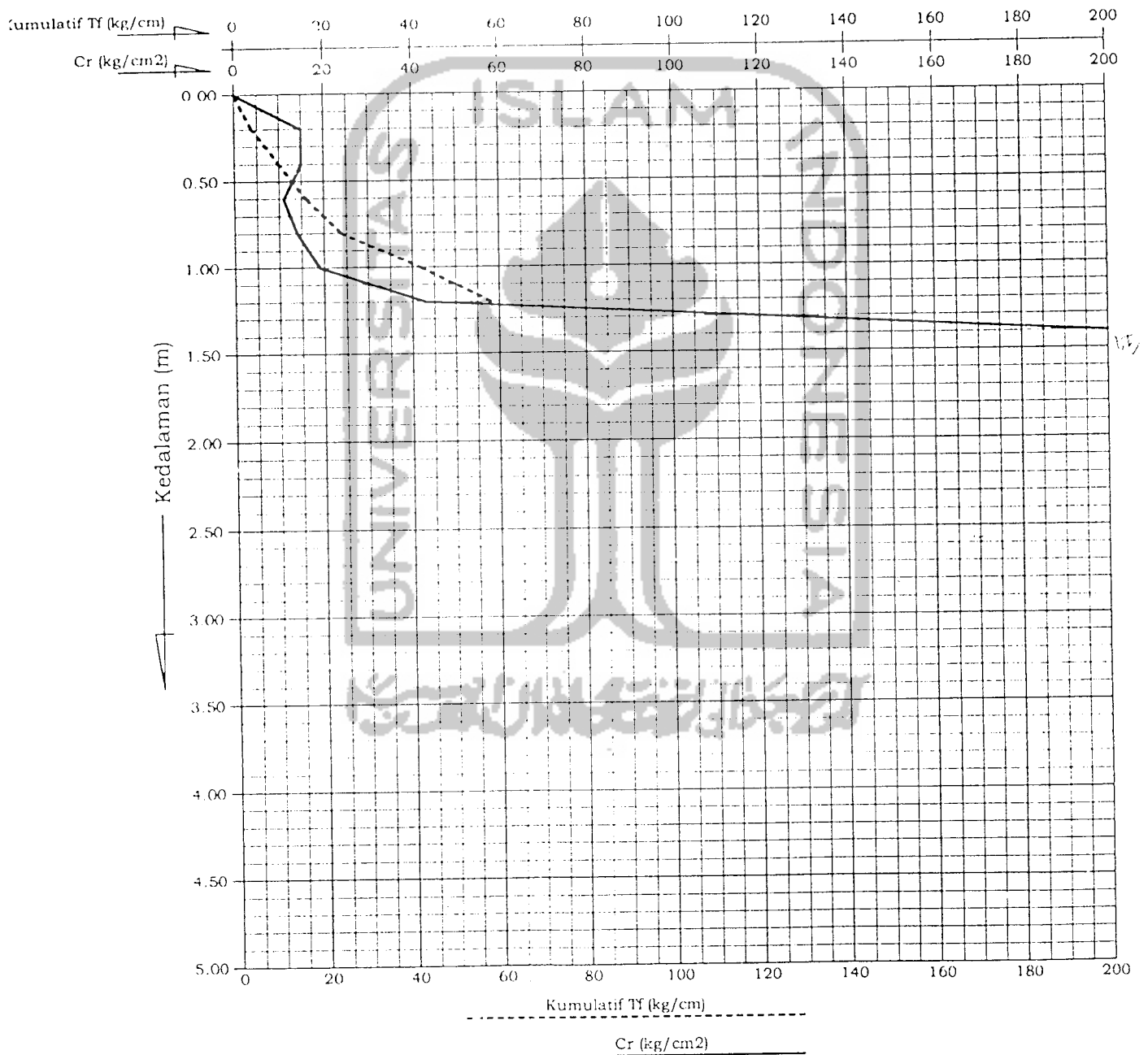
## GRAFIK HASIL PENYONDIRAN

PROYEK	Gedung Fakultas Hukum UGm 3 Lantai	Nomor titik	6
LOKASI	Bulaksumur Yogyakarta	Muka tanah	+0.00
HARI/TGL.	Selasa, 19 Februari 2002	Muka air tanah	-8.00



## GRAFIK HASIL PENYONDIRAN

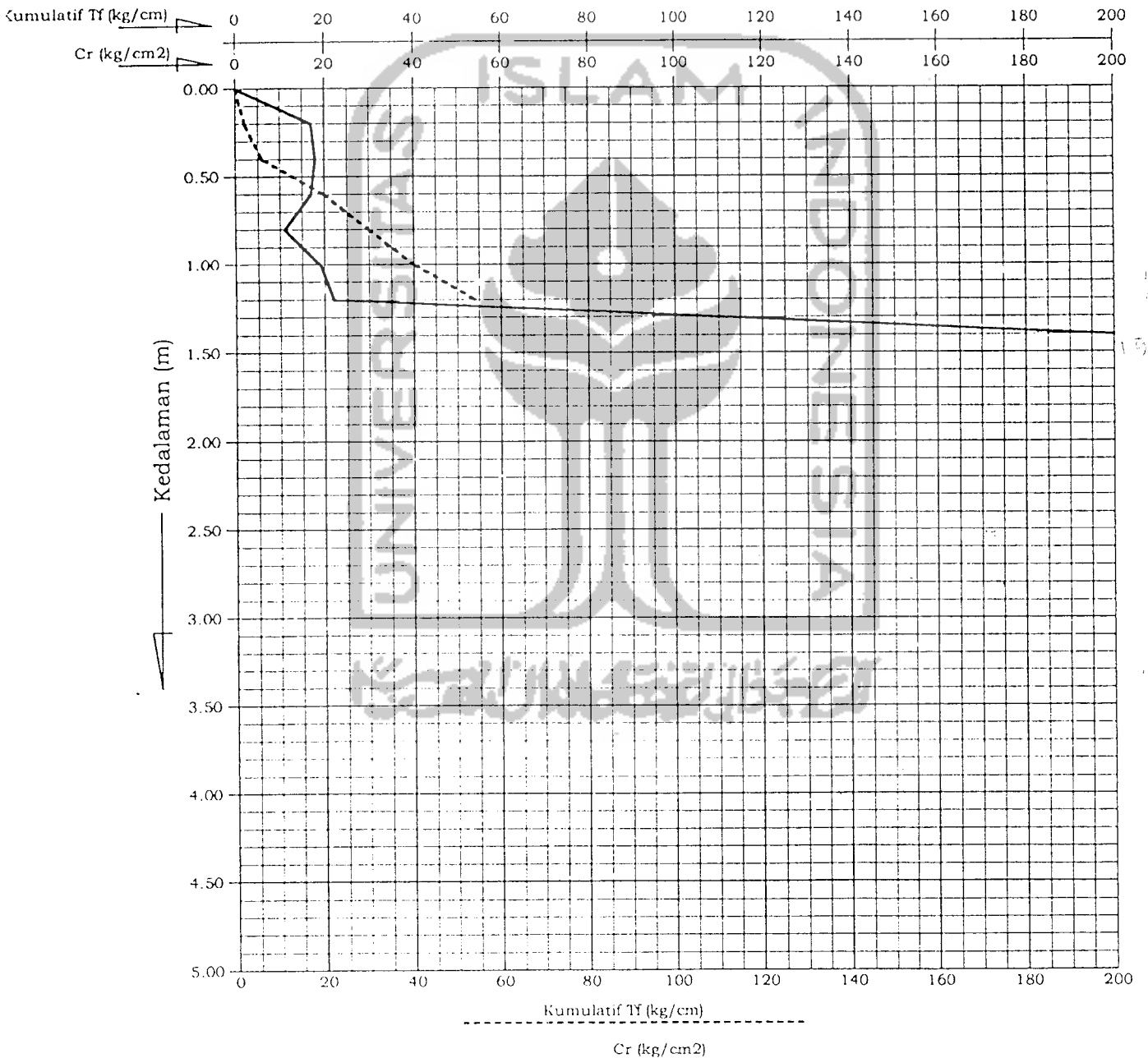
PROYEK	Gedung Fakultas Hukum UGm 3 Lantai	Nomor titik	7
LOKASI	Bulaksumur Yogyakarta	Muka tanah	+0.00
HARI/TGL.	Selasa, 19 Februari 2002	Muka air tanah	-8.00



Laboratorium Mekanika Tanah  
PT MUMPUNI  
Jln. Flamboyan CT.X/47 Karangasem Yogyakarta, Telp.(0274)584032 Fax.(0274)589683

## GRAFIK HASIL PENYONDIRAN

PROYEK	Gedung Fakultas Hukum UGm 3 Lantai	Nomor titik	8
LOKASI	Bulaksumur Yogyakarta	Muka tanah	+0.00
HARI/TGL.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

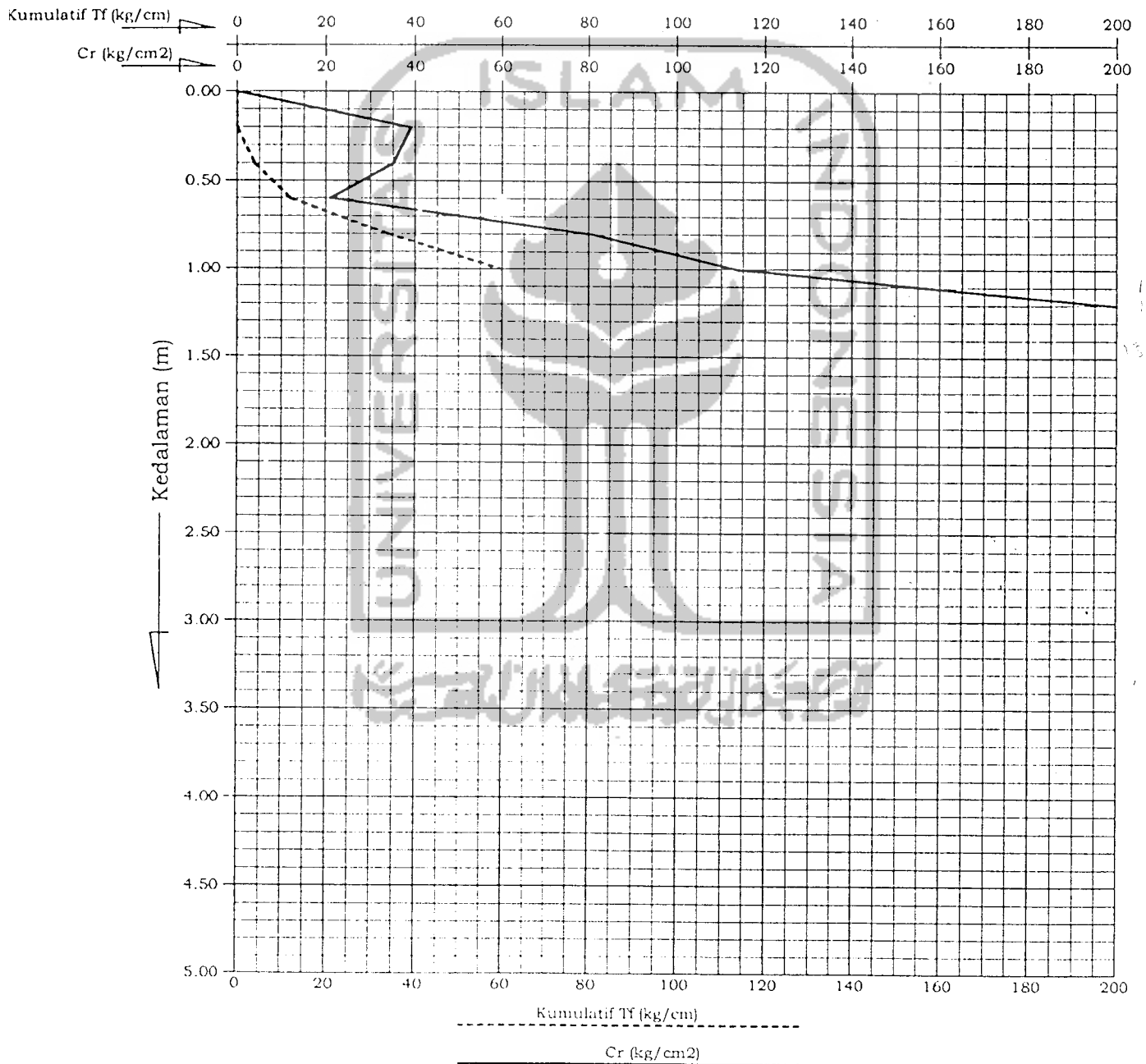


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GRAFIK HASIL PENYONDIRAN

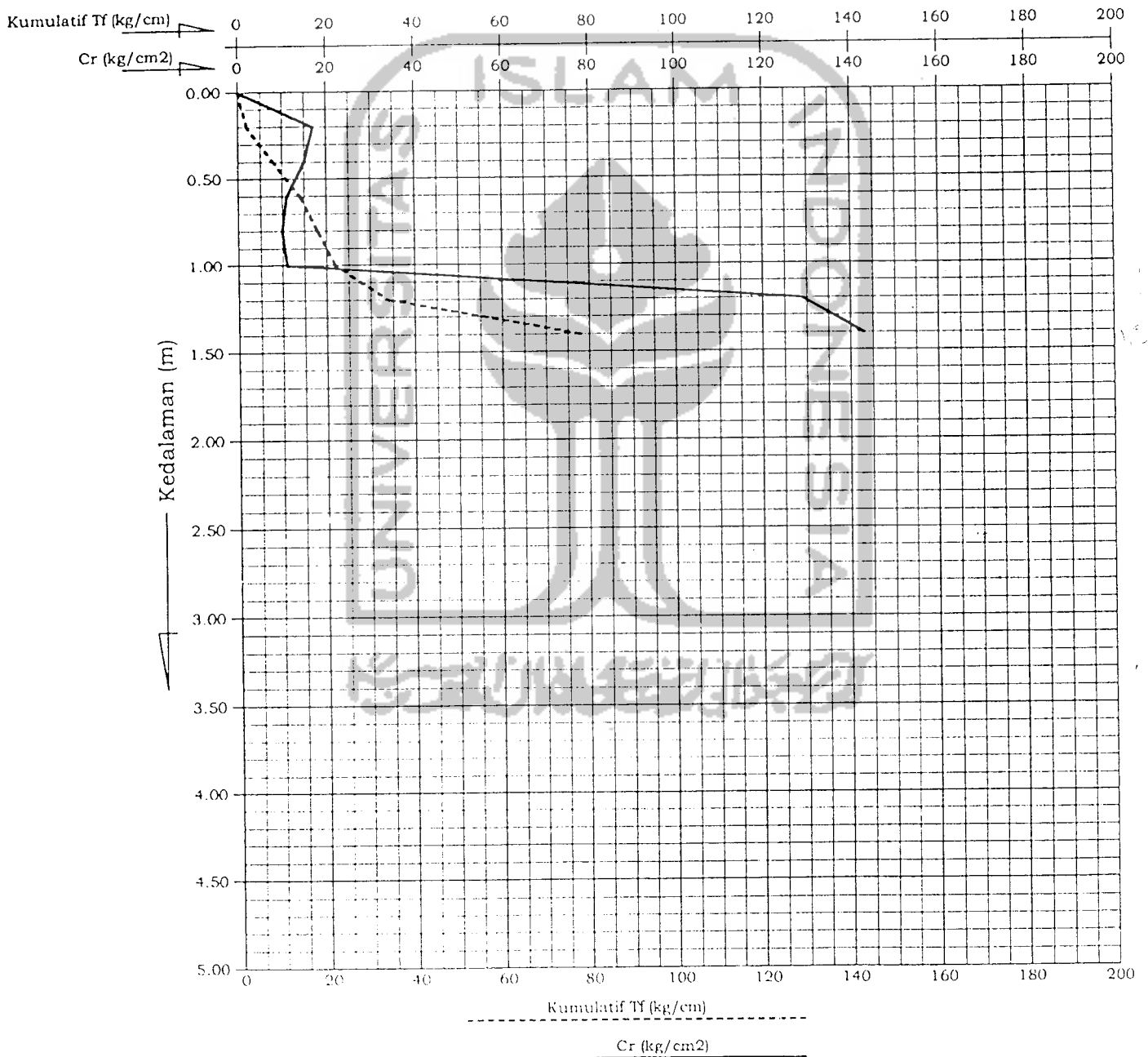
PROYEK	Gedung Fakultas Hukum UGm 3 Lantai	Nomor titik	9
LOKASI	Bulaksumur Yogyakarta	Muka tanah	+0.00
HARI/TGL.	Selasa, 19 Februari 2002	Muka air tanah	-8.00





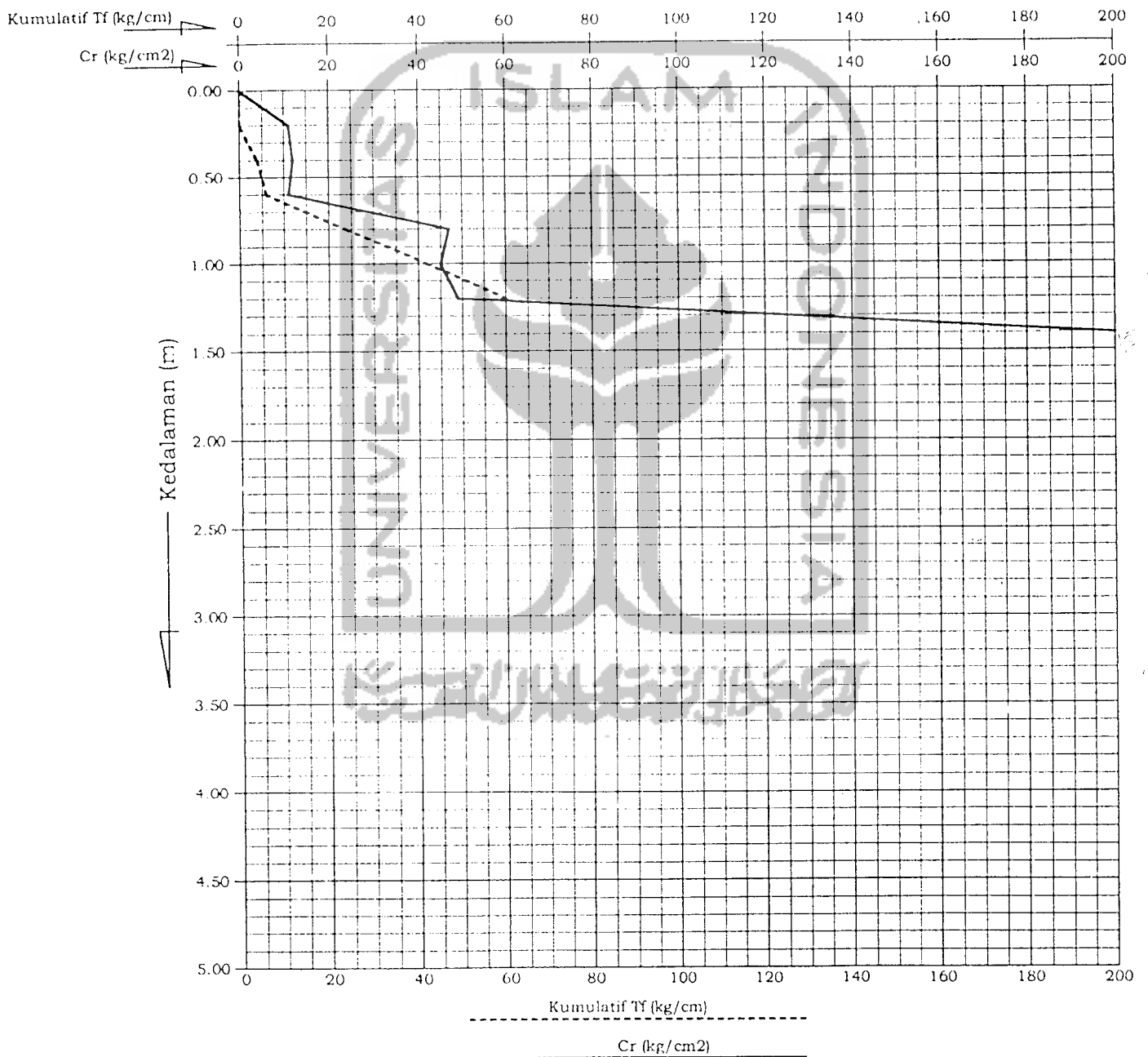
## GRAFIK HASIL PENYONDIRAN

PROYEK	Gedung Fakultas Hukum UGm 3 Lantai	Nomor titik	10
LOKASI	Bulaksumur Yogyakarta	Muka tanah	+0.00
HARI/TGL.	Selasa, 19 Februari 2002	Muka air tanah	-8.00



## GRAFIK HASIL PENYONDIRAN

PROYEK	Gedung Fakultas Hukum UGm 3 Lantai	Nomor titik	11
LOKASI	Bulaksumur Yogyakarta	Muka tanah	+0.00
HARI/TGL.	Selasa, 19 Februari 2002	Muka air tanah	-8.00



TABEL HASIL PENYONDIRAN

Proyek	Gedung Fakultas Hukum UGM 3 Lantai	Nomor titik	5
Lokasi	Bulaksumur, Yogyakarta	Muka tanah	0.00
Hari/Tgl.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

Kedalaman (m)	Cr (kg/cm <sup>2</sup> )	Cr + Lf (kg/cm <sup>2</sup> )	Lf (kg/cm <sup>2</sup> )	Tf (kg/cm)	Kumulatif Tf (kg/cm)
(1)	(2)	(3)	(4) = (3-2)x10/100	(5) = (4)x20	(6)
0.00	0	0	0.00	0.00	0.00
0.20	11	11	0.00	0.00	0.00
0.40	12	14	0.20	4.00	4.00
0.60	14	18	0.40	8.00	12.00
0.80	31	39	0.80	16.00	28.00
1.00	29	35	0.60	12.00	40.00
1.20	89	97	0.80	16.00	56.00
1.40	135	147	1.20	24.00	80.00
1.60	200				
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					
3.20					
3.40					
3.60					
3.80					
4.00					
4.20					
4.40					
4.60					
4.80					
5.00					
5.20					
5.40					
5.60					
5.80					
6.00					

TABEL HASIL PENYONDIRAN

Proyek	Gedung Fakultas Hukum UGM 3 Lantai	Nomor titik	6
Lokasi	Bulaksumur, Yogyakarta	Muka tanah	0.00
Hari/Tgl.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

Kedalaman (m)	Cr (kg/cm <sup>2</sup> )	Cr + Lf (kg/cm <sup>2</sup> )	Lf (kg/cm <sup>2</sup> )	Tf (kg/cm)	Kumulatif Tf (kg/cm)
(1)	(2)	(3)	(4) = (3-2)x10/100	(5) = (4)x20	(6)
0.00	0	0	0.00	0.00	0.00
0.20	21	21 ✓	0.00	0.00	0.00
0.40	18 ✓	22	0.40	8.00	8.00
0.60	21	24	0.30	6.00	14.00
0.80	24	31	0.70	14.00	28.00
1.00	97	108	1.10	22.00	50.00
1.20	140	155	1.50	30.00	80.00
1.40	200				
1.60					
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					
3.20					
3.40					
3.60					
3.80					
4.00					
4.20					
4.40					
4.60					
4.80					
5.00					
5.20					
5.40					
5.60					
5.80					
6.00					

TABEL HASIL PENYONDIRAN

Proyek	Gedung Fakultas Hukum UGM 3 Lantai	Nomor titik	7
Lokasi	Bulaksumur, Yogyakarta	Muka tanah	0.00
Hari/Tgl.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

Kedalaman (m)	Cr (kg/cm <sup>2</sup> )	Cr + Lf (kg/cm <sup>2</sup> )	Lf (kg/cm <sup>2</sup> )	Tf (kg/cm)	Kumulatif Tf (kg/cm)
(1)	(2)	(3)	(4) = (3-2)x10/100	(5) = (4)x20	(6)
0.00	0	0	0.00	0.00	0.00
0.20	15	17	0.20	4.00	4.00
0.40	15	18	0.30	6.00	10.00
0.60	11	14	0.30	6.00	16.00
0.80	14	18	0.40	8.00	24.00
1.00	19	28	0.90	18.00	42.00
1.20	43	51	0.80	16.00	58.00
1.40	200				
1.60					
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					
3.20					
3.40					
3.60					
3.80					
4.00					
4.20					
4.40					
4.60					
4.80					
5.00					
5.20					
5.40					
5.60					
5.80					
6.00					

TABEL HASIL PENYONDIRAN			
Proyek	Gedung Fakultas Hukum UGM 3 Lantai	Nomor titik	8
Lokasi	Bulaksumur, Yogyakarta	Muka tanah	0.00
Hari/Tgl.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

Kedalaman (m)	Cr (kg/cm <sup>2</sup> )	Cr + Lf (kg/cm <sup>2</sup> )	Lf (kg/cm <sup>2</sup> )	Tf (kg/cm)	Kumulatif Tf (kg/cm)
(1)	(2)	(3)	(4) = (3-2)x10/100	(5) = (4)x20	(6)
0.00	0	0	0.00	0.00	0.00
0.20	17	18	0.10	2.00	2.00
0.40	18	20	0.20	4.00	6.00
0.60	17	24	0.70	14.00	20.00
0.80	11	16	0.50	10.00	30.00
1.00	19	24	0.50	10.00	40.00
1.20	22	29	0.70	14.00	54.00
1.40	200				
1.60					
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					
3.20					
3.40					
3.60					
3.80					
4.00					
4.20					
4.40					
4.60					
4.80					
5.00					
5.20					
5.40					
5.60					
5.80					
6.00					

## TABEL HASIL PENYONDIRAN

Proyek	Gedung Fakultas Hukum UGM 3 Lantai	Nomor titik	9
Lokasi	Bulaksumur, Yogyakarta	Muka tanah	0.00
Hari/Tgl.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

Kedalaman (m)	Cr (kg/cm <sup>2</sup> )	Cr + Lf (kg/cm <sup>2</sup> )	Lf (kg/cm <sup>2</sup> )	Tf (kg/cm)	Kumulatif Tf (kg/cm)
(1)	(2)	(3)	(4) = (3-2)×10/100	(5) = (4)×20	(6)
0.00	0	0	0.00	0.00	0.00
0.20	39	39	0.00	0.00	0.00
0.40	35	37	0.20	4.00	4.00
0.60	21	25	0.40	8.00	12.00
0.80	81	92	1.10	22.00	34.00
1.00	114	127	1.30	26.00	60.00
1.20	200				
1.40					
1.60					
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					
3.20					
3.40					
3.60					
3.80					
4.00					
4.20					
4.40					
4.60					
4.80					
5.00					
5.20					
5.40					
5.60					
5.80					
6.00					

TABEL HASIL PENYONDIRAN

Proyek	Gedung Fakultas Hukum UGM 3 Lantai	Nomor titik	10
Lokasi	Bulaksumur, Yogyakarta	Muka tanah	0.00
Hari/Tgl.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

Kedalaman (m)	Cr (kg/cm <sup>2</sup> )	Cr + Lf (kg/cm <sup>2</sup> )	Lf (kg/cm <sup>2</sup> )	Tf (kg/cm)	Kumulatif Tf (kg/cm)
(1)	(2)	(3)	(4) = (3-2)x10/100	(5) = (4)x20	(6)
0.00	0	0	0.00	0.00	0.00
0.20	17	18	0.10	2.00	2.00
0.40	15	18	0.30	6.00	8.00
0.60	11	14	0.30	6.00	14.00
0.80	10	12	0.20	4.00	18.00
1.00	11	13	0.20	4.00	22.00
1.20	129	135	0.60	12.00	34.00
1.40	143	165	2.20	44.00	78.00
1.60	200				
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					
3.20					
3.40					
3.60					
3.80					
4.00					
4.20					
4.40					
4.60					
4.80					
5.00					
5.20					
5.40					
5.60					
5.80					
6.00					



TABEL HASIL PENYONDIRAN

Proyek	Gedung Fakultas Hukum UGM 3 Lantai	Nomor titik	11
Lokasi	Bulaksumur, Yogyakarta	Muka tanah	0.00
Hari/Tgl.	Selasa, 19 Februari 2002	Muka air tanah	-8.00

Kedalaman (m)	Cr (kg/cm <sup>2</sup> )	Cr + Lf (kg/cm <sup>2</sup> )	Lf (kg/cm <sup>2</sup> )	Tf (kg/cm)	Kumulatif Tf (kg/cm)
(1)	(2)	(3)	(4) = (3-2)x10/100	(5) = (4)x20	(6)
0.00	0	0	0.00	0.00	0.00
0.20	11	11	0.00	0.00	0.00
0.40	12	14	0.20	4.00	4.00
0.60	11	12	0.10	2.00	6.00
0.80	47	56	0.90	18.00	24.00
1.00	45	54	0.90	18.00	42.00
1.20	49	58	0.90	18.00	60.00
1.40	200				
1.60					
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					
3.20					
3.40					
3.60					
3.80					
4.00					
4.20					
4.40					
4.60					
4.80					
5.00					
5.20					
5.40					
5.60					
5.80					
6.00					

# LAMPIRAN

## III

UNIVERSITAS ISLAM INDONESIA  
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### Perencanaan dimensi batang kuda-kuda KK-1

Batang Tarik	Batang Atas	Batang Bawah	Batang Vertikal	Batang Diagonal
Gaya Tarik Maks. (kg)	42.449	1639.128	1061.657	1811.616
Panjang Batang (cm)	173	155.5	125	418.8
$f_y$ (kg/cm <sup>2</sup> )	2400	2400	2400	2400
$F_u$ (kg/cm <sup>2</sup> )	3700	3700	3700	3700
K (sendi-sendi)	1	1	1	1
r min (cm)	0.721	0.648	0.521	1.745
A lubang (cm <sup>2</sup> )	3.175	3.175	3.175	3.175
$A_{g1}$ (cm <sup>2</sup> )	0.029	1.138	0.737	1.258
$A_{g2}$ (cm <sup>2</sup> )	3.206	4.356	3.940	4.481
Dicoba profil 2L60x60x6				
A (cm <sup>2</sup> )	6.91	6.91	6.91	6.91
r (cm)	1.82	1.82	1.82	1.82
A bruto (cm <sup>2</sup> )	13.820	13.820	13.820	13.820
A netto (cm <sup>2</sup> )	10.645	10.645	10.645	10.645
A efektif (cm <sup>2</sup> )	7.984	7.984	7.984	7.984
Kontrol tegangan				
T/A profil (kg/cm <sup>2</sup> )	3.072	118.605	76.820	131.087
0,6 $f_y$ (kg/cm <sup>2</sup> )	1440	1440	1440	1440
T/A profil $\leq$ 0,6 $f_y$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>
T/A efektif (kg/cm <sup>2</sup> )	5.317	205.308	132.977	226.913
0,5 $F_u$ (kg/cm <sup>2</sup> )	1850	1850	1850	1850
T/A efektif $\leq$ 0,5 $F_u$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>

Batang Tekan	Batang Atas	Batang Bawah	Batang Vertikal	Batang Diagonal
Gaya Tekan Maks. (kg)	3907.326	2314.637	958.591	3852.759
Panjang Batang (cm)	173	155.5	350	223.7
$f_y$ (kg/cm <sup>2</sup> )	2400	2400	2400	2400
$F_u$ (kg/cm <sup>2</sup> )	3700	3700	3700	3700
E (kg/cm <sup>2</sup> )	2100000	2100000	2100000	2100000
K (sendi-sendi)	1	1	1	1
r min (cm)	0.865	0.778	1.750	1.119
Dicoba profil 2L60x60x6				
A (cm <sup>2</sup> )	6.91	6.91	6.91	6.91
r (cm)	1.82	1.82	1.82	1.82
$I_x = I_y$ (cm <sup>4</sup> )	22.8	22.8	22.8	22.8
$i_x = i_y$ (cm)	1.82	1.82	1.82	1.82
e (cm)	1.69	1.69	1.69	1.69
x (cm)	2.19	2.19	2.19	2.19
$I_x$ gabungan (cm <sup>4</sup> )	45.6	45.6	45.6	45.6
$I_y$ gabungan (cm <sup>4</sup> )	111.882	111.882	111.882	111.882
$i_x$ gabungan (cm)	1.816	1.816	1.816	1.816
$i_y$ gabungan (cm)	2.845	2.845	2.845	2.845
Dipakai r (cm)	1.816	1.816	1.816	1.816
Syarat :				
KL/r	95.240	85.606	192.681	123.151
Cc	131.456	131.456	131.456	131.456
KL/r < Cc	<b>Ok !</b>	<b>Ok !</b>	<b>Ok !</b>	<b>Ok !</b>
$F_s$	1.891	1.876	1.823	1.915
$F_a$ (kg/cm <sup>2</sup> )	936.168	1007.866	100.397	703.235
Kontrol kapasitas				
P (kg)	12937.838	13928.702	1387.487	9718.704
P > Pterjadi	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>

## PERENCANAAN PELAT LANTAI TIPE II

(ukuran 4,5m x 2,25 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	2,9655	2,9655	1,6741	1,6741
Mu / Ø (KNm)	3,7069	3,7069	2,0926	2,0926
h (mm)	120	120	120	120
d (mm)	95	95	85	95
$\rho_b$	0,054	0,054	0,054	0,054
$\rho_{max}$	0,0405	0,0405	0,0405	0,0405
$\rho_{min}$	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,4107	0,4107	0,2896	0,2319
m	11,2941	11,2941	11,2941	11,2941
$\rho_{perlu}$	0,0017	0,0017	0,0012	0,0010
1,33 . $\rho_{perlu}$	0,0023	0,0023	0,0016	0,0013
$\rho_{pakai}$	0,0023	0,0023	0,0016	0,0013
As pakai (mm <sup>2</sup> )	218,3655	218,2655	137,3736	122,7431
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	358,774	358,774	570,728	638,9828
Pakai Jarak (mm)	240	240	240	240
As ada (mm <sup>2</sup> )	327,25	327,25	327,25	327,25
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	4,9301	4,9301	2,7832	2,7832
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

### PERENCANAAN PELAT LANTAI TIPE III

(ukuran 3,45m x 3,00 m)

	Mlx	Mtx	Mly	Mty
Mu (KNm)	3,7414	3,7414	3,1887	3,1887
Mu / Ø (KNm)	4,6768	4,6768	3,9859	3,9859
h (mm)	120	120	120	120
d (mm)	95	95	85	95
Pb	0,054	0,054	0,054	0,054
$\rho$ max	0,0405	0,0405	0,0405	0,0405
$\rho$ min	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,5182	0,5182	0,5517	0,4416
m	11,2941	11,2941	11,2941	11,2941
$\rho$ perlu	0,0022	0,0022	0,0023	0,0019
1,33 . $\rho$ perlu	0,0029	0,0029	0,0031	0,0025
$\rho$ pakai	0,0029	0,0029	0,0031	0,0025
As pakai (mm <sup>2</sup> )	277,1002	277,1002	264,2226	235,6107
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	283,4348	283,4348	297,2487	333,3457
Pakai Jarak (mm)	240	240	240	240
As ada (mm <sup>2</sup> )	327,25	327,25	327,25	327,25
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	6,2201	6,2201	5,3012	5,3012
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

## PERENCANAAN PELAT LANTAI TIPE IV

(ukuran 3,00m x 3,00 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	3,0612	3,0612	3,0612	3,0612
Mu / Ø (KNm)	3,8265	3,8265	3,8265	3,8265
h (mm)	120	120	120	120
d (mm)	95	95	85	95
pb	0,054	0,054	0,054	0,054
ρ max	0,0405	0,0405	0,0405	0,0405
ρ min	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,424	0,424	0,5296	0,424
m	11,2941	11,2941	11,2941	11,2941
ρ perlu	0,0018	0,0018	0,0021	0,0018
1,33 . ρ perlu	0,0024	0,0024	0,003	0,0024
ρ pakai	0,0024	0,0024	0,003	0,0024
As pakai (mm <sup>2</sup> )	226,0677	226,0677	253,4848	226,0677
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	347,4173	347,4173	309,8403	347,4173
Pakai Jarak (mm)	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
As ada (mm <sup>2</sup> )	327,2492	327,2492	327,2492	327,2492
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	5,0892	5,0892	5,0892	5,0892
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

## PERENCANAAN PELAT LANTAI TIPE V

(ukuran 4,50m x 0,90 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	0,4821	0,4821	0,0995	0,2908
Mu / Ø (KNm)	0,6026	0,6026	0,1244	0,3635
h (mm)	120	120	120	120
d (mm)	95	95	85	95
ρ <sub>b</sub>	0,054	0,054	0,054	0,054
ρ <sub>max</sub>	0,0405	0,0405	0,0405	0,0405
ρ <sub>min</sub>	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,0668	0,0668	0,0172	0,0403
m	11,2941	11,2941	11,2941	11,2941
ρ <sub>perlu</sub>	0,0003	0,0003	0,0001	0,0002
1,33 . ρ <sub>perlu</sub>	0,0004	0,0004	0,0001	0,0002
ρ <sub>pakai</sub>	0,0004	0,0004	0,0001	0,0002
As pakai (mm <sup>2</sup> )	35,2224	35,2224	8,1129	21,2293
Pakai Tul. Ø (mm)	10	10	10	10
A <sub>l</sub> . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	2229,8236	2229,8236	9680,8894	3699,5873
Pakai Jarak (mm)	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
As ada (mm <sup>2</sup> )	327,2492	327,2492	327,2492	327,2492
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	0,8015	0,8015	0,1654	0,4835
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A <sub>l</sub> . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

## PERENCANAAN PELAT LANTAI TIPE VI

(ukuran 3,00m x 0,90 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	0,4821	0,4821	0,0995	0,2908
Mu / Ø (KNm)	0,6026	0,6026	0,1244	0,3635
h (mm)	120	120	120	120
d (mm)	95	95	85	95
$\rho_b$	0,054	0,054	0,054	0,054
$\rho_{max}$	0,0405	0,0405	0,0405	0,0405
$\rho_{min}$	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,0668	0,0668	0,0172	0,0403
m	11,2941	11,2941	11,2941	11,2941
$\rho_{perlu}$	0,0003	0,0003	0,0001	0,0002
1,33 . $\rho_{perlu}$	0,0004	0,0004	0,0001	0,0002
$\rho_{pakai}$	0,0004	0,0004	0,0001	0,0002
As pakai (mm <sup>2</sup> )	35,2224	35,2224	8,1129	21,2293
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	2229,8236	2229,8236	9680,8894	3699,5873
Pakai Jarak (mm)	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
As ada (mm <sup>2</sup> )	327,2492	327,2492	327,2492	327,2492
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	0,8015	0,8015	0,1654	0,4835
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>



## PERENCANAAN PELAT LANTAI TIPE VII

(ukuran 2,25m x 0,90 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	0,4821	0,4821	0,2602	0,2602
Mu / Ø (KNm)	0,6026	0,6026	0,3253	0,3253
h (mm)	120	120	120	120
d (mm)	95	95	85	95
$\rho_b$	0,054	0,054	0,054	0,054
$\rho_{max}$	0,0405	0,0405	0,0405	0,0405
$\rho_{min}$	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,0668	0,0668	0,045	0,036
m	11,2941	11,2941	11,2941	11,2941
$\rho_{perlu}$	0,0003	0,0003	0,0002	0,0002
1,33 . $\rho_{perlu}$	0,0004	0,0004	0,0002	0,0002
$\rho_{pakai}$	0,0004	0,0004	0,0002	0,0002
As pakai (mm <sup>2</sup> )	35,2224	35,2224	21,2332	18,9931
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	2229,8236	2229,8236	3698,92	4135,1828
Pakai Jarak (mm)	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
As ada (mm <sup>2</sup> )	327,2492	327,2492	327,2492	327,2492
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	0,8015	0,8015	0,4326	0,4326
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

### PERENCANAAN PELAT LANTAI TIPE VIII

(ukuran 4,50m x 1,80 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	1,9285	1,9285	1,0408	1,0408
Mu / Ø (KNm)	2,4106	2,4106	1,301	1,301
h (mm)	120	120	120	120
d (mm)	95	95	85	95
pb	0,054	0,054	0,054	0,054
ρ max	0,0405	0,0405	0,0405	0,0405
ρ min	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,2671	0,2671	0,1801	0,1442
m	11,2941	11,2941	11,2941	11,2941
ρ perlu	0,0011	0,0011	0,0008	0,0006
1,33 . ρ perlu	0,0015	0,0015	0,0010	0,0008
ρ pakai	0,0015	0,0015	0,0010	0,0008
As pakai (mm <sup>2</sup> )	141,7422	141,7422	85,2741	76,2162
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	554,1032	554,1032	921,0274	1030,4872
Pakai Jarak (mm)	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
As ada (mm <sup>2</sup> )	327,2492	327,2492	327,2492	327,2492
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	3,2061	3,2061	1,7303	1,7303
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

### PERENCANAAN PELAT LANTAI TIPE IX

(ukuran 3,00m x 1,80 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	1,796	1,796	1,102	1,102
Mu / Ø (KNm)	2,245	2,245	1,3775	1,3775
h (mm)	120	120	120	120
d (mm)	95	95	85	95
pb	0,054	0,054	0,054	0,054
ρ max	0,0405	0,0405	0,0405	0,0405
ρ min	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,2488	0,2488	0,1907	0,1526
m	11,2941	11,2941	11,2941	11,2941
ρ perlu	0,0010	0,0010	0,0008	0,0006
1,33 . ρ perlu	0,0014	0,0014	0,0011	0,0008
ρ pakai	0,0014	0,0014	0,0011	0,0008
As pakai (mm <sup>2</sup> )	131,9307	131,9307	90,3169	80,7182
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	595,311	595,311	869,6024	973,0129
Pakai Jarak (mm)	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
As ada (mm <sup>2</sup> )	327,2492	327,2492	327,2492	327,2492
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	2,9859	2,9859	1,8321	1,8321
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

### PERENCANAAN PELAT LANTAI TIPE X

(ukuran 2,25m x 1,80 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	1,4694	1,4694	1,1632	1,1632
Mu / Ø (KNm)	1,8368	1,8368	1,454	1,454
h (mm)	120	120	120	120
d (mm)	95	95	85	95
pb	0,054	0,054	0,054	0,054
ρ max	0,0405	0,0405	0,0405	0,0405
ρ min	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,2035	0,2035	0,2012	0,1611
m	11,2941	11,2941	11,2941	11,2941
ρ perlu	0,0009	0,0009	0,0008	0,0007
1,33 . ρ perlu	0,0011	0,0011	0,0011	0,0009
ρ pakai	0,0011	0,0011	0,0011	0,0009
As pakai (mm <sup>2</sup> )	107,7929	107,7929	95,3629	85,2224
Pakai Tul. Ø (mm)	10	10	10	10
A1 . Ø (mm <sup>2</sup> )	78,54	78,54	78,54	78,54
Jarak Tul. (mm)	728,6178	728,6178	823,5885	921,5863
Pakai Jarak (mm)	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
As ada (mm <sup>2</sup> )	327,2492	327,2492	327,2492	327,2492
a (mm)	3,696	3,696	3,696	3,696
Mn (KNm)	7,3162	7,3162	6,5308	7,3162
1,33. Mu / Ø (KNm)	2,4429	2,4429	1,9338	1,9338
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>	<b>P 10-240</b>
As Bagi (mm <sup>2</sup> )		240		240
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		209,458		209,458
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

## PERENCANAAN PELAT TALANG TIPE II

(ukuran 2,25m x 1,8 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	0,7788	0,7788	0,6166	0,6166
Mu / Ø (KNm)	0,9735	0,9735	0,7708	0,7708
h (mm)	100	100	100	100
d (mm)	76	76	68	76
$\rho_b$	0,054	0,054	0,054	0,054
$\rho$ max	0,0405	0,0405	0,0405	0,0405
$\rho$ min	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,1685	0,1685	0,1667	0,1334
m	11,2941	11,2941	11,2941	11,2941
$\rho$ perlu	0,0007	0,0007	0,0007	0,0007
1,33 . $\rho$ perlu	0,0009	0,0009	0,0009	0,0009
$\rho$ pakai	0,0009	0,0009	0,0009	0,0009
As pakai (mm <sup>2</sup> )	71,3398	71,3398	63,1233	56,4228
Pakai Tul. Ø (mm)	8	8	8	8
A1 . Ø (mm <sup>2</sup> )	50,27	50,27	50,27	50,27
Jarak Tul. (mm)	704,5926	704,5926	796,3058	890,8712
Pakai Jarak (mm)	<b>200</b>	<b>200</b>	<b>200</b>	<b>200</b>
As ada (mm <sup>2</sup> )	251,35	251,35	251,35	251,35
a (mm)	2,8388	2,8388	2,8388	2,8388
Mn (KNm)	4,499	4,499	4,0164	4,499
1,33. Mu / Ø (KNm)	1,2948	1,2948	1,0251	1,0251
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 8-200</b>	<b>P 8-200</b>	<b>P 8-200</b>	<b>P 8-200</b>
As Bagi (mm <sup>2</sup> )		200		200
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		251,35		251,35
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>

**PERENCANAAN PELAT TALANG TIPE III**

(ukuran 3,00m x 3,00 m)

	<b>Mlx</b>	<b>Mtx</b>	<b>Mly</b>	<b>Mty</b>
Mu (KNm)	1,6226	1,6226	1,6226	1,6226
Mu / Ø (KNm)	2,0283	2,0283	2,0283	2,0283
h (mm)	100	100	100	100
d (mm)	76	76	68	76
pb	0,054	0,054	0,054	0,054
ρ max	0,0405	0,0405	0,0405	0,0405
ρ min	0,0058	0,0058	0,0058	0,0058
Rn (Mpa)	0,3512	0,3512	0,4386	0,3512
m	11,2941	11,2941	11,2941	11,2941
ρ perlu	0,0015	0,0015	0,0019	0,0015
1,33 . ρ perlu	0,0020	0,0020	0,0025	0,0020
ρ pakai	0,0020	0,0020	0,0025	0,0020
As pakai (mm <sup>2</sup> )	149,4531	149,4531	167,4817	149,4531
Pakai Tul. Ø (mm)	8	8	8	8
A1 . Ø (mm <sup>2</sup> )	50,27	50,27	50,27	50,27
Jarak Tul. (mm)	336,3296	336,3296	300,1252	336,3296
Pakai Jarak (mm)	<b>200</b>	<b>200</b>	<b>200</b>	<b>200</b>
As ada (mm <sup>2</sup> )	251,35	251,35	251,35	251,35
a (mm)	2,8388	2,8388	2,8388	2,8388
Mn (KNm)	4,499	4,499	4,0164	4,499
1,33. Mu / Ø (KNm)	2,6976	2,6976	2,6976	2,6976
Kontrol	AMAN	AMAN	AMAN	AMAN
Pakai Tul.	<b>P 8-200</b>	<b>P 8-200</b>	<b>P 8-200</b>	<b>P 8-200</b>
As Bagi (mm <sup>2</sup> )		200		200
Pakai Tul. (mm)		8		8
A1 . Ø (mm <sup>2</sup> )		50,27		50,27
x (mm)		251,35		251,35
x pakai (mm)		200		200
Pakai Tul. Bagi		<b>P 8-200</b>		<b>P 8-200</b>







## PERENCANAAN TULANGAN BALOK RING

Balok	R 4 Anak ( 3 m )		R 5 Anak ( 2,6 m )		R 6 Anak ( 1,8 m )	
	Tumpuan	Lapangan	Tumpuan	Lapangan	Tumpuan	Lapangan
$f'c$ (Mpa)	25	25	25	25	25	25
$f_y$ (Mpa)	400	400	400	400	400	400
$\Phi$	0.8	0.8	0.8	0.8	0.8	0.8
$\beta$	0.85	0.85	0.85	0.85	0.85	0.85
$d'$ (mm)	40	40	40	40	40	40
$\rho_b$	0.027	0.027	0.027	0.027	0.027	0.027
$\rho$ maks	0.020	0.020	0.020	0.020	0.020	0.020
$\rho$ min	0.004	0.004	0.004	0.004	0.004	0.004
$\rho$ rencana	0.010	0.010	0.010	0.010	0.010	0.010
$m$	18.824	18.824	18.824	18.824	18.824	18.824
$R_n$ (Mpa)	3.675	3.675	3.675	3.675	3.675	3.675
$M_u$ (KNm)	46.405	1.000	24.225	0.966	31.072	1.809
$M_n$ (KNm)	58.006	1.250	30.281	1.208	38.840	2.261
$\emptyset$ (mm)	16	16	16	16	16	16
$A_{1\emptyset}$ (mm <sup>2</sup> )	201.143	201.143	201.143	201.143	201.143	201.143
$b$ (mm)	200	200	200	200	200	200
$h$ (mm)	400	400	400	400	400	400
$d$ ada (mm)	360	360	360	360	360	360
$d$ perlu (mm)	280.910	41.237	202.963	40.530	229.864	55.463
	SEBELAH	SEBELAH	SEBELAH	SEBELAH	SEBELAH	SEBELAH
<b>Kontrol Momen</b>						
$R_n$ baru (Mpa)	2.238	0.048	1.168	0.047	1.498	0.087
$\rho$ baru	0.006	0.000	0.003	0.000	0.004	0.000
$A_s$ (mm <sup>2</sup> )	445.414	9.598	232.521	9.272	298.242	17.364
$n$	3	2	2	2	2	2
$A_s$ ada (mm <sup>2</sup> )	603.429	402.286	402.286	402.286	402.286	402.286
$a$	56.793	37.862	37.862	37.862	37.862	37.862
$M_n$ (KNm)	80.040	54.883	54.883	54.883	54.883	54.883
	AMAN	AMAN	AMAN	AMAN	AMAN	AMAN
<b>Kontrol Momen</b>						
$\rho_1$	0.000	0.000	0.000	0.000	0.000	0.000
$A_s 1$	0.000	0.000	0.000	0.000	0.000	0.000
$a$	0.000	0.000	0.000	0.000	0.000	0.000
$M_n 1$ (KNm)	0.000	0.000	0.000	0.000	0.000	0.000
$M_n 2$ (KNm)	0.000	0.000	0.000	0.000	0.000	0.000
$f_s'$	0.000	0.000	0.000	0.000	0.000	0.000
$A_s' = A_s 2$	0.000	0.000	0.000	0.000	0.000	0.000
$n$	0	0	0	0	0	0
$A_s'$ ada (mm <sup>2</sup> )	0.000	0.000	0.000	0.000	0.000	0.000
$A_s$	0.000	0.000	0.000	0.000	0.000	0.000
$n$	0	0	0	0	0	0
$A_s$ ada (mm <sup>2</sup> )	0.000	0.000	0.000	0.000	0.000	0.000
$\rho$	0.000	0.000	0.000	0.000	0.000	0.000
$\rho'$	0.000	0.000	0.000	0.000	0.000	0.000
$\rho_1$	0.000	0.000	0.000	0.000	0.000	0.000
$f_s'$	0.000	0.000	0.000	0.000	0.000	0.000
$a$	0.000	0.000	0.000	0.000	0.000	0.000
$M_n$ (KNm)	0.000	0.000	0.000	0.000	0.000	0.000
	-	-	-	-	-	-







## PERENCANAAN TULANGAN BALOK LANTAI 2

Balok	B 1 a Induk (9 m)		B 1 b Induk (9 m)		B 2 a Induk (6 m)		B 2 b Induk (6 m)	
	Tumpuan	Lapangan	Tumpuan	Lapangan	Tumpuan	Lapangan	Tumpuan	Lapangan
$f_c$ (Mpa)	25	25	25	25	25	25	25	25
$f_y$ (Mpa)	400	400	400	400	400	400	400	400
$\phi$	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
$\beta$	0,85	0,85	0,85	0,85	0,85	0,85	0,85	0,85
$d'$ (mm)	60	60	90	60	60	60	60	60
$\rho_b$	0,027	0,027	0,027	0,027	0,027	0,027	0,027	0,027
$\rho_{maks}$	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020
$\rho_{min}$	0,004	0,004	0,004	0,004	0,004	0,004	0,004	0,004
$\rho_{rencana}$	0,010	0,010	0,010	0,010	0,010	0,010	0,010	0,010
$m$	18.824	18.824	18.824	18.824	18.824	18.824	18.824	18.824
$R_n$ (Mpa)	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675
$M_u$ (KNm)	297,071	251,961	440,659	284,701	143,319	114,123	322,608	164,548
$M_n$ (KNm)	371,339	314,951	550,823	355,876	179,149	143,029	403,260	205,685
$O$ (mm)	22	22	22	22	22	22	22	22
$A_{LO}$ (mm <sup>2</sup> )	380,286	380,286	380,286	380,286	380,286	380,286	380,286	380,286
$b$ (mm)	400	400	400	400	400	400	400	400
$h$ (mm)	600	600	600	600	600	600	600	600
$d$ (mm)	540	540	510	540	540	540	540	540
$d_{perlu}$ (mm)	502,575	462,847	612,099	492,060	549,078	311,909	523,731	374,039
	SEBELAH	SEBELAH	RANGKAP	SEBELAH	SEBELAH	SEBELAH	SEBELAH	SEBELAH
<b>Kontrol Momen</b>								
$R_n$ baru (Mpa)	3,184	2,700	0,000	3,051	1,536	1,226	3,457	1,763
$\rho$ baru	0,009	0,007	0,000	0,008	0,004	0,003	0,010	0,005
$A_s$ (mm <sup>2</sup> )	1900,938	1612,282	0,000	1821,783	917,089	732,185	2064,548	1052,332
$n$	5	5	0	5	3	3	5	3
$A_s$ ada (mm <sup>2</sup> )	1901,429	1901,429	0,000	1901,429	1140,857	1140,857	2281,714	1140,857
$a$	89,479	89,479	0,000	89,479	53,687	53,687	107,375	53,687
$M_n$ (KNm)	376,681	376,681	0,000	376,681	234,175	234,175	443,851	234,175
	AMAN	AMAN	-	AMAN	AMAN	AMAN	AMAN	AMAN
<b>Kontrol Momen</b>								
$\rho_1$	0,000	0,000	0,010	0,000	0,000	0,000	0,000	0,000
$A_s_1$	0,000	0,000	2072,672	0,000	0,000	0,000	0,000	0,000
$a$	0,000	0,000	97,538	0,000	0,000	0,000	0,000	0,000
$M_n_1$ (KNm)	0,000	0,000	382,392	0,000	0,000	0,000	0,000	0,000
$M_n_2$ (KNm)	0,000	0,000	168,430	0,000	0,000	0,000	0,000	0,000
$f_s'$	0,000	0,000	129,412	0,000	0,000	0,000	0,000	0,000
$A_s'=A_s2$	0,000	0,000	3098,822	0,000	0,000	0,000	0,000	0,000
$n$	0	0	4	0	0	0	0	0
$A_s'$ ada (mm <sup>2</sup> )	0,000	0,000	1521,143	0,000	0,000	0,000	0,000	0,000
$A_s$	0,000	0,000	5171,494	0,000	0,000	0,000	0,000	0,000
$n$	0	0	8	0	0	0	0	0
$A_s$ ada (mm <sup>2</sup> )	0,000	0,000	3042,286	0,000	0,000	0,000	0,000	0,000
$\rho$	0,000	0,000	0,015	0,000	0,000	0,000	0,000	0,000
$\rho'$	0,000	0,000	0,007	0,000	0,000	0,000	0,000	0,000
$\rho_1$	0,000	0,000	0,007	0,000	0,000	0,000	0,000	0,000
$f_s'$	0,000	0,000	-41,212	0,000	0,000	0,000	0,000	0,000
$a$	0,000	0,000	150,542	0,000	0,000	0,000	0,000	0,000
$M_n$ (KNm)	0,000	0,000	529,952	0,000	0,000	0,000	0,000	0,000
	-	-	AMAN	-	-	-	-	-



## PERENCANAAN TULANGAN BALOK LANTAI 2

Balok	B 1 b Anak ( 9 m )		B 2 a Anak ( 6 m )		B 2 b Anak ( 6 m )		B 3 a Anak ( 4,5 m )	
	Tumpuan	Lapangan	Tumpuan	Lapangan	Tumpuan	Lapangan	Tumpuan	Lapangan
$f_c$ (Mpa)	25	25	25	25	25	25	25	25
$f_y$ (Mpa)	400	400	400	400	400	400	400	400
$\Phi$	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
$\beta$	0,85	0,85	0,85	0,85	0,85	0,85	0,85	0,85
$d'$ (mm)	60	40	40	40	60	40	40	40
$\rho_{\text{d}}$	0,027	0,027	0,027	0,027	0,027	0,027	0,027	0,027
$\rho$ maks	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020
$\rho$ min	0,004	0,004	0,004	0,004	0,004	0,004	0,004	0,004
$\rho$ rencana	0,010	0,010	0,010	0,010	0,010	0,010	0,010	0,010
$m$	18,824	18,824	18,824	18,824	18,824	18,824	18,824	18,824
$R_n$ (Mpa)	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675
$M_u$ (KNm)	116,324	28,401	44,077	36,191	83,744	55,456	16,751	5,059
$M_n$ (KNm)	145,405	35,501	55,096	45,239	104,680	69,520	20,939	6,324
$O$ (mm)	16	16	16	16	16	16	16	16
$A_{IO}$ (mm <sup>2</sup> )	201,143	201,143	201,143	201,143	201,143	201,143	201,143	201,143
$b$ (mm)	200	200	200	200	200	200	200	200
$h$ (mm)	400	400	400	400	400	400	400	400
$d$ ada (mm)	340	360	360	360	340	360	360	360
$d$ perlu (mm)	444,754	219,762	273,774	248,077	377,366	307,086	168,774	92,751
	RANGKAP	SEBELAH	SEBELAH	SEBELAH	RANGKAP	SEBELAH	SEBELAH	SEBELAH
<b>Kontrol Momen</b>								
$R_n$ baru (Mpa)	0,000	1,370	2,126	1,745	0,000	2,674	0,808	0,244
$\rho$ baru	0,000	0,004	0,005	0,005	0,000	0,007	0,002	0,001
$A_s$ (mm <sup>2</sup> )	0,000	272,604	423,669	347,376	0,000	532,289	160,783	48,558
$n$	0	4	3	2	0	3	2	2
$A_s$ ada (mm <sup>2</sup> )	0,000	804,571	603,429	402,286	0,000	603,429	402,286	402,286
$a$	0,000	75,724	56,793	37,862	0,000	56,793	37,862	37,362
$M_n$ (KNm)	0,000	133,673	80,040	54,883	0,000	80,040	54,883	54,883
	-	AMAN	AMAN	AMAN	-	AMAN	AMAN	AMAN
<b>Kontrol Momen</b>								
$\rho_1$	0,010	0,000	0,000	0,000	0,010	0,000	0,000	0,000
$A_s 1$	690,891	0,000	0,000	0,000	690,891	0,000	0,000	0,000
$a$	65,025	0,000	0,000	0,000	65,025	0,000	0,000	0,000
$M_n 1$ (KNm)	84,976	0,000	0,000	0,000	84,976	0,000	0,000	0,000
$M_n 2$ (KNm)	60,429	0,000	0,000	0,000	19,704	0,000	0,000	0,000
$f_s'$	129,412	0,000	0,000	0,000	129,412	0,000	0,000	0,000
$A_s' = A_s 2$	1667,681	0,000	0,000	0,000	543,777	0,000	0,000	0,000
$n$	4	0	0	0	3	0	0	0
$A_s'$ ada (mm <sup>2</sup> )	804,571	0,000	0,000	0,000	603,429	0,000	0,000	0,000
$A_s$	2358,572	0,000	0,000	0,000	1234,667	0,000	0,000	0,000
$n$	7	0	0	0	5	0	0	0
$A_s$ ada (mm <sup>2</sup> )	1408,000	0,000	0,000	0,000	1095,714	0,000	0,000	0,000
$\rho$	0,021	0,000	0,000	0,000	0,015	0,000	0,000	0,000
$\rho'$	0,012	0,000	0,000	0,000	0,009	0,000	0,000	0,000
$\rho_1$	0,009	0,000	0,000	0,000	0,006	0,000	0,000	0,000
$f_s'$	61,204	0,000	0,000	0,000	-208,194	0,000	0,000	0,000
$a$	120,931	0,000	0,000	0,000	124,216	0,000	0,000	0,000
$M_n$ (KNm)	157,457	0,000	0,000	0,000	111,527	0,000	0,000	0,000
	AMAN	-	-	-	AMAN	-	-	-

## PERENCANAAN TULANGAN BALOK LANTAI 2

Balok	B 3 b Anak ( 4,5 m )		B 4 Anak ( 3 m )		B 5 Anak ( 0,9 m )	
	Tumpuan	Lapangan	Tumpuan	Lapangan	Tumpuan	Lapangan
$f_c$ (Mpa)	25	25	25	25	25	25
$f_y$ (Mpa)	400	400	400	400	400	400
$\Phi$	0,8	0,8	0,8	0,8	0,8	0,8
$\beta$	0,85	0,85	0,85	0,85	0,85	0,85
$d'$ (mm)	40	40	60	40	40	40
$\rho_b$	0,027	0,027	0,027	0,027	0,027	0,027
$\rho_{maks}$	0,020	0,020	0,020	0,020	0,020	0,020
$\rho_{min}$	0,004	0,004	0,004	0,004	0,004	0,004
$\rho_{rencana}$	0,010	0,010	0,010	0,010	0,010	0,010
$m$	18,824	18,824	18,824	18,824	18,824	18,824
$R_n$ (Mpa)	3,675	3,675	3,675	3,675	3,675	3,675
$M_u$ (KNm)	55,362	33,396	84,849	9,431	46,009	5,054
$M_n$ (KNm)	69,203	41,745	106,061	11,789	57,511	6,318
$O$ (mm)	16	16	16	16	16	16
$A_{10}$ (mm <sup>2</sup> )	201,143	201,143	201,143	201,143	201,143	201,143
$b$ (mm)	200	200	200	200	200	200
$h$ (mm)	400	400	400	400	400	400
$d_{ada}$ (mm)	360	360	340	360	360	360
$d_{perlu}$ (mm)	306,825	238,305	379,847	126,638	279,709	92,705
	SEBELAH	SEBELAH	RANGKAP	SEBELAH	SEBELAH	SEBELAH
<b>Kontrol Momen</b>						
$R_n$ baru (Mpa)	2,670	1,611	0,000	0,455	2,219	0,244
$\rho$ baru	0,007	0,004	0,000	0,001	0,006	0,001
$A_s$ (mm <sup>2</sup> )	531,387	320,548	0,000	90,523	441,613	49,510
$n$	3	2	0	3	3	2
$A_s$ ada (mm <sup>2</sup> )	603,429	402,286	0,000	603,429	603,429	402,286
$a$	56,793	37,852	0,000	56,793	56,793	37,862
$M_n$ (KNm)	80,040	54,883	0,000	80,040	80,040	54,883
	AMAN	AMAN	-	AMAN	AMAN	AMAN
<b>Kontrol Momen</b>						
$\rho_1$	0,000	0,000	0,010	0,000	0,000	0,000
$A_s 1$	0,000	0,000	690,891	0,000	0,000	0,000
$a$	0,000	0,000	65,025	0,000	0,000	0,000
$M_n 1$ (KNm)	0,000	0,000	84,976	0,000	0,000	0,000
$M_n 2$ (KNm)	0,000	0,000	21,085	0,000	0,000	0,000
$f_s'$	0,000	0,000	129,412	0,000	0,000	0,000
$A_s' = A_s 2$	0,000	0,000	581,896	0,000	0,000	0,000
$n$	0	0	3	0	0	0
$A_s'$ ada (mm <sup>2</sup> )	0,000	0,000	603,429	0,000	0,000	0,000
$A_s$	0,000	0,000	1272,786	0,000	0,000	0,000
$n$	0	0	5	0	0	0
$A_s$ ada (mm <sup>2</sup> )	0,000	0,000	1005,714	0,000	0,000	0,000
$\rho$	0,000	0,000	0,015	0,000	0,000	0,000
$\rho'$	0,000	0,000	0,009	0,000	0,000	0,000
$\rho_1$	0,000	0,000	0,006	0,000	0,000	0,000
$f_s'$	0,000	0,000	-208,194	0,000	0,000	0,000
$a$	0,000	0,000	124,216	0,000	0,000	0,000
$M_n$ (KNm)	0,000	0,000	111,527	0,000	0,000	0,000
	-	-	AMAN	-	-	-



## PERENCANAAN TULANGAN BALOK SLOOF

Balok	S 1 (9 m)		S 2 (6 m)		S 3 (4,5 m)	
	Tumpuan	Lapangan	Tumpuan	Lapangan	Tumpuan	Lapangan
$f_c$ (Mpa)	25	25	25	25	25	25
$f_y$ (Mpa)	400	400	400	400	400	400
$\Phi$	0.8	0.8	0.8	0.8	0.8	0.8
$\beta$	0.85	0.85	0.85	0.85	0.85	0.85
$d'$ (mm)	40	40	40	40	40	40
$\rho_b$	0.032	0.032	0.032	0.032	0.032	0.032
$\rho$ maks	0.024	0.024	0.024	0.024	0.024	0.024
$\rho$ min	0.004	0.004	0.004	0.004	0.004	0.004
$\rho$ rencana	0.018	0.018	0.018	0.018	0.018	0.018
$m$	18.824	18.824	18.824	18.824	18.824	18.824
$R_n$ (Mpa)	5.962	5.962	5.962	5.962	5.962	5.962
$M_u$ (KNm)	135.539	78.948	91.746	20.595	72.788	11.085
$M_n$ (KNm)	169.424	98.685	114.683	25.744	90.985	13.856
$\emptyset$ (mm)	16	16	16	16	16	16
$A_{IO}$ (mm <sup>2</sup> )	201.143	201.143	201.143	201.143	201.143	201.143
$b$ (mm)	250	250	250	250	250	250
$h$ (mm)	500	500	500	500	500	500
$d$ ada (mm)	460	460	460	460	460	460
$d$ perlu (mm)	337.159	257.320	277.394	131.427	247.077	96.421
	SEBELAH	SEBELAH	SEBELAH	SEBELAH	SEBELAH	SEBELAH
<b>Kontrol Momen</b>						
$R_n$ baru (Mpa)	3.203	1.866	2.168	0.487	1.720	0.262
$\rho$ baru	0.010	0.006	0.007	0.001	0.005	0.001
$A_s$ (mm <sup>2</sup> )	1107.707	645.211	749.804	168.315	594.868	90.593
$n$	5	3	4	2	3	2
$A_s$ ada (mm <sup>2</sup> )	1005.714	603.429	804.571	402.286	603.429	402.286
$a$	75.724	45.435	60.579	30.290	45.435	30.290
$M_n$ (KNm)	169.820	105.548	138.293	71.584	105.548	71.584
	AMAN	AMAN	AMAN	AMAN	AMAN	AMAN
<b>Kontrol Momen</b>						
$\rho$ 1	0.000	0.000	0.000	0.000	0.000	0.000
$A_s$ 1	0.000	0.000	0.000	0.000	0.000	0.000
$a$	0.000	0.000	0.000	0.000	0.000	0.000
$M_n$ 1 (KNm)	0.000	0.000	0.000	0.000	0.000	0.000
$M_n$ 2 (KNm)	0.000	0.000	0.000	0.000	0.000	0.000
$f_s'$	0.000	0.000	0.000	0.000	0.000	0.000
$A_s' = A_s2$	0.000	0.000	0.000	0.000	0.000	0.000
$n$	0	0	0	0	0	0
$A_s'$ ada (mm <sup>2</sup> )	0.000	0.000	0.000	0.000	0.000	0.000
$A_s$	0.000	0.000	0.000	0.000	0.000	0.000
$n$	0	0	0	0	0	0
$A_s$ ada (mm <sup>2</sup> )	0.000	0.000	0.000	0.000	0.000	0.000
$\rho$	0.000	0.000	0.000	0.000	0.000	0.000
$\rho'$	0.000	0.000	0.000	0.000	0.000	0.000
$\rho_l$	0.000	0.000	0.000	0.000	0.000	0.000
$f_s'$	0.000	0.000	0.000	0.000	0.000	0.000
$a$	0.000	0.000	0.000	0.000	0.000	0.000
$M_n$ (KNm)	0.000	0.000	0.000	0.000	0.000	0.000
	-	-	-	-	-	-

LANTAI	BALOK	JENIS TUL.	LUAS TUL. SAP 2000 (-) (mm <sup>2</sup> )	LUAS TUL. SAP 2000 (+) (mm <sup>2</sup> )	Ø TUL. (mm)	LUAS TUL. (mm <sup>2</sup> )	JUMLAH TUL. (-)	JUMLAH TUL. (+)	TUL. PAKAI (-)	TUL. PAKAI (+)
ATAP	R 1 Induk	Tump	772.213	502.428	22	380.133	2.031	1.322	3	2
	( 9 m )	Lap	130.692	651.024	22	380.133	0.344	1.713	2	2
ATAP	R 2 Induk	Tump	772.213	420.039	22	380.133	2.031	1.105	3	2
	( 6 m )	Lap	0	680.728	22	380.133	0.000	1.791	2	2
ATAP	R 3 Induk	Tump	669.473	331.13	22	380.133	1.761	0.871	2	2
	( 4,5 m )	Lap	58.383	150.947	22	380.133	0.154	0.397	2	2
ATAP	R 4 Induk	Tump	1251.828	772.213	22	380.133	3.293	2.031	4	3
	( 3 m )	Lap	641.841	400.38	22	380.133	1.688	1.053	2	3
ATAP	R 5 Induk	Tump	772.213	476.039	22	380.133	2.031	1.252	3	2
	( 1,8 m )	Lap	423.194	236.207	22	380.133	1.113	0.621	2	2
ATAP	R 1 Anak	Tump	334.022	217.88	16	201.062	1.661	1.084	2	2
	( 9 m )	Lap	42.132	262.001	16	201.062	0.210	1.303	2	2
ATAP	R 2 Anak	Tump	302.428	197.698	16	201.062	1.504	0.983	2	2
	( 6 m )	Lap	0	170.606	16	201.062	0.000	0.849	2	2
ATAP	R 3 Anak	Tump	262.001	164.057	16	201.062	1.303	0.816	2	2
	( 4,5 m )	Lap	0	69.488	16	201.062	0.000	0.346	2	2
ATAP	R 4 Anak	Tump	401.595	260.729	16	201.062	1.997	1.297	3	2
	( 3 m )	Lap	128.747	128.747	16	201.062	0.640	0.640	2	2
ATAP	R 5 Anak	Tump	262.001	134.495	16	201.062	1.303	0.669	2	2
	( 2,6 m )	Lap	66.522	66.522	16	201.062	0.331	0.331	2	2
ATAP	R 6 Anak	Tump	264.169	173.136	16	201.062	1.314	0.861	2	2
	( 1,8 m )	Lap	92.891	85.86	16	201.062	0.462	0.427	2	2
LT 3	B 1 a Induk	Tump	2247.37	1065.258	22	380.133	5.912	2.802	7	4
	( 9 m )	Lap	0	1914.261	22	380.133	0.000	5.036	3	6
LT 3	B 1 b Induk	Tump	2739.353	1280.973	22	380.133	7.206	3.370	8	4
	( 9 m )	Lap	0	1382.21	22	380.133	0.000	3.636	3	6
LT 3	B 2 a Induk	Tump	905.079	591.464	22	380.133	2.381	1.556	3	2
	( 6 m )	Lap	0	772.213	22	380.133	0.000	2.031	2	3
LT 3	B 2 b Induk	Tump	1854.418	888.104	22	380.133	4.878	2.336	6	3
	( 6 m )	Lap	0	967.584	22	380.133	0.000	2.545	2	4
LT 3	B 3 a Induk	Tump	929.809	607.277	22	380.133	2.446	1.598	3	2
	( 4,5 m )	Lap	0	450.354	22	380.133	0.000	1.185	2	2
LT 3	B 3 b Induk	Tump	778.495	510.224	22	380.133	2.048	1.342	3	2
	( 4,5 m )	Lap	0	563.425	22	380.133	0.000	1.482	2	2
LT 3	B 4 Induk	Tump	1736.189	910.108	22	380.133	4.567	2.394	8	4
	( 3 m )	Lap	899.778	551.027	22	380.133	2.367	1.450	3	4
LT 3	B 5 Induk	Tump	1170.275	760.024	22	380.133	3.079	1.999	4	2
	( 1,8 m )	Lap	501.863	280.492	22	380.133	1.320	0.738	2	2
LT 3	B 1a Anak	Tump	576.208	277.051	16	201.062	2.866	1.378	4	2
	( 9 m )	Lap	0	211.702	16	201.062	0.000	1.053	2	2
LT 3	B 1 b Anak	Tump	1084.681	500.514	16	201.062	5.395	2.489	6	3
	( 9 m )	Lap	0	262.001	16	201.062	0.000	1.303	2	3
LT 3	B 2 a Anak	Tump	397.037	257.852	16	201.062	1.975	1.282	3	2
	( 6 m )	Lap	0	285.013	16	201.062	0.000	1.418	2	2
LT 3	B 2 b Anak	Tump	758.444	359.619	16	201.062	3.772	1.789	5	3
	( 6 m )	Lap	0	490.46	16	201.062	0.000	2.439	2	3
LT 3	B 3 a Anak	Tump	262.001	160.404	16	201.062	1.303	0.798	2	2
	( 4,5 m )	Lap	0	28.557	16	201.062	0.000	0.142	2	2
LT 3	B 3 b Anak	Tump	474.963	262.001	16	201.062	2.362	1.303	3	2
	( 4,5 m )	Lap	0	283.529	16	201.062	0.000	1.410	2	2
LT 3	B 4 Anak	Tump	794.766	375.757	16	201.062	3.953	1.869	5	3
	( 3 m )	Lap	244.395	244.395	16	201.062	1.216	1.216	2	3
LT 3	B 5 Anak	Tump	587.085	282.052	16	201.062	2.920	1.403	4	2
	( 1,8 m )	Lap	216.231	135.870	16	201.062	1.075	0.676	2	2

LANTAI	BALOK	JENIS TUL.	LUAS TUL. SAP 2000 (-) (mm <sup>2</sup> )	LUAS TUL. SAP 2000 (+) (mm <sup>2</sup> )	Ø TUL. (mm)	LUAS TUL. (mm <sup>2</sup> )	JUMLAH TUL. (-)	JUMLAH TUL. (+)	TUL. PAKAI (-)	TUL. PAKAI (+)
LT 2	B 1 a Induk	Tump	1792.813	859.954	22	380.133	4.716	2.262	5	3
	( 9 m )	Lap	0	1500.65	22	380.133	0.000	3.948	3	5
LT 2	B 1 b Induk	Tump	2784.899	1300.588	22	380.133	7.326	3.421	8	4
	( 9 m )	Lap	0	1711.859	22	380.133	0.000	4.503	3	5
LT 2	B 2 a Induk	Tump	828.621	542.454	22	380.133	2.180	1.427	3	2
	( 6 m )	Lap	0	772.213	22	380.133	0.000	2.031	2	3
LT 2	B 2 b Induk	Tump	1962.01	937.025	22	380.133	5.161	2.465	6	3
	( 6 m )	Lap	0	956.694	22	380.133	0.000	2.517	2	3
LT 2	B 3 a Induk	Tump	1106.534	632.313	22	380.133	2.911	1.663	4	2
	( 4,5 m )	Lap	355.683	407.819	22	380.133	0.936	1.073	2	2
LT 2	B 3 b Induk	Tump	772.213	483.375	22	380.133	2.031	1.272	3	2
	( 4,5 m )	Lap	0	626.411	22	380.133	0.000	1.648	2	2
LT 2	B 4 Induk	Tump	480.524	238.415	22	380.133	1.264	0.627	2	2
	( 0,9 m )	Lap	213.039	118.756	22	380.133	0.560	0.312	2	2
LT 2	B 1 a Anak	Tump	502.671	262.001	16	201.062	2.500	1.303	3	2
	( 9 m )	Lap	0	137.569	16	201.062	0.000	0.684	2	2
LT 2	B 1 b Anak	Tump	1108.883	510.589	16	201.062	5.515	2.539	7	4
	( 9 m )	Lap	0	262.001	16	201.062	0.000	1.303	2	4
LT 2	B 2 a Anak	Tump	380.398	247.334	16	201.062	1.892	1.250	3	2
	( 6 m )	Lap	32.624	309.489	16	201.062	0.162	1.539	2	2
LT 2	B 2 b Anak	Tump	760.259	360.428	16	201.062	3.781	1.793	5	3
	( 6 m )	Lap	0	485.21	16	201.062	0.000	2.413	2	3
LT 2	B 3 a Anak	Tump	186.918	92.633	16	201.062	0.930	0.461	2	2
	( 4,5 m )	Lap	71.199	35.481	16	201.062	0.354	0.176	2	2
LT 2	B 3 b Anak	Tump	484.327	262.001	16	201.062	2.409	1.303	3	2
	( 4,5 m )	Lap	0	284.67	16	201.062	0.000	1.416	2	2
LT 2	B 4 Anak	Tump	771.473	237.843	16	201.062	3.837	1.183	5	3
	( 3 m )	Lap	365.42	365.42	16	201.062	1.817	1.817	2	3
LT 2	B 5 Anak	Tump	346.104	214.864	16	201.062	1.721	1.069	3	2
	( 0,9 m )	Lap	217.151	106.338	16	201.062	1.080	0.529	2	2
SLOOF	S 1	Tump	953.760	457.633	16	201.062	4.744	2.276	5	3
	( 9 m )	Lap	216.148	413.685	16	201.062	1.075	2.058	2	3
SLOOF	S 2	Tump	628.264	407.996	16	201.062	3.125	1.962	4	2
	( 6 m )	Lap	201.490	201.490	16	201.062	1.002	1.002	2	2
SLOOF	S 3	Tump	492.936	298.478	16	201.062	2.452	1.485	3	2
	( 4,5 m )	Lap	143.819	143.819	16	201.062	0.715	0.715	2	2

**PERENCANAAN TULANGAN GESER BALOK INDUK RING**

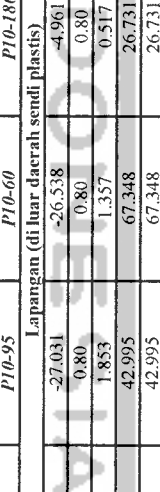
Balok	R 1 Induk ( 9 m)	R 2 Induk ( 6 m)	R 3 Induk ( 4,5 m)	R 4 Induk ( 3 m)	R 5 Induk ( 1,8 m)
	Tumpuan (di dalam daerah sendi plastis)				
$\Phi$	1.25	1.25	1.25	1.25	1.25
In (m)	8.6	5.6	4.1	2.7	1.5
Mnak (KNm)	234.175	234.175	158.839	306.789	234.175
Mhak (KNm)	158.839	158.839	158.839	234.175	158.839
VD (KN)	54.895	62.619	49.302	65.118	52.074
VL (KN)	12.380	8.983	6.671	16.675	12.972
VE (KN)	4.615	15.689	17.063	18.213	22.851
Vu (KN)	110.626	136.591	126.569	261.195	297.556
Vu (KN)	201.325	143.763	132.921	165.470	167.402
Vu pakat (KN)	110.626	136.591	126.569	165.470	167.402
$\Phi$	0.6	0.6	0.6	0.6	0.6
$f_c$ (MPa)	25	25	25	25	25
$f_y$ (MPa)	240	240	240	240	240
b (mm)	400	400	400	400	400
h (mm)	600	600	600	600	600
d (mm)	540	540	540	540	540
Vc (KN)	180	180	180	180	180
Vs min (KN)	72	72	72	72	72
Vu / $\Phi$ (KN)	184.376	227.651	210.948	275.783	279.003
O (mm)	10	10	10	10	10
Kaki	2	2	2	2	2
$A_v$ (mm <sup>2</sup> )	157.143	157.143	157.143	157.143	157.143
S 1 (mm)	282.857	282.857	282.857	212.624	205.708
S 2 (mm)	270	270	270	270	270
S 3 (mm)	600	600	600	600	600
S pakat (mm)	P10-270	P10-270	P10-270	P10-210	P10-205
Lapangan (di luar daerah sendi plastis)					
Vu" (KN)	-30.652	-13.774	9.025	89.430	160.960
2.h (m)	1.20	1.20	1.20	1.20	1.20
x (m)	1.866	0.513	0	0	0
v (KN)	90.913	104.370	83.140	42.245	1.288
Vu pakat (KN)	90.913	104.370	83.140	42.245	1.288
Vc (KN)	180	180	180	180	180
Vs min (KN)	72	72	72	72	72
Vu / $\Phi$ (KN)	151.521	173.949	138.567	70.408	2.147
O (mm)	10	10	10	10	10
Kaki	2	2	2	2	2
$A_v$ (mm <sup>2</sup> )	157.143	157.143	157.143	157.143	157.143
S 1 (mm)	282.857	282.857	282.857	282.857	282.857
S 2 (mm)	270	270	270	270	270
S 3 (mm)	600	600	600	600	600
S pakat (mm)	P10-270	P10-270	P10-270	P10-270	P10-270





PERENCANAAN TULANGAN GESER BALOK ANAK LANTAI 3

Balok	B 1 a Anak ( 9 m)		B 1 b Anak ( 9 m)		B 2 a Anak ( 6 m)		B 2 b Anak ( 6 m)		B 3 a Anak ( 4,5 m)		B 3 b Anak ( 4,5 m)		B 4 Anak ( 3 m)		B 5 Anak ( 1,8 m)	
	1.25	8.6	1.25	5.6	1.25	5.6	1.25	4.1	1.25	4.1	1.25	4.1	1.25	2.7	1.25	1.25
Φ	8.6	8.6	1.25	5.6	1.25	5.6	1.25	4.1	1.25	4.1	1.25	4.1	1.25	2.7	1.25	1.25
Mnak (KNm)	103.673	146.371	80.04	80.04	54.883	54.883	54.883	54.883	54.883	54.883	54.883	54.883	54.883	54.883	54.883	54.883
Mnak (KNm)	54.883	80.04	54.883	54.883	35.417	35.417	24.767	24.767	24.783	24.783	24.783	24.783	32.161	30.703	30.703	30.703
V <sub>D</sub> (KN)	43.749	41.803	39.914	39.914	5.908	5.908	2.268	2.268	12.515	12.515	10.249	10.249	6.885	6.885	6.885	6.885
V <sub>L</sub> (KN)	6.310	17.644	0.895	1.317	1.040	1.040	1.282	1.282	0.847	0.847	1.337	1.337	2.374	2.374	2.374	2.374
V <sub>E</sub> (KN)	0.895	2.428	1.317	1.040	1.040	1.040	1.282	1.282	0.847	0.847	1.337	1.337	2.374	2.374	2.374	2.374
V <sub>U</sub> (KN)	68.694	85.455	69.195	69.195	54.666	54.666	34.414	34.414	43.534	43.534	51.101	51.101	50.380	50.380	50.380	50.380
V <sub>V</sub> (KN)	57.394	74.000	54.666	54.666	34.414	34.414	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
V <sub>U</sub> pakai (KN)	57.394	74.000	54.666	54.666	34.414	34.414	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
ρ <sub>c</sub> (MPa)	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
ρ <sub>v</sub> (MPa)	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
b (mm)	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
h (mm)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
d (mm)	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360
V <sub>c</sub> (KN)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
V <sub>s</sub> min (KN)	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
V <sub>u</sub> / Φ (KN)	95.657	123.333	91.110	91.110	138.327	138.327	57.357	57.357	72.557	72.557	85.168	85.168	83.967	83.967	83.967	83.967
Ø (mm)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Kaki	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Av (mm <sup>2</sup> )	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571
S 1 (mm)	90.838	70.454	95.371	95.371	62.817	62.817	362.056	362.056	362.056	362.056	102.026	102.026	362.056	362.056	362.056	362.056
S 2 (mm)	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
S 3 (mm)	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
S pakai (mm)	P10-90	P10-70	P10-95	P10-95	P10-60	P10-60	P10-180	P10-180	P10-180	P10-180	P10-100	P10-100	P10-180	P10-180	P10-180	P10-180
V <sub>u</sub> " (KN)	-36.430	-39.383	-27.031	-27.031	-26.538	-26.538	-4.961	-4.961	-10.368	-10.368	14.019	14.019	53.024	53.024	53.024	53.024
z <sub>h</sub> (m)	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
x (m)	3.339	2.987	1.853	1.853	1.357	1.357	0.517	0.517	0.789	0.789	0	0	0	0	0	0
y (KN)	48.666	63.453	42.995	42.995	67.348	67.348	26.731	26.731	33.016	33.016	26.095	26.095	1.234	1.234	1.234	1.234
V <sub>u</sub> pakai (KN)	48.666	63.453	42.995	42.995	67.348	67.348	26.731	26.731	33.016	33.016	26.095	26.095	1.234	1.234	1.234	1.234
V <sub>c</sub> (KN)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
V <sub>s</sub> min (KN)	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
V <sub>u</sub> / Φ (KN)	81.110	105.755	71.658	71.658	112.247	112.247	44.552	44.552	55.027	55.027	43.491	43.491	2.056	2.056	2.056	2.056
Ø (mm)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Kaki	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Av (mm <sup>2</sup> )	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571
S 1 (mm)	362.056	189.91	362.056	362.056	166.313	166.313	362.056	362.056	362.056	362.056	362.056	362.056	362.056	362.056	362.056	362.056
S 2 (mm)	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
S 3 (mm)	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
S pakai (mm)	P10-180	P10-180	P10-180	P10-180	P10-165	P10-165	P10-180	P10-180	P10-180	P10-180	P10-180	P10-180	P10-180	P10-180	P10-180	P10-180







## PERENCANAAN TULANGAN GESER BALOK ANAK LANTAI 2

Balok	B 1 a Anak ( 9 m)		B 1 b Anak ( 9 m)		B 2 a Anak ( 6 m)		B 2 b Anak ( 6 m)		B 3 a Anak ( 4,5 m)		B 3 b Anak ( 4,5 m)		B 4 Anak ( 3 m)		B 5 Anak ( 0,9 m)	
	1.25	8.6	1.25	8.6	1.25	5.6	1.25	5.6	1.25	4.1	1.25	4.1	1.25	2.7	1.25	0.6
$\phi$	8.6	8.6	1.25	5.6	1.25	5.6	1.25	5.6	1.25	4.1	1.25	4.1	1.25	2.7	1.25	0.6
$M_{max}$ (KNm)	80.04	179.21	80.04	179.21	80.04	179.21	80.04	179.21	80.04	179.21	80.04	179.21	80.04	179.21	80.04	80.04
$M_{min}$ (KNm)	54.883	80.04	54.883	80.04	54.883	80.04	54.883	80.04	54.883	80.04	54.883	80.04	54.883	80.04	54.883	54.883
$V_D$ (KN)	38.501	43.2	39.12	43.2	35.637	39.12	35.637	39.12	18.784	26.813	18.784	26.813	31.748	31.748	50.521	50.521
$V_L$ (KN)	4.155	17.674	5.947	17.674	16.823	5.947	16.823	5.947	1.646	12.543	1.646	12.543	10.172	10.172	3.988	3.988
$V_E$ (KN)	1.495	2.897	1.068	2.897	0.454	1.068	0.454	1.068	1.483	0.403	1.483	0.403	1.175	1.175	2.952	2.952
$V_u$ (KN)	58.516	90.295	68.402	90.295	83.967	68.402	83.967	68.402	44.877	70.118	44.877	70.118	103.923	103.923	253.997	253.997
$V_u'$ (KN)	52.041	77.534	52.793	77.534	201.325	52.793	201.325	52.793	28.207	43.836	28.207	43.836	49.883	49.883	70.959	70.959
$V_u$ pakat (KN)	52.041	77.534	52.793	77.534	83.967	52.793	83.967	52.793	28.207	43.836	28.207	43.836	49.883	49.883	70.959	70.959
$\phi$	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
$f_c$ (MPa)	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
$f_y$ (MPa)	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
$b$ (mm)	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
$h$ (mm)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
$d$ (mm)	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360
$V_c$ (KN)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
$V_s$ min (KN)	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
$V_u/\phi$ (KN)	86.735	129.223	87.988	129.223	139.945	87.988	139.945	87.988	47.012	73.060	47.012	73.060	83.138	83.138	118.265	118.265
$\phi$ (mm)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Kaki	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
$\Delta v$ (mm2)	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571
$S_1$ (mm)	100.183	67.243	98.756	67.243	62.091	98.756	62.091	98.756	362.056	362.056	362.056	362.056	362.056	362.056	362.056	362.056
$S_2$ (mm)	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
$S_3$ (mm)	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
$S$ pakat (mm)	$P10-100$	$P10-65$	$P10-95$	$P10-65$	$P10-95$	$P10-65$	$P10-95$	$P10-65$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-70$
$V_u'$ (KN)	-31.061	-37.541	-26.239	-37.541	-26.199	-37.541	-26.199	-37.541	1.974	-12.529	1.974	-12.529	15.891	15.891	139.528	139.528
$2 \cdot h$ (m)	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
$x$ (m)	3.214	2.806	1.859	2.806	1.332	1.859	1.332	1.859	0	0.911	0	0.911	0	0	0	0
$v$ (KN)	44.311	66.829	41.503	66.829	68.229	41.503	68.229	41.503	21.114	32.838	21.114	32.838	23.920	23.920	22.856	22.856
$V_u$ pakat (KN)	44.311	66.829	41.503	66.829	68.229	41.503	68.229	41.503	21.114	32.838	21.114	32.838	23.920	23.920	22.856	22.856
$V_c$ (KN)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
$V_s$ min (KN)	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
$V_u/\phi$ (KN)	73.851	111.382	69.171	111.382	113.715	69.171	113.715	69.171	35.190	54.730	35.190	54.730	39.867	39.867	38.094	38.094
$\phi$ (mm)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Kaki	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
$\Delta v$ (mm2)	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571	100.571
$S_1$ (mm)	362.056	169.112	362.056	169.112	161.767	362.056	161.767	362.056	362.056	362.056	362.056	362.056	362.056	362.056	362.056	362.056
$S_2$ (mm)	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
$S_3$ (mm)	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
$S$ pakat (mm)	$P10-180$	$P10-165$	$P10-180$	$P10-165$	$P10-180$	$P10-180$	$P10-165$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$	$P10-180$

**PERENCANAAN TULANGAN GESER BALOK SLOOF**

Balok	S 1 (9 m)	S 2 (6 m)	S 3 (4,5 m)
<b>Tumpuan (di dalam daerah sendi plastis)</b>			
$\phi$	1,25	1,25	1,25
ln (m)	8,75	5,75	4,25
Miaak (KNm)	190,318	131,234	131,234
Miak (KNm)	131,234	131,234	131,234
VD (KN)	64,233	48,361	27,724
VL (KN)	0,226	0,226	0,396
VE (KN)	7,039	0,051	20,751
Vu (KN)	99,837	90,957	83,564
Vu' (KN)	99,098	52,206	118,903
Vu pakat (KN)	99,098	52,206	83,564
$\phi$	0,6	0,6	0,6
$f_c$ (MPa)	25	25	25
$f_v$ (MPa)	240	240	240
b (mm)	250	250	250
h (mm)	500	500	500
d (mm)	460	460	460
Vc (KN)	96	96	96
Vs min (KN)	38	38	38
Vu / $\phi$ (KN)	165,163	87,010	139,273
$\phi$ (mm)	10	10	10
Kaki	2	2	2
$\Delta v$ (mm <sup>2</sup> )	157,143	157,143	157,143
S 1 (mm)	105,039	456,542	124,565
S 2 (mm)	230	230	180
S 3 (mm)	600	600	600
S pakat (mm)	P10-105	P10-230	P10-120
<b>Lapangan (di luar daerah sendi plastis)</b>			
Vu'' (KN)	-35,527	-11,076	24,512
2.h (m)	1,00	1,00	1,00
x (m)	2,309	1,006	0
y (KN)	83,712	41,201	45,158
Vu pakat (KN)	83,712	41,201	45,158
Vc (KN)	96	96	96
Vs min (KN)	38	38	38
Vu / $\phi$ (KN)	139,521	68,668	75,263
$\phi$ (mm)	10	10	10
Kaki	2	2	2
$\Delta v$ (mm <sup>2</sup> )	157,143	157,143	157,143
S 1 (mm)	398,626	456,542	456,542
S 2 (mm)	230	230	230
S 3 (mm)	600	600	600
S pakat (mm)	P10-230	P10-230	P10-230

## PERENCANAAN KOLOM

## 1.a. Perhitungan momen rencana (Mc) arah x

Btg	Ujung Kolom	I.1	KL Tengah		KL Tepi		k.l/r	Perbesaran Momen	PD (KN)	PL (KN)	PE (KN)	Pu (KN)	EI <sub>1</sub> (KNm <sup>2</sup> )	EI <sub>2</sub> (KNm <sup>2</sup> )	EI Pakai (KNm <sup>2</sup> )	Pc (KN)	δb
			ψ	K	ψ	K											
K1A=K10A	Atas	1			4.041	1.8	36	OK	458.270	71.480	101.721	664.293	79056.301	35998.892	79056.301	18596.695	1.063
	Bawah				2.02	1.8	36	OK	493.893	71.480	101.721	707.040	78608.650	35795.050	78608.650	18491.392	1.068
	Atas	2			4.041	2.1	42	OK	326.611	57.659	50.696	484.187	79858.813	36364.321	79858.813	13801.571	1.062
K2A=K9A	Bawah				4.041	2.1	42	OK	362.234	57.659	50.696	526.935	79182.382	36056.303	79182.382	13684.668	1.069
	Atas	3			2.02	1.8	36	OK	197.831	44.726	17.729	308.958	81714.254	37209.211	81714.254	19221.934	1.028
	Bawah				4.041	1.8	36	OK	233.453	44.726	17.729	351.705	80433.788	36626.141	80433.788	18920.726	1.032
K3A=8A	Atas	1			2.02	1.45	29	OK	892.961	169.071	40.842	1342.066	80348.616	36587.357	80348.616	29126.391	1.083
	Bawah				1.01	1.45	29	OK	928.584	169.071	40.842	1384.813	80071.588	36461.210	80071.588	29025.968	1.086
	Atas	2			2.02	1.6	32	OK	552.522	101.475	20.110	825.387	80132.202	36488.811	80132.202	23856.756	1.061
K4A=7A	Bawah				2.02	1.6	32	OK	588.145	101.475	20.110	868.134	79704.089	36293.867	79704.089	23729.299	1.065
	Atas	3			1.01	1.45	29	OK	186.140	27.339	0.295	267.111	78694.544	35834.163	78694.544	28526.790	1.016
	Bawah				2.02	1.45	29	OK	221.763	27.339	0.295	309.859	77738.075	35398.627	77738.075	28180.069	1.019
K5A=K6A	Atas	1			2.02	1.45	29	OK	973.082	199.660	41.942	1487.154	80944.764	36858.817	80944.764	29342.495	1.092
	Bawah				1.01	1.45	29	OK	1008.705	199.660	41.942	1529.902	80673.547	36735.317	80673.547	29244.179	1.096
	Atas	2			2.02	1.6	32	OK	604.142	121.631	21.098	919.579	80800.753	36793.241	80800.753	24055.796	1.068
K6A=7A	Bawah				2.02	1.6	32	OK	639.765	121.631	21.098	962.327	80378.243	36600.848	80378.243	23930.007	1.072
	Atas	3			1.01	1.45	29	OK	190.354	29.226	0.107	275.186	78959.541	35954.831	78959.541	28622.851	1.016
	Bawah				2.02	1.45	29	OK	225.976	29.226	0.107	317.933	77985.937	35511.493	77985.937	28269.919	1.019
K5A=K6A	Atas	1			1.695	1.4	28	OK	814.960	155.080	46.069	1226.081	80384.872	36603.867	80384.872	31258.097	1.070
	Bawah				0.847	1.4	28	OK	850.583	155.080	46.069	1268.828	80081.131	36465.555	80081.131	31139.985	1.073
	Atas	2			1.695	1.5	30	OK	497.849	92.913	23.548	746.079	80245.593	36540.445	80245.593	27182.097	1.048
K5A=K6A	Bawah				1.695	1.5	30	OK	533.472	92.913	23.548	788.827	79767.285	36322.644	79767.285	27020.076	1.051
	Atas	3			0.847	1.4	28	OK	151.105	23.744	0.051	219.317	79102.002	36019.702	79102.002	30759.246	1.012
	Bawah				1.695	1.4	28	OK	186.728	23.744	0.051	262.064	77897.130	35471.054	77897.130	30290.725	1.015
K5A=K6A	Atas	1			3.389	2.3	46	OK	624.286	77.408	46.311	872.996	77767.361	35411.963	77767.361	11204.332	1.149
	Bawah				8.082	2.3	46	OK	642.097	77.408	46.311	894.370	77625.727	35347.469	77625.727	11183.926	1.154
	Atas	2			2.542	2.18	43.6	OK	389.614	52.015	23.967	550.760	78155.819	35588.850	78155.819	12534.084	1.079
K5A=K6A	Bawah				8.082	2.18	43.6	OK	407.425	52.015	23.967	572.134	77917.926	35480.523	77917.926	12495.933	1.083
	Atas	1			8.082	1.95	39	OK	647.752	77.408	46.311	901.155	77582.264	35327.677	77582.264	15550.255	1.107
	Bawah				1.695	1.95	39	OK	665.563	77.408	46.311	922.528	77449.858	35267.385	77449.858	15523.716	1.110
K5A=K6A	Atas	2			8.082	2.18	43.6	OK	413.080	52.015	23.967	578.919	77846.356	35447.934	77846.356	12484.455	1.084
	Bawah				2.542	2.18	43.6	OK	430.891	52.015	23.967	600.292	77632.292	35350.458	77632.292	12450.125	1.087

K.5A <sup>+</sup> =K.6A <sup>+</sup>	Atlas	3			0.847	1.5	30	OK	159.900	26.735	0.382	234.656	79496.640	36199.403	79496.640	79496.640	26928.399	1.015
	Bawah				2.542	1.5	30	OK	195.523	26.735	0.382	277.403	78286.802	35648.494	78286.802	78286.802	26518.583	1.018
K.2C=K.9C	Atlas	1	2.02	1.45			29	OK	1051.480	277.179	3.461	1705.262	83050.311	37817.594	83050.311	83050.311	30105.756	1.104
	Bawah						29	OK	1087.103	277.179	3.461	1748.009	82747.829	37679.857	82747.829	82747.829	29996.106	1.108
K.3C=K.8C	Atlas	2	2.02	1.6			32	OK	498.717	137.606	4.162	818.630	83476.362	38011.600	83476.362	83476.362	24852.371	1.058
	Bawah						32	OK	534.339	137.606	4.162	861.377	82837.651	37720.758	82837.651	82837.651	24662.215	1.062
K.4C=K.7C	Atlas	1	2.02	1.45			29	OK	1026.978	275.755	6.102	1673.581	83220.662	37895.165	83220.662	83220.662	30167.509	1.102
	Bawah						29	OK	1062.601	275.755	6.102	1716.328	82907.136	37752.399	82907.136	82907.136	30053.855	1.105
K.5C=K.6C	Atlas	2	2.02	1.6			32	OK	490.028	137.201	7.387	807.556	83615.762	38075.077	83615.762	83615.762	24893.873	1.057
	Bawah						32	OK	525.651	137.201	7.387	850.303	82959.732	37776.348	82959.732	82959.732	24698.561	1.061
K.11:=K.10I	Atlas	1	1.695	1.4			28	OK	930.477	237.048	6.716	1495.849	82740.416	37676.481	82740.416	82740.416	32174.063	1.084
	Bawah						28	OK	966.100	237.048	6.716	1538.597	82408.030	37525.127	82408.030	82408.030	32044.813	1.087
K.2F:=K.9F	Atlas	2	1.695	1.5			30	OK	441.183	117.554	8.090	717.506	83149.254	37862.649	83149.254	83149.254	28165.672	1.044
	Bawah						30	OK	476.806	117.554	8.090	760.254	82449.958	37544.219	82449.958	82449.958	27928.795	1.048
K.3F:=K.8F	Atlas	1	1.695	1.4			28	OK	900.827	212.772	8.070	1421.428	82080.095	37375.799	82080.095	82080.095	31917.294	1.080
	Bawah						28	OK	936.450	212.772	8.070	1464.175	81755.368	37227.932	81755.368	81755.368	31791.022	1.083
K.4F:=K.7F	Atlas	2	1.695	1.5			30	OK	428.458	105.603	8.834	683.115	82447.361	37543.036	82447.361	82447.361	27927.915	1.042
	Bawah						30	OK	464.081	105.603	8.834	725.862	81767.773	37233.581	81767.773	81767.773	27697.714	1.046
K.5F:=K.6F	Atlas	1			4.041	1.8	36	OK	462.439	71.971	101.980	670.079	79042.642	35992.672	79042.642	79042.642	18593.482	1.064
	Bawah						36	OK	498.061	71.971	101.980	712.827	78599.565	35790.913	78599.565	78599.565	18489.255	1.069
K.6F:=K.5F	Atlas	2			4.041	2.1	42	OK	328.532	57.877	51.094	486.842	79844.598	36357.848	79844.598	79844.598	13799.115	1.062
	Bawah						42	OK	364.155	57.877	51.094	529.589	79172.922	36051.996	79172.922	79172.922	13683.033	1.069
K.7F:=K.4F	Atlas	3			2.02	1.8	36	OK	198.491	44.798	18.001	309.866	81700.101	37202.766	81700.101	81700.101	19218.605	1.028
	Bawah						36	OK	234.114	44.798	18.001	352.613	80424.974	36622.127	80424.974	80424.974	18918.652	1.032
K.8F:=K.3F	Atlas	1			2.02	1.45	29	OK	896.823	169.536	40.699	1347.445	80337.349	36582.226	80337.349	80337.349	29122.307	1.084
	Bawah						29	OK	932.446	169.536	40.699	1390.192	80061.810	36456.758	80061.810	80061.810	29022.424	1.087
K.9F:=K.2F	Atlas	2			2.02	1.6	32	OK	554.643	101.746	19.985	828.365	80124.030	36485.090	80124.030	80124.030	23854.323	1.061
	Bawah						32	OK	590.266	101.746	19.985	871.112	79697.856	36291.029	79697.856	79697.856	23727.444	1.065
K.10F:=K.1F	Atlas	3			1.01	1.45	29	OK	186.126	27.338	0.305	267.091	78694.691	35834.229	78694.691	78694.691	28526.843	1.016
	Bawah						29	OK	221.748	27.338	0.305	309.839	77738.154	35398.663	77738.154	77738.154	28180.098	1.019
K.11F:=K.11F	Atlas	1			2.02	1.45	29	OK	978.812	200.182	41.931	1494.865	80919.868	36847.481	80919.868	80919.868	29333.470	1.093
	Bawah						29	OK	1014.435	200.182	41.931	1537.612	80650.826	36724.970	80650.826	80650.826	29235.942	1.096
K.12F:=K.12F	Atlas	2			2.02	1.6	32	OK	607.001	121.803	21.022	923.285	80775.870	36781.910	80775.870	80775.870	24048.387	1.068
	Bawah						32	OK	642.624	121.803	21.022	966.033	80356.320	36590.865	80356.320	80356.320	23923.480	1.072
K.13F:=K.13F	Atlas	3			1.01	1.45	29	OK	190.072	29.104	0.043	274.653	78943.103	35947.346	78943.103	78943.103	28616.892	1.016
	Bawah						29	OK	225.695	29.104	0.043	317.400	77970.432	35504.433	77970.432	77970.432	28264.299	1.019

K41:=K7I:	Atas	1			1.695	1.4	28	OK	877.674	172.698	46.025	1329.526	80629.594	36715.302	80629.594	31353.258	1.076
	Bawah				0.847	1.4	28	OK	913.296	172.698	46.025	1372.273	80339.362	36583.143	80339.362	31240.400	1.079
	Atas	2			1.695	1.5	30	OK	540.613	106.065	23.554	818.440	80607.981	36705.461	80607.981	27304.851	1.053
	Bawah				1.695	1.5	30	OK	576.235	106.065	23.554	861.187	80147.818	36495.922	80147.818	27148.977	1.056
	Atas	3			0.847	1.4	28	OK	157.083	25.701	0.013	229.622	79356.814	36135.732	79356.814	30858.331	1.013
	Bawah				1.695	1.4	28	OK	192.705	25.701	0.013	272.369	78150.492	35586.424	78150.492	30389.246	1.015
K5I:=K6I:	Atas	1			1.695	1.4	28	OK	1011.068	209.108	47.391	1547.855	81005.711	36886.570	81005.711	31499.514	1.089
	Bawah				0.847	1.4	28	OK	1046.691	209.108	47.391	1590.603	80742.780	36766.842	80742.780	31397.271	1.092
	Atas	2			1.695	1.5	30	OK	603.695	124.165	24.340	923.099	80963.134	36867.182	80963.134	27425.154	1.059
	Bawah				1.695	1.5	30	OK	639.318	124.165	24.340	965.846	80533.335	36671.470	80533.335	27279.565	1.063
	Atas	3			0.847	1.4	28	OK	181.800	33.763	0.063	272.180	80210.755	36524.581	80210.755	31190.391	1.015
	Bawah				1.695	1.4	28	OK	217.422	33.763	0.063	314.927	79028.940	35986.432	79028.940	30730.835	1.017



## 1.b. Perhitungan momen rencana (Mc) arah y

Btg	Ujung Kolom	L1	KL Tengah		KL Tepi		k.l/r	Perbesar Momen	PD (KN)	PL (KN)	PE (KN)	Pu (KN)	EI <sub>1</sub> (KNm <sup>2</sup> )	EI <sub>2</sub> (KNm <sup>2</sup> )	EI Pakai (KNm <sup>2</sup> )	Pc (KN)	δb
			ψ	K	ψ	K											
K1A=K10A	Atas	1			2.918	1.65	33	OK	458.270	71.480	101.721	664.293	79056.301	35998.892	79056.301	22131.604	1.053
	Bawah				1.459	1.65	33	OK	493.893	71.480	101.721	707.040	78608.650	35795.050	78608.650	22006.285	1.057
	Atas	2			2.918	1.8	36	OK	326.611	57.659	50.696	484.187	79838.813	36364.321	79838.813	18785.472	1.045
	Bawah				2.918	1.8	36	OK	362.234	57.659	50.696	526.935	79182.382	36056.303	79182.382	18626.353	1.049
	Atas	3			1.459	1.65	33	OK	197.831	44.726	17.729	308.958	81714.254	37209.211	81714.254	22875.690	1.023
	Bawah				2.918	1.65	33	OK	233.453	44.726	17.729	351.705	80433.788	36626.141	80433.788	22517.228	1.027
K1B=K10B	Atas	1			1.993	1.9	38	OK	831.683	164.882	73.999	1261.831	80685.369	36740.700	80685.369	17034.597	1.141
	Bawah				0.997	1.9	38	OK	867.305	164.882	73.999	1304.578	80377.902	36600.693	80377.902	16969.684	1.147
	Atas	2			1.993	1.6	32	OK	500.290	101.921	38.071	763.422	80890.346	36834.038	80890.346	24082.469	1.056
	Bawah				1.993	1.6	32	OK	535.913	101.921	38.071	806.169	80380.687	36601.961	80380.687	23930.735	1.059
	Atas	3			0.997	1.9	38	OK	119.112	27.193	13.001	186.443	81794.763	37245.871	81794.763	17268.817	1.018
	Bawah				1.993	1.9	38	OK	154.735	27.193	13.001	229.190	79828.002	36350.291	79828.002	16853.587	1.023
K1D=K10D	Atas	1			1.993	1.9	38	OK	828.267	164.496	73.817	1257.115	80698.576	36746.714	80698.576	17037.385	1.140
	Bawah				0.997	1.9	38	OK	863.890	164.496	73.817	1299.862	80389.466	36605.958	80389.466	16972.125	1.146
	Atas	2			1.993	1.6	32	OK	498.327	101.691	37.962	760.698	80903.086	36839.839	80903.086	24086.262	1.056
	Bawah				1.993	1.6	32	OK	533.950	101.691	37.962	803.445	80390.887	36606.605	80390.887	23933.771	1.059
	Atas	3			0.997	1.9	38	OK	118.448	27.111	12.966	185.516	81816.133	37255.602	81816.133	17273.328	1.018
	Bawah				1.993	1.9	38	OK	154.071	27.111	12.966	228.263	79836.731	36354.266	79836.731	16855.430	1.023
K1E=K10E	Atas	1			2.918	1.65	33	OK	462.439	71.971	101.980	670.079	79042.642	35992.672	79042.642	22127.780	1.053
	Bawah				1.459	1.65	33	OK	498.061	71.971	101.980	712.827	78599.565	35790.913	78599.565	22003.742	1.057
	Atas	2			2.918	1.8	36	OK	328.532	57.877	51.094	486.842	79844.598	36357.848	79844.598	18782.128	1.045
	Bawah				2.918	1.8	36	OK	364.155	57.877	51.094	529.589	79172.922	36051.996	79172.922	18624.128	1.050
	Atas	3			1.459	1.65	33	OK	198.491	44.798	18.001	309.866	81700.101	37202.766	81700.101	22871.728	1.023
	Bawah				2.918	1.65	33	OK	234.114	44.798	18.001	352.613	80424.974	36622.127	80424.974	22514.760	1.027
K2A=K9A	Atas	1			6.286	1.95	39	OK	892.961	169.071	40.842	1342.066	80348.616	36587.357	80348.616	16104.730	1.161
	Bawah				3.143	1.95	39	OK	928.584	169.071	40.842	1384.813	80071.588	36461.210	80071.588	16049.204	1.168
	Atas	2			6.286	2.43	48.6	OK	552.522	101.475	20.110	823.387	80132.202	36488.811	80132.202	10342.816	1.153
	Bawah				6.286	2.43	48.6	OK	588.145	101.475	20.110	868.134	79704.089	36293.867	79704.089	10287.559	1.164
	Atas	3			3.143	1.95	39	OK	186.140	27.339	0.295	267.111	78694.544	35834.163	78694.544	15773.195	1.029
	Bawah				6.286	1.95	39	OK	221.763	27.339	0.295	309.859	77738.075	35398.627	77738.075	15581.485	1.034
K2C=K9C	Atas	1	3.143	1.65			33	OK	1051.480	277.179	3.461	1705.262	83050.311	37817.594	83050.311	23249.716	1.139
	Bawah				1.571	1.65	33	OK	1087.103	277.179	3.461	1748.009	82747.829	37679.857	82747.829	23165.037	1.144
	Atas	2	3.143	1.85			37	OK	498.717	137.606	4.162	818.630	83476.362	38011.600	83476.362	18589.556	1.079
	Bawah				3.143	1.85	37	OK	534.339	137.606	4.162	861.377	82837.651	37720.758	82837.651	18447.121	1.084

K2I=K9I:	Atlas	1			6.286	1.95	39	OK	186.126	27.338	0.305	267.091	78694.691	35834.229	78694.691	15773.225	1.029
	Bawah				3.143	1.95	39	OK	221.748	27.338	0.305	309.839	77738.154	35398.663	77738.154	15581.501	1.034
	Atlas	2			6.286	2.43	48.6	OK	554.643	101.746	19.985	828.365	80124.030	36485.090	80124.030	10341.761	1.154
	Bawah				6.286	2.43	48.6	OK	590.266	101.746	19.985	871.112	79697.856	36291.029	79697.856	10286.754	1.164
	Atlas	3			3.143	1.95	39	OK	186.126	27.338	0.305	267.091	78694.691	35834.229	78694.691	15773.225	1.029
	Bawah				6.286	1.95	39	OK	221.748	27.338	0.305	309.839	77738.154	35398.663	77738.154	15581.501	1.034
	Atlas	1			6.286	1.95	39	OK	973.082	199.660	41.942	1487.154	80944.764	36838.817	80944.764	16224.220	1.180
	Bawah				3.143	1.95	39	OK	1008.705	199.660	41.942	1529.902	80673.547	36735.317	80673.547	16169.858	1.187
	Atlas	2			6.286	2.43	48.6	OK	604.142	121.631	21.098	919.579	80800.753	36793.241	80800.753	10429.107	1.172
	Bawah				6.286	2.43	48.6	OK	639.765	121.631	21.098	962.327	80378.243	36600.848	80378.243	10374.573	1.183
K3C=K8C	Atlas	3			3.143	1.95	39	OK	190.354	29.226	0.107	275.186	78959.541	35954.831	78959.541	15826.310	1.030
	Bawah				6.286	1.95	39	OK	225.976	29.226	0.107	317.933	77985.937	35511.493	77985.937	15631.165	1.035
	Atlas	1	3.143	1.65			33	OK	1026.978	275.755	6.102	1673.581	83220.662	37895.165	83220.662	23297.406	1.136
	Bawah				6.286	1.95	39	OK	1062.601	275.755	6.102	1716.328	82907.136	37752.399	82907.136	23209.635	1.141
	Atlas	2	3.143	1.85			37	OK	490.028	137.201	7.387	807.556	83615.762	38075.077	83615.762	18620.399	1.078
	Bawah				6.286	1.95	39	OK	525.651	137.201	7.387	850.303	82959.732	37776.348	82959.732	18474.307	1.083
	Atlas	1			6.286	1.95	39	OK	978.812	200.182	41.931	1494.865	80919.868	36847.481	80919.868	16219.230	1.181
	Bawah				3.143	1.95	39	OK	1014.435	200.182	41.931	1537.612	80650.826	36724.970	80650.826	16165.304	1.188
	Atlas	2			6.286	2.43	48.6	OK	607.001	121.803	21.022	923.285	80775.870	36781.910	80775.870	10425.896	1.173
	Bawah				6.286	2.43	48.6	OK	642.624	121.803	21.022	966.033	80356.320	36590.865	80356.320	10371.744	1.184
K4A=K7A	Atlas	3			3.143	1.95	39	OK	190.072	29.104	0.043	274.653	78943.103	35947.346	78943.103	15823.015	1.030
	Bawah				6.286	1.95	39	OK	225.695	29.104	0.043	317.400	77970.432	35504.433	77970.432	15628.057	1.035
	Atlas	1			6.286	1.95	39	OK	814.960	155.080	46.069	1226.081	80384.872	36603.867	80384.872	16111.997	1.145
	Bawah				3.143	1.95	39	OK	850.583	155.080	46.069	1268.828	80081.131	36465.555	80081.131	16051.117	1.152
	Atlas	2			6.286	2.43	48.6	OK	497.849	92.913	23.548	746.079	80245.593	36540.445	80245.593	10357.452	1.136
	Bawah				6.286	2.43	48.6	OK	533.472	92.913	23.548	788.827	79767.285	36322.644	79767.285	10295.716	1.146
	Atlas	3			3.143	1.95	39	OK	151.105	23.744	0.051	219.317	79102.002	36019.702	79102.002	15854.864	1.024
	Bawah				6.286	1.95	39	OK	186.728	23.744	0.051	262.064	77897.130	35471.054	77897.130	15613.365	1.029
	Atlas	1	3.143	1.65			33	OK	930.477	237.048	6.716	1495.849	82740.416	37676.481	82740.416	23162.962	1.121
	Bawah				6.286	1.95	39	OK	966.100	237.048	6.716	1538.597	82408.030	37525.127	82408.030	23069.911	1.125
K4I=K7I:	Atlas	1			6.286	1.95	39	OK	441.183	117.554	8.090	717.506	83149.254	37862.649	83149.254	18516.512	1.069
	Bawah				3.143	1.95	39	OK	476.806	117.554	8.090	760.254	82449.958	37544.219	82449.958	18360.786	1.074
	Atlas	2			6.286	1.95	39	OK	157.083	25.701	0.013	229.622	79356.814	36135.732	79356.814	15905.938	1.025
	Bawah				3.143	1.95	39	OK	192.705	25.701	0.013	272.369	78150.492	35586.424	78150.492	15664.148	1.030
	Atlas	2			6.286	2.43	48.6	OK	540.613	106.065	23.554	818.440	80607.981	36705.461	80607.981	10404.226	1.151
	Bawah				6.286	2.43	48.6	OK	576.235	106.065	23.554	861.187	80147.818	36495.922	80147.818	10344.832	1.161
	Atlas	3			3.143	1.95	39	OK	157.083	25.701	0.013	229.622	79356.814	36135.732	79356.814	15905.938	1.025
	Bawah				6.286	1.95	39	OK	192.705	25.701	0.013	272.369	78150.492	35586.424	78150.492	15664.148	1.030

K5A=K6A	Atlas	1		12.571	4.5	90	OK	624.286	77.408	46.311	872.996	77767.361	35411.963	77767.361	2926.959	1.988
	Bawah			123095.238	4.5	90	OK	642.097	77.408	46.311	894.370	77625.727	35347.469	77625.727	2921.628	2.042
	Atlas	2		9.429	4.3	86	OK	389.614	52.015	23.967	550.760	78155.819	35388.850	78155.819	3221.578	1.398
	Bawah			246190.476	4.3	86	OK	407.425	52.015	23.967	572.134	77917.926	35480.523	77917.926	3211.772	1.422
K5A=K6A'	Atlas	1		123095.238	3.5	70	OK	647.752	77.408	46.311	901.155	77582.264	35327.677	77582.264	4826.926	1.452
	Bawah			6.286	3.5	70	OK	665.563	77.408	46.311	922.528	77449.858	35267.385	77449.858	4818.688	1.469
	Atlas	2		246190.476	4.3	86	OK	413.080	52.015	23.967	578.919	77846.356	35447.934	77846.356	3208.822	1.430
	Bawah			9.429	4.3	86	OK	430.891	52.015	23.967	600.292	77632.292	35350.458	77632.292	3199.999	1.455
K5A"=K6A"	Atlas	3		3.143	2.9	58	OK	159.900	26.735	0.382	234.656	79496.640	36199.403	79496.640	7204.387	1.057
	Bawah			184642.857	2.9	58	OK	195.523	26.735	0.382	277.403	78286.802	35648.494	78286.802	7094.746	1.070
	Atlas	1	3.143	1.65		33	OK	900.827	212.772	8.070	1421.428	82080.095	37375.799	82080.095	22978.107	1.115
	Bawah					33	OK	936.450	212.772	8.070	1464.175	81755.368	37227.932	81755.368	22887.200	1.119
K5C=K6C	Atlas	2	3.143	1.85		37	OK	428.458	105.603	8.834	683.115	82447.361	37543.036	82447.361	18360.207	1.066
	Bawah					37	OK	464.081	105.603	8.834	725.862	81767.773	37233.581	81767.773	18208.870	1.071
	Atlas	1		6.286	1.95	39	OK	1011.068	209.108	47.391	1547.855	81005.711	36886.570	81005.711	16236.436	1.189
	Bawah			3.143	1.95	39	OK	1046.691	209.108	47.391	1590.603	80742.780	36766.842	80742.780	16183.735	1.196
K5I=K6I	Atlas	2		6.286	2.43	48.6	OK	603.695	124.165	24.340	923.099	80963.134	36867.182	80963.134	10450.066	1.173
	Bawah			6.286	2.43	48.6	OK	639.318	124.165	24.340	965.846	80533.335	36671.470	80533.335	10394.591	1.183
	Atlas	3		3.143	1.95	39	OK	181.800	33.763	0.063	272.180	80210.755	36524.581	80210.755	16077.098	1.029
	Bawah			6.286	1.95	39	OK	217.422	33.763	0.063	314.927	79028.940	35986.432	79028.940	15840.220	1.034





## 2.a. Perhitungan momen lentur dan aksial kolom arah x

Big	Ujung Kolom	I4	$\Sigma P_u$ (KN)	$\Sigma P_c$ (KN)	$\delta_s$	MD (KNm)	ML (KNm)	ME (KNm)	M <sub>ex</sub> (KNm)	Rv	M <sub>nak, b<sub>s</sub>ki</sub> (KNm)	M <sub>nak, b<sub>s</sub>ka</sub> (KNm)	L <sub>b<sub>s</sub>ki</sub> (m)	L <sub>b<sub>s</sub>ka</sub> (m)	Nu <sub>k1x</sub> (KN)	Nu <sub>k2x</sub> =Nu <sub>k2y</sub> (KN)	Nu <sub>k</sub> pakai (KN)
K1A=K10A	Atas	1	12987,489	270156,529	1,087	19,948	1,280	0,254	27,906	1	0	234,175	0	6	590,389	983,466	590,389
	Bawah		13414,962	269218,332	1,091	31,433	5,790	0,465	50,689	1	0	131,234	0	6	612,780	1020,870	612,780
	Atas	2	8209,823	227829,518	1,064	36,922	7,671	0,561	60,692	1	0	234,175	0	6	437,634	616,405	437,634
	Bawah		8637,295	226620,215	1,068	40,203	8,257	1,638	67,418	1	0	234,175	0	6	475,038	653,809	475,038
	Atas	3	2610,454	268118,439	1,016	14,575	5,803	2,753	30,310	1	158,839	234,172	1,80	6	366,048	329,146	329,146
	Bawah		3037,927	264360,045	1,020	23,501	4,242	2,741	38,902	1	0	234,175	0	6	326,238	366,550	326,238
K2A=K9A	Atas	1	12987,489	270156,529	1,087	3,274	1,021	0,071	6,102	1	158,839	234,175	6	6	1172,448	1286,670	1172,448
	Bawah		13414,962	269218,332	1,091	11,580	3,869	0,222	22,062	1	131,234	131,234	6	6	1190,813	1324,074	1190,813
	Atas	2	8209,823	227829,518	1,064	12,295	5,939	0,563	26,340	1	158,839	234,175	6	6	744,012	771,159	744,012
	Bawah		8637,295	226620,215	1,068	13,009	5,078	0,464	25,772	1	158,839	234,175	6	6	781,415	808,563	781,415
	Atas	3	2610,454	268118,439	1,016	34,461	6,026	2,676	54,524	1	158,839	234,175	6	6	281,468	225,391	225,391
	Bawah		3037,927	264360,045	1,020	27,818	8,117	4,699	52,026	1	158,839	234,175	6	6	318,872	262,795	262,795
K3A=8A	Atas	1	12987,489	270156,529	1,087	0,210	0,036	0,272	0,634	1	158,839	234,175	6	6	1288,694	1407,535	1288,694
	Bawah		13414,962	269218,332	1,091	0,270	0,320	0,394	1,345	1	131,234	131,234	6	6	1307,060	1444,939	1307,060
	Atas	2	8209,823	227829,518	1,064	2,266	1,027	1,761	6,533	1	158,839	234,175	6	6	819,376	850,673	819,376
	Bawah		8637,295	226620,215	1,068	2,665	0,903	0,636	5,656	1	158,839	234,175	6	6	856,780	888,077	856,780
	Atas	3	2610,454	268118,439	1,016	7,542	0,371	2,191	12,028	1	158,839	234,175	6	6	287,873	231,008	231,008
	Bawah		3037,927	264360,045	1,020	0,487	0,722	2,868	4,698	1	158,839	234,175	6	6	325,277	268,412	268,412
K4A=7A	Atas	1	12987,489	270156,529	1,087	10,903	1,691	0,189	17,098	1	158,839	306,789	6	4,50	1101,360	1212,033	1101,360
	Bawah		13414,962	269218,332	1,091	18,506	4,832	0,153	32,285	1	131,234	131,234	6	4,50	1100,602	1249,437	1100,602
	Atas	2	8209,823	227829,518	1,064	30,483	10,356	0,579	56,313	1	158,839	234,175	6	4,50	688,998	719,200	688,998
	Bawah		8637,295	226620,215	1,068	28,735	9,337	0,040	51,991	1	158,839	306,789	6	4,50	740,521	756,604	740,521
	Atas	3	2610,454	268118,439	1,016	26,303	6,864	1,784	44,871	1	158,839	234,175	6	4,50	252,290	183,806	183,806
	Bawah		3037,927	264360,045	1,020	26,753	8,576	2,240	48,781	1	158,839	234,175	6	4,50	289,694	221,210	221,210
K5A=K6A	Atas	1	12987,489	270156,529	1,087	1,316	4,335	0,100	9,896	1	306,789	158,839	4,50	6	819,596	931,285	819,596
	Bawah		13414,962	269218,332	1,091	2,263	0,264	0,185	3,822	1	0	234,175	0	6	789,631	949,987	789,631
	Atas	2	8209,823	227829,518	1,064	2,075	0,170	0,383	3,388	1	306,789	158,839	4,50	6	546,527	564,370	546,527
	Bawah		8637,295	226620,215	1,068	6,846	6,267	0,069	19,823	1	0	234,175	0	6	516,562	583,072	516,562
	Atas	1	12987,489	270156,529	1,087	3,350	0,242	0,181	5,074	1	0	234,175	0	6	795,568	955,924	795,568
	Bawah		13414,962	269218,332	1,091	6,430	0,370	0,055	9,281	1	131,234	131,234	4,50	6	824,776	974,626	824,776
K5A=K6A	Atas	2	8209,823	227829,518	1,064	2,649	5,097	0,836	13,172	1	0	234,175	0	6	522,499	589,009	522,499
	Bawah		8637,295	226620,215	1,068	3,451	0,109	0,386	5,104	1	306,789	158,839	4,50	6	589,868	607,711	589,868
	Atas	3	2610,454	268118,439	1,016	15,330	0,736	0,858	20,734	1	234,175	158,839	4,50	6	264,665	197,570	197,570
	Bawah		3037,927	264360,045	1,020	4,113	2,744	1,349	10,867	1	306,789	158,839	4,50	6	316,188	234,974	234,974

K2C=K9C	Atlas	1	12592.240	248729.243	1.092	21.375	2.545	0.162	32.998	1	234.175	443.851	6	6	1493.970	1409.627	1409.627	1409.627
	Bawah		12934.218	247771.593	1.095	20.115	0.461	0.017	27.569	1	131.234	131.234	6	6	1470.772	1447.031	1447.031	1447.031
	Atlas	2	6053.614	211679.662	1.050	27.754	6.365	0.929	46.991	1	234.175	443.851	6	6	767.018	685.621	685.621	685.621
	Bawah		6395.592	209974.572	1.053	23.527	5.330	0.287	39.335	1	234.175	443.851	6	6	804.422	723.025	723.025	723.025
K3C=K8C	Atlas	1	12592.240	248729.243	1.092	0.201	0.241	0.057	0.753	1	234.175	443.851	6	6	1466.748	1393.498	1393.498	1393.498
	Bawah		12934.218	247771.593	1.095	0.168	0.227	0.053	0.682	1	131.234	131.234	6	6	1443.550	1430.902	1430.902	1430.902
	Atlas	2	6053.614	211379.662	1.050	2.780	0.752	0.085	4.890	1	234.175	443.851	6	6	757.470	689.616	689.616	689.616
	Bawah		6395.592	209974.572	1.053	3.902	1.182	0.084	7.061	1	234.175	443.851	6	6	794.873	727.020	727.020	727.020
K4C=K7C	Atlas	1	12592.240	248729.243	1.092	11.075	1.961	0.033	17.844	1	443.851	158.839	6	4.50	1321.515	1254.109	1254.109	1254.109
	Bawah		12934.218	247771.593	1.095	19.575	6.220	0.039	36.392	1	131.234	131.234	6	4.50	1307.961	1291.513	1291.513	1291.513
	Atlas	2	6053.614	211379.662	1.050	32.157	11.913	0.042	60.250	1	443.851	158.839	6	4.50	682.288	620.654	620.654	620.654
	Bawah		6395.592	209974.572	1.053	39.357	14.287	0.037	73.456	1	443.851	158.839	6	4.50	719.692	658.058	658.058	658.058
K5C=K6C	Atlas	1	12592.240	248729.243	1.092	9.600	1.341	0.102	14.872	1	158.839	443.851	4.50	6	1264.893	1203.172	1203.172	1203.172
	Bawah		12934.218	247771.593	1.095	15.678	4.027	0.299	27.683	1	131.234	131.234	4.50	6	1251.339	1240.576	1240.576	1240.576
	Atlas	2	6053.614	211379.662	1.050	27.461	8.095	0.538	48.421	1	158.839	443.851	4.50	6	656.378	597.867	597.867	597.867
	Bawah		6395.592	209974.572	1.053	34.158	9.826	0.630	59.964	1	158.839	443.851	4.50	6	693.782	635.271	635.271	635.271
K11=K10I	Atlas	1	12779.541	279804.061	1.082	31.530	5.808	0.370	50.540	1	0	234.175	0	6	595.280	989.446	989.446	989.446
	Bawah		13207.013	278770.585	1.086	19.974	1.259	0.085	27.859	1	0	131.234	0	6	617.672	1026.850	1026.850	1026.850
	Atlas	2	7960.062	232863.659	1.060	40.604	8.281	0.744	66.636	1	0	234.175	0	6	439.880	620.324	620.324	620.324
	Bawah		8387.535	231524.997	1.064	36.994	7.643	0.332	60.881	1	0	234.175	0	6	477.284	657.728	657.728	657.728
	Atlas	3	2706.823	276822.123	1.017	14.559	5.799	1.978	29.499	1	158.839	234.172	1.80	6	366.817	331.057	331.057	331.057
	Bawah		3134.296	272966.261	1.020	22.912	4.150	1.242	36.495	1	0	234.175	0	6	327.008	368.461	368.461	368.461
K2E=K9I	Atlas	1	12779.541	279804.061	1.082	11.721	3.886	0.393	22.402	1	158.839	234.175	6	6	1176.991	1290.611	1290.611	1290.611
	Bawah		13207.013	278770.585	1.086	3.283	0.984	0.186	6.193	1	131.234	131.234	6	6	1195.357	1328.014	1328.014	1328.014
	Atlas	2	7960.062	232863.659	1.060	13.090	6.025	0.629	27.572	1	158.839	234.175	6	6	746.523	773.145	773.145	773.145
	Bawah		8387.535	231524.997	1.064	13.339	-5.087	0.816	9.248	1	158.839	234.175	6	6	783.927	810.549	810.549	810.549
	Atlas	3	2706.823	276822.123	1.017	33.327	5.837	1.176	51.310	1	158.839	234.175	6	6	281.451	225.417	225.417	225.417
	Bawah		3134.296	272966.261	1.020	26.287	7.887	2.886	47.879	1	158.839	234.175	6	6	318.855	262.821	262.821	262.821
K3E=K8I	Atlas	1	12779.541	279804.061	1.082	0.242	0.344	0.274	1.215	1	158.839	234.175	6	6	1295.258	1414.055	1414.055	1414.055
	Bawah		13207.013	278770.585	1.086	0.330	0.104	0.074	0.696	1	131.234	131.234	6	6	1313.624	1451.460	1451.460	1451.460
	Atlas	2	7960.062	232863.659	1.060	1.515	0.988	1.051	4.747	1	158.839	234.175	6	6	822.538	853.538	853.538	853.538
	Bawah		8387.535	231524.997	1.064	2.510	0.906	0.385	5.194	1	158.839	234.175	6	6	859.962	890.941	890.941	890.941
	Atlas	3	2706.823	276822.123	1.017	8.563	0.178	0.760	11.505	1	158.839	234.175	6	6	287.449	230.315	230.315	230.315
	Bawah		3134.296	272966.261	1.020	2.262	0.402	1.199	4.644	1	158.839	234.175	6	6	324.853	267.719	267.719	267.719

K.41:=K7E:	Atas	1	12779.541	279804.061	1.082	14.215	3.702	0.092	24.828	1	158.839	306.789	6	4.50	1185.708	1296.195	1185.708
	Bawah		13207.013	278770.585	1.086	9.225	1.278	0.059	14.215	1	131.234	131.234	6	4.50	1184.951	1333.599	1184.951
	Atas	2	7960.062	232863.659	1.060	20.093	6.966	0.174	37.296	1	158.839	234.175	6	4.50	747.710	777.940	747.710
	Bawah		8387.535	231524.997	1.064	20.650	6.886	0.080	37.881	1	158.839	306.789	6	4.50	799.233	815.344	799.233
	Atas	3	2706.823	276822.123	1.017	16.364	3.355	0.540	25.867	1	158.839	234.175	6	4.50	260.621	191.977	191.977
	Bawah		3134.296	272966.261	1.020	17.174	4.906	0.887	29.794	1	158.839	234.175	6	4.50	298.025	229.381	229.381
	Atas	1	12779.541	279804.061	1.082	24.495	8.162	0.204	46.462	1	306.789	158.839	4.50	6	1364.002	1480.228	1364.002
	Bawah		13207.013	278770.585	1.086	12.559	2.653	0.115	21.222	1	131.234	131.234	4.50	6	1363.245	1517.632	1363.245
	Atas	2	7960.062	232863.659	1.060	28.255	10.469	0.257	53.940	1	158.839	234.175	4.50	6	829.290	866.482	829.290
	Bawah		8387.535	231524.997	1.064	31.500	11.716	0.156	60.258	1	158.839	234.175	4.50	6	866.694	903.886	866.694
Atas	3	2706.823	276822.123	1.017	35.157	9.251	0.063	57.895	1	158.839	234.175	4.50	6	291.376	226.607	226.607	
Bawah		3134.296	272966.261	1.020	30.204	9.443	0.073	52.320	1	158.839	234.175	4.50	6	328.780	264.011	264.011	



## 2.b. Perhitungan momen lentur dan aksial kolom arah y

Big	Ujung Kolom	Lt	$\Sigma P_u$ (KN)	$\Sigma P_e$ (KN)	$\delta s$	MD (KNm)	ML (KNm)	ME (KNm)	Mey (KNm)	Rv	Mnak,by <sub>ki</sub> (KNm)	Mnak,by <sub>ka</sub> (KNm)	Lby <sub>ki</sub> (m)	Lby <sub>ka</sub> (m)	Nuky (KN)	Nuk <sub>s</sub> =Nuk <sub>y</sub> (KN)	Nuk pakai (KN)
K1A=K10A	Atas	1	3853.318	78331.366	1.089	13.907	2.882	78.615	108.057	1	0	306.789	0	4.50	615.891	983.466	615.891
	Bawah		4024.307	77951.835	1.094	8.896	0.411	79.144	98.568	1	0	131.234	0	4.50	619.159	1020.870	619.159
	Atas	2	2495.149	85736.332	1.051	23.373	6.455	66.133	109.603	1	0	234.175	0	4.50	449.018	616.405	449.018
	Bawah		2666.138	85114.987	1.055	18.738	5.195	41.741	76.361	1	0	306.789	0	4.50	500.541	653.809	500.541
	Atas	3	990.782	80289.564	1.021	38.691	10.857	34.189	100.176	1	234.172	158.839	1.80	4.50	399.403	329.146	329.146
	Bawah		1161.771	78741.003	1.025	0.472	0.136	11.768	12.869	1	0	234.175	0	4.50	337.622	366.550	337.622
	Atas	1	3853.318	78331.366	1.089	69.181	11.819	108.034	233.966	1	158.839	376.681	4.50	9	1113.900	1357.190	1113.900
	Bawah		4024.307	77951.835	1.094	45.804	3.515	95.493	173.976	1	131.234	131.234	4.50	9	1122.073	1394.594	1122.073
	Atas	2	2495.149	85736.332	1.051	102.878	22.146	93.510	266.026	1	158.839	508.298	4.50	9	712.625	792.219	712.625
K1D=K10D	Bawah		2666.138	85114.987	1.055	95.304	20.449	76.762	236.822	1	158.839	376.681	4.50	9	737.233	829.623	737.233
	Atas	3	990.782	80289.564	1.021	80.820	19.969	54.711	187.158	1	158.839	234.175	4.50	9	207.272	208.226	207.272
	Bawah		1161.771	78741.003	1.025	98.442	22.443	33.899	192.365	1	158.839	508.298	4.50	9	271.327	245.630	245.630
	Atas	1	3853.318	78331.366	1.089	73.941	12.402	107.956	241.394	1	376.681	158.839	9	4.50	1109.909	1352.434	1109.909
	Bawah		4024.307	77951.835	1.094	49.966	4.025	94.792	179.832	1	131.234	131.234	9	4.50	1118.082	1389.838	1118.082
	Atas	2	2495.149	85736.332	1.051	107.037	22.655	93.404	272.008	1	508.298	158.839	9	4.50	710.322	789.459	710.322
	Bawah		2666.138	85114.987	1.055	98.634	20.856	76.654	241.599	1	376.681	158.839	9	4.50	734.930	826.863	734.930
	Atas	3	990.782	80289.564	1.021	83.123	20.255	57.006	192.767	1	234.175	158.839	9	4.50	206.490	207.295	206.490
	Bawah		1161.771	78741.003	1.025	99.652	22.591	33.810	193.988	1	508.298	158.839	9	4.50	270.545	244.699	244.699
K1E=K10E	Atas	1	3853.318	78331.366	1.089	17.235	3.288	78.563	112.901	1	306.789	0	4.50	0	620.783	989.446	620.783
	Bawah		4024.307	77951.835	1.094	12.255	0.822	79.079	103.459	1	131.234	0	4.50	0	624.051	1026.850	624.051
	Atas	2	2495.149	85736.332	1.051	26.123	6.793	66.039	113.528	1	234.175	0	4.50	0	451.264	620.324	451.264
	Bawah		2666.138	85114.987	1.055	20.337	5.391	41.657	78.625	1	306.789	0	4.50	0	502.787	657.728	502.787
	Atas	3	990.782	80289.564	1.021	39.027	10.927	34.314	100.837	1	158.839	234.175	4.50	1.80	400.174	331.057	331.057
	Bawah		1161.771	78741.003	1.025	0.186	0.182	11.893	12.721	1	234.175	0	4.50	0	338.391	368.461	338.391
	Atas	1	4656.485	55127.671	1.164	92.236	27.368	69.974	260.827	1	158.839	587.798	0.90	9	1326.707	1286.670	1286.670
	Bawah		3442.661	54795.742	1.117	48.439	6.387	74.978	163.574	1	0	190.318	0	9	1171.040	1324.074	1171.040
	Atas	2	2472.382	39273.933	1.117	85.522	41.501	64.874	267.437	1	158.839	587.798	1.80	9	821.057	771.159	771.159
K2A=K9A	Bawah		2600.624	39021.434	1.125	106.075	42.467	34.592	266.105	1	158.839	587.798	0.90	9	935.675	808.563	808.563
	Atas	3	534.203	31546.420	1.029	78.817	21.637	11.697	144.988	1	234.175	0	1.80	0	337.989	225.391	225.391
	Bawah		619.697	31162.985	1.034	60.837	20.072	96.772	208.812	1	158.839	587.798	1.80	9	395.918	262.795	262.795
	Atas	1	4656.485	55127.671	1.164	2.429	0.279	91.138	109.900	1	306.789	587.798	9	9	1482.065	1409.627	1409.627
	Bawah		3442.661	54795.742	1.117	3.169	0.382	90.974	106.663	1	131.234	190.318	9	9	1463.758	1447.031	1447.031
	Atas	2	2472.382	39273.933	1.117	6.337	0.831	120.105	143.825	1	306.789	587.798	9	9	755.113	685.621	685.621
	Bawah		2600.624	39021.434	1.125	4.827	0.639	85.509	103.585	1	306.789	587.798	9	9	792.517	723.025	723.025

K2):=K9):	Atlas	1	4656.485	55127.671	1.164	96.290	27.845	69.900	246.103	1	587.798	158.839	9	0.90	435.710	225.417	225.417
	Bawah		3442.661	54795.742	1.117	53.828	7.041	74.941	162.165	1	190.318	0	9	0	280.044	262.821	262.821
	Atlas	2	2472.382	39273.933	1.117	83.738	41.174	65.044	264.663	1	587.798	158.839	9	1.80	823.569	773.145	773.145
	Bawah		2600.624	39021.434	1.125	108.834	42.817	34.676	270.837	1	587.798	158.839	9	0.90	938.186	810.549	810.549
	Atlas	3	534.203	31546.420	1.029	80.453	21.917	11.687	147.460	1	0	234.175	0	1.80	337.972	225.417	225.417
	Bawah		619.697	31162.985	1.034	71.266	21.504	96.340	223.678	1	587.798	158.839	9	1.80	395.901	262.821	262.821
K3A=K8A	Atlas	1	4874.917	55740.855	1.171	91.294	29.896	76.624	275.464	1	158.839	587.798	0.90	9	1442.953	1407.535	1407.535
	Bawah		4783.842	55544.797	1.168	45.266	6.608	82.640	173.533	1	0	190.318	0	9	1287.286	1444.939	1287.286
	Atlas	2	2650.420	39475.402	1.126	40.885	38.492	74.877	214.023	1	158.839	587.798	1.80	9	896.422	850.673	850.673
	Bawah		2778.662	39220.624	1.134	84.594	43.212	43.628	251.328	1	158.839	587.798	0.90	9	1011.039	888.077	888.077
	Atlas	3	549.838	31649.326	1.030	84.811	23.333	5.729	149.158	1	234.175	0	1.80	0	344.393	231.008	231.008
	Bawah		635.333	31259.223	1.035	60.826	21.332	137.645	253.352	1	158.839	587.798	1.80	9	402.323	268.412	268.412
K3C=K8C	Atlas	1	4874.917	55740.855	1.171	91.294	29.896	76.624	275.464	1	158.839	587.798	0.90	9	1442.953	1407.535	1407.535
	Bawah		4783.842	55544.797	1.168	45.266	6.608	82.640	173.533	1	0	190.318	0	9	1287.286	1444.939	1287.286
	Atlas	2	2650.420	39475.402	1.126	40.885	38.492	74.877	214.023	1	158.839	587.798	1.80	9	896.422	850.673	850.673
	Bawah		2778.662	39220.624	1.134	84.594	43.212	43.628	251.328	1	158.839	587.798	0.90	9	1011.039	888.077	888.077
	Atlas	3	549.838	31649.326	1.030	84.811	23.333	5.729	149.158	1	234.175	0	1.80	0	344.393	231.008	231.008
	Bawah		635.333	31259.223	1.035	60.826	21.332	137.645	253.352	1	158.839	587.798	1.80	9	402.323	268.412	268.412
K3):=K8):	Atlas	1	4874.917	55740.855	1.171	91.294	29.896	76.624	275.464	1	158.839	587.798	0.90	9	1442.953	1407.535	1407.535
	Bawah		4783.842	55544.797	1.168	45.266	6.608	82.640	173.533	1	0	190.318	0	9	1287.286	1444.939	1287.286
	Atlas	2	2650.420	39475.402	1.126	40.885	38.492	74.877	214.023	1	158.839	587.798	1.80	9	896.422	850.673	850.673
	Bawah		2778.662	39220.624	1.134	84.594	43.212	43.628	251.328	1	158.839	587.798	0.90	9	1011.039	888.077	888.077
	Atlas	3	549.838	31649.326	1.030	84.811	23.333	5.729	149.158	1	234.175	0	1.80	0	344.393	231.008	231.008
	Bawah		635.333	31259.223	1.035	60.826	21.332	137.645	253.352	1	158.839	587.798	1.80	9	402.323	268.412	268.412
K3):=K8):	Atlas	1	4874.917	55740.855	1.171	91.294	29.896	76.624	275.464	1	158.839	587.798	0.90	9	1442.953	1407.535	1407.535
	Bawah		4783.842	55544.797	1.168	45.266	6.608	82.640	173.533	1	0	190.318	0	9	1287.286	1444.939	1287.286
	Atlas	2	2650.420	39475.402	1.126	40.885	38.492	74.877	214.023	1	158.839	587.798	1.80	9	896.422	850.673	850.673
	Bawah		2778.662	39220.624	1.134	84.594	43.212	43.628	251.328	1	158.839	587.798	0.90	9	1011.039	888.077	888.077
	Atlas	3	549.838	31649.326	1.030	84.811	23.333	5.729	149.158	1	234.175	0	1.80	0	344.393	231.008	231.008
	Bawah		635.333	31259.223	1.035	60.826	21.332	137.645	253.352	1	158.839	587.798	1.80	9	402.323	268.412	268.412
K4A=K7A	Atlas	1	4625.133	55180.897	1.162	95.968	27.265	81.254	276.297	1	158.839	587.798	0.90	9	1230.116	1212.033	1212.033
	Bawah		3079.794	54785.176	1.103	43.852	5.774	87.740	168.058	1	0	190.318	0	9	1074.449	1249.437	1074.449
	Atlas	2	2282.025	39278.190	1.107	58.662	34.819	79.258	231.065	1	158.839	587.798	1.80	9	754.660	719.200	719.200
	Bawah		2410.267	39001.334	1.115	84.205	37.591	48.014	238.314	1	158.839	587.798	0.90	9	869.278	756.604	756.604
	Atlas	3	448.939	31760.802	1.024	80.122	20.673	2.581	134.917	1	234.175	0	1.80	0	297.427	183.806	183.806
	Bawah		534.433	31277.513	1.029	80.125	23.848	153.554	296.227	1	158.839	587.798	1.80	9	355.356	221.210	221.210
K4C=K7C	Atlas	1	4625.133	55180.897	1.162	95.968	27.265	81.254	276.297	1	158.839	587.798	0.90	9	1230.116	1212.033	1212.033
	Bawah		3079.794	54785.176	1.103	43.852	5.774	87.740	168.058	1	0	190.318	0	9	1074.449	1249.437	1074.449
	Atlas	2	2282.025	39278.190	1.107	58.662	34.819	79.258	231.065	1	158.839	587.798	1.80	9	754.660	719.200	719.200
	Bawah		2410.267	39001.334	1.115	84.205	37.591	48.014	238.314	1	158.839	587.798	0.90	9	869.278	756.604	756.604
	Atlas	3	448.939	31760.802	1.024	80.122	20.673	2.581	134.917	1	234.175	0	1.80	0	297.427	183.806	183.806
	Bawah		534.433	31277.513	1.029	80.125	23.848	153.554	296.227	1	158.839	587.798	1.80	9	355.356	221.210	221.210
K4):=K7):	Atlas	1	4625.133	55180.897	1.162	95.968	27.265	81.254	276.297	1	158.839	587.798	0.90	9	1230.116	1212.033	1212.033
	Bawah		3079.794	54785.176	1.103	43.852	5.774	87.740	168.058	1	0	190.318	0	9	1074.449	1249.437	1074.449
	Atlas	2	2282.025	39278.190	1.107	58.662	34.819	79.258	231.065	1	158.839	587.798	1.80	9	754.660	719.200	719.200
	Bawah		2410.267	39001.334	1.115	84.205	37.591	48.014	238.314	1	158.839	587.798	0.90	9	869.278	756.604	756.604
	Atlas	3	448.939	31760.802	1.024	80.122	20.673	2.581	134.917	1	234.175	0	1.80	0	297.427	183.806	183.806
	Bawah		534.433	31277.513	1.029	80.125	23.848	153.554	296.227	1	158.839	587.798	1.80	9	355.356	221.210	221.210
K4):=K7):	Atlas	1	4625.133	55180.897	1.162	95.968	27.265	81.254	276.297	1	158.839	587.798	0.90	9	1230.116	1212.033	1212.033
	Bawah		3079.794	54785.176	1.103	43.852	5.774	87.740	168.058	1	0	190.318	0	9	1074.449	1249.437	1074.449
	Atlas	2	2282.025	39278.190	1.107	58.662	34.819	79.258	231.065	1	158.839	587.798	1.80	9	754.660	719.200	719.200
	Bawah		2410.267	39001.334	1.115	84.205	37.591	48.014	238.314	1	158.839	587.798	0.90	9	869.278	756.604	756.604
	Atlas	3	448.939	31760.802	1.024	80.122	20.673	2.581	134.917	1	234.175	0	1.80	0	297.427	183.806	183.806
	Bawah		534.433	31277.513	1.029	80.125	23.848	153.554	296.227	1	158.839	587.798	1.80	9	355.356	221.210	221.210
	Atlas	1	4625.133	55180.897	1.162	95.968	27.265	81.254	276.297	1	158.839	587.798	0.90	9	1230.116	1212.033	1212.033
	Bawah		3079.794	54785.176	1.103	43.852	5.774	87.740	168.058	1	0	190.318	0	9	1074.449	1249.437	1074.449
	Atlas	2	2282.025	39278.190	1.107	58.662	34.819	79.258	231.065	1	158.839	587.798	1.80	9	754.660	719.200	719.200
	Bawah		2410.267	39001.334	1.115	84.205	37.591	48.014	238.314	1	158.839	587.798	0.90	9	869.278	756.604	756.604
	Atlas	3	448.939	31760.802	1.024	80.122	20.673	2.581	134.917	1	234.175	0	1.80	0	297.427	183.806	183.806
	Bawah		534.433	31277.513	1.029	80.125	23.848	153.554	296.227	1	158.839	587.798	1.80	9	355.356	221.210	221.210
	Atlas	1	4625.133	55180.897	1.162	95.968	27.265	81.254	276.297	1	158.839	587.798	0.90	9	1230.116	1212.033	1212.033
	Bawah		3079.794	54785.176	1.103	43.852	5.774	87.740	168.058	1	0	190.318	0	9	1074.449	1249.437	1074.449
	Atlas	2	2282.025	39278.190	1.107	58.662	34.819	79.258	231.065	1	158.839	587.798	1.80	9	754.660	719.200	719.200
	Bawah		2410.267	39001.334	1.115	84.205	37.591	48.014	238.314	1	158.839	587.798	0.90	9	869.278	756.604	756.604
	Atlas	3	448.939	31760.802	1.024	80.122	20.673	2.581	134.917	1	234.175	0	1.80	0	297.427	183.806	183.806
	Bawah		534.433	31277.513	1.029	80.125	23.848	153.554	296.227	1	158.839	587.798	1.80	9	355.356	221.210	221.210
	Atlas	1	4625.133	55180.897	1.162	95.968	27.265	81.254	276.297	1	158.839	587.798	0.90	9	1230.116	1212.033	1212.033
	Bawah		3079.794	54785.176	1.103	43.852	5.774	87.740	168.058	1	0	190.318					

K5A=K6A	Atlas	1	4743.434	46968.427	1.202	25.545	6.935	11.385	96.707	1	234.175	587.798	0	9	793.926	931.285	793.926
	Bawah		4871.676	46811.251	1.210	90.844	16.775	81.137	375.527	1	0	0	0	0	0.000	949.987	0.000
	Atlas	2	2735.892	35240.674	1.149	2.186	0.736	26.861	36.168	1	234.175	587.798	0	9	520.857	564.370	520.857
	Bawah		2864.134	35015.232	1.158	60.278	17.100	79.070	233.340	1	0	0	0	0	0.000	583.072	0.000
K5A=K6A	Atlas	1	4743.434	46968.427	1.202	39.755	2.904	89.087	183.117	1	0	0	0	0	0.000	955.924	0.000
	Bawah		4871.676	46811.251	1.210	25.545	6.935	11.385	75.088	1	0	190.318	0	9	798.623	974.626	798.623
	Atlas	2	2735.892	35240.674	1.149	64.649	18.571	47.486	207.971	1	0	0	0	0	0.000	589.009	0.000
	Bawah		2864.134	35015.232	1.158	2.186	0.736	26.861	36.630	1	234.175	587.798	0	9	564.198	607.711	564.198
K5A=K6A	Atlas	3	506.836	23281.485	1.038	80.972	20.980	1.638	139.938	1	234.175	0	0	9	0.000	197.570	0.000
	Bawah		592.330	22934.966	1.045	96.574	18.784	156.052	319.189	1	234.175	587.798	1.80	0	347.205	234.974	234.974
	Atlas	1	4743.434	46968.427	1.202	8.283	1.386	105.070	139.889	1	306.789	587.798	9	9	1256.253	1203.172	1203.172
	Bawah		4871.676	46811.251	1.210	13.416	8.053	97.272	150.127	1	131.234	190.318	9	9	1237.945	1240.576	1237.945
K5C=K6C	Atlas	2	2735.892	35240.674	1.149	36.441	7.280	111.150	186.707	1	306.789	587.798	9	9	647.738	597.867	597.867
	Bawah		2864.134	35015.232	1.158	39.068	9.454	155.467	246.427	1	306.789	587.798	9	9	685.142	635.271	635.271
	Atlas	1	4743.434	46968.427	1.202	22.077	16.869	82.794	163.135	1	587.798	0	9	0.90	1338.332	1480.228	1338.332
	Bawah		4871.676	46811.251	1.210	43.603	4.981	89.542	180.436	1	190.318	0	9	0	1337.092	1517.632	1337.092
K5I=K6I	Atlas	2	2735.892	35240.674	1.149	50.973	16.463	80.628	195.227	1	587.798	0	9	1.80	821.401	866.482	821.401
	Bawah		2864.134	35015.232	1.158	14.195	26.509	49.819	128.025	1	587.798	0	9	0.90	858.805	903.886	858.805
	Atlas	3	506.836	23281.485	1.038	141.055	37.968	2.263	239.042	1	0	234.175	0	1.80	340.175	226.607	226.607
	Bawah		592.330	22934.966	1.045	96.337	28.039	159.685	332.835	1	587.798	0	9	1.80	320.891	264.011	264.011



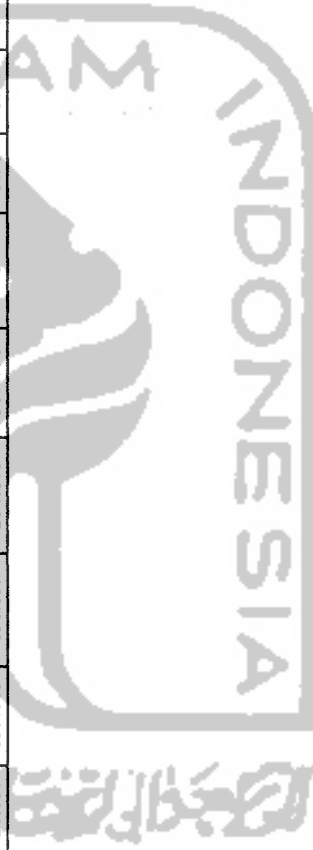
## 3. Perencanaan tulangan kolom

Big	Ujung Kolom	l,t	Mmaks (KNm)	ak	$\sigma_d$	MD (KNm)	ML (KNm)	ME (KNm)	Mmak, bx <sub>ki</sub> (KNm)	Mmak, bx <sub>ka</sub> (KNm)	Mmak, by <sub>ki</sub> (KNm)	Mmak, by <sub>ka</sub> (KNm)	Lbmx <sub>ki</sub> (m)	Lbmx <sub>ka</sub> (m)	Lbny <sub>ki</sub> (m)	Lbny <sub>ka</sub> (m)	Mcx (KNm)	Mcy (KNm)	Muk1 (KNm)	Muk2 (KNm)	Muk3 (KNm)	
K1A=K10A	Atas	1	97.490	0.517	1	13.907	2.882	78.615	0	234.175	0	306.789	0	5.40	0	3.90	27.906	108.057	193.412	228.071	347.812	
	Bawah		91.038	0.483	1	8.896	0.411	79.144	0	131.234	0	131.234	0	5.40	0	3.90	50.689	98.568	94.273	96.208	342.177	
	Atas	2	97.270	0.594	1.3	23.373	6.455	66.133	0	234.175	0	234.175	0	5.40	0	3.90	60.692	109.603	269.174	274.699	309.080	
	Bawah		66.383	0.406	1.3	18.738	5.195	41.741	0	234.175	0	234.175	0	5.40	0	3.90	67.418	76.361	197.231	232.573	200.441	
	Atas	3	72.726	0.851	1	38.691	10.857	34.189	158.839	234.172	234.172	158.839	158.839	1.50	5.40	1.50	30.310	100.176	552.221	569.577	195.618	
	Bawah		12.765	0.149	1	0.472	0.136	11.768	0	234.175	0	234.175	0	5.40	0	3.90	38.902	12.869	52.016	53.084	50.062	
K1B=K10B	Atas	1	192.805	0.563	1	69.181	11.819	108.034	158.839	443.851	158.839	376.681	0.60	5.50	3.90	8.40	233.966	233.966	566.514	476.791	538.792	
	Bawah		149.760	0.437	1	45.804	3.515	95.493	0	0	131.234	131.234	0	0	3.90	8.40	173.976	173.976	39.098	130.328	452.857	
	Atas	2	219.951	0.532	1.3	102.878	22.146	93.510	158.839	443.851	158.839	508.298	1.50	5.50	3.90	8.40	266.026	266.026	658.974	665.517	524.017	
	Bawah		193.327	0.468	1.3	95.304	20.449	76.762	158.839	443.851	158.839	376.681	0.60	5.50	3.90	8.40	236.822	236.822	612.109	515.165	443.941	
	Atas	3	154.888	0.501	1	80.820	19.969	54.711	234.175	0	158.839	234.175	0	0	3.90	8.40	187.158	187.158	234.464	272.560	335.615	
	Bawah		154.039	0.499	1	98.442	22.443	33.899	158.839	443.851	158.839	508.298	1.50	5.50	3.90	8.40	192.365	192.365	474.915	479.630	269.303	
K1D=K10D	Atas	1	198.250	0.562	1	73.941	12.402	107.956	158.839	443.851	376.681	158.839	0.60	5.50	8.40	3.90	241.394	241.394	565.642	476.058	544.076	
	Bawah		154.532	0.438	1	49.966	4.025	94.792	0	0	131.234	131.234	0	0	8.40	3.90	179.832	179.832	39.176	130.586	454.819	
	Atas	2	224.727	0.533	1.3	107.037	22.655	93.404	158.839	443.851	508.298	158.839	1.50	5.50	8.40	3.90	272.008	272.008	659.501	666.049	528.473	
	Bawah		197.188	0.467	1.3	98.634	20.856	76.654	158.839	443.851	376.681	158.839	0.60	5.50	8.40	3.90	241.599	241.599	611.552	514.697	447.413	
	Atas	3	157.638	0.503	1	83.123	20.255	57.006	234.175	0	234.175	158.839	1.50	0	8.40	3.90	192.767	192.767	235.245	273.468	347.972	
	Bawah		155.729	0.497	1	99.652	22.591	33.810	158.839	443.851	508.298	158.839	1.50	5.50	8.40	3.90	193.988	193.988	473.323	478.023	270.360	
K1E=K10E	Atas	1	101.294	0.516	1	17.235	3.288	78.563	0	234.175	306.789	0	0	5.40	3.90	0	50.540	112.901	193.116	227.722	351.514	
	Bawah		94.890	0.484	1	12.255	0.822	79.079	0	131.234	131.234	0	0	5.40	3.90	0	27.859	103.459	94.427	96.366	345.862	
	Atas	2	100.397	0.595	1.3	26.123	6.793	66.039	0	234.175	234.175	0	0	5.40	3.90	0	66.636	113.528	269.611	275.145	311.924	
	Bawah		68.243	0.405	1.3	20.337	5.391	41.657	0	234.175	234.175	0	0	5.40	3.90	0	60.881	78.625	196.762	232.020	201.973	
	Atas	3	73.061	0.853	1	39.027	10.927	34.314	158.839	234.172	158.839	234.175	1.50	5.40	3.90	0	29.499	100.837	553.874	571.284	196.572	
	Bawah		12.568	0.147	1	0.186	0.182	11.893	0	234.175	234.175	0	0	5.40	3.90	0	36.495	12.721	51.130	52.179	50.337	
K2A=K9A	Atas	1	175.562	0.574	1	92.236	27.368	69.974	158.839	234.175	158.839	587.798	5.40	5.40	0.60	8.40	6.102	260.827	422.138	631.500	419.476	
	Bawah		130.506	0.426	1	48.439	6.387	74.978	131.234	131.234	0	190.318	5.40	5.40	0	8.40	22.062	163.574	153.569	126.841	372.477	
	Atas	2	184.062	0.485	1.3	85.522	41.501	64.874	158.839	234.175	158.839	587.798	5.40	5.40	1.50	8.40	26.340	267.437	445.854	633.149	405.846	
	Bawah		195.237	0.515	1.3	106.075	42.467	34.592	158.839	234.175	158.839	587.798	5.40	5.40	0.90	8.40	25.772	266.105	481.605	700.524	301.258	
	Atas	3	129.199	0.551	1	78.817	21.637	11.697	158.839	234.175	234.175	0	0	5.40	5.40	1.50	0	54.524	144.988	301.155	258.272	154.681
	Bawah		105.119	0.449	1	60.837	20.072	96.772	158.839	234.175	158.839	587.798	5.40	5.40	1.50	8.40	52.026	208.812	317.062	450.253	491.398	
K2C=K9C	Atas	1	98.421	0.498	1	2.429	0.279	91.138	234.175	443.851	306.789	587.798	5.40	5.40	8.40	8.40	32.998	109.900	529.496	602.537	385.624	
	Bawah		99.091	0.502	1	3.169	0.382	90.974	131.234	131.234	131.234	190.318	5.40	5.40	8.40	8.40	27.569	106.663	202.291	221.252	385.819	
	Atas	2	133.288	0.583	1.3	6.337	0.831	120.105	234.175	443.851	306.789	587.798	5.40	5.40	8.40	8.40	46.991	143.825	805.621	916.751	511.968	
	Bawah		95.256	0.417	1.3	4.827	0.639	85.509	234.175	443.851	306.789	587.798	5.40	5.40	8.40	8.40	39.335	103.585	575.751	655.172	364.879	

K.2I:=K.9I:	1	180.110	0.569	1	96.290	27.845	69.900	158.839	234.175	587.798	158.839	5.40	5.40	8.40	0.60	22.402	246.103	418.514	626.080	423.920
Bawah		136.606	0.431	1	53.828	7.041	74.941	131.234	131.234	190.318	0	5.40	5.40	8.40	0	6.193	162.165	155.342	128.306	378.664
Atlas	2	182.160	0.478	1.3	83.738	41.174	65.044	158.839	234.175	587.798	158.839	5.40	5.40	8.40	1.50	27.572	264.663	438.969	623.370	404.342
Bawah		199.109	0.522	1.3	108.834	42.817	34.676	158.839	234.175	587.798	158.839	5.40	5.40	8.40	0.60	9.248	270.837	499.625	747.417	304.872
Atlas	3	131.611	0.523	1	80.453	21.917	11.687	158.839	234.175	0	234.175	5.40	5.40	0	1.50	51.310	147.460	285.779	245.086	156.575
Bawah		119.925	0.477	1	71.266	21.504	96.340	158.839	234.175	587.798	158.839	5.40	5.40	9	1.50	47.879	223.678	336.550	477.146	502.036
Atlas	1	178.012	0.569	1	91.294	29.896	76.624	158.839	234.175	158.839	587.798	5.40	5.40	0.60	8.40	0.634	275.464	419.053	626.886	449.072
Bawah		134.612	0.431	1	45.266	6.608	82.640	131.234	131.234	0	190.318	5.40	5.40	0	8.40	1.345	173.533	155.078	128.088	401.556
Atlas	2	145.800	0.461	1.3	40.885	38.492	74.877	158.839	234.175	158.839	587.798	5.40	5.40	1.50	8.40	6.533	214.023	423.313	601.138	397.829
Bawah		170.652	0.539	1.3	84.594	43.212	43.628	158.839	234.175	158.839	587.798	5.40	5.40	0.60	8.40	5.656	251.328	515.927	771.805	317.434
Atlas	3	139.106	0.565	1	84.811	23.333	5.729	158.839	234.175	234.175	0	5.40	5.40	1.50	0	12.028	149.158	308.565	264.627	137.615
Bawah		107.122	0.435	1	60.826	21.332	137.645	158.839	234.175	158.839	587.798	5.40	5.40	1.50	8.40	4.698	253.352	307.474	436.638	664.376
Atlas	1	100.207	0.479	1	5.985	0.661	97.416	234.175	443.851	306.789	587.798	5.40	5.40	8.40	8.40	0.753	123.400	508.996	579.209	416.127
Bawah		108.988	0.521	1	3.254	0.262	92.051	131.234	131.234	131.234	190.318	5.40	5.40	8.40	8.40	0.682	112.411	210.070	229.760	390.307
Atlas	2	164.306	0.582	1.3	12.199	1.649	99.031	234.175	443.851	306.789	587.798	5.40	5.40	5.40	8.40	4.890	130.132	804.462	915.432	430.470
Bawah		117.830	0.418	1.3	15.763	2.112	139.451	234.175	443.851	306.789	587.798	5.40	5.40	8.40	8.40	7.061	182.270	576.910	656.491	604.463
Atlas	1	185.391	0.558	1	97.982	30.587	76.562	158.839	234.175	587.798	158.839	5.40	5.40	8.40	0.60	1.215	286.365	410.958	614.775	456.558
Bawah		146.606	0.442	1	55.961	7.825	82.620	131.234	131.234	190.318	0	5.40	5.40	8.40	0	0.696	191.152	159.040	131.360	413.982
Atlas	2	139.354	0.433	1.3	35.141	37.302	75.196	158.839	234.175	587.798	158.839	5.40	5.40	8.40	1.50	4.747	204.159	397.940	565.106	391.890
Bawah		182.392	0.567	1.3	92.948	44.284	43.742	158.839	234.175	587.798	158.839	5.40	5.40	8.40	0.60	5.194	265.507	542.348	811.329	327.810
Atlas	3	144.255	0.500	1	88.235	23.983	5.659	158.839	234.175	0	234.175	5.40	5.40	0	1.50	11.505	154.380	272.961	234.093	141.597
Bawah		144.393	0.500	1	86.783	25.159	136.875	158.839	234.175	587.798	158.839	5.40	5.40	8.40	1.50	4.644	291.126	353.545	502.062	692.413
Atlas	1	184.191	0.572	1	95.968	27.265	81.254	158.839	306.789	158.839	587.798	5.40	5.40	0.60	8.40	17.098	276.297	475.880	646.376	470.660
Bawah		137.716	0.428	1	43.852	5.774	87.740	131.234	131.234	0	190.318	5.40	5.40	3.90	8.40	32.285	168.058	156.528	127.997	420.616
Atlas	2	166.752	0.506	1.3	58.662	34.819	79.258	158.839	234.175	158.839	587.798	5.40	5.40	3.90	8.40	56.313	231.065	472.031	662.788	431.039
Bawah		162.512	0.494	1.3	84.205	37.591	48.014	158.839	306.789	158.839	587.798	5.40	5.40	0.60	8.40	51.991	238.314	533.635	724.822	329.543
Atlas	3	129.224	0.490	1	80.122	20.673	2.581	158.839	234.175	234.175	0	5.40	5.40	3.90	0	44.871	134.917	272.833	231.190	116.677
Bawah		134.307	0.510	1	80.125	23.848	153.554	158.839	234.175	158.839	587.798	5.40	5.40	1.50	8.40	48.781	296.227	365.400	513.065	754.099
Atlas	1	102.286	0.466	1	8.019	0.647	103.231	443.851	158.839	306.789	587.798	5.40	5.40	3.90	8.40	17.844	131.937	458.730	552.681	442.670
Bawah		117.139	0.534	1	0.649	0.604	96.403	131.234	131.234	131.234	190.318	5.40	5.40	8.40	8.40	36.392	108.334	218.311	236.348	406.210
Atlas	2	201.218	0.574	1.3	31.431	3.768	108.249	443.851	158.839	306.789	587.798	5.40	5.40	8.40	8.40	60.250	166.621	734.940	885.459	491.605
Bawah		149.038	0.426	1.3	37.443	4.382	151.570	443.851	158.839	306.789	587.798	5.40	5.40	8.40	8.40	73.456	224.767	544.354	655.840	680.508
Atlas	1	176.197	0.537	1	88.711	26.681	81.359	158.839	306.789	587.798	158.839	5.40	5.40	0.60	8.40	24.828	247.390	446.794	606.868	462.870
Bawah		151.786	0.463	1	56.524	7.055	87.810	131.234	131.234	190.318	0	5.40	5.40	3.90	8.40	14.215	178.365	169.324	138.461	435.560
Atlas	2	118.646	0.412	1.3	16.342	28.281	79.685	158.839	234.175	587.798	158.839	5.40	5.40	8.40	1.50	37.296	162.876	384.065	539.273	381.531
Bawah		169.287	0.588	1.3	89.306	38.825	48.293	158.839	306.789	587.798	158.839	5.40	5.40	8.40	0.60	37.881	250.397	635.676	863.422	337.366
Atlas	3	144.174	0.437	1	88.750	23.547	1.998	158.839	234.175	0	234.175	5.40	5.40	0	1.50	25.867	149.774	243.304	206.168	126.302
Bawah		185.529	0.563	1	114.860	29.811	152.638	158.839	234.175	587.798	158.839	5.40	5.40	8.40	1.50	29.794	348.179	403.450	566.492	792.985



K5A=K6A	Atas	1	171.407	0.804	1	25.545	6.935	11.385	306.789	158.839	234.175	587.798	3.90	5.40	0	8.40	9.896	96.707	590.555	647.620	81.920
	Bawah		41.750	0.196	1	90.844	16.775	81.137	0	234.175	0	0	0	5.40	0	0	3.822	375.527	52.025	15.607	453.773
	Atas	2	157.088	0.861	1.3	2.186	0.736	26.861	306.789	158.839	234.175	587.798	3.90	5.40	0	8.40	3.388	36.168	821.626	901.019	115.886
	Bawah		25.446	0.139	1.3	60.278	17.100	79.070	0	234.175	0	0	0	5.40	0	0	19.823	233.340	48.136	14.441	413.340
K5A=K6A'	Atas	1	41.750	0.239	1	39.755	2.904	89.087	0	234.175	0	0	0	5.40	0	0	5.074	183.117	63.483	19.045	418.956
	Bawah		132.933	0.761	1	25.545	6.935	11.385	131.234	131.234	0	190.318	3.90	5.40	0	8.40	9.281	75.088	278.433	227.682	81.920
	Atas	2	25.446	0.164	1.3	64.649	18.571	47.486	0	234.175	0	0	0	5.40	0	0	13.172	207.971	56.728	17.018	286.821
	Bawah		129.442	0.836	1.3	2.186	0.736	26.861	306.789	158.839	234.175	587.798	3.90	5.40	0	8.40	5.104	36.630	797.870	874.967	115.886
K5A=K6A''	Atas	3	130.734	0.473	1	80.972	20.980	1.638	234.175	158.839	234.175	0	3.90	5.40	0	8.40	20.734	139.938	215.464	64.639	113.931
	Bawah		145.944	0.527	1	96.574	18.784	156.052	306.789	158.839	234.175	587.798	3.90	5.40	1.50	0	10.867	319.189	338.609	262.231	776.545
	Atas	1	121.296	0.507	1	8.283	1.386	105.070	158.839	443.851	306.789	587.798	3.90	5.40	8.40	8.40	14.872	139.889	498.699	600.835	451.445
	Bawah		118.055	0.493	1	13.416	8.053	97.272	131.234	131.234	131.234	190.318	3.90	5.40	8.40	8.40	27.683	150.127	201.702	218.366	431.085
K5C=K6C	Atas	2	198.036	0.568	1.3	36.441	7.280	111.150	158.839	443.851	306.789	587.798	3.90	5.40	8.40	8.40	48.421	186.707	727.266	876.213	512.738
	Bawah		150.318	0.432	1.3	39.068	9.454	155.467	158.839	443.851	306.789	587.798	3.90	5.40	8.40	8.40	59.964	246.427	552.029	665.087	703.908
	Atas	1	100.992	0.421	1	22.077	16.869	82.794	306.789	158.839	587.798	0	3.90	5.40	8.40	0.60	46.462	163.135	309.531	339.440	388.627
	Bawah		138.624	0.579	1	43.603	4.981	89.542	131.234	131.234	190.318	0	3.90	5.40	8.40	0	21.222	180.436	211.671	173.089	427.090
K5I=K6I	Atas	2	41.510	0.331	1.3	50.973	16.463	80.628	158.839	234.175	587.798	0	3.90	5.40	8.40	1.50	53.940	195.227	277.756	335.037	409.446
	Bawah		83.916	0.669	1.3	14.195	26.509	49.819	158.839	234.175	587.798	0	3.90	5.40	8.40	0.60	60.258	128.025	561.498	677.295	251.978
	Atas	3	230.015	0.589	1	141.055	37.968	2.263	158.839	234.175	0	234.175	3.90	5.40	0	1.50	57.895	239.042	325.812	277.142	197.480
	Bawah		160.468	0.411	1	96.337	28.039	159.685	158.839	234.175	587.798	0	3.90	5.40	8.40	1.50	52.320	332.835	265.299	320.011	801.272



## 3. Perencanaan tulangan kolom lanjutan

Blg	Ujung Kolom	Lt	Muk pakai (KNm)	Muk terpakai (KNm)	Nuk <sub>lx</sub> (KN)	Nuk <sub>ly</sub> (KN)	Nuk <sub>lx</sub> =Nuk <sub>ly</sub> (KN)	Nuk pakai (KN)	Mn (KNm)	Pn (KN)	%	Ast (mm <sup>2</sup> )	As=As perlu (mm <sup>2</sup> )	n tul.	n tul. terpakai	As=As ada (mm <sup>2</sup> )
K1A=K10A	Atas	1	193.412	193.412	590.389	615.891	983.466	590.389	322.353	983.981	1.0	3600	1800	4.735	5	1900.7
	Bawah		94.273	98.568	612.780	619.159	1020.870	612.780	164.280	1021.300	1.0	3600	1800	4.735	5	1900.7
	Atas	2	269.174	269.174	437.634	449.018	616.405	437.634	448.623	729.390	1.0	3600	1800	4.735	5	1900.7
	Bawah		197.231	197.231	475.038	500.541	653.809	475.038	328.718	791.730	1.0	3600	1800	4.735	5	1900.7
	Atas	3	195.618	195.618	366.048	399.403	329.146	329.146	326.030	548.577	1.0	3600	1800	4.735	5	1900.7
	Bawah		50.062	50.062	326.238	337.622	366.550	326.238	83.437	543.731	1.0	3600	1800	4.735	5	1900.7
K1B=K10B	Atas	1	476.791	476.791	1113.900	1113.900	1357.190	1113.900	794.652	1856.500	1.2	4320	2160	5.682	6	2280.8
	Bawah		39.098	173.976	1122.073	1122.073	1394.594	1122.073	289.960	1870.122	1.1	3960	1980	5.209	6	2280.8
	Atas	2	524.017	524.017	712.625	712.625	792.219	712.625	873.362	1187.708	1.3	4680	2340	6.156	7	2660.9
	Bawah		443.941	443.941	737.233	737.233	829.623	737.233	739.902	1228.721	1.2	4320	2160	5.682	6	2280.8
	Atas	3	234.464	234.464	207.272	207.272	208.226	207.272	390.773	345.454	1.0	3600	1800	4.735	5	1900.7
	Bawah		269.303	269.303	271.327	271.327	245.630	245.630	448.838	409.383	1.0	3600	1800	4.735	5	1900.7
K1D=K10D	Atas	1	476.058	476.058	1109.909	1109.909	1352.434	1109.909	793.430	1849.848	1.1	3960	1980	5.209	6	2280.8
	Bawah		39.176	179.832	1118.082	1118.082	1389.838	1118.082	299.720	1863.470	1.1	3960	1980	5.209	6	2280.8
	Atas	2	528.473	528.473	710.322	710.322	789.459	710.322	880.788	1183.870	1.2	4320	2160	5.682	6	2280.8
	Bawah		447.413	447.413	734.930	734.930	826.863	734.930	745.688	1224.883	1.2	4320	2160	5.682	6	2280.8
	Atas	3	235.245	235.245	206.490	206.490	207.295	206.490	392.075	344.150	1.0	3600	1800	4.735	5	1900.7
	Bawah		270.360	270.360	270.545	270.545	244.699	244.699	450.600	407.832	1.0	3600	1800	4.735	5	1900.7
K1E=K10E	Atas	1	193.116	193.116	595.280	620.783	989.446	595.280	321.860	992.134	1.0	3600	1800	4.735	5	1900.7
	Bawah		94.427	103.459	617.672	624.051	1026.850	617.672	172.432	1029.453	1.0	3600	1800	4.735	5	1900.7
	Atas	2	269.611	269.611	439.880	451.264	620.324	439.880	449.352	733.134	1.0	3600	1800	4.735	5	1900.7
	Bawah		196.762	196.762	477.284	502.787	657.728	477.284	327.937	795.474	1.0	3600	1800	4.735	5	1900.7
	Atas	3	196.572	196.572	366.817	400.174	331.057	331.057	327.620	551.762	1.0	3600	1800	4.735	5	1900.7
	Bawah		50.337	50.337	327.008	338.391	368.461	327.008	83.895	545.013	1.0	3600	1800	4.735	5	1900.7
K2A=K9A	Atas	1	419.476	419.476	1172.448	1326.707	1286.670	1172.448	699.127	1954.079	1.0	3600	1800	4.735	5	1900.7
	Bawah		126.841	163.574	1190.813	1171.040	1324.074	1171.040	272.623	1951.733	1.0	3600	1800	4.735	5	1900.7
	Atas	2	405.846	405.846	744.012	821.057	771.159	744.012	676.410	1240.019	1.0	3600	1800	4.735	5	1900.7
	Bawah		301.258	301.258	781.415	935.675	808.563	781.415	502.097	1302.359	1.0	3600	1800	4.735	5	1900.7
	Atas	3	154.603	154.603	281.468	337.989	225.391	225.391	257.672	375.652	1.0	3600	1800	4.735	5	1900.7
	Bawah		317.062	317.062	318.872	395.918	262.795	262.795	528.437	437.992	1.0	3600	1800	4.735	5	1900.7
K2C=K9C	Atas	1	385.624	385.624	1493.970	1482.065	1409.627	1409.627	642.707	2349.378	1.0	3600	1800	4.735	5	1900.7
	Bawah		202.291	202.291	1470.772	1463.758	1447.031	1447.031	337.152	2411.718	1.0	3600	1800	4.735	5	1900.7
	Atas	2	511.968	511.968	767.018	755.113	685.621	685.621	853.280	1142.702	1.0	3600	1800	4.735	5	1900.7
	Bawah		364.879	364.879	804.422	792.517	723.025	723.025	608.132	1205.042	1.0	3600	1800	4.735	5	1900.7

K2I:=K9I:	Atlas	1	418.514	418.514	1176.991	435.710	225.417	225.417	225.417	697.523	375.695	1.3	4680	2340	6.156	7	2660.9
	Bawah		128.306	162.165	1195.357	280.044	262.821	262.821	262.821	270.275	438.035	1.2	4320	2160	5.682	6	2280.8
	Atlas	2	404.342	404.342	746.523	823.569	773.145	746.523	746.523	673.903	1244.205	1.0	3600	1800	4.735	5	1900.7
K3A:=K8A	Bawah		304.872	304.872	783.927	938.186	810.549	783.927	783.927	508.120	1306.545	1.0	3600	1800	4.735	5	1900.7
	Atlas	3	156.575	156.575	281.451	337.972	225.417	225.417	225.417	260.958	375.695	1.0	3600	1800	4.735	5	1900.7
	Bawah		336.550	336.550	318.855	395.901	262.821	262.821	262.821	560.917	438.035	1.0	3600	1800	4.735	5	1900.7
K3C:=K8C	Atlas	1	419.053	419.053	1288.694	1442.953	1407.535	1288.694	1288.694	698.422	2147.823	1.0	3600	1800	4.735	5	1900.7
	Bawah		128.088	173.533	1307.060	1287.286	1444.939	1287.286	1287.286	289.222	2145.477	1.0	3600	1800	4.735	5	1900.7
	Atlas	2	397.829	397.829	819.376	896.422	850.673	819.376	819.376	663.048	1365.626	1.0	3600	1800	4.735	5	1900.7
K3I:=K8I:	Bawah		307.434	307.434	856.780	1011.039	888.077	856.780	856.780	512.390	1427.966	1.0	3600	1800	4.735	5	1900.7
	Atlas	3	137.615	149.158	287.873	344.393	231.008	231.008	231.008	248.597	385.013	1.0	3600	1800	4.735	5	1900.7
	Bawah		307.474	307.474	325.277	402.323	268.412	268.412	268.412	512.457	447.353	1.0	3600	1800	4.735	5	1900.7
K4A:=K7A	Atlas	1	416.127	416.127	1466.748	1454.843	1393.498	1393.498	1393.498	693.545	2322.497	1.0	3600	1800	4.735	5	1900.7
	Bawah		210.070	210.070	1443.550	1436.535	1430.902	1430.902	1430.902	350.117	2384.837	1.0	3600	1800	4.735	5	1900.7
	Atlas	2	430.470	430.470	757.470	745.565	689.616	689.616	689.616	717.450	1149.360	1.2	4320	2160	5.682	6	2280.8
K4I:=K7I:	Bawah		576.910	576.910	794.873	782.968	727.020	727.020	727.020	961.517	1211.700	1.2	4320	2160	5.682	6	2280.8
	Atlas	1	410.958	410.958	1295.258	1449.517	1414.055	1295.258	1295.258	684.930	2158.763	1.0	3600	1800	4.735	5	1900.7
	Bawah		131.360	191.152	1313.624	1293.851	1451.460	1293.851	1293.851	318.587	2156.418	1.0	3600	1800	4.735	5	1900.7
K4C:=K7C	Atlas	2	391.890	391.890	822.558	899.604	853.538	822.558	822.558	653.150	1370.931	1.0	3600	1800	4.735	5	1900.7
	Bawah		327.810	327.810	859.962	1014.221	890.941	859.962	859.962	546.350	1433.270	1.0	3600	1800	4.735	5	1900.7
	Atlas	3	141.597	154.380	287.449	343.970	230.315	230.315	230.315	257.300	383.858	1.0	3600	1800	4.735	5	1900.7
K4I:=K7I:	Bawah		353.545	353.545	324.853	401.899	267.719	267.719	267.719	589.242	446.198	1.0	3600	1800	4.735	5	1900.7
	Atlas	1	470.660	470.660	1101.360	1230.116	1212.033	1101.360	1101.360	784.433	1835.600	1.3	4680	2340	6.156	7	2660.9
	Bawah		127.997	168.058	1100.602	1074.449	1249.437	1074.449	1074.449	280.097	1790.748	1.2	4320	2160	5.682	6	2280.8
K4I:=K7I:	Atlas	2	431.039	431.039	688.998	754.660	719.200	688.998	688.998	718.398	1148.330	1.2	4320	2160	5.682	6	2280.8
	Bawah		329.543	329.543	740.521	869.278	756.604	740.521	740.521	549.238	1234.202	1.0	3600	1800	4.735	5	1900.7
	Atlas	3	116.677	134.917	252.290	297.427	183.806	183.806	183.806	224.862	306.343	1.0	3600	1800	4.735	5	1900.7
K4I:=K7I:	Bawah		365.400	365.400	289.694	355.356	221.210	221.210	221.210	609.000	368.683	1.0	3600	1800	4.735	5	1900.7
	Atlas	1	442.670	442.670	1321.515	1312.875	1254.109	1254.109	1254.109	737.783	2090.182	1.0	3600	1800	4.735	5	1900.7
	Bawah		218.311	218.311	1307.961	1294.567	1291.513	1291.513	1291.513	363.852	2152.522	1.0	3600	1800	4.735	5	1900.7
K4I:=K7I:	Atlas	2	491.605	491.605	682.288	673.648	620.654	620.654	620.654	819.342	1034.423	1.2	4320	2160	5.682	6	2280.8
	Bawah		544.354	544.354	719.692	711.052	658.058	658.058	658.058	907.257	1096.763	1.3	4680	2340	6.156	7	2660.9
	Atlas	1	446.794	446.794	1185.708	403.497	191.977	191.977	191.977	744.657	319.962	1.3	4680	2340	6.156	7	2660.9
K4I:=K7I:	Bawah		138.461	178.365	1184.951	247.830	229.381	229.381	229.381	297.275	382.302	1.2	4320	2160	5.682	6	2280.8
	Atlas	2	381.531	381.531	747.710	813.372	777.940	747.710	747.710	635.885	1246.183	1.0	3600	1800	4.735	5	1900.7
	Bawah		337.366	337.366	799.233	927.990	815.344	799.233	799.233	562.277	1332.055	1.0	3600	1800	4.735	5	1900.7
K4I:=K7I:	Atlas	3	126.302	149.774	260.621	305.758	191.977	191.977	191.977	249.623	319.962	1.0	3600	1800	4.735	5	1900.7
	Bawah		403.450	403.450	298.025	363.688	229.381	229.381	229.381	672.417	382.302	1.0	3600	1800	4.735	5	1900.7

K5A=K6A	Atas	1	81.920	96.707	819.596	793.926	931.285	793.926	161.178	1323.210	1.0	3600	1800	4.735	5	1900.7
	Bawah		15.607	375.527	789.631	0.000	949.987	789.631	625.878	1316.052	1.0	3600	1800	4.735	5	1900.7
	Atas	2	115.886	115.886	546.527	520.857	564.370	520.857	193.143	868.095	1.0	3600	1800	4.735	5	1900.7
	Bawah		14.441	233.340	516.562	0.000	583.072	516.562	388.900	866.937	1.0	3600	1800	4.735	5	1900.7
K5A=K6A	Atas	1	19.045	183.117	795.568	0.000	955.924	795.568	305.195	1325.947	1.0	3600	1800	4.735	5	1900.7
	Bawah		81.920	81.920	824.776	798.623	974.626	798.623	136.533	1331.038	1.0	3600	1800	4.735	5	1900.7
	Atas	2	17.018	207.971	522.499	0.000	589.009	522.499	346.618	870.832	1.0	3600	1800	4.735	5	1900.7
	Bawah		115.886	115.886	589.868	564.198	607.711	564.198	193.143	940.330	1.0	3600	1800	4.735	5	1900.7
K5A=K6A	Atas	3	64.639	139.938	264.665	0.000	197.570	197.570	233.230	329.283	1.0	3600	1800	4.735	5	1900.7
	Bawah		262.231	319.189	316.188	347.205	234.974	234.974	531.982	391.623	1.0	3600	1800	4.735	5	1900.7
	Atas	1	451.445	451.445	1264.893	1256.253	1203.172	1203.172	752.408	2005.287	1.2	4320	2160	5.682	6	2280.8
	Bawah		201.702	201.702	1251.339	1237.945	1240.576	1237.945	336.170	2063.242	1.2	4320	2160	5.682	6	2280.8
K5C=K6C	Atas	2	512.738	512.738	656.378	647.738	597.867	597.867	854.563	996.445	1.4	5040	2520	6.629	7	2660.9
	Bawah		552.029	552.029	693.782	685.142	635.271	635.271	920.048	1058.785	1.3	4680	2340	6.156	7	2660.9
	Atas	1	309.531	309.531	1364.002	1338.332	1480.228	1338.332	515.885	2230.553	1.0	3600	1800	4.735	5	1900.7
	Bawah		173.089	180.436	1363.245	1337.092	1517.632	1337.092	300.727	2228.487	1.0	3600	1800	4.735	5	1900.7
K5I=K6I	Atas	2	277.756	277.756	829.290	821.401	866.482	821.401	462.927	1369.002	1.0	3600	1800	4.735	5	1900.7
	Bawah		251.978	251.978	866.694	858.805	903.886	858.805	419.963	1431.342	1.0	3600	1800	4.735	5	1900.7
	Atas	3	197.480	239.042	291.376	340.175	226.607	226.607	398.403	377.678	1.0	3600	1800	4.735	5	1900.7
	Bawah		265.299	332.835	328.780	320.891	264.011	264.011	554.725	440.018	1.0	3600	1800	4.735	5	1900.7



## 4. Perhitungan keruntuhan kolom

Fig	Ujung Kolom	LA	Pakai Tul.	l <sub>bd</sub> (mm)	X <sub>b</sub> (mm)	f <sub>s</sub> ' (Mpa)	f <sub>s</sub> ' pakai (Mpa)	C <sub>c</sub> (KN)	C <sub>s</sub> (KN)	T <sub>s</sub> (KN)	P <sub>nb</sub> (KN)	M <sub>nb</sub> (KNm)	eb (m)	e (m)	Keruntuhan Kolom	Patah Desak P <sub>n</sub> (KN)	Patah Tarik P <sub>n</sub> (KN)	Kontrol P <sub>n</sub> >Nu/Ø
K1A=K10A	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.328	Patah Tarik	-	7273.287	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.161	Patah Desak	9974.470	-	AMAN
	Bawah	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.615	Patah Tarik	-	5942.979	AMAN
K1B=K10B	Bawah	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.415	Patah Tarik	-	6766.405	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.594	Patah Tarik	-	6011.769	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.153	Patah Desak	10428.791	-	AMAN
K1C=K10C	Atas	1	6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.428	Patah Tarik	-	6797.343	AMAN
	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.155	Patah Desak	10511.963	-	AMAN
	Bawah	2	7	57.67	324	488.889	400	3511.350	1007.828	1064.372	3454.805	1067.220	0.309	0.735	Patah Tarik	-	5740.302	AMAN
K1D=K10D	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.602	Patah Tarik	-	6056.077	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.131	Patah Tarik	-	4901.894	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.096	Patah Tarik	-	4945.926	AMAN
K1E=K10E	Atas	1	6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.429	Patah Tarik	-	6792.850	AMAN
	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.161	Patah Desak	10157.379	-	AMAN
	Bawah	2	6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.744	Patah Tarik	-	5648.359	AMAN
K1F=K10F	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.609	Patah Tarik	-	6043.644	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.139	Patah Tarik	-	4892.027	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.105	Patah Tarik	-	4934.961	AMAN
K2A=K9A	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.324	Patah Tarik	-	7293.904	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.167	Patah Desak	9600.062	-	AMAN
	Bawah	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.613	Patah Tarik	-	5949.952	AMAN
K2B=K9B	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.412	Patah Tarik	-	6781.680	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.594	Patah Tarik	-	6013.634	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.154	Patah Desak	10398.043	-	AMAN
K2C=K9C	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.358	Patah Tarik	-	7086.094	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.140	Patah Desak	11399.034	-	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.545	Patah Tarik	-	6187.065	AMAN
K2D=K9D	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.386	Patah Tarik	-	6925.901	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.686	Patah Tarik	-	5730.361	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.206	Patah Tarik	-	4814.383	AMAN
K2E=K9E	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.274	Patah Tarik	-	7645.644	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.140	Patah Desak	11390.187	-	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.747	Patah Tarik	-	5571.891	AMAN
K2F=K9F	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.505	Patah Tarik	-	6349.622	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.747	Patah Tarik	-	5571.891	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.505	Patah Tarik	-	6349.622	AMAN

K2I:=K9I:	Atas	1	7	57.67	324	488.889	400	3511.350	1007.828	1064.372	3454.805	1067.220	0.309	1.857	Patah Tarik	-	4392.323	AMAN
	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.617	Patah Tarik	-	6016.159	AMAN
	Atas	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.542	Patah Tarik	-	6201.739	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.389	Patah Tarik	-	6907.159	AMAN
	Atas	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.695	Patah Tarik	-	5706.511	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.281	Patah Tarik	-	4737.410	AMAN
	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.325	Patah Tarik	-	7288.946	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.135	Patah Desak	11789.190	-	AMAN
	Atas	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.486	Patah Tarik	-	6431.348	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.359	Patah Tarik	-	7079.847	AMAN
K3A:=K8A	Atas	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.646	Patah Tarik	-	5847.080	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.146	Patah Tarik	-	4884.442	AMAN
	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.299	Patah Tarik	-	7466.775	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.147	Patah Desak	10874.623	-	AMAN
	Atas	2	6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.624	Patah Tarik	-	5992.529	AMAN
	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.794	Patah Tarik	-	5529.009	AMAN
	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.317	Patah Tarik	-	7340.611	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.148	Patah Desak	10809.893	-	AMAN
	Atas	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.476	Patah Tarik	-	6471.550	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.381	Patah Tarik	-	6950.219	AMAN
K4A:=K7A	Atas	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.670	Patah Tarik	-	5774.499	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.321	Patah Tarik	-	4699.038	AMAN
	Atas	1	7	57.67	324	488.889	400	3511.350	1007.828	1064.372	3454.805	1067.220	0.309	0.427	Patah Tarik	-	6896.178	AMAN
	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.156	Patah Desak	10426.114	-	AMAN
	Atas	2	6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.626	Patah Tarik	-	5988.023	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.445	Patah Tarik	-	6617.318	AMAN
	Atas	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.734	Patah Tarik	-	5603.376	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.652	Patah Tarik	-	4448.357	AMAN
	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.353	Patah Tarik	-	7114.952	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.169	Patah Desak	9517.562	-	AMAN
K4I:=K7I:	Atas	2	6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.792	Patah Tarik	-	5532.342	AMAN
	Bawah		7	57.67	324	488.889	400	3511.350	1007.828	1064.372	3454.805	1067.220	0.309	0.827	Patah Tarik	-	5518.018	AMAN
	Atas	1	7	57.67	324	488.889	400	3511.350	1007.828	1064.372	3454.805	1067.220	0.309	2.327	Patah Tarik	-	4192.313	AMAN
	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.778	Patah Tarik	-	5566.128	AMAN
	Atas	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.510	Patah Tarik	-	6326.351	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.422	Patah Tarik	-	6730.827	AMAN
	Atas	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.780	Patah Tarik	-	5492.776	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.759	Patah Tarik	-	4386.432	AMAN

K5A=K6A	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.122	Patah Desak	12978.156	-	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.476	Patah Tarik	-	6475.376	AMAN
	Atas	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.222	Patah Desak	7342.103	-	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.452	Patah Tarik	-	6585.282	AMAN
K5A=K6A'	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.230	Patah Desak	7110.553	-	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.103	Patah Desak	15278.927	-	AMAN
	Atas	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.398	Patah Tarik	-	6857.248	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.205	Patah Desak	7917.665	-	AMAN
K5A'=K6A''	Atas	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.708	Patah Tarik	-	5669.714	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.358	Patah Tarik	-	4664.709	AMAN
	Atas	1	6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.375	Patah Tarik	-	7085.708	AMAN
	Bawah		6	73.60	324	488.889	400	3511.350	863.852	912.319	3462.883	996.173	0.288	0.163	Patah Desak	10035.246	-	AMAN
K5C=K6C	Atas	2	7	57.67	324	488.889	400	3511.350	1007.828	1064.372	3454.805	1067.220	0.309	0.858	Patah Tarik	-	5452.699	AMAN
	Bawah		7	57.67	324	488.889	400	3511.350	1007.828	1064.372	3454.805	1067.220	0.309	0.869	Patah Tarik	-	5429.237	AMAN
	Atas	1	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.231	Patah Desak	7078.328	-	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.135	Patah Desak	11777.501	-	AMAN
K5E=K6E'	Atas	2	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.338	Patah Tarik	-	7206.254	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	0.293	Patah Tarik	-	7503.095	AMAN
	Atas	3	5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.055	Patah Tarik	-	5001.730	AMAN
	Bawah		5	97.50	324	488.889	400	3511.350	719.877	760.266	3470.961	925.126	0.267	1.261	Patah Tarik	-	4757.240	AMAN



## 5. Perencanaan gaya geser kolom

Btg	Ujung Kolom	Lt	VD (KN)	VL (KN)	VE (KN)	Muk terpakai (KNm)	Vuk1 (KN)	Vuk2 (KN)	Vuk pakai (KN)
K1A=K10A	Atas	1	12.234	1.683	37.562	193.412	81.106	172.372	81.106
	Bawah		12.234	1.683	37.562	98.568	81.106	172.372	81.106
	Atas	2	18.363	3.792	25.684	269.174	129.557	131.138	129.557
	Bawah		18.363	3.792	25.684	197.231	129.557	131.138	129.557
	Atas	3	9.100	2.617	10.942	195.618	68.244	58.259	58.259
	Bawah		9.100	2.617	10.942	50.062	68.244	58.259	58.259
K1B=K10B	Atas	1	27.377	4.697	48.459	476.791	180.769	237.205	180.769
	Bawah		27.377	4.697	48.459	173.976	180.769	237.205	180.769
	Atas	2	47.186	10.142	40.541	524.017	268.877	230.466	230.466
	Bawah		47.186	10.142	40.541	443.941	268.877	230.466	230.466
	Atas	3	42.682	10.098	21.674	234.464	139.935	146.451	139.935
	Bawah		42.682	10.098	21.674	269.303	139.935	146.451	139.935
K1D=K10D	Atas	1	29.502	4.597	48.422	476.058	182.192	239.174	182.192
	Bawah		29.502	4.597	48.422	179.832	182.192	239.174	182.192
	Atas	2	48.969	10.360	40.490	528.473	271.079	232.354	232.354
	Bawah		48.969	10.360	40.490	447.413	271.079	232.354	232.354
	Atas	3	43.518	10.201	21.623	235.245	140.446	147.222	140.446
	Bawah		43.518	10.201	21.623	270.360	140.446	147.222	140.446
K1E=K10E	Atas	1	12.263	1.682	37.534	193.116	82.382	172.284	82.382
	Bawah		12.263	1.682	37.534	103.459	82.382	172.284	82.382
	Atas	2	18.476	3.792	25.642	269.611	129.548	131.076	129.548
	Bawah		18.476	3.792	25.642	196.762	129.548	131.076	129.548
	Atas	3	9.248	2.645	11.002	196.572	68.586	58.695	58.695
	Bawah		9.248	2.645	11.002	50.337	68.586	58.695	58.695
K2A=K9A	Atas	1	33.494	8.037	34.513	419.476	161.958	188.560	161.958
	Bawah		33.494	8.037	34.513	163.574	161.958	188.560	161.958
	Atas	2	45.618	19.992	23.683	405.846	196.418	168.358	168.358
	Bawah		45.618	19.992	23.683	301.258	196.418	168.358	168.358
	Atas	3	14.828	3.368	25.826	154.603	131.018	127.575	127.575
	Bawah		14.828	3.368	25.826	317.062	131.018	127.575	127.575
K2C=K9C	Atas	1	9.879	0.716	43.360	385.624	163.310	193.236	163.310
	Bawah		9.879	0.716	43.360	202.291	163.310	193.236	163.310
	Atas	2	12.210	2.785	48.956	511.968	243.569	221.359	221.359
	Bawah		12.210	2.785	48.956	364.879	243.569	221.359	221.359



K2E=K9E	Atas	1	35.742	8.306	34.486	418.514	161.300	191.092	161.300
	Bawah		35.742	8.306	34.486	162.165	161.300	191.092	161.300
	Atas	2	45.851	19.998	23.743	404.342	197.004	168.860	168.860
	Bawah		45.851	19.998	23.743	304.872	197.004	168.860	168.860
	Atas	3	14.194	3.268	25.721	156.575	136.979	126.362	126.362
	Bawah		14.194	3.268	25.721	336.550	136.979	126.362	126.362
K3A=K8A	Atas	1	32.514	8.691	37.920	419.053	164.607	202.530	164.607
	Bawah		32.514	8.691	37.920	173.533	164.607	202.530	164.607
	Atas	2	29.876	19.453	28.215	397.829	195.906	170.301	170.301
	Bawah		29.876	19.453	28.215	307.434	195.906	170.301	170.301
	Atas	3	5.711	0.476	34.137	149.158	126.842	149.871	126.842
	Bawah		5.711	0.476	34.137	307.474	126.842	149.871	126.842
K3C=K8C	Atas	1	2.200	0.220	45.110	416.127	173.944	192.004	173.944
	Bawah		2.200	0.220	45.110	210.070	173.944	192.004	173.944
	Atas	2	6.657	0.896	56.781	430.470	279.828	246.413	246.413
	Bawah		6.657	0.896	56.781	576.910	279.828	246.413	246.413
	Atas	1	36.653	9.146	37.901	410.958	167.253	207.271	167.253
	Bawah		36.653	9.146	37.901	191.152	167.253	207.271	167.253
K3E=K8E	Atas	2	30.497	19.425	28.319	391.890	199.917	171.357	171.357
	Bawah		30.497	19.425	28.319	327.810	199.917	171.357	171.357
	Atas	3	2.578	0.280	33.937	154.380	141.090	145.534	141.090
	Bawah		2.578	0.280	33.937	353.545	141.090	145.534	141.090
	Atas	1	33.290	7.866	40.237	470.660	177.422	212.208	177.422
	Bawah		33.290	7.866	40.237	168.058	177.422	212.208	177.422
K4A=K7A	Atas	2	34.016	17.240	30.303	431.039	211.273	181.091	181.091
	Bawah		34.016	17.240	30.303	329.543	211.273	181.091	181.091
	Atas	3	12.632	3.676	37.175	134.917	138.977	173.259	138.977
	Bawah		12.632	3.676	37.175	365.400	138.977	173.259	138.977
	Atas	1	7.298	1.948	47.487	442.670	183.606	209.155	183.606
	Bawah		7.298	1.948	47.487	218.311	183.606	209.155	183.606
K4C=K7C	Atas	2	17.027	6.238	61.860	491.605	287.766	284.241	284.241
	Bawah		17.027	6.238	61.860	544.354	287.766	284.241	284.241
	Atas	1	34.580	8.032	40.278	446.794	173.655	213.912	173.655
	Bawah		34.580	8.032	40.278	178.365	173.655	213.912	173.655
	Atas	2	25.154	15.978	30.471	381.531	199.694	171.166	171.166
	Bawah		25.154	15.978	30.471	337.366	199.694	171.166	171.166
K4E=K7E	Atas	3	7.985	1.967	36.818	149.774	153.673	165.086	153.673
	Bawah		7.985	1.967	36.818	403.450	153.673	165.086	153.673

K5A=K6A	Atas	1	31.095	4.685	40.529	96.707	131.176	207.793	131.176
	Bawah		31.095	4.685	40.529	375.527	131.176	207.793	131.176
K5A=K6A'	Atas	2	29.745	8.493	30.132	115.886	97.007	166.705	97.007
	Bawah		29.745	8.493	30.132	233.340	97.007	166.705	97.007
K5A=K6A''	Atas	1	31.095	4.685	40.529	183.117	73.621	207.793	73.621
	Bawah		31.095	4.685	40.529	81.920	73.621	207.793	73.621
K5A''=K6A''	Atas	2	29.745	8.493	30.132	207.971	89.960	166.705	89.960
	Bawah		29.745	8.493	30.132	115.886	89.960	166.705	89.960
K5C=K6C	Atas	3	4.629	0.523	37.545	139.938	127.535	163.100	127.535
	Bawah		4.629	0.523	37.545	319.189	127.535	163.100	127.535
K5C=K6C'	Atas	1	6.018	2.247	48.177	451.445	181.430	211.021	181.430
	Bawah		6.018	2.247	48.177	201.702	181.430	211.021	181.430
K5C=K6C''	Atas	2	17.978	3.984	63.480	512.738	295.769	289.677	289.677
	Bawah		17.978	3.984	63.480	552.029	295.769	289.677	289.677
K5C=K6C'''	Atas	1	15.638	5.202	41.032	309.531	136.102	194.218	136.102
	Bawah		15.638	5.202	41.032	180.436	136.102	194.218	136.102
K5C=K6C''''	Atas	2	14.227	10.232	31.059	277.756	147.148	156.129	147.148
	Bawah		14.227	10.232	31.059	251.978	147.148	156.129	147.148
K5C=K6C'''''	Atas	3	15.562	4.451	38.559	239.042	158.855	182.962	158.855
	Bawah		15.562	4.451	38.559	332.835	158.855	182.962	158.855





K2I:=K9I:	Atas	1	267.091	161.300	0	108	268.833	2	75.726	150	176	100	75	P10-75	284.308	108	-15.476	2	188.496	150	176	100	P10-100
	Bawah		309.839	161.300	0	108	268.833	2	75.726	150	176	100	75	P10-75	286.598	108	-17.766	2	188.496	150	176	100	P10-100
	Atas	2	828.365	168.860	0	108	281.433	2	72.335	150	176	100	70	P10-70	314.377	108	-32.943	2	188.496	150	176	100	P10-100
K3A:=K8A	Bawah		871.112	168.860	0	108	281.433	2	72.335	150	176	100	70	P10-70	316.667	108	-35.233	2	188.496	150	176	100	P10-100
	Atas	3	267.091	126.362	0	108	210.603	2	96.663	150	176	100	95	P10-95	284.308	108	-73.705	2	188.496	150	176	100	P10-100
	Bawah		309.839	126.362	0	108	210.603	2	96.663	150	176	100	95	P10-95	286.598	108	-75.995	2	188.496	150	176	100	P10-100
K3C:=K8C	Atas	1	1487.154	164.607	0	108	274.345	2	74.204	150	176	100	70	P10-70	349.669	108	-75.324	2	188.496	150	176	100	P10-100
	Bawah		1529.902	164.607	0	108	274.345	2	74.204	150	176	100	70	P10-70	351.959	108	-77.614	2	188.496	150	176	100	P10-100
	Atas	2	919.579	170.301	0	108	283.835	2	71.723	150	176	100	70	P10-70	319.263	108	-35.428	2	188.496	150	176	100	P10-100
K3I:=K8I:	Bawah		962.327	170.301	0	108	283.835	2	71.723	150	176	100	70	P10-70	321.553	108	-37.718	2	188.496	150	176	100	P10-100
	Atas	3	275.186	126.842	0	108	211.404	2	96.297	150	176	100	95	P10-95	284.742	108	-73.338	2	188.496	150	176	100	P10-100
	Bawah		317.933	126.842	0	108	211.404	2	96.297	150	176	100	95	P10-95	287.032	108	-75.628	2	188.496	150	176	100	P10-100
K4A:=K7A	Atas	1	1673.581	173.944	0	108	289.906	2	70.221	150	176	100	70	P10-70	359.656	108	-69.750	2	188.496	150	176	100	P10-100
	Bawah		1716.328	173.944	0	108	289.906	2	70.221	150	176	100	70	P10-70	361.946	108	-72.040	2	188.496	150	176	100	P10-100
	Atas	2	807.556	246.413	0	108	410.688	3	74.354	150	176	100	70	P10-70	313.262	108	97.426	2	208.953	150	176	100	P10-100
K4I:=K7I:	Bawah		850.303	246.413	0	108	410.688	3	74.354	150	176	100	70	P10-70	315.552	108	95.136	2	213.983	150	176	100	P10-100
	Atas	1	1494.865	167.253	0	108	278.755	2	73.030	150	176	100	70	P10-70	350.082	108	-71.327	2	188.496	150	176	100	P10-100
	Bawah		1537.612	167.253	0	108	278.755	2	73.030	150	176	100	70	P10-70	352.372	108	-73.617	2	188.496	150	176	100	P10-100
K4C:=K7C	Atas	2	923.285	171.357	0	108	285.595	2	71.281	150	176	100	70	P10-70	319.462	108	-33.867	2	188.496	150	176	100	P10-100
	Bawah		966.033	171.357	0	108	285.595	2	71.281	150	176	100	70	P10-70	321.752	108	-36.157	2	188.496	150	176	100	P10-100
	Atas	3	274.653	141.090	0	108	235.150	2	86.573	150	176	100	85	P10-85	284.714	108	-49.563	2	188.496	150	176	100	P10-100
K4I:=K7I:	Bawah		317.400	141.090	0	108	235.150	2	86.573	150	176	100	85	P10-85	287.004	108	-51.853	2	188.496	150	176	100	P10-100
	Atas	1	1226.081	177.422	0	108	295.703	2	68.845	150	176	100	65	P10-65	335.683	108	-39.980	2	188.496	150	176	100	P10-100
	Bawah		1268.828	177.422	0	108	295.703	2	68.845	150	176	100	65	P10-65	337.973	108	-42.270	2	188.496	150	176	100	P10-100
K4I:=K7I:	Atas	2	746.079	181.091	0	108	301.818	2	67.450	150	176	100	65	P10-65	309.969	108	-8.150	2	188.496	150	176	100	P10-100
	Bawah		788.827	181.091	0	108	301.818	2	67.450	150	176	100	65	P10-65	312.259	108	-10.440	2	188.496	150	176	100	P10-100
	Atas	3	219.317	138.977	0	108	231.628	2	87.889	150	176	100	85	P10-85	281.749	108	-50.121	2	188.496	150	176	100	P10-100
K4I:=K7I:	Bawah		262.064	138.977	0	108	231.628	2	87.889	150	176	100	85	P10-85	284.039	108	-52.411	2	188.496	150	176	100	P10-100
	Atas	1	1495.849	183.606	0	108	306.010	2	66.526	150	176	100	65	P10-65	350.135	108	-44.125	2	188.496	150	176	100	P10-100
	Bawah		1538.597	183.606	0	108	306.010	2	66.526	150	176	100	65	P10-65	352.425	108	-46.415	2	188.496	150	176	100	P10-100
K4I:=K7I:	Atas	2	717.506	284.241	0	108	473.735	3	64.459	150	176	100	60	P10-60	308.438	108	165.297	2	123.157	150	176	100	P10-100
	Bawah		760.254	284.241	0	108	473.735	3	64.459	150	176	100	60	P10-60	310.728	108	163.007	2	124.888	150	176	100	P10-100
	Atas	1	229.622	173.655	0	108	289.425	2	70.338	150	176	100	70	P10-70	282.301	108	7.124	2	2857.479	150	176	100	P10-100
K4I:=K7I:	Bawah		272.369	173.655	0	108	289.425	2	70.338	150	176	100	70	P10-70	284.591	108	4.834	2	4211.088	150	176	100	P10-100
	Atas	2	818.440	171.166	0	108	285.277	2	71.361	150	176	100	70	P10-70	313.845	108	-28.568	2	188.496	150	176	100	P10-100
	Bawah		861.187	171.166	0	108	285.277	2	71.361	150	176	100	70	P10-70	316.135	108	-30.858	2	188.496	150	176	100	P10-100
K4I:=K7I:	Atas	3	229.622	153.673	0	108	256.122	2	79.484	150	176	100	75	P10-75	282.301	108	-26.179	2	188.496	150	176	100	P10-100
	Bawah		272.369	153.673	0	108	256.122	2	79.484	150	176	100	75	P10-75	284.591	108	-28.469	2	188.496	150	176	100	P10-100

K5A=K6A	Atas	1	872.996	131.176	0	108	218.627	2	93.116	150	176	100	90	P10-90	316.768	108	-98.141	2	188.496	150	176	100	P10-100
	Bawah		894.370	131.176	0	108	218.627	2	93.116	150	176	100	90	P10-90	317.913	108	-99.286	2	188.496	150	176	100	P10-100
K5A=K6A	Atas	2	550.760	97.007	0	108	161.679	2	125.914	150	176	100	100	P10-100	299.505	108	-137.826	2	188.496	150	176	100	P10-100
	Bawah		572.134	97.007	0	108	161.679	2	125.914	150	176	100	100	P10-100	300.650	108	-138.971	2	188.496	150	176	100	P10-100
K5A=K6A	Atas	1	901.155	73.621	0	108	122.702	2	165.910	150	176	100	100	P10-100	318.276	108	-195.574	2	188.496	150	176	100	P10-100
	Bawah		922.528	73.621	0	108	122.702	2	165.910	150	176	100	100	P10-100	319.421	108	-196.719	2	188.496	150	176	100	P10-100
K5A=K6A	Atas	2	578.919	89.960	0	108	149.934	2	135.777	150	176	100	100	P10-100	301.014	108	-151.080	2	188.496	150	176	100	P10-100
	Bawah		600.292	89.960	0	108	149.934	2	135.777	150	176	100	100	P10-100	302.159	108	-152.225	2	188.496	150	176	100	P10-100
K5A=K6A	Atas	3	234.656	127.535	0	108	212.559	2	95.774	150	176	100	95	P10-95	282.571	108	-70.012	2	188.496	150	176	100	P10-100
	Bawah		277.403	127.535	0	108	212.559	2	95.774	150	176	100	95	P10-95	284.861	108	-72.302	2	188.496	150	176	100	P10-100
K5C=K6C	Atas	1	1421.428	181.430	0	108	302.383	2	67.324	150	176	100	65	P10-65	346.148	108	-43.765	2	188.496	150	176	100	P10-100
	Bawah		1464.175	181.430	0	108	302.383	2	67.324	150	176	100	65	P10-65	348.438	108	-46.055	2	188.496	150	176	100	P10-100
K5C=K6C	Atas	2	683.115	289.677	0	108	482.795	3	63.249	150	176	100	60	P10-60	306.595	108	176.200	2	115.537	150	176	100	P10-100
	Bawah		725.862	289.677	0	108	482.795	3	63.249	150	176	100	60	P10-60	308.885	108	173.910	2	117.058	150	176	100	P10-100
K5I=K6I	Atas	1	1547.855	136.102	0	108	226.837	2	89.746	150	176	100	85	P10-85	352.921	108	-126.084	2	188.496	150	176	100	P10-100
	Bawah		1590.603	136.102	0	108	226.837	2	89.746	150	176	100	85	P10-85	355.211	108	-128.374	2	188.496	150	176	100	P10-100
K5I=K6I	Atas	2	923.099	147.148	0	108	245.247	2	83.008	150	176	100	80	P10-80	319.452	108	-74.205	2	188.496	150	176	100	P10-100
	Bawah		965.846	147.148	0	108	245.247	2	83.008	150	176	100	80	P10-80	321.742	108	-76.495	2	188.496	150	176	100	P10-100
K5I=K6I	Atas	3	272.180	158.855	0	108	264.758	2	76.891	150	176	100	75	P10-75	284.581	108	-19.823	2	188.496	150	176	100	P10-100
	Bawah		314.927	158.855	0	108	264.758	2	76.891	150	176	100	75	P10-75	286.871	108	-22.113	2	188.496	150	176	100	P10-100



## 7. Perhitungan gaya-gaya dalam

Lu	h (m)		Arah x						Arah y													
	Lx (m)		Lny (m)		M <sub>pak,bs</sub> (KNm)		Vkol,x (KN)	Cka=Tka (KN)	Cki=Tki (KN)	Lx (m)		M <sub>pak,bs</sub> (KNm)		Vkol,y (KN)	Cka=Tka (KN)	Cki=Tki (KN)	Vjhy (KN)					
	A	B	Ki	Ka	Ki	Ka	Ki	Ka	Ki	Ka	Ki	Ka	Ki	Ka	Ki	Ka	Ki	Ka				
<b>K1A=K10A</b>																						
2 (J1A=J10A)	4.2	4.2	0	6	0	5.4	0	234.175	76.331	0	421.611	345.280	0	4.5	0	3.9	0	306.789	90.010	0	552.346	462.337
3 (J1A=J10A)	4.2	4.2	0	6	0	5.4	0	234.175	71.095	0	421.611	350.517	0	4.5	0	3.9	0	234.175	72.554	0	421.611	349.057
ATAP (J1A=J10A)	0	4.2	1.8	6	1.4	5.4	158.839	234.172	254.050	285.976	421.606	453.532	1.8	4.5	1.4	3.9	234.172	158.839	259.866	421.606	285.976	447.716
<b>K1B=K10B</b>																						
2 (J1B=J10B)	4.2	4.2	0.9	6	0.5	5.4	158.839	443.851	198.987	285.976	799.114	886.103	4.5	9	3.9	8.4	376.681	158.839	170.955	285.976	678.181	793.201
3 (J1B=J10B)	4.2	4.2	1.8	6	1.2	5.4	158.839	443.851	197.873	285.976	799.114	887.217	4.5	9	3.9	8.4	508.298	158.839	197.356	285.976	915.146	1003.765
ATAP (J1B=J10B)	0	4.2	1.8	6	1.2	5.4	234.175	0	200.632	421.611	0	220.980	4.5	9	3.9	8.4	158.839	234.175	224.815	285.976	421.611	482.772
<b>K1D=K10D</b>																						
2 (J1D=J10D)	4.2	4.2	0.9	6	0.5	5.4	158.839	443.851	198.987	285.976	799.114	886.103	9	4.5	8.4	3.9	376.681	158.839	170.955	678.181	285.976	793.201
3 (J1D=J10D)	4.2	4.2	1.8	6	1.2	5.4	158.839	443.851	197.873	285.976	799.114	887.217	9	4.5	8.4	3.9	508.298	158.839	197.356	915.146	285.976	1003.765
ATAP (J1D=J10D)	0	4.2	1.8	6	1.2	5.4	234.175	0	200.632	421.611	0	220.980	9	4.5	8.4	3.9	234.175	158.839	224.815	421.611	285.976	482.772
<b>K1E=K10E</b>																						
2 (J1E=J10E)	4.2	4.2	0	6	0	5.4	0	234.175	76.331	0	421.611	345.280	4.5	0	3.9	0	306.789	0	90.010	552.346	0	462.337
3 (J1E=J10E)	4.2	4.2	0	6	0	5.4	0	234.175	71.095	0	421.611	350.517	4.5	0	3.9	0	234.175	0	72.554	421.611	0	349.057
ATAP (J1E=J10E)	0	4.2	1.8	6	1.4	5.4	158.839	234.172	254.050	285.976	421.606	453.532	4.5	1.8	3.9	1.4	158.839	234.175	259.867	285.976	421.611	447.720
<b>K2A=K9A</b>																						
2 (J2A=J9A)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	148.206	285.976	421.611	559.381	0.9	9	0.5	8.4	158.839	587.798	218.062	285.976	1058.278	1126.192
3 (J2A=J9A)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	143.101	285.976	421.611	564.486	1.8	9	1.4	8.4	158.839	587.798	201.044	285.976	1058.278	1143.210
ATAP (J2A=J9A)	0	4.2	6	6	5.4	5.4	158.839	234.175	219.586	285.976	421.611	488.001	1.8	0	1.4	0	234.175	0	180.036	421.611	0	241.575
<b>K2C=K9C</b>																						
2 (J2C=J9C)	4.2	4.2	6	6	5.4	5.4	234.175	443.851	216.856	421.611	799.114	1003.870	9	9	8.4	8.4	306.789	587.798	246.770	552.346	1058.278	1363.855
3 (J2C=J9C)	0	4.2	6	6	5.4	5.4	234.175	443.851	433.712	421.611	799.114	787.014	9	9	8.4	8.4	306.789	587.798	493.539	552.346	1058.278	1117.085
<b>K2E=K9E</b>																						
2 (J2E=J9E)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	148.206	285.976	421.611	559.381	9	0.9	8.4	0.5	587.798	158.839	218.062	1058.278	285.976	1126.192
3 (J2E=J9E)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	143.101	285.976	421.611	564.486	9	1.8	8.4	1.4	587.798	158.839	201.044	1058.278	285.976	1143.210
ATAP (J2E=J9E)	0	4.2	6	6	5.4	5.4	158.839	234.175	219.586	285.976	421.611	488.001	0	1.8	0	1.4	0	234.175	180.036	0	421.611	241.575
<b>K3A=K8A</b>																						
2 (J3A=J8A)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	148.206	285.976	421.611	559.381	0.9	9	0.5	8.4	158.839	587.798	218.062	285.976	1058.278	1126.192
3 (J3A=J8A)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	143.101	285.976	421.611	564.486	1.8	9	1.4	8.4	158.839	587.798	201.044	285.976	1058.278	1143.210
ATAP (J3A=J8A)	0	4.2	6	6	5.4	5.4	158.839	234.175	219.586	285.976	421.611	488.001	1.8	0	1.4	0	234.175	0	180.036	421.611	0	241.575
<b>K3C=K8C</b>																						
2 (J3C=J8C)	4.2	4.2	6	6	5.4	5.4	234.175	443.851	216.856	421.611	799.114	1003.870	9	9	8.4	8.4	306.789	587.798	246.770	552.346	1058.278	1363.855
3 (J3C=J8C)	0	4.2	6	6	5.4	5.4	234.175	443.851	433.712	421.611	799.114	787.014	9	9	8.4	8.4	306.789	587.798	493.539	552.346	1058.278	1117.085

<b>K3E=K8E</b>																						
2 (J3E=J8E)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	148.206	285.976	421.611	559.381	9	0.9	8.4	0.5	587.798	158.839	218.062	1058.278	285.976	1126.192
3 (J3E=J8E)	4.2	4.2	6	6	5.4	5.4	158.839	234.175	143.101	285.976	421.611	564.486	9	1.8	8.4	1.4	587.798	158.839	201.044	1058.278	285.976	1143.210
ATAP (J3E=J8E)	0	4.2	6	6	5.4	5.4	158.839	234.175	219.586	285.976	421.611	488.001	0	1.8	0	1.4	0	234.175	180.036	0	421.611	241.575
<b>K4A=K7A</b>																						
2 (J4A=J7A)	4.2	4.2	6	4.5	5.4	3.9	158.839	306.789	167.747	285.976	552.346	670.576	0.9	9	0.5	8.4	158.839	587.798	223.924	285.976	1058.278	1120.330
3 (J4A=J7A)	4.2	4.2	6	4.5	5.4	3.9	158.839	234.175	145.186	285.976	421.611	562.401	1.8	9	1.4	8.4	158.839	587.798	201.669	285.976	1058.278	1142.585
ATAP (J4A=J7A)	0	4.2	6	4.5	5.4	3.9	158.839	234.175	223.756	285.976	421.611	483.831	1.8	0	1.4	0	234.175	0	181.287	421.611	0	240.324
<b>K4C=K7C</b>																						
2 (J4C=J7C)	4.2	4.2	6	4.5	5.4	3.9	443.851	158.839	200.831	799.114	285.976	884.259	9	9	8.4	8.4	306.789	587.798	241.962	552.346	1058.278	1368.662
3 (J4C=J7C)	0	4.2	6	4.5	5.4	3.9	443.851	158.839	401.662	799.114	285.976	683.428	9	9	8.4	8.4	306.789	587.798	483.925	552.346	1058.278	1126.700
<b>K4E=K7E</b>																						
2 (J4E=J7E)	4.2	4.2	6	4.5	5.4	3.9	158.839	306.789	167.747	285.976	552.346	670.576	9	0.9	8.4	0.5	587.798	158.839	223.924	1058.278	285.976	1120.330
3 (J4E=J7E)	4.2	4.2	6	4.5	5.4	3.9	158.839	234.175	145.186	285.976	421.611	562.401	9	1.8	8.4	1.4	587.798	158.839	201.669	1058.278	285.976	1142.585
ATAP (J4E=J7E)	0	4.2	6	4.5	5.4	3.9	158.839	234.175	223.756	285.976	421.611	483.831	0	1.8	0	1.4	0	234.175	181.287	0	421.611	240.324
<b>K5A=K6A</b>																						
2 (J5A=J6A)	2.1	2.1	4.5	6	3.9	5.4	306.789	158.839	299.754	552.346	285.976	538.568	0	9	0	8.4	234.175	587.798	328.719	421.611	1058.278	1151.170
3 (J5A=J6A)	4.2	2.1	4.5	6	3.9	5.4	306.789	158.839	199.836	552.346	285.976	638.486	0	9	0	8.4	234.175	587.798	219.146	421.611	1058.278	1260.744
<b>K5A'=K6A''</b>																						
2 (J5A'=J6A'')	2.1	2.1	0	6	0	5.4	0	234.175	108.414	0	421.611	313.197	0	0	0	0	0	0	32.524	0	0	-32.524
3 (J5A'=J6A'')	2.1	2.1	0	6	0	5.4	0	234.175	108.414	0	421.611	313.197	0	0	0	0	0	0	32.524	0	0	-32.524
<b>K5A''=K6A'''</b>																						
ATAP (J5A''=J6A''')	0	4.2	4.5	6	3.9	5.4	234.175	158.839	230.029	421.611	285.976	477.558	1.8	0	1.2	0	234.175	0	202.196	421.611	0	219.416
<b>K5C=K6C</b>																						
2 (J5C=J6C)	4.2	4.2	4.5	6	3.9	5.4	158.839	443.851	200.831	285.976	799.114	884.259	9	9	8.4	8.4	306.789	587.798	241.962	552.346	1058.278	1368.662
3 (J5C=J6C)	0	4.2	4.5	6	3.9	5.4	158.839	443.851	401.662	285.976	799.114	683.428	9	9	8.4	8.4	306.789	587.798	483.925	552.346	1058.278	1126.700
<b>K5E=K6E</b>																						
2 (J5E=J6E)	4.2	4.2	4.5	6	3.9	5.4	306.789	158.839	149.877	552.346	285.976	688.445	9	3	8.4	2.6	587.798	0	164.360	1058.278	0	893.919
3 (J5E=J6E)	4.2	4.2	4.5	6	3.9	5.4	158.839	234.175	131.751	285.976	421.611	575.836	9	3	8.4	2.6	587.798	0	158.922	1058.278	0	899.356
ATAP (J5E=J6E)	0	4.2	4.5	6	3.9	5.4	158.839	234.175	218.554	285.976	421.611	489.032	0	3	0	2.6	0	234.175	168.018	0	421.611	253.593

## 7. Perhitungan gaya-gaya dalam lanjutan

I.t	Nu <sub>k</sub> (KN)	Arah x			Arah y		
		$V_{jh,x} \leq 1,5 \cdot \sqrt{f_c} = 7,5$ (N/mm <sup>2</sup> )	$Nu_k / \Delta g < 0,1 \cdot f_c = 2,5$ (N/mm <sup>2</sup> )	$V_{sh,x}$ (KN)	$V_{jh,y} \leq 1,5 \cdot \sqrt{f_c} = 7,5$ (N/mm <sup>2</sup> )	$Nu_k / \Delta g < 0,1 \cdot f_c = 2,5$ (N/mm <sup>2</sup> )	$V_{sh,y}$ (KN)
<b>K1A=K10A</b>							
2 (J1A=J10A)	664.293	0.959	1.845	0	1.284	1.845	0
3 (J1A=J10A)	484.187	0.974	1.345	0	0.970	1.345	0
ATAP (J1A=J10A)	308.958	1.260	0.858	0	1.244	0.858	0
<b>K1B=K10B</b>							
2 (J1B=J10B)	1261.831	2.461	3.505	240.610	2.203	3.505	240.610
3 (J1B=J10B)	763.422	2.464	2.121	0	2.788	2.121	0
ATAP (J1B=J10B)	186.443	0.614	0.518	0	1.341	0.518	0
<b>K1D=K10D</b>							
2 (J1D=J10D)	1257.115	2.461	3.492	239.036	2.203	3.492	239.036
3 (J1D=J10D)	760.698	2.464	2.113	0	2.788	2.113	0
ATAP (J1D=J10D)	185.516	0.614	0.515	0	1.341	0.515	0
<b>K1E=K10E</b>							
2 (J1E=J10E)	670.079	0.959	1.861	0	1.284	1.861	0
3 (J1E=J10E)	486.842	0.974	1.352	0	0.970	1.352	0
ATAP (J1E=J10E)	309.866	1.260	0.861	0	1.244	0.861	0
<b>K2A=K9A</b>							
2 (J2A=J9A)	1342.066	1.554	3.728	265.952	3.128	3.728	265.952
3 (J2A=J9A)	825.387	1.568	2.293	0	3.176	2.293	0
ATAP (J2A=J9A)	267.111	1.356	0.742	0	0.671	0.742	0
<b>K2C=K9C</b>							
2 (J2C=J9C)	1705.262	2.789	4.737	358.946	3.788	4.737	358.946
3 (J2C=J9C)	818.630	2.186	2.274	0	3.103	2.274	0
<b>K2E=K9E</b>							
2 (J2E=J9E)	267.091	1.554	0.742	0	3.128	0.742	0
3 (J2E=J9E)	828.365	1.568	2.301	0	3.176	2.301	0
ATAP (J2E=J9E)	267.091	1.356	0.742	0	0.671	0.742	0
<b>K3A=K8A</b>							
2 (J3A=J8A)	1487.154	1.554	4.131	306.504	3.128	4.131	306.504
3 (J3A=J8A)	919.579	1.568	2.554	55.970	3.176	2.554	55.970
ATAP (J3A=J8A)	275.186	1.356	0.764	0	0.671	0.764	0
<b>K3C=K8C</b>							
2 (J3C=J8C)	1673.581	2.789	4.649	351.814	3.788	4.649	351.814
3 (J3C=J8C)	807.556	2.186	2.243	0	3.103	2.243	0







<b>K3E=K9E</b>														
2 (J3E=18E)	250.871	817.682	817.682	3407.007	314.159	10.845	11P10	862.771	1126.192	263.421	1097.586	314.159	3.494	4P10
3 (J3E=18E)	503.448	1082.172	1082.172	4509.050	314.159	14.353	15P10	803.205	1143.210	340.005	1416.689	314.159	4.509	5P10
ATAP (J3E=18E)	488.001	241.575	488.001	2033.338	314.159	6.472	7P10	307.693	488.001	180.308	751.283	314.159	2.391	3P10
<b>K4A=K7A</b>														
2 (J4A=17A)	442.162	891.916	891.916	3716.315	314.159	11.829	12P10	824.822	1120.330	295.508	1231.283	314.159	3.919	4P10
3 (J4A=17A)	562.401	1142.585	1142.585	4760.770	314.159	15.154	16P10	780.268	1142.585	362.316	1509.651	314.159	4.805	5P10
ATAP (J4A=17A)	483.831	240.324	483.831	2015.963	314.159	6.417	7P10	302.089	483.831	181.742	757.259	314.159	2.410	3P10
<b>K4C=K7C</b>														
2 (J4C=17C)	575.494	1059.897	1059.897	4416.239	314.159	14.057	15P10	1048.677	1368.662	319.986	1333.274	314.159	4.244	5P10
3 (J4C=17C)	683.428	1126.700	1126.700	4694.584	314.159	14.943	15P10	765.844	1126.700	360.856	1503.568	314.159	4.786	5P10
<b>K4E=K7E</b>														
2 (J4E=17E)	670.576	1120.330	1120.330	4668.040	314.159	14.859	15P10	700.781	1120.330	419.548	1748.118	314.159	5.564	6P10
3 (J4E=17E)	562.401	1142.585	1142.585	4760.770	314.159	15.154	16P10	789.455	1142.585	353.130	1471.374	314.159	4.684	5P10
ATAP (J4E=17E)	483.831	240.324	483.831	2015.963	314.159	6.417	7P10	302.643	483.831	181.188	754.951	314.159	2.403	3P10
<b>K5A=K6A</b>														
2 (J5A=16A)	538.568	1151.170	1151.170	4796.544	314.159	15.268	16P10	802.365	1151.170	348.805	1433.355	314.159	4.626	5P10
3 (J5A=16A)	638.486	1260.744	1260.744	5253.098	314.159	16.721	17P10	833.598	1260.744	427.146	1779.773	314.159	5.665	6P10
<b>K5A'=K6A'</b>														
2 (J5A'=16A')	299.604	-46.117	299.604	1248.350	314.159	3.974	4P10	219.278	313.197	93.919	391.329	314.159	1.246	2P10
3 (J5A'=16A')	313.197	-32.524	313.197	1304.988	314.159	4.154	5P10	208.064	313.197	105.133	438.033	314.159	1.394	2P10
<b>K5A''=K6A''</b>														
ATAP (J5A''=16A'')	477.558	219.416	477.558	1989.825	314.159	6.334	7P10	298.986	477.558	178.572	744.050	314.159	2.368	3P10
<b>K5C=K6C</b>														
2 (J5C=16C)	595.419	1079.823	1079.823	4499.261	314.159	14.322	15P10	1037.359	1368.662	331.303	1380.430	314.159	4.394	5P10
3 (J5C=16C)	683.428	1126.700	1126.700	4694.584	314.159	14.943	15P10	761.538	1126.700	365.162	1521.507	314.159	4.843	5P10
<b>K5E=K6E</b>														
2 (J5E=16E)	366.487	571.961	571.961	2383.171	314.159	7.586	8P10	690.091	893.919	203.828	849.283	314.159	2.703	3P10
3 (J5E=16E)	515.042	838.563	838.563	3494.012	314.159	11.122	12P10	631.858	899.356	267.499	1114.578	314.159	3.548	4P10
ATAP (J5E=16E)	489.032	253.593	489.032	2037.633	314.159	6.486	7P10	308.209	489.032	180.824	753.431	314.159	2.398	3P10

### PERENCANAAN PONDASI TELAPAK

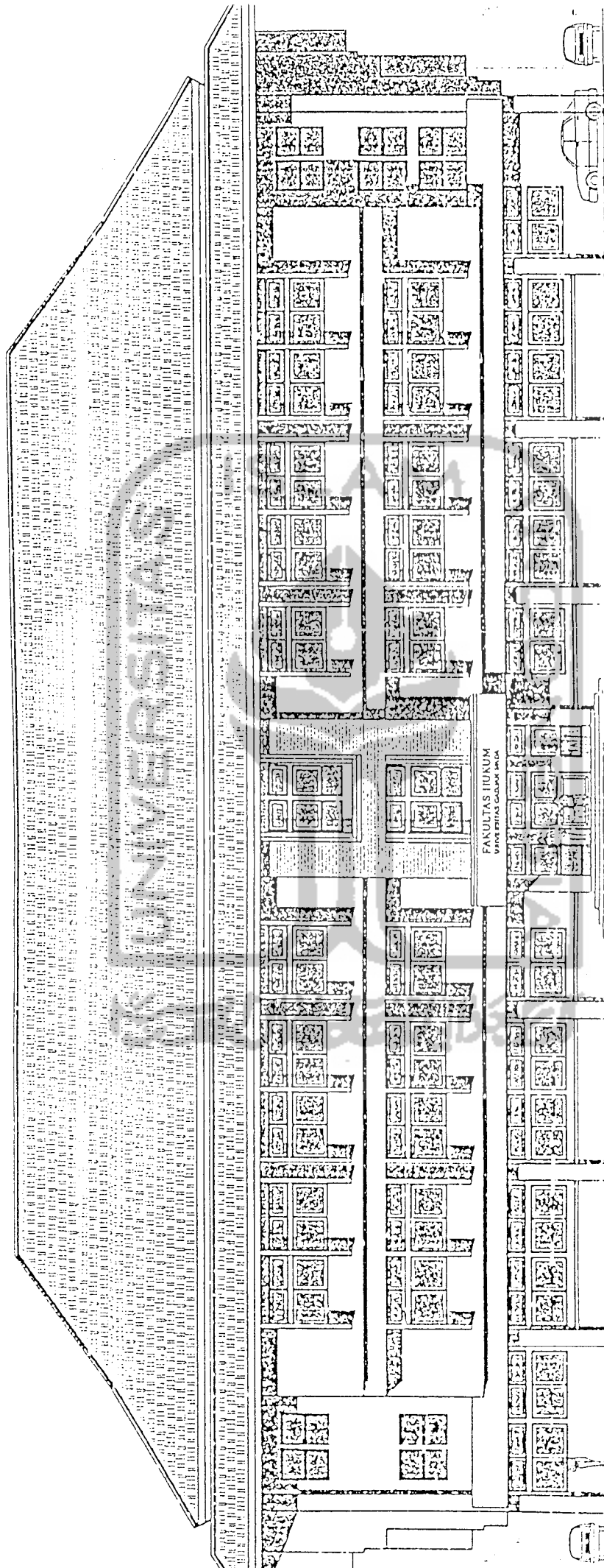
<b>Tipe Pondasi</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
$\sigma_{\text{tanah}}$ (KN/m <sup>2</sup> )	150	150	150
f <sub>c</sub> (Mpa)	25	25	25
f <sub>y</sub> (Mpa)	400	400	400
$\gamma_{\text{tanah}}$ (KN/m <sup>3</sup> )	18	18	18
$\gamma_{\text{beton}}$ (KN/m <sup>3</sup> )	24	24	24
h <sub>t.urug</sub> (m)	1	1	1
h <sub>pelat</sub> (m)	0.5	0.5	0.5
b <sub>kolom</sub> (mm)	600	600	600
h <sub>kolom</sub> (mm)	600	600	600
P <sub>b</sub> (mm)	70	70	70
$\phi_{\text{tul.pokok}}$ (mm)	22	22	22
P (KN)	1571.922	1387.436	650.340
M <sub>x</sub> (KNm)	4.748	8.974	9.022
M <sub>y</sub> (KNm)	7.183	1.991	10.934
<b>Pondasi Telapak :</b>			
$\sigma_{\text{netto tanah}}$ (KN/m <sup>2</sup> )	120	120	120
Coba B (m)	3.7	3.5	2.5
A <sub>perlu</sub> (m <sup>2</sup> )	13.255	11.712	5.789
B <sub>perlu</sub> (mm)	3.641	3.422	2.406
B <sub>ada</sub> (m)	3.7	3.5	2.5
A <sub>ada</sub> (m <sup>2</sup> )	13.69	12.25	6.25
Kontrol : A <sub>ada</sub> > A <sub>perlu</sub>	<b>Ok!</b>	<b>Ok!</b>	<b>Ok!</b>
$\sigma_{\text{kontak}}$ (KN/m <sup>2</sup> )	116.236	114.795	111.718
Kontrol : $\sigma_{\text{kontak}} < \sigma_{\text{netto}}$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>
<i>Tinjauan B. Sementara :</i>			
e <sub>x</sub> (m)	0.003	0.006	0.014
e <sub>y</sub> (m)	0.005	0.001	0.017
$\sigma$ (KN/m <sup>2</sup> )	57.529	56.758	52.674
1,5 . $\sigma_{\text{netto}}$ (KN/m <sup>2</sup> )	180	180	180
Kontrol : $\sigma < 1,5 . \sigma_{\text{netto}}$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>
<b>Perhit. Geser 1 Arah :</b>			
P <sub>u</sub> (KN)	1996.976	1748.536	809.490
M <sub>ux</sub> (KNm)	157.143	167.123	130.133
M <sub>uy</sub> (KNm)	22.296	144.504	13.727
d (mm)	419	419	419
n <sub>l</sub> (m)	1.131	1.031	0.531
<i>Arah x :</i>			
q <sub>ux<sub>max</sub></sub> (KN/m <sup>2</sup> )	164.485	166.125	179.489
q <sub>ux<sub>min</sub></sub> (KN/m <sup>2</sup> )	127.257	119.350	79.547
q <sub>u<sub>m</sub></sub> (KN/m <sup>2</sup> )	153.105	152.347	158.262
q <sub>ux<sub>terjadi</sub></sub> (KN/m <sup>2</sup> )	158.795	159.236	168.876
V <sub>u</sub> (KN)	664.511	574.602	224.182
V <sub>u/Φ</sub> (KN)	1107.518	957.671	373.637
V <sub>c</sub> (KN)	1291.917	1222.083	872.917
Kontrol : V <sub>c</sub> ≥ V <sub>u/Φ</sub>	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>

<b>Arah y :</b>			
$qu_{y_{max}}$ (KN/m <sup>2</sup> )	148.512	162.960	134.790
$qu_{y_{min}}$ (KN/m <sup>2</sup> )	143.230	122.515	124.247
$qu_m$ (KN/m <sup>2</sup> )	146.898	151.046	132.550
$qu_{y_{terjadi}}$ (KN/m <sup>2</sup> )	147.705	157.003	133.670
$V_u$ (KN)	618.101	566.545	177.447
$V_u/\Phi$ (KN)	1030.168	944.242	295.745
$V_c$ (KN)	1291.917	1222.083	872.917
Kontrol : $V_c \geq V_u/\Phi$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>
<b>Perhit. Geser 2 Arah :</b>			
$x = y$ (mm)	1019	1019	1019
$qu_{max}$ (KN/m <sup>2</sup> )	167.126	186.347	184.761
$qu_{min}$ (KN/m <sup>2</sup> )	124.616	99.128	74.276
$qu_T$ (KN/m <sup>2</sup> )	145.871	142.738	129.518
$V_u$ (KN)	1845.509	1600.323	675.003
$V_u/\Phi$ (KN)	3075.848	2667.205	1125.005
$\beta_c$	1	1	1
$b_o$ (mm)	4076	4076	4076
$V_{c1}$ (KN)	51235.320	51235.320	51235.320
$V_{c2}$ (KN)	34156.880	34156.880	34156.880
$V_{c_{pakai}}$ (KN)	34156.880	34157.880	34158.880
Kontrol : $V_{c_{pakai}} \geq V_u/\Phi$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>
<b>Kuat Tumpuan Pondasi :</b>			
<i>Kuat Tump. Pondasi :</i>			
$\Phi \cdot P_n$	10710	10710	10710
<i>Kuat Tump. Kolom :</i>			
$\Phi \cdot P_n$	5355	5355	5355
Kontrol : $\Phi \cdot P_{n_{pondasi}} > \Phi \cdot P_{n_{kolom}}$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>
<b>Perhit. Tul. Lentur Pondasi :</b>			
$l$ (m)	1.550	1.450	0.950
$qu_{max}$ (KN/m <sup>2</sup> )	167.126	186.347	184.761
$M_u$ (KNm)	200.760	195.898	83.373
$M_u/\Phi$ (KNm)	250.950	244.872	104.217
$m$	18.824	18.824	18.824
$R_n$ (mm <sup>2</sup> )	1.429	1.395	0.594
$\rho_{min}$	0.004	0.004	0.004
$\rho_b$	0.027	0.027	0.027
$\rho_{max}$	0.020	0.020	0.020
$\rho_{perlu}$	0.004	0.004	0.002
$\rho_{pakai}$	0.004	0.004	0.003
$A_{s_{perlu}}$ (mm <sup>2</sup> )	1676	1676	1257
$\emptyset$ tulangan pokok (mm)	22	22	22
$A1 \cdot \emptyset$ (mm <sup>2</sup> )	380.286	380.286	380.286
$s$ (mm)	226.901	226.901	302.534
$s_{pakai}$ (mm)	220	220	250
Dipakai tulangan	<b>D22-220</b>	<b>D22-220</b>	<b>D22-250</b>
$A_{s_{ada}}$ (mm <sup>2</sup> )	1728.571	1728.571	1521.143
$a$ (mm)	32.538	32.538	28.633
$M_n$ (KNm)	278.460	278.460	246.232
Kontrol : $M_n > M_u/\Phi$	<b>Aman !</b>	<b>Aman !</b>	<b>Aman !</b>
<i>Tulangan Susut :</i>			
$A_{s_{susut}}$ (mm <sup>2</sup> )	1000	1000	1000
$\emptyset$ tul. susut (mm)	12	12	12
$s$ (mm)	113.143	113.143	113.143
Dipakai tulangan	<b>P12-110</b>	<b>P12-110</b>	<b>P12-110</b>

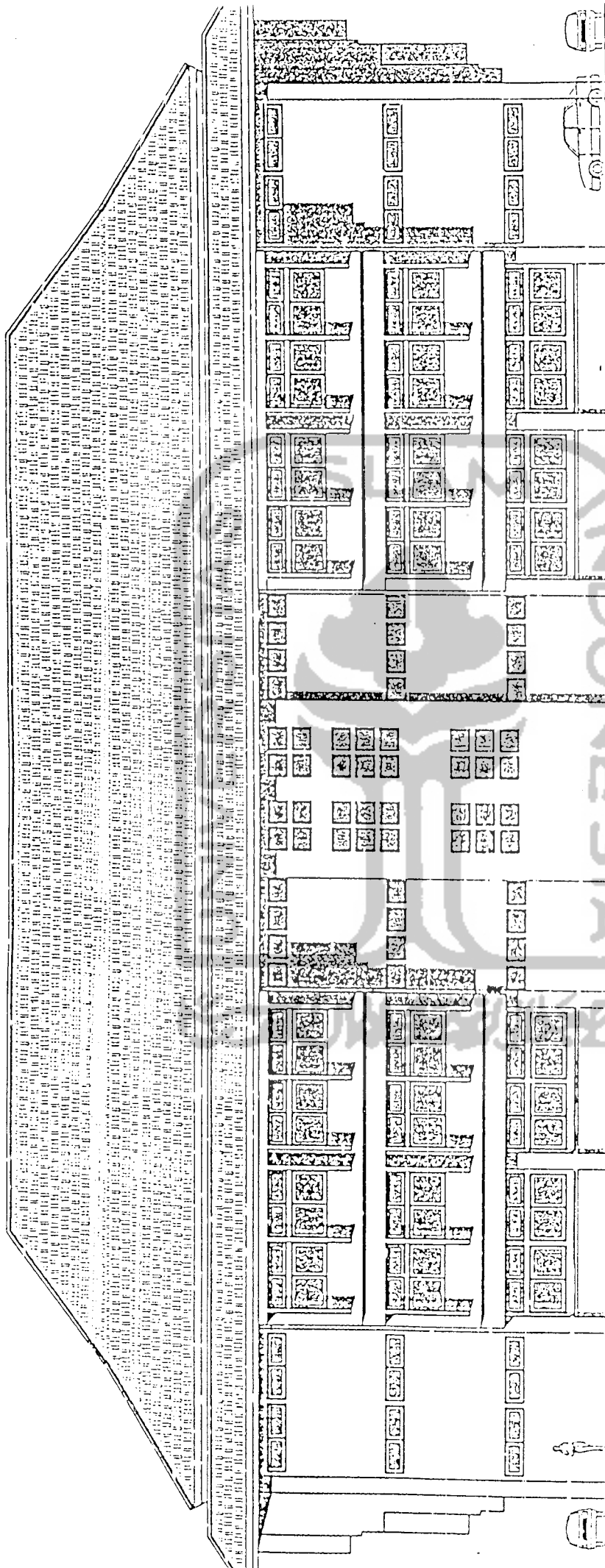
# LAMPIRAN

## IV

UNIVERSITAS ISLAM INDONESIA

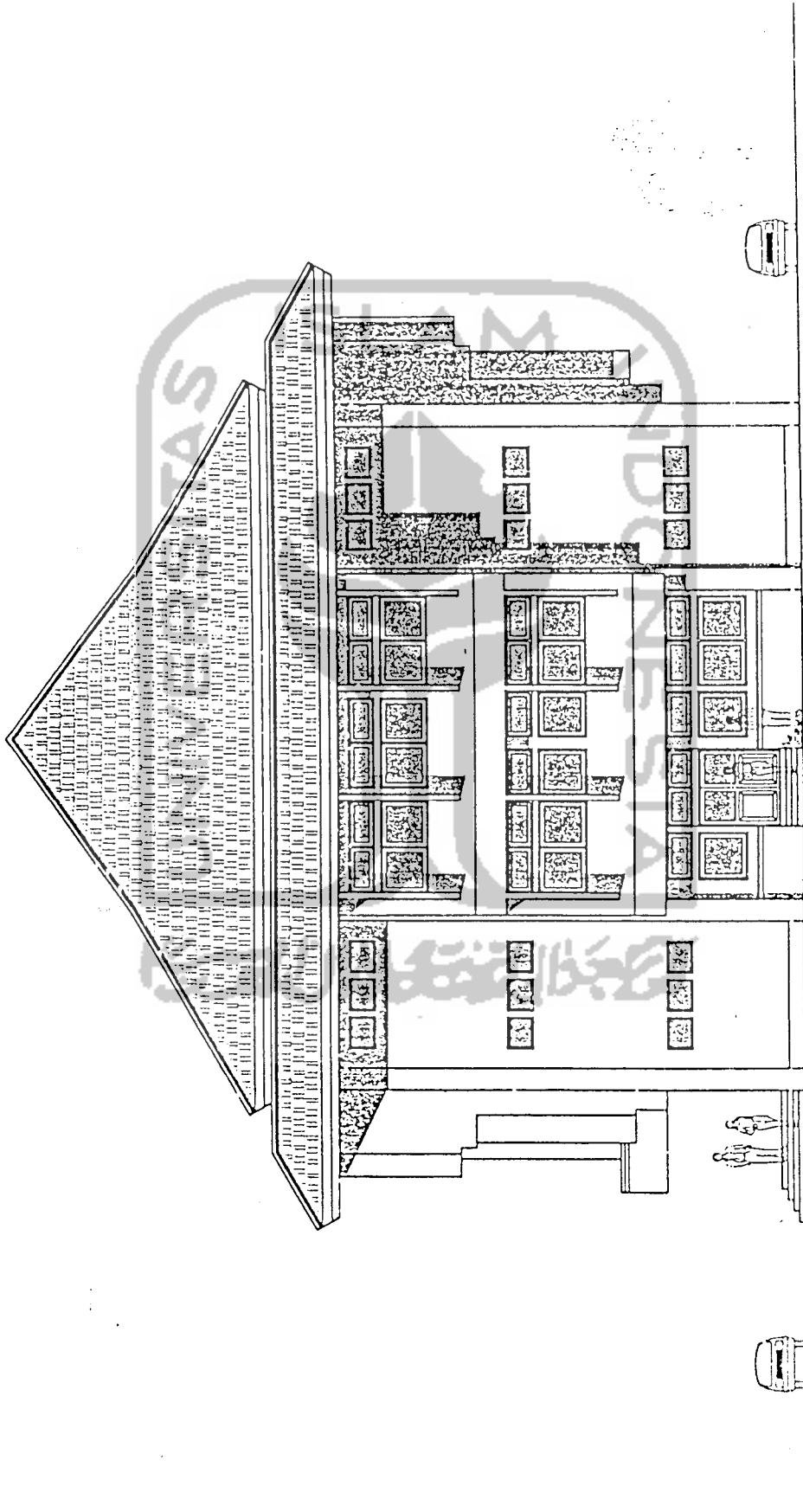


TAMPAK DEPAN

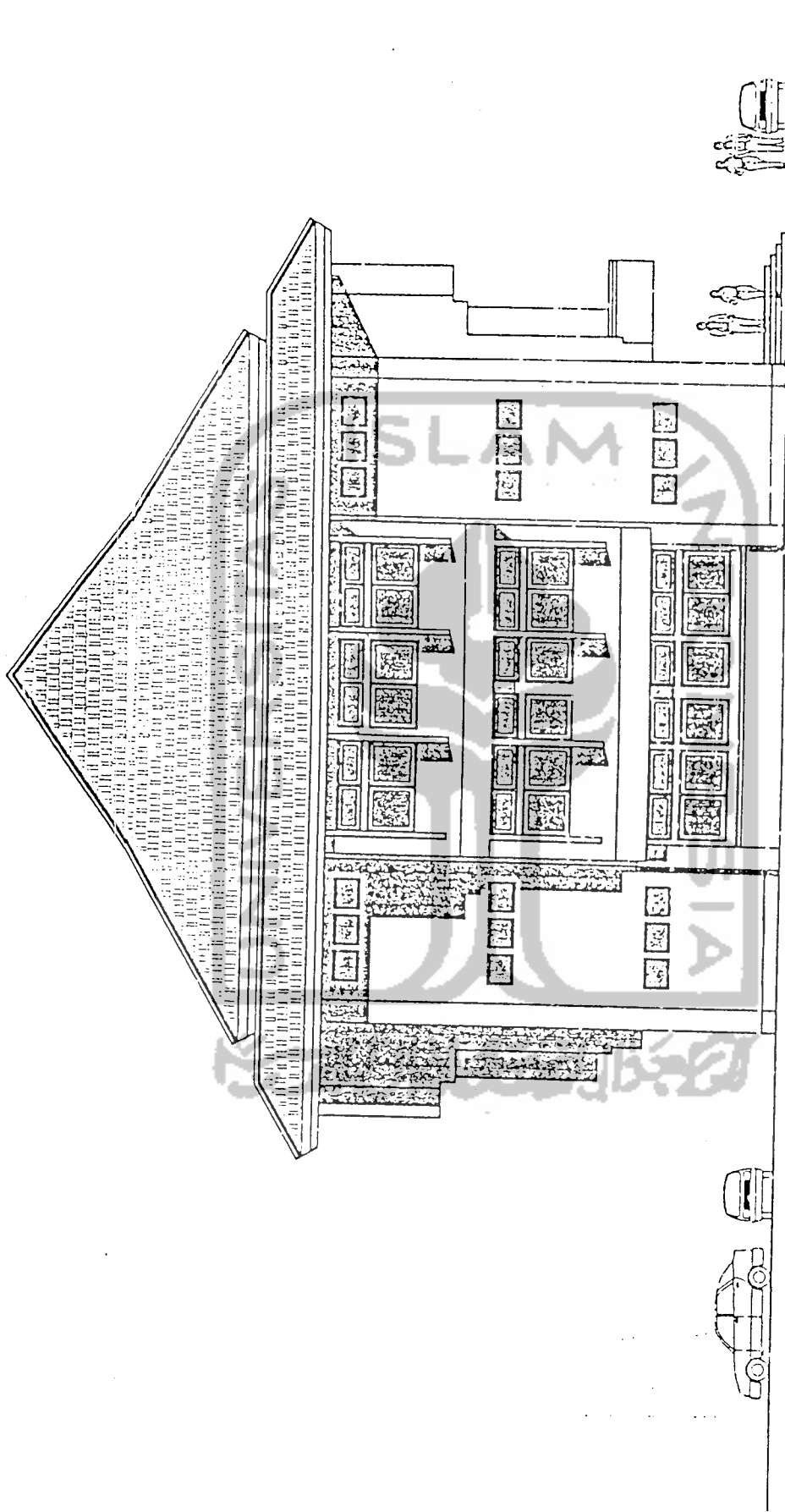


TAMPAK BELANG





TAMPAK SAMPIING KIRI

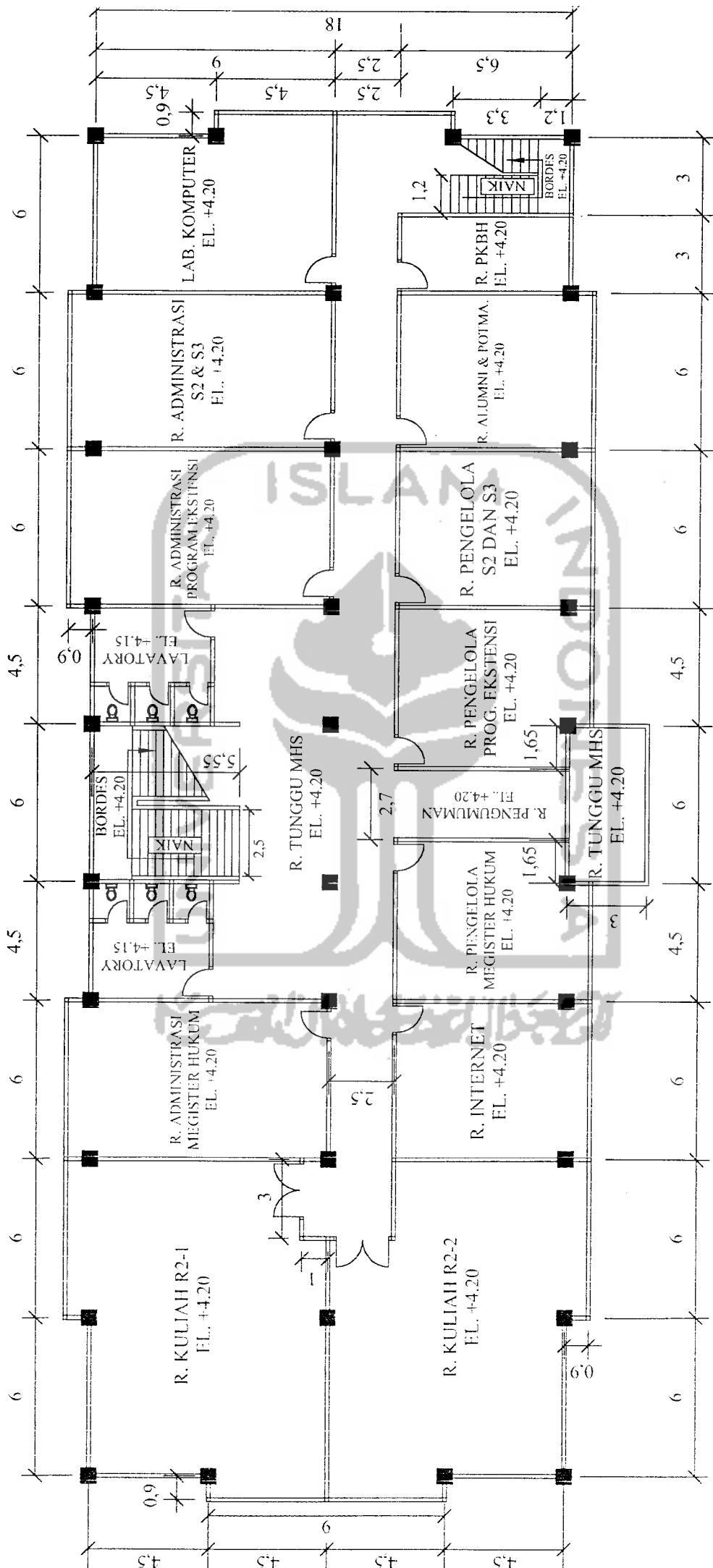


TAMPAK SAMPING KANAN





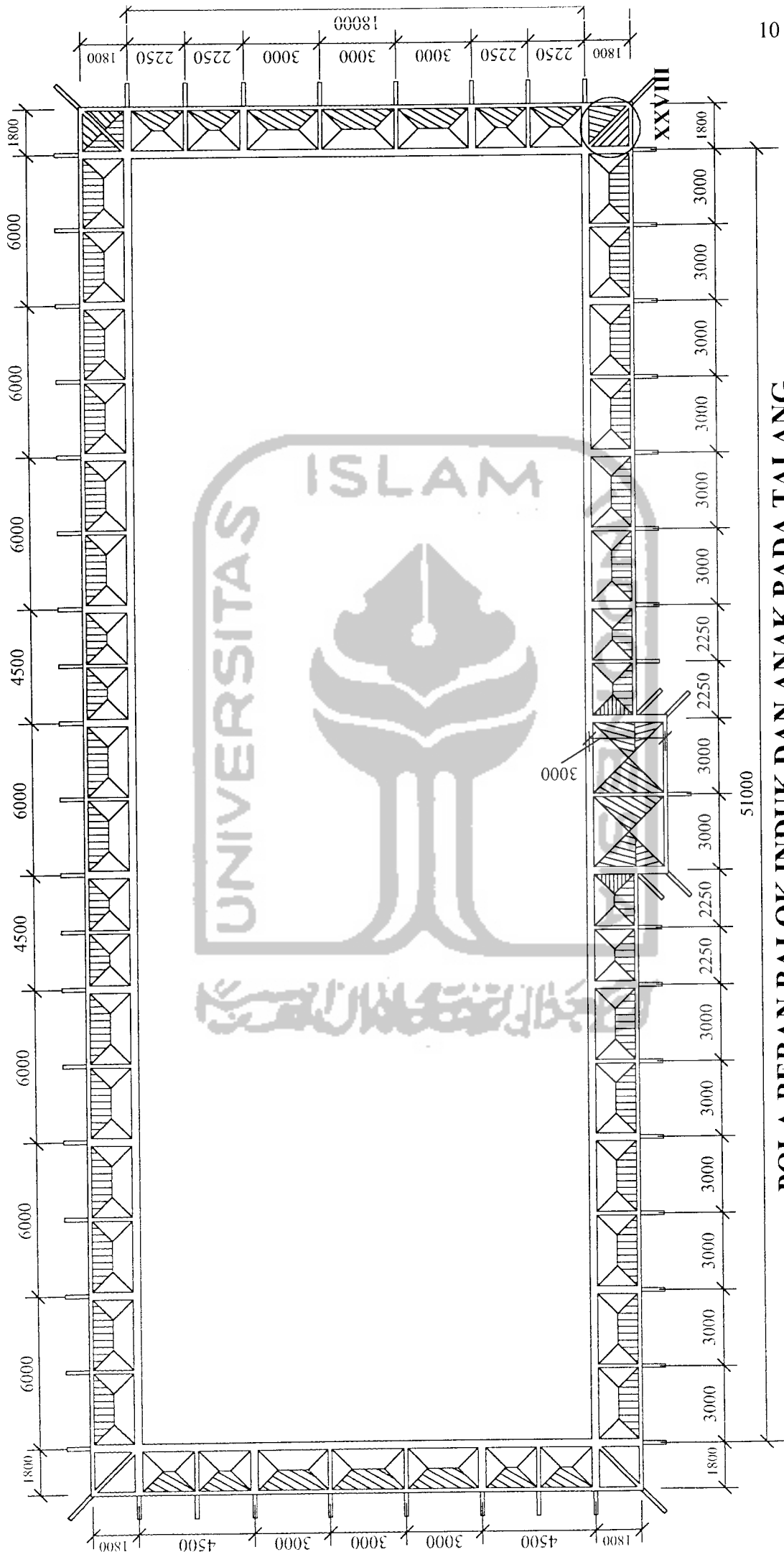




**DENAH LANTAI 2**

Skala 1:200



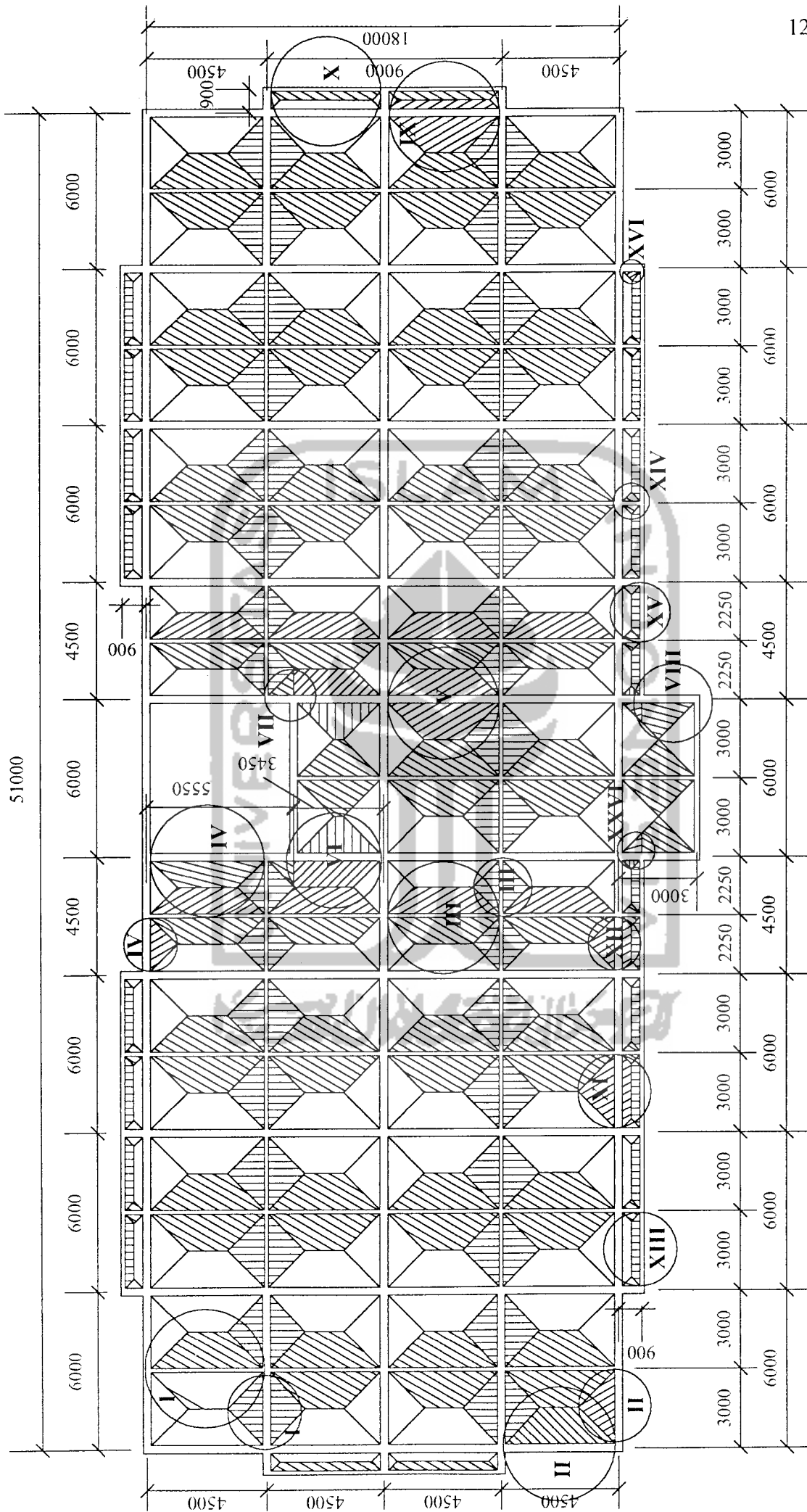


**POLA BEBAN BALOK INDUK DAN ANAK PADA TALANG**

Skala 1:200



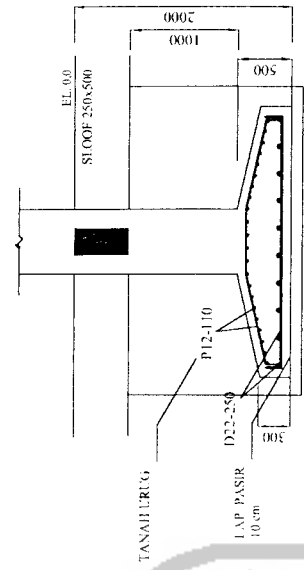




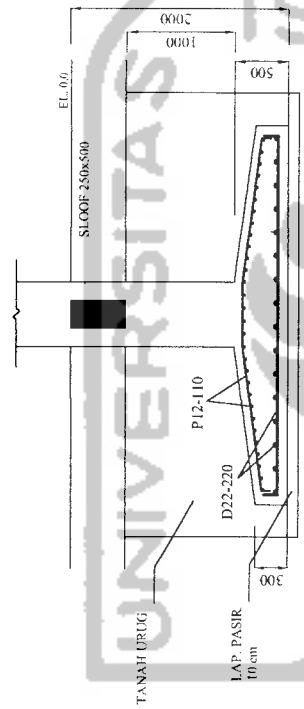
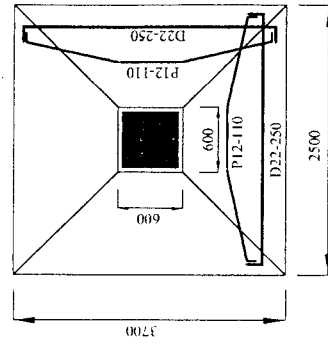
**POLA BEBAN BALOK INDUK DAN ANAK LANTAI-2**

Skala 1:200

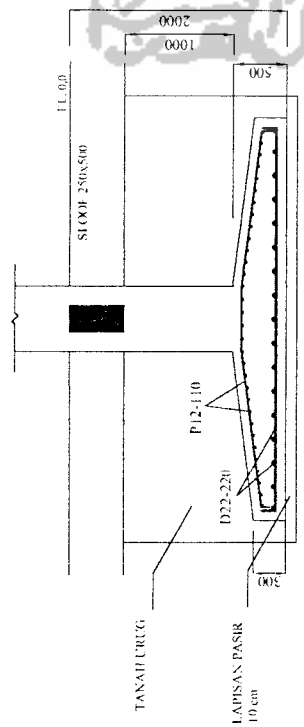
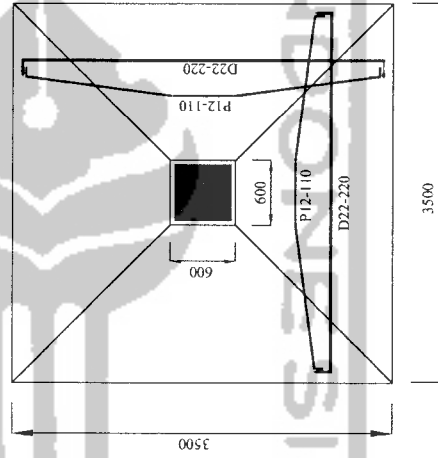




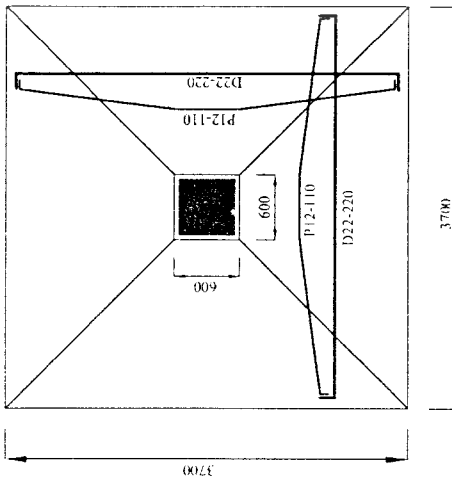
DENAH PONDASI P3 2500x2500



DENAH PONDASI P2 3500x3500

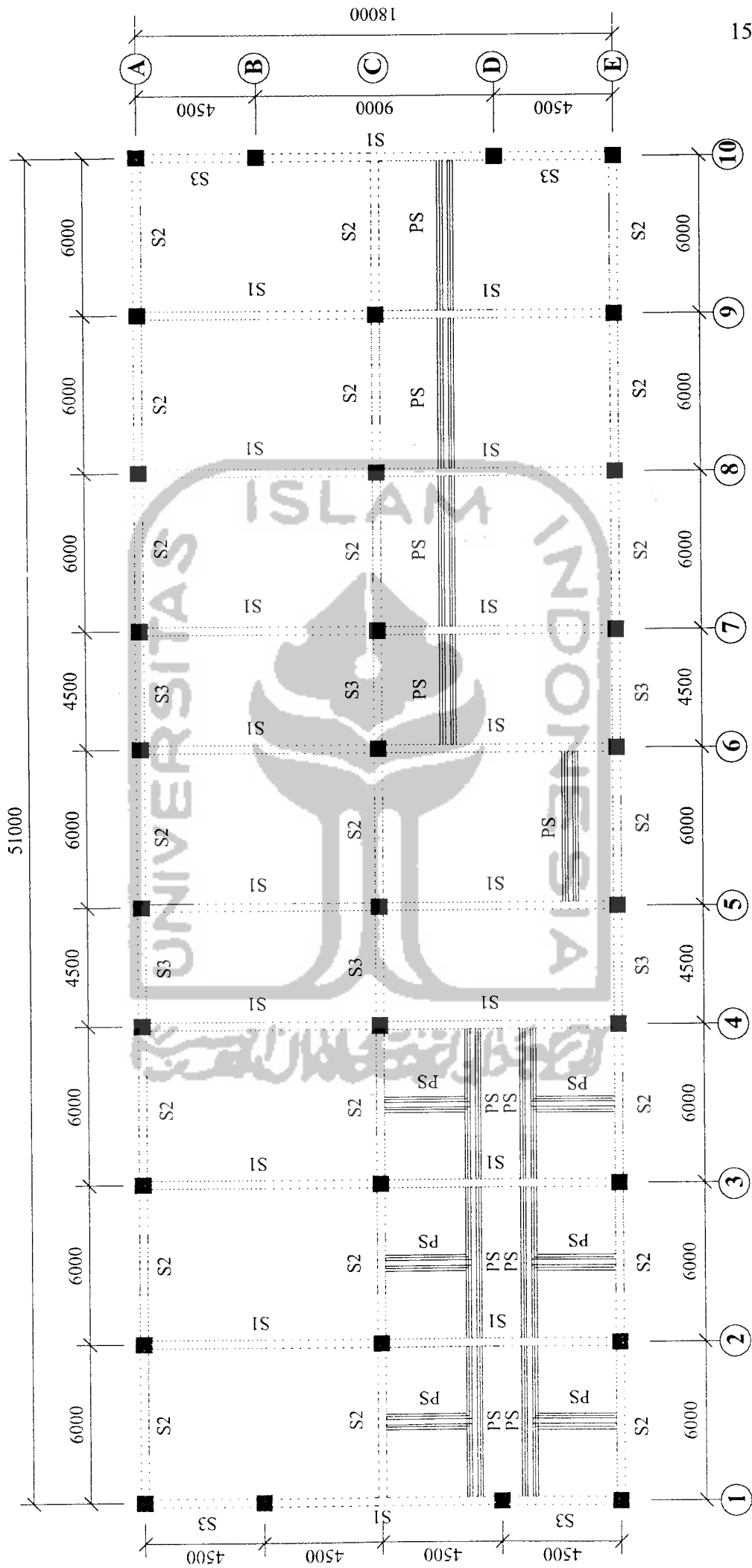


DENAH PONDASI P1 3700x3700



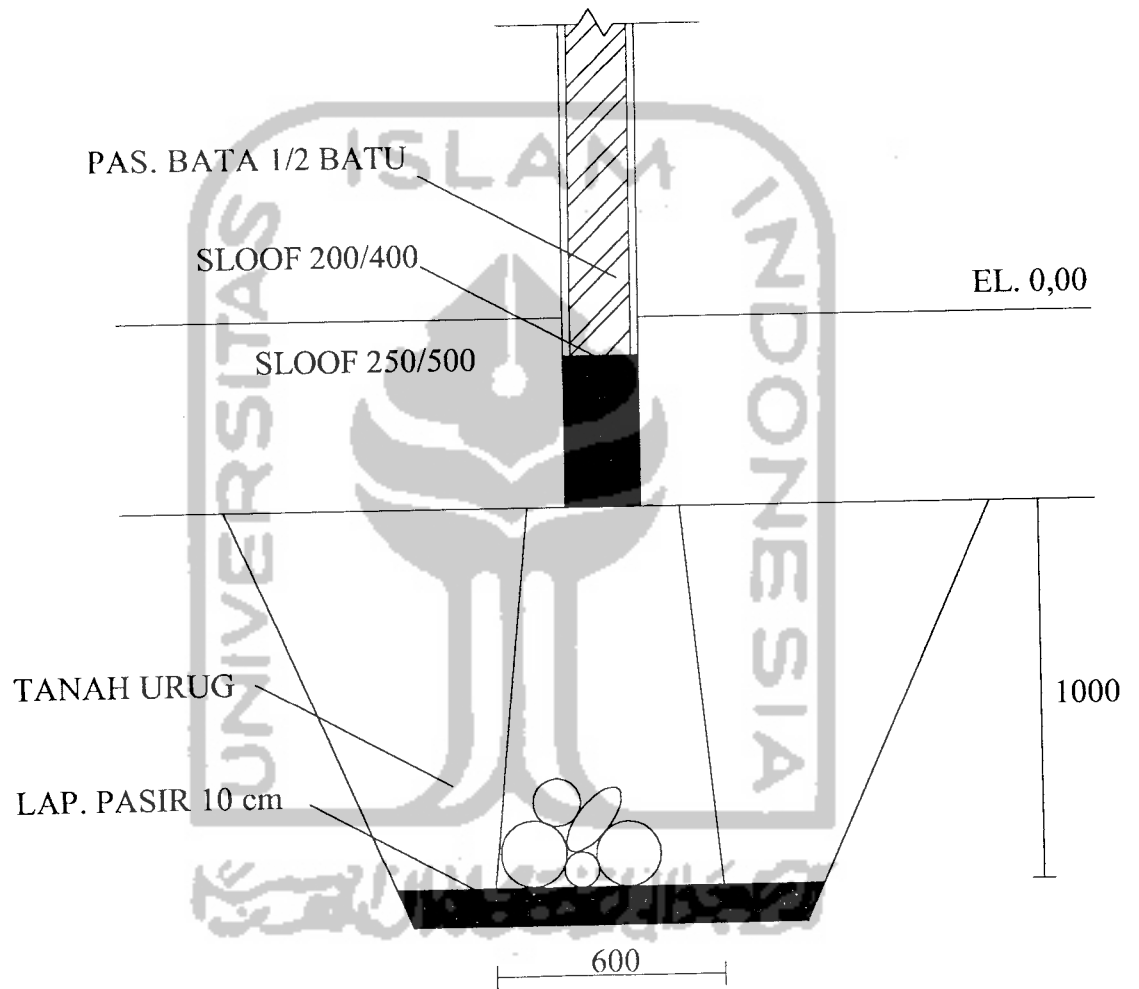
**PENULANGAN PONDASI**

Skala 1:70



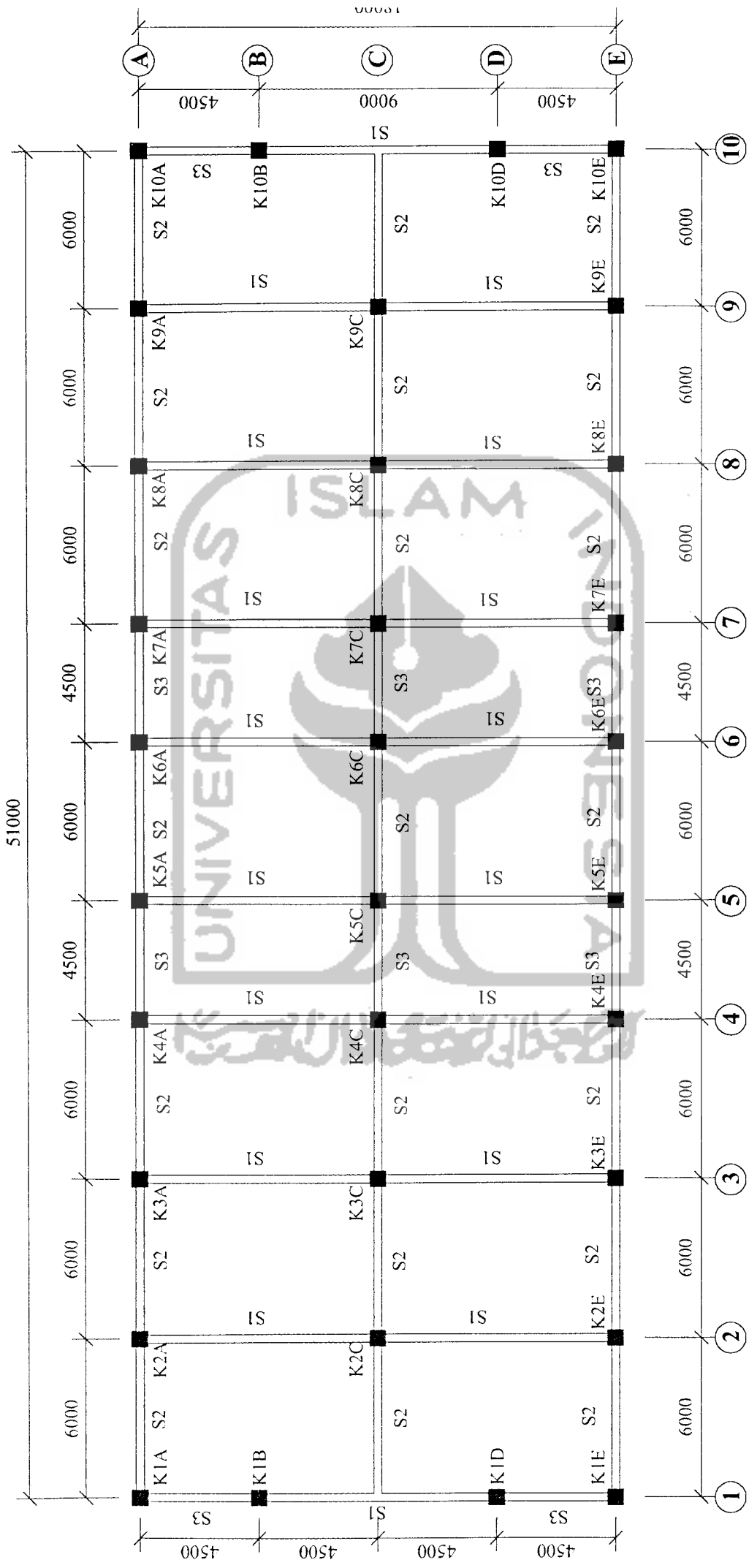
**DENAH PONDASI STAAL**

Skala 1:200

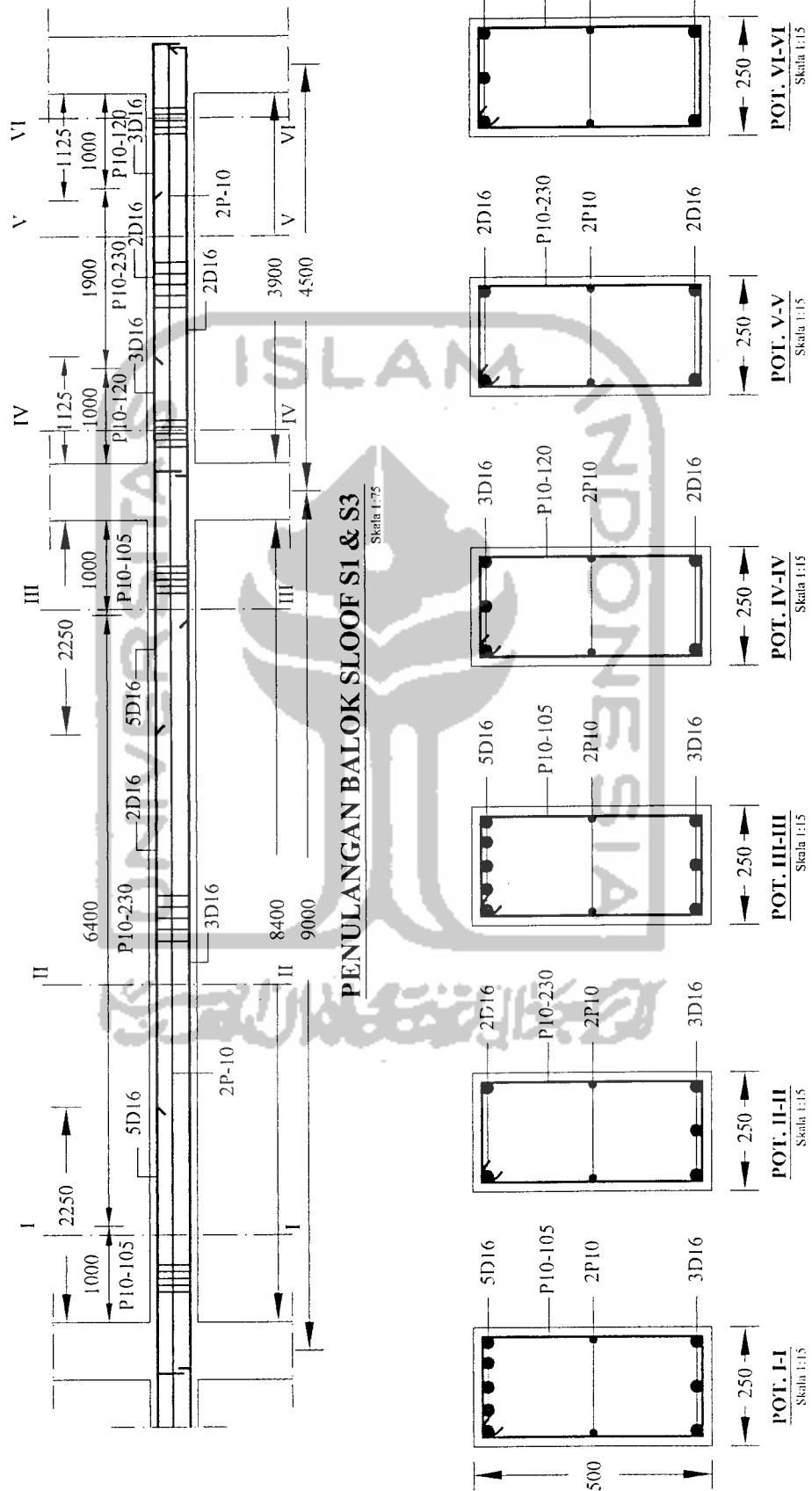


## DETAIL PONDASI STAAL

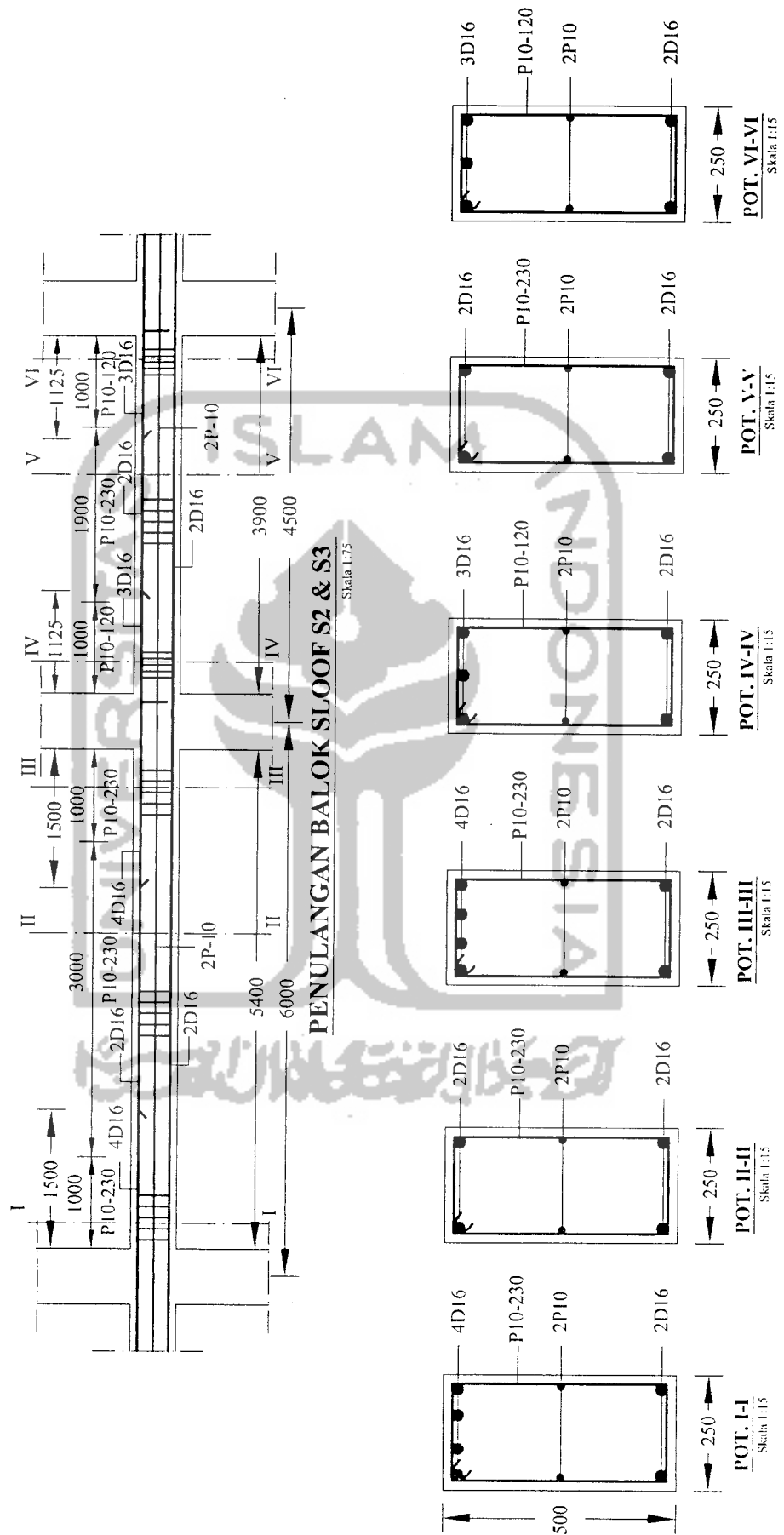
Skala 1 : 20

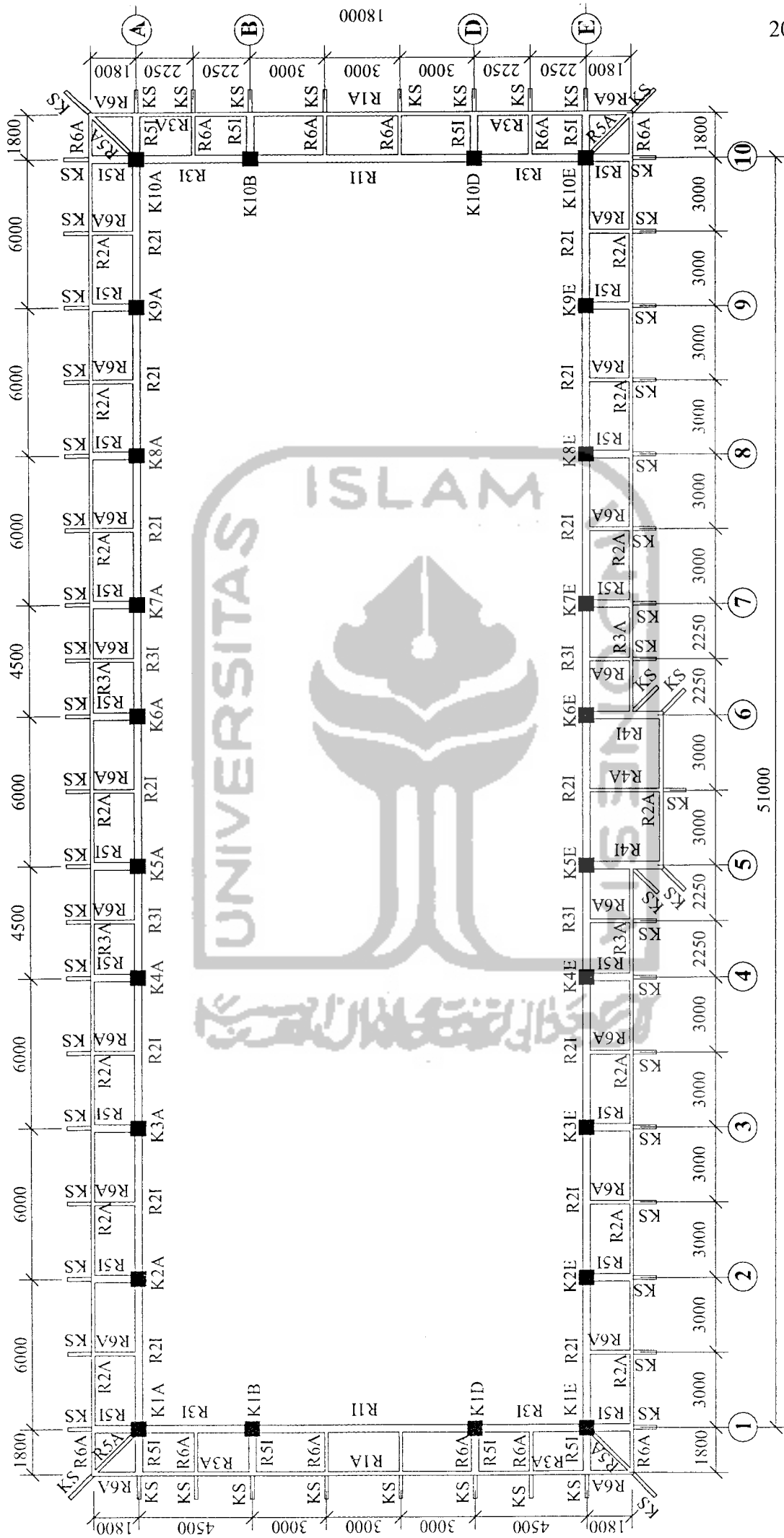


**DENAH BALOK SLOOF DAN KOLOM LANTAI-I**  
 Skala 1:200



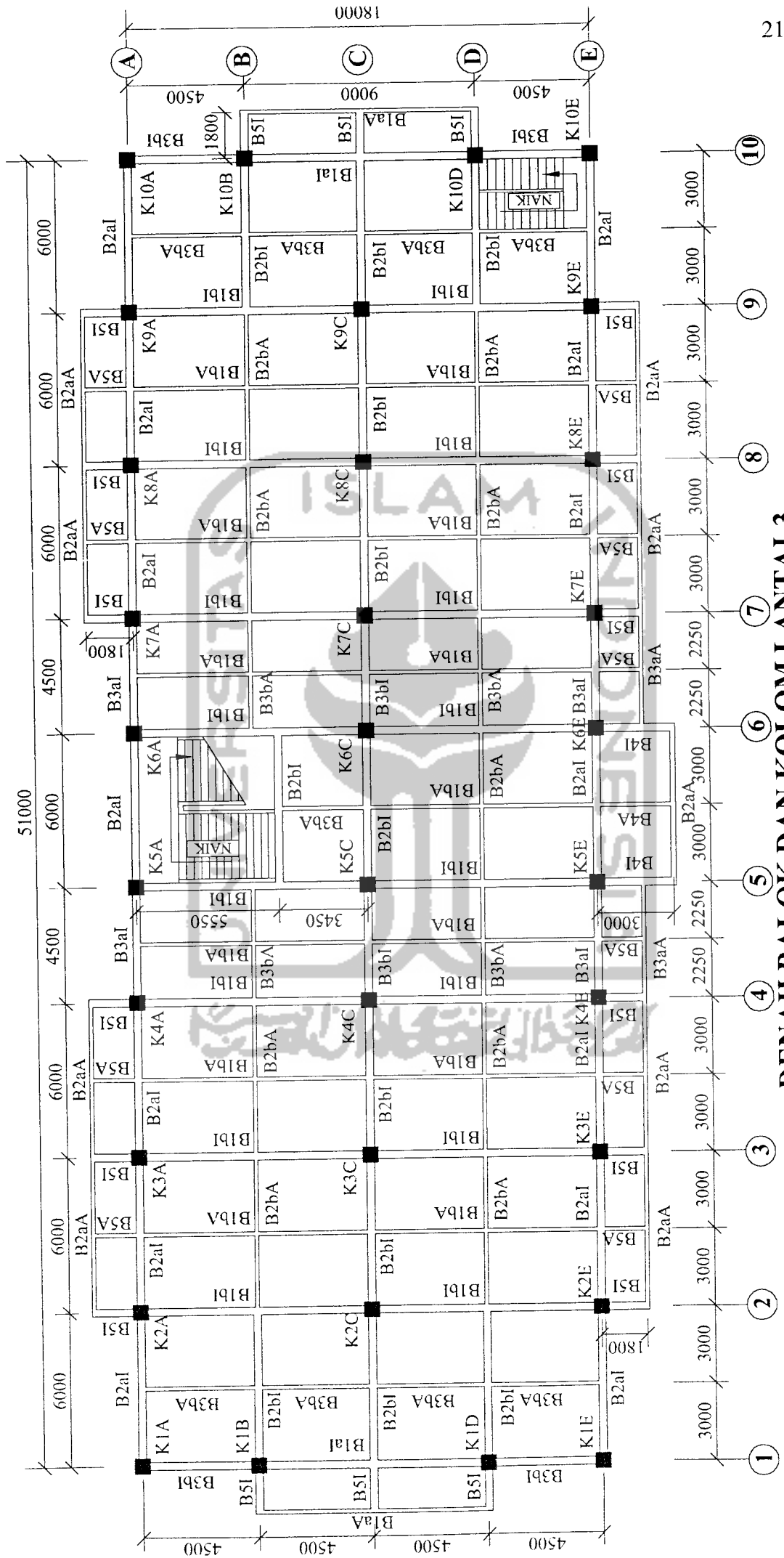






**DENAH BALOK DAN KOLOM PELAT ATAP**

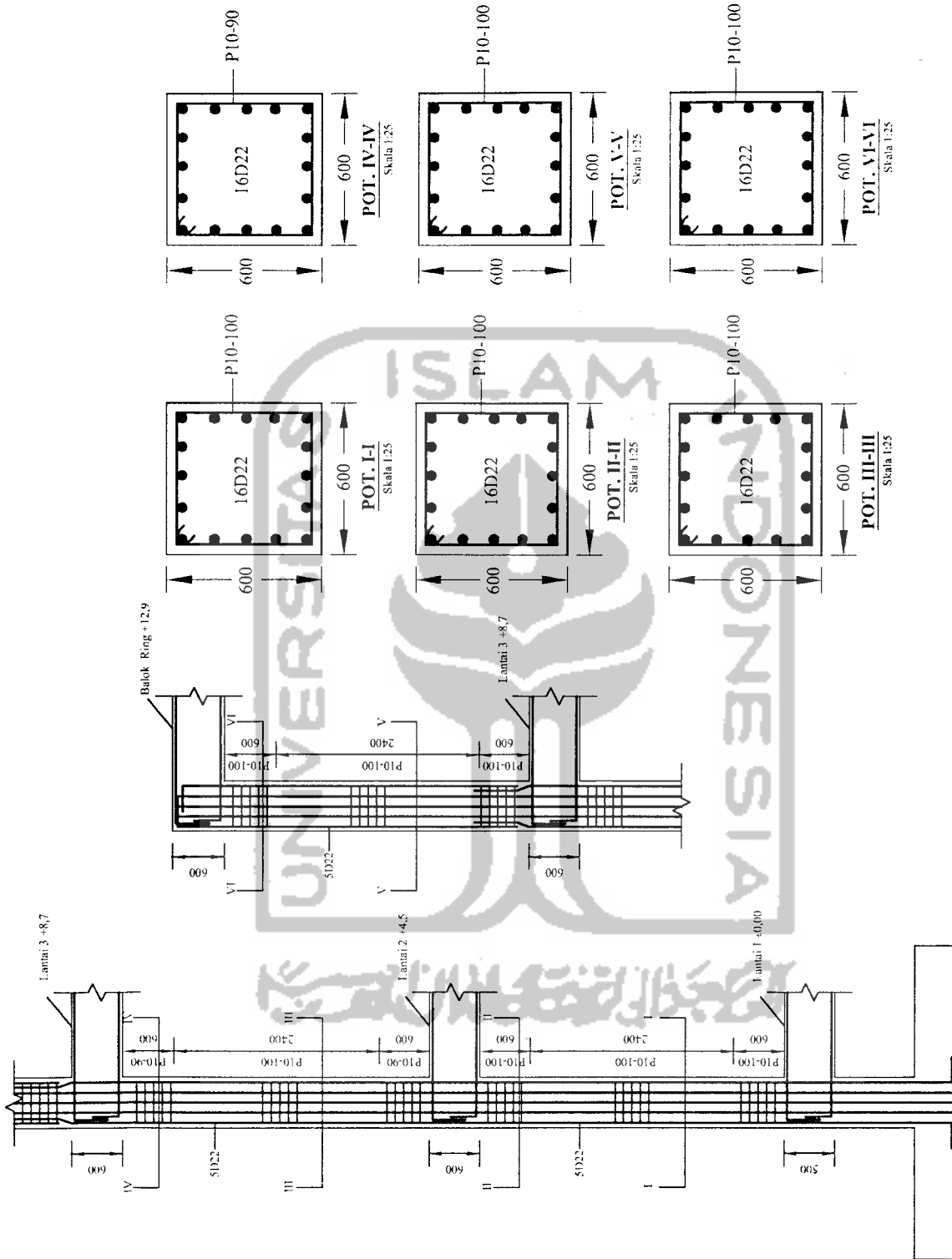
Skala 1:200



**DENAH BALOK DAN KOLOM LANTAI-3**

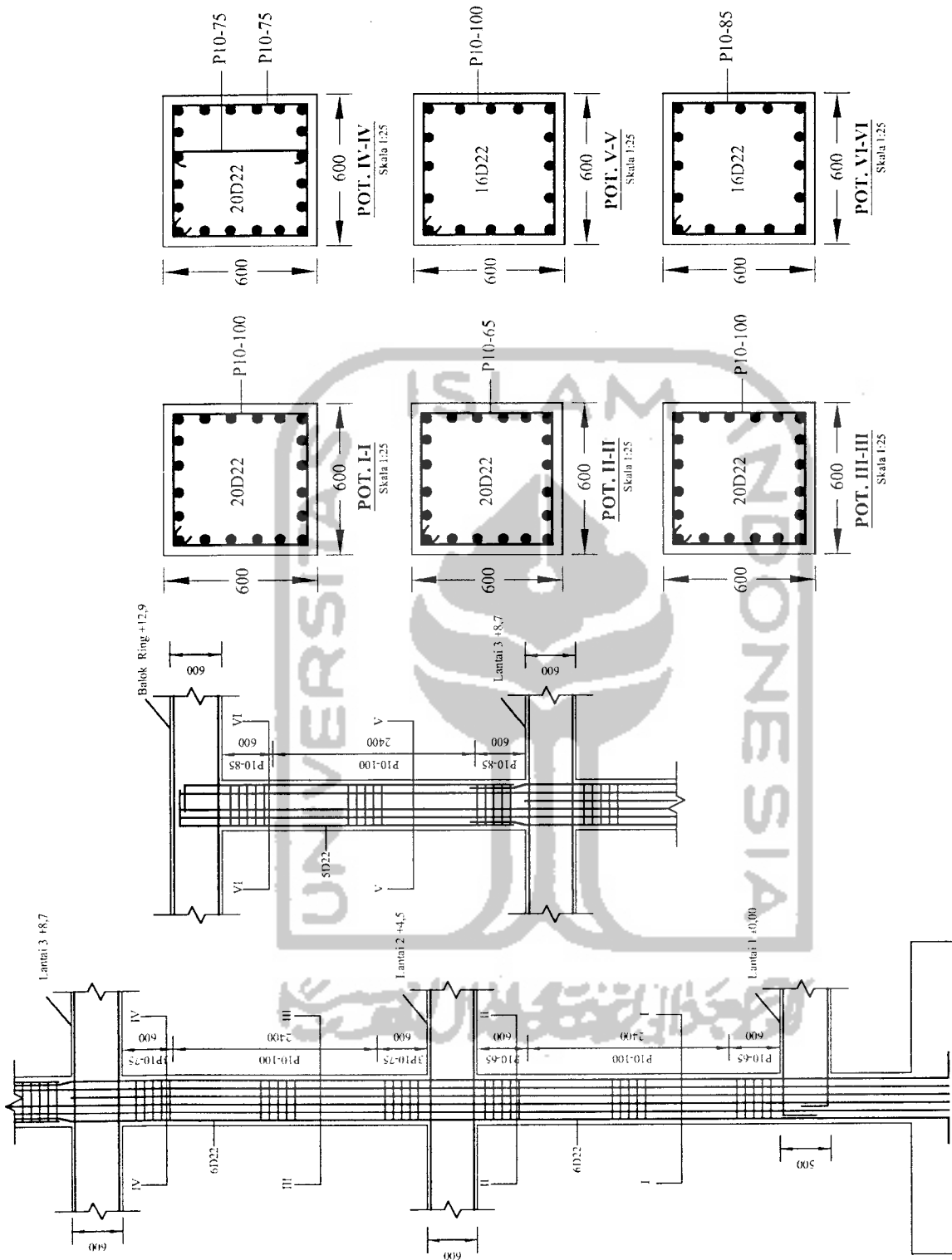
Skala 1:200



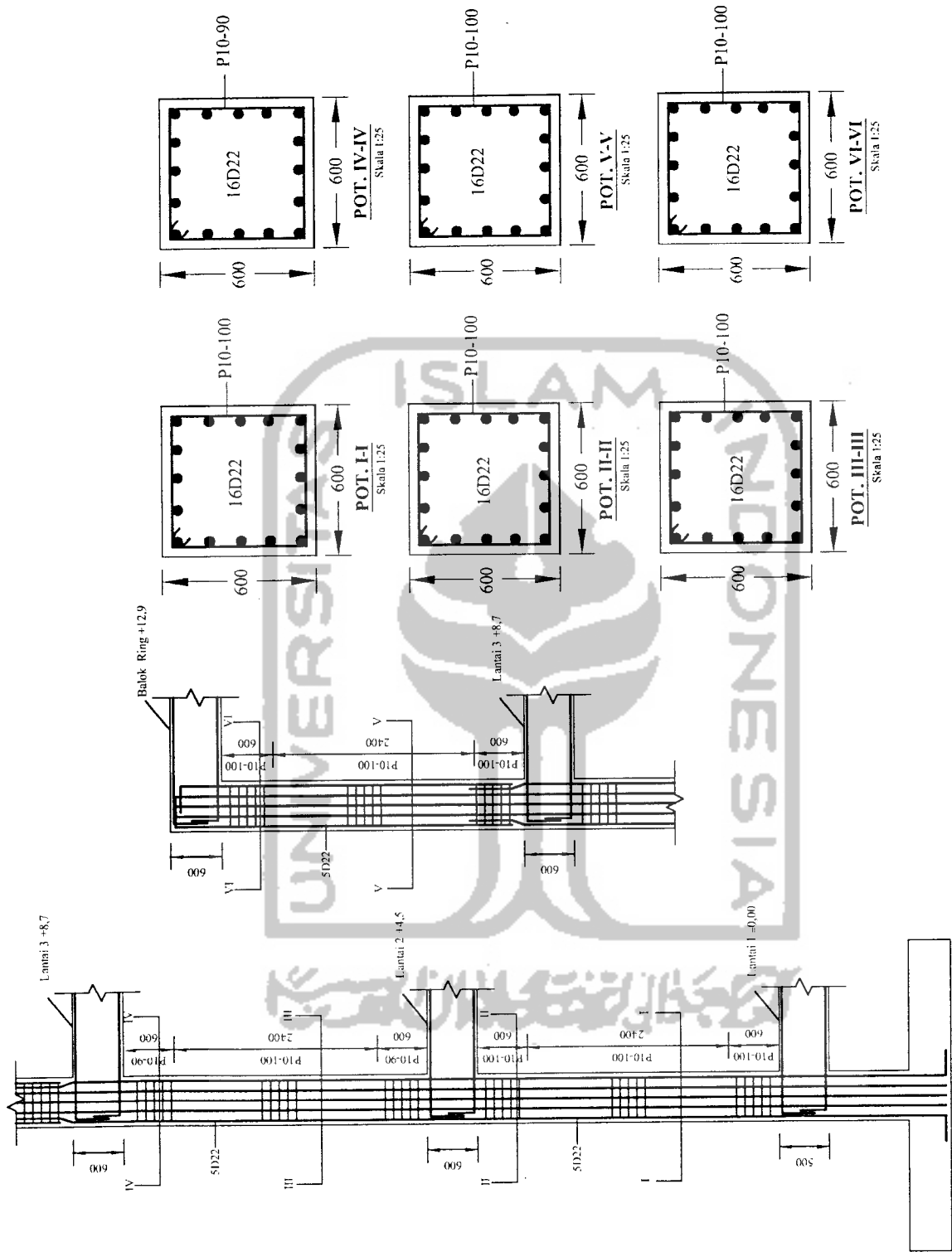


**PENULANGAN KOLOM KIA=K10A**  
Skala 1:75





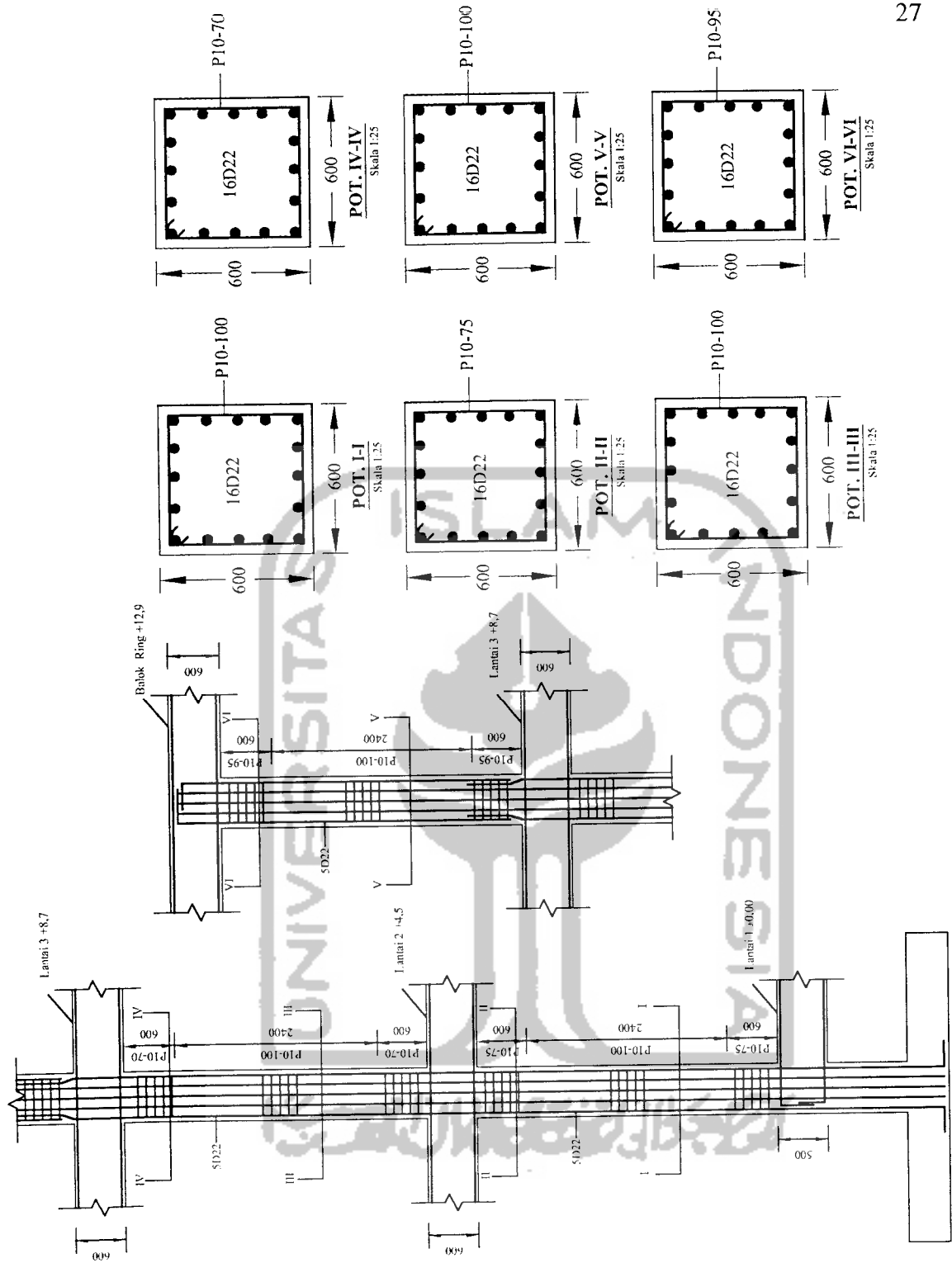
**PENULANGAN KOLOM K10D**  
Skala 1:75



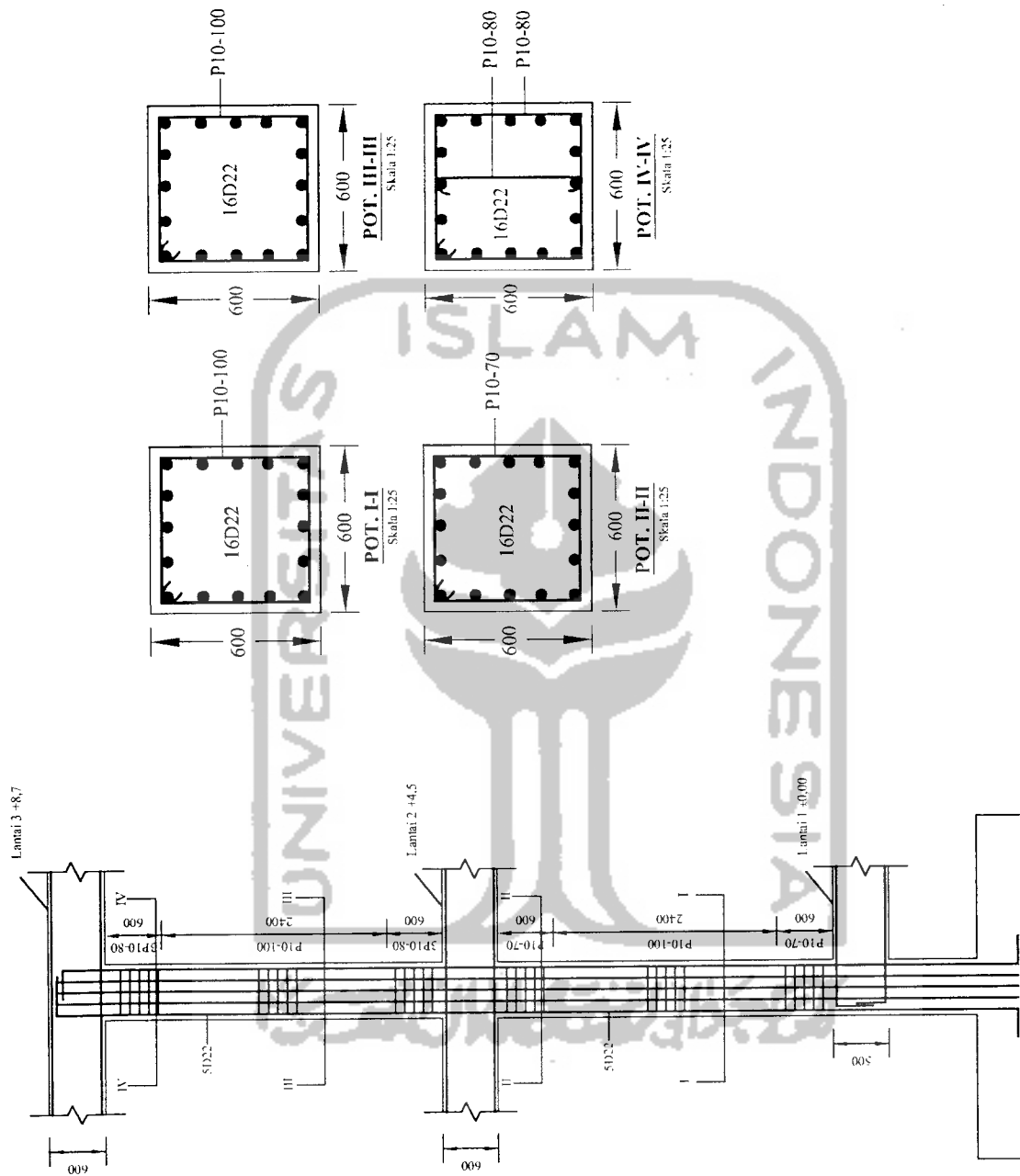
**PENULANGAN KOLOM KIE=K10E**

Skala 1:75

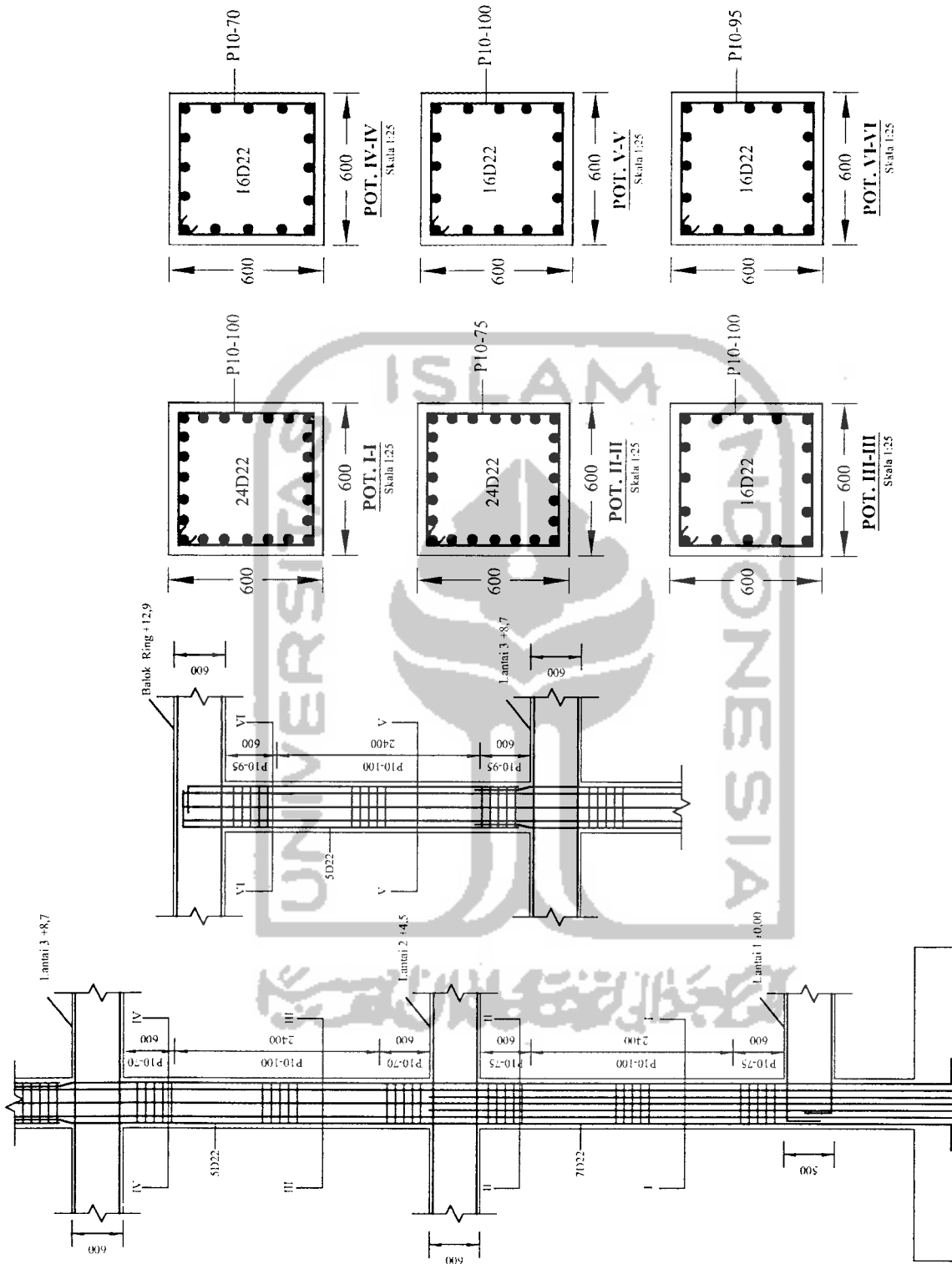




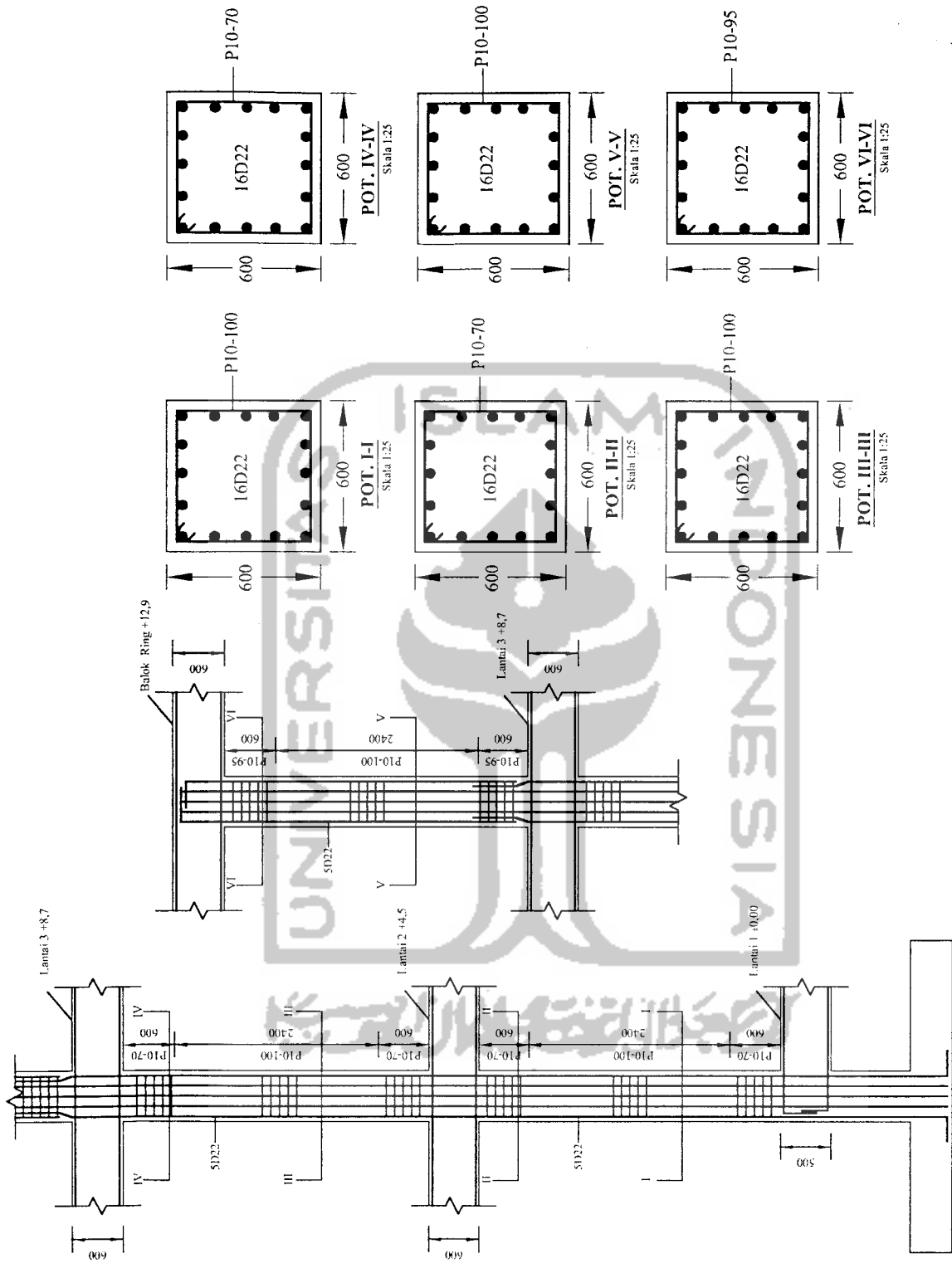
**PENULANGAN KOLOM K2A=K9A**  
Skala 1:75



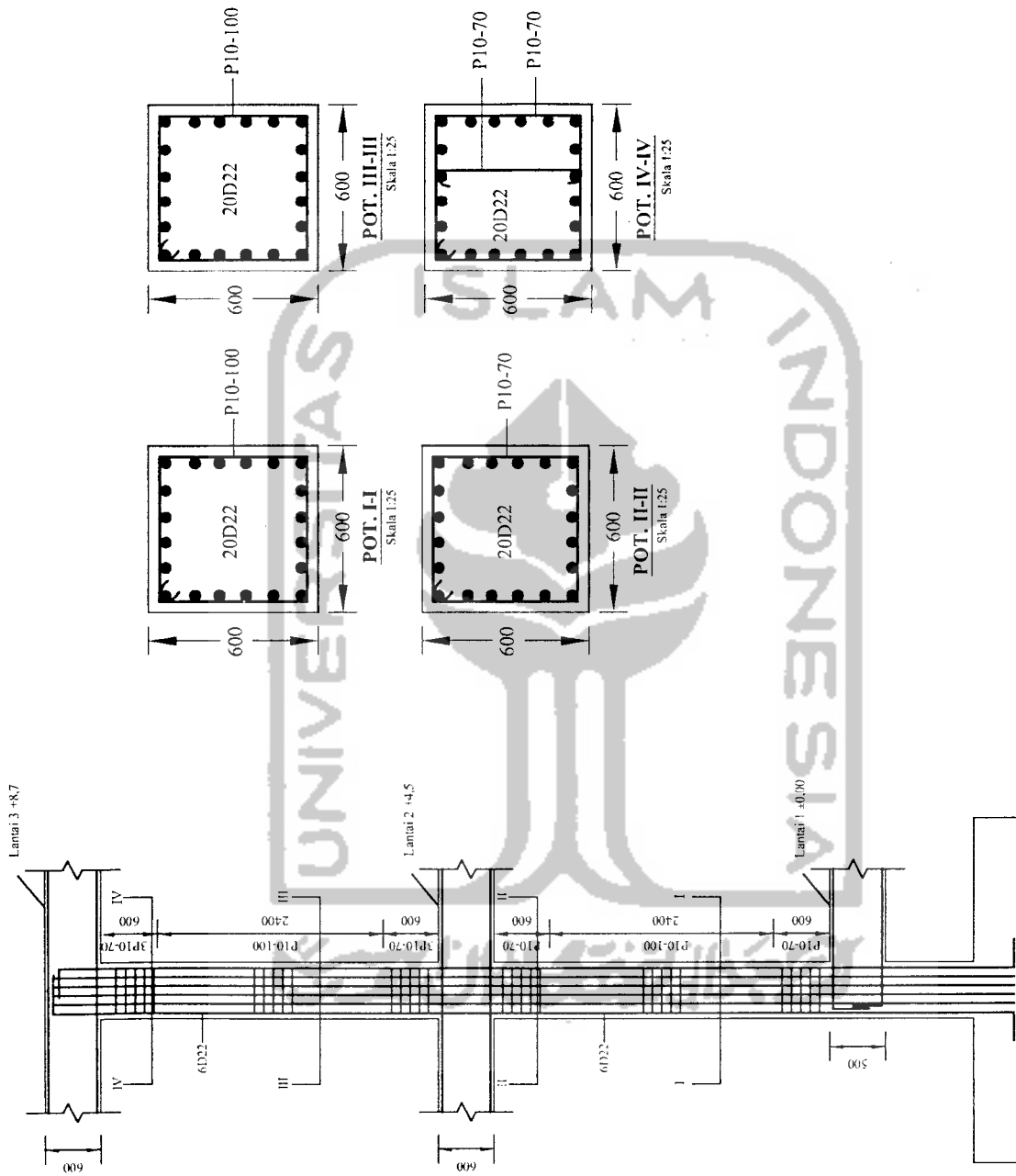
**PENULANGAN KOLOM K2C=K9C**  
Skala 1:75



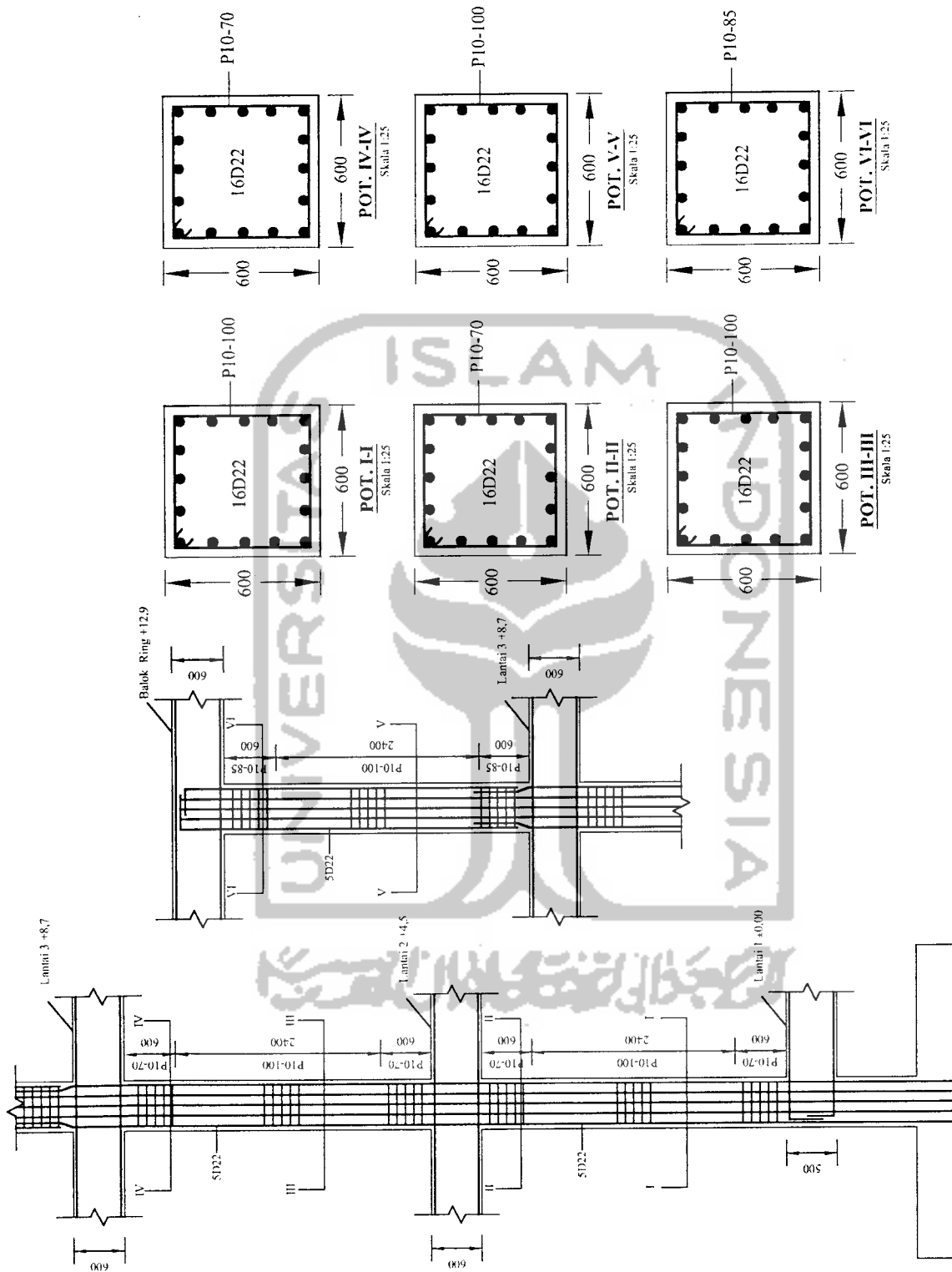
**PENULANGAN KOLOM K2E=K9E**  
Skala 1:75



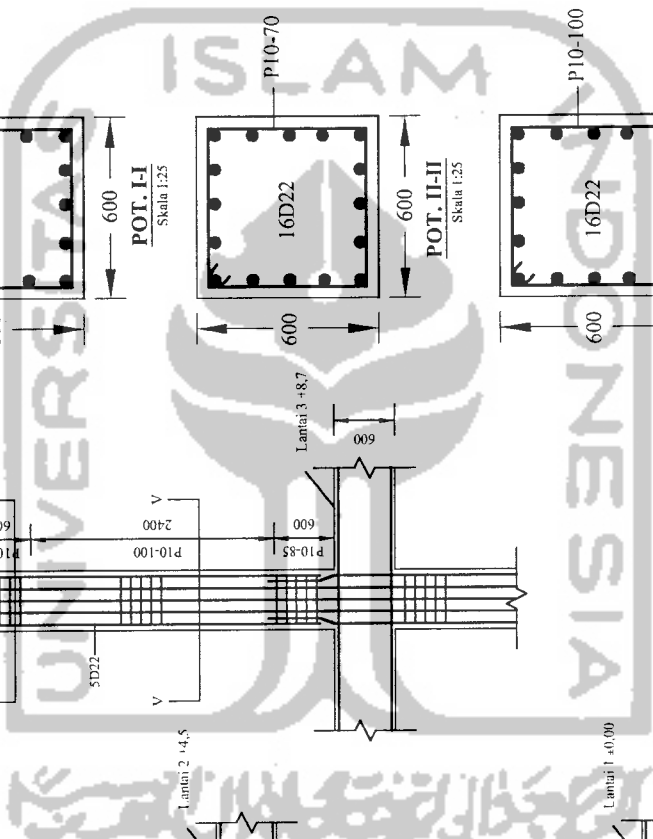
**PENULANGAN KOLOM K3A=K8A**  
Skala 1:75

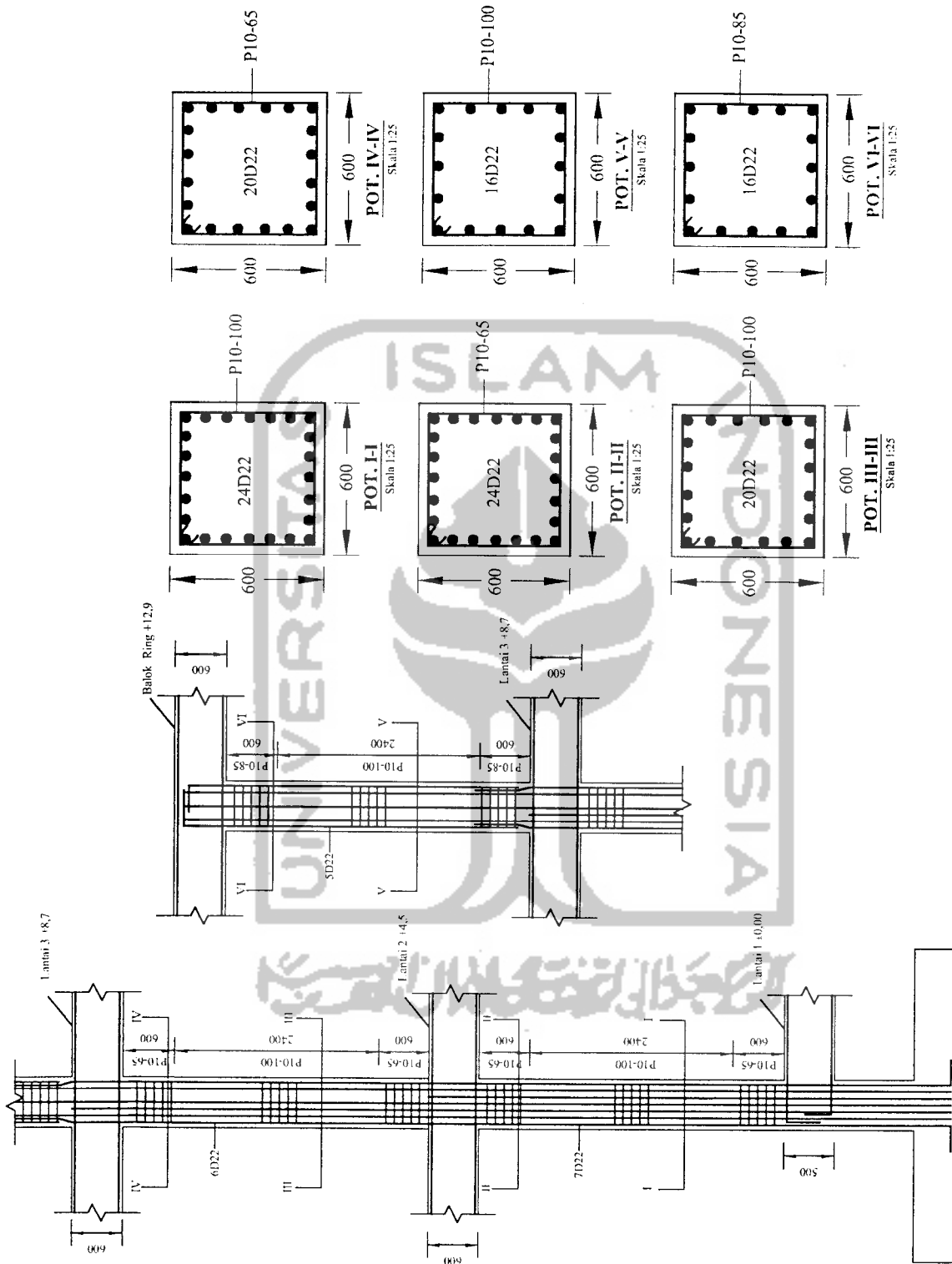


**PENULANGAN KOLOM K3C=K8C**  
Skala 1:75

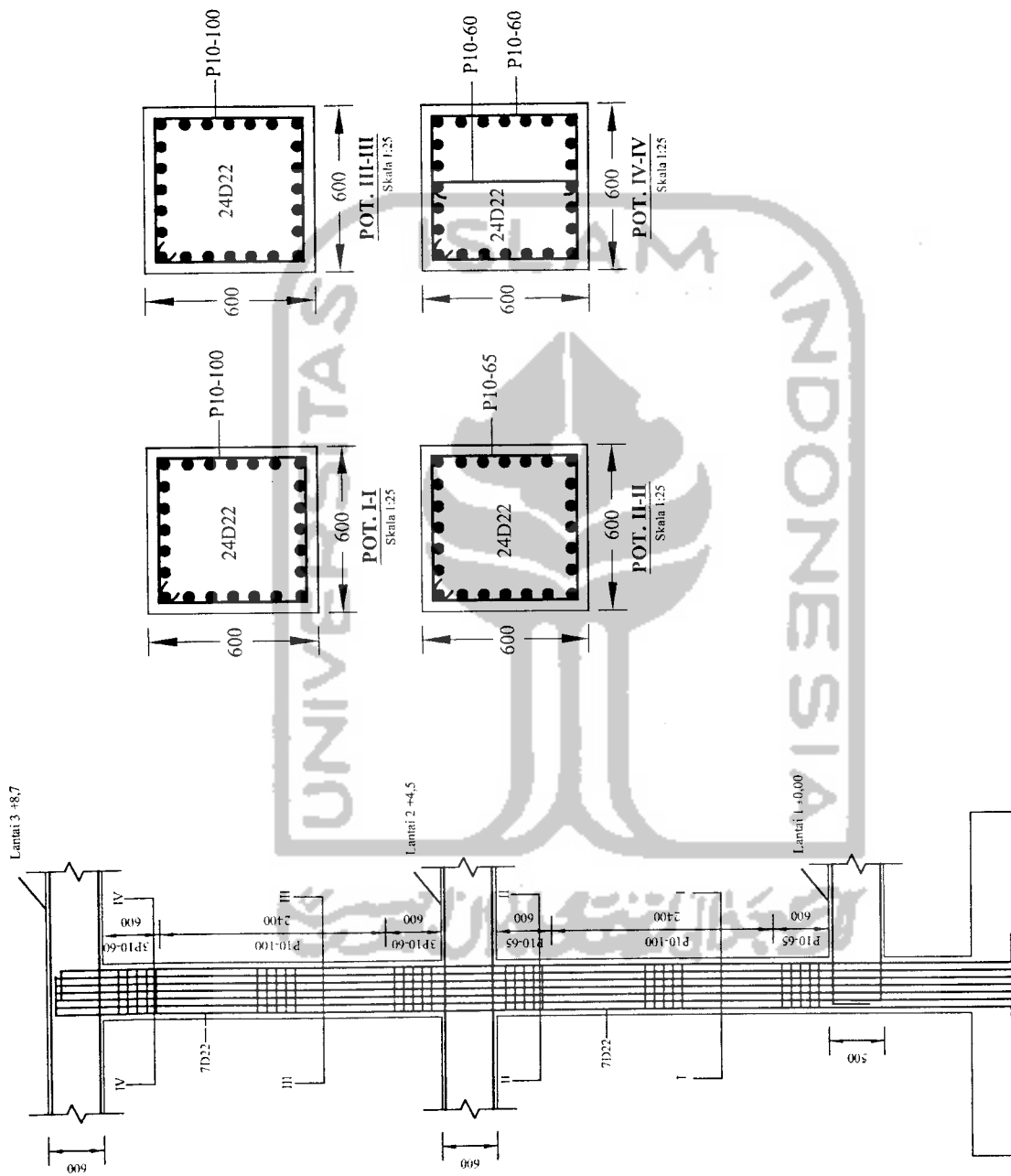


**PENULANGAN KOLOM K3E=K8E**  
Skala 1:25



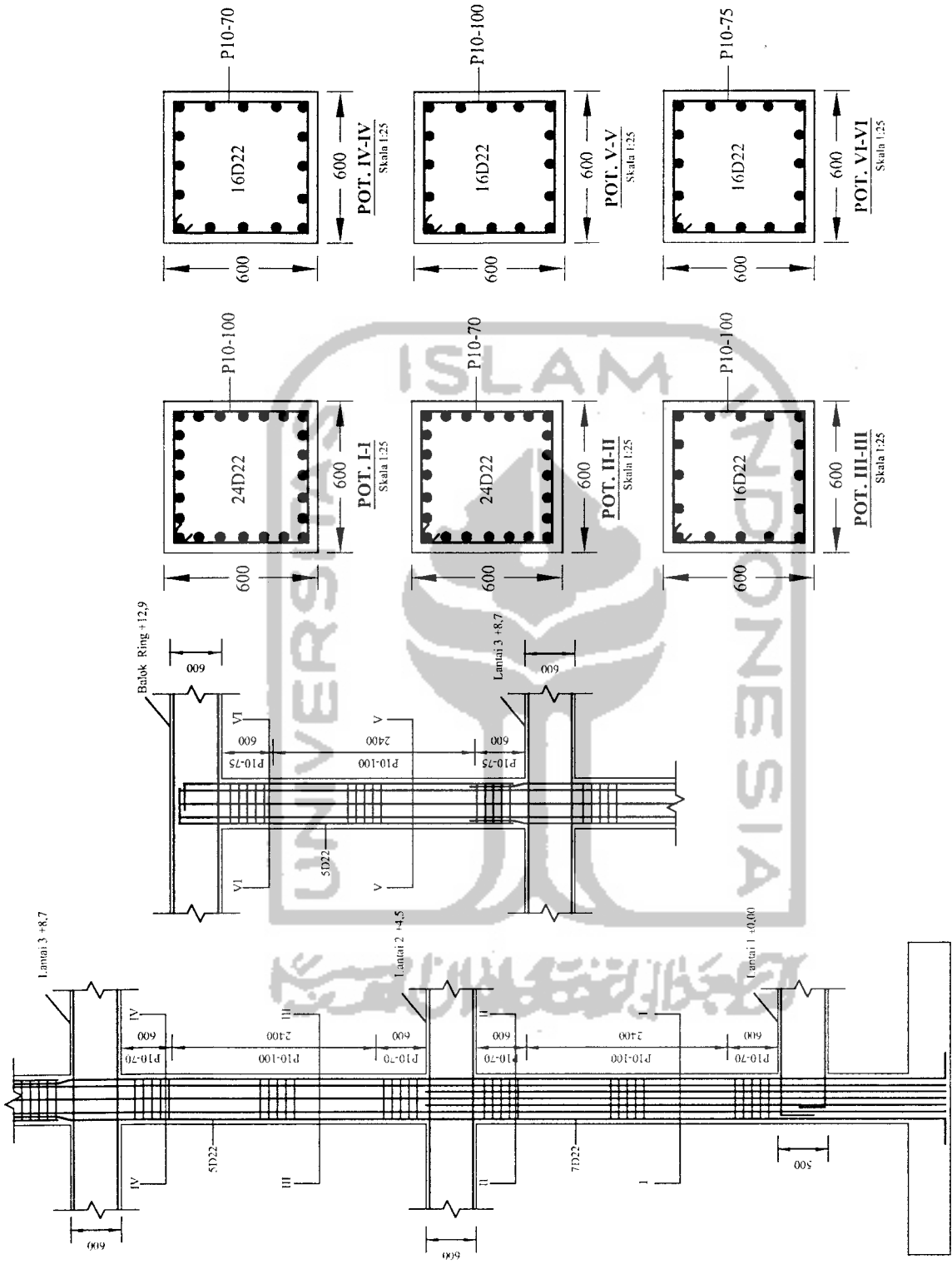


**PENULANGAN KOLOM K4A=K7A**  
Skala 1:75



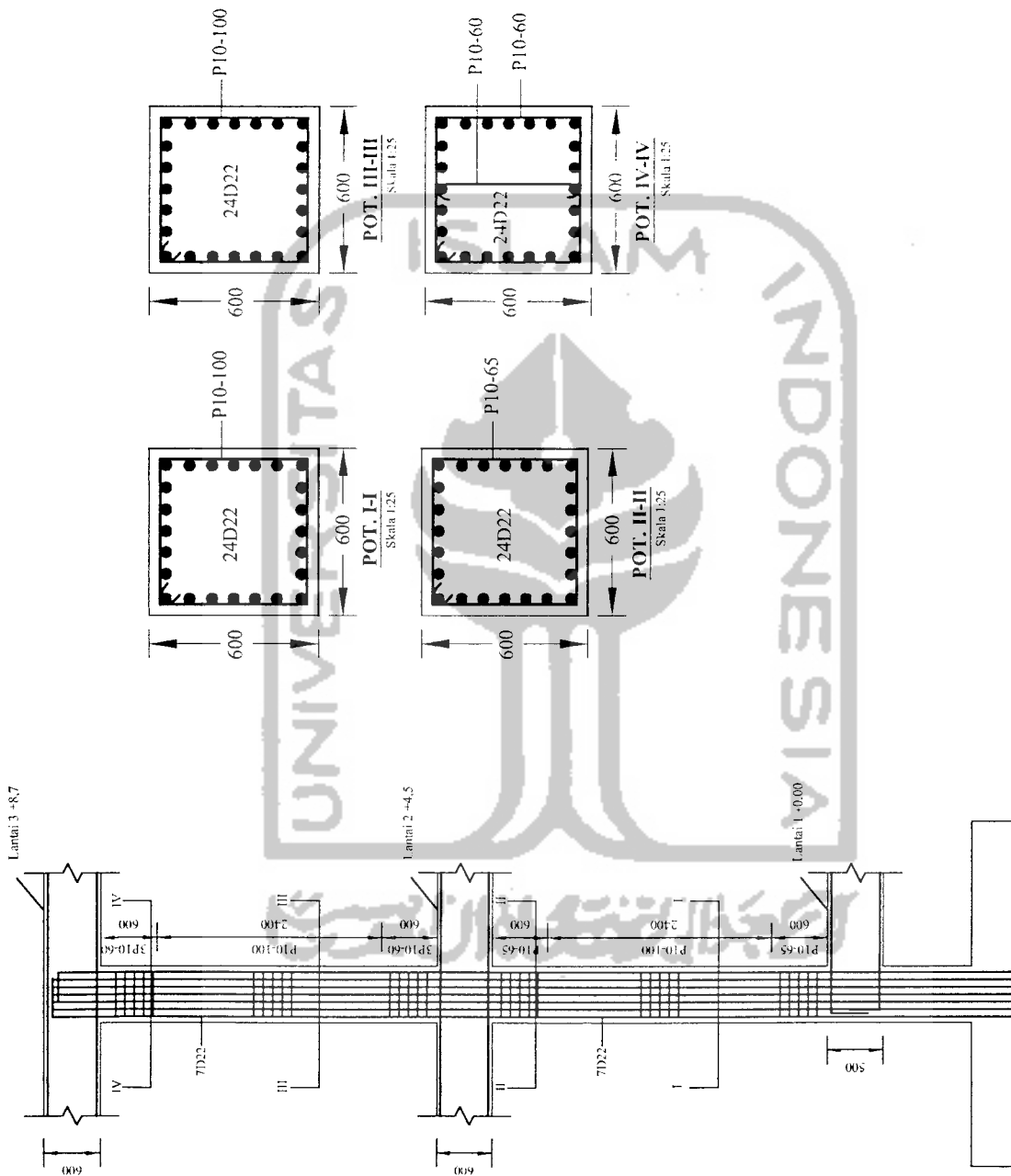
**PENULANGAN KOLOM K4C=K7C**  
Skala 1:75





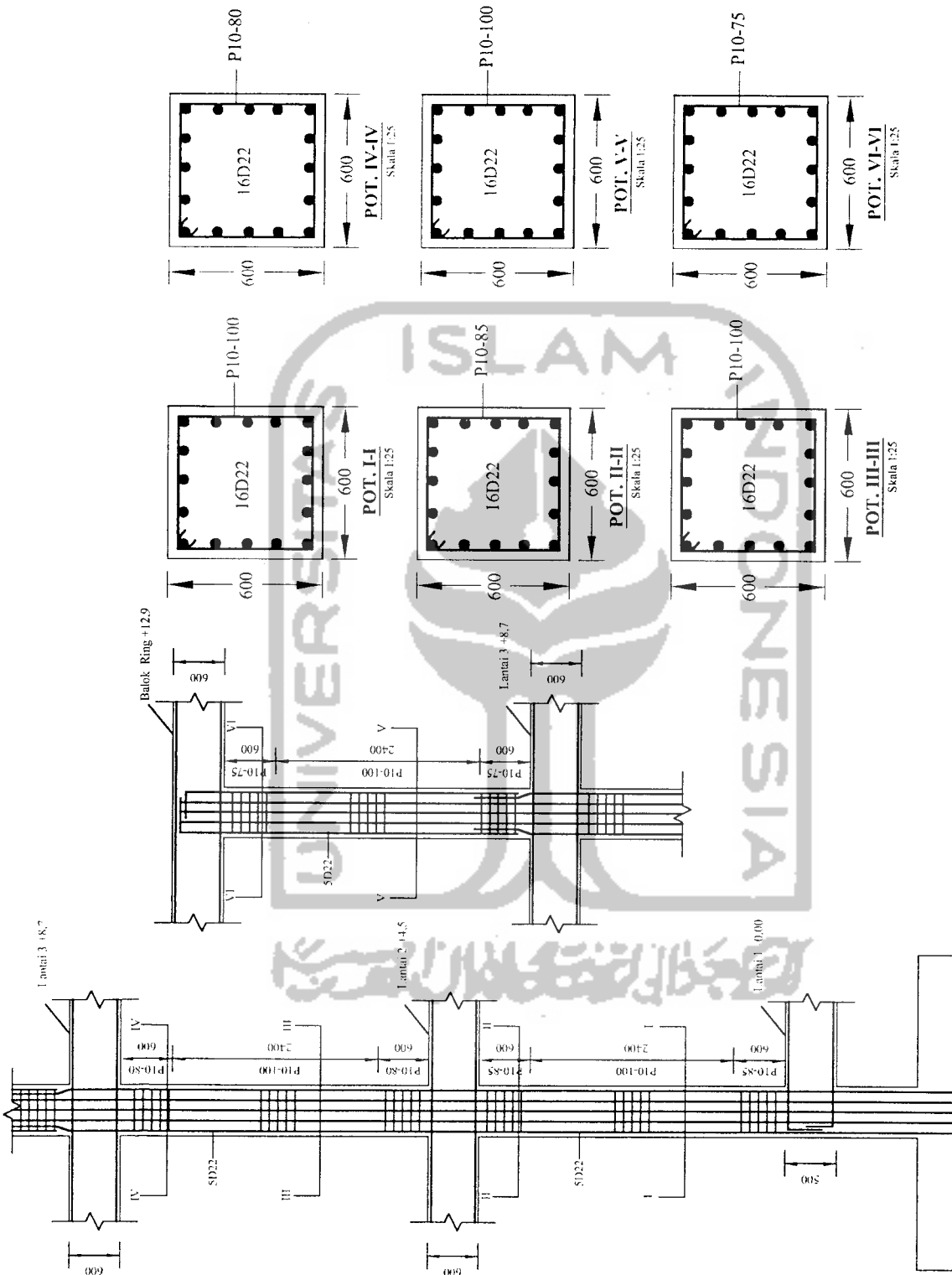
**PENULANGAN KOLOM K4E-K7E**

Skala 1:75

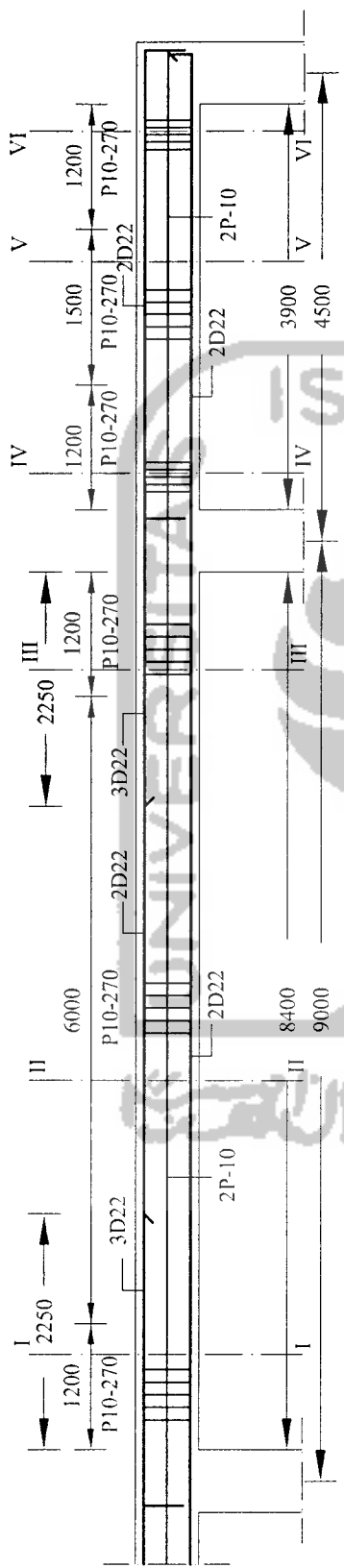


**PENULANGAN KOLOM K5C=K6C**

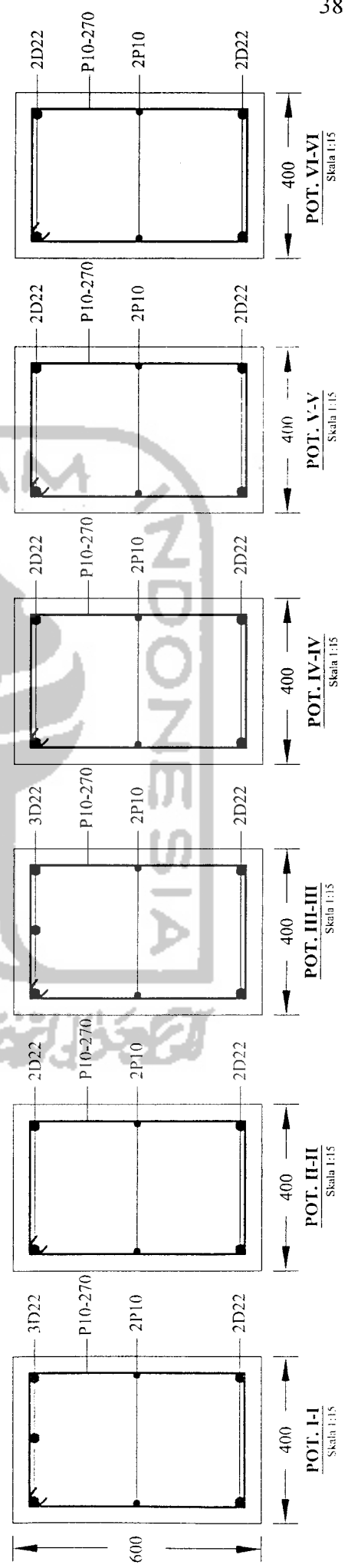
Skala 1:75

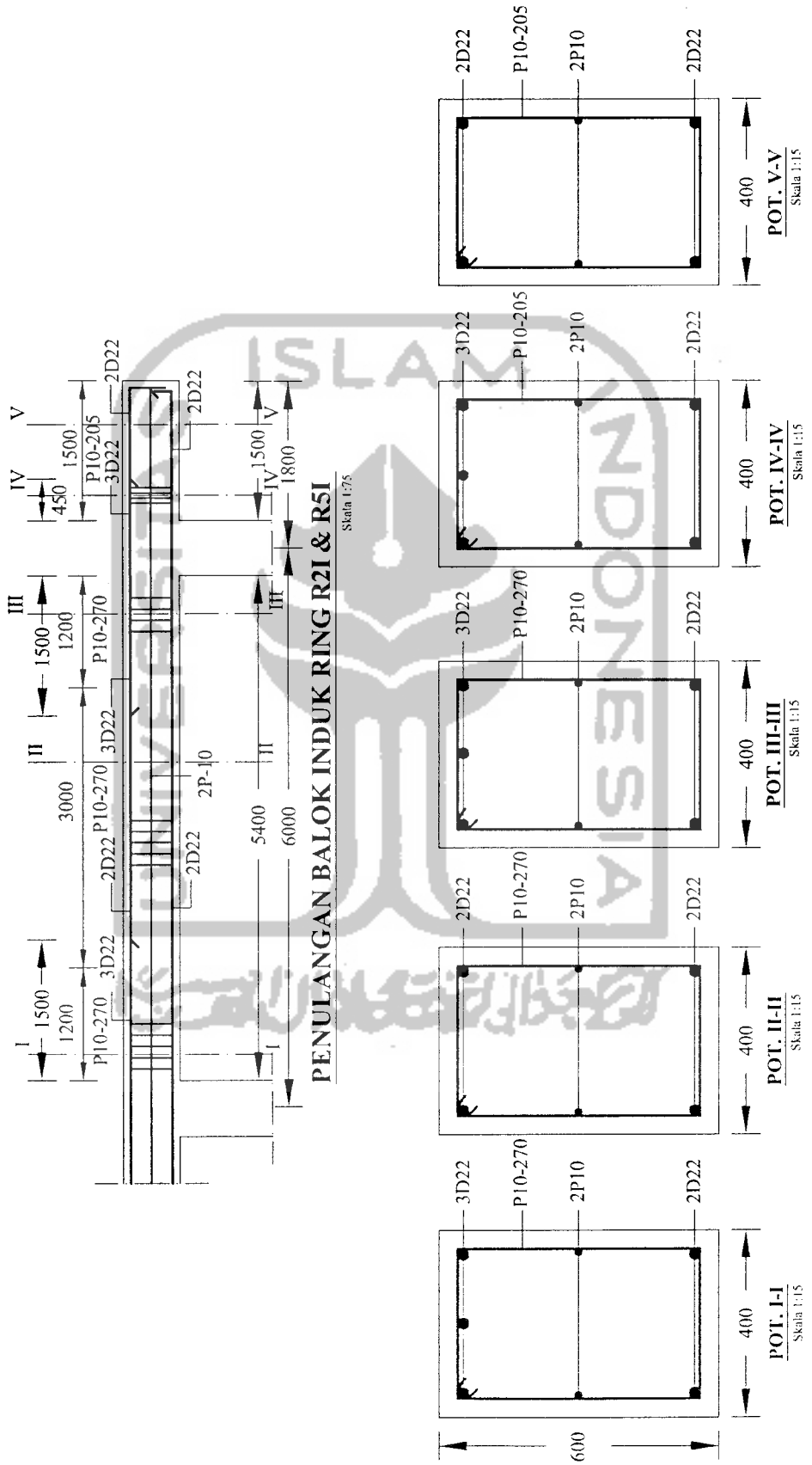


**PENULANGAN KOLOM K5E=K6E**  
Skala 1:25



**PENULANGAN BALOK INDUK RING RII & R3I**  
Skala 1:75





**PENULANGAN BALOK INDUK RING R21 & R51**

Skala 1:75

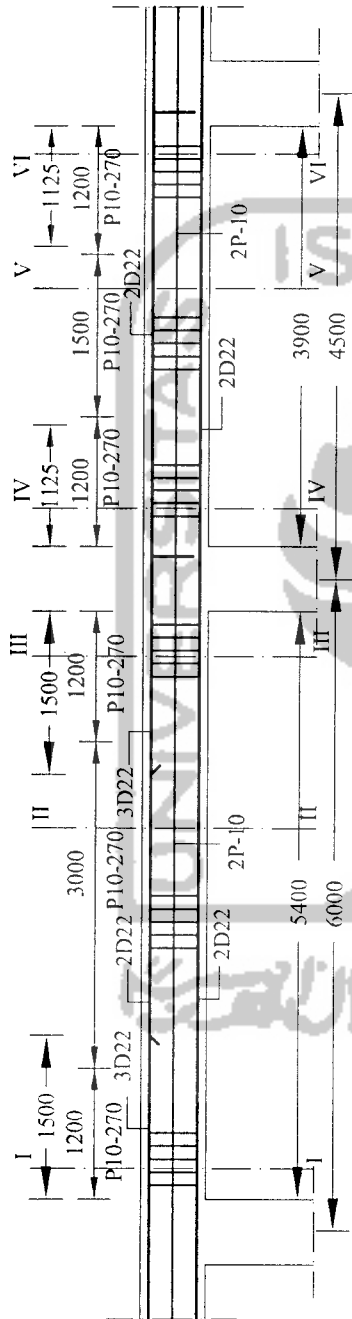
**POT. V-V**  
Skala 1:15

**POT. IV-IV**  
Skala 1:15

**POT. III-III**  
Skala 1:15

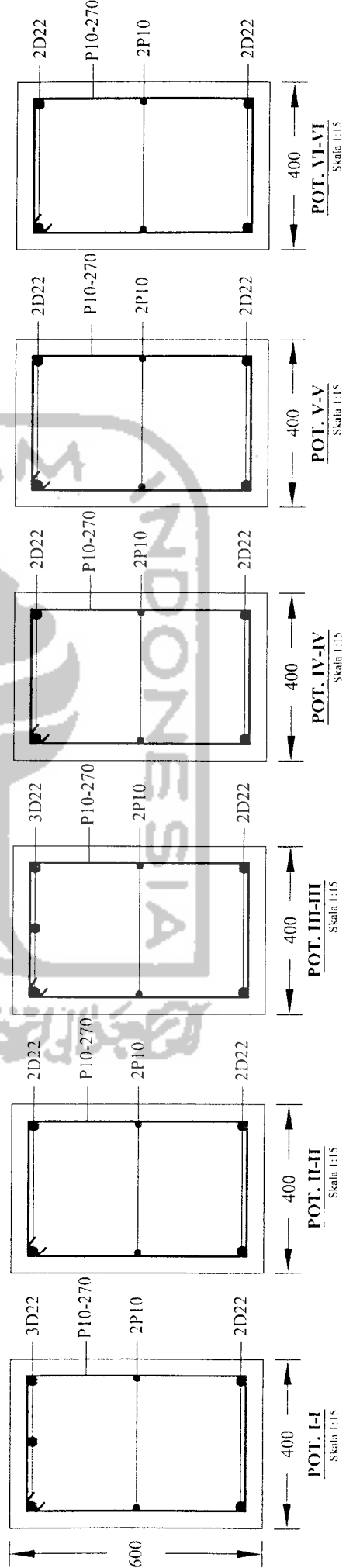
**POT. II-II**  
Skala 1:15

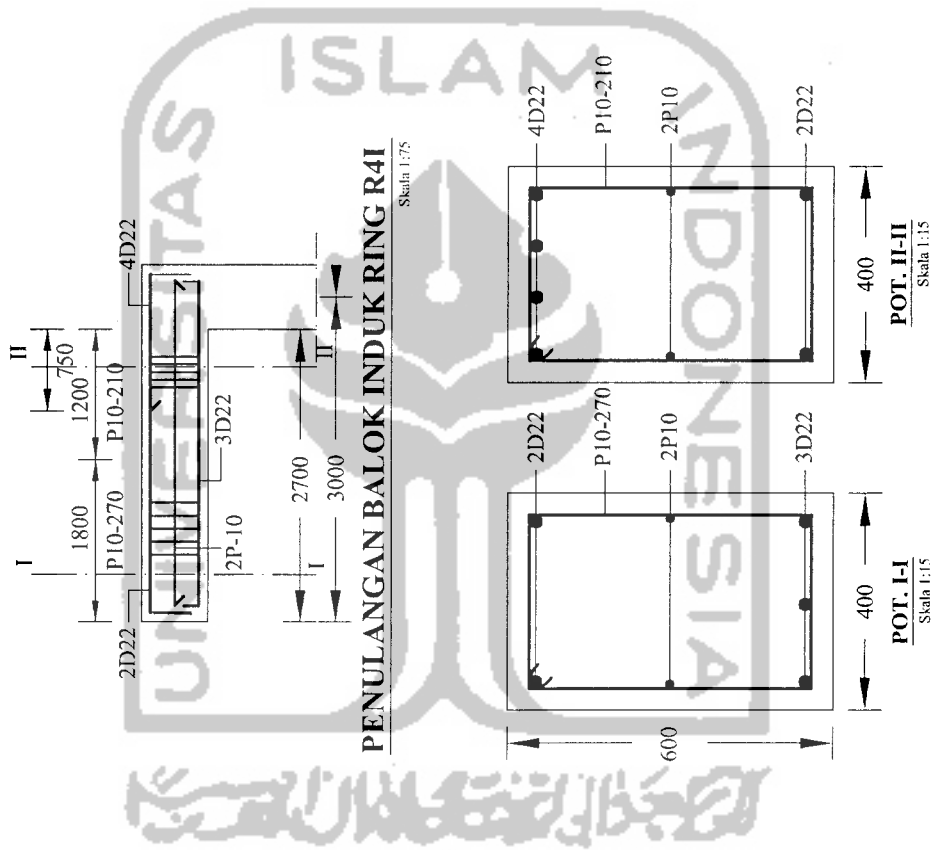
**POT. I-I**  
Skala 1:15



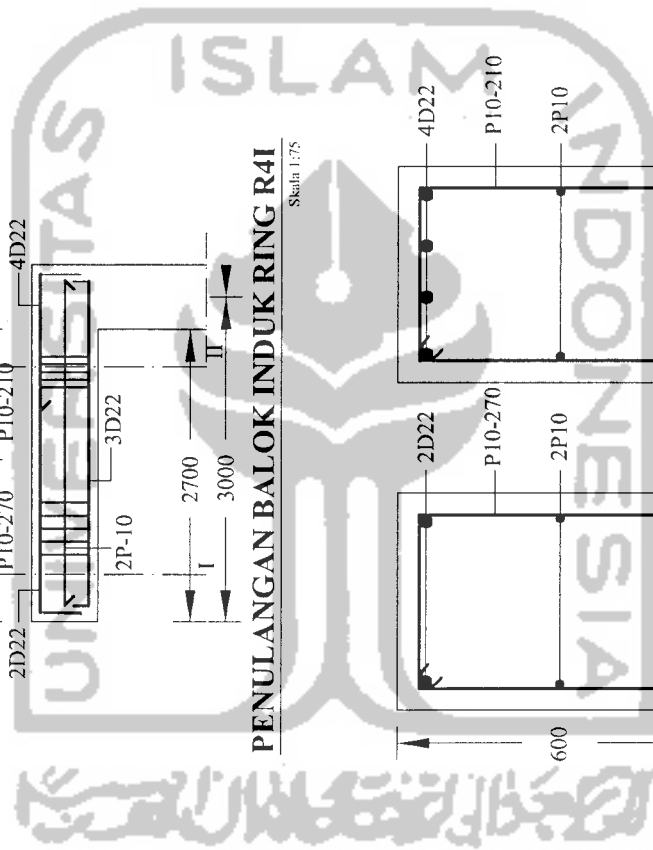
**PENULANGAN BALOK INDUK RING R21 & R31**

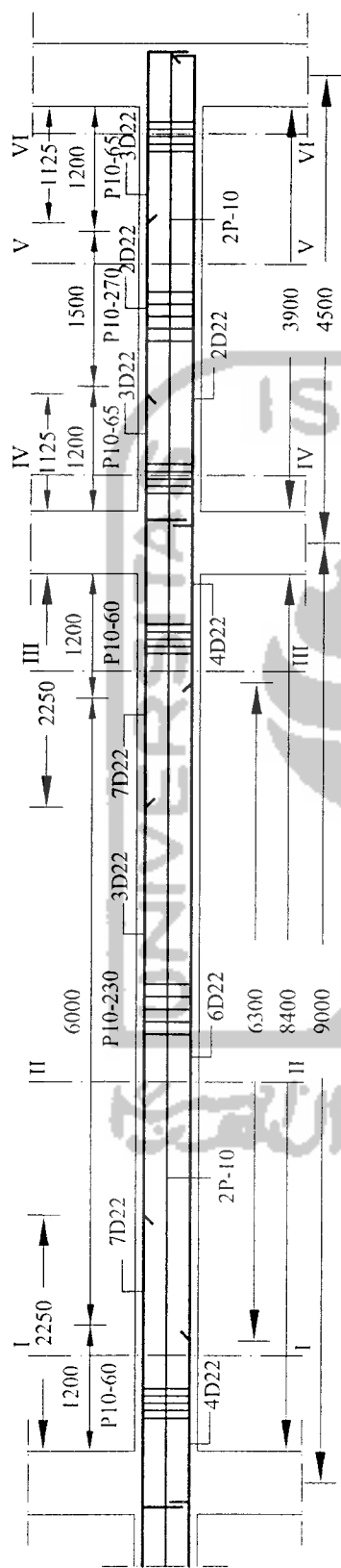
Skala 1:75





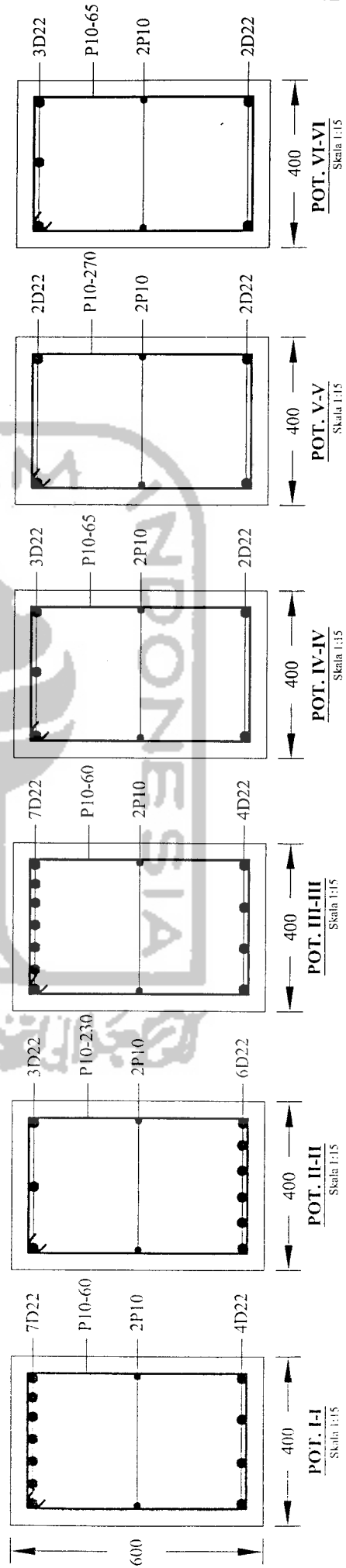
PENULANGAN BALOK INDUK RING R41





**PENULANGAN BALOK INDUK B1aI & B3bi LANTAI-3**

Skala 1:75



POT. VI-VI  
Skala 1:15

POT. V-V  
Skala 1:15

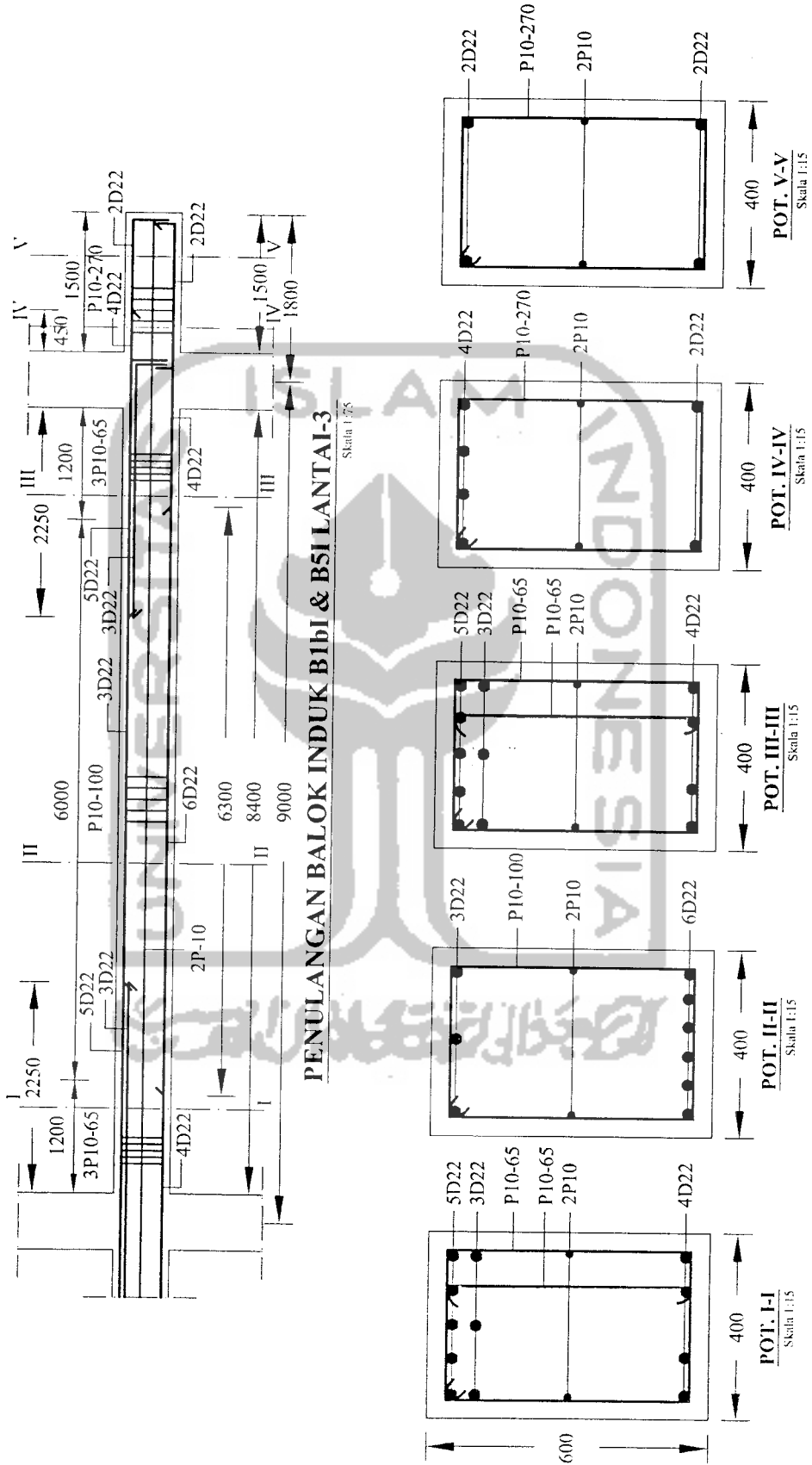
POT. IV-IV  
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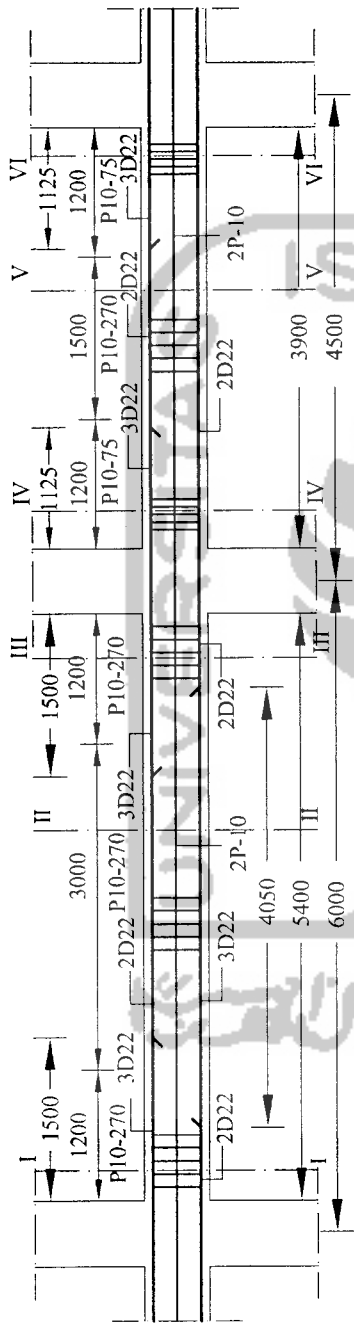
POT. III-III  
Skala 1:15

POT. II-II  
Skala 1:15

POT. I-I  
Skala 1:15

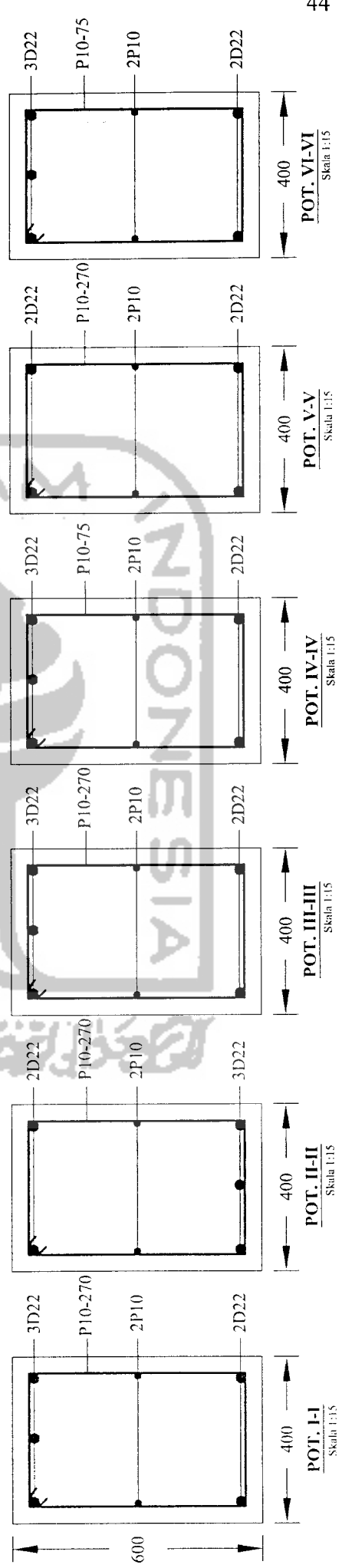


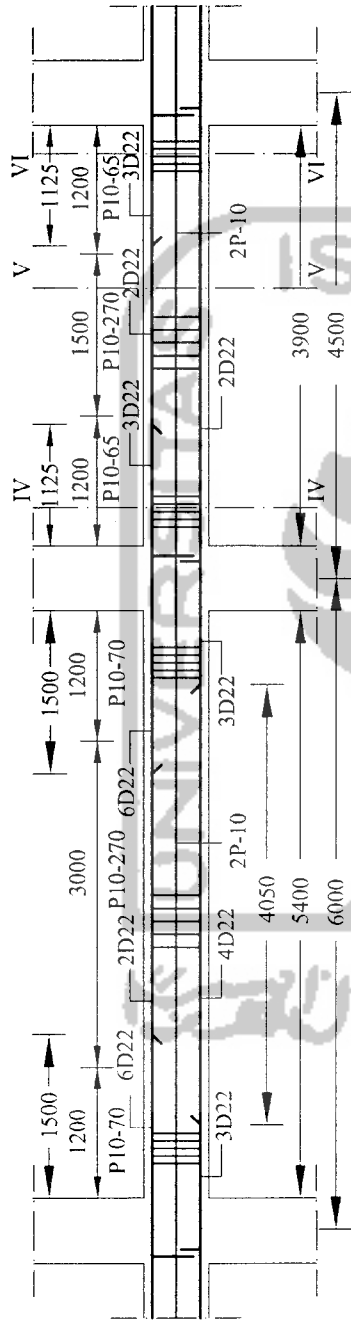




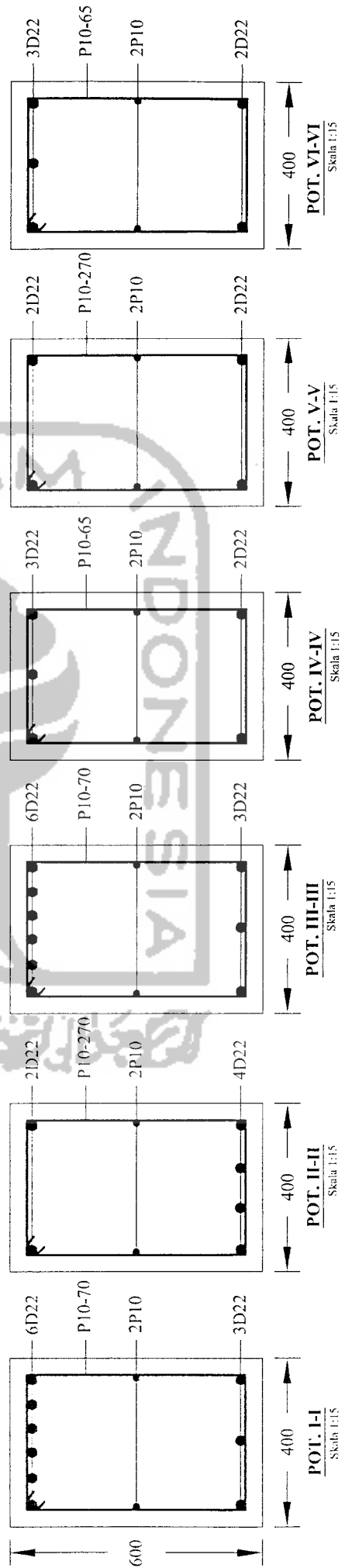
**PENULANGAN BALOK INDUK B2aI & B3aI LANTAI-3**

Skala 1/75





**PENULANGAN BALOK INDUK B2bI & B3bI LANTAI-3**  
Skala 1/75



**POT. I-I**  
Skala 1/15

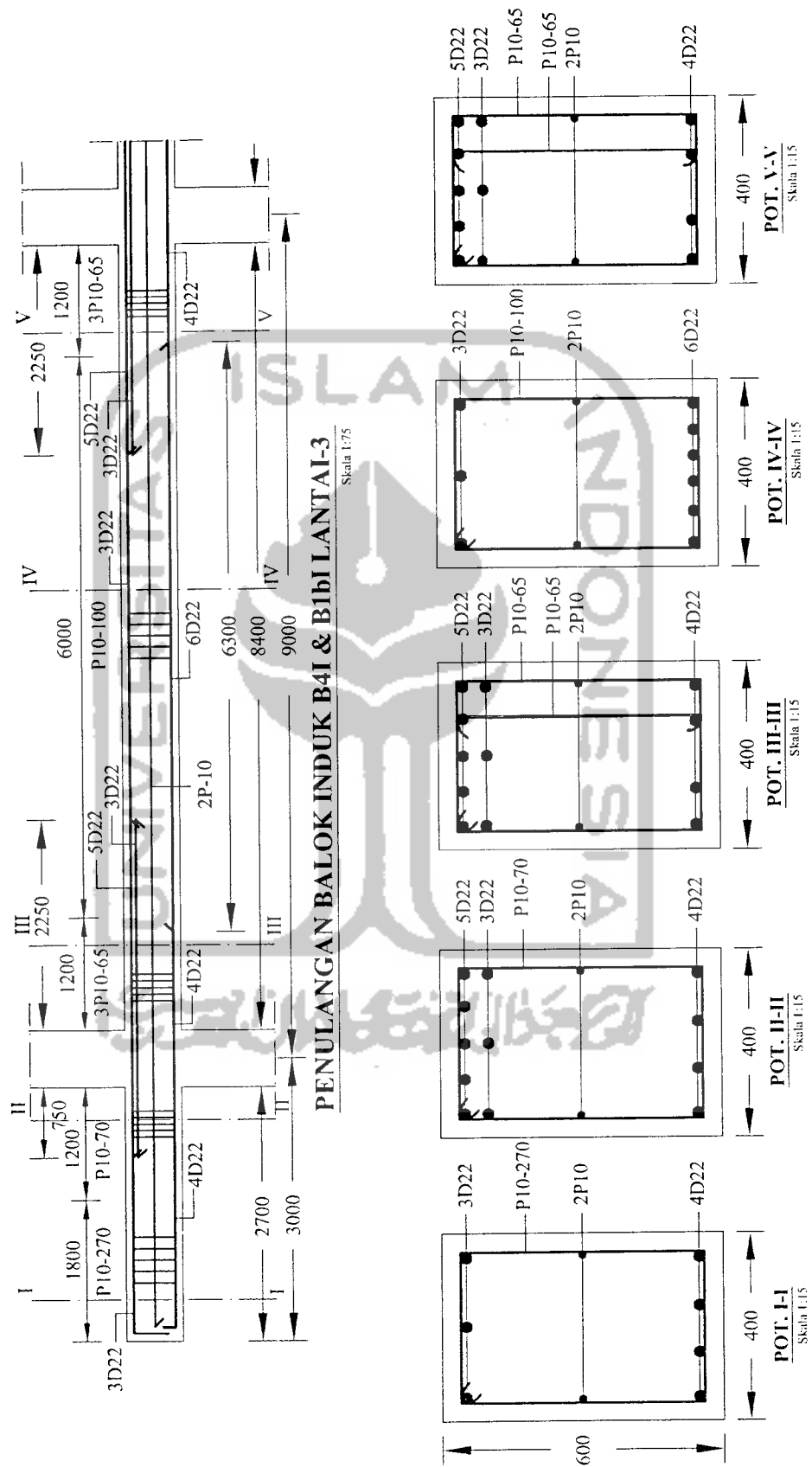
**POT. II-II**  
Skala 1/15

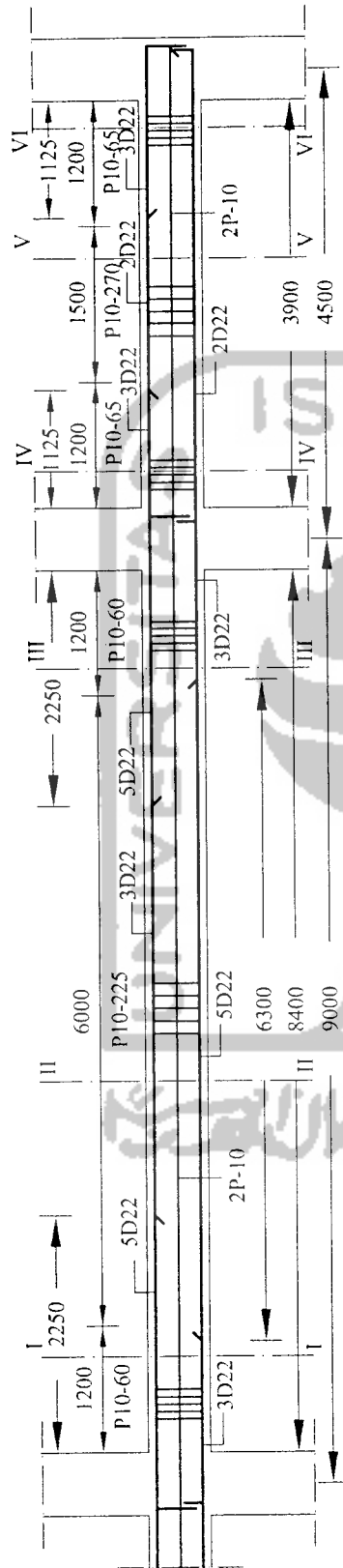
**POT. III-III**  
Skala 1/15

**POT. IV-IV**  
Skala 1/15

**POT. V-V**  
Skala 1/15

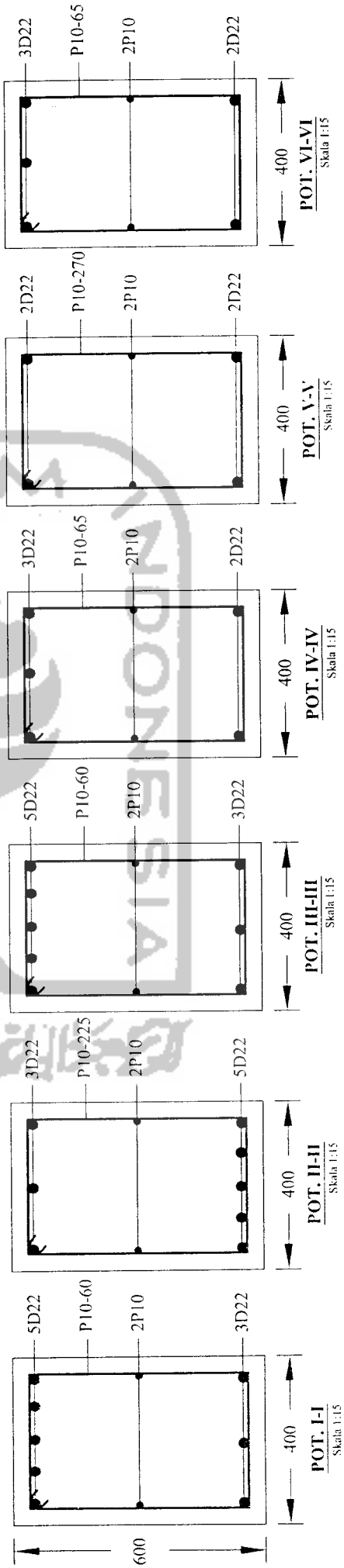
**POT. VI-VI**  
Skala 1/15





**PENULANGAN BALOK INDUK B1a1 & B3b1 LANTAI-2**

Skala 1:75



POT. I-I  
Skala 1:15

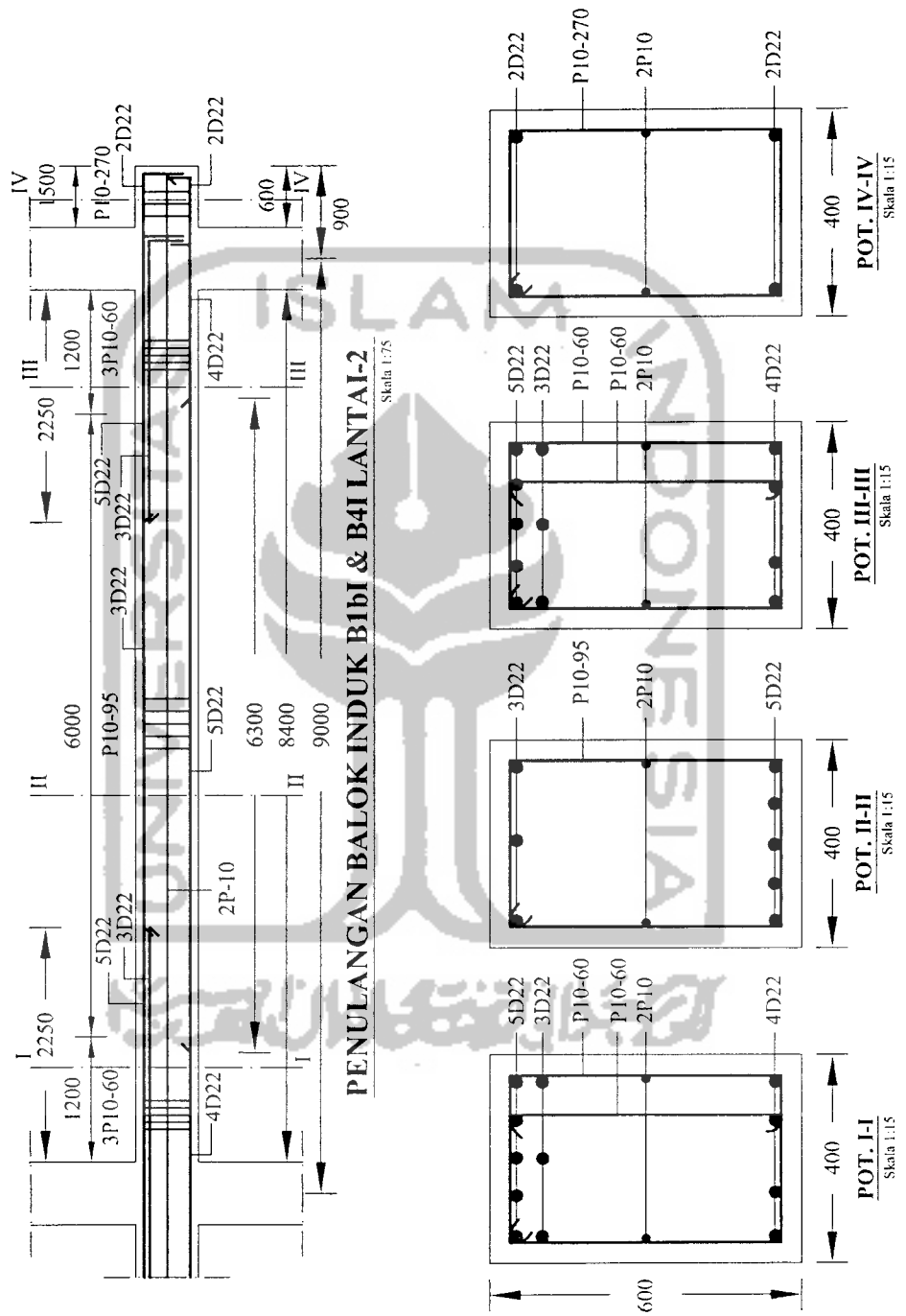
POT. II-II  
Skala 1:15

POT. III-III  
Skala 1:15

POT. IV-IV  
Skala 1:15

POT. V-V  
Skala 1:15

POT. VI-VI  
Skala 1:15



**PENULANGAN BALOK INDUK B1bI & B4I LANTAI-2**

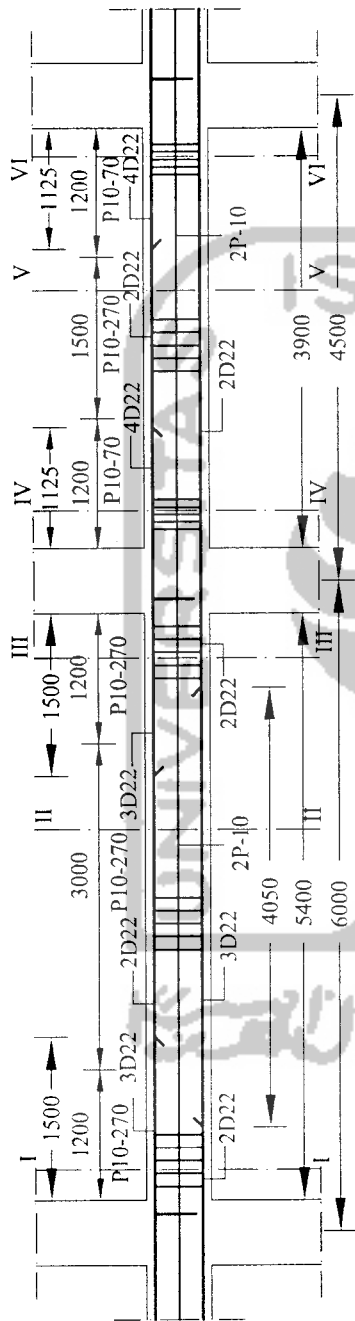
Skala 1:7.5

POT. IV-IV  
Skala 1:15

POT. III-III  
Skala 1:15

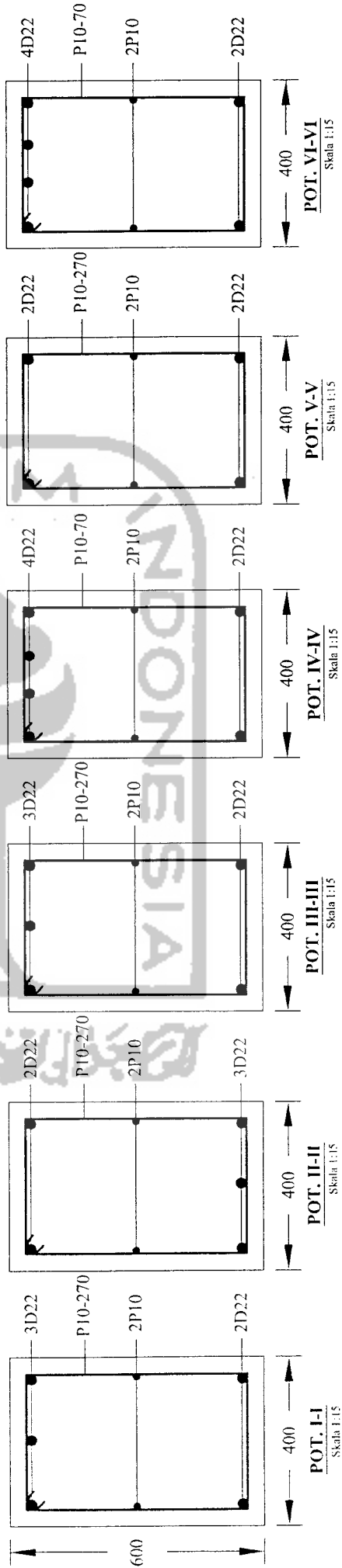
POT. II-II  
Skala 1:15

POT. I-I  
Skala 1:15



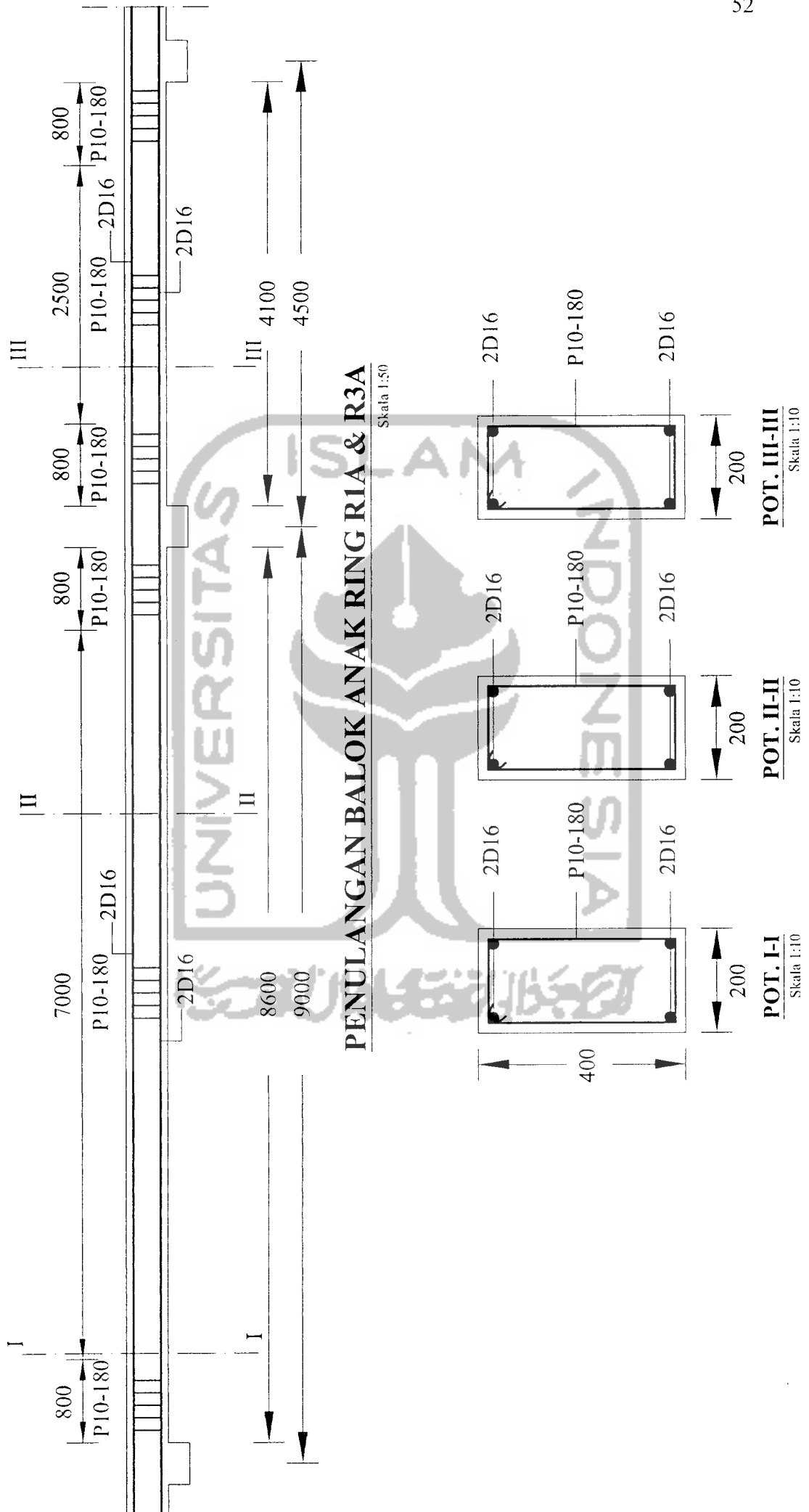
**PENULANGAN BALOK INDUK B2aI & B3aI LANTAI-2**

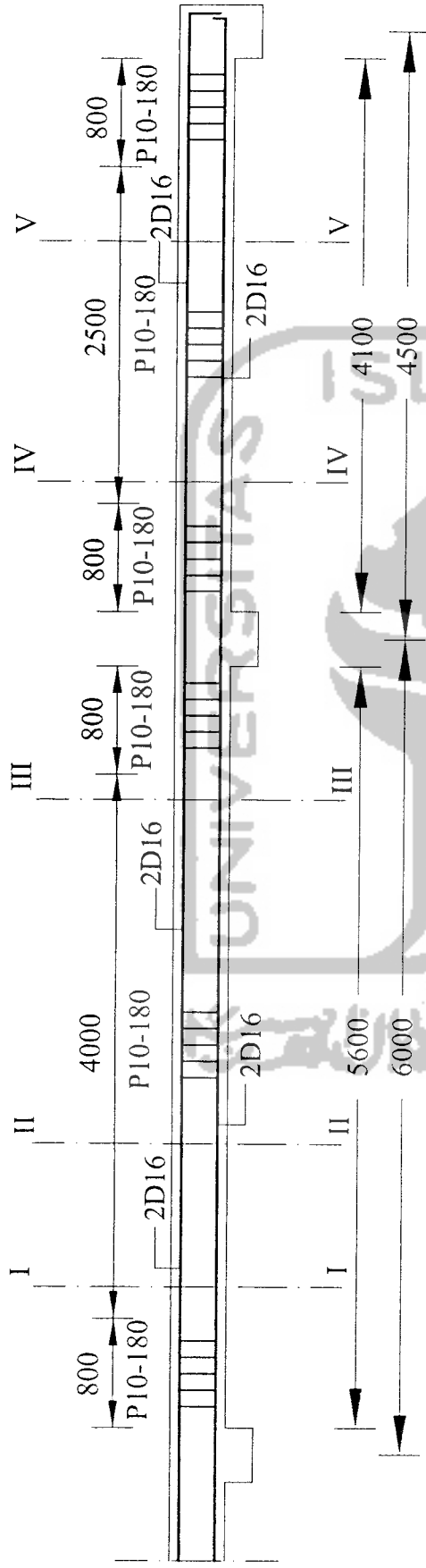
Skala 1:75





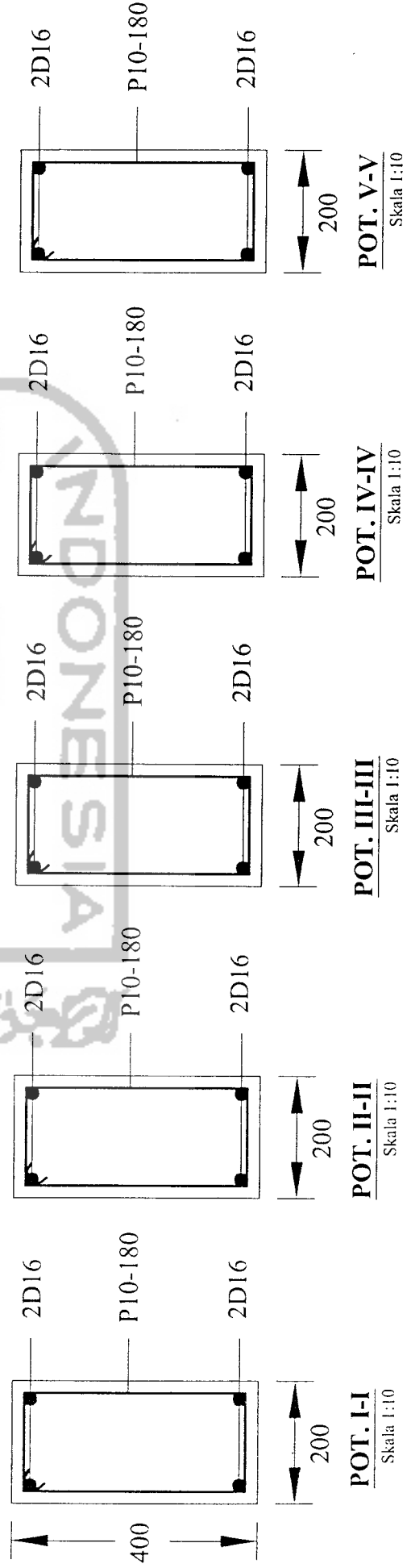






**PENULANGAN BALOK ANAK RING R2A & R3A**

Skala 1:50



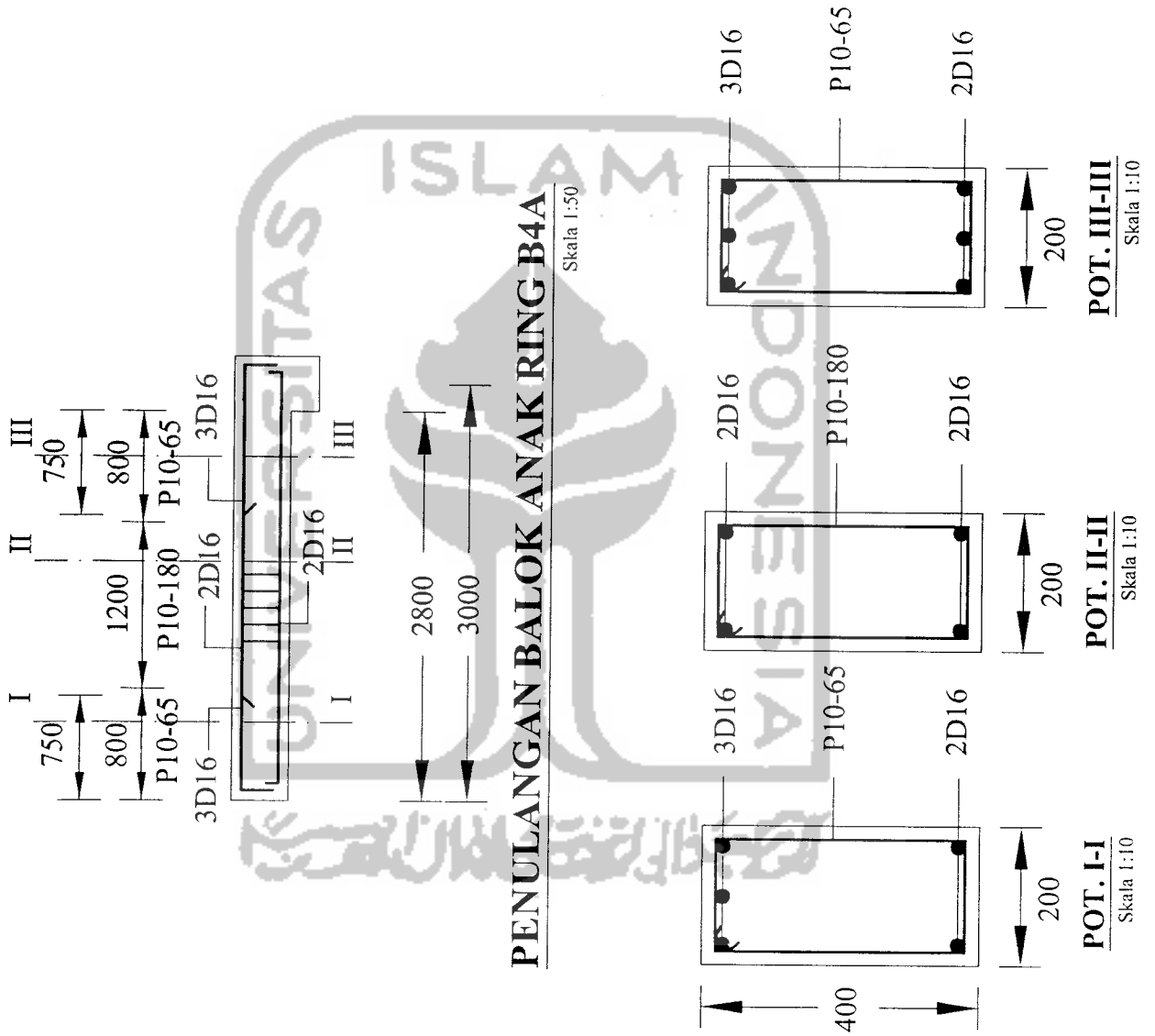
**POT. I-I**  
Skala 1:10

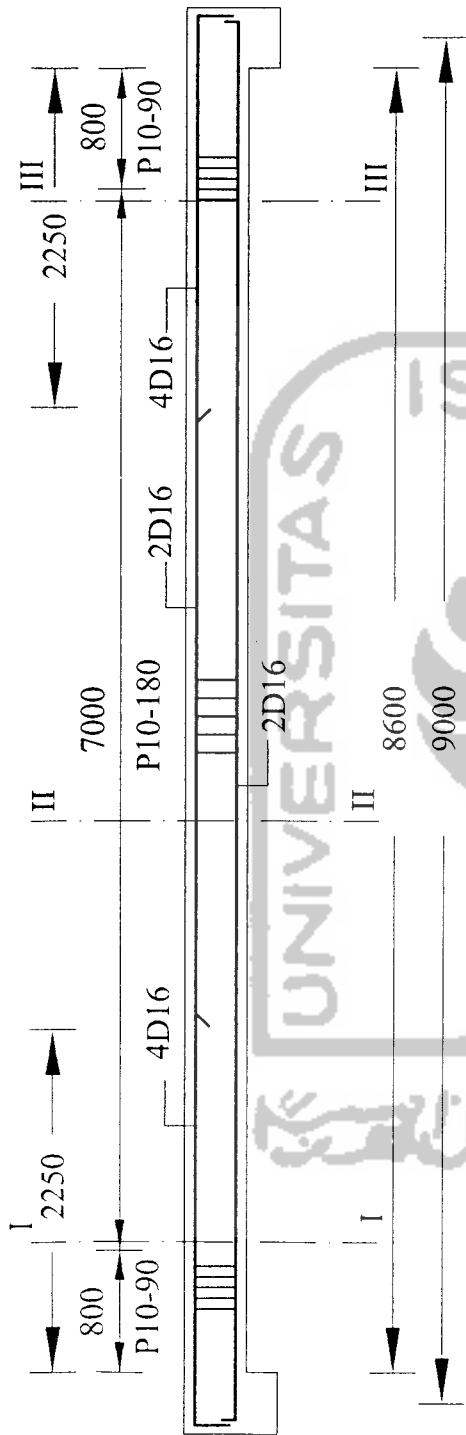
**POT. II-II**  
Skala 1:10

**POT. III-III**  
Skala 1:10

**POT. IV-IV**  
Skala 1:10

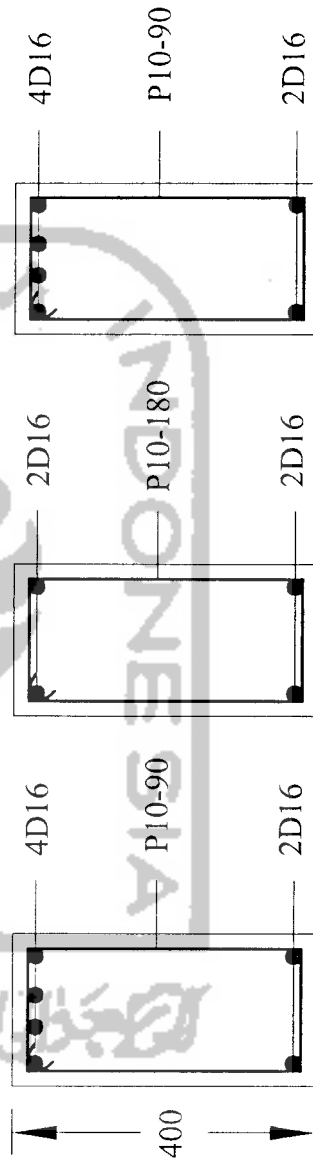
**POT. V-V**  
Skala 1:10





**PENULANGAN BALOK ANAK B1aA LANTAI-3**

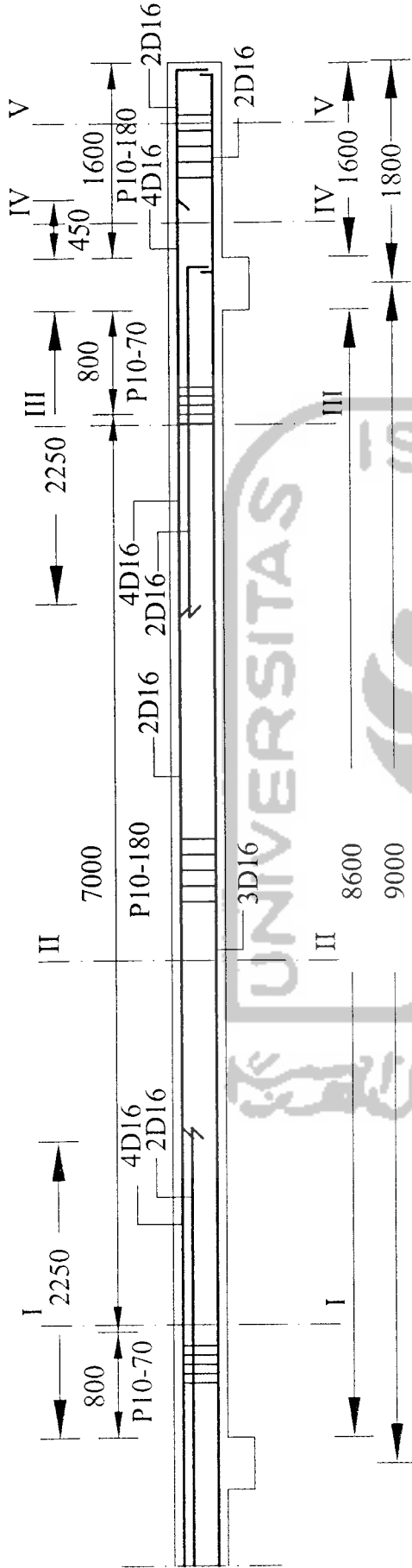
Skala 1:50



**POT. I-I**  
Skala 1:10

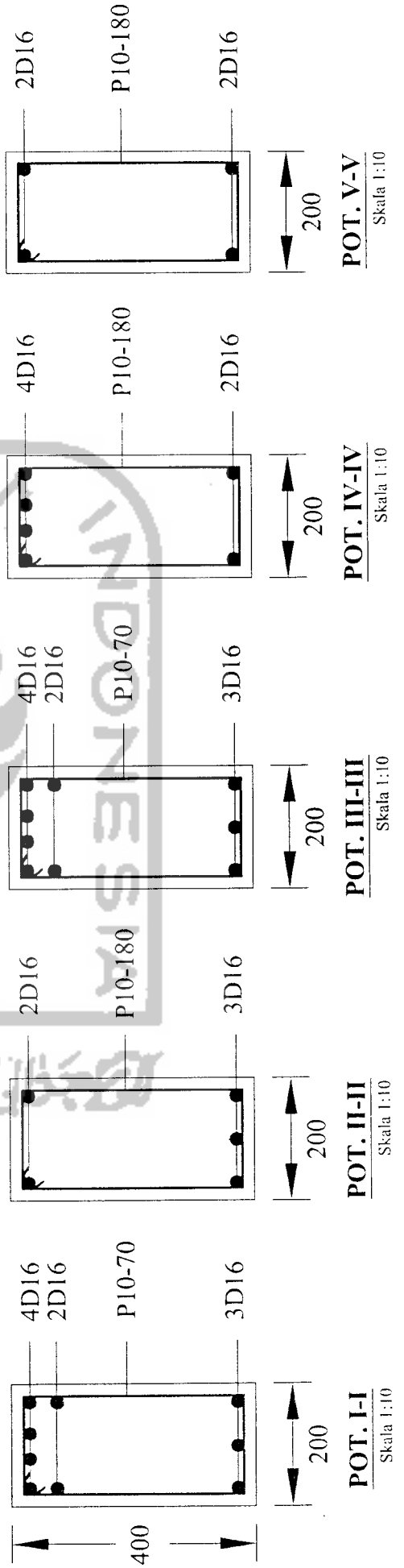
**POT. II-II**  
Skala 1:10

**POT. III-III**  
Skala 1:10



**PENULANGAN BALOK ANAK B1ba & B5a LANTAI-3**

Skala 1:50



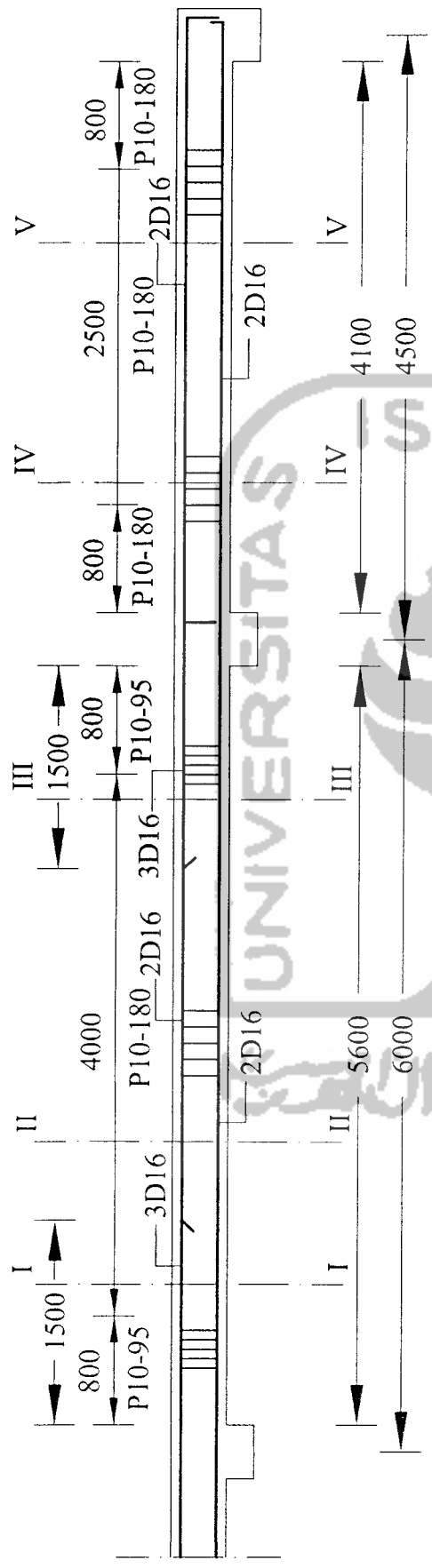
**POT. I-I**  
Skala 1:10

**POT. II-II**  
Skala 1:10

**POT. III-III**  
Skala 1:10

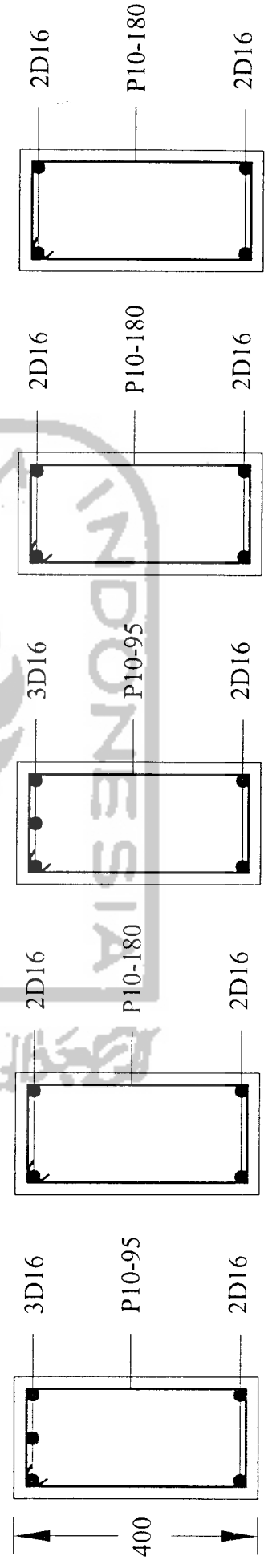
**POT. IV-IV**  
Skala 1:10

**POT. V-V**  
Skala 1:10



**PENULANGAN BALOK ANAK B2aA & B3aA LANTAI-3**

Skala 1:50



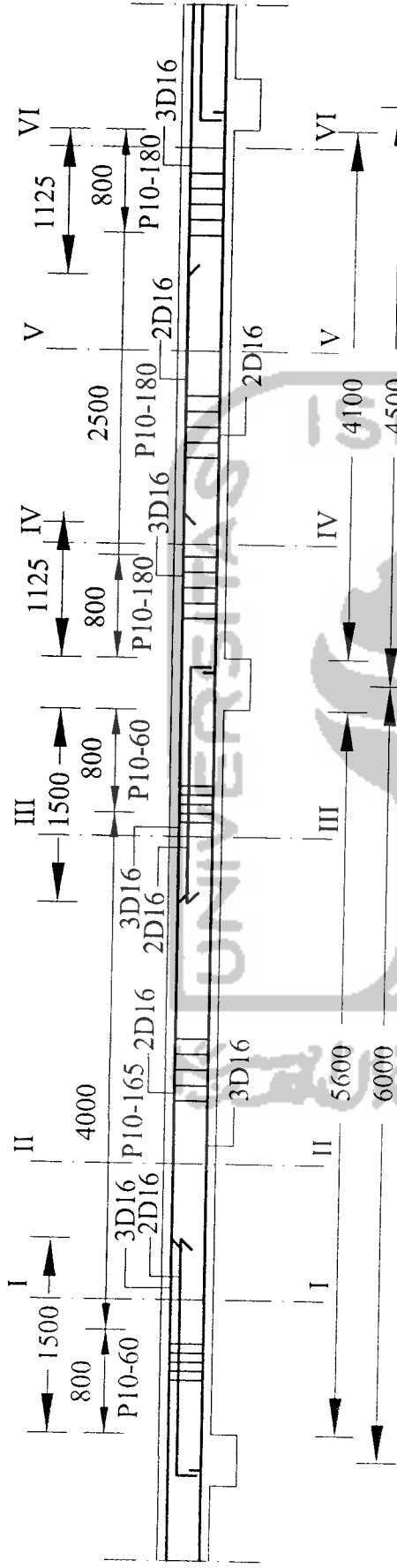
**POT. I-I**  
Skala 1:10

**POT. II-II**  
Skala 1:10

**POT. III-III**  
Skala 1:10

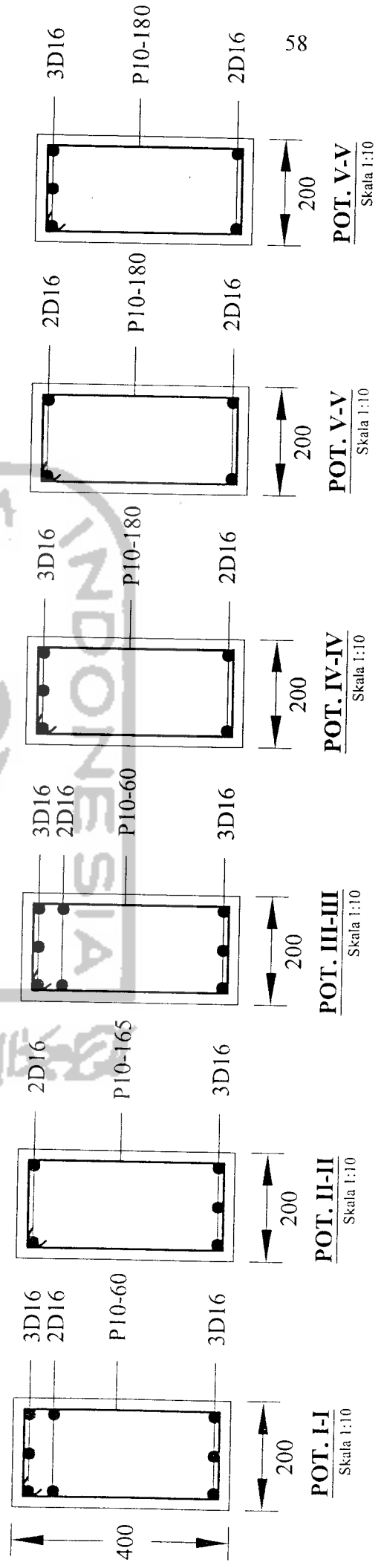
**POT. IV-IV**  
Skala 1:10

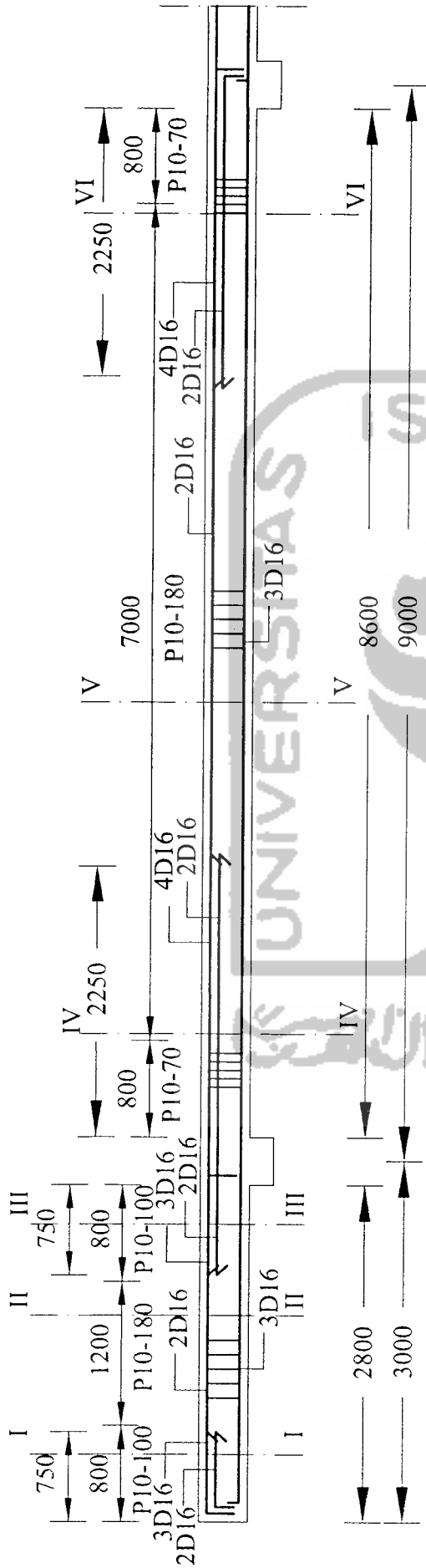
**POT. V-V**  
Skala 1:10



**PENULANGAN BALOK ANAK B2ba & B3ba LANTAI-3**

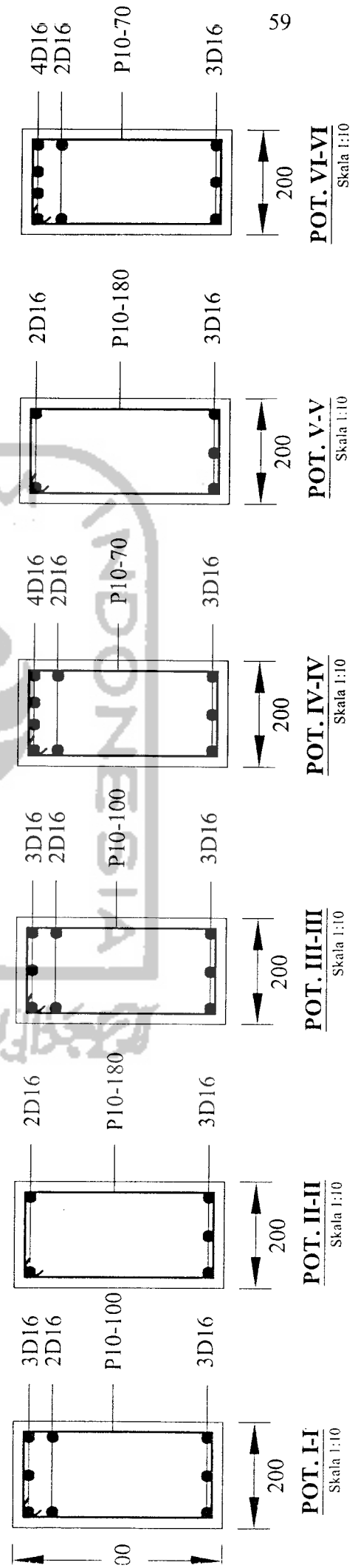
Skala 1:50



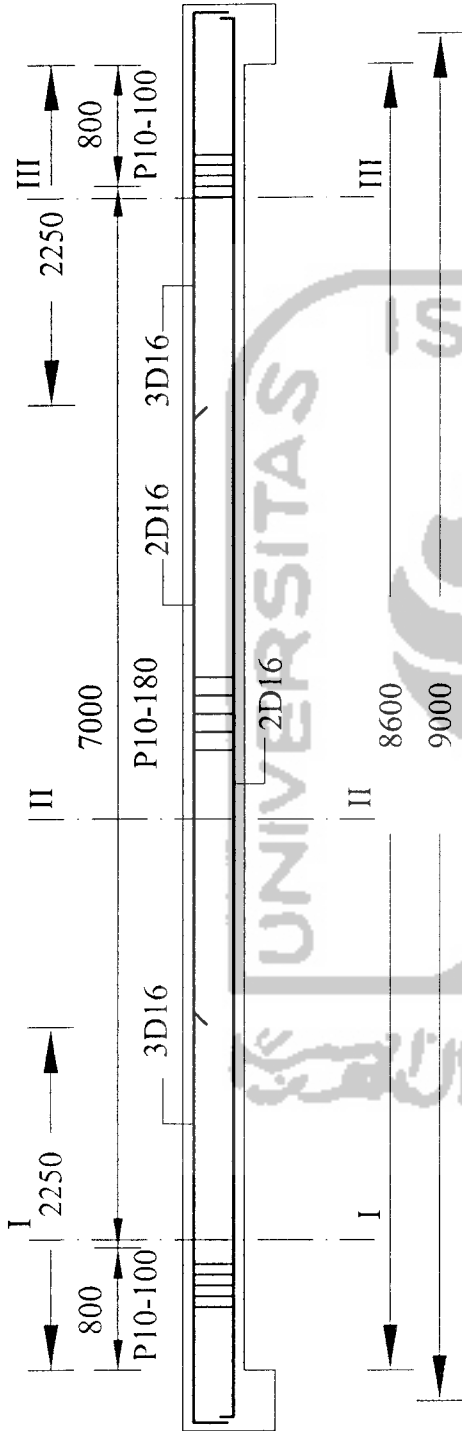


**PENULANGAN BALOK ANAK B4A & B1ba LANTAI-3**

Skala 1:50

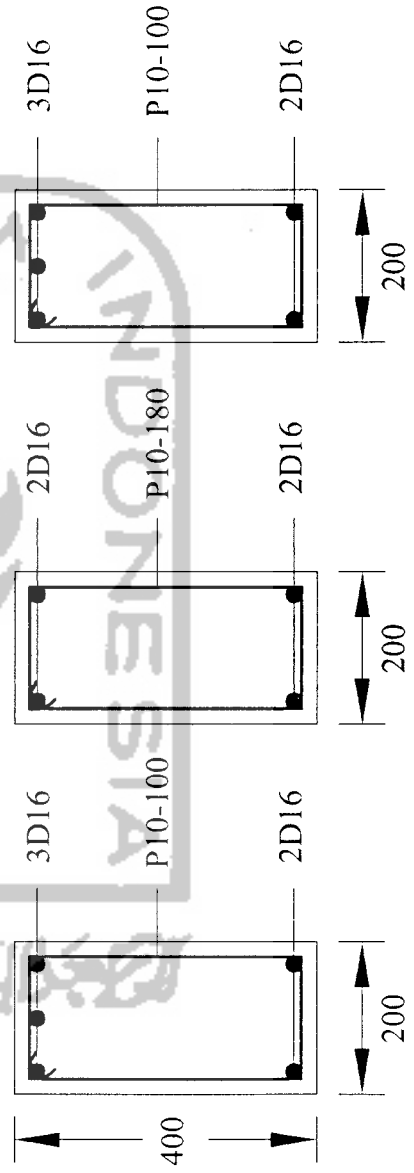


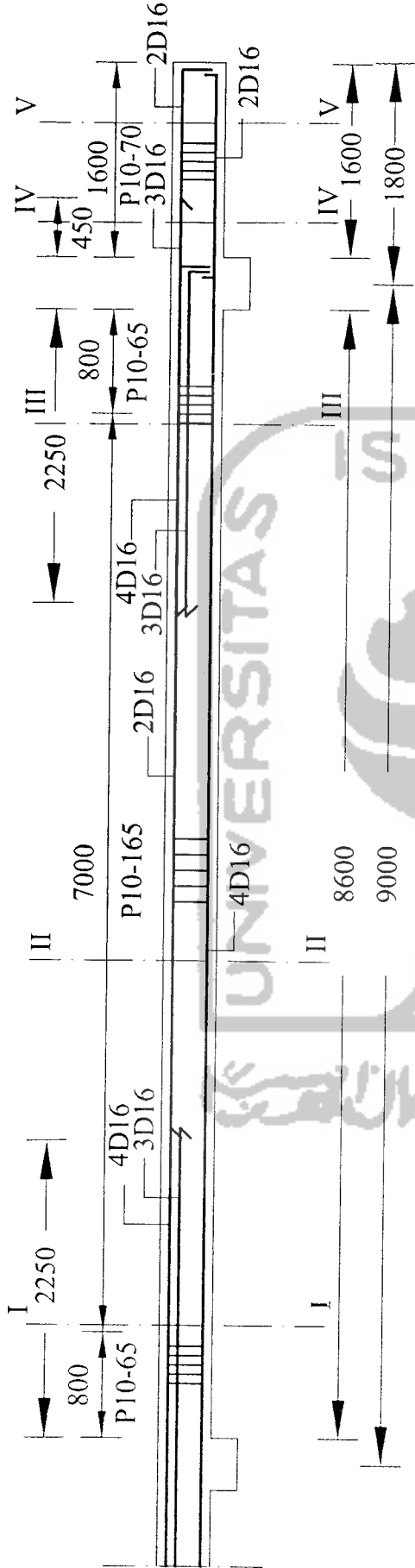




**PENULANGAN BALOK ANAK B1aa LANTAI-2**

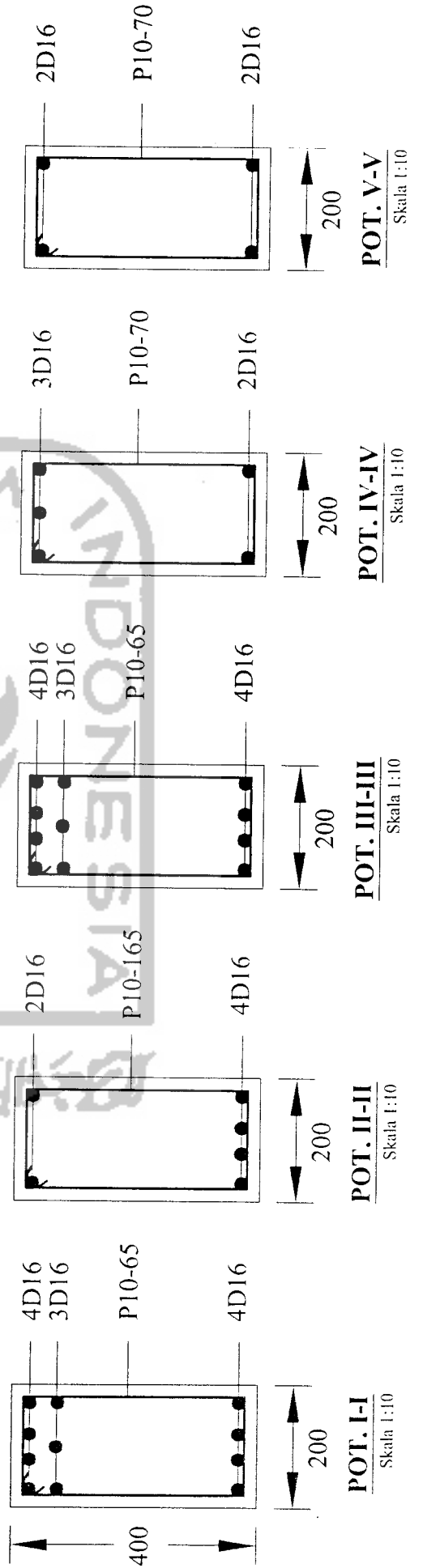
Skala 1:50





**PENULANGAN BALOK ANAK BIBA & BSA LANTAI-2**

Skala 1:50



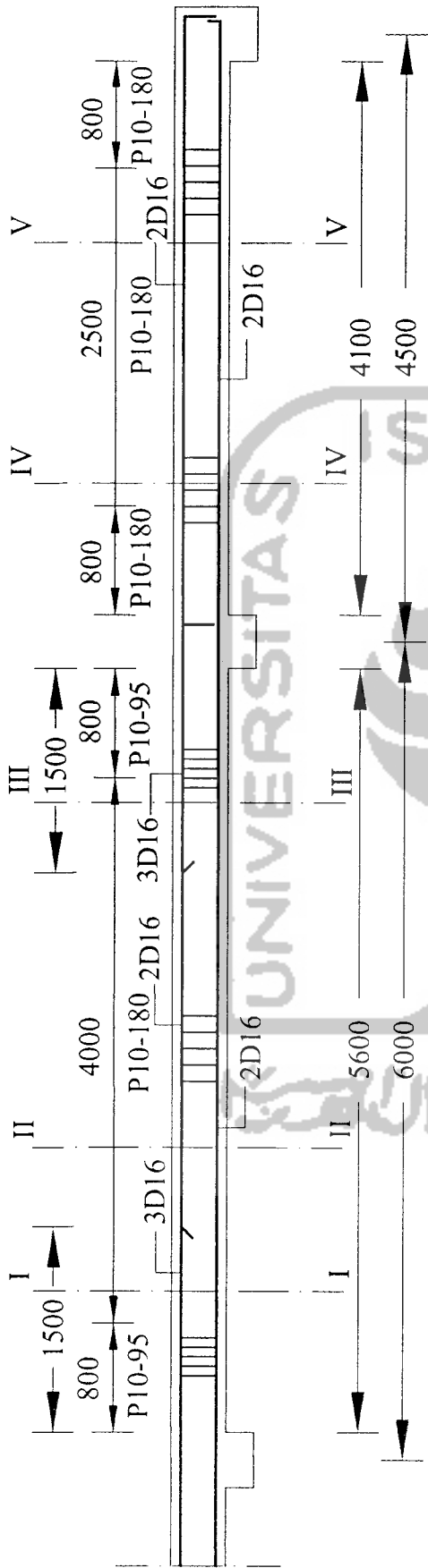
**POT. I-I**  
Skala 1:10

**POT. II-II**  
Skala 1:10

**POT. III-III**  
Skala 1:10

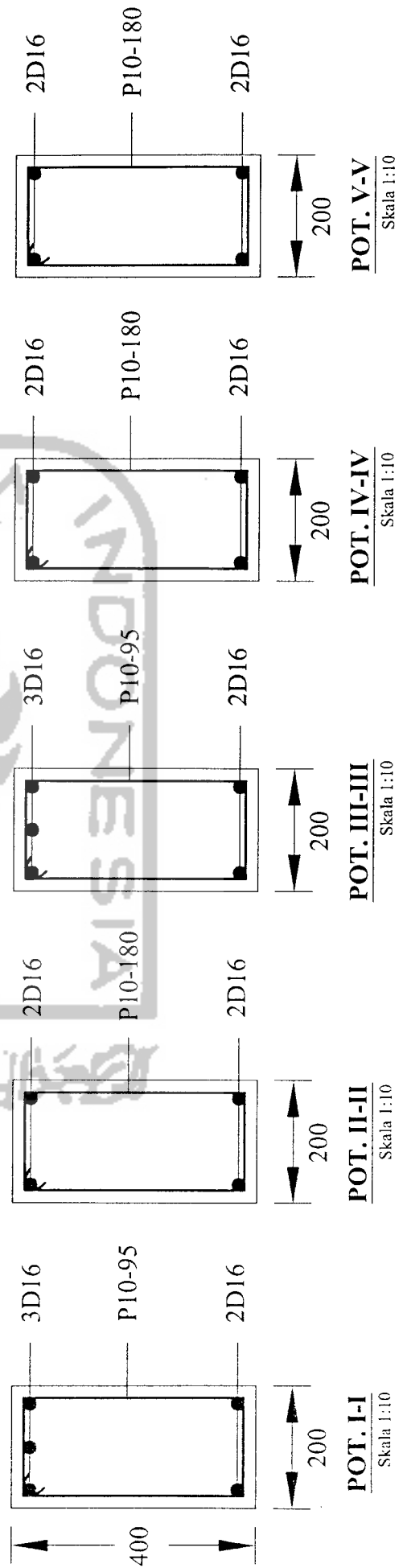
**POT. IV-IV**  
Skala 1:10

**POT. V-V**  
Skala 1:10



**PENULANGAN BALOK ANAK B2aA & B3aA LANTAI-2**

Skala 1:50



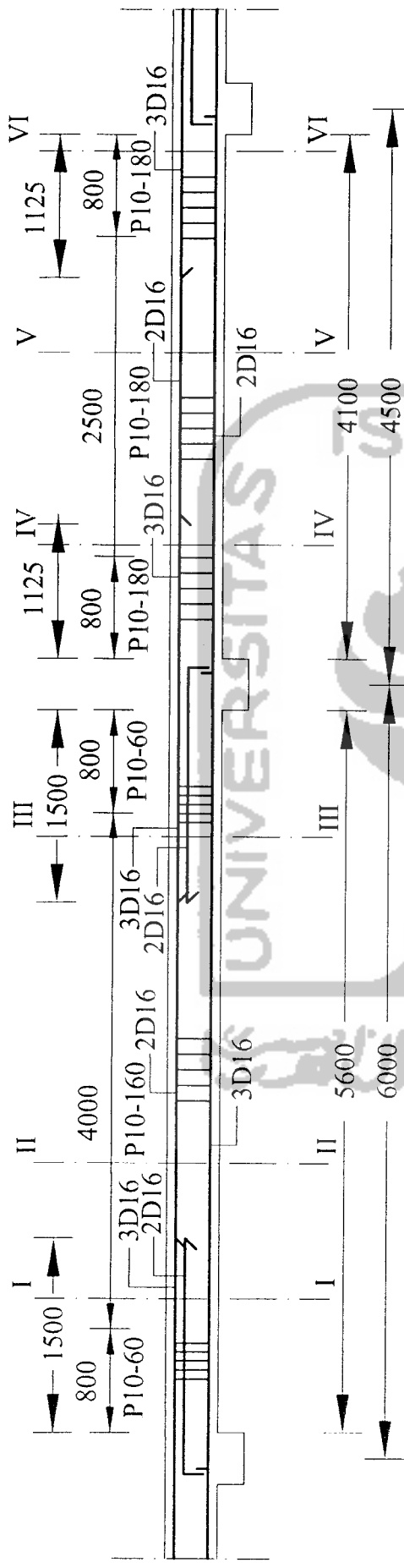
**POT. I-I**  
Skala 1:10

**POT. II-II**  
Skala 1:10

**POT. III-III**  
Skala 1:10

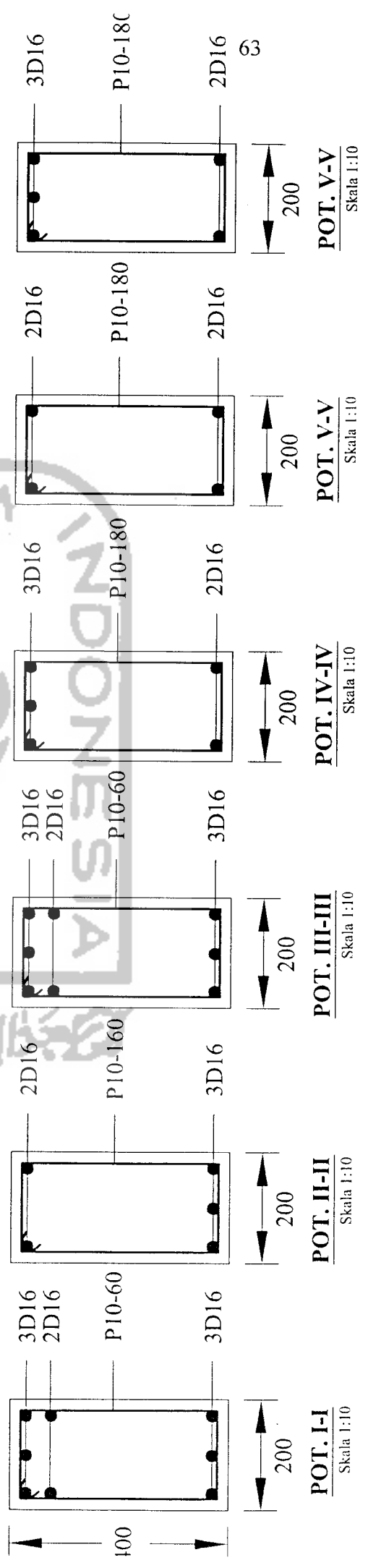
**POT. IV-IV**  
Skala 1:10

**POT. V-V**  
Skala 1:10



**PENULANGAN BALOK ANAK B2ba & B3ba LANTAI-2**

Skala 1:50



POT. I-I  
Skala 1:10

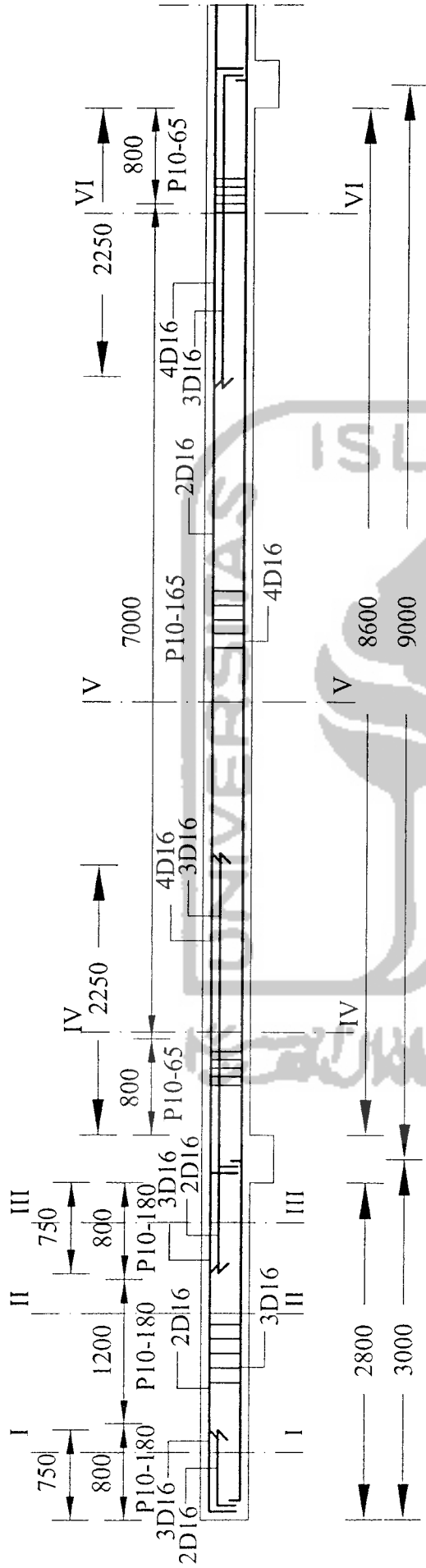
POT. II-II  
Skala 1:10

POT. III-III  
Skala 1:10

POT. IV-IV  
Skala 1:10

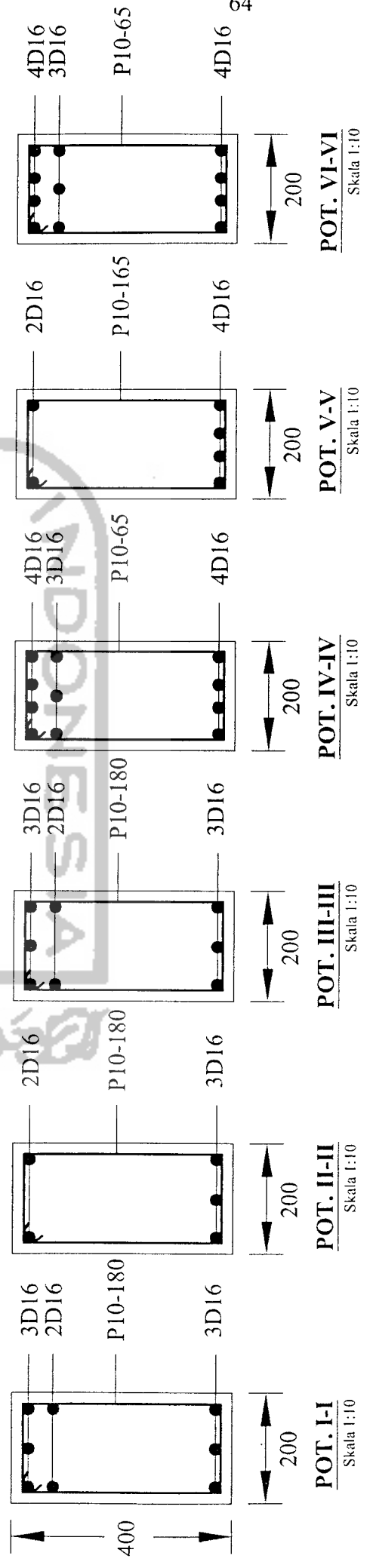
POT. V-V  
Skala 1:10

POT. V-V  
Skala 1:10



**PENULANGAN BALOK ANAK B4A & B1ba LANTAI-2**

Skala 1:50



**POT. I-I**  
Skala 1:10

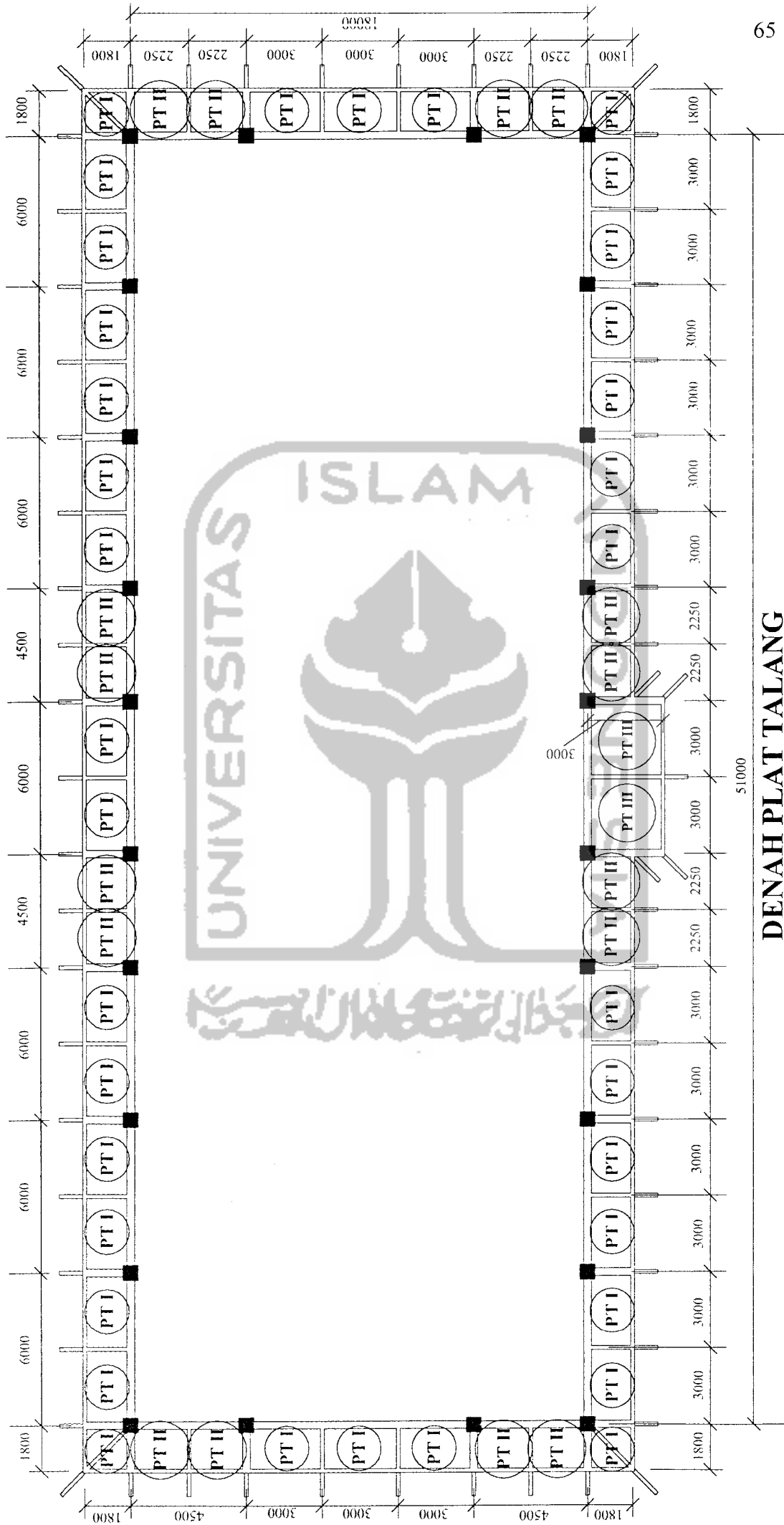
**POT. II-II**  
Skala 1:10

**POT. III-III**  
Skala 1:10

**POT. IV-IV**  
Skala 1:10

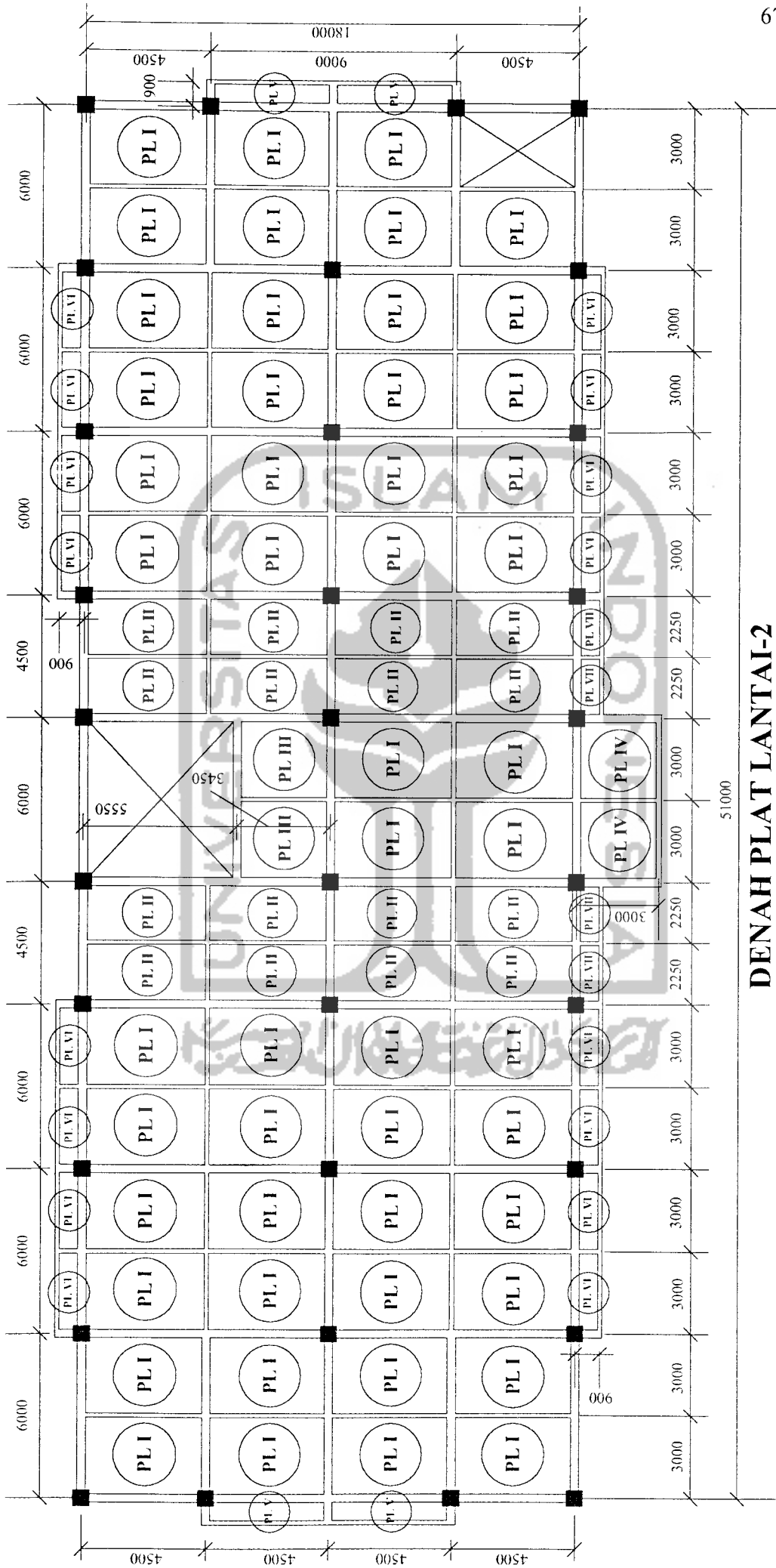
**POT. V-V**  
Skala 1:10

**POT. VI-VI**  
Skala 1:10



**DENAH PLAT TALANG**  
Skala 1:200



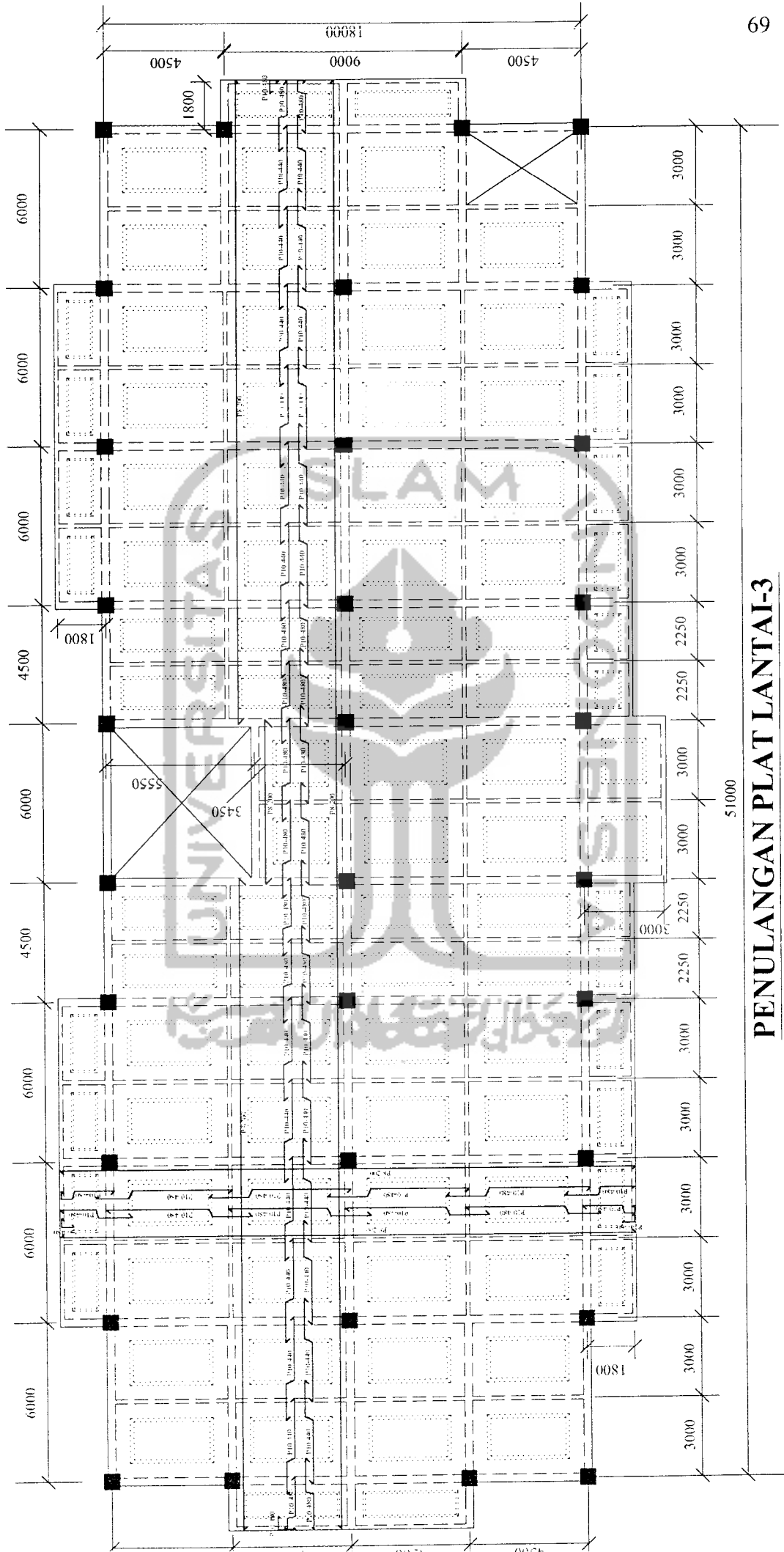


**DENAH PLAT LANTAI-2**

Skala 1:200







**PENULANGAN PLAT LANTAI-3**

Skala 1:200



**TIPE I**

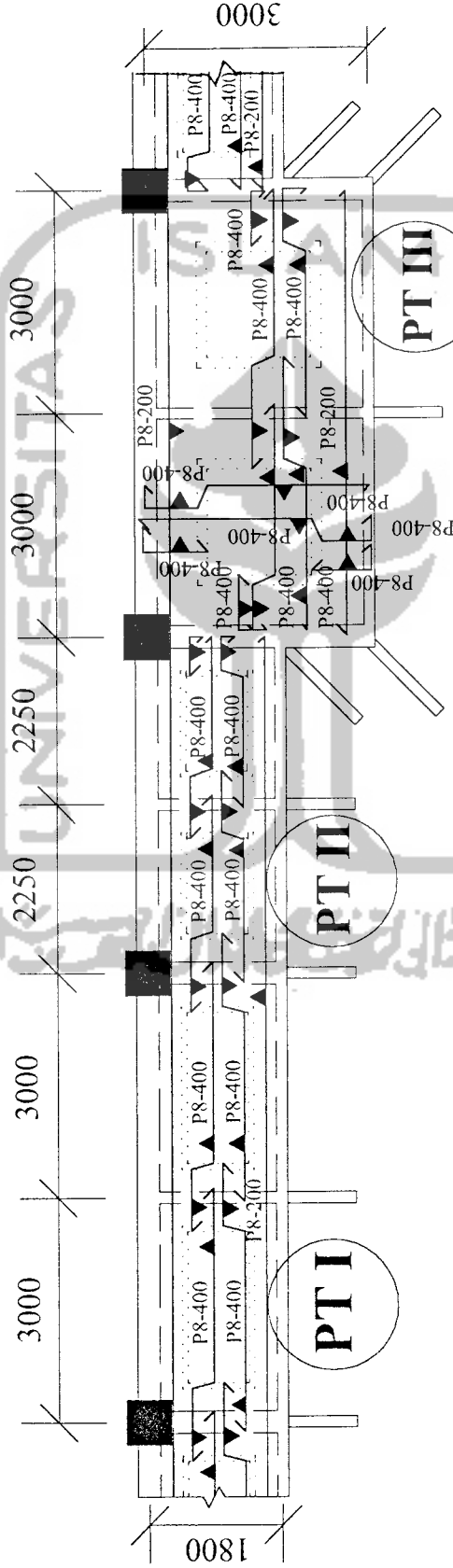
- lx = 1800 mm
- ly = 3000 mm
- tul. lx = tx = P8-200
- tul. ly = P8-200
- tul. ty = P8-200
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200

**TIPE II**

- lx = 1800 mm
- ly = 2250 mm
- tul. lx = tx = P8-200
- tul. ly = P8-200
- tul. ty = P8-200
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200

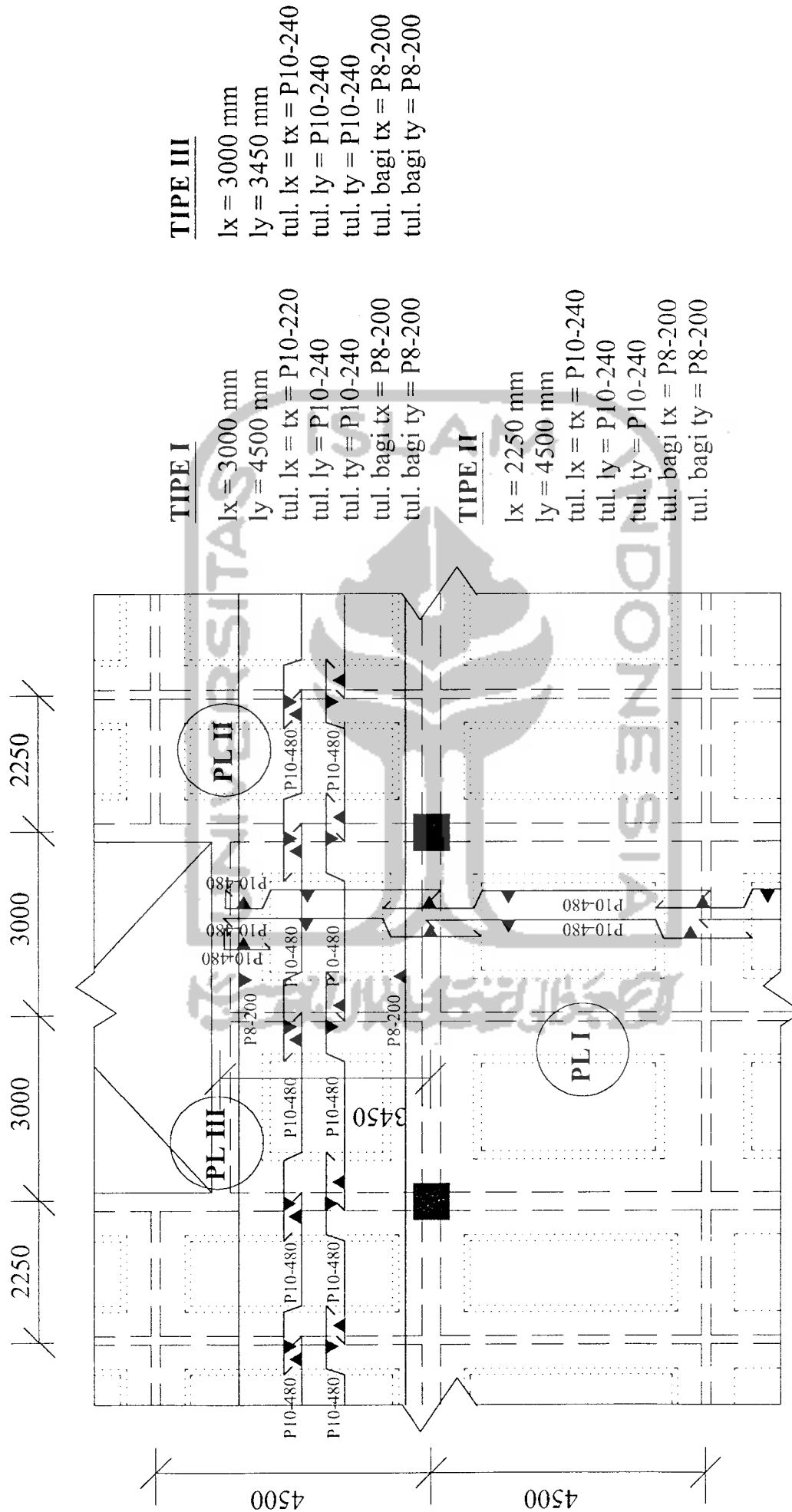
**TIPE III**

- lx = 3000 mm
- ly = 3000 mm
- tul. lx = tx = P8-200
- tul. ly = P8-200
- tul. ty = P8-200
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200



**DETAIL PENULANGAN PLATTALANG TIPE I, II & III**

Skala 1:100



**TIPE I**

lx = 3000 mm  
 ly = 4500 mm  
 tul. lx = tx = P10-220  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**TIPE II**

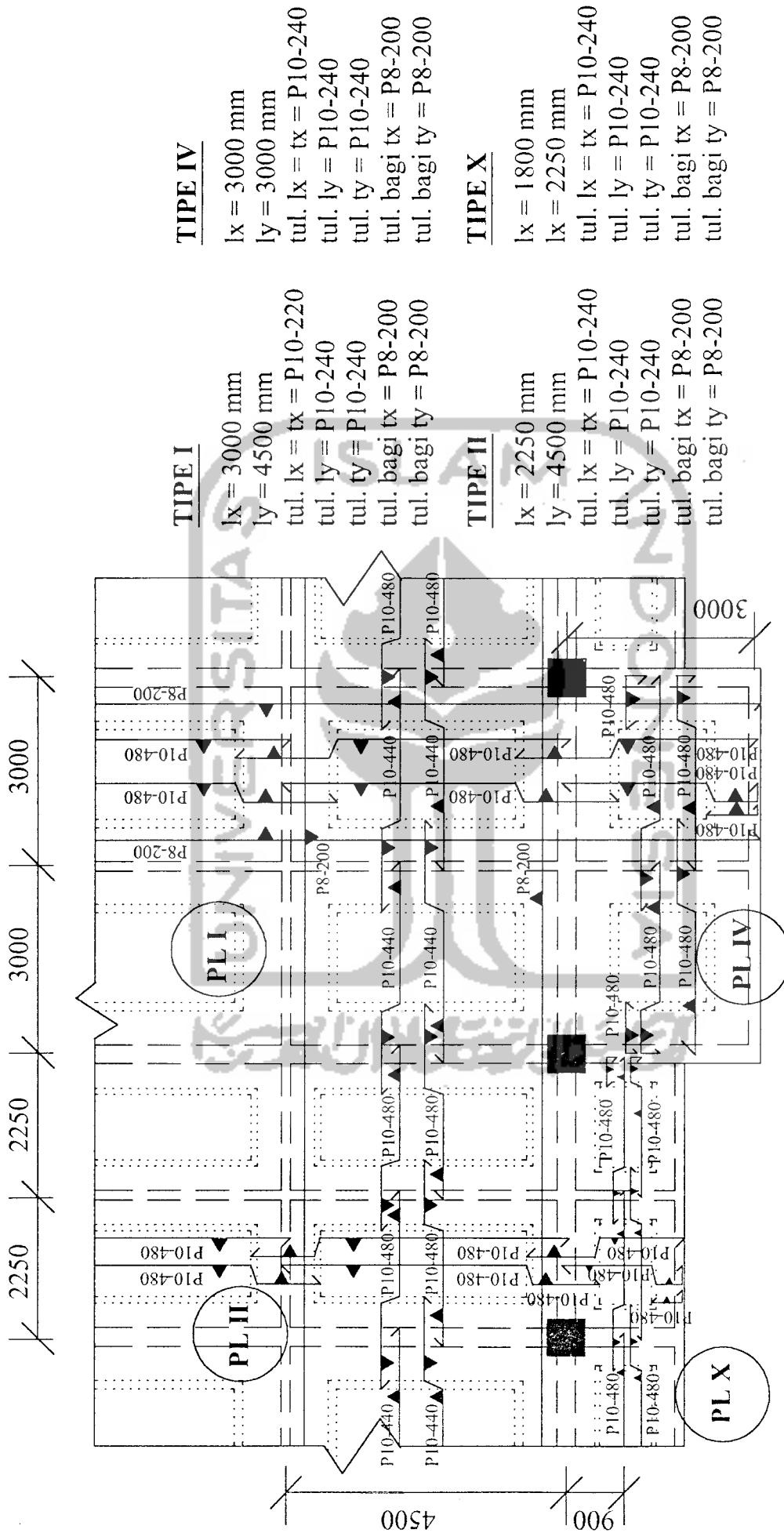
lx = 2250 mm  
 ly = 4500 mm  
 tul. lx = tx = P10-240  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**TIPE III**

lx = 3000 mm  
 ly = 3450 mm  
 tul. lx = tx = P10-240  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

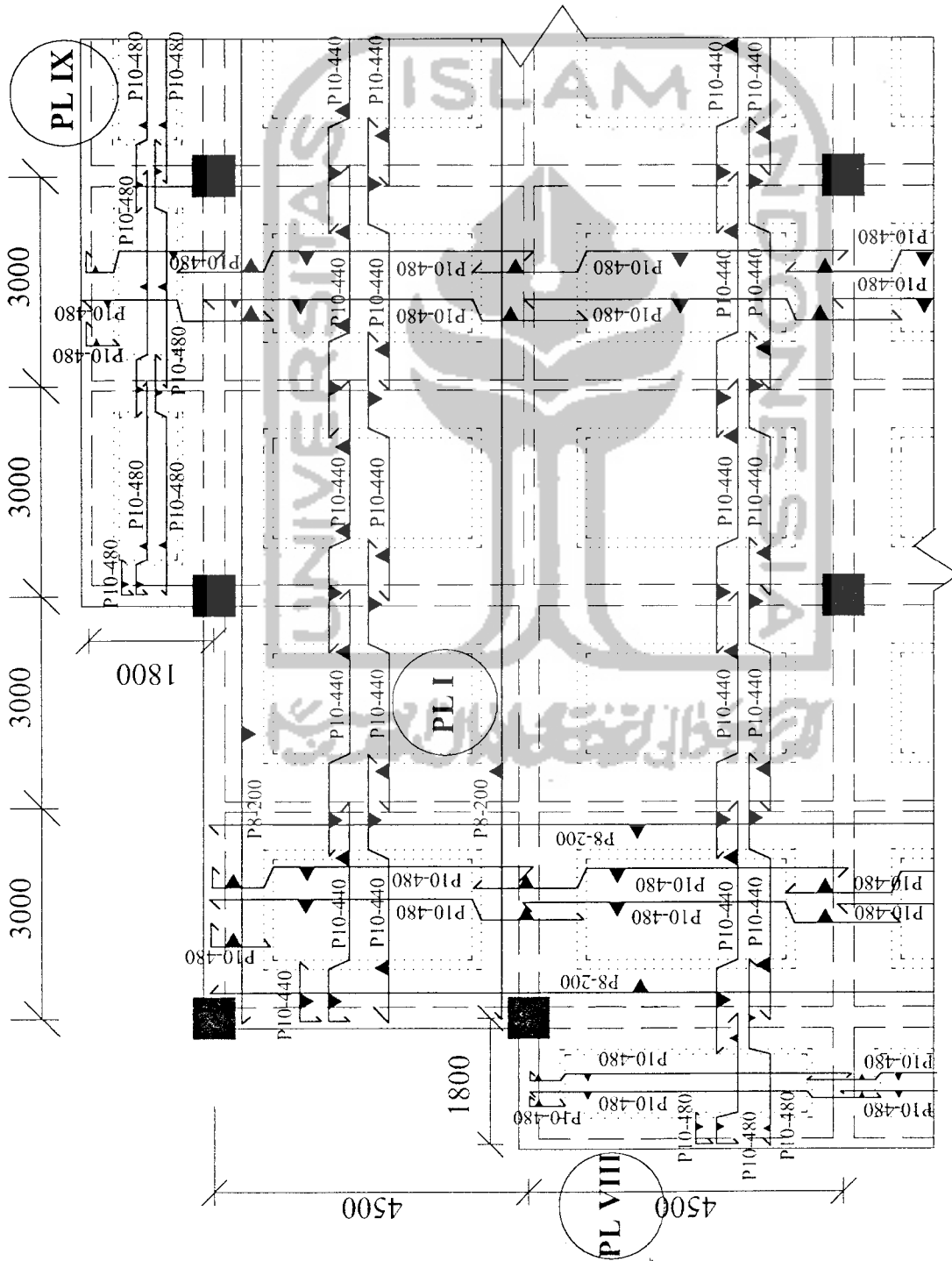
**DETAIL PENULANGAN PLAT TIPE I, II & III LANTAI 3**

Skala 1:100



DETAIL PENULANGAN PLAT TIPE I, II, IV & X LANTAI 3

Skala 1:100



**TIPE I**

- lx = 3000 mm
- ly = 4500 mm
- tul. lx = tx = P10-220
- tul. ly = P10-240
- tul. ty = P10-240
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200

**TIPE VIII**

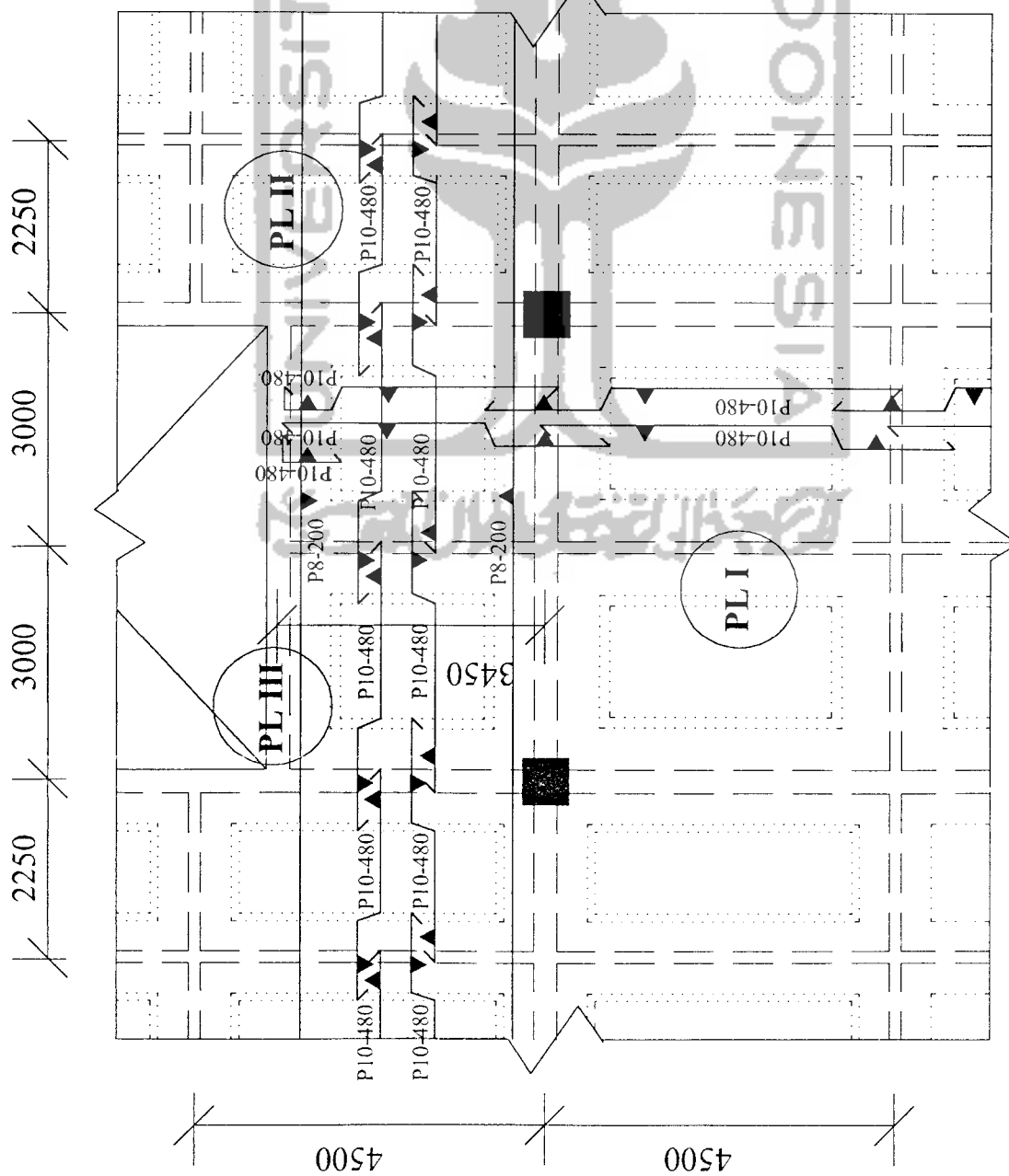
- lx = 1800 mm
- ly = 4500 mm
- tul. lx = tx = P10-240
- tul. ly = P10-240
- tul. ty = P10-240
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200

**TIPE IX**

- lx = 1800 mm
- ly = 3000 mm
- tul. lx = tx = P10-240
- tul. ly = P10-240
- tul. ty = P10-240
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200

**DETAIL PENULANGAN PLAT TIPE I, VIII & IX LANTAI 3**

Skala 1:100



**TIPE I**

lx = 3000 mm  
 ly = 4500 mm  
 tul. lx = tx = P10-220  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**TIPE II**

lx = 2250 mm  
 ly = 4500 mm  
 tul. lx = tx = P10-240  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

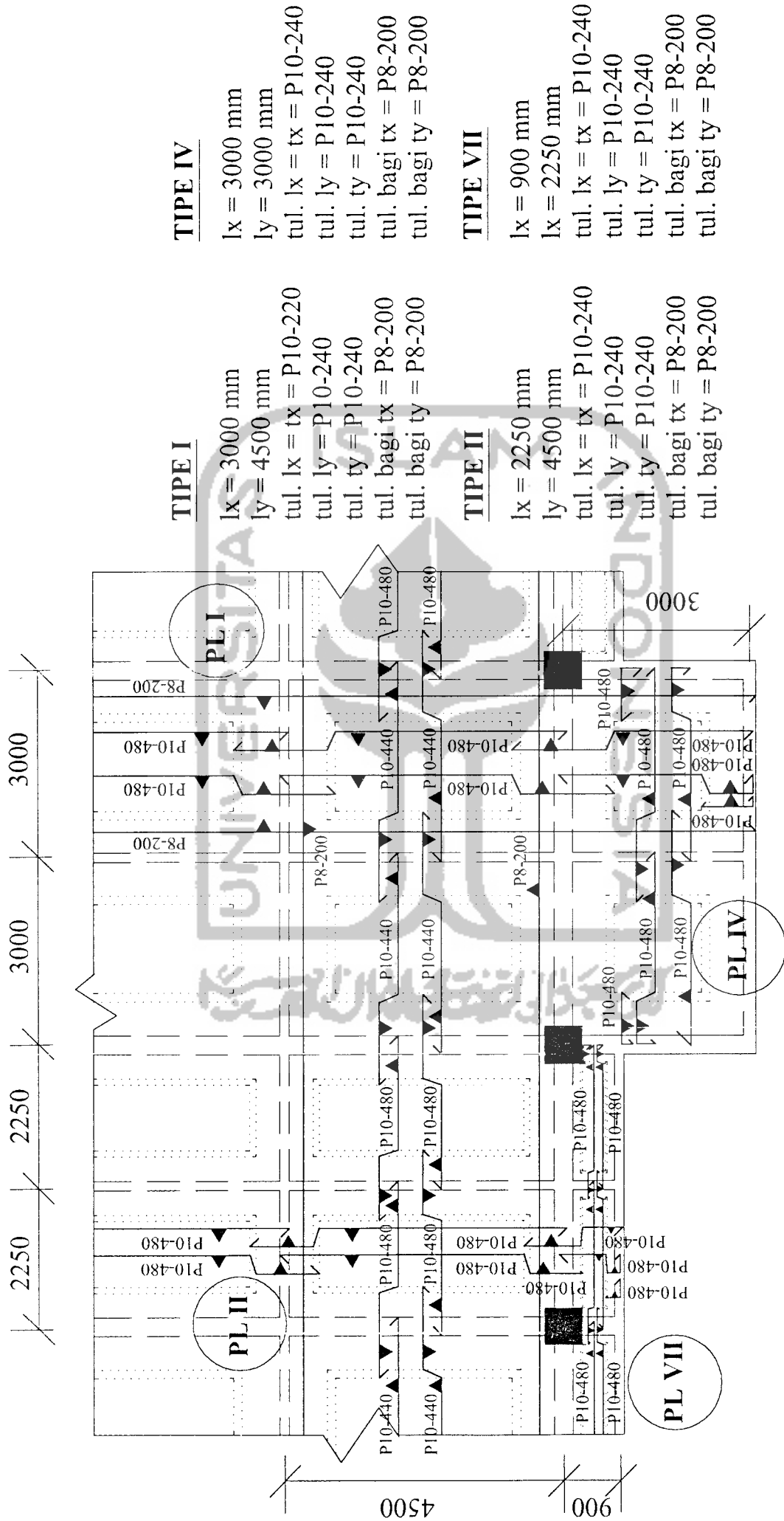
**TIPE III**

lx = 3000 mm  
 ly = 3450 mm  
 tul. lx = tx = P10-240  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**DETAIL PENULANGAN PLAT TIPE I, II & III LANTAI 2**

Skala 1:100





**TIPE I**

lx = 3000 mm  
 ly = 4500 mm  
 tul. lx = tx = P10-220  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**TIPE II**

lx = 2250 mm  
 ly = 4500 mm  
 tul. lx = tx = P10-240  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**TIPE IV**

lx = 3000 mm  
 ly = 3000 mm  
 tul. lx = tx = P10-240  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**TIPE VII**

lx = 900 mm  
 ly = 2250 mm  
 tul. lx = tx = P10-240  
 tul. ly = P10-240  
 tul. ty = P10-240  
 tul. bagi tx = P8-200  
 tul. bagi ty = P8-200

**DETAIL PENULANGAN PLAT TIPE I, II, IV & VII LANTAI 2**

Skala 1:100

**TIPE I**

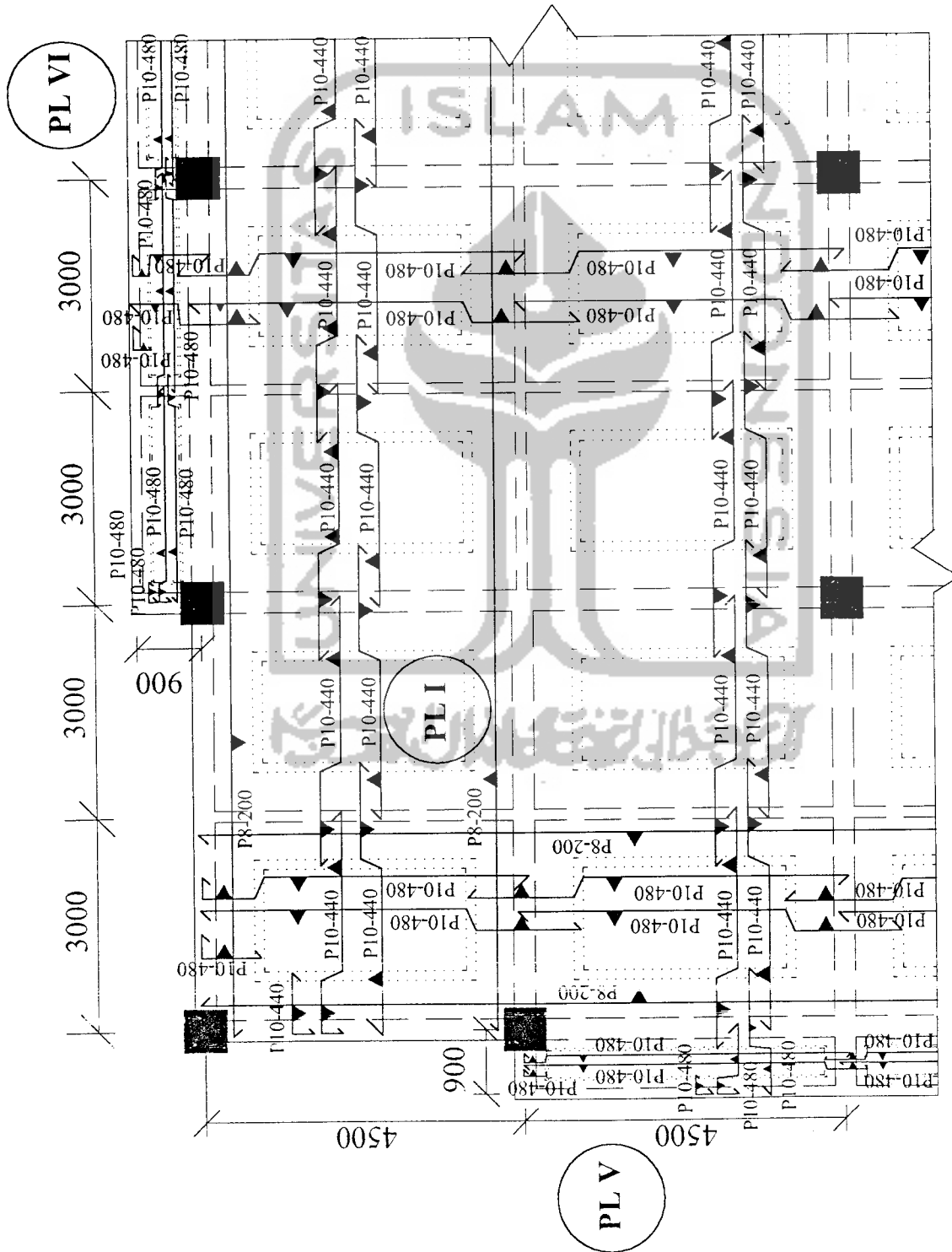
- lx = 3000 mm
- ly = 4500 mm
- tul. lx = tx = P10-220
- tul. ly = P10-240
- tul. ty = P10-240
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200

**TIPE V**

- lx = 900 mm
- ly = 4500 mm
- tul. lx = tx = P10-240
- tul. ly = P10-240
- tul. ty = P10-240
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200

**TIPE VI**

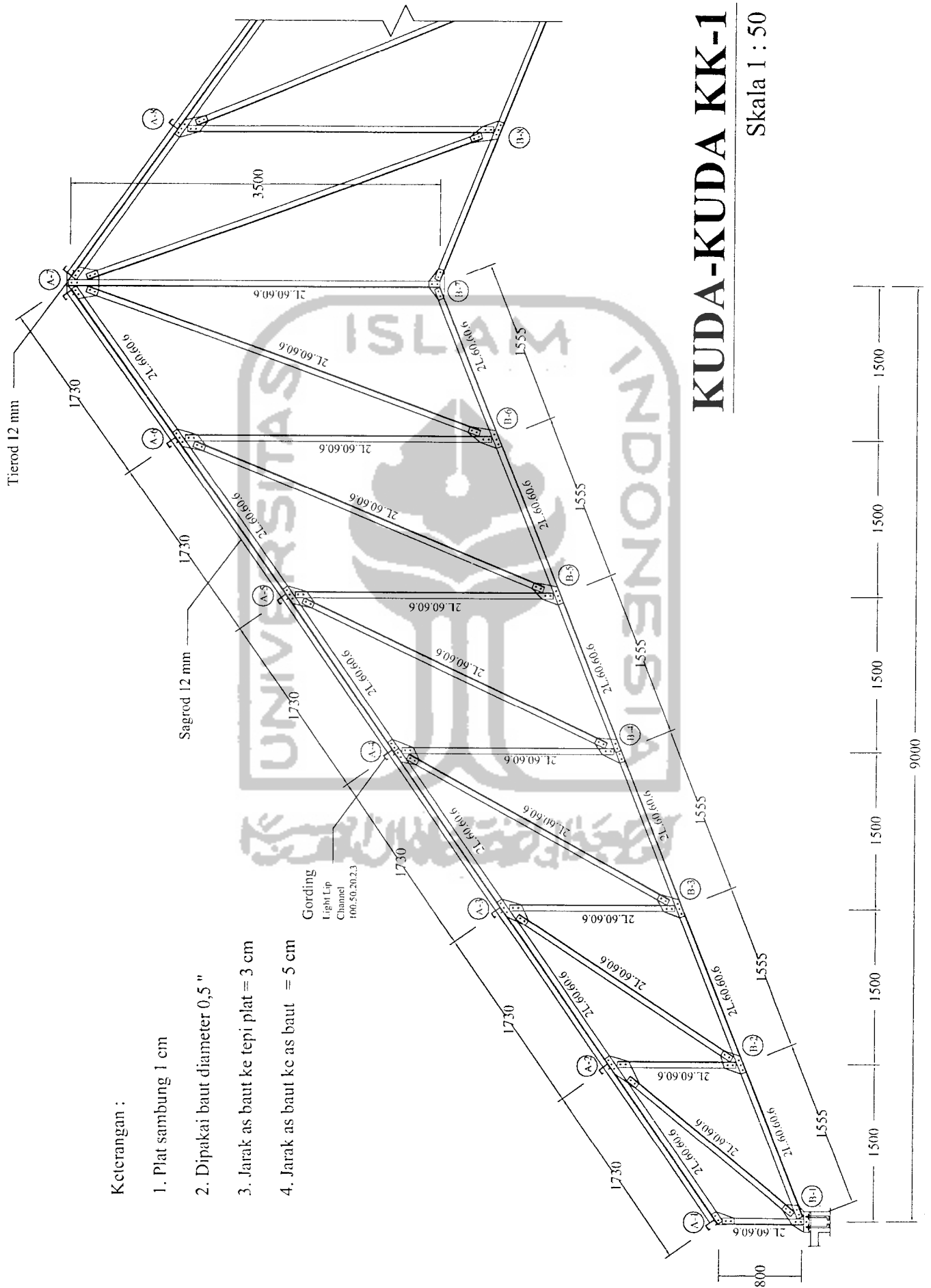
- lx = 900 mm
- ly = 3000 mm
- tul. lx = tx = P10-240
- tul. ly = P10-240
- tul. ty = P10-240
- tul. bagi tx = P8-200
- tul. bagi ty = P8-200



**DETAIL PENULANGAN PLAT TIPE I, V & VI LANTAI 2**

Skala 1:100



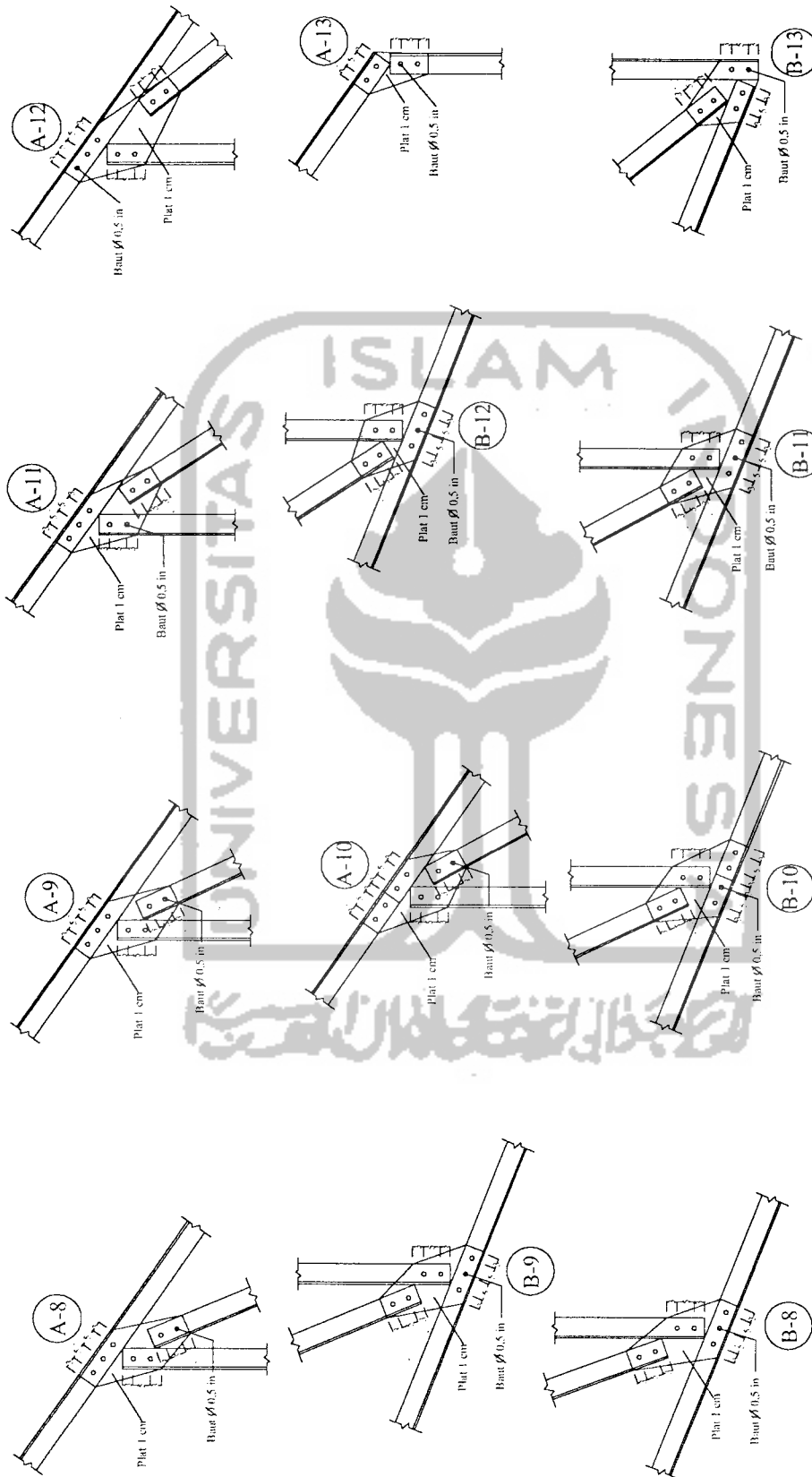


# KUDA-KUDA KK-1

Skala 1 : 50

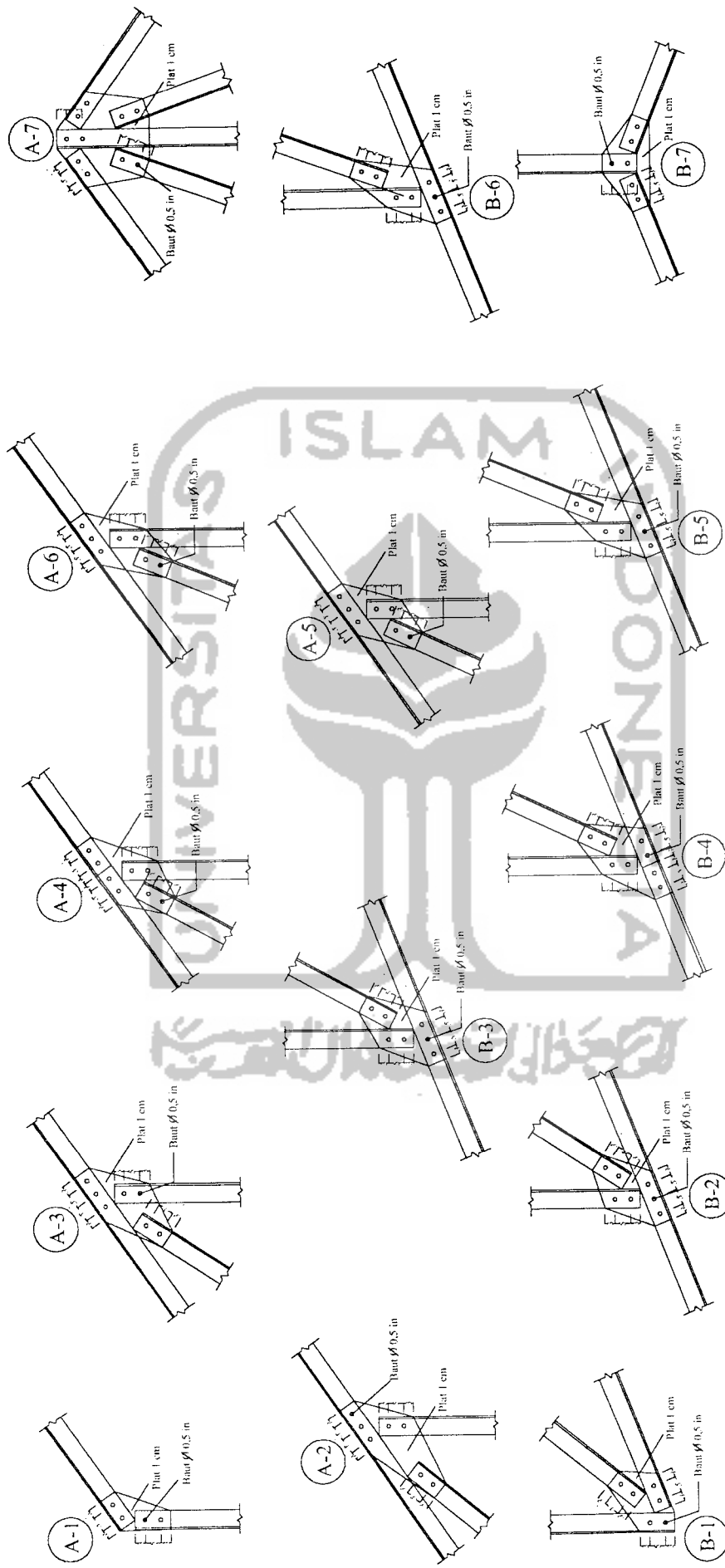
Keterangan :

1. Plat sambung 1 cm
2. Dipakai baut diameter 0,5"
3. Jarak as baut ke tepi plat = 3 cm
4. Jarak as baut ke as baut = 5 cm



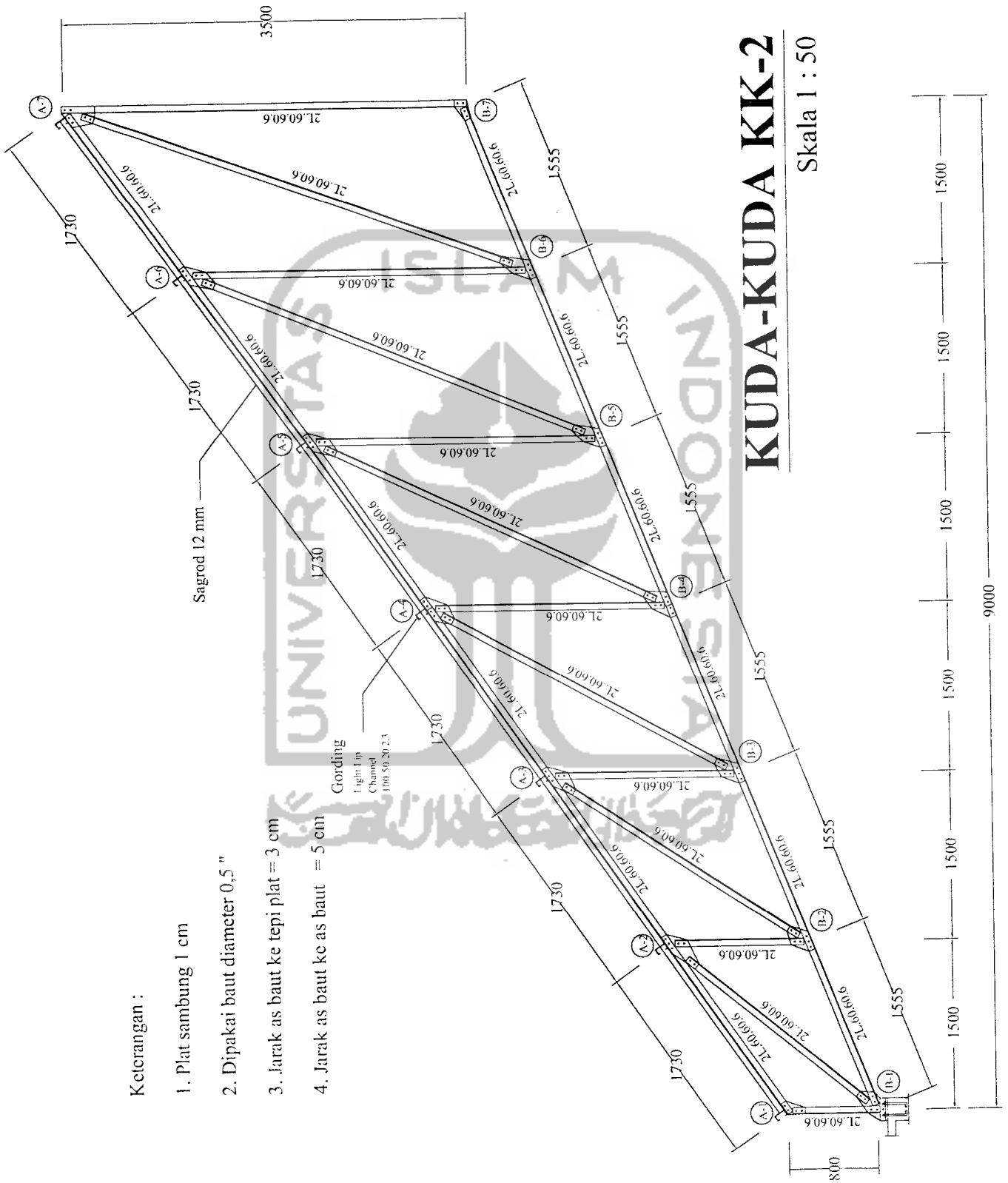
# DETAIL KUDA-KUDA KK-1

Skala 1 : 20



# DETAIL KUDA-KUDA KK-1

Skala 1 : 20



Keterangan :

1. Plat sambung 1 cm
2. Dipakai baut diameter 0,5"
3. Jarak as baut ke tepi plat = 3 cm
4. Jarak as baut ke as baut = 5 cm

## KUDA-KUDA KK-2

Skala 1 : 50

9000

1500

1500

1500

1500

1500

1500

1500

Sagrod 12 mm

Gording  
Light Lip  
Channel  
100.50.20.2.1

A-1

A-2

A-3

A-4

A-5

A-6

A-7

B-1

B-2

B-3

B-4

B-5

1730

1730

1730

1730

1730

1730

1730

3500

1555

1555

1555

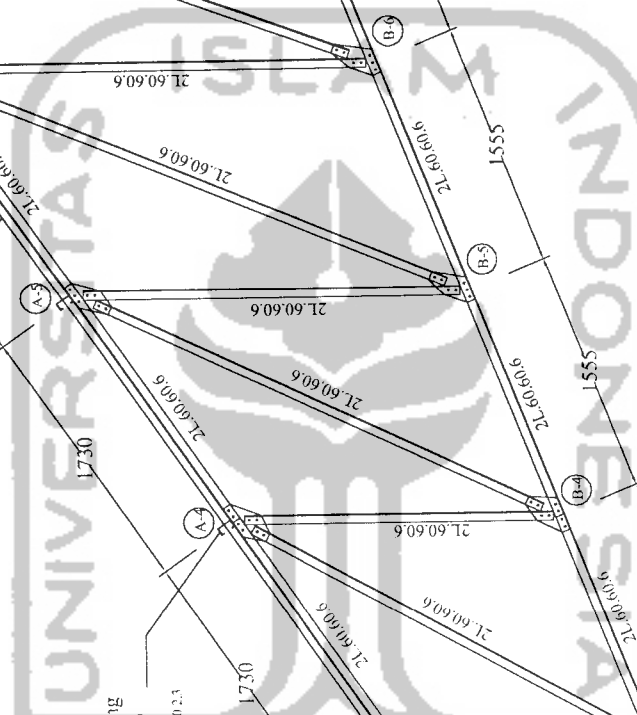
1555

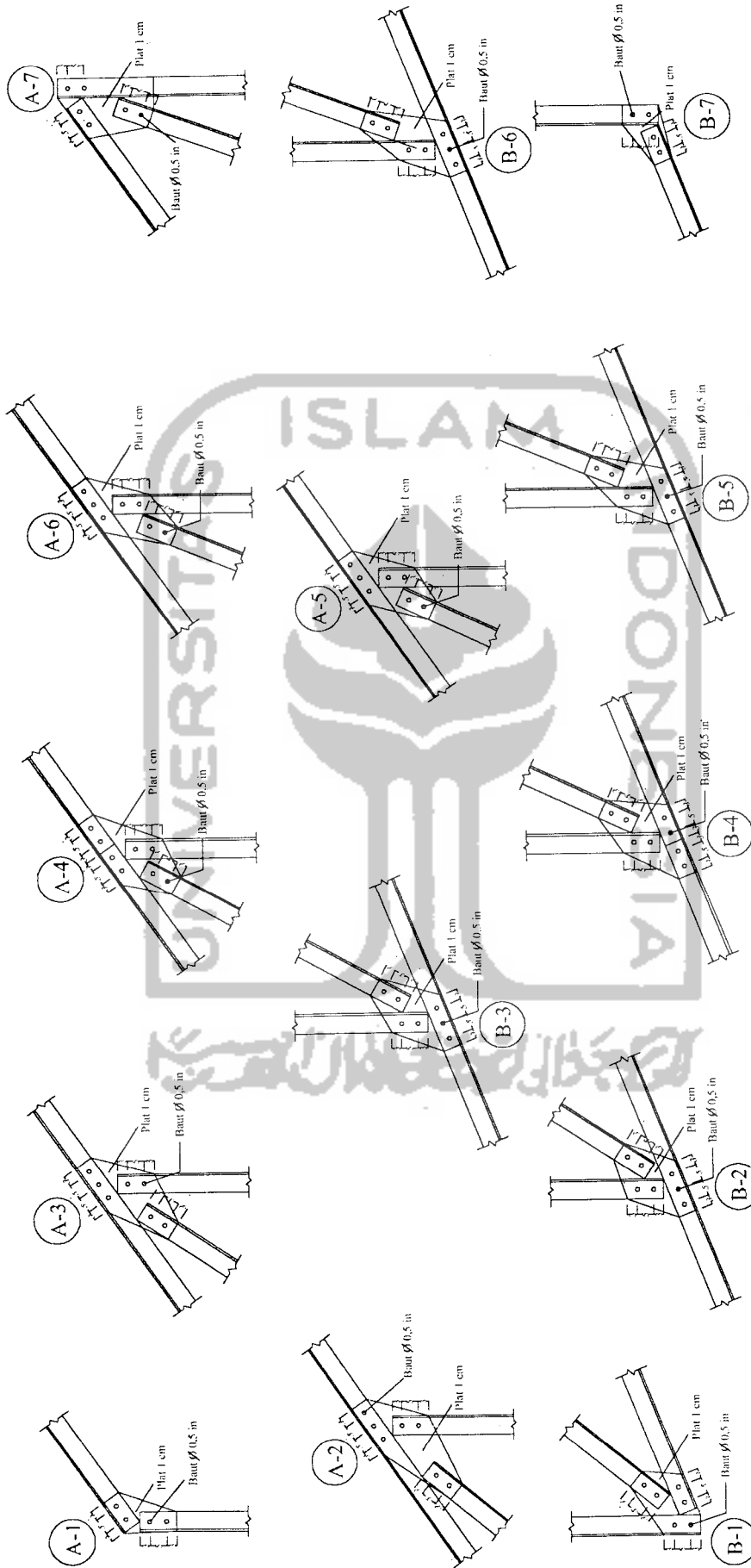
1555

1555

1555

800

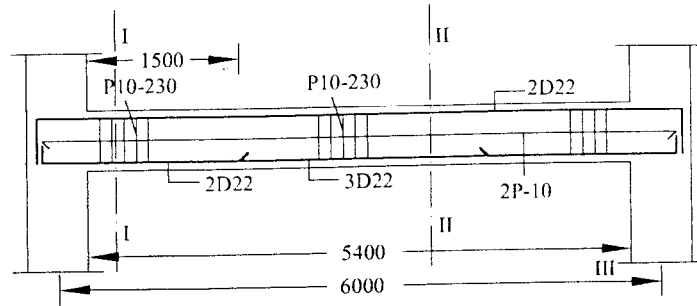




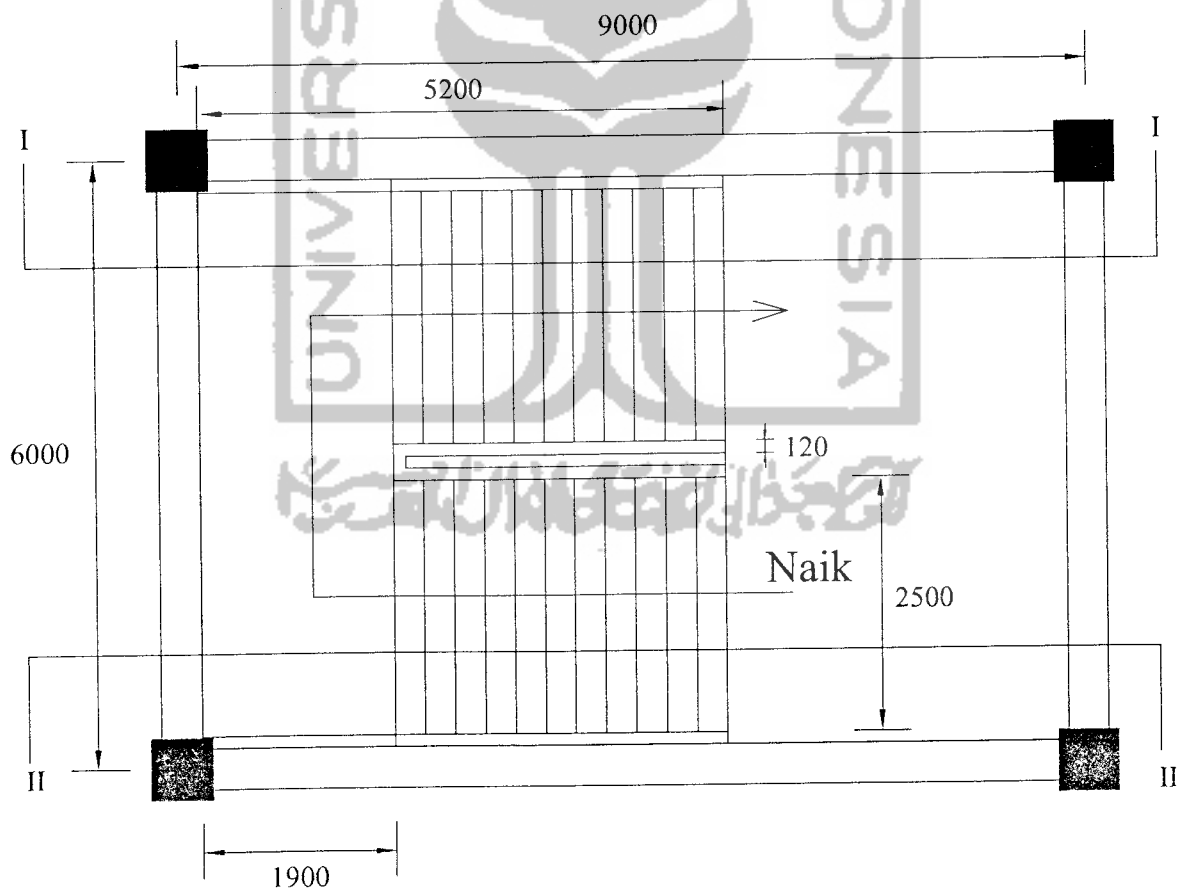
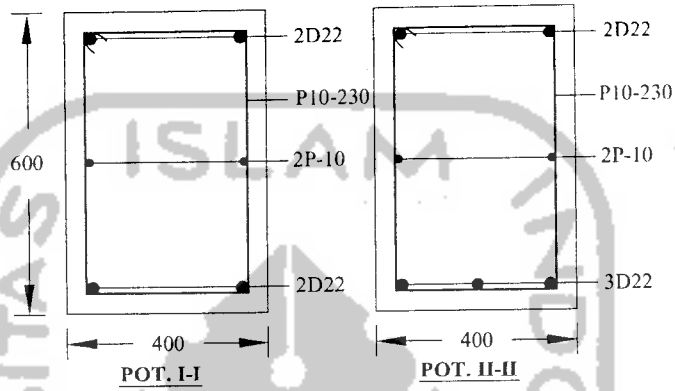
# DETAIL KUDA-KUDA KK-2

Skala 1 : 20



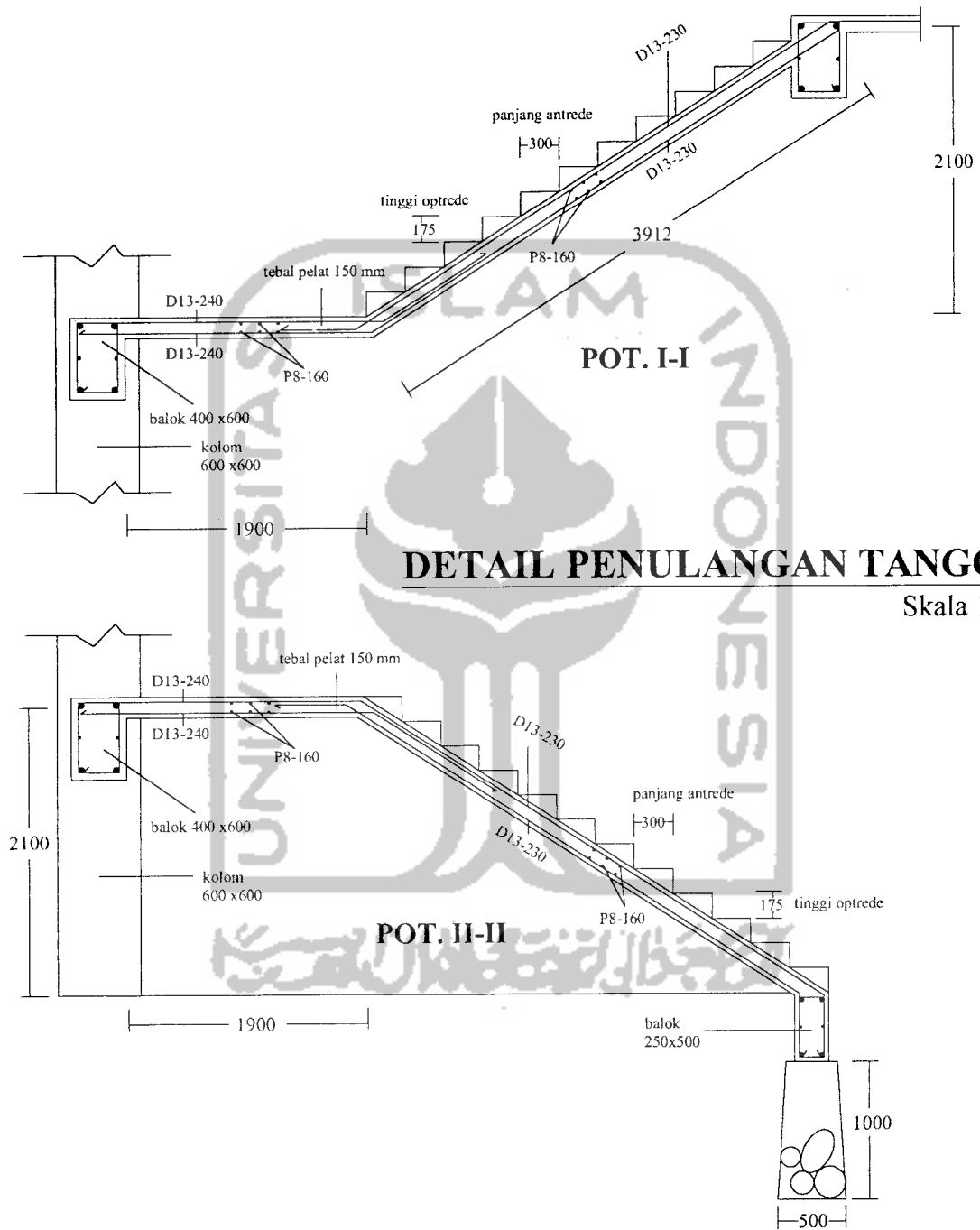


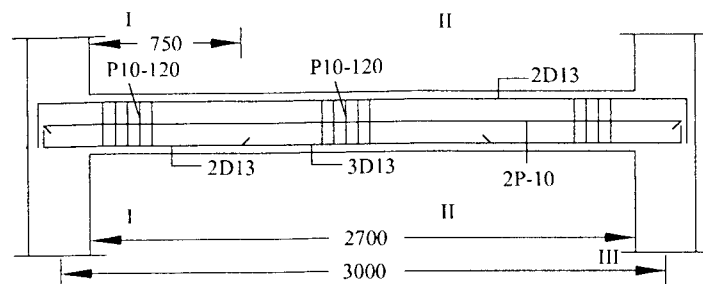
**PENULANGAN BALOK BORDES**



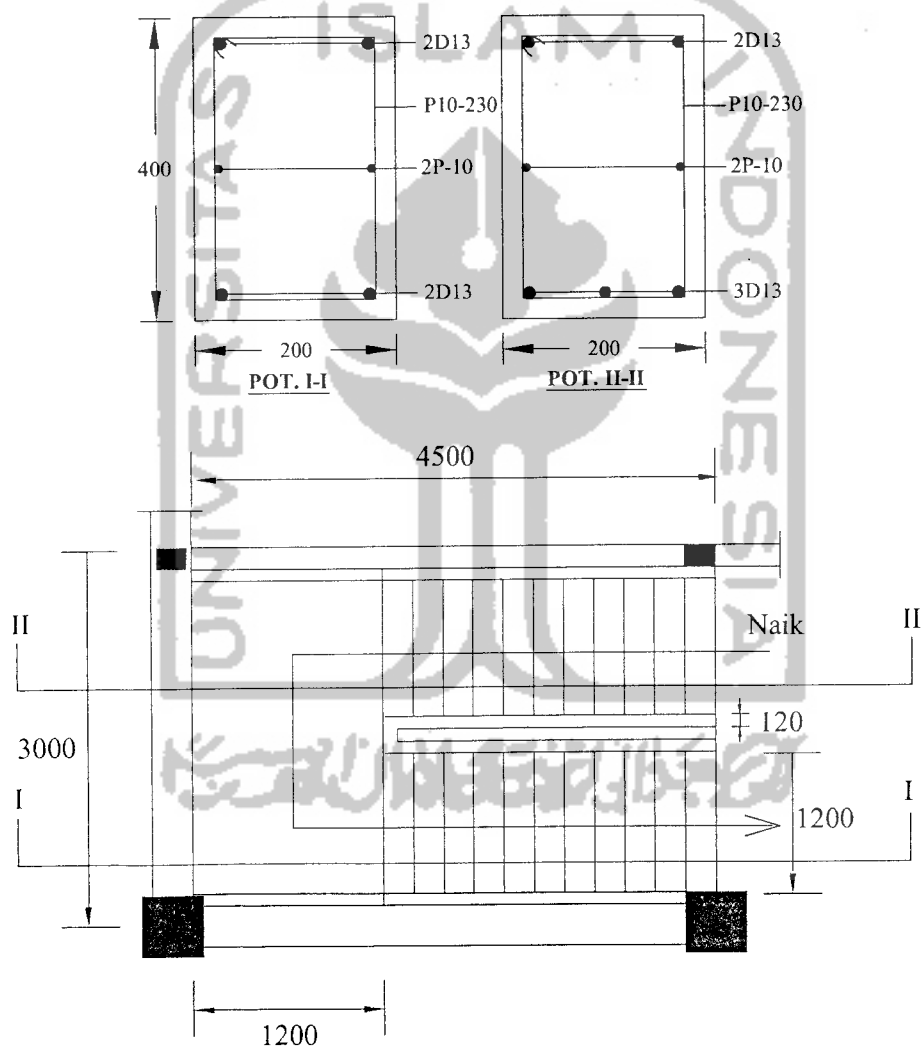
**DENAH TANGGA I**

Skala 1:75





**PENULANGAN BALOK BORDES**



**DENAH TANGGA II**

Skala 1:75

