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## TUGAS AKHIR

### ANALISIS DINAMIS 3D PENGARUH KETINGGIAN PORTAL DENGAN DINDING GESER BERLUBANG TERHADAP SIMPANGAN, GAYA GESER, DAN MOMEN GULING MENGUNAKAN EKSITASI GEMPA EL CENTRO

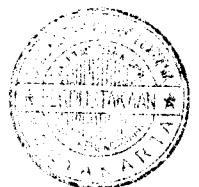
*( 3D Dynamic Analysis of The Effects of The Height of Frame and Shear  
Walls with Openings to The Displacements, Shear Forces, and Overturning  
Moments using El Centro Earthquake Excitation )*



Disusun oleh :

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UNIVERSITAS ISLAM INDONESIA  
JOGJAKARTA  
2003



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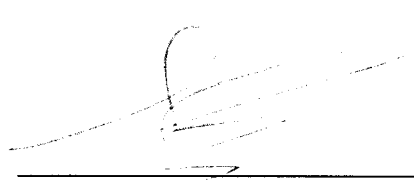
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Dosen Pembimbing II

Tanggal :   
07/05/2003

## HALAMAN PERSEMBAHAN

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Armono Wibowo

MOTTO

..... إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ  
..... الْعُلَمَاءُ

“...YANG SINGGUH-SINGGUH TAKUT KEPADA ALLAH DARI HAMBANYA ADALAH PARA CENDEKIA...”  
(TQS. AL FAATHIR : 28)

فَإِنَّ مَعَ الْعُسْرِ يُسْرًا ﴿٥﴾

“SINGGUH BERSAMA KESUKARAN PASTI ADA KEMUDAHAN”  
(TQS. ALAM NASYROH : 5)

إِنَّ مَعَ الْعُسْرِ يُسْرًا ﴿٦﴾

“DAN BERSAMA KESUKARAN PASTI ADA KEMUDAHAN”  
(TQS. ALAM NASYROH : 6)

فَإِذَا فَرَغْتَ فَانصَبْ ﴿٧﴾

“KARENA ITU, BILA SELESAI SUATU TUGAS, MULAILAH DENGAN YANG LAIN DENGAN SINGGUH-SINGGUH”  
(TQS. ALAM NASYROH : 7)

وَالِلَّهِ رَبِّكَ فَاَرْغَبْ ﴿٨﴾

“HANYA KEPADA TUHANMU HENDAKNYA KAU BERHARAP”  
(TQS. ALAM NASYROH : 8)

..... يَرْفَعُ اللَّهُ  
الَّذِينَ ءَامَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ  
..... ذَرَجَاتٍ

“...ALLAH PASTI AKAN MENGANGKAT ORANG YANG BERIMAN DAN BERPENGETAHUAN DI ANTARAMU BEBERAPA TINGKAT LEBIH TINGGI...”  
(TQS. AL MUJADILAH : 11)

## KATA PENGANTAR

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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Penulisan Tugas Akhir ini dengan judul **“ANALISIS DINAMIS 3D PENGARUH KETINGGIAN DINDING GESER BERLUBANG-PORTAL TERHADAP SIMPANGAN, GAYA GESER, DAN MOMEN GULING MENGGUNAKAN EKSITASI GEMPA EL CENTRO”** ini diajukan sebagai syarat guna memperoleh gelar Sarjana Teknik Sipil pada jurusan Teknik Sipil, Fakultas Teknik Sipil dan perencanaan, Universitas Islam Indonesia, Jogjakarta.

Pada penulisan Tugas Akhir ini ada juga kesulitan yang dialami karena keterbatasan dalam pengalaman maupun teori ilmu pengetahuan, namun karena kemauan, sikap optimis, dan semangat bahwa di balik kesulitan itu terdapat suatu kemudahan, maka Tugas Akhir ini dapat diselesaikan dengan baik.

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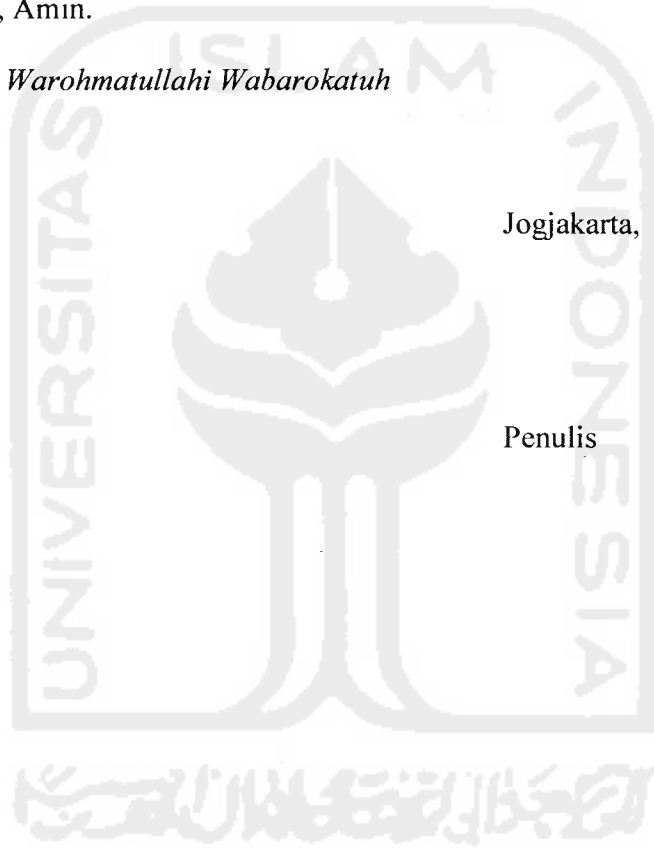
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Jogjakarta, Maret 2003

Penulis





## DAFTAR ISI

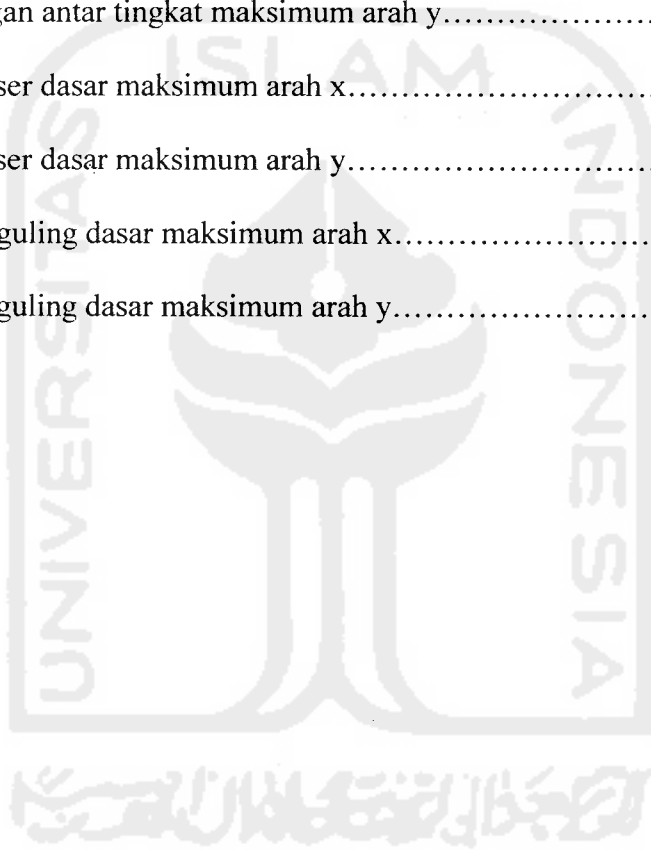
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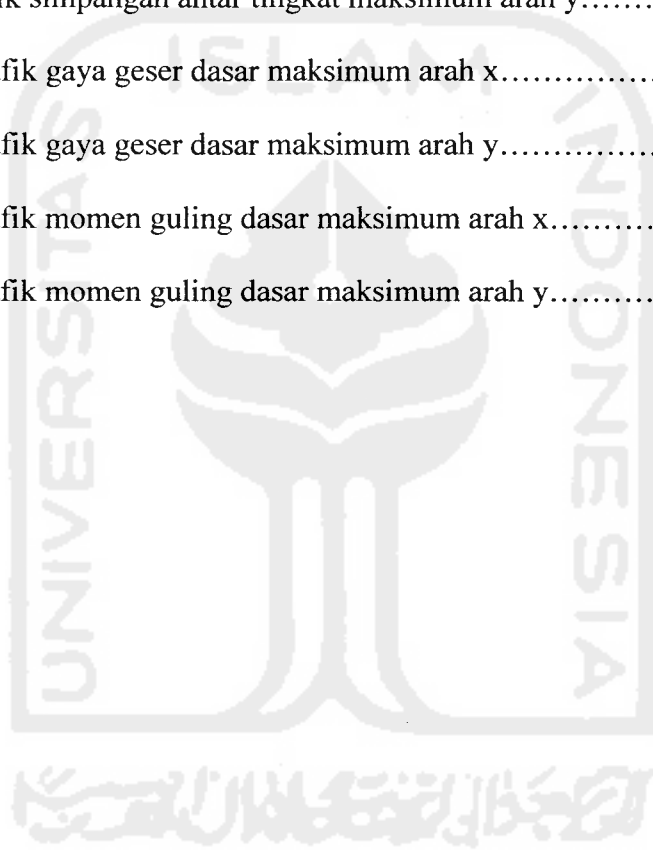
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## DAFTAR SIMBOL

$A$	percepatan maksimum tanah
$A_o$	luas lubang
$A_w$	luas bagian dinding atau luas yang dikelilingi garis as kolom dan balok
$c$	redaman
$\delta_F$	deformasi geser akibat adanya lubang
$\delta_n$	perpindahan relatif
$\delta_S$	deformasi geser tanpa lubang
$D_F$	ketegaran dinding geser berlubang
$D_n$	koefisien distribusi gaya geser
$D_S$	ketegaran dinding geser tanpa lubang
$E_c$	modulus elastisitas beton
$f_c'$	mutu beton atau kuat desak beton
$f_y$	mutu baja tulangan longitudinal atau kuat leleh baja tulangan
$f_{ys}$	mutu baja tulangan geser
$F_i$	gaya horisontal lantai ke- $i$
$F_k$	gaya horisontal lantai ke- $k$
$h_k$	elevasi lantai ke- $k$ terhadap dasar bangunan
$h_{(i-1)}$	elevasi lantai ke- $(i-1)$ terhadap dasar bangunan
$k$	kekakuan
$m$	massa bangunan
$M_l$	momen guling dasar

$M_i$	momen guling lantai ke- $i$
$p$	akar dari rasio luas lubang dibagi luas yang dikelilingi garis as kolom dan balok
$P(t)$	gaya luar
$Q_n$	gaya geser hipotesis
$S_1$	gaya geser dasar
$S_i$	gaya geser tingkat ke- $i$
$V$	kecepatan maksimum tanah
$Y_i$	simpangan antar tingkat lantai ke- $i$
$Y_i(t)$	simpangan relatif lantai ke- $i$
$Y_{i-1}(t)$	simpangan relatif lantai ke- $(i-1)$
$Z_j$	modal amplitudo <i>mode j</i>
$\Delta Y_i(t)$	simpangan antar tingkat
$\Phi_{ij}$	<i>mode shape</i> massa $i$ , <i>mode j</i>
$\gamma$	faktor reduksi ketegaran akibat adanya lubang
$\frac{1}{\gamma}$	faktor reduksi relatif akibat adanya lubang



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## **ABSTRAKSI**

Getaran akibat gempa bumi dapat membuat kerusakan, baik kerusakan struktur tanah maupun kerusakan bangunan yang berada di atas tanah terutama pada bangunan gedung bertingkat banyak (*multy story building*). Penggunaan struktur yang lebih kuat untuk meningkatkan kekuatan struktur pada arah lateral sangatlah diperlukan, oleh karenanya dipakai interaksi dinding geser berlubang-portal. Dipakai dinding geser berlubang disamping bisa menghasilkan kekakuan yang besar juga untuk mengurangi berat struktur, pertimbangan faktor ekonomis dan segi arsitektural.

Pada penelitian ini akan dilakukan analisis dinamis pengaruh variasi ketinggian dinding geser berlubang terhadap simpangan, gaya geser, dan momen guling karena karakteristik lendutan dinding geser berlubang dan portal berbeda jauh, sehingga besar simpangan antar tingkat tiap lantai berbeda-beda sejalan dengan perubahan kekakuan dari struktur dinding geser berlubang-portal. Metodenya dengan memvariasi ketinggian dinding geser berlubang yaitu 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, dan 100% dari ketinggian total struktur 20 lantai yang dibebani gempa riwayat waktu El Centro arah N-S, E-W, dan Vertical. Proses analisis dinamis dengan program SAP 2000 yang hasilnya berupa simpangan relatif, gaya geser dasar, dan momen guling dasar yang nantinya diproses dengan Microsoft Excel.

Hasil penelitian ini adalah bahwa semua variasi ternyata aman ditinjau dari simpangan antar tingkat sesuai dengan PPKGURG 1987 dan hasil output program SAP 2000 (*start design/check of structure*) menunjukkan dimensi struktur aman. Pada kasus dinding geser berlubang-portal, variasi yang efektif yaitu pada ketinggian dinding geser berlubang 75% s/d 80% dari total ketinggian bangunan dengan nilai simpangan antar tingkat sebesar 0.00893 m dan gaya geser dasar sebesar 7390.51416 KN. Hasil variasi ketinggian dinding geser berlubang ini bisa diberlakukan untuk dinding geser dengan kasus serupa yaitu kasus lubang kecil dan pada ketinggian gedung diatas 12 lantai.

# BAB I

## PENDAHULUAN

Gempa bumi merupakan bencana alam yang waktu terjadinya sulit untuk diprediksi dan bisa terjadi di daerah-daerah di dunia yang dilewati oleh perbatasan antara dua plat tektonik yang umumnya disebut dengan sabuk-gempa (*earthquake belt*). Getaran akibat gempa bumi dapat menyebabkan kerusakan baik kerusakan struktur tanah maupun kerusakan bangunan yang berada di atas tanah. Mengingat besarnya kerugian yang bisa terjadi akibat gempa, maka pengaruh beban gempa harus benar-benar diperhatikan dalam perencanaan struktur.

### 1.1. Latar Belakang

Pada umumnya gedung-gedung bertingkat banyak hanya menggunakan struktur portal terbuka, yang kekuatan portalnya tidak begitu besar dan daya tahannya terbatas, terlebih untuk menahan gaya pada arah lateral. Struktur biasanya direncanakan untuk mendukung gaya vertikal (gravitasi) dengan faktor keamanan yang memadai dan sebaliknya pada arah lateral kekuatan yang diberikan kurang memadai akibatnya gaya gempa horisontal justru menyerang titik-titik lemah struktur sehingga menyebabkan terjadinya keruntuhan. Oleh karena itu penggunaan struktur yang lebih kuat

untuk meningkatkan kekuatan struktur pada arah lateral sangatlah diperlukan. Salah satu metode yang bisa dipakai untuk mengurangi kerusakan struktur ialah dengan menggunakan dinding geser.

Dinding geser pada gedung umumnya dihubungkan dengan portal-portal, karena interaksi antara dinding geser dengan portal memiliki kekakuan yang jauh lebih besar daripada dinding geser yang berdiri sendiri. Sesuai penempatan dan fungsinya, dinding geser bisa berupa potongan dinding penuh atau dinding berlubang. Pada umumnya dinding geser pada bangunan bertingkat tinggi difungsikan sebagai tempat untuk lift dan tangga darurat sehingga pada kenyataannya berupa dinding geser berlubang (*shear walls with openings*). Disamping menghasilkan kekakuan maksimum, penggunaan *shear walls with openings* juga untuk mengurangi berat struktur dan pertimbangan faktor ekonomis.

## 1.2. Batasan Masalah

Untuk memperjelas variabel-variabel yang ditinjau, maka penelitian ini dibatasi pada ruang lingkup sebagai berikut :

1. Perhitungan dilakukan pada struktur beton bertulang,
2. Hubungan struktur dengan tanah diasumsikan jepit,
3. Penulangan dinding geser tidak diperhitungkan,
4. Analisis struktur ditinjau secara 3 dimensi,

5. Analisis dinamika struktur dibatasi pada kondisi linear elastis,
6. Analisis struktur menggunakan program SAP 2000,
7. Portal direncanakan dengan *code ACI 318-99*,
8. Analisis *output* menggunakan program aplikasi *Microsoft Excel*,
9. *P - Δ effect* diabaikan,
10. Rotasi dan punter tidak diperhitungkan,
11. Parameter yang digunakan yaitu simpangan relatif, simpangan antar tingkat, gaya geser dasar dan momen guling,
12. Digunakan beban dinamik eksitasi gempa metode riwayat waktu (*time history*) El Centro 1940 arah *N-S*, *E-W*, dan *Vertical*,
13. Model struktur yang dipakai berupa gedung bertingkat 20 lantai, terdiri dari 11 variasi ketinggian dinding geser berlubang,
14. Dimensi dinding geser berlubang  $4 \times 6 \text{ m}^2$  dengan lubang memanjang horizontal ukuran  $1 \times 3 \text{ m}^2$  atau rasio luas lubang  $1/8$  terhadap luas dinding geser, dan
15. Letak dinding geser berlubang simetris dalam dua arah, terletak di tengah di daerah core, dengan keempat sisi berlubang.

### 1.3. Rumusan Masalah

Struktur bangunan bertingkat banyak apabila dibebani oleh beban gempa maka massa strukturnya akan bergoyang baik ke kiri maupun ke kanan

dan sesungguhnya goyangan tersebut terjadi secara 3 dimensi. Untuk konstruksi beton, usaha untuk memperkaku struktur utama dengan dinding geser, dalam analisis ini dipakai dinding geser berlubang.

*Kenapa dinding geser?*

Tujuan dan prinsip desain bangunan tahan gempa ialah untuk mengurangi kerusakan bangunan akibat gempa. Salah satu metode yang bisa ditempuh ialah dengan menggunakan dinding geser (*shear wall*). Penggunaan *shear wall* akan memberikan kekakuan tambahan terhadap struktur secara keseluruhan yang pada hakekatnya adalah untuk mengendalikan simpangan antara tingkat yang cukup besar akibat adanya beban gempa.

*Mengapa dinding geser berlubang ?*

Sesuai penempatan dan fungsinya, dinding geser bisa berupa potongan dinding penuh atau dinding berlubang. Dipakai dinding geser berlubang karena untuk mengurangi berat struktur, faktor ekonomis dan segi arsitektural.

*Mengapa analisis ketinggian dinding geser berlubang perlu diteliti?*

Pada interaksi dinding geser berlubang–portal (*frame-shear walls with openings*), karakteristik lendutan dinding dan portal berbeda jauh, sehingga besar simpangan antar tingkat tiap lantai berbeda–beda sejalan dengan perubahan kekakuan dari struktur dinding geser berlubang–portal. Pada struktur kombinasi antara portal dengan dinding (*frame-wall*) pada tingkat-

tingkat atas struktur portal akan mengalami simpangan yang justru bertambah besar sebagai akibat dari gaya tarik struktur dinding, dengan kondisi seperti itu maka struktur dinding pada kombinasi antara portal dengan dinding kadang-kadang tidak dibuat sampai puncak struktur bangunan. Hal inilah yang mendasari kenapa penelitian terhadap ketinggian dinding geser berlubang perlu dilakukan, yaitu untuk mendapatkan kekakuan yang *optimum* ditinjau dari pengaruh simpangan, gaya geser dan momen guling berdasarkan variasi ketinggian dinding geser.

*Bagaimana cara mencari ketinggian dinding geser berlubang yang efektif?*

Dari *output* hasil analisis dinamik dengan SAP 2000 didapat hasil simpangan relatif, simpangan antar tingkat, gaya geser dasar, dan momen guling dasar dari masing-masing variasi ketinggian dinding geser berlubang. Untuk mencari pengaruh kekakuan dinding geser berlubang tiap variasi dengan plot grafik antara simpangan relatif maksimum vs tinggi tingkat struktur. Untuk mencari ketinggian dinding geser berlubang yang efektif (diambil dari nilai maksimum simpangan antar tingkat tiap variasi) dengan plot grafik antara simpangan relatif antar tingkat vs tinggi tingkat struktur. Untuk mencari gaya geser dasar terkecil dan efektif (diambil dari nilai maksimum gaya geser pada kolom lantai pertama / *base shear*) dengan plot grafik antara gaya geser dasar vs variasi ketinggian dinding geser berlubang.

Untuk momen guling dasar yang terkecil dan efektif (diambil dari nilai maksimum momen guling pada kolom lantai pertama / *base moment*) dengan plot grafik antara momen guling vs variasi ketinggian dinding geser berlubang.

#### **1.4. Tujuan Penelitian**

Tujuan dari penulisan tugas akhir ini adalah untuk menganalisis dan mengetahui keefektifan variasi ketinggian dinding geser berlubang-portal terhadap simpangan, gaya geser dan momen guling akibat beban gempa El Centro.

#### **1.5. Manfaat Penelitian**

1. Dapat mengetahui keefektifan ketinggian dinding geser berlubang pada interaksi portal dengan analisis dinamis *3-D* ditinjau dari simpangan, gaya geser dan momen guling akibat beban gempa.
2. Dapat dijadikan acuan untuk desain bangunan bertingkat tinggi tahan gempa dengan ketinggian dinding geser berlubang yang efektif dan ekonomis.



## BAB II

### TINJAUAN PUSTAKA

Bab ini berisi penjelasan mengenai istilah-istilah pokok yang dibahas di dalam penelitian berdasarkan pengertian yang didapat dari buku-buku dan referensi lainnya. Hal tersebut meliputi pengertian program SAP 2000, dinding geser dan dinding geser berlubang. Pada bab ini juga ditinjau gambaran penelitian sebelumnya untuk mempertegas bahwa penelitian ini bukan merupakan suatu duplikasi melainkan lebih kepada melanjutkan penelitian sebelumnya dengan penambahan dan perbedaan pada variabel yang diteliti.

#### 2.1 SAP 2000 – *Nonlinear*

Program SAP dibuat untuk pelaksanaan yang efisien pada komputer oleh *Computers and Structures of Berkeley, California*. SAP 2000 dapat dijalankan pada *Microsoft Windows*. Penciptaan dan perubahan pada model, eksekusi analisis, dan pengecekan serta optimasi desain dapat diselesaikan melalui program ini. Hasil yang didapat berupa penampilan berbasis grafis, termasuk menampakkan lendutan *real-time* dari *time history* (riwayat waktu). (Naeim dan Kelly, 1999).

## 2.2 Dinding Geser

Pada bangunan tinggi, kekakuan yang memadai sangat diperlukan untuk menahan gaya lateral akibat pengaruh angin, gempa, atau ledakan. Gaya-gaya ini dapat menimbulkan tegangan yang besar dan menyebabkan pergerakan ke samping, sehingga ketenangan penghuninya terganggu. Dinding beton, yang sangat kaku dalam bidangnya dan diletakkan di lokasi yang menguntungkan, umumnya ekonomis untuk digunakan sebagai penahan gaya mendatar. Dinding seperti ini disebut dinding geser. Dinding tersebut dapat diletakkan di sekeliling lubang *elevator* atau tangga, sehingga berbentuk rangkaian dinding; struktur berbentuk kotak ini efisien untuk menahan gaya mendatar. (Ghali dan Neville, 1986).

Dinding geser (*shear wall*) pada gedung umumnya dihubungkan dengan portal-portal, pengaruh sambungan (pengaruh perbatasan / *boundary*) antara dinding geser dan portal sangat besar dan kelakuannya (*behavior*) jauh berbeda dari dinding geser yang berdiri sendiri. Karakteristik lendutan dinding berbeda jauh dengan karakteristik lendutan portal, dan lendutan dinding terutama dipengaruhi oleh deformasi tipe geser. Perpindahan relatif tingkat-tingkat atas suatu dinding geser jauh lebih besar daripada tingkat-tingkat bawah, sedang perpindahan relatif tingkat-tingkat atas dan bawah pada portal hampir sama. Dengan demikian, pada gedung yang sesungguhnya, bila beban lateral dipikul oleh dinding geser dan portal secara bersama-sama, bagian

yang diterima oleh tingkat yang lebih atas dan yang lebih bawah akan berlainan. (Muto, 1974).

### 2.3. Dinding geser berlubang (*Shear walls with Openings*)

Dinding dengan lubang untuk jendela dan pintu dapat juga menjadi dinding potongan yang efektif. Untuk memasukkan secara efektif dinding dengan bukaan dalam merancang tahan gempa, perlu meneliti kebiasaannya dari aspek ketegaran dan kekuatan. Dinding berlubang, walaupun sebutannya sederhana, pada dasarnya meliputi banyak sekali bentuk dinding. Lubang pada dinding bisa berupa lubang jendela yang seragam di setiap tingkat dan bentang, lubang jendela dan pintu yang berseling, lubang kecil untuk saluran (*duct*), lubang dengan pola yang tidak beraturan dan lubang dengan ukuran yang beraneka ragam. Pada kajian ketegaran dinding berlubang didapat hasil :

1. Pada struktur bertingkat banyak, ketegaran bervariasi sesuai dengan tingkat dan jumlah tingkat walaupun ukuran dan bentuk semua lubang sama.
2. Seperti pada kasus dinding geser tanpa lubang, deformasi dapat dihitung secara praktis dengan menganalisa dinding secara terpisah terhadap momen lentur, gaya geser, rotasi pondasi dan lain-lain. Pengaruh lubang yang terbesar adalah pada deformasi geser.
3. Khususnya, bila ukuran lubang melampaui ukuran tertentu, metode perhitungan eksak atau pun pendekatan dapat diterapkan dengan

melakukan konversi ke portal ekuivalen yang menyertakan momen lentur, gaya geser, dan daerah tegar (*rigid zone*) seperti pada kasus portal dinding.

Pada kasus lubang yang kecil, analisa dilakukan dengan memasukkan faktor koreksi pada dinding geser tak berlubang; sedang pada kasus lubang yang besar, metoda analisa portal dengan memperhitungkan momen lentur, gaya geser dan daerah tegar bisa diterapkan (Muto, 1974).

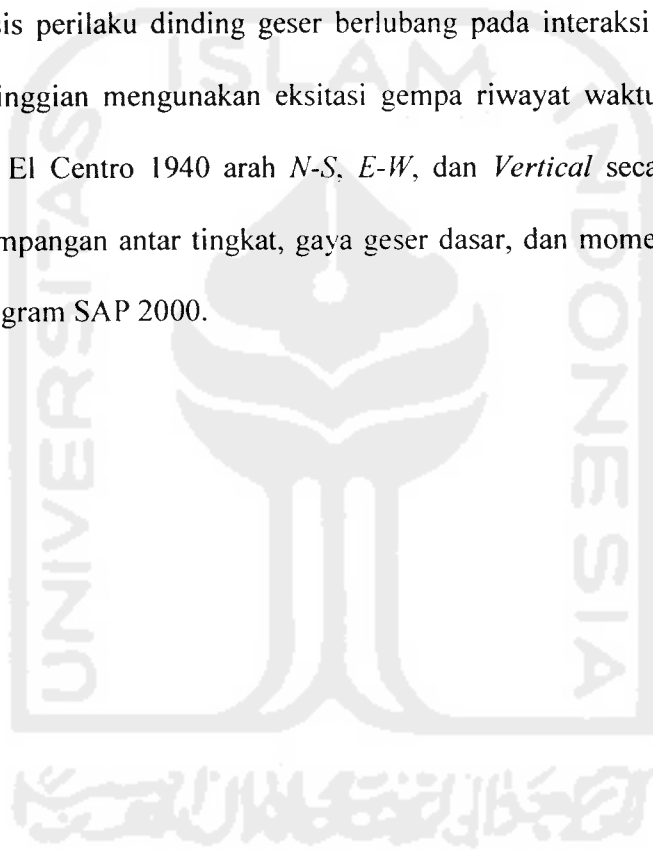
#### 2.4 Gambaran Penelitian Sebelumnya

**Mayfrini dan Wismawati (1999)**, kedua peneliti menganalisis *Pengaruh Tinggi Dinding Geser Akibat Beban Lateral Gempa Pada Tinjauan Portal 2 Dimensi*, menyatakan struktur dinding geser lebih efektif pada ketinggian dinding geser  $\frac{3}{4} H$  dengan tinjauan simpangan horizontal, momen kolom dan momen balok menggunakan program SAP 90.

**Yusuf Gunawan dan Surya Adinata (2002)**, kedua peneliti mengadakan *Analisis Dinamis 3D Pengaruh Jumlah dan Ketinggian Dinding Geser Portal Terhadap Simpangan, Gaya Geser, dan Momen Guling Menggunakan Eksitasi Gempa El Centro* menggunakan program SAP 2000 *Education*, menyatakan dinding geser yang efektif pada 80% dari tinggi total bangunan dengan jumlah 3 dinding geser.

## 2.5 Pembahasan Penelitian

Peneliti yang pertama dan kedua secara *eksplisit* (jelas) tidak menyinggung sama sekali tentang pengaruh dinding geser berlubang (*shear walls with openings*) dalam penelitiannya. Pada penelitian ini penulis akan menganalisis perilaku dinding geser berlubang pada interaksi portal dengan variasi ketinggian menggunakan eksitasi gempa riwayat waktu (*time history excitation*) El Centro 1940 arah *N-S*, *E-W*, dan *Vertical* secara *3D* dengan tinjauan simpangan antar tingkat, gaya geser dasar, dan momen guling dasar dengan program SAP 2000.



## BAB III

### LANDASAN TEORI

Dalam bab ini dijelaskan mengenai landasan teori pada penelitian ini. Landasan teori ini mengacu pada referensi mengenai prinsip shear building, distribusi dinding geser, koefisien distribusi untuk dinding geser berlubang berupa kasus lubang kecil dan kasus lubang besar, simpangan relatif lantai, simpangan antar tingkat, gaya geser dasar, dan momen guling.

#### 3.1 Prinsip *Shear Building*

Apabila suatu struktur bangunan bertingkat banyak bergoyang ke arah horizontal, maka umumnya terdapat 3 macam pola goyangan yang terjadi. Kombinasi antara kelangsingan struktur, jenis struktur utama penahan beban dan jenis bahan yang dipakai akan berpengaruh terhadap pola goyangan yang dimaksud.

Pola goyangan yang pertama adalah bangunan yang bergoyang dengan dominasi geser (*shear mode*). Pola bangunan seperti ini akan terjadi pada bangunan bertingkat banyak dengan portal terbuka sebagai struktur utama. Secara keseluruhan bangunan seperti ini akan relatif fleksibel, sementara plat-plat lantai relatif kaku terhadap arah horizontal. Pola goyangan yang kedua adalah pola goyangan bangunan yang didominasi oleh lentur (*flexural mode*).

Bangunan yang mempunyai pola goyangan seperti ini adalah bangunan yang mempunyai struktur dinding yang kaku baik pada *frame-walls* atau *cantilever wall* yang kedua-duanya dijepit secara kaku pada pondasinya. Pola goyangan yang ketiga adalah kombinasi diantara dua pola goyangan di atas.

Pada analisis dinamika struktur pola goyangan pertamalah yang umumnya diadopsi, artinya struktur cukup fleksibel dengan lantai-lantai tingkat yang relatif kaku. Untuk sampai pada anggapan hanya terdapat satu derajat kebebasan pada setiap tingkat, maka terdapat beberapa penyederhanaan sebagai berikut :

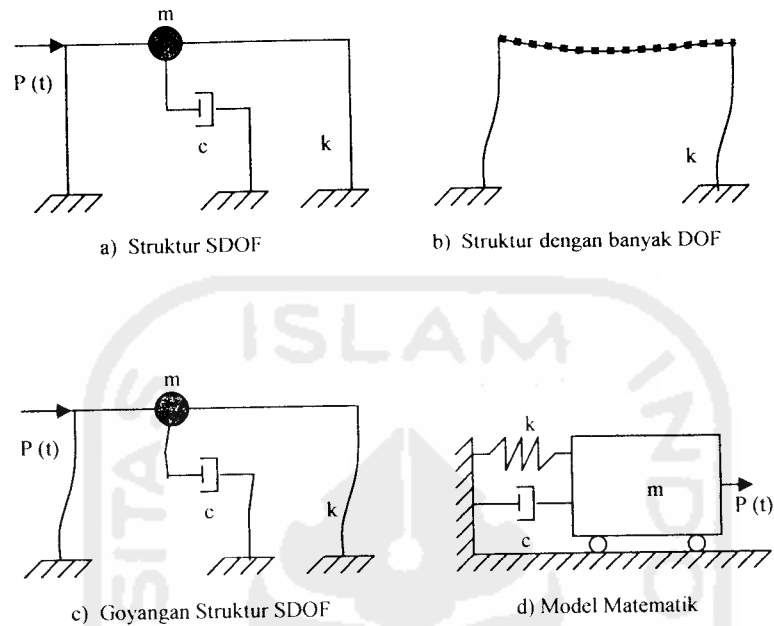
1. Massa struktur dianggap terkonsentrasi pada tiap lantai tingkat. Massa yang dimaksud adalah massa struktur akibat berat sendiri, beban berguna, beban hidup dan berat kolom pada  $\frac{1}{2}$  tingkat di bawah dan di atas tingkat yang bersangkutan. Massa itu semua kemudian dianggap terkonsentrasi pada satu titik (*lumped mass*) pada elevasi tingkat yang bersangkutan. Hal ini bertujuan agar struktur yang terdiri atas tak terhingga derajat kebebasan berkurang menjadi satu derajat kebebasan saja.
2. Lantai-lantai tingkat dianggap sangat kaku dibanding dengan kolom-kolomnya karena balok-balok portal disatukan secara monolit oleh plat lantai. Hal ini berarti

bahwa *beam column joint* dianggap tidak rotasi sehingga lantai tingkat tetap horizontal sebelum dan sesudah terjadi penggoyangan seperti tampak pada Gambar 3.1.

3. Simpangan massa dianggap tidak dipengaruhi oleh beban aksial kolom atau deformasi aksial kolom diabaikan. Disamping itu pengaruh *P-delta* terhadap momen kolom juga diabaikan.

Dengan anggapan-anggapan tersebut di atas maka portal seolah-olah menjadi bangunan yang bergoyang akibat gaya lintang saja (lentur balok dianggap tidak ada) atau bangunan yang pola goyongannya didominasi oleh geser (*shear mode*). (Widodo, 2000).





**Gambar 3.1.** Bangunan Dengan Perilaku *Shear Building*

### 3.2 Distribusi Dinding Geser

Interaksi dinding geser dan portal dilakukan untuk memperbesar kekakuan struktur dalam mendukung gaya pada arah horizontal. Namun karena lendutan pada dinding maupun portal memiliki karakteristik lendutan yang berbeda jauh maka perpindahan relatif tingkat yang diterima oleh struktur bagian yang lebih atas dan yang lebih bawah akan berlainan. Menurut Muto (1974), distribusi gaya geser pada portal dan dinding tersebut bisa dijabarkan dalam kesimpulan-kesimpulan sebagai berikut :

1. Koefisien distribusi gaya geser dipengaruhi oleh karakteristik ketegaran (*rigidity*) lentur dinding, dan umumnya gaya geser yang dipikul di tingkat-tingkat atas jauh lebih kecil. Khususnya, bila dinding sangat tinggi dan langsing serta ketegaran lenturnya kecil, kapasitas pemikul gaya geser akan hilang dan pengaruh yang merugikan juga dijumpai pada beberapa kasus serta gaya geser pada kolom menjadi besar.
2. Pada beberapa kasus, struktur akan lebih efektif bila dinding geser yang kecil (sempit) dibatasi hanya sampai pada tingkat-tingkat tengah dan tidak diperpanjang hingga tingkat-tingkat atas.
3. Bila derajat jepitan di perletakan tidak memadai, koefisien gaya geser akan mengecil.

### 3.3 Koefisien Distribusi untuk Dinding Geser Berlubang

Koefisien distribusi gaya geser untuk dinding geser berlubang dihitung dengan rumus berikut yang didasarkan pada perpindahan relative  $\delta n$  akibat gaya geser hipotesis  $Qn$ .

$$\text{Rumus praktis } Dn = \frac{Qn}{\delta n} \quad (3-1)$$

Perpindahan relatif  $\delta n$  diakibatkan oleh deformasi lentur, deformasi geser dan deformasi akibat rotasi pondasi. Untuk kasus ini, deformasi geser

dinyatakan sebagai  $\delta_F$ , yakni deformasi geser yang timbul akibat adanya lubang. Perhitungan  $\delta_F$  bervariasi sesuai dengan ukuran lubang dan karenanya metode analisa dibedakan atas metode untuk kasus lubang yang kecil dan kasus lubang yang besar.

### 3.3.1. Kasus Lubang Kecil

Deformasi geser pada dinding geser dengan lubang yang kecil bisa diperoleh dengan mengalikan deformasi geser untuk dinding geser tanpa lubang dengan suatu faktor koreksi. Bila dinyatakan dalam angka ketegaran, ketegaran geser dinding berlubang,  $D_F$ , bisa dihitung dengan mengalikan ketegaran geser dinding tanpa lubang,  $D_S$ , dengan faktor reduksi ketegaran  $\gamma$  :

$$D_F = D_S \times \gamma \quad (3-2)$$

dimana  $\gamma = 1 - 1,25p$ , merupakan faktor reduksi ketegaran akibat adanya lubang.

$$p = \sqrt{\frac{A_o}{A_w}} \quad (3-3)$$

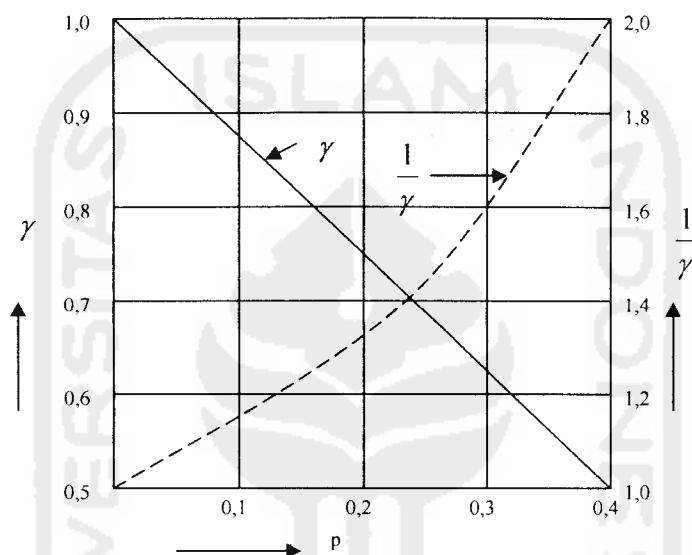
$A_o$  : luas lubang

$A_w$  : luas bagian dinding atau luas yang dikelilingi garis as kolom dan balok

Persamaan di atas hanya bisa diterapkan bila  $p < 0,4$ , bila dinyatakan dalam perpindahan relatif, persamaan yang selaras adalah :

$$\delta_F = \frac{1}{\gamma} \times \delta_S \quad (3-4)$$

Faktor  $\gamma$  dan  $\frac{1}{\gamma}$  ditunjukkan pada Gambar 3.2.



Gambar 3.2. Faktor  $\gamma$  dan  $\frac{1}{\gamma}$  (Muto, 1974)

### 3.3.2. Kasus Lubang Besar

Bila ukuran lubang besar, sifat-sifat dinding akan mendekati sifat-sifat portal dan deformasi geser  $\delta_F$  bisa diperoleh dengan memperluas teori portal. Metode perhitungan  $\delta_F$  dari portal yang ekuivalen dan metode penentuan tegangan pada pelbagai bagian portal seperti ini bisa diringkas sebagai berikut,

*Metode eksak* : Dinding berlubang dinyatakan dengan garis as kolom dinding dan balok dinding, dan diselesaikan dengan metode analisa portal yang memperhitungkan deformasi lentur, deformasi geser dan daerah tegar.

*Metode pendekatan* : Bila dinding memiliki lubang-lubang yang beraturan, metode pendekatan yang sama seperti untuk portal dinding dapat diterapkan.

#### 3.4. Simpangan relatif lantai

Simpangan massa ke- $i$  atau  $Y_i$  diperoleh dengan menjumlahkan pengaruh atau kontribusi tiap-tiap *mode*. Kontribusi massa ke- $i$  terhadap simpangan horizontal *mode* ke- $j$  dinyatakan dalam produk antara  $\Phi_{ij}$  dengan suatu modal amplitudo  $Z_j$ .

$$Y_{ij} = \sum \Phi_{ij} \cdot Z_j \quad (3-5)$$

Dengan;  $Y_{ij}$  = Simpangan relatif massa ke- $i$  akibat kontribusi *mode* ke- $j$ ,

$\Phi_{ij}$  = *mode shape* massa  $i$ , *mode*  $j$ , dan

$Z_j$  = modal amplitudo *mode*  $j$ .

Nilai simpangan relatif lantai akan semakin besar untuk lantai yang lebih tinggi, hal ini sesuai dengan pola goyangan pada *mode* pertama.

### 3.5 Simpangan antar tingkat (*inter-story drift*)

Simpangan antar tingkat adalah simpangan yang terjadi pada tiap lantai struktur, simpangan ini dihitung dengan cara simpangan relatif lantai atas dikurangi simpangan relatif lantai di bawahnya. *Inter-story drift* sangat mungkin terjadi pada tingkat yang lemah. Terjadinya distribusi kekakuan struktur secara vertikal yang tidak merata akan menyebabkan adanya suatu tingkat yang lemah tersebut. *Inter-story drift* dapat dihitung dengan rumus,

$$\Delta Y_i(t) = Y_i(t) - Y_{i-1}(t) \quad (3-6)$$

dengan;  $\Delta Y_i(t)$  = simpangan antar tingkat,

$Y_i(t)$  = Simpangan relatif lantai ke- $i$ , dan

$Y_{i-1}(t)$  = Simpangan relatif lantai ke- $(i-1)$

### 3.6 Gaya geser dasar

Gaya horisontal lantai atau gaya lantai maksimum yang bekerja pada suatu massa ke- $i$  dapat dicari yaitu :

$$F_i = k \cdot Y_i \quad (3-7)$$

Dengan;  $F_i$  = Gaya horisontal massa ke- $i$ ,

$k$  = kekakuan total struktur,

$Y_i$  = Simpangan relatif lantai ke- $i$ .

Gaya geser tingkat ke- $i$  dapat dicari dengan rumus,

$$S_i = -\left(\sum_i^n F_i\right) \quad (3-8)$$

Dengan;  $S_i$  = Gaya geser tingkat ke- $i$ ,

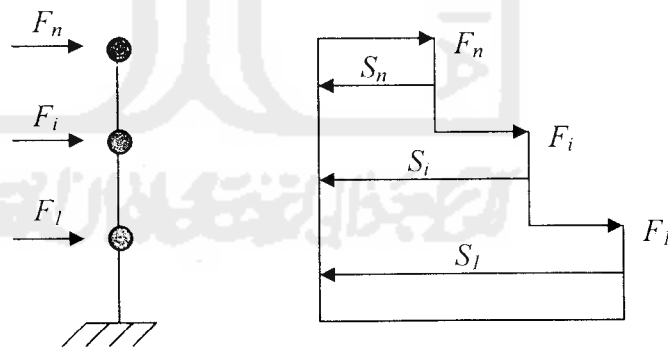
$F_i$  = Gaya horisontal massa ke- $i$

Sedangkan gaya geser dasar merupakan penjumlahan dari gaya lantai tetapi arahnya berlawanan. Gaya geser dasar dicari dengan rumus,

$$S_l = -\left(\sum_{i=1}^n F_i\right) \quad (3-9)$$

Dengan;  $S_l$  = Gaya geser dasar,

$F_i$  = Gaya horisontal massa ke- $i$ .



**Gambar 3.3.** Model Struktur Gaya geser

Keterangan :  $S_n = F_n$

$S_i = F_n + F_i$

$$S_I = F_n + F_i + F_l$$

$S_I$  = Gaya geser dasar.

### 3.7 Momen Guling

Momen guling didapat dengan mengalikan gaya lantai yang terjadi pada setiap tingkat ( $F_i$ ) dengan tinggi lantai ( $h_i$ ).

Momen guling tingkat ke- $i$  dapat dicari dengan rumus,

$$M_i = \sum_{k=i}^n F_k \cdot (h_k - h_{(i-1)}) \quad (3-10)$$

Dengan;  $M_i$  = Momen guling lantai ke- $i$ ,

$F_k$  = Gaya horisontal lantai ke- $k$ ,

$h_k$  = elevasi lantai ke- $k$  terhadap dasar bangunan,

$h_{(i-1)}$  = elevasi lantai ke- $(i-1)$  terhadap dasar bangunan,

$h_0 = 0$ .

Sedangkan momen guling dasar dapat dicari dengan rumus,

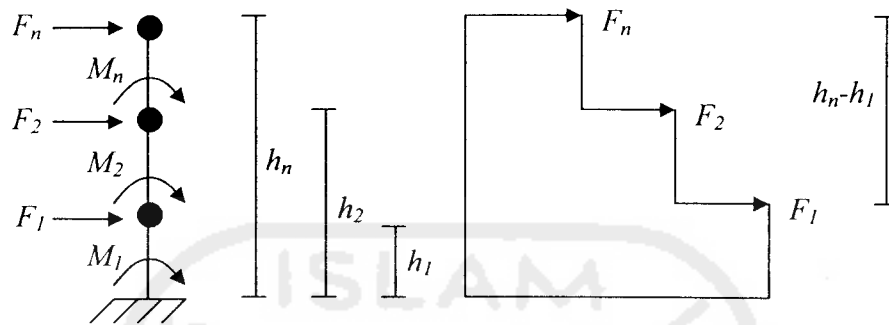
$$M_I = \sum_{k=1}^n F_k \cdot h_k \quad (3-11)$$

Dengan;  $M_I$  = Momen guling dasar,

$F_k$  = Gaya horisontal lantai ke- $k$ ,

$h_k$  = elevasi lantai ke- $k$  terhadap dasar bangunan.





**Gambar 3.4.** Model Struktur Momen guling

Keterangan :  $M_1 = F_1 \cdot h_1 + F_2 \cdot h_2 + F_n \cdot h_n$

$$M_2 = F_2 \cdot (h_2 - h_1) + F_n \cdot (h_n - h_1)$$

$$M_n = F_n \cdot (h_n - h_{(n-1)})$$

$M_1$  = Momen guling dasar.

## BAB IV

### METODE PENELITIAN

Metode penelitian adalah prosedur (urutan) tata cara pelaksanaan penelitian. Pada penelitian ini, analisis dimulai dengan asumsi data struktur, parameter bahan, dan pembebanan, kemudian dilanjutkan dengan langkah-langkah pengolahan data dan bagan alir analisis program SAP 2000 serta pemodelan struktur yang akan dianalisis.

#### 4.1. Data Struktur, Parameter Bahan, dan Pembebanan

Data struktur, parameter bahan, dan pembebanan pada struktur gedung dua puluh lantai ini adalah sebagai berikut :

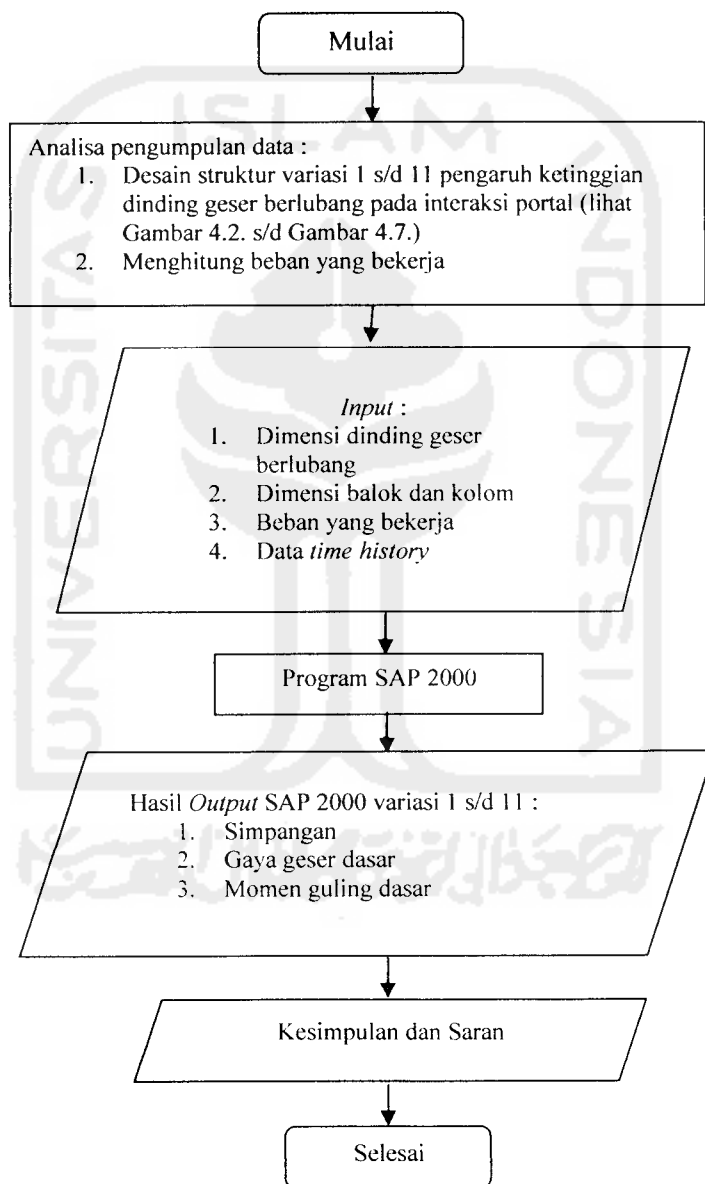
1. Model struktur adalah struktur beton bertulang 3 dimensi.
2. Mutu beton dipakai  $f_c' = 35 \text{ MPa} = 35000 \text{ KN/m}^2$ ,
3. Modulus elastisitas beton  $E_c = 2.10^4 \text{ MPa} = 2.10^7 \text{ KN/m}^2$ ,
4. Mutu baja tulangan longitudinal dipakai  $f_y = 400 \text{ MPa} = 400000 \text{ KN/m}^2$ ,  
dan mutu baja tulangan geser  $f_{ys} = 240 \text{ MPa} = 240000 \text{ KN/m}^2$ ,
5. Dimensi kolom 70 / 70 cm,
6. Dimensi balok 35 / 70 cm,
7. Dimensi dinding geser 4x6 m dengan lubang memanjang horizontal 1x3 m  
di tengah dinding geser,
8. Tebal dinding geser berlubang 35 cm,

9. Tebal plat atap dan lantai 12 cm,
10. Tata guna ruang sebagai apartemen dengan beban hidup lantai  $250 \text{ kg/m}^2$  dan beban hidup atap  $100 \text{ kg/m}^2$ .
11. Analisis dinamis menggunakan beban riwayat waktu gempa El Centro 1940 arah *N-S*, *E-W*, dan *Vertical*.



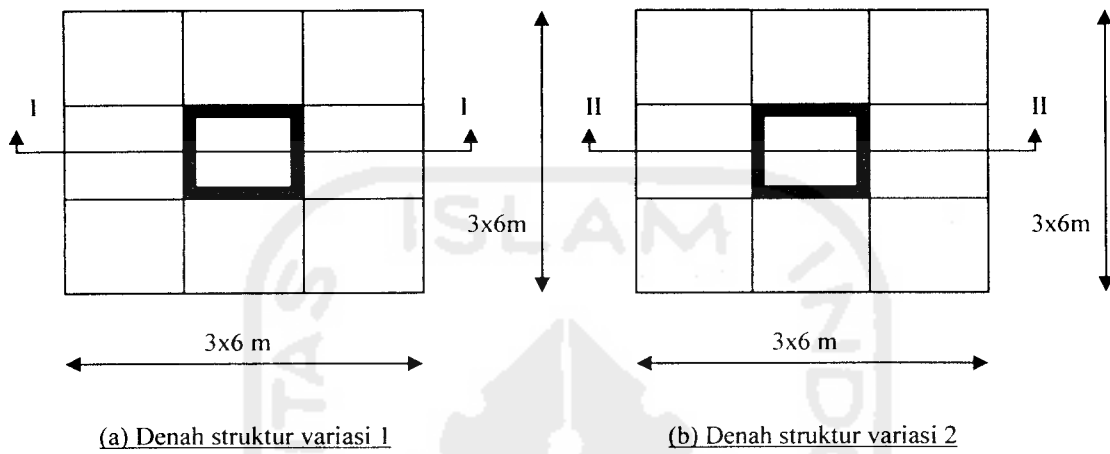
#### 4.2. Pengolahan Data

Pengolahan dilakukan dengan langkah-langkah sesuai Gambar 4.1. dan analisis data dengan SAP 2000 seperti pada Gambar 4.8.

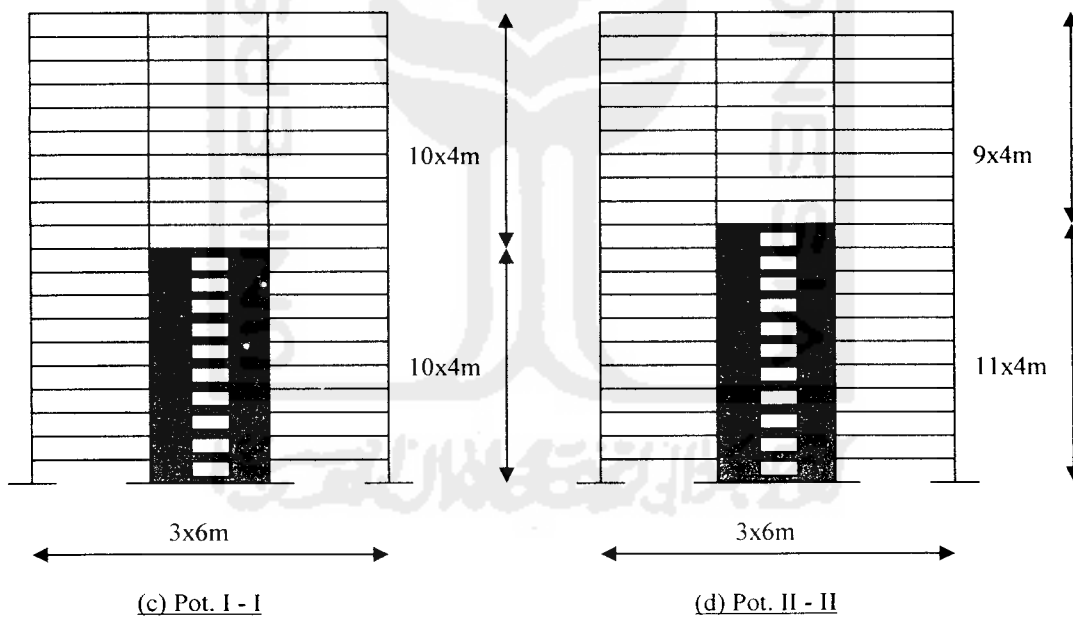


Gambar 4.1. Bagan alir pengolahan data

III  
↑  
3x6



x4m  
2x4m

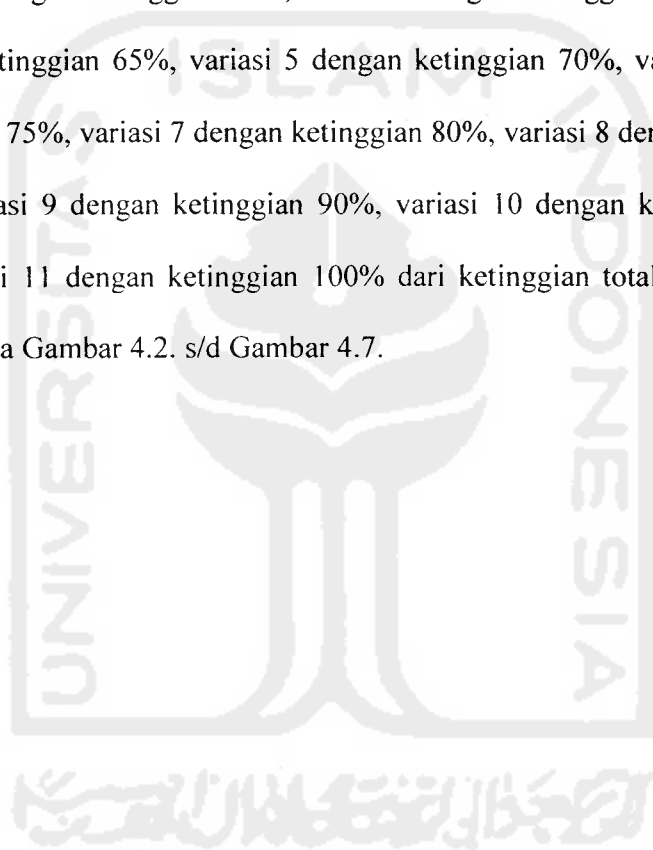


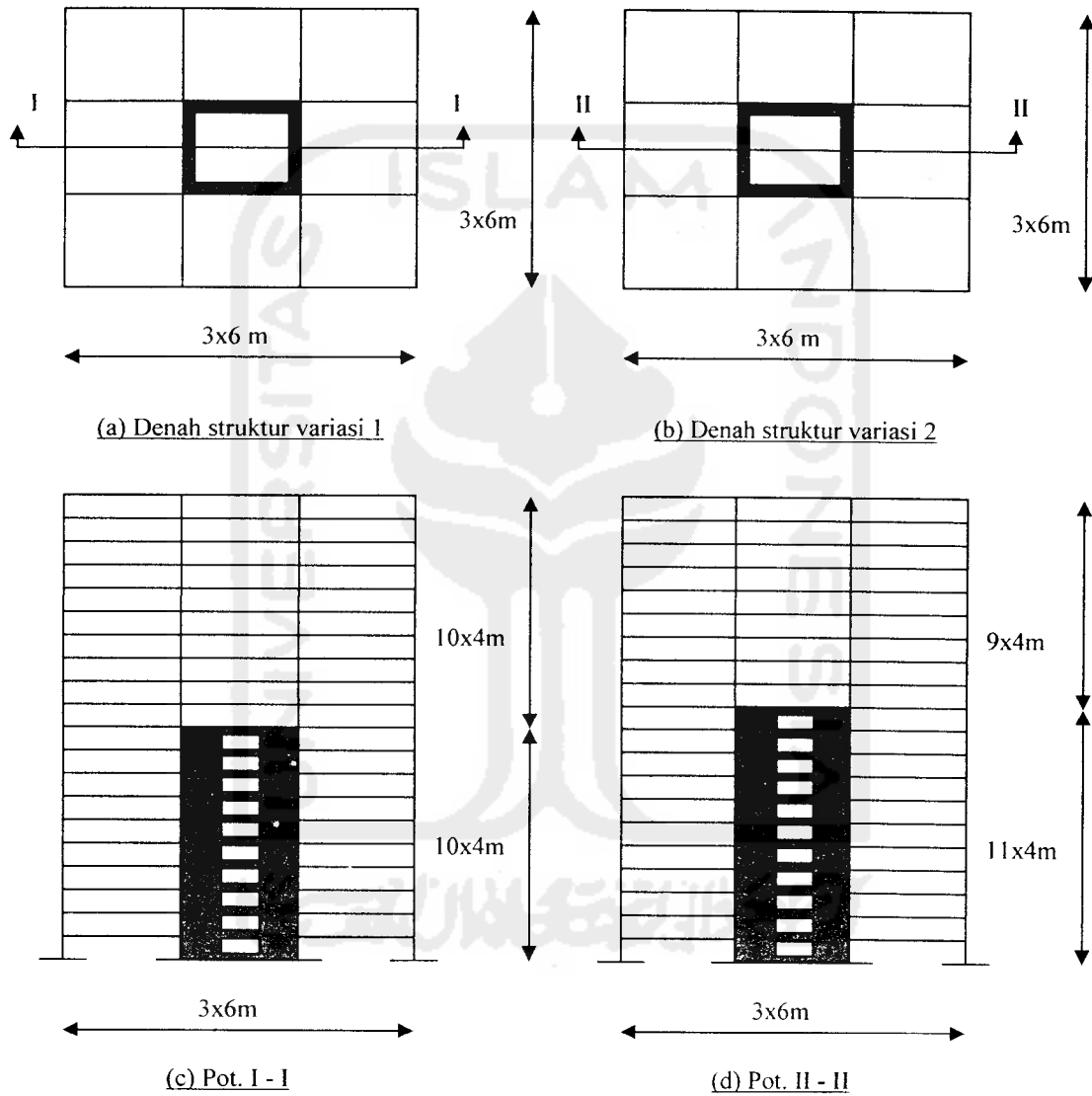
tinggi  
3 dan

**Gambar 4.2.** Variasi ketinggian dinding geser berlubang-portal (Variasi 1 dan Variasi 2)

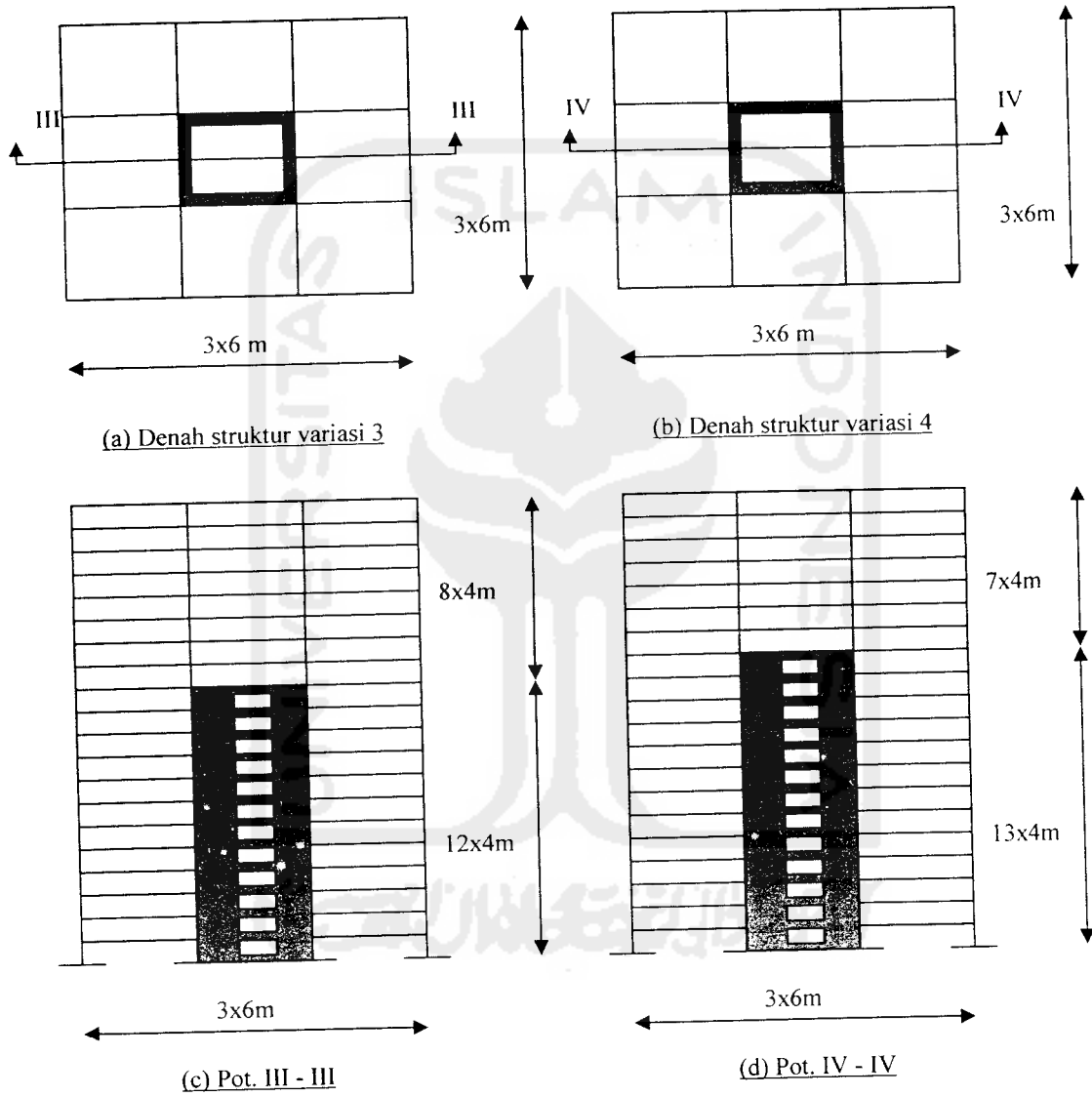
### 4.3. Model Struktur

Model struktur yang digunakan pada analisis ini ada 11 variasi, yaitu struktur dinding geser berlubang untuk variasi 1 dengan ketinggian 50%, variasi 2 dengan ketinggian 55%, variasi 3 dengan ketinggian 60%, variasi 4 dengan ketinggian 65%, variasi 5 dengan ketinggian 70%, variasi 6 dengan ketinggian 75%, variasi 7 dengan ketinggian 80%, variasi 8 dengan ketinggian 85%, variasi 9 dengan ketinggian 90%, variasi 10 dengan ketinggian 95%, dan variasi 11 dengan ketinggian 100% dari ketinggian total struktur dapat dilihat pada Gambar 4.2. s/d Gambar 4.7.



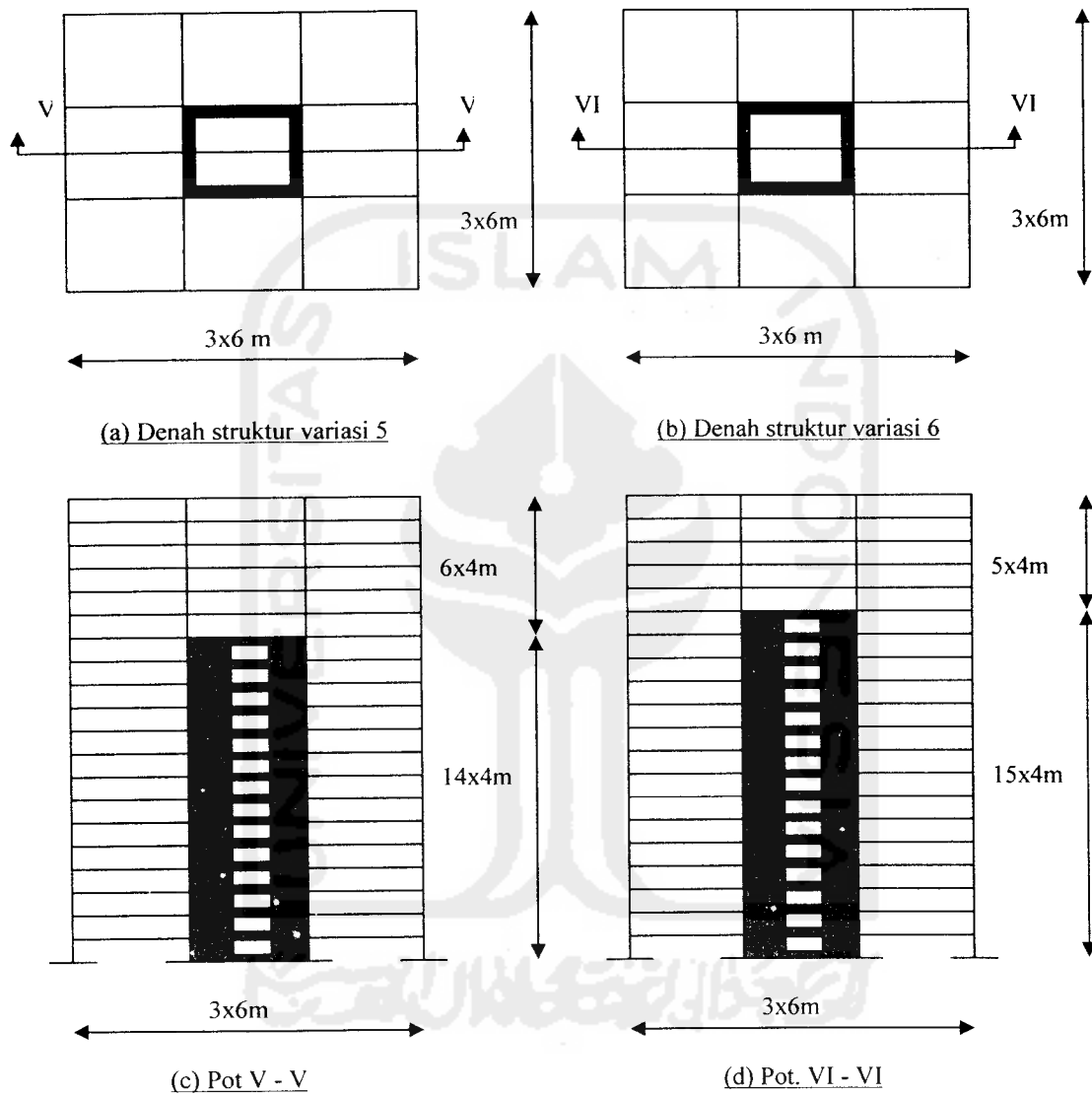


**Gambar 4.2.** Variasi ketinggian dinding geser berlubang-portal (Variasi 1 dan Variasi 2)

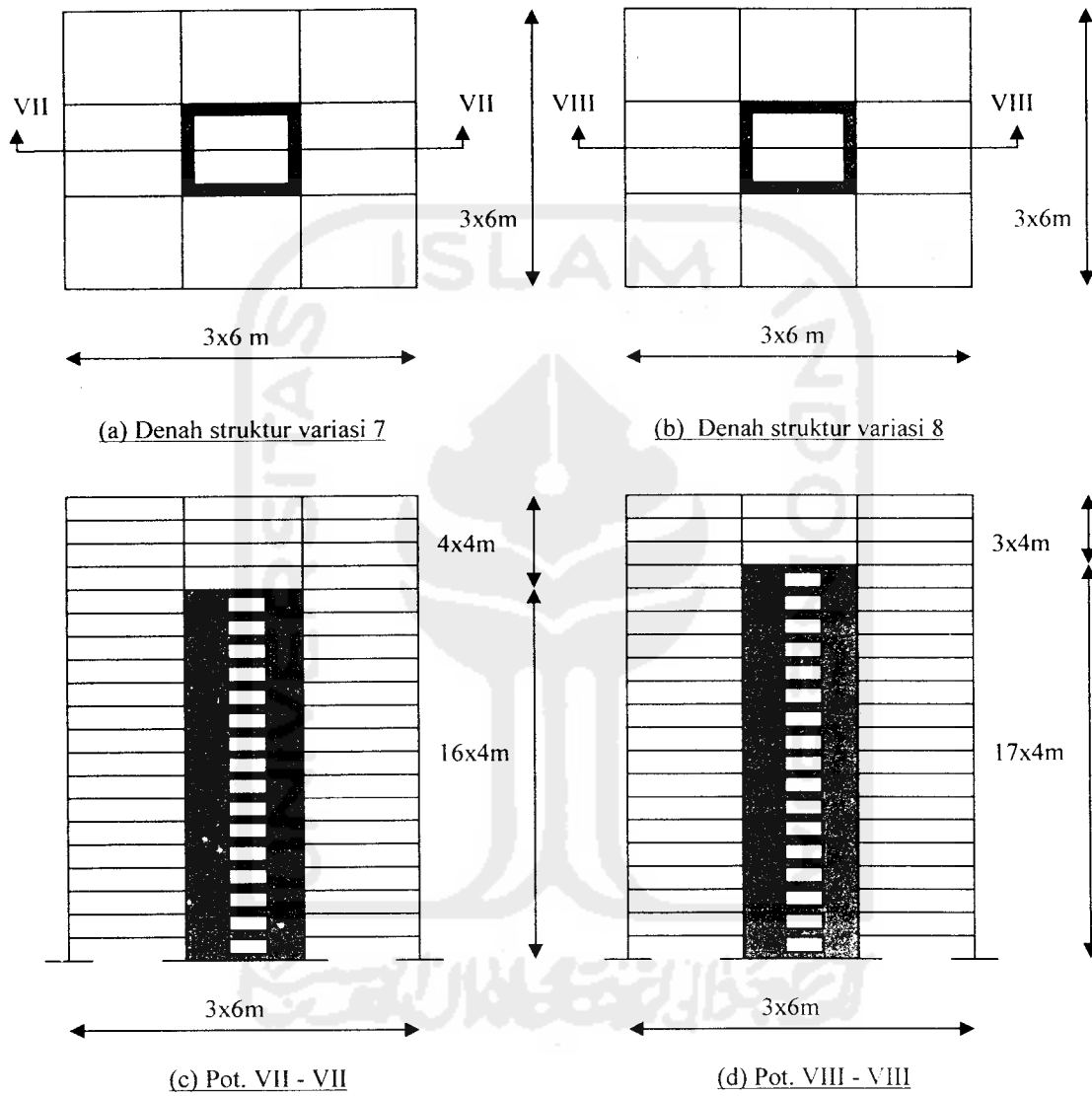


**Gambar 4.3.** Variasi ketinggian dinding geser berlubang-portal  
(Variasi 3 dan Variasi 4)

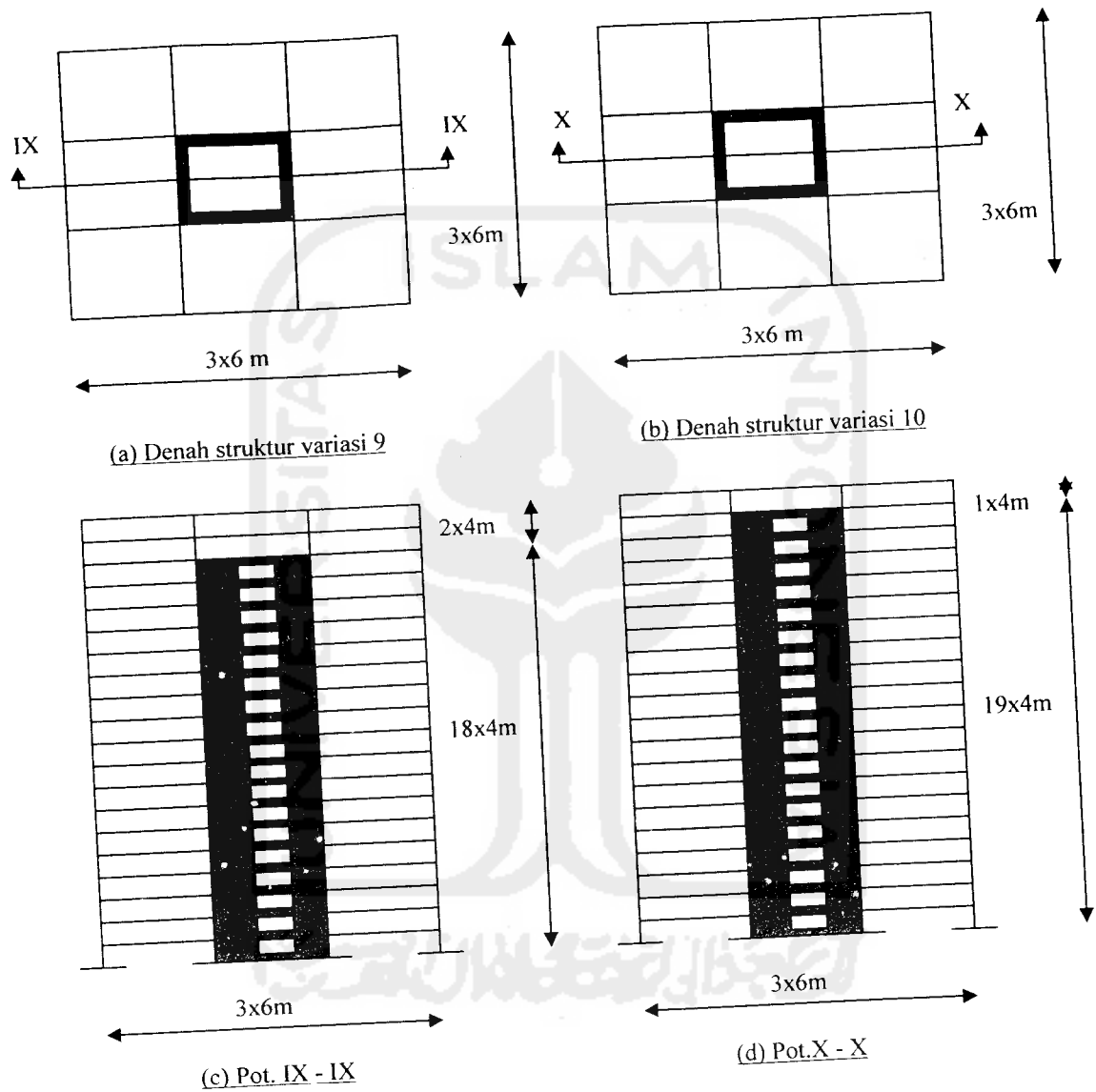




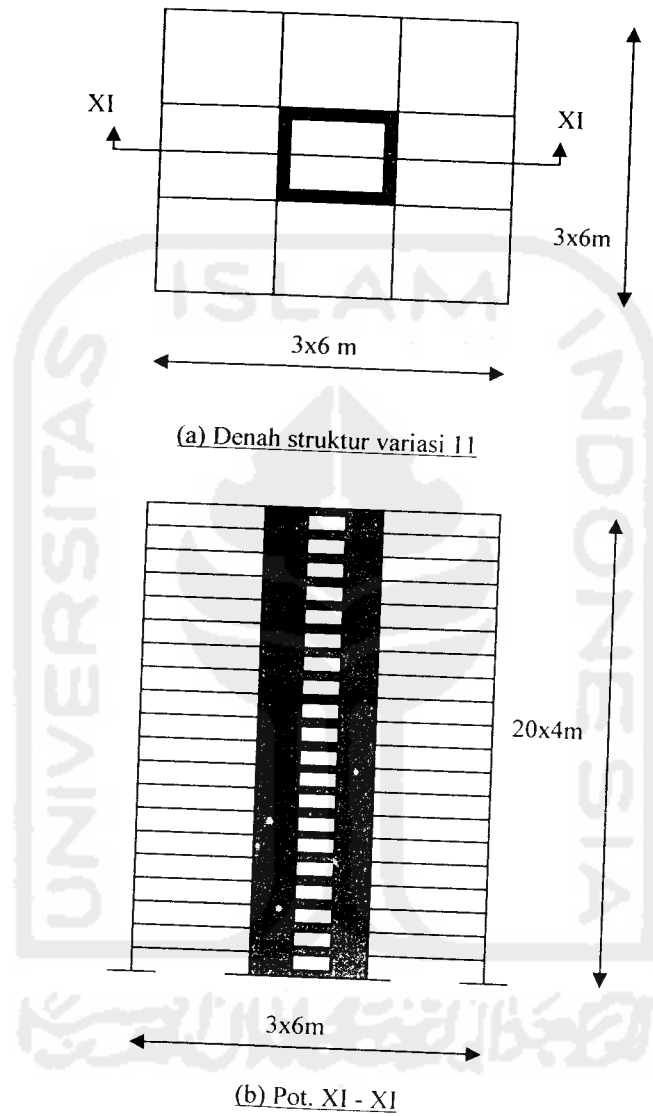
**Gambar 4.4.** Variasi ketinggian dinding geser berlubang-portal (Variasi 5 dan Variasi 6)



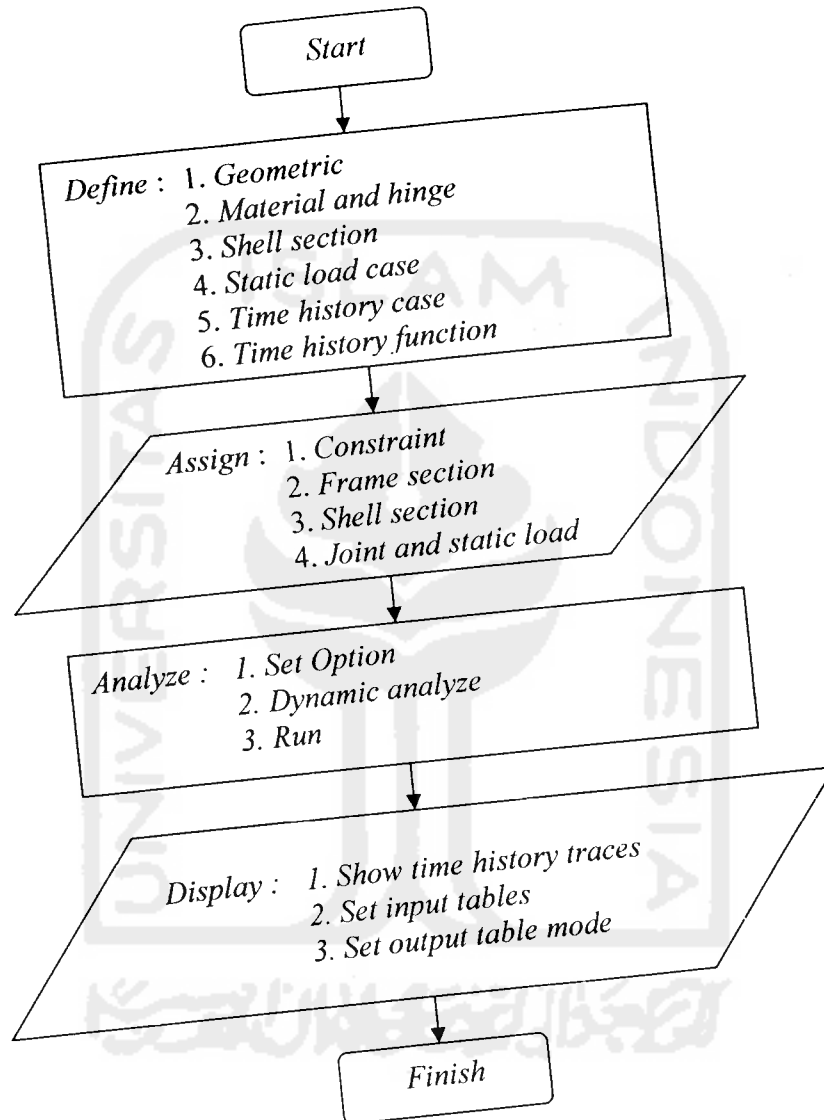
**Gambar 4.5.** Variasi ketinggian dinding geser berlubang-portal (Variasi 7 dan Variasi 8)



**Gambar 4.6.** Variasi ketinggian dinding geser berlubang-portal (Variasi 9 dan Variasi 10)



**Gambar 4.7.** Variasi ketinggian dinding geser berlubang-portal (Variasi 11)



**Gambar 4.8.** Bagan alir analisis SAP 2000

## BAB V

### PERHITUNGAN DAN ANALISIS STRUKTUR

Pada bab ini membahas tentang perhitungan dan analisis pengaruh variasi keefektifan ketinggian dinding geser berlubang-portal terhadap simpangan, gaya geser dasar, dan momen guling akibat beban gempa El Centro. Hasil perhitungan pengaruh variasi ketinggian dinding geser berlubang-portal disajikan dalam bentuk tabel dan grafik. Di sini juga dibahas mengenai *A/V ratio* maksimum (Hz) gempa El Centro 1940 arah x (N-S) dan arah y (E-W) dibandingkan dengan frekuensi *mode* (Hz) bangunan tiap variasi (diambil 3 *mode*) untuk diteliti apakah terjadi resonansi (frekuensi gempa sama dengan frekuensi bangunan) pada struktur yang diteliti dan hasilnya disajikan dalam bentuk tabel dan grafik pada lampiran III..

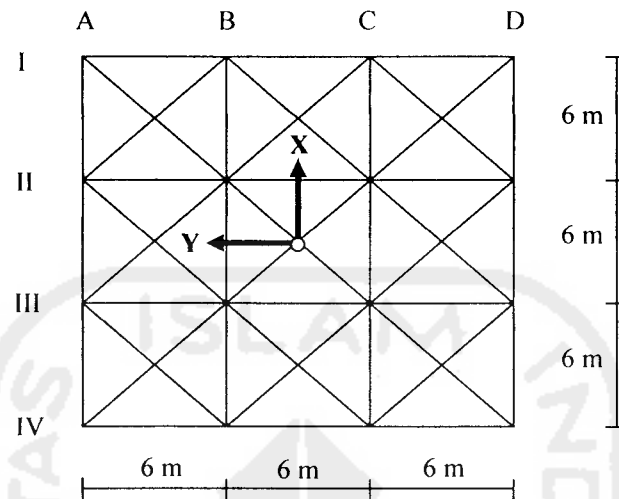
Dalam menganalisis struktur diperlukan asumsi dimensi dari seluruh struktur yang akan dianalisis yang selanjutnya akan diproses oleh program SAP 2000 untuk mendapatkan simpangan relatif, gaya geser dasar, dan momen guling dasar. Sebagai bahan penelitian yaitu gedung apartemen 20 lantai dengan variasi ketinggian dinding geser berlubang 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, dan 100% dari total ketinggian bangunan.

Denah bangunan berbentuk bujur sangkar dengan letak dinding geser berlubang simetris dalam dua arah dengan keempat sisi berlubang. Pembebanan dengan beban gempa *time history* El Centro arah N-S, E-W, dan Vertikal.

### 5.1. Asumsi Yang Digunakan

1. Tebal pelat atap = 0.12 m
2. Tebal pelat lantai = 0.12 m
3. Dimensi kolom = 0.7 x 0.7 m
4. Dimensi balok = 0.35 x 0.7 m
5. Dimensi dinding geser = 4 x 6 m dengan lubang memanjang horizontal ukuran 1 x 3 m di tengah,
6. Tebal dinding gese berlubang = 0.35 m
7. Berat volume beton = 24 KN/m<sup>3</sup>
8. Tata guna ruang sebagai apartemen dengan beban hidup lantai = 2.5 KN/m<sup>2</sup> dan beban hidup atap = 1 KN/m<sup>2</sup>
9. Bangunan dirancang simetri dua arah, sehingga pusat massa struktur saling berhimpit dan faktor puntir tidak diperhitungkan.

Denah bangunan dapat dilihat pada Gambar 5.1.



Gambar 5.1. Denah bangunan

## 5.2. Perhitungan Beban Atap dan Lantai

- a. Beban mati atap :
- |                    |                    |                            |
|--------------------|--------------------|----------------------------|
| Berat pelat 0.12 m | $= 0.12 \times 24$ | $= 2.88 \text{ KN/m}^2$    |
| Berat penggantung  |                    | $= 0.07 \text{ KN/m}^2$    |
| Berat plafon       |                    | $= 0.11 \text{ KN/m}^2$ +  |
|                    |                    | DL $= 3.06 \text{ KN/m}^2$ |
- Beban hidup atap LL  $= 1.00 \text{ KN/m}^2$
- b. Beban mati lantai :
- |                       |                    |                         |
|-----------------------|--------------------|-------------------------|
| Berat pelat 0.12 m    | $= 0.12 \times 24$ | $= 2.88 \text{ KN/m}^2$ |
| Berat pasir 0.03 m    | $= 0.03 \times 16$ | $= 0.48 \text{ KN/m}^2$ |
| Berat spesi/m, 0.02 m | $= 0.02 \times 21$ | $= 0.42 \text{ KN/m}^2$ |
| Berat tegel/m, 0.02 m | $= 0.02 \times 24$ | $= 0.48 \text{ KN/m}^2$ |
| Berat penggantung     |                    | $= 0.07 \text{ KN/m}^2$ |

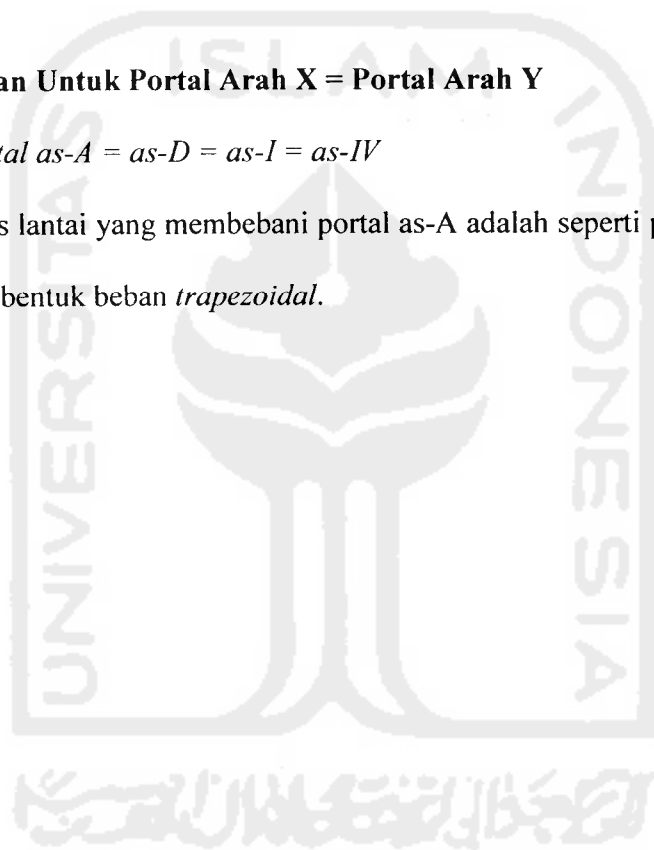


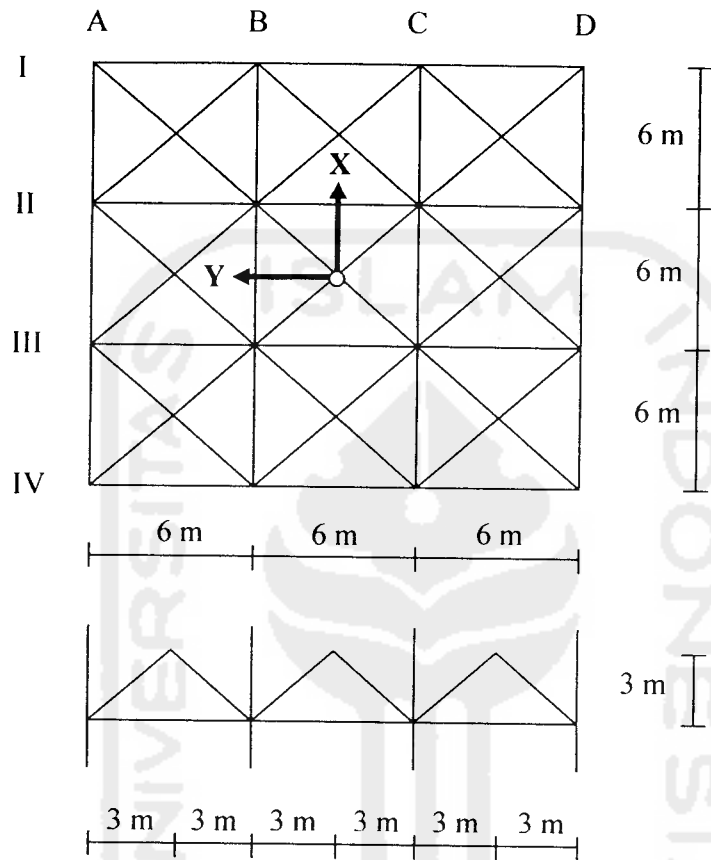
Berat plafon		= $0.11 \text{ KN/m}^2$ +
	DL	= $4.44 \text{ KN/m}^2$
Beban hidup lantai :beban untuk apartemen	LL	= $2.50 \text{ KN/m}^2$
c. Berat tembok $\frac{1}{2}$ bata		= $2.50 \text{ KN/m}^2$

### 5.3. Pembebanan Untuk Portal Arah X = Portal Arah Y

a. Portal *as-A* = *as-D* = *as-I* = *as-IV*

Luas lantai yang membebani portal *as-A* adalah seperti pada Gambar 5.2. dengan bentuk beban *trapezoidal*.





Gambar 5.2. Beban *trapezoidal* portal as-A

1. Beban gravitasi pada balok atap as-A = as-D = as-I = as IV

a. Beban mati pada atap tiap meter

$$\text{Pelat} = 3 \times 2.88 = 8.64 \text{ KN/m}$$

$$\text{Plafon dan pengantung} = 3 \times 0.18 = 0.54 \text{ KN/m} +$$

$$\text{DL trapezoidal} = 9.18 \text{ KN/m}$$

$$\text{Dinding (DL uniform)} = 250 \times 2 = 5.00 \text{ KN/m}$$

b. Beban hidup pada atap tiap meter

$$\text{Beban hidup (LL trapezoidal)} = 3 \times 1.00 = \mathbf{3.00 \text{ KN/m}}$$

2. Beban gravitasi balok lantai 1 s/d 19 di as-A = as-D = as-I = as IV

a. Beban mati pada lantai tiap meter

$$\text{Pelat} = 3 \times 2.88 = 8.64 \text{ KN/m}$$

$$\text{Pasir} = 3 \times 0.48 = 1.44 \text{ KN/m}$$

$$\text{Spesi} = 3 \times 0.42 = 1.26 \text{ KN/m}$$

$$\text{Tegel} = 3 \times 0.48 = 1.44 \text{ KN/m}$$

$$\text{Plafon dan penggantung} = 3 \times 0.18 = \underline{0.54 \text{ KN/m} +}$$

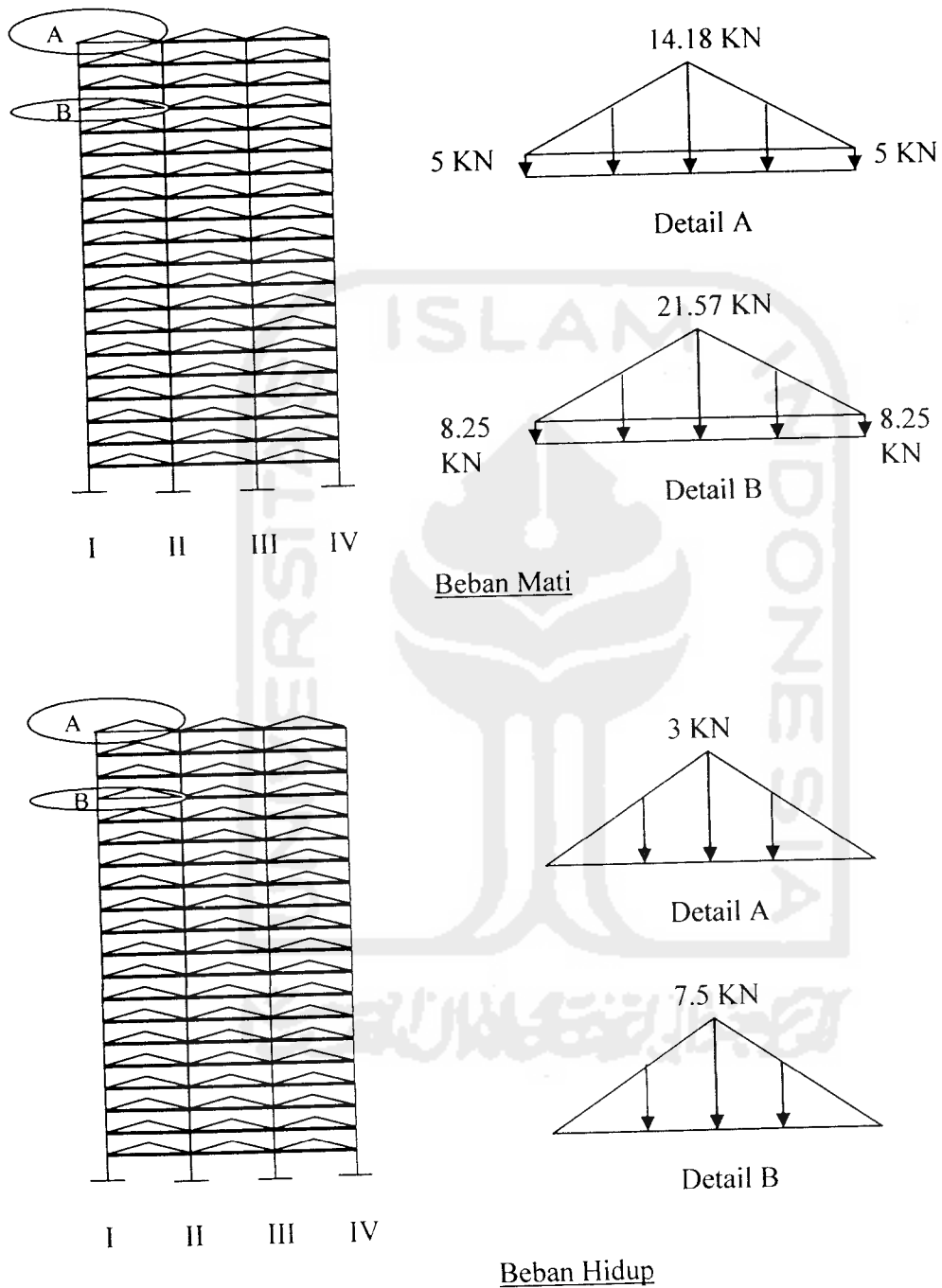
$$\text{DL trapezoidal} = \mathbf{13.32 \text{ KN/m}}$$

$$\text{Dinding (DL uniform)} = 2.50 \times (4 - 0.7) = \mathbf{8.25 \text{ KN/m}}$$

b. Beban hidup pada lantai tiap meter

$$\text{Beban hidup (LL trapezoidal)} = 3 \times 2.50 = \mathbf{7.50 \text{ KN/m}}$$

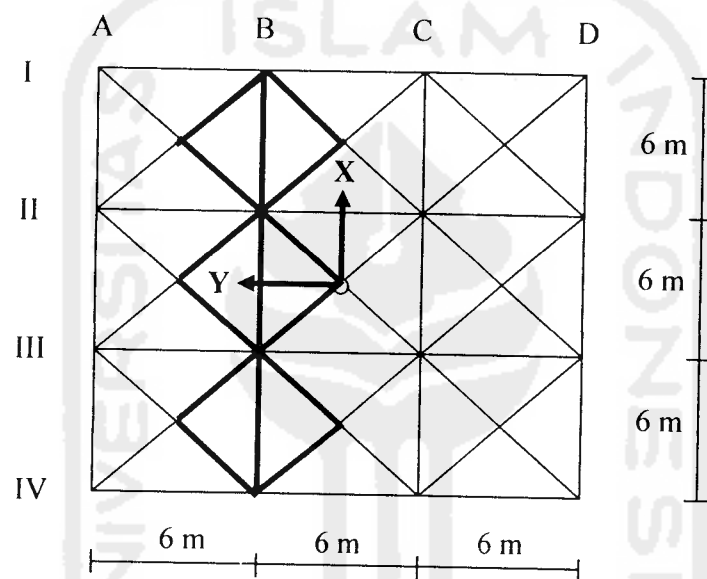
Hasil perhitungan beban mati dan beban hidup pada atap dan lantai untuk portal as-A dapat dilihat pada Gambar 5.3.



Gambar 5.3. Beban mati dan beban hidup portal as-A

b. Portal as-B = as- C = as- II = as III

Luas lantai yang membebani portal as-B adalah dua kali luas lantai yang membebani portal as-A seperti pada Gambar 5.4. dengan bentuk beban *trapezoidal*.



Gambar 5.4. Beban *trapezoidal* portal as-B

1. Beban gravitasi pada balok atap as-B = as-C = as-II = as III

a. Beban mati pada atap tiap meter

$$\text{Pelat} = 2 \times 3 \times 2.88 = 17.28 \text{ KN/m}$$

$$\text{Plafon dan pengantung} = 2 \times 3 \times 0.18 = 1.08 \text{ KN/m} +$$

$$\text{DL trapezoidal} = 18.36 \text{ KN/m}$$

$$\text{Dinding (DL uniform)} = 2.50 \times 2 = 5.00 \text{ KN/m}$$

b. Beban hidup pada atap tiap meter

$$\text{Beban hidup (LL trapezoidal)} = 2 \times 3 \times 1.00 = \mathbf{6.00 \text{ KN/m}}$$

2. Beban gravitasi balok lantai 1 s/d 19 di as-B = as-C = as-II = as III

a. Beban mati pada lantai tiap meter

$$\text{Pelat} = 2 \times 3 \times 2.88 = 17.28 \text{ KN/m}$$

$$\text{Pasir} = 2 \times 3 \times 0.48 = 2.88 \text{ KN/m}$$

$$\text{Spesi} = 2 \times 3 \times 0.42 = 2.52 \text{ KN/m}$$

$$\text{Tegel} = 2 \times 3 \times 0.48 = 2.88 \text{ KN/m}$$

$$\text{Plafon dan penggantung} = 2 \times 3 \times 0.18 = \underline{1.08 \text{ KN/m}} +$$

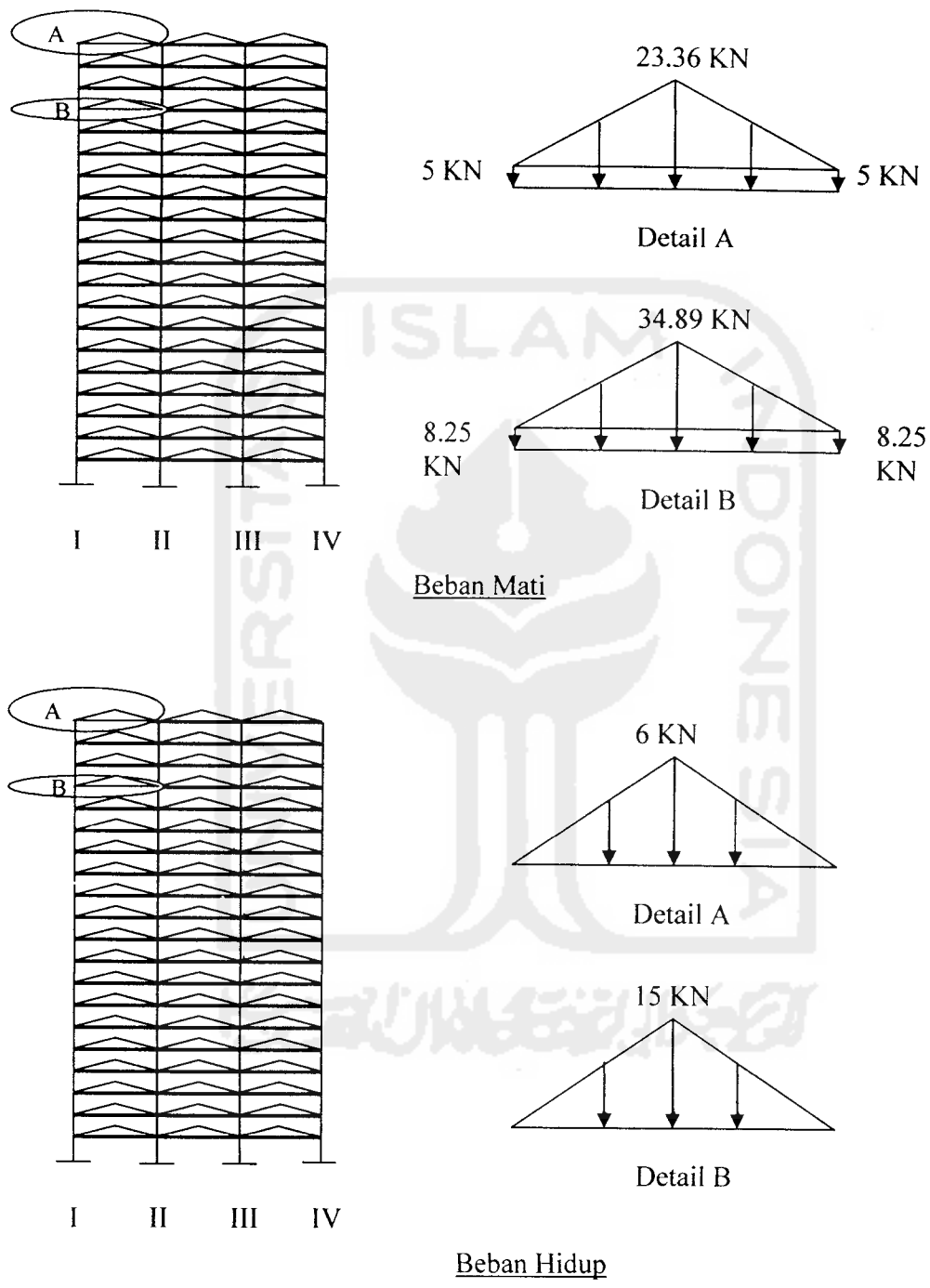
$$\text{DL trapezoidal} = \mathbf{26.64 \text{ KN/m}}$$

$$\text{Dinding (DL uniform)} = 2.50 \times (4 - 0.7) = \mathbf{8.25 \text{ KN/m}}$$

b. Beban hidup pada lantai tiap meter

$$\text{Beban hidup (LL trapezoidal)} = 2 \times 3 \times 2.50 = \mathbf{15.00 \text{ KN/m}}$$

Hasil perhitungan beban mati dan beban hidup pada atap dan lantai untuk portal as-B dapat dilihat pada Gambar 5.5.



**Gambar 5.5.** Beban mati dan beban hidup portal as-B

#### 5.4. *Input SAP 2000*

*Input* yang pertama yaitu penentuan bentuk (*geometric*) struktur dan ukurannya serta jenis material struktur yang dipakai, dalam penelitian ini digunakan struktur beton bertulang. Kemudian menentukan dimensi struktur yaitu kolom, balok, dan dimensi dinding geser berlubang yang selanjutnya *joint* tiap lantai dikekang (*joint constraint*) sebagai diafragma (*Diaphragm*) agar sesuai dengan prinsip dinding geser baik penuh maupun berlubang yaitu yang pertama, massa lantai dari struktur termasuk beban yang harus didukung dianggap terkonsentrasi pada satu titik (*lumped mass*) ditengah bentang atau kolom dan lantai dianggap tidak bermassa; dan yang kedua, balok serta pelat lantai dianggap relatif sangat kaku dibanding kolom, *beam coloumn joint* mampu menahan rotasi (*joint* tidak berotasi dan simpangan hanya kearah horizontal tanpa adanya puntir).

Pembebanan untuk semua variasi dinding geser berlubang-portal dilakukan melalui perhitungan kasus beban-beban statis (*static load case*) yaitu beban mati dan beban hidup serta beban berupa percepatan tanah dari kasus riwayat waktu (*time history case*) gempa El Centro arah Utara-Selatan, Timur-Barat, dan Vertikal. Langkah-langkah pengerjaan dengan SAP 2000 dapat dilihat di Gambar 4.3. pada Bab IV. Contoh input data pada SAP 2000 diambil variasi 6 yaitu 75% dari ketinggian total bangunan dapat dilihat pada Lampiran I.





## 5.5. Output SAP 2000

Hasil analisis dengan program SAP 2000 berupa simpangan relatif arah x dan y, gaya geser dasar arah x dan y, serta momen guling dasar arah x dan y. Contoh hasil *output* dari SAP 2000 diambil variasi 6 yaitu 75% dari ketinggian total bangunan dapat dilihat pada Lampiran II.

### 5.5.1 Simpangan Relatif Lantai

Nilai simpangan relatif diambil dari nilai *joint displacement* pada *joint* di perpotongan as-D dengan as-IV pada setiap lantai (lihat Gambar 5.1), yang merupakan sudut bangunan yang relatif memiliki simpangan besar. Disini diambil *joint* 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, dan 21 yaitu *joint* perpotongan as-D dengan as-IV (lihat Lampiran II *Output joint displacement*). Simpangan relatif maksimum arah x dapat dilihat pada Tabel 5.1. dan Gambar 5.6., simpangan relatif maksimum arah y dapat dilihat pada Tabel 5.2. dan Gambar 5.7.

**Tabel 5.1.** Simpangan relatif maksimum arah x

Lt	Variasi 1 (m)	Variasi 2 (m)	Variasi 3 (m)	Variasi 4 (m)	Variasi 5 (m)	Variasi 6 (m)	Variasi 7 (m)	Variasi 8 (m)	Variasi 9 (m)	Variasi 10 (m)	Variasi 11 (m)
1	0.00439	0.00423	0.00392	0.00318	0.00361	0.0032	0.00311	0.0028	0.00302	0.00327	0.00348
2	0.01065	0.01021	0.00935	0.00753	0.00841	0.00831	0.0078	0.00719	0.00788	0.00857	0.00885
3	0.01786	0.01705	0.01547	0.01239	0.01364	0.01464	0.01378	0.0126	0.01396	0.01522	0.01541
4	0.02558	0.02432	0.02189	0.01746	0.01909	0.0219	0.02091	0.01901	0.02097	0.02291	0.02332
5	0.03349	0.03171	0.0283	0.02249	0.02576	0.02985	0.02884	0.02687	0.02868	0.0314	0.0321
6	0.04132	0.03898	0.0345	0.02729	0.0328	0.03828	0.03738	0.03559	0.03782	0.04047	0.04153
7	0.04889	0.04594	0.04031	0.03363	0.04003	0.047	0.04636	0.04504	0.04767	0.04992	0.05142
8	0.05609	0.05249	0.04576	0.04013	0.04737	0.05588	0.05564	0.05507	0.05809	0.0596	0.06174
9	0.06285	0.05858	0.05312	0.04697	0.05494	0.06481	0.06509	0.06552	0.06893	0.0694	0.07227
10	0.06908	0.0642	0.06055	0.05393	0.06248	0.07368	0.07479	0.07628	0.08005	0.0802	0.08289

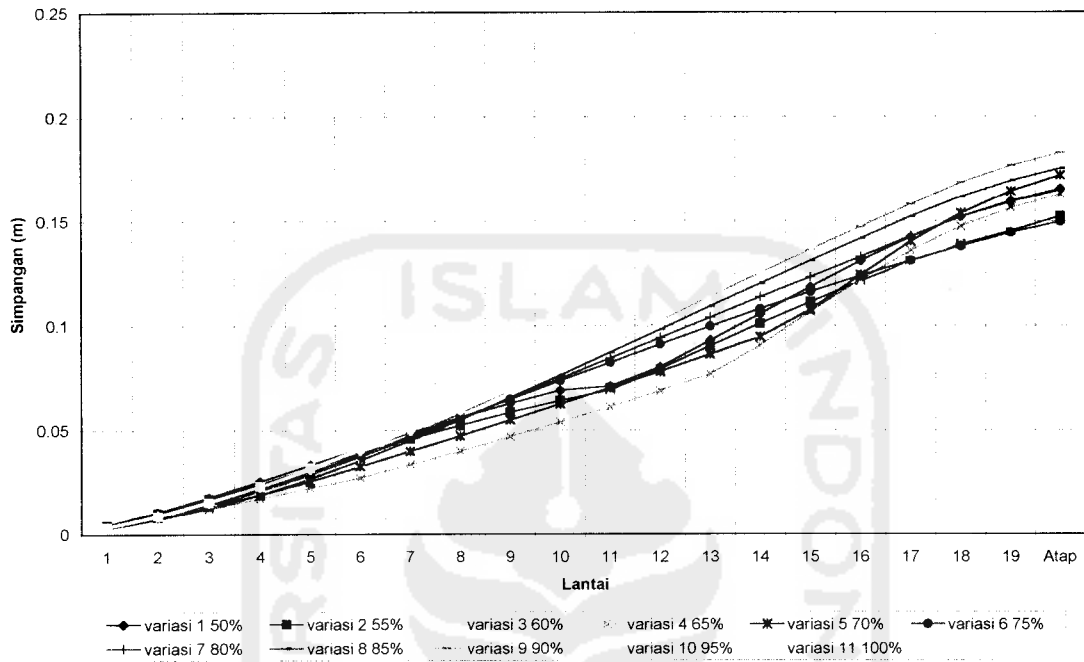
**Tabel 5.1. Lanjutan**

11	0.07111	0.06925	0.0679	0.0612	0.07032	0.08245	0.08454	0.08722	0.09134	0.09175	0.0935
12	0.0802	0.07929	0.07519	0.06885	0.07815	0.09117	0.09425	0.09825	0.10269	0.10341	0.10418
13	0.09291	0.09042	0.08514	0.07689	0.08633	0.09971	0.10394	0.10927	0.11402	0.11508	0.11487
14	0.10568	0.10104	0.09632	0.09064	0.09468	0.10808	0.1137	0.12021	0.12526	0.12674	0.12661
15	0.11846	0.11129	0.10787	0.10669	0.1077	0.11624	0.1233	0.13102	0.13636	0.13829	0.13875
16	0.13092	0.1212	0.11942	0.12203	0.12417	0.12382	0.13291	0.14166	0.14727	0.14966	0.15073
17	0.14232	0.13041	0.13036	0.13581	0.14016	0.13097	0.14269	0.15211	0.15798	0.16081	0.16251
18	0.15203	0.13867	0.13976	0.14733	0.15372	0.13798	0.15177	0.16164	0.16842	0.17175	0.17406
19	0.15969	0.14524	0.14884	0.15632	0.16428	0.14443	0.15917	0.16932	0.17663	0.18239	0.18537
20	0.16556	0.15234	0.15719	0.16291	0.17189	0.14963	0.16482	0.17522	0.18265	0.18995	0.19639

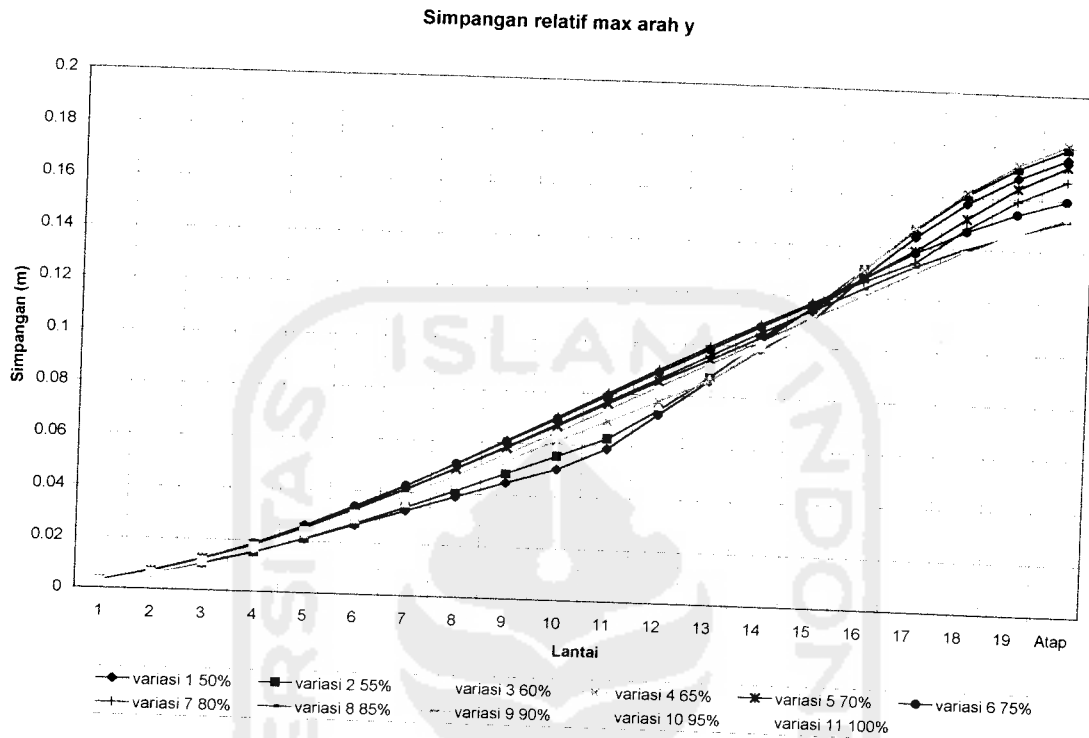
**Tabel 5.2. Simpangan relatif maksimum arah y**

Lt	Variasi 1 (m)	Variasi 2 (m)	Variasi 3 (m)	Variasi 4 (m)	Variasi 5 (m)	Variasi 6 (m)	Variasi 7 (m)	Variasi 8 (m)	Variasi 9 (m)	Variasi 10 (m)	Variasi 11 (m)
1	0.00242	0.00258	0.00255	0.00249	0.00287	0.00251	0.00257	0.00248	0.00234	0.0024	0.00245
2	0.0061	0.00627	0.00654	0.00626	0.00724	0.00674	0.00682	0.00664	0.00612	0.00632	0.00642
3	0.01047	0.01053	0.01143	0.01109	0.0125	0.01223	0.01222	0.01196	0.01098	0.01119	0.0115
4	0.01542	0.01531	0.01696	0.01686	0.01837	0.01874	0.01853	0.01822	0.01682	0.01679	0.01739
5	0.02098	0.02103	0.02294	0.02331	0.02522	0.02607	0.0256	0.0253	0.02344	0.02321	0.02386
6	0.0268	0.02723	0.02921	0.0303	0.03291	0.03407	0.03371	0.03303	0.03072	0.03034	0.03073
7	0.0328	0.03406	0.03597	0.0377	0.04108	0.04258	0.04247	0.04123	0.03854	0.03805	0.03799
8	0.0388	0.04114	0.04356	0.0454	0.04961	0.05147	0.05164	0.04979	0.04698	0.04637	0.0453
9	0.04469	0.04833	0.05171	0.05332	0.05837	0.06064	0.06107	0.05858	0.05574	0.05505	0.05384
10	0.05043	0.05553	0.05991	0.06136	0.06729	0.06998	0.07065	0.06778	0.06478	0.06402	0.06292
11	0.05882	0.06277	0.06804	0.06947	0.07628	0.0794	0.08028	0.07705	0.07401	0.07313	0.07217
12	0.07238	0.07412	0.07605	0.07758	0.08526	0.08884	0.08985	0.08633	0.0833	0.08233	0.08152
13	0.08602	0.0875	0.08665	0.08597	0.09425	0.09824	0.09927	0.09581	0.09261	0.09157	0.09087
14	0.09862	0.10186	0.09951	0.09883	0.1033	0.10753	0.10851	0.10518	0.10202	0.10076	0.10019
15	0.11048	0.11534	0.11332	0.11262	0.11513	0.11675	0.11752	0.1144	0.11146	0.1101	0.10962
16	0.12827	0.13095	0.13103	0.13062	0.12749	0.12753	0.12626	0.12354	0.12078	0.11945	0.11895
17	0.1442	0.14708	0.14824	0.14755	0.13891	0.13791	0.13415	0.13256	0.13001	0.12882	0.12821
18	0.15765	0.16095	0.16293	0.16186	0.15181	0.14689	0.14789	0.14014	0.13906	0.13802	0.13745
19	0.16814	0.17176	0.17438	0.17302	0.16415	0.15413	0.15912	0.14653	0.14672	0.14699	0.1465
20	0.17567	0.17954	0.18255	0.18103	0.1729	0.15969	0.16718	0.15185	0.15241	0.1536	0.15531

simpangan relatif max arah x



Gambar 5.6. Grafik simpangan relatif maksimum arah x



**Gambar 5.7.** Grafik simpangan relatif maksimum arah y

### 5.5.2. Simpangan Antar Tingkat

Simpangan antar tingkat diperoleh dari selisih simpangan relatif lantai atas dengan simpangan relatif lantai bawah. Hasil perhitungan simpangan antar tingkat arah x dapat dilihat pada Tabel 5.3. dan Gambar 5.8. dan hasil perhitungan simpangan antar tingkat arah y dapat dilihat pada Tabel 5.4. dan Gambar 5.9.

Tabel 5.3. Simpangan antar tingkat maksimum arah x

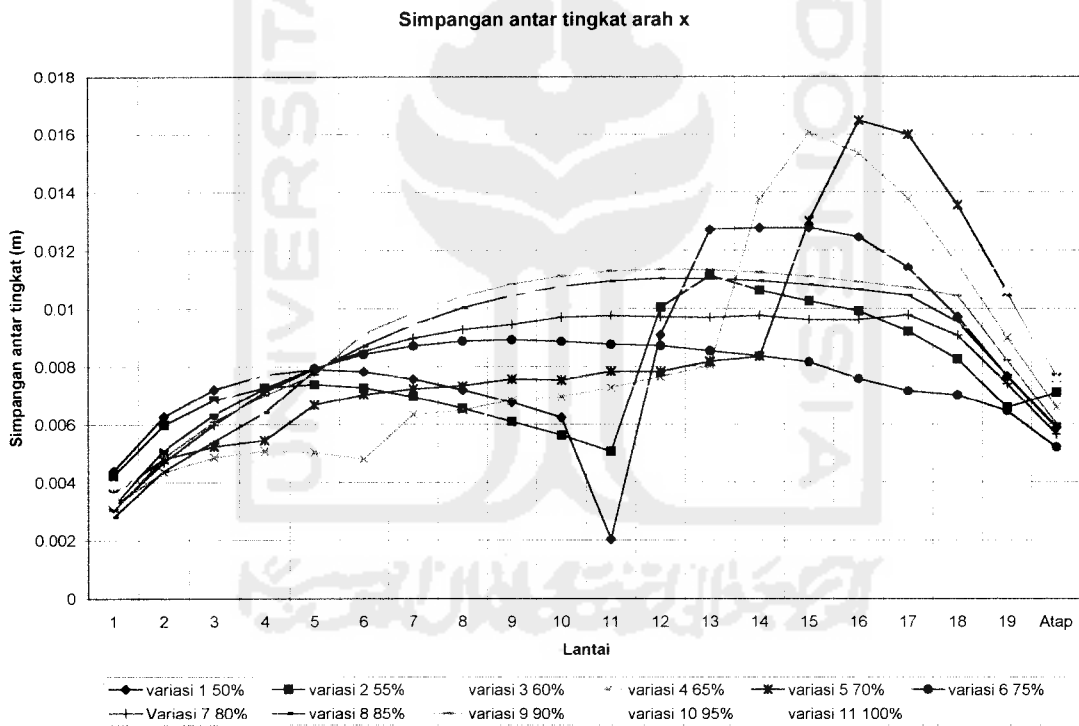
Lt	Variasi 1 (m)	Variasi 2 (m)	Variasi 3 (m)	Variasi 4 (m)	Variasi 5 (m)	Variasi 6 (m)	Variasi 7 (m)	Variasi 8 (m)	Variasi 9 (m)	Variasi 10 (m)	Variasi 11 (m)
1	0.00439	0.00423	0.00392	0.00318	0.00361	0.0032	0.00311	0.0028	0.00302	0.00327	0.00348
2	0.00626	0.00598	0.00543	0.00435	0.0048	0.00511	0.00469	0.00439	0.00486	0.0053	0.00537
3	0.00721	0.00684	0.00612	0.00486	0.00523	0.00633	0.00598	0.00541	0.00608	0.00665	0.00656
4	0.00772	0.00727	0.00642	0.00507	0.00545	0.00726	0.00713	0.00641	0.00701	0.00769	0.00791
5	0.00791	0.00739	0.00641	0.00503	0.00667	0.00795	0.00793	0.00786	0.00771	0.00849	0.00878
6	0.00783	0.00727	0.0062	0.0048	0.00704	0.00843	0.00854	0.00872	0.00914	0.00907	0.00943
7	0.00757	0.00696	0.00581	0.00634	0.00723	0.00872	0.00898	0.00945	0.00985	0.00945	0.00989
8	0.0072	0.00655	0.00545	0.0065	0.00734	0.00888	0.00928	0.01003	0.01042	0.00968	0.01032
9	0.00676	0.00609	0.00736	0.00684	0.00757	<b>0.00893</b>	0.00945	0.01045	0.01084	0.0098	0.01053
10	0.00623	0.00562	0.00743	0.00696	0.00754	0.00887	0.0097	0.01076	0.01112	0.0108	0.01062
11	0.00203	0.00505	0.00735	0.00727	0.00784	0.00877	0.00975	0.01094	0.01129	0.01155	0.01061
12	0.00909	0.01004	0.00729	0.00765	0.00783	0.00872	0.00971	0.01103	0.01135	0.01166	0.01068
13	0.01271	0.01113	0.00995	0.00804	0.00818	0.00854	0.00969	0.01102	0.01133	0.01167	0.01069
14	0.01277	0.01062	0.01118	0.01375	0.00835	0.00837	0.00976	0.01094	0.01124	0.01166	0.01174
15	0.01278	0.01025	0.01155	0.01605	0.01302	0.00816	0.0096	0.01081	0.0111	0.01155	0.01214
16	0.01246	0.00991	0.01155	0.01534	0.01647	0.00758	0.00961	0.01064	0.01091	0.01137	0.01198
17	0.0114	0.00921	0.01094	0.01378	0.01599	0.00715	0.00978	0.01045	0.01071	0.01115	0.01178
18	0.00971	0.00826	0.0094	0.01152	0.01356	0.00701	0.00908	0.00953	0.01044	0.01094	0.01155
19	0.00766	0.00657	0.00908	0.00899	0.01056	0.00645	0.0074	0.00768	0.00821	0.01064	0.01131
20	0.00587	0.0071	0.00835	0.00659	0.00761	0.0052	0.00565	0.0059	0.00602	0.00756	0.01102
	0.01278	0.01113	0.01155	0.01605	0.01647	<b>0.00893</b>	0.00978	0.01103	0.01135	0.01167	0.01214

Tabel 5.4. Simpangan antar tingkat maksimum arah y

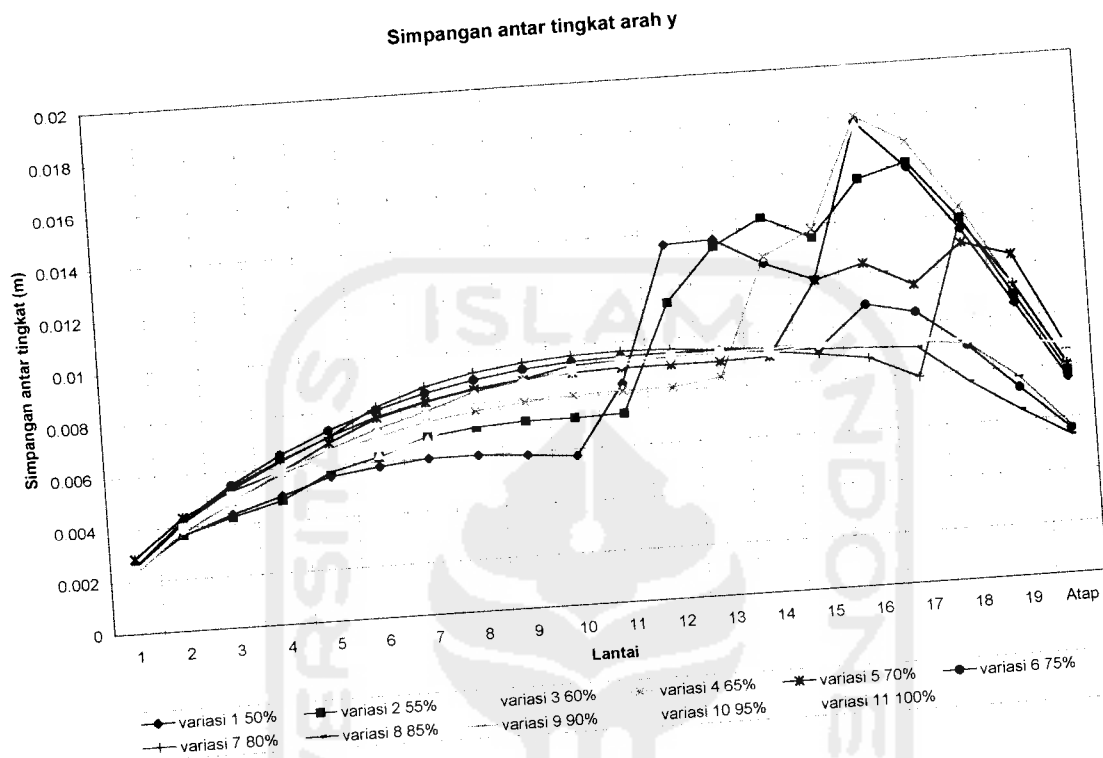
Lt	Variasi 1 (m)	Variasi 2 (m)	Variasi 3 (m)	Variasi 4 (m)	Variasi 5 (m)	Variasi 6 (m)	Variasi 7 (m)	Variasi 8 (m)	Variasi 9 (m)	Variasi 10 (m)	Variasi 11 (m)
1	0.00242	0.00258	0.00255	0.00249	0.00287	0.00251	0.00257	0.00248	0.00234	0.0024	0.00245
2	0.00368	0.00369	0.00399	0.00377	0.00437	0.00423	0.00425	0.00416	0.00378	0.00392	0.00397
3	0.00437	0.00426	0.00489	0.00483	0.00526	0.00549	0.0054	0.00532	0.00486	0.00487	0.00508
4	0.00495	0.00478	0.00553	0.00577	0.00587	0.00651	0.00631	0.00626	0.00584	0.0056	0.00589
5	0.00556	0.00572	0.00598	0.00645	0.00685	0.00733	0.00707	0.00708	0.00662	0.00642	0.00647
6	0.00582	0.0062	0.00627	0.00699	0.00769	0.008	0.00811	0.00773	0.00728	0.00713	0.00687
7	0.006	0.00683	0.00676	0.0074	0.00817	0.00851	0.00876	0.0082	0.00782	0.00771	0.00726
8	0.006	0.00708	0.00759	0.0077	0.00853	0.00889	0.00917	0.00856	0.00844	0.00832	0.00731
9	0.00589	0.00719	0.00815	0.00792	0.00876	0.00917	0.00943	0.00879	0.00876	0.00868	0.00854
10	0.00574	0.0072	0.0082	0.00804	0.00892	0.00934	0.00958	0.0092	0.00904	0.00897	0.00908
11	0.00839	0.00724	0.00813	0.00811	0.00899	0.00942	0.00963	0.00927	0.00923	0.00911	0.00925
12	0.01356	0.01135	0.00801	0.00811	0.00898	0.00944	0.00957	0.00928	0.00929	0.0092	0.00935

**Tabel 5.4. Lanjutan**

13	0.01364	0.01338	0.0106	0.00839	0.00899	0.0094	0.00942	0.00948	0.00931	0.00924	0.00935
14	0.0126	0.01436	0.01286	0.01286	0.00905	0.00929	0.00924	0.00937	0.00941	0.00919	0.00932
15	0.01186	0.01348	0.01381	0.01379	0.01183	0.00922	0.00901	0.00922	0.00944	0.00934	0.00943
16	0.01779	0.01561	0.01771	0.018	0.01236	0.01078	0.00874	0.00914	0.00932	0.00935	0.00933
17	0.01593	0.01613	0.01721	0.01693	0.01142	0.01038	0.00789	0.00902	0.00923	<b>0.00937</b>	0.00926
18	0.01345	0.01387	0.01469	0.01431	0.0129	0.00898	0.01374	0.00758	0.00905	0.0092	0.00924
19	0.01049	0.01081	0.01145	0.01116	0.01234	0.00724	0.01123	0.00639	0.00766	0.00897	0.00905
20	0.00753	0.00778	0.00817	0.00801	0.00875	0.00556	0.00806	0.00532	0.00569	0.00661	0.00881
	0.01779	0.01613	0.01771	0.018	0.0129	0.01078	0.01374	0.00948	0.00944	<b>0.00937</b>	0.00943



**Gambar 5.8. Grafik simpangan antar tingkat maksimum arah x**



**Gambar 5.9.** Grafik simpangan antar tingkat maksimum arah y

### 5.5.3. Gaya Geser Dasar (*Base Shear*)

Salah satu fungsi utama dinding geser adalah menahan gaya geser yang terjadi akibat beban lateral gempa. Nilai gaya geser dasar diperoleh dari *output* SAP 2000 (*Display Time History Traces*) yaitu nilai maksimum gaya geser yang terjadi pada kolom lantai pertama (*base*) pada arah x dan y. Gaya geser dasar maksimum arah x dapat dilihat pada Tabel 5.5. dan Gambar 5.10., gaya geser dasar maksimum arah y dapat dilihat pada Tabel 5.6. dan Gambar 5.11.

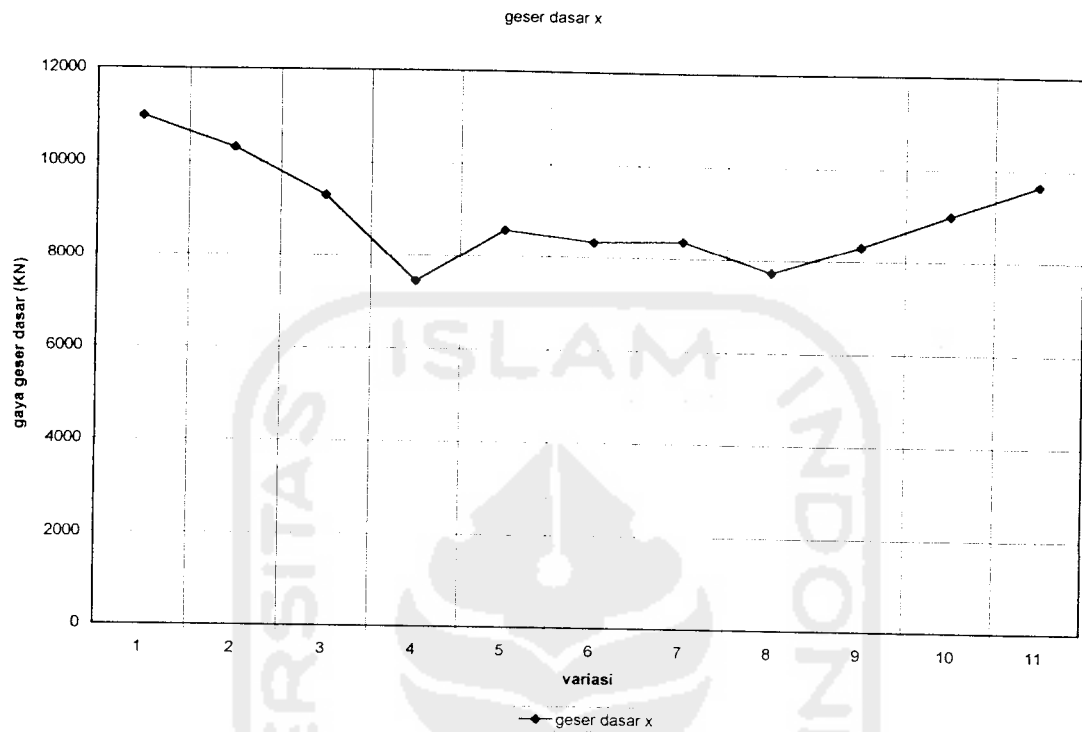
**Tabel 5.5.** Gaya geser dasar maksimum arah x

Variasi	Gaya geser dasar maksimum arah x (KN)
1	10971.271
2	10311.593
3	9294.109
4	<b>7453.934</b>
5	8574.351
6	8331.271
7	8374.459
8	7731.138
9	8317.076
10	8996.110
11	9651.413

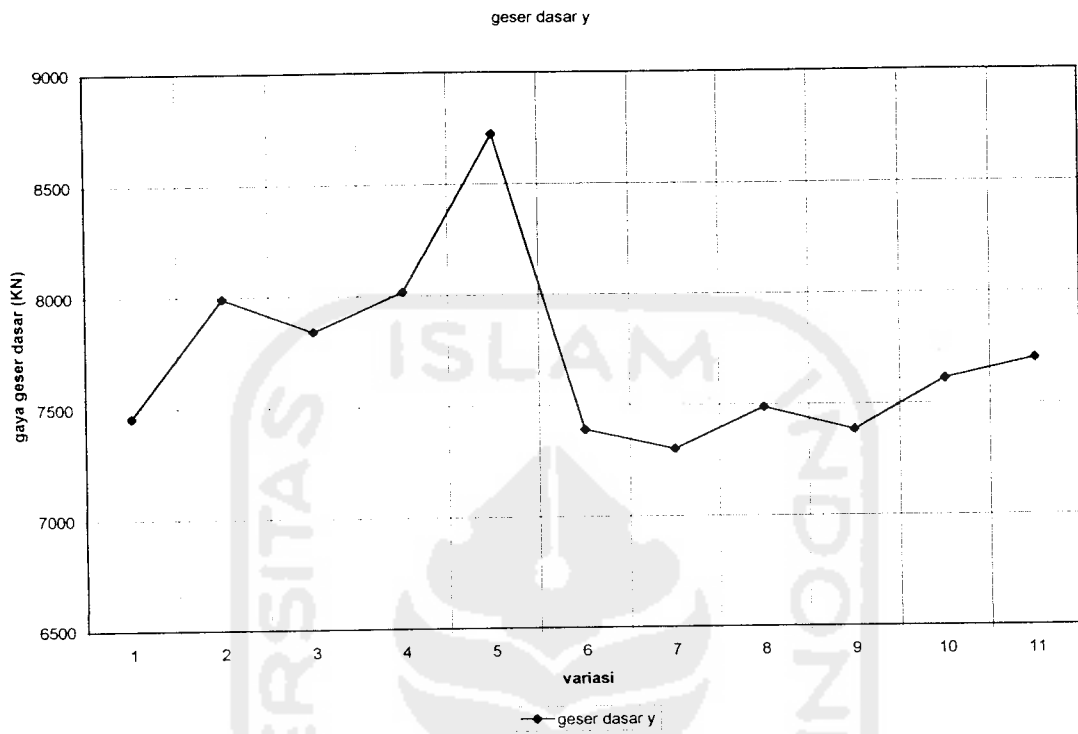
**Tabel 5.6.** Gaya geser dasar maksimum arah y

Variasi	Gaya geser dasar maksimum arah y (KN)
1	7457.222
2	7991.411
3	7840.596
4	8017.720
5	8723.935
6	7390.514
7	<b>7302.705</b>
8	7487.536
9	7384.910
10	7611.941
11	7701.879





**Gambar 5.10.** Grafik gaya geser dasar maksimum arah x



**Gambar 5.11.** Grafik gaya geser dasar maksimum arah y

#### 5.5.4. Momen Guling Dasar (*Base Moment*)

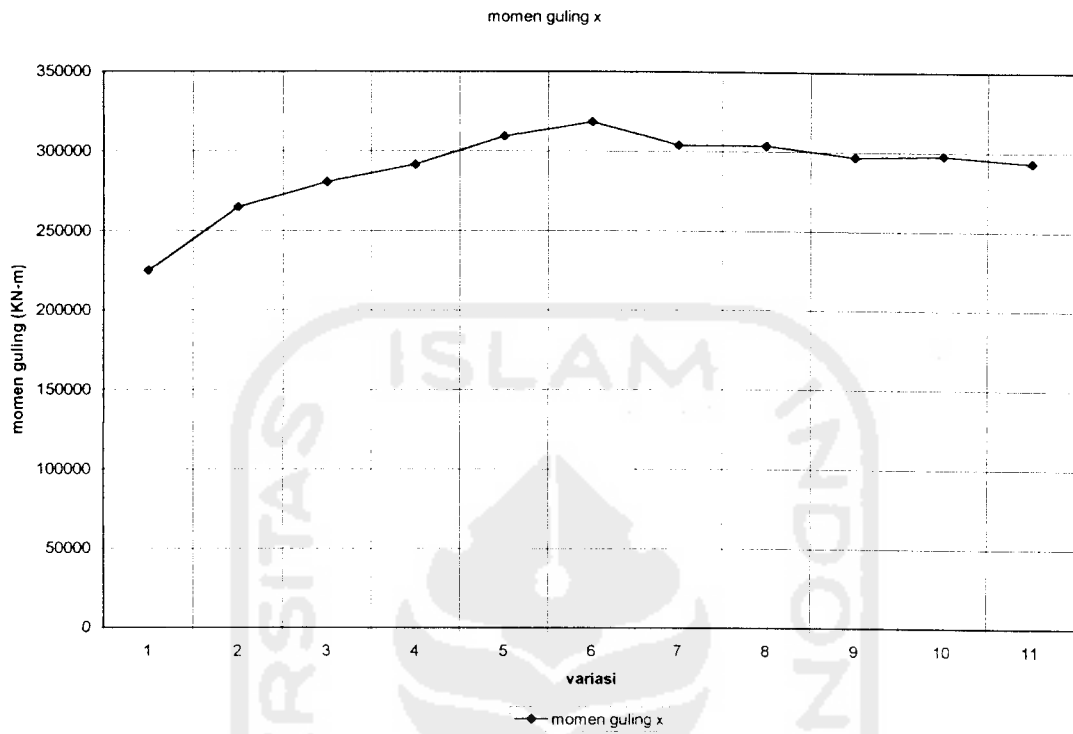
Besar momen guling dasar didapat dari hasil kali gaya gempa horizontal dengan tinggi setiap tingkatnya. Nilai momen guling dasar diperoleh dari *output* SAP 2000 (*Display Time History Traces*) yaitu nilai maksimum momen guling yang terjadi pada kolom lantai pertama (*base*) pada arah x dan y. Momen guling dasar arah x dapat dilihat pada Tabel 5.7. dan Gambar 5.12., momen guling dasar arah y dapat dilihat pada Tabel 5.8. dan Gambar 5.13.

**Tabel 5.7.** Momen guling dasar maksimum arah x

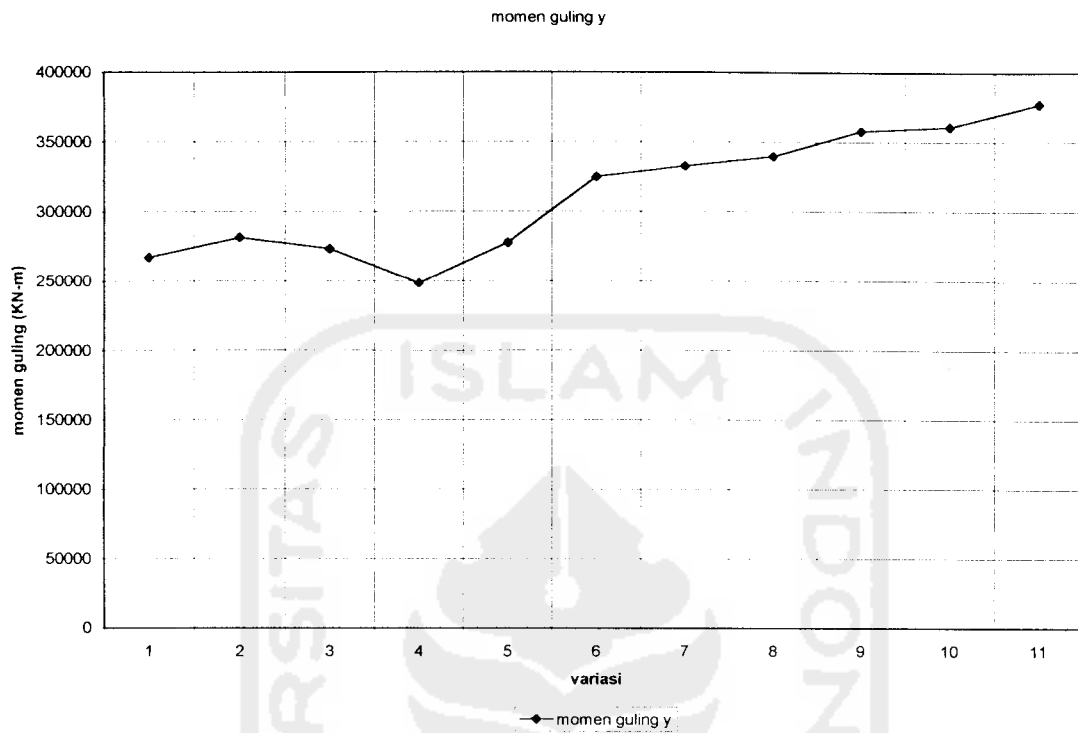
Variasi	Momen guling maksimum arah x (KN-m)
1	<b>224737.406</b>
2	265060.688
3	280795.250
4	291777.219
5	309474.281
6	318558.410
7	303961.625
8	303911.781
9	296928.281
10	297896.813
11	293483.719

**Tabel 5.8.** Momen guling dasar maksimum arah y

Variasi	Momen guling maksimum arah y (KN-m)
1	266951.438
2	281479.906
3	273297.344
4	<b>248535.016</b>
5	277567.813
6	325104.780
7	332745.440
8	339587.060
9	357899.590
10	361005.530
11	377410.800



Gambar 5.12. Grafik momen guling dasar maksimum arah x



**Gambar 5.13.** Grafik momen guling dasar maksimum arah y

## 5.6. Pembahasan

Dari hasil *output* SAP 2000 dan hitungan dengan *microsoft excel* berupa tabel dan grafik seperti diatas, kemudian dibahas satu-persatu yaitu simpangan relatif lantai, simpangan antar tingkat, gaya geser dasar, momen guling dasar, dan *A/V ratio* maksimum El Centro 1940 vs frekuensi bangunan yang akan digunakan sebagai dasar dalam pengambilan kesimpulan pada penelitian ini.

### 5.6.1. Simpangan Relatif Lantai

Pada simpangan relatif maksimum arah x di tabel 5.1. dan Gambar 5.6. dan simpangan relatif maksimum arah y di tabel 5.2. dan Gambar 5.7., nampak bahwa pada variasi 11 terlihat berupa garis linier pada seluruh lantai karena seluruh lantai struktur didominasi oleh dinding geser. Pada variasi lainnya dari lantai 1 sampai dengan lantai 9 berupa garis linier, hal ini menandakan bahwa struktur didominasi oleh kekakuan dinding geser yang besar sehingga kenaikan simpangan relatif yang terjadi di setiap tingkatnya relatif konstan, sedangkan pada lantai 10 sampai atap cenderung berupa garis lengkung karena struktur didominasi oleh kekakuan portal (*frame*) yang semakin menurun sejalan dengan ketinggian tingkat struktur sehingga simpangan relatif yang terjadi berubah-ubah sejalan dengan perubahan kekakuan portal (*frame*) pada setiap tingkatnya.

### 5.6.2. Simpangan Antar Tingkat (*Inter-story Drift*)

Simpangan antar tingkat dihitung untuk menentukan ketinggian dinding geser berlubang yang efektif. Pada pasal 2.6.3. Pedoman Perencanaan Gempa Untuk Rumah dan Gedung 1987 (PPKGURG 1987) menyebutkan adanya pembatasan simpangan antar tingkat, yang mana perbandingan antara simpangan antar tingkat dengan tinggi tingkat yang bersangkutan tidak boleh melampaui 0.5% dari tinggi tingkat =  $0.005 \times 4 \text{ m} = 2 \text{ cm}$ , berarti simpangan antar tingkat yang terjadi tidak boleh lebih besar dari 2 cm. Dengan melihat hasil simpangan antar tingkat arah x dan y (lihat tabel 5.3. dan tabel 5.4.) pada seluruh variasi, secara keseluruhan struktur aman sesuai dengan persyaratan simpangan antar tingkat.

Pada simpangan antar tingkat maksimum arah x di tabel 5.3. dan Gambar 5.8. didapat hasil simpangan antar tingkat maksimum dari tiap variasi yang terkecil (paling efektif) pada variasi 6 yaitu 75% dari total ketinggian bangunan, besar simpangan yang terjadi  $0.00893 \text{ m} = 0.893 \text{ cm}$  pada lantai 9. Pada simpangan antar tingkat maksimum arah y di tabel 5.4. dan Gambar 5.9. didapat hasil simpangan antar tingkat maksimum dari tiap variasi yang terkecil (paling efektif) pada variasi 10 yaitu 95% dari total ketinggian bangunan, besar simpangan yang terjadi  $0.00937 \text{ m} = 0.937 \text{ cm}$  pada lantai 17.

Dari hasil nilai efektif simpangan antar tingkat kedua arah yaitu arah x dan arah y dapat diambil ketinggian dinding geser berlubang yang paling efektif yaitu nilai simpangan antar tingkat yang terkecil dari kedua arah tersebut yaitu

pada variasi 6 yaitu 75% dari total ketinggian bangunan dengan simpangan terjadi sebesar  $0.00893 \text{ m} = 0.893 \text{ cm}$ .

### 5.6.3. Gaya Geser Dasar

Besar gaya geser dasar dipengaruhi oleh kekakuan tingkat, gaya geser dasar disini ditinjau dari nilai maksimum gaya geser yang terjadi pada kolom lantai pertama (*base shear*). Pada gaya geser dasar maksimum arah x di tabel 5.5. dan Gambar 5.10. nampak bahwa gaya geser dasar maksimum yang terkecil pada variasi 4 yaitu 65% dari total ketinggian bangunan sebesar 7453.934 KN. Pada gaya geser dasar maksimum arah y di tabel 5.6. dan Gambar 5.11. nampak bahwa gaya geser dasar maksimum yang terkecil pada variasi 7 yaitu 80% dari total ketinggian bangunan sebesar 7302.705 KN.

Dari hasil nilai efektif gaya geser dasar kedua arah yaitu arah x dan y dapat diketahui gaya geser pada dinding geser berlubang yang paling efektif adalah nilai terkecil gaya geser dari kedua arah tersebut yaitu pada variasi 7, ketinggian dinding geser 80% dari total ketinggian bangunan, dengan gaya geser sebesar 7302.705 KN.

Pada penelitian dinding geser berlubang ini besarnya gaya geser dasar yang terjadi nilainya fluktuatif karena pengaruh perbedaan kekakuan tingkat, pengaruh massa struktur yang bertambah karena dinding geser berlubang, dan pengaruh beban gempa dinamik yang fluktuatif terhadap waktu. Dari hasil yang



fluktuatif tadi didapat gaya geser dasar yang efektif pada variasi 7, ketinggian 80% dari total tinggi bangunan.

#### 5.6.4. Momen Guling Dasar

Momen guling dipengaruhi oleh gaya lantai dan elevasi lantai. Momen guling disini ditinjau dari nilai maksimum momen guling yang terjadi pada kolom lantai pertama (*base moment*). Pada momen guling dasar maksimum arah x di tabel 5.7. dan Gambar 5.12. nampak bahwa momen guling dasar maksimum yang terkecil pada variasi 1 yaitu 50% dari total ketinggian bangunan sebesar 224737.406 KN.m. Pada momen guling dasar maksimum arah y di tabel 5.8. dan Gambar 5.13. nampak bahwa momen guling dasar maksimum yang terkecil pada variasi 4 yaitu 65% dari total ketinggian bangunan sebesar 248535.016 KN.m.

Dari hasil nilai efektif momen guling dasar kedua arah yaitu arah x dan arah y dapat diketahui momen guling pada dinding geser berlubang yang paling efektif yaitu nilai terkecil gaya geser dari kedua arah tersebut yaitu pada variasi 1 yaitu 50% dari total ketinggian bangunan sebesar 224737.406 KN.m.

Momen guling yang efektif didapat pada dinding geser berlubang yang tingginya 50% dari total tinggi bangunan terjadi kerana berat strukturnya paling ringan dibandingkan dengan variasi yang lainnya, ini dapat dilihat pada Tabel 5.7. dan Tabel 5.8. bahwa nilai momen guling yang terjadi cenderung meningkat seiring dengan bertambahnya ketinggian dinding geser berlubang. Ini berarti

bahwa semakin berat struktur maka gaya lateral semakin besar sehingga momen guling yang terjadi semakin besar.

#### 5.6.5. *A/V ratio* maksimum El Centro 1940 vs frekuensi bangunan

Getaran tanah akibat gempa mengandung frekuensi yang lebar (*wide range frequency*), kandungan frekuensi dominan gempa dapat dinyatakan secara praktis dengan rasio  $A/V$ , dimana  $A$  adalah percepatan maksimum tanah dan  $V$  adalah kecepatan maksimum tanah.  $A/V$  *ratio* maksimum gempa El Centro arah  $x$  (N-S) adalah 10.21537 Hz dan arah  $y$  (E-W) adalah 5.691653 Hz sedangkan frekuensi bangunan yang terjadi pada variasi 1 s/d variasi 11 adalah bernilai antara 0.599346 Hz s/d 1.247753 Hz, ini berarti bahwa frekuensi keduanya sangat berbeda jauh maka tidak terjadi resonansi (*resonance*) pada bangunan yang diteliti atau tidak terjadi respon yang sangat besar pada bangunan akibat beban gempa karena frekuensinya berbeda sehingga tidak memperparah kerusakan struktur bangunan.

## **BAB VI**

### **KESIMPULAN DAN SARAN**

Kesimpulan diambil berdasarkan pembahasan pada Bab V yang merupakan hasil dari analisis dengan SAP 2000 yang kemudian dibandingkan dengan penelitian-penelitian sebelumnya maupun dari teori-teori yang ada. Saran pada Bab ini ditulis mengingat berbagai kekurangan dan keterbatasan penulisan Tugas Akhir ini sehingga diharapkan adanya penyempurnaan penelitian selanjutnya yang lebih detail dan *comprehensive* (luas, meliputi banyak hal).

#### **6.1. Kesimpulan**

Berdasarkan hasil analisis dan pembahasan penelitian tentang analisis dinamis 3 D pengaruh ketinggian dinding geser berlubang-portal terhadap simpangan, gaya geser, dan momen guling menggunakan eksitasi gempa El Centro 1940 arah N-S, E-W, dan Vertikal dihasilkan kesimpulan sebagai berikut ini.

1. Penggunaan dinding geser berlubang dengan ketinggian semakin bertambah akan lebih memperkaku struktur ditinjau dari simpangan relatif tiap tingkat yang nampak garisnya semakin linier sejalan dengan bertambahnya ketinggian dari dinding geser berlubang.

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2. Berdasarkan hasil perhitungan SAP 2000, simpangan antar tingkat pada struktur dinding geser berlubang-portal pada arah x dan y diperoleh bahwa seluruh variasi ketinggian dinding geser berlubang-portal aman sesuai persyaratan PPKGURG 1987 yaitu lebih kecil dari 0.5% dari tinggi tingkat =  $0.005 \times 4 \text{ m} = 2 \text{ cm}$ .
3. Dari hasil analisis dinamis SAP 2000 diperoleh nilai simpangan antar tingkat yang efektif pada variasi 6 yaitu ketinggian 75% dari total tinggi bangunan dengan nilai simpangan antar tingkat sebesar  $0.00893 \text{ m} = 0.893 \text{ cm}$ .
4. Nilai gaya geser dasar yang efektif pada variasi 7 yaitu ketinggian 80% dari total tinggi bangunan dengan nilai gaya geser dasar sebesar 7302.705 KN.
5. Nilai momen guling dasar yang efektif pada variasi 1 yaitu ketinggian 50% dari total tinggi bangunan dengan nilai momen guling dasar sebesar 224737.406 KN.m.
6. Dari hasil analisis dari simpangan antar tingkat dan tinjauan gaya geser dasar, diperoleh struktur dinding geser berlubang-portal yang efektif pada interval ketinggian 75% s/d 80% dari total tinggi bangunan.
7. Hasil analisis kekakuan optimum dinding geser berlubang-portal dibandingkan dengan hasil analisis kekakuan optimum dinding

geser-portal adalah sama (interval 75% s/d 80% dari total ketinggian bangunan).

## 6.2. Saran

Beberapa saran yang dapat disampaikan guna penyempurnaan pada penelitian selanjutnya adalah perlu diadakan :

1. model penelitian serupa yang memperhitungkan  $P-\Delta$  effect dan beban angin,
2. model penelitian serupa yang menggunakan pembebanan dinamik dengan beban gempa fungsi respon spektrum (*response spectrum functions*) secara 3D arah x, y, dan z,
3. model penelitian serupa yang memperhitungkan variasi jenis (lubang bujur sangkar, lubang memanjang horizontal, dan lubang memanjang vertikal) dan variasi ukuran lubang dinding geser,
4. penelitian dengan memvariasi denah peletakan komponen struktur dinding geser berlubang dengan memperhitungkan rotasi akibat momen puntir dan
5. penelitian pada bangunan simetris dua arah (3D) dengan dinding geser berlubang berada pada inti bangunan (*core*), variasi ketinggian dinding geser berlubang tidak memberikan pengaruh terhadap parameter tinjauan momen guling dalam pencarian nilai kekakuan yang optimum struktur dinding geser berlubang-portal.

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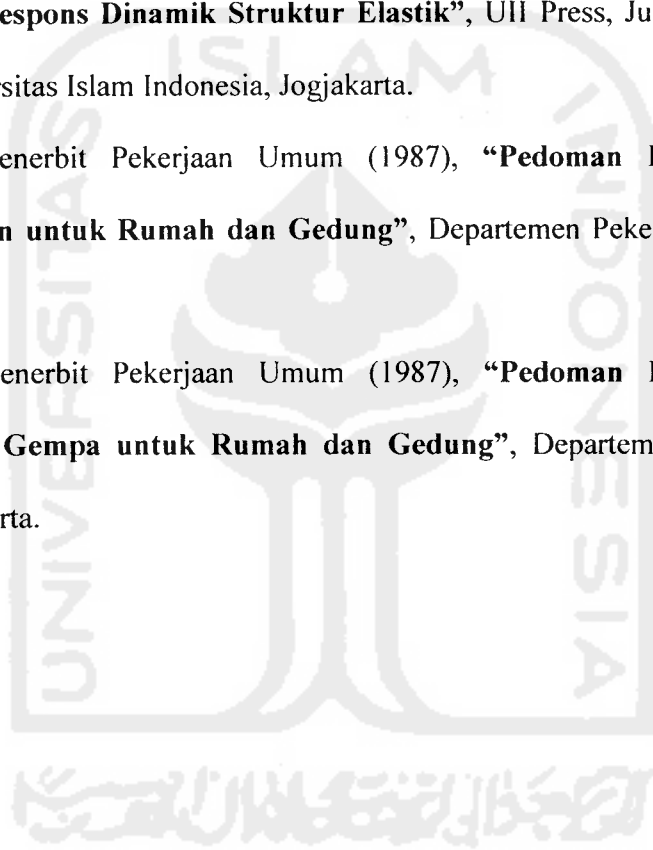
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2	Armono Wibowo	98511295	Teknik Sipil

**JUDUL TUGAS AKHIR :**

.....  
 Analisis dinamis 3D pengaruh jumlah dan ketinggian dinding geser portal terhadap  
 simpangan geser dan momen guling.  
 .....

**PERIODE II : DESEMBER - MEI**

TAHUN : 2002 / 2003

No.	Kegiatan	Bulan Ke :					
		Des.	Jan.	Peb.	Mar.	Apr.	Mei.
1.	Pendaftaran	■					
2.	Penentuan Dosen Pembimbing	■					
3.	Pembuatan Proposal		■				
4.	Seminar Proposal		■	■			
5.	Konsultasi Penyusunan TA.			■	■	■	
6.	Sidang-Sidang					■	■
7.	Pendadaran.						■

DOSEN PEMBIMBING I : ...Ir. Helmy Akbar Bale, MT.  
 DOSEN PEMBIMBING II : ...Ir. H. Sarwidi, MSCE, PhD.



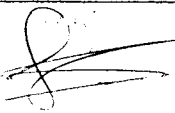


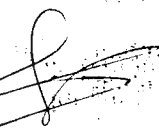
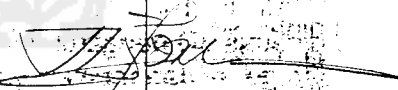
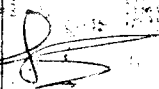
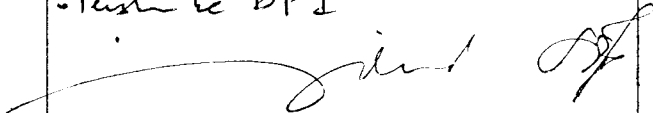
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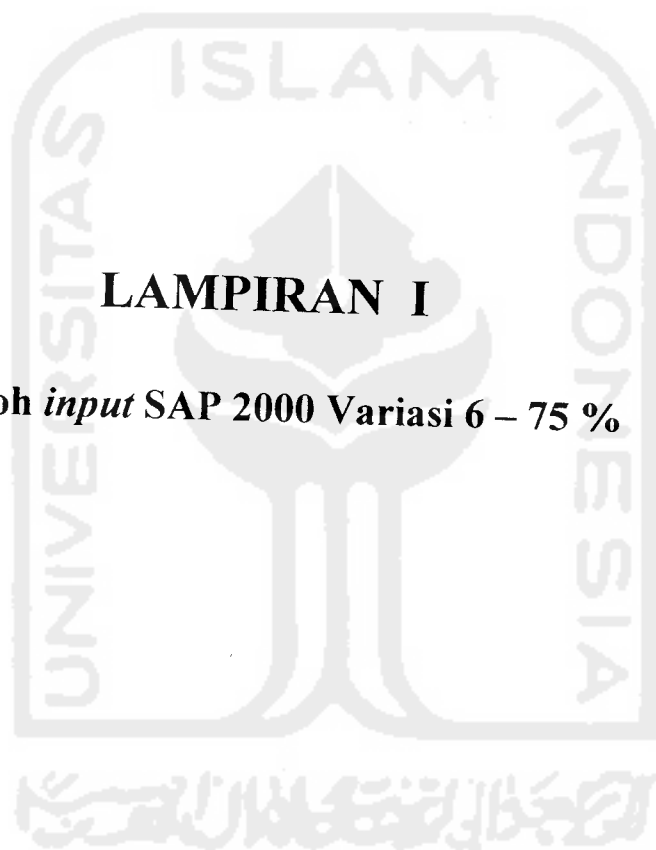
Sa.n. Dekan,

  
 (.....Ir. H. Munadhir, MS.....)
**Catatan.**

Seminar : ..... 14 Februari 2003 .....  
 Sidang : ..... 31 MARET... 2003 .....  
 Pendadaran : ..... 3 Mei 2003 .....

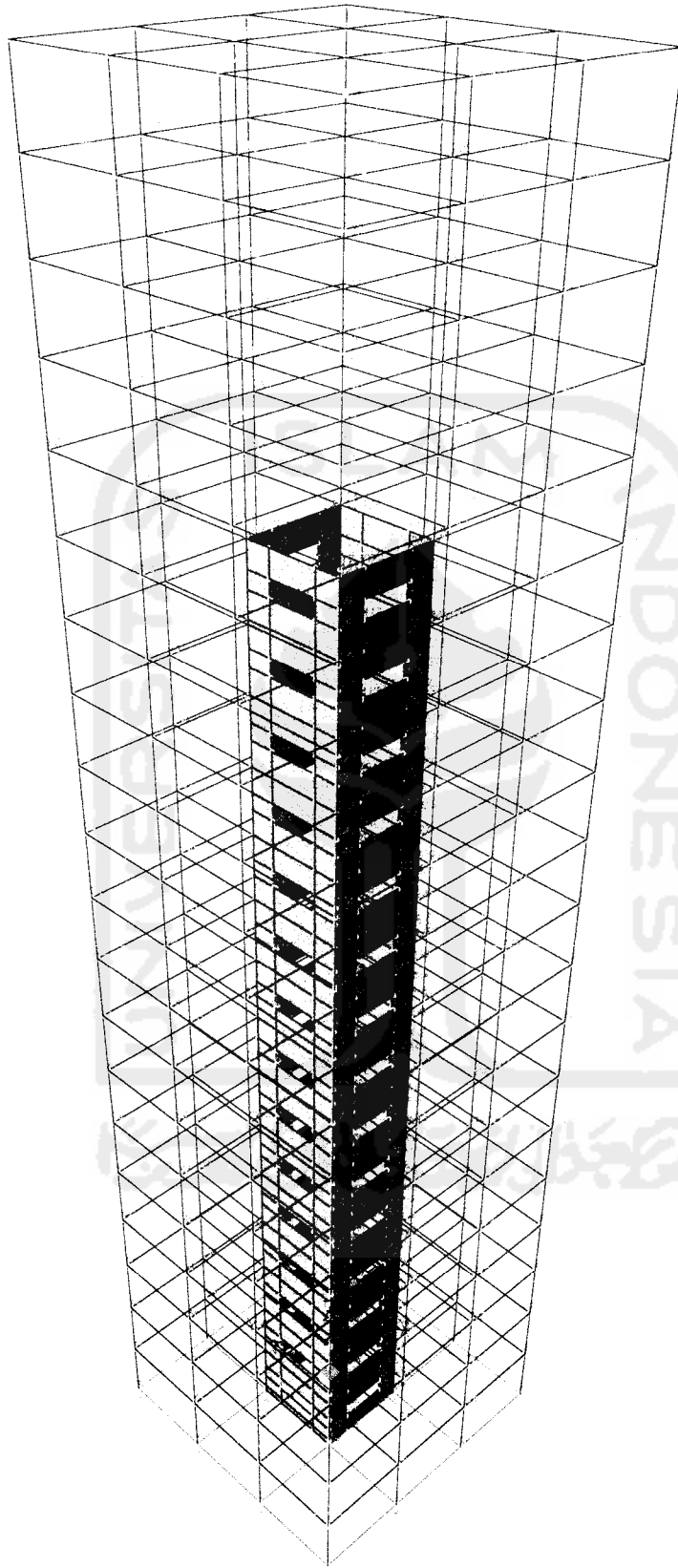
## CATATAN KONSULTASI TUGAS AKHIR

NO	TANGGAL	CATATAN KONSULTASI	TANDA TANGAN
01	03/02/2003	<ul style="list-style-type: none"> <li>- Pembacaan surat DP I petyajid</li> <li>- Surat Semar → tugas ke DP I</li> <li>- format pemusatan, surat</li> </ul>	 4/2 '03
02	25/02/2003	<ul style="list-style-type: none"> <li>- Pembacaan surat</li> <li>- Pembacaan surat</li> <li>- Pembacaan surat</li> </ul>	
03	05/03/2003	<ul style="list-style-type: none"> <li>- Laporan dari nomor 2 dan nomor 1000</li> <li>- Tugas ke DP I untuk Justisia Ridy</li> <li>- DP II de untuk Indig</li> </ul>	 
04	11/03/2003	surat sedang	
05	17/04/2003	<ul style="list-style-type: none"> <li>- Surat penerangan, surat</li> <li>- DP II de ke penerangan</li> </ul>	
	14/4 '03	Surat penerangan	
	07/05/2003	<ul style="list-style-type: none"> <li>- Surat penerangan yg kebetulan, penerangan yg ada surat penerangan</li> <li>- Tugas ke DP I</li> </ul>	 

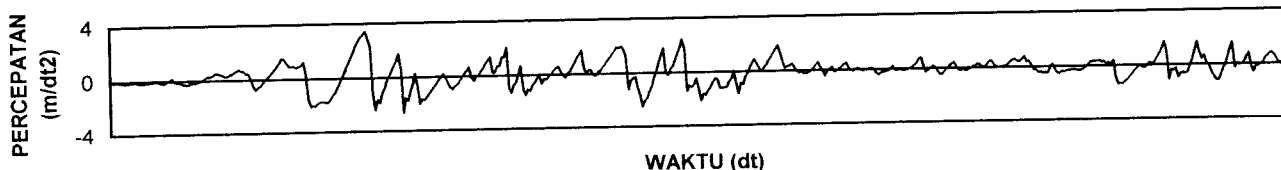


## **LAMPIRAN I**

**Contoh *input* SAP 2000 Variasi 6 – 75 %**



GRAFIK DAN DATA PERCEPATAN GEMPA EL CENTRO 1940 N-S

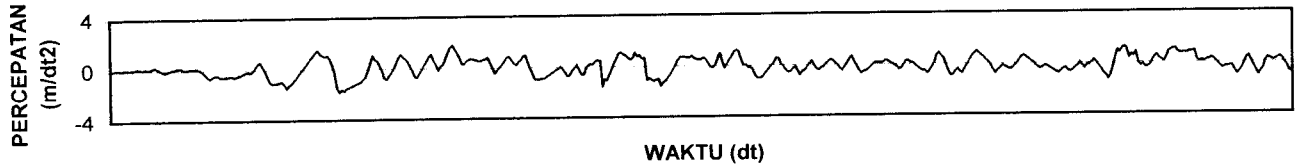


TIME HISTORY DATA

FUNCTION EC1940NS: Function EC1940NS

TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION
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0	-0.014	0.92	0.359	1.84	-1.347	2.76	-0.044	3.68	-0.109	4.6	0.154	5.52	0.292	6.44	0.085	7.36	0.232	8.28	0.087	9.2	1.072
0.02	-0.108	0.94	0.271	1.86	-1.087	2.78	0.188	3.7	0.017	4.62	0.816	5.54	0.445	6.46	-0.056	7.38	0.079	8.3	0.281	9.22	1.669
0.04	-0.101	0.96	0.235	1.88	-0.782	2.8	-0.095	3.72	0.299	4.64	1.319	5.56	0.785	6.48	-0.304	7.4	-0.008	8.32	0.31	9.24	0.947
0.06	-0.088	0.98	0.339	1.9	-0.429	2.82	-0.433	3.74	0.488	4.66	1.818	5.58	1.033	6.5	-0.421	7.42	0.2	8.34	0.358	9.26	0.408
0.08	-0.095	1	0.412	1.92	-0.017	2.84	-0.838	3.76	0.608	4.68	-0.058	5.6	1.352	6.52	-0.244	7.44	0.435	8.36	0.341	9.28	0.667
0.1	-0.12	1.02	0.53	1.94	0.36	2.86	-0.951	3.78	0.222	4.7	-0.169	5.62	1.606	6.54	-0.236	7.46	0.492	8.38	0.358	9.3	0.132
0.12	-0.142	1.04	0.639	1.96	0.785	2.88	-0.716	3.8	-0.032	4.72	0.285	5.64	1.861	6.56	-0.177	7.48	0.191	8.4	0.287	9.32	-0.095
0.14	-0.128	1.06	0.732	1.98	1.164	2.9	-0.599	3.82	-0.245	4.74	0.447	5.66	1.281	6.58	-0.129	7.5	0.092	8.42	0.305	9.34	-0.52
0.16	-0.11	1.08	0.652	2	1.598	2.92	-0.334	3.84	0.077	4.76	0.983	5.68	0.64	6.6	-0.018	7.52	-0.022	8.44	0.112	9.36	-0.827
0.18	-0.085	1.1	0.599	2.02	1.96	2.94	-0.108	3.86	0.211	4.78	1.424	5.7	0.204	6.62	0.203	7.54	-0.021	8.46	0.214	9.38	-1.152
0.2	-0.085	1.12	0.4	2.04	2.412	2.96	0.185	3.88	0.568	4.8	1.853	5.72	0.314	6.64	-0.108	7.56	0.052	8.48	0.136	9.4	-1.15
0.22	-0.131	1.14	0.4	2.06	2.729	2.98	0.42	3.9	0.826	4.82	2.456	5.74	0.373	6.66	-0.091	7.58	0.093	8.5	0.384	9.42	-0.803
0.24	-0.176	1.16	0.063	2.08	3.036	3	0.673	3.92	1.206	4.84	1.685	5.76	0.496	6.68	-0.034	7.6	0.255	8.52	-0.861	9.44	-0.369
0.26	-0.194	1.18	-0.515	2.1	3.2	3.02	-0.097	3.94	1.478	4.86	-1.38	5.78	0.235	6.7	-0.106	7.62	0.368	8.54	-1.349	9.46	0.029
0.28	-0.162	1.2	-0.787	2.12	3.417	3.04	-0.372	3.96	1.737	4.88	-0.999	5.8	-0.084	6.72	-0.111	7.64	0.525	8.56	-1.342	9.48	0.545
0.3	-0.144	1.22	-0.603	2.14	2.821	3.06	-0.04	3.98	0.421	4.9	-1.089	5.82	-0.168	6.74	-0.093	7.66	0.541	8.58	-1.354	9.5	1.178
0.32	-0.108	1.24	-0.484	2.16	2.324	3.08	0.011	4	0.029	4.92	-0.907	5.84	-0.113	6.76	-0.002	7.68	0.425	8.6	-1.193	9.52	1.61
0.34	-0.082	1.26	-0.25	2.18	-1.198	3.1	0.344	4.02	0.259	4.94	-0.469	5.86	-0.229	6.78	0.073	7.7	0.398	8.62	-1.042	9.54	-0.27
0.36	-0.042	1.28	-0.059	2.2	-2.373	3.12	0.565	4.04	0.293	4.96	-1.25	5.88	-0.248	6.8	0.235	7.72	0.559	8.64	-0.829	9.56	0.034
0.38	-0.066	1.3	0.134	2.22	-1.64	3.14	0.883	4.06	-0.055	4.98	-2.111	5.9	-0.157	6.82	0.355	7.74	0.756	8.66	-0.651	9.58	-0.056
0.4	-0.131	1.32	0.308	2.24	-1.865	3.16	1.13	4.08	-0.147	5	-1.617	5.92	-0.069	6.84	0.705	7.76	0.365	8.68	-0.444	9.6	0.02
0.42	-0.19	1.34	0.499	2.26	-1.095	3.18	1.363	4.1	0.143	5.02	-1.692	5.94	0.147	6.86	0.779	7.78	0.411	8.7	-0.258	9.62	0.146
0.44	-0.196	1.36	0.71	2.28	-0.753	3.2	0.219	4.12	0.206	5.04	-1.306	5.96	0.379	6.88	0.184	7.8	0.098	8.72	-0.06	9.64	0.537
0.46	-0.066	1.38	0.995	2.3	-0.173	3.22	0.241	4.14	0.499	5.06	-1.111	5.98	0.579	6.9	-0.263	7.82	-0.204	8.74	-0.091	9.66	0.798
0.48	0.03	1.4	1.219	2.32	0.113	3.24	0.683	4.16	0.645	5.08	-0.773	6	0.255	6.92	-0.124	7.84	-0.249	8.76	-0.182	9.68	-0.205
0.5	0.141	1.42	1.529	2.34	0.533	3.26	0.689	4.18	0.957	5.1	-0.51	6.02	-0.041	6.94	-0.042	7.86	-0.405	8.78	-0.147	9.7	-0.59
0.52	-0.049	1.44	1.449	2.36	0.895	3.28	1.318	4.2	1.128	5.12	-0.544	6.04	-0.428	6.96	0.159	7.88	-0.413	8.8	0.085	9.72	-0.169
0.54	-0.128	1.46	1.155	2.38	1.186	3.3	1.353	4.22	1.447	5.14	-1.2	6.06	-0.133	6.98	0.048	7.9	-0.471	8.82	0.163	9.74	-0.175
0.56	-0.144	1.48	0.935	2.4	1.757	3.32	2.04	4.24	1.629	5.16	-1.209	6.08	0.095	7	-0.219	7.92	-0.433	8.84	0.05	9.76	-0.028
0.58	-0.203	1.5	0.892	2.42	0.576	3.34	-0.931	4.26	1.945	5.18	-1.158	6.1	0.23	7.02	-0.467	7.94	-0.458	8.86	0.264	9.78	0.074
0.6	-0.26	1.52	0.926	2.44	-2.631	3.36	-1.308	4.28	1.856	5.2	-1.145	6.12	-0.129	7.04	-0.428	7.96	-0.057	8.88	0.582	9.8	0.382
0.62	-0.325	1.54	0.839	2.46	-1.547	3.38	-0.692	4.3	1.984	5.22	-0.717	6.14	-0.05	7.06	-0.216	7.98	0.178	8.9	0.867	9.82	0.567
0.64	-0.306	1.56	0.901	2.48	-1.729	3.4	-0.546	4.32	1.769	5.24	-0.546	6.16	0.08	7.08	-0.043	8	-0.208	8.92	1.2	9.84	0.753
0.66	-0.172	1.58	0.993	2.5	-1.012	3.42	0.072	4.34	1.25	5.26	0.064	6.18	0.21	7.1	0.159	8.02	-0.492	8.94	1.695	9.86	0.801
0.68	-0.197	1.6	1.209	2.52	-0.579	3.44	0.675	4.36	-1.207	5.28	-0.804	6.2	0.38	7.12	0.32	8.04	-0.53	8.96	1.111	9.88	0.592
0.7	-0.163	1.62	0.328	2.54	0.237	3.46	-1.067	4.38	-0.542	5.3	-1.634	6.22	0.51	7.14	0.419	8.06	-0.362	8.98	-1.1	9.9	0.304
0.72	-0.164	1.64	-1.475	2.56	-0.67	3.48	-1.488	4.4	-0.384	5.32	-0.859	6.24	0.157	7.16	0.123	8.08	-0.405	9	-0.366	9.92	0.023
0.74	-0.067	1.66	-2.066	2.58	-1.98	3.5	-1.071	4.42	-0.311	5.34	-0.961	6.26	-0.032	7.18	-0.16	8.1	-0.308	9.02	-0.445	9.94	0.064
0.76	0.025	1.68	-1.989	2.6	-1.641	3.52	-1.162	4.44	-1.118	5.36	-0.396	6.28	-0.111	7.2	-0.204	8.12	-0.316	9.04	-0.236	9.96	-0.406
0.78	0.15	1.7	-2.034	2.62	-1.685	3.54	-0.762	4.46	-1.661	5.38	-0.147	6.3	0.005	7.22	-0.082	8.14	-0.285	9.06	-0.96	9.98	-0.451
0.8	0.236	1.72	-1.816	2.64	-1.481	3.56	-0.559	4.48	-2.464	5.4	0.319	6.32	0.076	7.24	-0.206	8.16	-0.265	9.08	-0.856	10	-0.079
0.82	0.252	1.74	-1.725	2.66	-1.231	3.58	-0.215	4.5	-2.025	5.42	0.648	6.34	0.035	7.26	-0.137	8.18	-0.269	9.1	-0.597		
0.84	0.336	1.76	-1.752	2.68	-1.001	3.6	-0.126	4.52	-1.835	5.44	0.876	6.36	-0.095	7.28	-0.055	8.2	-0.345	9.12	-0.67		
0.86	0.463	1.78	-1.753	2.7	-0.751	3.62	-0.674	4.54	-1.317	5.46	0.472	6.38	-0.036	7.3	0.053	8.22	-0.309	9.14	-0.552		
0.88	0.492	1.8	-1.805	2.72	-0.523	3.64	-0.324	4.56	-0.96	5.48	0.198	6.4	-0.016	7.32	0.134	8.24	-0.217	9.16	-0.027		
0.9	0.419	1.82	-1.63	2.74	-0.271	3.66	-0.337	4.58	-0.325	5.5	-0.027	6.42	0.038	7.34	0.266	8.26	-0.078	9.18	0.378		

GRAFIK DAN DATA PERCEPATAN GEMPA EL CENTRO 1940 E-W

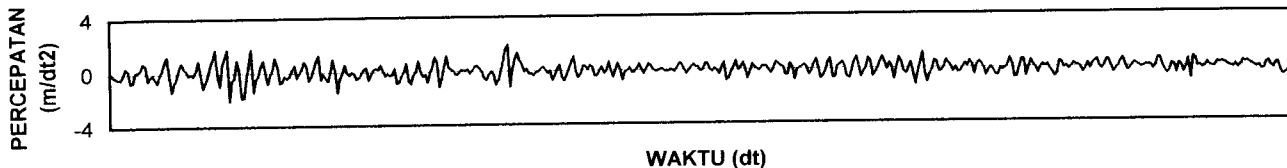


TIME HISTORY DATA

FUNCTION EC1940EW: Function EC1940EW

TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION
EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW	EC1940EW
0	0.003	0.92	-0.569	1.84	0.369	2.76	0.144	3.68	-0.624	4.6	-1.035	5.52	-0.683	6.44	-0.005	7.36	0.661	8.28	-0.123	9.2	0.221
0.02	0.019	0.94	-0.572	1.86	-0.225	2.78	0.33	3.7	-0.501	4.62	-1.011	5.54	-0.441	6.46	0.161	7.38	0.498	8.3	0.079	9.22	0.052
0.04	0.068	0.96	-0.528	1.88	-1.481	2.8	0.772	3.72	-0.376	4.64	-1.532	5.56	-0.211	6.48	0.132	7.4	0.284	8.32	0.241	9.24	0.139
0.06	0.029	0.98	-0.497	1.9	-1.786	2.82	1.181	3.74	-0.24	4.66	-1.245	5.58	0.017	6.5	0.14	7.42	0.113	8.34	0.002	9.26	0.073
0.08	0.029	1	-0.498	1.92	-1.589	2.84	1.592	3.76	-0.125	4.68	-1.117	5.6	0.198	6.52	0.117	7.44	-0.175	8.36	-0.243	9.28	0.182
0.1	0.054	1.02	-0.55	1.94	-1.693	2.86	1.78	3.78	0.015	4.7	-0.874	5.62	0.578	6.54	0.31	7.46	-0.476	8.38	-0.477	9.3	0.224
0.12	0.083	1.04	-0.492	1.96	-1.521	2.88	1.487	3.8	-0.171	4.72	-0.613	5.64	0.531	6.56	0.288	7.48	-0.738	8.4	-0.752	9.32	0.315
0.14	0.053	1.06	-0.431	1.98	-1.446	2.9	1.183	3.82	-0.421	4.74	-0.258	5.66	0.084	6.58	0.154	7.5	-0.517	8.42	-1.001	9.34	0.285
0.16	0.014	1.08	-0.362	2	-1.348	2.92	0.788	3.84	-0.711	4.76	0.024	5.68	-0.074	6.6	0.085	7.52	-0.369	8.44	-1.278	9.36	0.064
0.18	0.053	1.1	-0.28	2.02	-1.265	2.94	0.326	3.86	-0.643	4.78	0.438	5.7	-0.403	6.62	-0.076	7.54	-0.113	8.46	-0.96	9.38	-0.108
0.2	0.134	1.12	-0.204	2.04	-1.179	2.96	0.351	3.88	-0.277	4.8	0.694	5.72	-0.533	6.64	-0.181	7.56	-0.249	8.48	-0.278	9.4	-0.36
0.22	0.124	1.14	-0.147	2.06	-1.088	2.98	0.529	3.9	-0.065	4.82	0.708	5.74	-0.498	6.66	-0.366	7.58	-0.317	8.5	0.419	9.42	-0.461
0.24	0.066	1.16	-0.213	2.08	-0.997	3	0.69	3.92	0.169	4.84	0.69	5.76	-0.301	6.68	-0.291	7.6	-0.471	8.52	0.989	9.44	-0.343
0.26	0.061	1.18	-0.047	2.1	-0.764	3.02	0.711	3.94	-0.23	4.86	0.673	5.78	-0.106	6.7	-0.013	7.62	-0.389	8.54	0.79	9.46	-0.343
0.28	0.133	1.2	0.215	2.12	-0.595	3.04	0.663	3.96	-0.59	4.88	0.623	5.8	-0.444	6.72	0.274	7.64	-0.232	8.56	1.138	9.48	-0.278
0.3	0.049	1.22	0.479	2.14	-0.095	3.06	0.621	3.98	-0.57	4.9	0.794	5.82	-0.792	6.74	0.245	7.66	-0.027	8.58	1.223	9.5	-0.273
0.32	0.096	1.24	0.58	2.16	0.542	3.08	0.542	4	-0.065	4.92	0.63	5.84	-0.471	6.76	0.109	7.68	0.226	8.6	1.117	9.52	-0.64
0.34	0.188	1.26	0.188	2.18	1.059	3.1	0.521	4.02	0.147	4.94	0.525	5.86	-0.414	6.78	0.092	7.7	0.493	8.62	0.409	9.54	-0.935
0.36	0.243	1.28	-0.122	2.2	0.77	3.12	0.634	4.04	0.205	4.96	0.463	5.88	-0.138	6.8	-0.103	7.72	0.632	8.64	0.653	9.56	-0.743
0.38	0.133	1.3	-0.538	2.22	0.585	3.14	0.698	4.06	0.209	4.98	0.533	5.9	0.098	6.82	-0.24	7.74	0.46	8.66	0.532	9.58	-0.485
0.4	0.046	1.32	-0.968	2.24	0.247	3.16	0.81	4.08	0.439	5	0.623	5.92	0.323	6.84	-0.407	7.76	0.353	8.68	0.847	9.6	-0.05
0.42	-0.081	1.34	-1.1	2.26	-0.128	3.18	0.431	4.1	0.509	5.02	0.517	5.94	0.01	6.86	-0.526	7.78	0.199	8.7	0.001	9.62	0.351
0.44	-0.156	1.36	-1.059	2.28	-0.675	3.2	-0.055	4.12	0.482	5.04	0.206	5.96	-0.287	6.88	-0.494	7.8	0.063	8.72	-0.234	9.64	0.46
0.46	-0.085	1.38	-1.07	2.3	-0.826	3.22	-0.459	4.14	-1.563	5.06	-0.067	5.98	-0.405	6.9	-0.719	7.82	-0.125	8.74	-0.134	9.66	0.089
0.48	-0.031	1.4	-0.999	2.32	-0.521	3.24	-0.206	4.16	-0.985	5.08	-0.132	6	-0.235	6.92	-0.523	7.84	-0.299	8.76	-0.337	9.68	-0.332
0.5	0.04	1.42	-0.936	2.34	-0.3	3.26	-0.007	4.18	-1.074	5.1	0.049	6.02	-0.167	6.94	-0.26	7.86	-0.388	8.78	-0.331	9.7	-0.637
0.52	0.085	1.44	-1.128	2.36	0.074	3.28	0.26	4.2	-0.673	5.12	0.536	6.04	0.067	6.96	0.131	7.88	-0.32	8.8	-0.194	9.72	-1.022
0.54	0.132	1.46	-1.469	2.38	0.447	3.3	0.486	4.22	-0.256	5.14	1.002	6.06	0.237	6.98	0.693	7.9	-0.18	8.82	0.16	9.74	-0.728
0.56	0.18	1.48	-1.213	2.4	0.852	3.32	0.764	4.24	0.261	5.16	0.323	6.08	0.405	7	0.873	7.92	-0.229	8.84	0.474	9.76	-0.474
0.58	0.162	1.5	-1.099	2.42	1.118	3.34	0.879	4.26	0.615	5.18	-0.181	6.1	0.339	7.02	0.616	7.94	-0.364	8.86	0.602	9.78	0.119
0.6	0.023	1.52	-0.858	2.44	0.922	3.36	0.611	4.28	1.022	5.2	0.117	6.12	0.134	7.04	0.419	7.96	-0.462	8.88	0.315	9.8	0.326
0.62	0.025	1.54	-0.636	2.46	0.775	3.38	0.351	4.3	1.093	5.22	0.461	6.14	-0.048	7.06	-0.091	7.98	-0.578	8.9	0.205	9.82	0.253
0.64	0.08	1.56	-0.38	2.48	0.544	3.4	0.198	4.32	0.954	5.24	0.716	6.16	-0.271	7.08	-0.549	8	-0.69	8.92	0.07	9.84	0.144
0.66	0.077	1.58	-0.155	2.5	0.156	3.42	0.429	4.34	0.875	5.26	1.061	6.18	-0.439	7.1	-0.929	8.02	-0.759	8.94	0.389	9.86	0.161
0.68	0.11	1.6	0.107	2.52	-0.183	3.44	0.579	4.36	0.661	5.28	1.216	6.2	-0.125	7.12	-0.853	8.04	-0.583	8.96	0.836	9.88	0.262
0.7	0.131	1.62	0.338	2.54	-0.612	3.46	0.864	4.38	0.523	5.3	1.1	6.22	0.118	7.14	-0.578	8.06	-0.434	8.98	0.996	9.9	0.377
0.72	0.081	1.64	0.599	2.56	-0.7	3.48	0.946	4.4	0.676	5.32	0.528	6.24	0.472	7.16	-0.396	8.08	-0.367	9	1.072	9.92	0.305
0.74	0.013	1.66	0.835	2.58	-0.318	3.5	0.414	4.42	1.079	5.34	0.017	6.26	0.637	7.18	-0.658	8.1	-0.632	9.02	1.098	9.94	-0.022
0.76	-0.151	1.68	1.092	2.6	-0.038	3.52	-0.059	4.44	0.77	5.36	0.046	6.28	0.212	7.2	-0.718	8.12	-0.662	9.04	0.787	9.96	-0.307
0.78	-0.33	1.7	1.325	2.62	0.284	3.54	-0.511	4.46	0.869	5.38	-0.14	6.3	-0.064	7.22	-0.341	8.14	-0.525	9.06	0.713	9.98	-0.7
0.8	-0.532	1.72	1.485	2.64	0.594	3.56	-0.926	4.48	0.592	5.4	-0.107	6.32	-0.42	7.24	-0.043	8.16	-0.353	9.08	0.741	10	-0.83
0.82	-0.646	1.74	1.192	2.66	0.919	3.58	-0.953	4.5	0.645	5.42	-0.338	6.34	-0.661	7.26	0.262	8.18	-0.226	9.1	0.744		
0.84	-0.525	1.76	1.105	2.68	1.109	3.6	-0.934	4.52	-1.083	5.44	-0.78	6.36	-0.558	7.28	0.567	8.2	0.051	9.12	0.777		
0.86	-0.415	1.78	1.003	2.7	0.651	3.62	-0.888	4.54	-0.93	5.46	-1	6.38	-0.5	7.3	0.801	8.22	-0.188	9.14	0.841		
0.88	-0.401	1.8	1.079	2.72	0.27	3.64	-0.861	4.56	-1.068	5.48	-0.99	6.4	-0.353	7.32	0.961	8.24	-0.427	9.16	0.852		
0.9	-0.515	1.82	0.824	2.74	-0.151	3.66	-0.74	4.58	-1.17	5.5	-0.931	6.42	-0.173	7.34	0.856	8.26	-0.149	9.18	0.908		

GRAFIK DAN DATA PERCEPATAN GEMPA EL CENTRO 1940 UP



TIME HISTORY DATA

FUNCTION EC1940UP: Function EC1940UP

TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION	TIME	FUNCTION
EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP	EC1940UP
0	0.024	0.92	0.666	1.84	0.946	2.76	-0.493	3.68	-0.009	4.6	-0.06	5.52	0.178	6.44	-0.341	7.36	-0.052	8.28	0.188	9.2	0.009
0.02	-0.23	0.94	1.173	1.86	0.052	2.78	0.441	3.7	-0.681	4.62	0.037	5.54	-0.124	6.46	-0.006	7.38	-0.632	8.3	0.388	9.22	-0.18
0.04	-0.275	0.96	1.728	1.88	-1.522	2.8	1.126	3.72	-0.425	4.64	0.053	5.56	-0.32	6.48	0.457	7.4	-0.21	8.32	0.5	9.24	-0.086
0.06	-0.397	0.98	-2.063	1.9	-0.489	2.82	0.285	3.74	0.143	4.66	-0.112	5.58	0.054	6.5	0.802	7.42	-0.019	8.34	-0.02	9.26	0.239
0.08	-0.39	1	-0.555	1.92	-0.099	2.84	0.135	3.76	0.406	4.68	-0.118	5.6	0.495	6.52	0.387	7.44	-0.228	8.36	-0.189	9.28	-0.02
0.1	-0.06	1.02	-0.431	1.94	0.543	2.86	0.028	3.78	-0.474	4.7	-0.006	5.62	0.363	6.54	-0.094	7.46	-0.585	8.38	0.09	9.3	-0.05
0.12	0.409	1.04	0.936	1.96	-0.066	2.88	-0.244	3.8	-0.761	4.72	-0.043	5.64	0.193	6.56	0.366	7.48	-0.593	8.4	0.498	9.32	-0.098
0.14	0.209	1.06	0.22	1.98	-0.219	2.9	-0.186	3.82	-0.324	4.74	-0.161	5.66	0.139	6.58	0.045	7.5	-0.075	8.42	0.464	9.34	0.244
0.16	-0.683	1.08	-1.836	2	-0.01	2.92	0.081	3.84	0.087	4.76	0.151	5.68	-0.46	6.6	-0.866	7.52	-0.211	8.44	-0.04	9.36	0.172
0.18	-0.647	1.1	-1.837	2.02	-0.121	2.94	0.074	3.86	0.623	4.78	0.464	5.7	-0.45	6.62	0.014	7.54	-0.117	8.46	-0.434	9.38	0.265
0.2	0.091	1.12	-0.419	2.04	-0.529	2.96	0.032	3.88	1.019	4.8	0.415	5.72	0.383	6.64	0.736	7.56	0.115	8.48	-0.21	9.4	0.188
0.22	0.134	1.14	0.606	2.06	-0.426	2.98	0.12	3.9	-0.084	4.82	0.01	5.74	0.103	6.66	0.47	7.58	0.651	8.5	0.05	9.42	0.127
0.24	0.317	1.16	1.722	2.08	-0.073	3	-0.187	3.92	-0.521	4.84	-0.308	5.76	-0.82	6.68	-0.237	7.6	0.221	8.52	0.398	9.44	0
0.26	0.738	1.18	-1.41	2.1	0.227	3.02	0.065	3.94	-0.235	4.86	-0.069	5.78	-0.086	6.7	-0.426	7.62	-0.758	8.54	0.588	9.46	-0.078
0.28	0.6	1.2	-0.44	2.12	0.314	3.04	0.347	3.96	0.347	4.88	0.185	5.8	0.063	6.72	-0.086	7.64	-0.76	8.56	0.085	9.48	-0.161
0.3	-0.531	1.22	-0.267	2.14	-0.606	3.06	0.419	3.98	0.328	4.9	0.355	5.82	0.154	6.74	0.388	7.66	-0.116	8.58	-0.351	9.5	0.087
0.32	-0.261	1.24	0.519	2.16	-0.171	3.08	0.216	4	0.055	4.92	0.165	5.84	0.289	6.76	-0.307	7.68	0.573	8.6	-0.206	9.52	-0.213
0.34	-0.13	1.26	0.875	2.18	0.149	3.1	-0.026	4.02	0.367	4.94	0.204	5.86	0.097	6.78	-1.233	7.7	0.548	8.62	0.09	9.54	-0.041
0.36	-0.439	1.28	-0.035	2.2	0.241	3.12	-0.531	4.04	0.218	4.96	-0.109	5.88	-0.448	6.8	-0.348	7.72	-0.665	8.64	0.259	9.56	0.336
0.38	-0.69	1.3	-0.809	2.22	0.157	3.14	-0.675	4.06	-0.404	4.98	-0.043	5.9	-0.201	6.82	0.341	7.74	-0.057	8.66	0.153	9.58	0.23
0.4	-0.117	1.32	-0.098	2.24	0.509	3.16	-0.242	4.08	-0.413	5	0.432	5.92	0.341	6.84	1.1	7.76	0.495	8.68	0.045	9.6	0.302
0.42	0.26	1.34	0.278	2.26	0.103	3.18	-0.034	4.1	-0.021	5.02	0.423	5.94	0.677	6.86	-0.388	7.78	0.162	8.7	-0.092	9.62	0.147
0.44	0.84	1.36	1.093	2.28	-0.289	3.2	-0.23	4.12	0.241	5.04	-0.036	5.96	0.002	6.88	-1.067	7.8	-0.072	8.72	-0.021	9.64	0.088
0.46	1.224	1.38	0.421	2.3	-0.144	3.22	-1.021	4.14	-0.223	5.06	-0.154	5.98	-0.774	6.9	-0.52	7.82	-0.486	8.74	0.087	9.66	-0.055
0.48	-0.232	1.4	-0.791	2.32	-0.241	3.24	-0.658	4.16	-0.005	5.08	0.055	6	-0.584	6.92	-0.183	7.84	-0.04	8.76	0.051	9.68	-0.147
0.5	-1.371	1.42	-0.664	2.34	-0.211	3.26	0.028	4.18	0.609	5.1	-0.079	6.02	-0.157	6.94	0.538	7.86	0.183	8.78	0.069	9.7	-0.036
0.52	-0.727	1.44	-0.279	2.36	0.239	3.28	0.748	4.2	-0.065	5.12	-0.374	6.04	0.471	6.96	0.425	7.88	0.027	8.8	-0.237	9.72	-0.323
0.54	-0.381	1.46	-0.423	2.38	-0.867	3.3	1.645	4.22	-0.556	5.14	0.175	6.06	0.75	6.98	-0.304	7.9	0.146	8.82	-0.034	9.74	-0.274
0.56	0.394	1.48	-0.261	2.4	-0.78	3.32	1.904	4.24	0.019	5.16	0.505	6.08	-0.683	7	-0.281	7.92	-0.153	8.84	0.577	9.76	0.196
0.58	0.771	1.5	0.204	2.42	-0.26	3.34	-1.163	4.26	0.495	5.18	-0.831	6.1	-0.66	7.02	-0.022	7.94	-0.388	8.86	0.612	9.78	0.288
0.6	0.356	1.52	0.521	2.44	0.022	3.36	0.136	4.28	0.023	5.2	-0.672	6.12	0.153	7.04	0.548	7.96	-0.742	8.88	0.051	9.8	-0.081
0.62	0.179	1.54	-0.399	2.46	0.599	3.38	0.935	4.3	-0.74	5.22	-0.233	6.14	0.278	7.06	0.271	7.98	-0.54	8.9	-0.29	9.82	-0.231
0.64	-0.171	1.56	-0.096	2.48	-0.705	3.4	1.347	4.32	-0.149	5.24	0.142	6.16	0.447	7.08	0.075	8	0.41	8.92	-0.564	9.84	0.158
0.66	-0.058	1.58	0.236	2.5	-0.898	3.42	0.772	4.34	-0.054	5.26	0.596	6.18	0.173	7.1	-0.313	8.02	0.306	8.94	-0.348	9.86	0.197
0.68	-0.194	1.6	0.781	2.52	-0.227	3.44	0.515	4.36	0.178	5.28	-0.074	6.2	-0.59	7.12	0.015	8.04	-0.08	8.96	0.174	9.88	-0.435
0.7	0.229	1.62	0.455	2.54	-0.066	3.46	-0.049	4.38	-0.185	5.3	0.085	6.22	-0.739	7.14	-0.348	8.06	0.037	8.98	0.072	9.9	-0.74
0.72	0.903	1.64	-0.589	2.56	0.785	3.48	0.13	4.4	-0.159	5.32	0.476	6.24	-0.218	7.16	-0.311	8.08	-0.197	9	-0.522	9.92	-0.625
0.74	-0.08	1.66	-0.315	2.58	0.031	3.5	-0.215	4.42	0.086	5.34	0.056	6.26	0.471	7.18	0.046	8.1	-0.013	9.02	0.187	9.94	-0.491
0.76	-1.112	1.68	0.215	2.6	-0.366	3.52	-0.202	4.44	0.442	5.36	-0.683	6.28	0.809	7.2	0.294	8.12	0.254	9.04	0.077	9.96	-0.136
0.78	-0.699	1.7	0.743	2.62	-0.214	3.54	-0.369	4.46	0.057	5.38	-0.234	6.3	0.144	7.22	0.086	8.14	0.113	9.06	-0.483	9.98	0.313
0.8	-0.188	1.72	1.242	2.64	-0.807	3.56	-0.114	4.48	-0.26	5.4	0.361	6.32	-0.637	7.24	0.492	8.16	0.056	9.08	-0.102	10	0.323
0.82	0.577	1.74	-0.527	2.66	-0.106	3.58	-0.048	4.5	0.113	5.42	0.13	6.34	-0.304	7.26	0.196	8.18	-0.052	9.1	0.514		
0.84	1.077	1.76	-0.133	2.68	0.302	3.6	0.156	4.52	0.437	5.44	-0.013	6.36	0.043	7.28	-0.505	8.2	-0.413	9.12	-0.957		
0.86	1.734	1.78	-0.398	2.7	1.06	3.62	0.27	4.54	0.285	5.46	-0.098	6.38	0.733	7.3	0.198	8.22	-0.161	9.14	0.674		
0.88	-0.036	1.8	-0.641	2.72	0.679	3.64	0.078	4.56	0.034	5.48	0.166	6.4	0.548	7.32	0.399	8.24	0.245	9.16	0.546		
0.9	-0.968	1.82	0.018	2.74	-1.136	3.66	-0.188	4.58	-0.134	5.5	0.184	6.42	-0.619	7.34	0.22	8.26	-0.185	9.18	-0.068		

Tugas Akhir

STATIC LOAD CASES

STATIC CASE	CASE TYPE	SELF WT FACTOR
DL	DEAD	1.0000
LL	LIVE	0.0000

TIME HISTORY CASES

HISTORY CASE	HISTORY TYPE	NUMBER OF TIME STEPS	TIME STEP INCREMENT
ELCENTRO	LINEAR	500	0.02000

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JOINT DATA

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	RESTRAINTS	ANGLE-A	ANGLE-B	ANGLE-C
1	-9.00000	-9.00000	0.00000	1 1 1 1 1 1	0.000	0.000	0.000
2	-9.00000	-9.00000	4.00000	0 0 0 0 0 0	0.000	0.000	0.000
3	-9.00000	-9.00000	8.00000	0 0 0 0 0 0	0.000	0.000	0.000
4	-9.00000	-9.00000	12.00000	0 0 0 0 0 0	0.000	0.000	0.000
5	-9.00000	-9.00000	16.00000	0 0 0 0 0 0	0.000	0.000	0.000
6	-9.00000	-9.00000	20.00000	0 0 0 0 0 0	0.000	0.000	0.000
7	-9.00000	-9.00000	24.00000	0 0 0 0 0 0	0.000	0.000	0.000
8	-9.00000	-9.00000	28.00000	0 0 0 0 0 0	0.000	0.000	0.000
9	-9.00000	-9.00000	32.00000	0 0 0 0 0 0	0.000	0.000	0.000
10	-9.00000	-9.00000	36.00000	0 0 0 0 0 0	0.000	0.000	0.000
11	-9.00000	-9.00000	40.00000	0 0 0 0 0 0	0.000	0.000	0.000
12	-9.00000	-9.00000	44.00000	0 0 0 0 0 0	0.000	0.000	0.000
13	-9.00000	-9.00000	48.00000	0 0 0 0 0 0	0.000	0.000	0.000
14	-9.00000	-9.00000	52.00000	0 0 0 0 0 0	0.000	0.000	0.000
15	-9.00000	-9.00000	56.00000	0 0 0 0 0 0	0.000	0.000	0.000
16	-9.00000	-9.00000	60.00000	0 0 0 0 0 0	0.000	0.000	0.000
17	-9.00000	-9.00000	64.00000	0 0 0 0 0 0	0.000	0.000	0.000
18	-9.00000	-9.00000	68.00000	0 0 0 0 0 0	0.000	0.000	0.000
19	-9.00000	-9.00000	72.00000	0 0 0 0 0 0	0.000	0.000	0.000
20	-9.00000	-9.00000	76.00000	0 0 0 0 0 0	0.000	0.000	0.000
21	-9.00000	-9.00000	80.00000	0 0 0 0 0 0	0.000	0.000	0.000
22	-9.00000	-3.00000	0.00000	1 1 1 1 1 1	0.000	0.000	0.000
23	-9.00000	-3.00000	4.00000	0 0 0 0 0 0	0.000	0.000	0.000
24	-9.00000	-3.00000	8.00000	0 0 0 0 0 0	0.000	0.000	0.000
25	-9.00000	-3.00000	12.00000	0 0 0 0 0 0	0.000	0.000	0.000
26	-9.00000	-3.00000	16.00000	0 0 0 0 0 0	0.000	0.000	0.000
27	-9.00000	-3.00000	20.00000	0 0 0 0 0 0	0.000	0.000	0.000
28	-9.00000	-3.00000	24.00000	0 0 0 0 0 0	0.000	0.000	0.000
29	-9.00000	-3.00000	28.00000	0 0 0 0 0 0	0.000	0.000	0.000
30	-9.00000	-3.00000	32.00000	0 0 0 0 0 0	0.000	0.000	0.000
31	-9.00000	-3.00000	36.00000	0 0 0 0 0 0	0.000	0.000	0.000
32	-9.00000	-3.00000	40.00000	0 0 0 0 0 0	0.000	0.000	0.000
33	-9.00000	-3.00000	44.00000	0 0 0 0 0 0	0.000	0.000	0.000
34	-9.00000	-3.00000	48.00000	0 0 0 0 0 0	0.000	0.000	0.000
35	-9.00000	-3.00000	52.00000	0 0 0 0 0 0	0.000	0.000	0.000
36	-9.00000	-3.00000	56.00000	0 0 0 0 0 0	0.000	0.000	0.000
37	-9.00000	-3.00000	60.00000	0 0 0 0 0 0	0.000	0.000	0.000
38	-9.00000	-3.00000	64.00000	0 0 0 0 0 0	0.000	0.000	0.000
39	-9.00000	-3.00000	68.00000	0 0 0 0 0 0	0.000	0.000	0.000
40	-9.00000	-3.00000	72.00000	0 0 0 0 0 0	0.000	0.000	0.000
41	-9.00000	-3.00000	76.00000	0 0 0 0 0 0	0.000	0.000	0.000
42	-9.00000	-3.00000	80.00000	0 0 0 0 0 0	0.000	0.000	0.000
43	-9.00000	3.00000	0.00000	1 1 1 1 1 1	0.000	0.000	0.000
44	-9.00000	3.00000	4.00000	0 0 0 0 0 0	0.000	0.000	0.000
45	-9.00000	3.00000	8.00000	0 0 0 0 0 0	0.000	0.000	0.000
46	-9.00000	3.00000	12.00000	0 0 0 0 0 0	0.000	0.000	0.000
47	-9.00000	3.00000	16.00000	0 0 0 0 0 0	0.000	0.000	0.000
48	-9.00000	3.00000	20.00000	0 0 0 0 0 0	0.000	0.000	0.000
49	-9.00000	3.00000	24.00000	0 0 0 0 0 0	0.000	0.000	0.000
50	-9.00000	3.00000	28.00000	0 0 0 0 0 0	0.000	0.000	0.000
51	-9.00000	3.00000	32.00000	0 0 0 0 0 0	0.000	0.000	0.000
52	-9.00000	3.00000	36.00000	0 0 0 0 0 0	0.000	0.000	0.000
53	-9.00000	3.00000	40.00000	0 0 0 0 0 0	0.000	0.000	0.000
54	-9.00000	3.00000	44.00000	0 0 0 0 0 0	0.000	0.000	0.000
55	-9.00000	3.00000	48.00000	0 0 0 0 0 0	0.000	0.000	0.000





















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Tugas Akhir

J O I N T   C O N S T R A I N T   D A T A

JOINT	TYPE
2	DIAPH1
23	DIAPH1
44	DIAPH1
65	DIAPH1
86	DIAPH1
107	DIAPH1
128	DIAPH1
149	DIAPH1
170	DIAPH1
191	DIAPH1
212	DIAPH1
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254	DIAPH1
275	DIAPH1
296	DIAPH1
317	DIAPH1
519	DIAPH1
520	DIAPH1
653	DIAPH1
654	DIAPH1
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848	DIAPH1
901	DIAPH1
902	DIAPH1
3	DIAPH2
24	DIAPH2
45	DIAPH2
66	DIAPH2
87	DIAPH2
108	DIAPH2
129	DIAPH2
150	DIAPH2
171	DIAPH2
192	DIAPH2
213	DIAPH2
234	DIAPH2
255	DIAPH2
276	DIAPH2
297	DIAPH2
318	DIAPH2
513	DIAPH2
514	DIAPH2
647	DIAPH2
648	DIAPH2
845	DIAPH2
846	DIAPH2
899	DIAPH2
900	DIAPH2
4	DIAPH3
25	DIAPH3
46	DIAPH3
67	DIAPH3
88	DIAPH3
109	DIAPH3
130	DIAPH3
151	DIAPH3
172	DIAPH3
193	DIAPH3
214	DIAPH3
235	DIAPH3
256	DIAPH3
277	DIAPH3
298	DIAPH3
319	DIAPH3
475	DIAPH3
476	DIAPH3
641	DIAPH3
642	DIAPH3
811	DIAPH3
812	DIAPH3
897	DIAPH3
898	DIAPH3
5	DIAPH4
26	DIAPH4
47	DIAPH4
68	DIAPH4
89	DIAPH4
110	DIAPH4
131	DIAPH4
152	DIAPH4



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FRAME ELEMENT DATA

FRAME	JNT-1	JNT-2	SECTION	ANGLE	RELEASES	SEGMENTS	R1	R2	FACTOR	LENGTH
1	1	2	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
2	2	3	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
3	3	4	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
4	4	5	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
5	5	6	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
6	6	7	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
7	7	8	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
8	8	9	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000
9	9	10	KOLOM	0.000	000000	2	0.000	0.000	1.000	4.000











430	224	308	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
431	223	307	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
432	222	306	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
433	221	305	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
434	220	304	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
435	219	303	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
436	218	302	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
437	217	301	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
438	216	300	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
439	215	299	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
440	214	298	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
441	213	297	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
442	212	296	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
512	120	389	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
513	389	390	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
514	390	121	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
515	204	391	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
516	391	392	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
517	392	205	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
518	120	393	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
519	393	394	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
520	394	204	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
521	119	395	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
522	395	396	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
523	396	120	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
524	203	397	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
525	397	398	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
526	398	204	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
527	119	399	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
528	399	400	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
529	400	203	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
530	118	401	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
531	401	402	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
532	402	119	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
533	202	403	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
534	403	404	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
535	404	203	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
536	118	405	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
537	405	406	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
538	406	202	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
539	117	407	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
540	407	408	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
541	408	118	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
542	201	409	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
543	409	410	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
544	410	202	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
545	117	411	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
546	411	412	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
547	412	201	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
572	116	429	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
573	429	430	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
574	430	117	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
575	200	431	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
576	431	432	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
577	432	201	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
578	116	433	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
579	20	41	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
580	21	42	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
581	433	434	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
582	434	200	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
583	115	435	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
584	435	436	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
585	436	116	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
586	199	437	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
587	437	438	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
588	438	200	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
589	115	439	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
590	439	440	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
591	440	199	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
592	114	441	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
593	441	442	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
594	442	115	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
595	198	443	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
596	443	444	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
597	444	199	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
598	114	445	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
599	445	446	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
600	446	198	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
601	113	447	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
602	447	448	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
603	448	114	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
604	197	449	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
605	449	450	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
606	450	198	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
607	113	451	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
608	451	452	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
609	452	197	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
610	112	453	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
611	453	454	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
612	454	113	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
613	196	455	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
614	455	456	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
615	456	197	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
616	112	457	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
617	457	458	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000

619	111	459	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
620	459	460	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
621	460	112	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
622	195	461	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
623	461	462	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
624	462	196	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
625	111	463	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
626	463	464	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
627	464	195	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
628	110	465	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
629	465	466	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
630	466	111	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
631	194	467	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
632	467	468	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
633	468	195	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
634	110	469	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
635	469	470	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
636	470	194	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
637	109	471	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
638	471	472	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
639	104	125	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
640	105	126	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
641	472	110	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
642	193	473	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
643	473	474	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
644	474	194	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
645	109	475	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
646	475	476	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
647	476	193	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
658	108	509	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
659	509	510	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
660	510	109	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
661	192	511	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
662	511	512	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
663	512	193	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
664	108	513	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
665	513	514	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
666	514	192	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
667	107	515	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
668	515	516	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
669	516	108	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
670	191	517	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
671	517	518	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
672	518	192	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
673	107	519	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
674	519	520	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
675	520	191	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
676	106	529	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
677	529	530	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
678	530	107	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
679	190	531	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
680	531	532	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
681	532	191	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
683	106	533	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
684	533	534	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
685	534	190	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
785	141	571	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
786	571	572	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
787	572	142	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
788	225	573	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
789	573	574	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
790	574	226	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
791	141	575	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
792	575	576	BALOK	0.000	000000	4	0.000	0.000	1.000	3.000
793	576	225	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
794	140	577	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
795	577	578	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
796	578	141	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
797	224	579	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
798	579	580	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.000
799	580	225	KOLOM	0.000	000000	2	0.000	0.000	1.000	1.500
800	140	581	BALOK	0.000	000000	4	0.000	0.000	1.000	1.500
801	42	63	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
802	63	84	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
803	19	40	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
804	18	39	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
805	17	38	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
806	16	37	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
807	15	36	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
808	14	35	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
809	13	34	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
810	12	33	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
811	11	32	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
812	10	31	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
813	9	30	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
814	8	29	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
815	7	28	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
816	6	27	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
817	5	26	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
818	4	25	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
819	3	24	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
820	2	23	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
821	41	62	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
822	40	61	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000
823	39	60	BALOK	0.000	000000	4	0.000	0.000	1.000	6.000















Tugas Akhir

S H E L L E L E M E N T D A T A

SHELL	JNT-1	JNT-2	JNT-3	JNT-4	SECTION	ANGLE	AREA
45	120	393	389	413	SW	0.000	2.250
46	389	413	390	414	SW	0.000	1.500
47	390	414	121	379	SW	0.000	2.250
48	393	394	413	415	SW	0.000	4.500
49	414	416	379	380	SW	0.000	4.500
50	394	204	415	391	SW	0.000	2.250
51	415	391	416	392	SW	0.000	1.500
52	416	392	380	205	SW	0.000	2.250
53	119	399	395	417	SW	0.000	2.250
54	395	417	396	418	SW	0.000	1.500
55	396	418	120	393	SW	0.000	2.250
56	399	400	417	419	SW	0.000	4.500
57	418	420	393	394	SW	0.000	4.500
58	400	203	419	397	SW	0.000	2.250
59	419	397	420	398	SW	0.000	1.500
60	420	398	394	204	SW	0.000	2.250
61	118	405	401	421	SW	0.000	2.250
62	401	421	402	422	SW	0.000	1.500
63	402	422	119	399	SW	0.000	2.250
64	405	406	421	423	SW	0.000	4.500
65	422	424	399	400	SW	0.000	4.500
66	406	202	423	403	SW	0.000	2.250
67	423	403	424	404	SW	0.000	1.500
68	424	404	400	203	SW	0.000	2.250
69	117	411	407	425	SW	0.000	2.250
70	407	425	408	426	SW	0.000	1.500
71	408	426	118	405	SW	0.000	2.250
72	411	412	425	427	SW	0.000	4.500
73	426	428	405	406	SW	0.000	4.500
74	412	201	427	409	SW	0.000	2.250
75	427	409	428	410	SW	0.000	1.500
76	428	410	406	202	SW	0.000	2.250
77	116	433	429	477	SW	0.000	2.250
78	429	477	430	478	SW	0.000	1.500
79	430	478	117	411	SW	0.000	2.250
80	433	434	477	479	SW	0.000	4.500
81	478	480	411	412	SW	0.000	4.500
82	434	200	479	431	SW	0.000	2.250
83	479	431	480	432	SW	0.000	1.500
84	480	432	412	201	SW	0.000	2.250
85	115	439	435	481	SW	0.000	2.250
86	435	481	436	482	SW	0.000	1.500
87	436	482	116	433	SW	0.000	2.250
88	439	440	481	483	SW	0.000	4.500
89	482	484	433	434	SW	0.000	4.500
90	440	199	483	437	SW	0.000	2.250
91	483	437	484	438	SW	0.000	1.500
92	484	438	434	200	SW	0.000	2.250
93	114	445	441	485	SW	0.000	2.250
94	441	485	442	486	SW	0.000	1.500
95	442	486	115	439	SW	0.000	2.250
96	445	486	485	487	SW	0.000	4.500
97	486	488	439	440	SW	0.000	4.500
98	446	198	487	443	SW	0.000	2.250
99	487	443	488	444	SW	0.000	1.500
100	488	444	440	199	SW	0.000	2.250
101	113	451	447	489	SW	0.000	2.250
102	447	489	448	490	SW	0.000	1.500
103	448	490	114	445	SW	0.000	2.250
104	451	452	489	491	SW	0.000	4.500
105	490	492	445	446	SW	0.000	4.500
106	452	197	491	449	SW	0.000	2.250
107	491	449	492	450	SW	0.000	1.500
108	492	450	446	198	SW	0.000	2.250
109	112	457	453	493	SW	0.000	2.250
110	453	493	454	494	SW	0.000	1.500
111	454	494	113	451	SW	0.000	2.250
112	457	458	493	495	SW	0.000	4.500
113	494	496	451	452	SW	0.000	4.500
114	458	196	495	455	SW	0.000	2.250
115	495	455	496	456	SW	0.000	1.500
116	496	456	452	197	SW	0.000	2.250
117	111	463	459	497	SW	0.000	2.250
118	459	497	460	498	SW	0.000	1.500
119	460	498	112	457	SW	0.000	2.250
120	463	464	497	499	SW	0.000	4.500
121	498	500	457	458	SW	0.000	4.500
122	464	195	499	461	SW	0.000	2.250
123	499	461	500	462	SW	0.000	1.500
124	500	462	458	196	SW	0.000	2.250
125	110	469	465	501	SW	0.000	2.250
126	465	501	466	502	SW	0.000	1.500
127	466	502	111	463	SW	0.000	2.250
128	469	470	501	503	SW	0.000	4.500

269	711	615	712	616	SW	0.000	1.500
270	712	616	612	219	SW	0.000	2.250
271	133	623	619	713	SW	0.000	2.250
272	619	713	620	714	SW	0.000	1.500
273	620	714	134	617	SW	0.000	2.250
274	623	624	713	715	SW	0.000	4.500
275	714	716	617	618	SW	0.000	4.500
276	624	217	715	621	SW	0.000	2.250
277	715	621	716	622	SW	0.000	1.500
278	716	622	618	218	SW	0.000	2.250
279	132	629	625	717	SW	0.000	2.250
280	625	717	626	718	SW	0.000	1.500
281	626	718	133	623	SW	0.000	2.250
282	629	630	717	719	SW	0.000	4.500
283	718	720	623	624	SW	0.000	4.500
284	630	216	719	627	SW	0.000	2.250
285	719	627	720	628	SW	0.000	1.500
286	720	628	624	217	SW	0.000	2.250
287	131	635	631	721	SW	0.000	2.250
288	631	721	632	722	SW	0.000	1.500
289	632	722	132	629	SW	0.000	2.250
290	635	636	721	723	SW	0.000	4.500
291	722	724	629	630	SW	0.000	4.500
292	636	215	723	633	SW	0.000	2.250
293	723	633	724	634	SW	0.000	1.500
294	724	634	630	216	SW	0.000	2.250
295	130	641	637	725	SW	0.000	2.250
296	637	725	638	726	SW	0.000	1.500
297	638	726	131	635	SW	0.000	2.250
298	641	642	725	727	SW	0.000	4.500
299	726	728	635	636	SW	0.000	4.500
300	642	214	727	639	SW	0.000	2.250
301	727	639	728	640	SW	0.000	1.500
302	728	640	636	215	SW	0.000	2.250
303	129	647	643	729	SW	0.000	2.250
304	643	729	644	730	SW	0.000	1.500
305	644	730	130	641	SW	0.000	2.250
306	647	648	729	731	SW	0.000	4.500
307	730	732	641	642	SW	0.000	4.500
308	648	213	731	645	SW	0.000	2.250
309	731	645	732	646	SW	0.000	1.500
310	732	646	642	214	SW	0.000	2.250
311	128	653	649	733	SW	0.000	2.250
312	649	733	650	734	SW	0.000	1.500
313	650	734	129	647	SW	0.000	2.250
314	653	654	733	735	SW	0.000	4.500
315	734	736	647	648	SW	0.000	4.500
316	654	212	735	651	SW	0.000	2.250
317	735	651	736	652	SW	0.000	1.500
318	736	652	648	213	SW	0.000	2.250
319	127	659	655	737	SW	0.000	2.250
320	655	737	656	738	SW	0.000	1.500
321	656	738	128	653	SW	0.000	2.250
322	659	660	737	739	SW	0.000	4.500
323	738	740	653	654	SW	0.000	4.500
324	660	211	739	657	SW	0.000	2.250
325	739	657	740	658	SW	0.000	1.500
326	740	658	654	212	SW	0.000	2.250
371	120	773	389	781	SW	0.000	2.250
372	389	781	390	782	SW	0.000	1.500
373	390	782	121	763	SW	0.000	2.250
374	773	774	781	783	SW	0.000	4.500
375	782	784	783	764	SW	0.000	4.500
376	774	141	783	571	SW	0.000	2.250
377	783	571	784	572	SW	0.000	1.500
378	784	572	764	142	SW	0.000	2.250
379	119	775	395	785	SW	0.000	2.250
380	395	785	396	786	SW	0.000	1.500
381	396	786	120	773	SW	0.000	2.250
382	775	776	785	787	SW	0.000	4.500
383	786	788	773	774	SW	0.000	4.500
384	776	140	787	577	SW	0.000	2.250
385	787	577	788	578	SW	0.000	1.500
386	788	578	774	141	SW	0.000	2.250
387	118	777	401	789	SW	0.000	2.250
388	401	789	402	790	SW	0.000	1.500
389	402	790	119	775	SW	0.000	2.250
390	777	778	789	791	SW	0.000	4.500
391	790	792	775	776	SW	0.000	4.500
392	778	139	791	583	SW	0.000	2.250
393	791	583	792	584	SW	0.000	1.500
394	792	584	776	140	SW	0.000	2.250
395	117	779	407	793	SW	0.000	2.250
396	407	793	408	794	SW	0.000	1.500
397	408	794	118	777	SW	0.000	2.250
398	779	780	793	795	SW	0.000	4.500
399	794	796	777	778	SW	0.000	4.500
400	780	138	795	589	SW	0.000	2.250
401	795	589	796	590	SW	0.000	1.500
402	796	590	778	139	SW	0.000	2.250
403	116	797	429	813	SW	0.000	2.250
404	429	813	430	814	SW	0.000	1.500
405	430	814	117	779	SW	0.000	2.250
406	797	798	813	815	SW	0.000	4.500

409	815	595	816	596	SW	0.000	1.500
410	816	596	780	138	SW	0.000	2.250
411	115	799	435	817	SW	0.000	2.250
412	435	817	436	818	SW	0.000	1.500
413	436	818	116	797	SW	0.000	2.250
414	799	800	817	819	SW	0.000	4.500
415	818	820	797	798	SW	0.000	4.500
416	800	136	819	601	SW	0.000	2.250
417	819	601	820	602	SW	0.000	1.500
418	820	602	798	137	SW	0.000	2.250
419	114	801	441	821	SW	0.000	2.250
420	441	821	442	822	SW	0.000	1.500
421	442	822	115	799	SW	0.000	2.250
422	801	802	821	823	SW	0.000	4.500
423	822	824	799	800	SW	0.000	4.500
424	802	135	823	607	SW	0.000	2.250
425	823	607	824	608	SW	0.000	1.500
426	824	608	800	136	SW	0.000	2.250
427	113	803	447	825	SW	0.000	2.250
428	447	825	448	826	SW	0.000	1.500
429	448	826	114	801	SW	0.000	2.250
430	803	804	825	827	SW	0.000	4.500
431	826	828	801	802	SW	0.000	4.500
432	804	134	827	613	SW	0.000	2.250
433	827	613	828	614	SW	0.000	1.500
434	828	614	802	135	SW	0.000	2.250
435	112	805	453	829	SW	0.000	2.250
436	453	829	454	830	SW	0.000	1.500
437	454	830	113	803	SW	0.000	2.250
438	805	806	829	831	SW	0.000	4.500
439	830	832	803	804	SW	0.000	4.500
440	806	133	831	619	SW	0.000	2.250
441	831	619	832	620	SW	0.000	1.500
442	832	620	804	134	SW	0.000	2.250
443	111	807	459	833	SW	0.000	2.250
444	459	833	460	834	SW	0.000	1.500
445	460	834	112	805	SW	0.000	2.250
446	807	808	833	835	SW	0.000	4.500
447	834	836	805	806	SW	0.000	4.500
448	808	132	835	625	SW	0.000	2.250
449	835	625	836	626	SW	0.000	1.500
450	836	626	806	133	SW	0.000	2.250
451	110	809	465	837	SW	0.000	2.250
452	465	837	466	838	SW	0.000	1.500
453	466	838	111	807	SW	0.000	2.250
454	809	810	837	839	SW	0.000	4.500
455	838	840	807	808	SW	0.000	4.500
456	810	131	839	631	SW	0.000	2.250
457	839	631	840	632	SW	0.000	1.500
458	840	632	808	132	SW	0.000	2.250
459	109	811	471	841	SW	0.000	2.250
460	471	841	472	842	SW	0.000	1.500
461	472	842	110	809	SW	0.000	2.250
462	811	812	841	843	SW	0.000	4.500
463	842	844	809	810	SW	0.000	4.500
464	812	130	843	637	SW	0.000	2.250
465	843	637	844	638	SW	0.000	1.500
466	844	638	810	131	SW	0.000	2.250
467	108	845	509	849	SW	0.000	2.250
468	509	849	510	850	SW	0.000	1.500
469	510	850	109	811	SW	0.000	2.250
470	845	846	849	851	SW	0.000	4.500
471	850	852	811	812	SW	0.000	4.500
472	846	129	851	643	SW	0.000	2.250
473	851	643	852	644	SW	0.000	1.500
474	852	644	812	130	SW	0.000	2.250
475	107	847	515	853	SW	0.000	2.250
476	515	853	516	854	SW	0.000	1.500
477	516	854	108	845	SW	0.000	2.250
478	847	848	853	855	SW	0.000	4.500
479	854	856	845	846	SW	0.000	4.500
480	848	128	855	649	SW	0.000	2.250
481	855	649	856	650	SW	0.000	1.500
482	856	650	846	129	SW	0.000	2.250
484	106	857	529	859	SW	0.000	2.250
485	529	859	530	860	SW	0.000	1.500
486	530	860	107	847	SW	0.000	2.250
487	857	858	859	861	SW	0.000	4.500
489	860	862	847	848	SW	0.000	4.500
490	858	127	861	655	SW	0.000	2.250
491	861	655	862	656	SW	0.000	1.500
492	862	656	848	128	SW	0.000	2.250
533	204	875	391	925	SW	0.000	2.250
534	391	925	392	926	SW	0.000	1.500
535	392	926	205	873	SW	0.000	2.250
536	875	876	925	927	SW	0.000	4.500
537	926	928	873	874	SW	0.000	4.500
538	876	225	927	573	SW	0.000	2.250
539	927	573	928	574	SW	0.000	1.500
540	928	574	874	226	SW	0.000	2.250
541	203	877	397	929	SW	0.000	2.250
542	397	929	398	930	SW	0.000	1.500
543	398	930	204	875	SW	0.000	2.250
544	877	878	929	931	SW	0.000	4.500
545	930	932	875	876	SW	0.000	4.500

547	931	579	932	580	SW	0.000	1.500
548	932	580	876	225	SW	0.000	2.250
549	202	879	403	933	SW	0.000	2.250
550	403	933	404	934	SW	0.000	1.500
551	404	934	203	877	SW	0.000	2.250
552	879	880	933	935	SW	0.000	4.500
553	934	936	877	878	SW	0.000	4.500
554	880	223	935	585	SW	0.000	2.250
555	935	585	936	586	SW	0.000	1.500
556	936	586	878	224	SW	0.000	2.250
557	201	881	409	937	SW	0.000	2.250
558	409	937	410	938	SW	0.000	1.500
559	410	938	202	879	SW	0.000	2.250
560	881	882	937	939	SW	0.000	4.500
561	938	940	879	880	SW	0.000	4.500
562	882	222	939	591	SW	0.000	2.250
563	939	591	940	592	SW	0.000	1.500
564	940	592	880	223	SW	0.000	2.250
565	200	883	431	941	SW	0.000	2.250
566	431	941	432	942	SW	0.000	1.500
567	432	942	201	881	SW	0.000	2.250
568	883	884	941	943	SW	0.000	4.500
569	942	944	881	882	SW	0.000	4.500
570	884	221	943	597	SW	0.000	2.250
571	943	597	944	598	SW	0.000	1.500
572	944	598	882	222	SW	0.000	2.250
573	199	885	437	945	SW	0.000	2.250
574	437	945	438	946	SW	0.000	1.500
575	438	946	200	883	SW	0.000	2.250
576	885	886	945	947	SW	0.000	4.500
577	946	948	883	884	SW	0.000	4.500
578	886	220	947	603	SW	0.000	2.250
579	947	603	948	604	SW	0.000	1.500
580	948	604	884	221	SW	0.000	2.250
581	198	887	443	949	SW	0.000	2.250
582	443	949	444	950	SW	0.000	1.500
583	444	950	199	885	SW	0.000	2.250
584	887	888	949	951	SW	0.000	4.500
585	950	952	885	886	SW	0.000	4.500
586	888	219	951	609	SW	0.000	2.250
587	951	609	952	610	SW	0.000	1.500
588	952	610	886	220	SW	0.000	2.250
589	197	889	449	953	SW	0.000	2.250
590	449	953	450	954	SW	0.000	1.500
591	450	954	198	887	SW	0.000	2.250
592	889	890	953	955	SW	0.000	4.500
593	954	956	887	888	SW	0.000	4.500
594	890	218	955	615	SW	0.000	2.250
595	955	615	956	616	SW	0.000	1.500
596	956	616	888	219	SW	0.000	2.250
597	196	891	455	957	SW	0.000	2.250
598	455	957	456	958	SW	0.000	1.500
599	456	958	197	889	SW	0.000	2.250
600	891	892	957	959	SW	0.000	4.500
601	958	960	889	890	SW	0.000	4.500
602	892	217	959	621	SW	0.000	2.250
603	959	621	960	622	SW	0.000	1.500
604	960	622	890	218	SW	0.000	2.250
605	195	893	461	961	SW	0.000	2.250
606	461	961	462	962	SW	0.000	1.500
607	462	962	196	891	SW	0.000	2.250
608	893	894	961	963	SW	0.000	4.500
609	962	964	891	892	SW	0.000	4.500
610	894	216	963	627	SW	0.000	2.250
611	963	627	964	628	SW	0.000	1.500
612	964	628	892	217	SW	0.000	2.250
613	194	895	467	965	SW	0.000	2.250
614	467	965	468	966	SW	0.000	1.500
615	468	966	195	893	SW	0.000	2.250
616	895	896	965	967	SW	0.000	4.500
617	966	968	893	894	SW	0.000	4.500
618	896	215	967	633	SW	0.000	2.250
619	967	633	968	634	SW	0.000	1.500
620	968	634	894	216	SW	0.000	2.250
621	193	897	473	969	SW	0.000	2.250
622	473	969	474	970	SW	0.000	1.500
623	474	970	194	895	SW	0.000	2.250
624	897	898	969	971	SW	0.000	4.500
625	970	972	895	896	SW	0.000	4.500
626	898	214	971	639	SW	0.000	2.250
627	971	639	972	640	SW	0.000	1.500
628	972	640	896	215	SW	0.000	2.250
629	192	899	511	973	SW	0.000	2.250
630	511	973	512	974	SW	0.000	1.500
631	512	974	193	897	SW	0.000	2.250
632	899	900	973	975	SW	0.000	4.500
633	974	976	897	898	SW	0.000	4.500
634	900	213	975	645	SW	0.000	2.250
635	975	645	976	646	SW	0.000	1.500
636	976	646	898	214	SW	0.000	2.250
637	191	901	517	977	SW	0.000	2.250
638	517	977	518	978	SW	0.000	1.500
639	518	978	192	899	SW	0.000	2.250
640	901	902	977	979	SW	0.000	4.500

643	979	651	980	652	SW	0.000	1.500
644	980	652	900	213	SW	0.000	2.250
645	190	903	531	981	SW	0.000	2.250
646	531	981	532	982	SW	0.000	1.500
647	532	982	191	901	SW	0.000	2.250
648	903	904	981	983	SW	0.000	4.500
649	982	984	901	902	SW	0.000	4.500
650	904	211	983	657	SW	0.000	2.250
651	983	657	984	658	SW	0.000	1.500
652	984	658	902	212	SW	0.000	2.250

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Tugas Akhir

FRAME	SPAN	D I S T R I B U T E D	L O A D S	Load Case	DL	
FRAME	TYPE	DIRECTION	DISTANCE-A	VALUE-A	DISTANCE-B	VALUE-B
580	FORCE	GLOBAL-Z	0.0000	-5.0000	1.0000	-5.0000
580	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-9.1800
580	FORCE	GLOBAL-Z	0.5000	-9.1800	1.0000	0.0000
801	FORCE	GLOBAL-Z	0.0000	-5.0000	1.0000	-5.0000
801	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-9.1800
801	FORCE	GLOBAL-Z	0.5000	-9.1800	1.0000	0.0000
802	FORCE	GLOBAL-Z	0.0000	-5.0000	1.0000	-5.0000
802	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-9.1800
802	FORCE	GLOBAL-Z	0.5000	-9.1800	1.0000	0.0000
579	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
579	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
579	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
803	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
803	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
803	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
804	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
804	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
804	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
805	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
805	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
805	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
806	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
806	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
806	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
807	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
807	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
807	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
808	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
808	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
808	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
809	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
809	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
809	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
810	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
810	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
810	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
811	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
811	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
811	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
812	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
812	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
812	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
813	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
813	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
813	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
814	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
814	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
814	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
815	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
815	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
815	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
816	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
816	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
816	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
817	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
817	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
817	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
818	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
818	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
818	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
819	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
819	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
819	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
820	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
820	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
820	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
821	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
821	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-13.3200
821	FORCE	GLOBAL-Z	0.5000	-13.3200	1.0000	0.0000
822	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500











































1795	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
1795	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-26.6400
1795	FORCE	GLOBAL-Z	0.5000	-26.6400	1.0000	0.0000
1798	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
1798	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-26.6400
1798	FORCE	GLOBAL-Z	0.5000	-26.6400	1.0000	0.0000
1799	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
1799	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-26.6400
1799	FORCE	GLOBAL-Z	0.5000	-26.6400	1.0000	0.0000
1800	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
1800	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-26.6400
1800	FORCE	GLOBAL-Z	0.5000	-26.6400	1.0000	0.0000
1801	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
1801	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-26.6400
1801	FORCE	GLOBAL-Z	0.5000	-26.6400	1.0000	0.0000
1804	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
1804	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-26.6400
1804	FORCE	GLOBAL-Z	0.5000	-26.6400	1.0000	0.0000
1805	FORCE	GLOBAL-Z	0.0000	-8.2500	1.0000	-8.2500
1805	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-26.6400
1805	FORCE	GLOBAL-Z	0.5000	-26.6400	1.0000	0.0000

















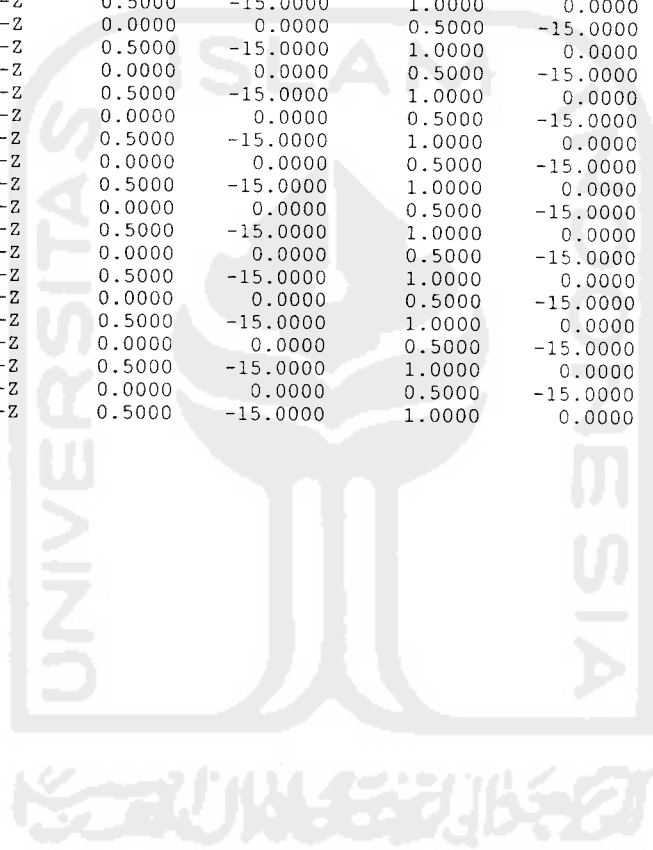


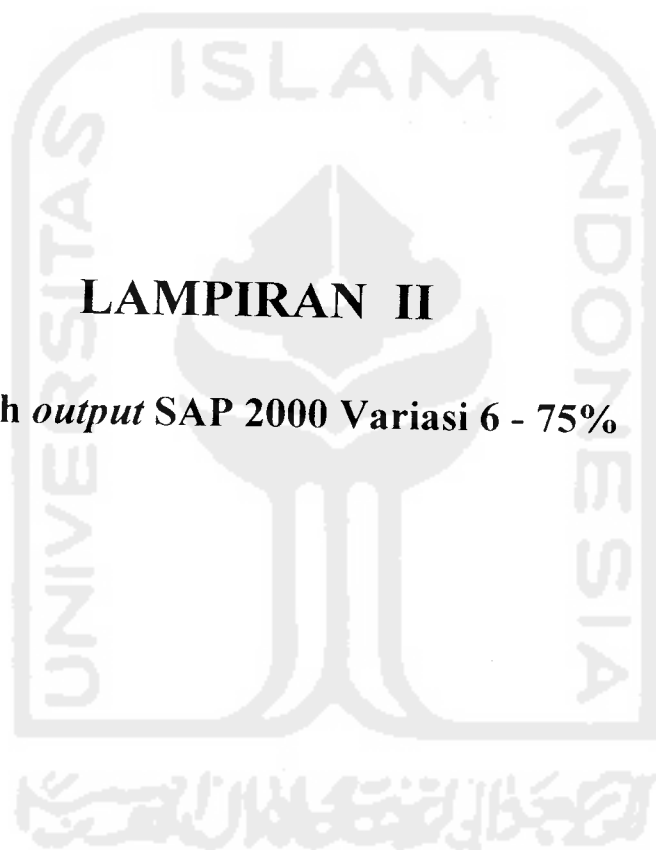






1742	FORCE	GLOBAL-Z	0.5000	-6.0000	1.0000	0.0000
1744	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-6.0000
1744	FORCE	GLOBAL-Z	0.5000	-6.0000	1.0000	0.0000
1748	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-6.0000
1748	FORCE	GLOBAL-Z	0.5000	-6.0000	1.0000	0.0000
1752	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1752	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1756	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1756	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1758	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1758	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1762	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1762	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1766	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1766	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1770	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1770	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1772	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1772	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1776	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1776	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1780	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1780	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1784	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1784	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1786	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1786	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1790	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1790	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1794	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1794	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1795	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1795	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1798	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1798	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1799	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1799	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1800	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1800	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1801	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1801	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1804	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1804	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000
1805	FORCE	GLOBAL-Z	0.0000	0.0000	0.5000	-15.0000
1805	FORCE	GLOBAL-Z	0.5000	-15.0000	1.0000	0.0000





## **LAMPIRAN II**

**Contoh *output* SAP 2000 Variasi 6 - 75%**

0.08	2.27E-05	5.32E-05	8.68E-05	1.21E-04	1.59E-04	1.88E-04	2.14E-04	2.39E-04	2.60E-04	2.77E-04	2.91E-04	3.02E-04	3.10E-04	3.17E-04	3.22E-04	2.93E-04	2.54E-04	2.19E-04	1.94E-04	1.80E-04
0.1	3.48E-05	8.16E-05	1.33E-04	1.87E-04	2.39E-04	2.89E-04	3.32E-04	3.72E-04	4.06E-04	4.34E-04	4.57E-04	4.76E-04	4.91E-04	5.03E-04	5.13E-04	4.73E-04	4.17E-04	3.67E-04	3.31E-04	3.10E-04
0.12	4.89E-05	1.16E-04	1.89E-04	2.64E-04	3.39E-04	4.10E-04	4.74E-04	5.32E-04	5.83E-04	6.29E-04	6.62E-04	6.92E-04	7.17E-04	7.38E-04	7.55E-04	7.05E-04	6.32E-04	5.67E-04	5.21E-04	4.95E-04
0.14	6.41E-05	1.52E-04	2.50E-04	3.52E-04	4.54E-04	5.50E-04	6.40E-04	7.21E-04	7.92E-04	8.54E-04	9.07E-04	9.52E-04	9.91E-04	1.0103	1.00105	9.96E-04	9.09E-04	8.31E-04	7.76E-04	7.47E-04
0.16	8.00E-05	1.91E-04	3.15E-04	4.46E-04	5.76E-04	7.02E-04	8.19E-04	9.27E-04	1.00102	1.00111	1.00118	1.00125	1.0013	1.00136	1.0014	1.00134	1.00125	1.00116	1.0011	0.00107
0.18	9.47E-05	2.27E-04	3.78E-04	5.36E-04	6.96E-04	8.52E-04	9.90E-04	1.00114	1.00126	1.00137	1.00147	1.00156	1.00164	1.00172	1.00178	1.00173	1.00164	1.00156	1.0015	0.00147
0.2	1.07E-04	2.59E-04	4.32E-04	6.17E-04	8.05E-04	9.90E-04	1.00117	1.00134	1.00149	1.00163	1.00176	1.00188	1.00199	1.00209	1.00218	1.00215	1.00208	1.00201	1.00196	0.00195
0.22	1.16E-04	2.83E-04	4.77E-04	6.85E-04	9.01E-04	1.00112	1.00132	1.00152	1.00171	1.00189	1.00205	1.0022	1.00234	1.00248	1.0026	1.00261	1.00256	1.00252	1.0025	0.0025
0.24	1.24E-04	3.06E-04	5.18E-04	7.50E-04	9.92E-04	1.00124	1.00148	1.00171	1.00194	1.00215	1.00235	1.00254	1.00272	1.0029	1.00306	1.00311	1.00311	1.0031	1.00311	0.00313
0.26	1.31E-04	3.29E-04	5.61E-04	8.18E-04	1.00109	1.00137	1.00165	1.00192	1.00219	1.00244	1.00269	1.00292	1.00314	1.00336	1.00356	1.00367	1.00372	1.00376	1.0038	0.00385
0.28	1.40E-04	3.52E-04	6.08E-04	8.93E-04	1.0012	1.00151	1.00183	1.00215	1.00246	1.00276	1.00305	1.00334	1.00361	1.00387	1.00413	1.00429	1.0044	1.00449	1.00457	0.00464
0.3	1.49E-04	3.77E-04	6.56E-04	9.71E-04	1.00131	1.00166	1.00203	1.00239	1.00275	1.0031	1.00345	1.00378	1.00411	1.00442	1.00473	1.00496	1.00513	1.00527	1.0054	0.00551
0.32	1.56E-04	4.01E-04	7.03E-04	1.00105	1.00142	1.00182	1.00222	1.00263	1.00304	1.00345	1.00385	1.00424	1.00462	1.00499	1.00535	1.00565	1.0059	1.0061	1.00627	1.00642
0.34	1.62E-04	4.21E-04	7.49E-04	1.00112	1.00152	1.00196	1.00241	1.00287	1.00333	1.00379	1.00425	1.00469	1.00513	1.00556	1.00599	1.00636	1.00668	1.00696	1.00718	1.00737
0.36	1.69E-04	4.39E-04	7.78E-04	1.00117	1.00161	1.00208	1.00258	1.00308	1.00356	1.00411	1.00462	1.00513	1.00563	1.00612	1.0066	1.00706	1.00747	1.00781	1.0081	1.00832
0.38	1.66E-04	4.45E-04	8.01E-04	1.00122	1.00169	1.00219	1.00272	1.00327	1.00384	1.0044	1.00497	1.00554	1.00609	1.00664	1.00718	1.00773	1.00823	1.00865	1.009	1.00927
0.4	1.66E-04	4.51E-04	8.19E-04	1.00126	1.00175	1.00228	1.00285	1.00345	1.00406	1.00468	1.0053	1.00592	1.00653	1.00714	1.00774	1.00838	1.00897	1.00947	1.00988	1.01019
0.42	1.69E-04	4.62E-04	8.49E-04	1.0013	1.00182	1.00239	1.00303	1.00364	1.00429	1.00496	1.00564	1.00631	1.00698	1.00764	1.0083	1.00902	1.00969	1.01027	1.01073	1.01109
0.44	1.74E-04	4.82E-04	8.89E-04	1.00137	1.00192	1.00253	1.00318	1.00386	1.00456	1.00528	1.00601	1.00674	1.00746	1.00818	1.00888	1.00967	1.01042	1.01105	1.01156	1.01195
0.46	1.85E-04	5.13E-04	9.42E-04	1.00146	1.00205	1.00269	1.00339	1.00411	1.00487	1.00564	1.00641	1.00719	1.00796	1.00873	1.00948	1.01033	1.01113	1.01181	1.01236	1.01278
0.48	1.86E-04	5.43E-04	9.99E-04	1.00155	1.00217	1.00285	1.00359	1.00436	1.00516	1.00597	1.00679	1.00762	1.00843	1.00924	1.01004	1.01094	1.01179	1.01251	1.01309	1.01353
0.5	2.04E-04	5.65E-04	1.00104	1.00161	1.00226	1.00298	1.00374	1.00455	1.00538	1.00624	1.0071	1.00796	1.00882	1.00967	1.01051	1.01146	1.01235	1.01311	1.01372	1.01418
0.52	2.05E-04	5.72E-04	1.00106	1.00164	1.00231	1.00304	1.00383	1.00466	1.00553	1.00641	1.00731	1.0082	1.00909	1.00998	1.01084	1.01179	1.01278	1.01359	1.01423	1.01472
0.54	2.06E-04	5.76E-04	1.00107	1.00166	1.00234	1.00309	1.00389	1.00476	1.00564	1.00655	1.00747	1.00839	1.00931	1.01022	1.01112	1.01206	1.01304	1.01397	1.01465	1.01516
0.56	2.09E-04	5.87E-04	1.00109	1.00169	1.00239	1.00316	1.00398	1.00496	1.0059	1.00685	1.00781	1.00880	1.00982	1.01082	1.01184	1.01288	1.01393	1.01486	1.01526	1.01579
0.58	2.17E-04	6.07E-04	1.00112	1.00174	1.00246	1.00324	1.00409	1.00498	1.00594	1.0069	1.00794	1.00897	1.00992	1.01094	1.01201	1.01313	1.01427	1.01526	1.01547	1.016
0.6	2.30E-04	6.39E-04	1.00117	1.00182	1.00255	1.00336	1.00423	1.00514	1.00608	1.00704	1.00802	1.00899	1.00996	1.01092	1.01196	1.01299	1.01402	1.01489	1.01566	1.01618
0.62	2.51E-04	6.86E-04	1.00125	1.00193	1.00269	1.00353	1.00442	1.00535	1.00632	1.00729	1.00828	1.00926	1.01024	1.01121	1.01216	1.0132	1.01417	1.01499	1.01566	1.01618
0.64	2.78E-04	7.50E-04	1.00136	1.00207	1.00288	1.00375	1.00467	1.00563	1.00662	1.00761	1.00861	1.00961	1.01059	1.01156	1.01251	1.01352	1.01443	1.01521	1.01585	1.01634
0.66	3.10E-04	8.24E-04	1.00148	1.00224	1.00309	1.00404	1.00496	1.00595	1.00696	1.00798	1.00899	1.00999	1.01099	1.01196	1.01291	1.01387	1.01473	1.01545	1.01604	1.01651
0.68	3.40E-04	8.94E-04	1.00159	1.0024	1.00329	1.00424	1.00524	1.00626	1.00729	1.00833	1.00936	1.01037	1.01137	1.01235	1.01331	1.01422	1.01502	1.01569	1.01624	1.01669
0.7	3.66E-04	9.56E-04	1.00169	1.00254	1.00347	1.00444	1.00548	1.00654	1.00759	1.00865	1.00969	1.01072	1.01173	1.01272	1.01368	1.01456	1.01531	1.01595	1.01647	1.01691
0.72	3.86E-04	0.001	1.00177	1.00265	1.00361	1.00463	1.00569	1.00676	1.00785	1.00892	1.00999	1.01103	1.01205	1.01305	1.01402	1.01489	1.01562	1.01623	1.01674	1.01716
0.74	3.98E-04	0.00103	1.00182	1.00272	1.00371	1.00475	1.00583	1.00693	1.00803	1.00913	1.01021	1.01127	1.01231	1.01333	1.01432	1.01519	1.01592	1.01653	1.01704	1.01747
0.76	3.98E-04	0.00104	1.00183	1.00273	1.00373	1.00479	1.00588	1.00707	1.00812	1.00923	1.01033	1.01142	1.01248	1.01351	1.01453	1.01543	1.01619	1.01683	1.01736	1.0178
0.78	3.84E-04	0.001	1.00178	1.00268	1.00366	1.00471	1.00581	1.00693	1.00806	1.00919	1.01031	1.01141	1.0125	1.01356	1.01459	1.01556	1.01639	1.01709	1.01766	1.01814

0.8	3.52E-04	9.34E-04	0.00167	0.00253	0.00348	0.00451	0.00559	0.00673	0.00783	0.00896	0.01009	0.01121	0.01232	0.0134	0.01447	0.01552	0.01646	0.01725	0.0179	0.01842
0.82	3.03E-04	8.23E-04	0.00149	0.00229	0.00319	0.00417	0.00521	0.00629	0.0074	0.00853	0.00967	0.0108	0.01192	0.01303	0.01412	0.01529	0.01637	0.01728	0.01802	0.0186
0.84	2.40E-04	6.77E-04	0.00126	0.00197	0.00279	0.0037	0.00468	0.00572	0.0068	0.00791	0.00904	0.01017	0.0113	0.01242	0.01353	0.01483	0.01607	0.01713	0.01797	0.01861
0.86	1.81E-04	5.02E-04	9.79E-04	0.00158	0.0023	0.00312	0.00402	0.00499	0.00602	0.0071	0.0082	0.00932	0.01044	0.01156	0.01268	0.01411	0.01552	0.01672	0.01768	0.01839
0.88	7.72E-05	3.00E-04	6.51E-04	0.00113	0.00172	0.00242	0.00322	0.00411	0.00506	0.00608	0.00714	0.00822	0.00932	0.01043	0.01153	0.01309	0.01465	0.01616	0.01706	0.01783
0.9	-1.49E-05	8.28E-05	2.94E-04	6.25E-04	0.00108	0.00164	0.00232	0.00309	0.00395	0.00489	0.00588	0.00691	0.00796	0.00902	0.01009	0.01174	0.01344	0.0151	0.01606	0.01687
0.92	-1.04E-04	-1.32E-04	1.19E-04	1.19E-04	4.18E-04	8.39E-04	0.00137	0.00202	0.00276	0.00359	0.00448	0.00543	0.0064	0.0074	0.00841	0.0101	0.01189	0.01344	0.01464	0.01548
0.94	-1.83E-04	-3.25E-04	-3.55E-04	-3.55E-04	-2.08E-04	5.96E-05	4.47E-04	9.49E-04	0.00155	0.00225	0.00302	0.00385	0.00472	0.00561	0.00653	0.0082	0.01	0.01157	0.01277	0.0136
0.96	-2.46E-04	-4.89E-04	-6.67E-04	-7.65E-04	-7.61E-04	-6.43E-04	-4.10E-04	-6.26E-05	3.90E-04	9.37E-04	0.00156	0.00225	0.00298	0.00374	0.00452	0.00609	0.00782	0.00932	0.01047	0.01125
0.98	-2.89E-04	-6.02E-04	-8.81E-04	-0.0011	-0.00122	-0.00125	-0.00117	-9.86E-04	-7.01E-04	-3.25E-04	1.28E-04	6.43E-04	0.0012	0.00179	0.00241	0.00379	0.00535	0.0067	0.00773	0.00842
1	-3.14E-04	-6.83E-04	-0.00104	-0.00136	-0.00161	-0.00178	-0.00186	-0.00185	-0.00175	-0.00156	-0.0013	-9.91E-04	-6.34E-04	-2.49E-04	1.67E-04	0.00129	0.00258	0.00371	0.00456	0.00512
1.02	-3.27E-04	-7.40E-04	-0.00117	-0.00158	-0.00196	-0.00227	-0.00251	-0.00268	-0.00278	-0.00281	-0.00277	-0.00269	-0.00256	-0.00241	-0.00223	-0.00144	-4.78E-04	-0.00333	9.88E-04	0.00138
1.04	-3.36E-04	-7.89E-04	-0.00129	-0.0018	-0.0023	-0.00276	-0.00318	-0.00355	-0.00387	-0.00413	-0.00434	-0.0045	-0.00463	-0.00474	-0.00461	-0.0044	-0.00383	-0.00333	-0.00296	-0.00275
1.06	-3.46E-04	-8.44E-04	-0.00142	-0.00204	-0.00267	-0.00331	-0.00392	-0.00451	-0.00506	-0.00557	-0.00605	-0.00649	-0.00689	-0.00728	-0.00763	-0.00763	-0.00748	-0.00733	-0.00724	-0.00724
1.08	-3.65E-04	-9.20E-04	-0.00159	-0.00233	-0.00312	-0.00394	-0.00477	-0.00559	-0.0064	-0.00718	-0.00794	-0.00867	-0.00937	-0.01005	-0.0107	-0.01112	-0.01139	-0.01116	-0.0118	-0.01201
1.1	-3.94E-04	-0.00102	-0.00179	-0.00268	-0.00364	-0.00467	-0.00572	-0.0068	-0.00787	-0.00894	-0.00999	-0.01103	-0.01204	-0.01302	-0.01396	-0.01481	-0.0155	-0.01608	-0.01657	-0.01697
1.12	-4.30E-04	-0.00114	-0.00203	-0.00307	-0.00422	-0.00546	-0.00676	-0.00809	-0.00945	-0.01081	-0.01217	-0.01351	-0.01483	-0.01613	-0.0174	-0.01865	-0.01975	-0.02068	-0.02144	-0.02205
1.14	-4.71E-04	-0.00127	-0.00229	-0.00349	-0.00483	-0.00629	-0.00783	-0.00944	-0.01108	-0.01273	-0.01439	-0.01605	-0.01768	-0.01929	-0.02087	-0.02252	-0.02402	-0.02529	-0.02633	-0.02714
1.16	-5.14E-04	-0.0014	-0.00255	-0.00391	-0.00545	-0.00713	-0.00892	-0.01079	-0.01271	-0.01466	-0.01662	-0.01868	-0.02052	-0.02243	-0.02432	-0.02636	-0.02825	-0.02986	-0.03115	-0.03216
1.18	-5.49E-04	-0.00151	-0.00278	-0.00429	-0.00601	-0.00789	-0.00991	-0.01202	-0.01421	-0.01644	-0.01869	-0.02094	-0.02318	-0.02539	-0.02757	-0.03	-0.03228	-0.03422	-0.03578	-0.03698
1.2	-5.69E-04	-0.00157	-0.0029	-0.00452	-0.00638	-0.00843	-0.01063	-0.01296	-0.01538	-0.01786	-0.02037	-0.02289	-0.02541	-0.02789	-0.03035	-0.03319	-0.03588	-0.03817	-0.04001	-0.04141
1.22	-5.39E-04	-0.00155	-0.00291	-0.00458	-0.00652	-0.00868	-0.01103	-0.01353	-0.01614	-0.01883	-0.02157	-0.02433	-0.02709	-0.02982	-0.03253	-0.03579	-0.03892	-0.04159	-0.04372	-0.04533
1.24	-4.97E-04	-0.00147	-0.00283	-0.00451	-0.00649	-0.00872	-0.01117	-0.01379	-0.01655	-0.01941	-0.02234	-0.0253	-0.02828	-0.03123	-0.03416	-0.03782	-0.04138	-0.04443	-0.04695	-0.04866
1.26	-4.47E-04	-0.00138	-0.0027	-0.00437	-0.00636	-0.00863	-0.01114	-0.01385	-0.01672	-0.01972	-0.02279	-0.02592	-0.02907	-0.0322	-0.03532	-0.03934	-0.04329	-0.04688	-0.04936	-0.05135
1.28	-4.01E-04	-0.00129	-0.00257	-0.00422	-0.00621	-0.0085	-0.01105	-0.01382	-0.01677	-0.01987	-0.02306	-0.02631	-0.02958	-0.03284	-0.03611	-0.04041	-0.04467	-0.04832	-0.05121	-0.05334
1.3	-3.74E-04	-0.00123	-0.00251	-0.00414	-0.00613	-0.00843	-0.01101	-0.01382	-0.01683	-0.01998	-0.02324	-0.02657	-0.02993	-0.03328	-0.03663	-0.04111	-0.04556	-0.04939	-0.05241	-0.05463
1.32	-3.74E-04	-0.00124	-0.00251	-0.00416	-0.00617	-0.00849	-0.01109	-0.01393	-0.01697	-0.02015	-0.02345	-0.02681	-0.03021	-0.03356	-0.03691	-0.04152	-0.04604	-0.04991	-0.05297	-0.05522
1.34	-4.08E-04	-0.00132	-0.00263	-0.00433	-0.00638	-0.00874	-0.01137	-0.01423	-0.01728	-0.02047	-0.02377	-0.02713	-0.03051	-0.03389	-0.03727	-0.04173	-0.04615	-0.04995	-0.05295	-0.05516
1.36	-4.79E-04	-0.00147	-0.00288	-0.00466	-0.00678	-0.00932	-0.01187	-0.01475	-0.01781	-0.02099	-0.02426	-0.02758	-0.03092	-0.03424	-0.03756	-0.04182	-0.046	-0.04959	-0.05243	-0.05454
1.38	-5.90E-04	-0.00172	-0.00326	-0.00517	-0.0074	-0.0099	-0.01263	-0.01555	-0.0186	-0.02176	-0.02499	-0.02825	-0.03151	-0.03475	-0.03796	-0.0419	-0.0457	-0.04856	-0.05155	-0.0535
1.4	-7.38E-04	-0.00205	-0.00378	-0.00587	-0.00825	-0.01087	-0.01369	-0.01665	-0.01972	-0.02285	-0.02603	-0.02921	-0.03237	-0.0355	-0.03869	-0.04211	-0.04541	-0.04824	-0.0505	-0.05224
1.42	-9.22E-04	-0.00246	-0.00443	-0.00674	-0.00931	-0.0121	-0.01503	-0.01806	-0.02116	-0.02429	-0.02741	-0.03051	-0.03368	-0.03659	-0.0395	-0.04257	-0.04529	-0.0476	-0.04949	-0.05098
1.44	-0.00113	-0.00234	-0.00518	-0.00776	-0.01057	-0.01355	-0.01663	-0.01978	-0.02293	-0.02607	-0.02916	-0.0322	-0.03518	-0.03808	-0.04091	-0.04342	-0.04551	-0.04726	-0.04873	-0.04996
1.46	-0.00135	-0.00344	-0.00598	-0.00883	-0.01191	-0.01511	-0.01838	-0.02165	-0.02489	-0.02806	-0.03115	-0.03416	-0.03707	-0.0399	-0.04263	-0.04463	-0.04612	-0.04734	-0.04841	-0.04939
1.48	-0.00155	-0.0039	-0.00672	-0.00985	-0.01317	-0.0166	-0.02005	-0.02347	-0.02681	-0.03005	-0.03318	-0.03618	-0.03907	-0.04185	-0.04453	-0.04613	-0.04711	-0.04789	-0.04863	-0.04941
1.5	-0.00172	-0.00428	-0.00732	-0.01069	-0.01424	-0.01787	-0.0215	-0.02506	-0.02853	-0.03186	-0.03505	-0.03809	-0.041	-0.0438	-0.04647	-0.04782	-0.04846	-0.04894	-0.04947	-0.05012

1.52	-0.00183	-0.00464	-0.00775	-0.01113	-0.01503	-0.01883	-0.02282	-0.02634	-0.02993	-0.03338	-0.03687	-0.03981	-0.0428	-0.04588	-0.04841	-0.04968	-0.0502	-0.05057	-0.05102	-0.05162
1.54	-0.00188	-0.00467	-0.00799	-0.01165	-0.01551	-0.01945	-0.02339	-0.02725	-0.03099	-0.03459	-0.03803	-0.04131	-0.04444	-0.04745	-0.05031	-0.05171	-0.05233	-0.05278	-0.0533	-0.05397
1.56	-0.00187	-0.00468	-0.00803	-0.01174	-0.01568	-0.01972	-0.02378	-0.02778	-0.03168	-0.03545	-0.03907	-0.04255	-0.04588	-0.04908	-0.05215	-0.05396	-0.05481	-0.05556	-0.0563	-0.05713
1.58	-0.00181	-0.00457	-0.00789	-0.01116	-0.01557	-0.01968	-0.02384	-0.02798	-0.03205	-0.03602	-0.03986	-0.04357	-0.04715	-0.05061	-0.05394	-0.05615	-0.05763	-0.05884	-0.05984	-0.06101
1.6	-0.00171	-0.00437	-0.00762	-0.01129	-0.01526	-0.01941	-0.02367	-0.02794	-0.03219	-0.03638	-0.04047	-0.04445	-0.04832	-0.05209	-0.05574	-0.05857	-0.06074	-0.06255	-0.06411	-0.0655
1.62	-0.00168	-0.00412	-0.00726	-0.01087	-0.01481	-0.01827	-0.02234	-0.02776	-0.03219	-0.03661	-0.04097	-0.04526	-0.04945	-0.05355	-0.05754	-0.0611	-0.06407	-0.06658	-0.06867	-0.07041
1.64	-0.00142	-0.00376	-0.00674	-0.01022	-0.01411	-0.01827	-0.02285	-0.02718	-0.03178	-0.03642	-0.04104	-0.04563	-0.05015	-0.05469	-0.05984	-0.06331	-0.06719	-0.07049	-0.07318	-0.07533
1.66	-0.00117	-0.00322	-0.00592	-0.00915	-0.01283	-0.01688	-0.02121	-0.02576	-0.03046	-0.03525	-0.0401	-0.04495	-0.04977	-0.05453	-0.05923	-0.06451	-0.06945	-0.07366	-0.07705	-0.07966
1.68	-8.36E-04	-0.00249	-0.00477	-0.00763	-0.01089	-0.01478	-0.01894	-0.0234	-0.02809	-0.03297	-0.03795	-0.043	-0.04807	-0.0531	-0.05811	-0.06436	-0.07045	-0.07567	-0.07982	-0.08291
1.7	-4.51E-04	-0.00162	-0.0034	-0.00577	-0.0087	-0.01212	-0.016	-0.02027	-0.02486	-0.02971	-0.03475	-0.03992	-0.04514	-0.05036	-0.0556	-0.0628	-0.07004	-0.07626	-0.08116	-0.08473
1.72	-4.36E-05	-6.85E-04	-0.00191	-0.00373	-0.00614	-0.00912	-0.01263	-0.0166	-0.02099	-0.02571	-0.03069	-0.03586	-0.04113	-0.04644	-0.05179	-0.05982	-0.06808	-0.0752	-0.08076	-0.08474
1.74	3.49E-04	2.29E-04	-4.28E-04	-0.00167	-0.00353	-0.00601	-0.00906	-0.01266	-0.01673	-0.02121	-0.02602	-0.03106	-0.03625	-0.0415	-0.04684	-0.05546	-0.0645	-0.07231	-0.07837	-0.08285
1.76	6.88E-04	0.00106	9.41E-04	2.58E-04	-0.00104	-0.00297	-0.00553	-0.00866	-0.01233	-0.01645	-0.02096	-0.02572	-0.03067	-0.03572	-0.04088	-0.04977	-0.05925	-0.06745	-0.07379	-0.07821
1.78	9.82E-04	0.00176	0.00213	0.00197	0.00123	-1.51E-04	-0.00216	-0.00477	-0.00793	-0.01157	-0.01561	-0.01986	-0.02452	-0.02918	-0.03398	-0.04278	-0.05228	-0.06051	-0.06685	-0.07122
1.8	0.00119	0.0023	0.00309	0.00341	0.00319	0.00238	9.55E-04	0.00106	-0.00362	-0.00666	-0.01011	-0.01387	-0.01786	-0.02196	-0.02622	-0.03451	-0.04358	-0.05146	-0.05749	-0.06163
1.82	0.00132	0.00268	0.0038	0.00455	0.00483	0.00458	0.00377	0.00241	5.46E-04	0.00178	-0.00045	-0.00752	-0.01076	-0.01413	-0.01785	-0.02503	-0.03322	-0.04034	-0.04578	-0.04946
1.84	0.00136	0.00288	0.00427	0.00538	0.00612	0.00642	0.00625	0.0056	0.0045	0.00289	0.00114	-1.00E-03	-0.00334	-0.00681	-0.00842	-0.0145	-0.02137	-0.02735	-0.0319	-0.03493
1.86	0.00133	0.00251	0.00448	0.00589	0.00705	0.00788	0.00835	0.00845	0.00819	0.00759	0.0067	0.00557	0.00426	0.00284	0.00129	-0.00314	-0.00829	-0.01278	-0.01617	-0.01839
1.88	0.00122	0.0028	0.00447	0.00612	0.00765	0.00899	0.0101	0.01097	0.01159	0.01196	0.01212	0.01209	0.01193	0.01167	0.01129	0.0088	0.00571	0.00299	9.71E-04	-2.78E-04
1.9	0.00106	0.00257	0.00428	0.00611	0.00797	0.0098	0.01155	0.01319	0.01471	0.0161	0.01735	0.0185	0.01954	0.02051	0.0214	0.02106	0.02026	0.01952	0.01904	0.01886
1.92	8.65E-04	0.00225	0.00396	0.00593	0.00809	0.01037	0.01274	0.01515	0.01757	0.01988	0.02236	0.0247	0.02699	0.02922	0.0314	0.03334	0.03496	0.03632	0.03746	0.03841
1.94	8.49E-04	0.00189	0.00357	0.00565	0.00807	0.01078	0.01374	0.01689	0.0202	0.02361	0.02709	0.03061	0.03412	0.03761	0.04108	0.0453	0.04937	0.05285	0.05563	0.05772
1.96	4.32E-04	0.00152	0.00316	0.00533	0.00799	0.01111	0.01461	0.01846	0.0226	0.02697	0.0315	0.03614	0.04083	0.04552	0.05022	0.05664	0.06307	0.0686	0.07296	0.07614
1.98	2.33E-04	0.00118	0.00278	0.00503	0.00791	0.01138	0.0154	0.0199	0.02481	0.03005	0.03555	0.04122	0.04699	0.05277	0.0586	0.06704	0.07564	0.08306	0.08886	0.09305
2	6.46E-05	8.93E-04	0.00247	0.0048	0.00788	0.01168	0.01615	0.02122	0.0268	0.03281	0.03916	0.04573	0.05245	0.0592	0.06601	0.07621	0.0867	0.09575	0.10281	0.10787
2.02	-6.33E-05	6.85E-04	0.00225	0.00466	0.00792	0.01201	0.01686	0.0224	0.02855	0.03521	0.04225	0.04957	0.05706	0.06461	0.07224	0.08387	0.09589	0.10626	0.11434	0.12012
2.04	-1.47E-04	5.88E-04	0.00214	0.00463	0.00804	0.01235	0.01751	0.02342	0.03001	0.03715	0.04473	0.05262	0.06069	0.06884	0.07708	0.08976	0.10291	0.11425	0.12309	0.12939
2.06	-1.88E-04	5.03E-04	0.00211	0.00467	0.00819	0.01267	0.01803	0.02419	0.03106	0.03852	0.04644	0.0547	0.06315	0.07168	0.08032	0.09366	0.1075	0.11945	0.12875	0.13538
2.08	-1.95E-04	5.05E-04	0.00213	0.00474	0.00833	0.01288	0.01834	0.02461	0.03161	0.03921	0.04728	0.05569	0.0643	0.07299	0.08178	0.09538	0.10949	0.12167	0.13115	0.1379
2.1	-1.76E-04	5.42E-04	0.00218	0.00479	0.00838	0.01291	0.01835	0.02459	0.03155	0.03909	0.04711	0.05545	0.064	0.07262	0.08135	0.09481	0.10877	0.12082	0.1302	0.13689
2.12	-1.43E-04	5.87E-04	0.00221	0.00477	0.00827	0.01269	0.01797	0.02403	0.03077	0.03807	0.04583	0.0539	0.06216	0.07049	0.07982	0.09188	0.10531	0.1169	0.12593	0.13237
2.14	-1.06E-04	6.17E-04	0.00218	0.00463	0.00796	0.01214	0.01713	0.02285	0.02921	0.03609	0.04338	0.05097	0.05874	0.06657	0.07449	0.08662	0.09918	0.11002	0.11846	0.12449
2.16	-5.92E-05	6.49E-04	0.00213	0.00441	0.0075	0.01136	0.01594	0.02119	0.027	0.03329	0.03995	0.04688	0.05396	0.0611	0.06831	0.0793	0.09066	0.10047	0.10812	0.11357
2.18	2.21E-05	7.42E-04	0.00215	0.00426	0.00708	0.01056	0.01468	0.01935	0.02452	0.03009	0.03597	0.04208	0.04832	0.05459	0.06093	0.07047	0.08031	0.08879	0.09541	0.10015
2.2	2.18E-04	0.00109	0.00256	0.00462	0.00727	0.01045	0.01414	0.01826	0.02276	0.02756	0.03226	0.03779	0.04307	0.04837	0.05371	0.06143	0.0683	0.07608	0.08139	0.08522
2.22	5.43E-04	0.00172	0.00343	0.00561	0.00822	0.01123	0.01457	0.0182	0.02206	0.0261	0.03027	0.0345	0.03877	0.04303	0.04728	0.05294	0.05835	0.06308	0.06682	0.06958



2.24	9.47E-04	0.00254	0.00458	0.00698	0.00986	0.01257	0.01584	0.01882	0.02208	0.02537	0.02866	0.03194	0.03517	0.03835	0.04148	0.04473	0.04766	0.05016	0.05219	0.05378
2.26	0.00138	0.00342	0.00585	0.00851	0.01131	0.01417	0.01701	0.01979	0.02248	0.02506	0.02751	0.02985	0.03208	0.03422	0.03625	0.03716	0.0375	0.03774	0.03805	0.03848
2.28	0.00177	0.00423	0.00699	0.00989	0.01279	0.01558	0.01821	0.02061	0.02276	0.02467	0.02635	0.02781	0.0291	0.03027	0.03128	0.03003	0.02798	0.02613	0.02485	0.02421
2.3	0.00207	0.00482	0.00781	0.01085	0.01376	0.01644	0.01882	0.02084	0.02249	0.02378	0.02475	0.02544	0.0259	0.0262	0.02632	0.02326	0.0192	0.01561	0.013	0.01145
2.32	0.00222	0.00508	0.00813	0.01114	0.01395	0.01642	0.01848	0.0201	0.02127	0.02201	0.02235	0.02238	0.02214	0.02173	0.02111	0.0167	0.01119	0.00635	0.00276	5.44E-04
2.34	0.00219	0.00496	0.00785	0.01064	0.01316	0.0153	0.01698	0.01817	0.01886	0.0191	0.01893	0.01841	0.01782	0.01666	0.01549	0.01029	0.00397	-0.00157	-0.0057	-0.00831
2.36	0.00197	0.00441	0.00691	0.00926	0.01132	0.01298	0.01417	0.01489	0.01512	0.01491	0.0143	0.01337	0.01219	0.01084	0.00931	0.00389	-0.00255	-0.00819	-0.01241	-0.01513
2.38	0.00156	0.00344	0.00531	0.007	0.00841	0.00944	0.01006	0.01024	0.01001	0.00939	0.00843	0.0072	0.00675	0.00418	0.00244	-0.00263	-0.00854	-0.0137	-0.01798	-0.02012
2.4	9.82E-04	0.00209	0.00311	0.00394	0.00451	0.00478	0.00471	0.00432	0.0036	0.0026	0.00134	-1.05E-04	-0.0017	-0.00339	-0.00518	-0.00942	-0.01422	-0.01841	-0.02159	-0.02371
2.42	2.65E-04	4.24E-04	4.23E-04	2.32E-04	-1.72E-04	-7.93E-04	-0.00163	-0.00267	-0.00389	-0.00528	-0.00679	-0.00841	-0.01009	-0.0118	-0.01355	-0.01661	-0.01989	-0.02272	-0.02491	-0.02843
2.44	-4.86E-04	-0.00131	-0.00237	-0.00363	-0.00503	-0.00656	-0.00818	-0.00986	-0.01159	-0.01333	-0.01508	-0.01682	-0.01855	-0.02024	-0.02192	-0.02368	-0.02528	-0.02684	-0.02775	-0.02862
2.46	-0.00114	-0.00281	-0.00479	-0.00695	-0.00923	-0.01153	-0.01382	-0.01605	-0.0182	-0.02025	-0.02219	-0.02404	-0.02579	-0.02747	-0.02906	-0.02968	-0.02983	-0.02992	-0.03008	-0.03037
2.48	-0.00164	-0.00399	-0.00689	-0.00958	-0.01254	-0.01548	-0.01831	-0.02099	-0.0235	-0.02581	-0.02794	-0.0299	-0.03171	-0.0334	-0.03496	-0.03474	-0.0338	-0.03292	-0.03238	-0.03225
2.5	-0.00199	-0.00479	-0.00789	-0.01114	-0.01486	-0.01825	-0.0215	-0.02454	-0.02734	-0.0299	-0.03222	-0.03432	-0.03624	-0.03801	-0.03963	-0.03895	-0.03739	-0.03596	-0.03502	-0.03466
2.52	-0.00216	-0.00522	-0.00871	-0.01242	-0.01619	-0.01989	-0.02344	-0.02676	-0.02982	-0.03262	-0.03516	-0.03746	-0.03956	-0.0415	-0.04327	-0.04255	-0.04087	-0.03933	-0.03832	-0.03794
2.54	-0.00219	-0.00531	-0.00869	-0.01273	-0.01666	-0.02054	-0.02428	-0.02782	-0.03112	-0.03417	-0.03696	-0.03953	-0.04189	-0.0441	-0.04614	-0.04578	-0.04446	-0.04323	-0.04246	-0.04226
2.56	-0.00209	-0.00511	-0.00864	-0.01245	-0.0164	-0.02036	-0.02423	-0.02795	-0.03147	-0.03478	-0.03788	-0.04077	-0.04348	-0.04605	-0.04846	-0.04882	-0.04828	-0.04773	-0.04748	-0.04764
2.58	-0.00185	-0.00461	-0.00789	-0.01151	-0.01533	-0.01923	-0.02313	-0.02696	-0.03067	-0.03425	-0.03766	-0.04092	-0.04404	-0.04696	-0.04989	-0.05131	-0.05196	-0.05245	-0.05299	-0.05367
2.6	-0.00147	-0.00377	-0.00661	-0.00984	-0.01334	-0.01703	-0.02083	-0.02466	-0.02849	-0.03228	-0.036	-0.03963	-0.04318	-0.04653	-0.04999	-0.05276	-0.05498	-0.05693	-0.05841	-0.05976
2.62	-9.76E-04	-0.00269	-0.00492	-0.0076	-0.01065	-0.01399	-0.01756	-0.0213	-0.02517	-0.02912	-0.0331	-0.03708	-0.04104	-0.04496	-0.04881	-0.05311	-0.05713	-0.06056	-0.06331	-0.06544
2.64	-4.20E-04	-0.00145	-0.00299	-0.00502	-0.00749	-0.01038	-0.01364	-0.01721	-0.02103	-0.02506	-0.02924	-0.03351	-0.03783	-0.04215	-0.04647	-0.05234	-0.05821	-0.06326	-0.06724	-0.07015
2.66	1.42E-04	-1.81E-04	-9.94E-04	-0.00233	-0.00419	-0.00657	-0.00943	-0.01275	-0.01645	-0.02048	-0.02476	-0.02924	-0.03382	-0.03845	-0.04314	-0.05045	-0.05805	-0.06462	-0.06972	-0.07335
2.68	6.59E-04	9.95E-04	8.75E-04	2.15E-04	-0.00103	-0.00288	-0.00532	-0.00832	-0.01182	-0.01575	-0.02004	-0.02459	-0.02931	-0.03412	-0.03904	-0.04751	-0.05653	-0.06434	-0.07037	-0.07459
2.7	0.00108	0.00198	0.00245	0.00239	0.00171	3.69E-04	-0.00163	-0.00427	-0.0075	-0.01123	-0.01539	-0.01987	-0.02458	-0.02941	-0.03438	-0.04359	-0.05357	-0.06222	-0.06887	-0.07346
2.72	0.00138	0.00268	0.00361	0.00403	0.00382	0.00293	0.00135	-9.00E-04	-0.00378	-0.00721	-0.01111	-0.01537	-0.01988	-0.02453	-0.02935	-0.0388	-0.04915	-0.05813	-0.06502	-0.06972
2.74	0.00152	0.00305	0.00426	0.005	0.00515	0.00465	0.00346	0.00161	-8.70E-04	-0.0039	-0.0074	-0.01127	-0.0154	-0.01968	-0.02414	-0.03326	-0.04333	-0.05208	-0.05877	-0.06332
2.76	0.0015	0.00306	0.00437	0.00527	0.00565	0.00543	0.00459	0.00314	0.00111	-0.00143	-0.00441	-0.00773	-0.0113	-0.01501	-0.0189	-0.02712	-0.03626	-0.0442	-0.05026	-0.05437
2.78	0.00132	0.00273	0.00396	0.00485	0.00531	0.00528	0.00474	0.00368	0.00214	1.63E-04	-0.00218	-0.00482	-0.00767	-0.01065	-0.01377	-0.02057	-0.02815	-0.03475	-0.03978	-0.04317
2.8	0.00101	0.00211	0.00308	0.00382	0.00428	0.00433	0.00403	0.00395	0.00232	9.84E-04	-0.00251	-0.00451	-0.00661	-0.00861	-0.00882	-0.01375	-0.01927	-0.02408	-0.02774	-0.0302
2.82	6.19E-04	0.00129	0.00192	0.00241	0.00274	0.00287	0.00278	0.00248	0.00197	0.00128	4.29E-04	-5.49E-04	-0.00162	-0.00274	-0.00393	-0.0067	-0.00981	-0.01253	-0.01459	-0.01597
2.84	1.86E-04	4.16E-04	6.55E-04	8.63E-04	0.00109	0.00125	0.00138	0.00147	0.00151	0.00151	0.00147	0.00141	0.00132	0.00122	0.0011	6.23E-04	5.40E-05	-4.44E-04	-8.16E-04	-0.00105
2.86	-2.14E-04	-3.93E-04	-4.94E-04	-4.93E-04	-3.73E-04	-1.26E-04	2.49E-04	7.45E-04	0.00136	0.00206	0.00285	0.00371	0.0046	0.00552	0.00647	0.00923	0.01015	0.01161	0.01309	0.01397
2.88	-5.36E-04	-0.00103	-0.00137	-0.00151	-0.00139	-9.94E-04	-3.23E-04	6.18E-04	0.00181	0.00322	0.00482	0.00656	0.0084	0.01029	0.01225	0.01606	0.02021	0.02382	0.02699	0.02849
2.9	-7.52E-04	-0.00143	-0.00189	-0.00203	-0.00181	-0.0012	-1.74E-04	0.00124	0.00301	0.0051	0.00745	0.01001	0.01272	0.0155	0.01838	0.0239	0.02993	0.03516	0.03918	0.04193
2.92	-8.44E-04	-0.00155	-0.00198	-0.002	-0.00165	-6.35E-04	7.89E-04	0.00269	0.00503	0.00775	0.01079	0.01408	0.01754	0.02109	0.02475	0.0316	0.03904	0.04549	0.05045	0.05387
2.94	-8.07E-04	-0.00141	-0.00163	-0.00139	-6.27E-04	6.92E-04	0.00256	0.00496	0.00784	0.01114	0.01478	0.01868	0.02276	0.02694	0.03123	0.03897	0.04731	0.05454	0.06011	0.06397

2.96	-6.46E-04	-9.82E-04	-8.77E-04	-2.51E-04	9.42E-04	0.00272	0.00507	0.00796	0.01134	0.01514	0.01927	0.02367	0.02824	0.03289	0.03765	0.04584	0.05458	0.06214	0.06789	0.07207
2.98	-3.81E-04	-3.33E-04	2.20E-04	0.00133	0.00302	0.00531	0.00815	0.01151	0.01534	0.01956	0.02409	0.02886	0.03377	0.03875	0.04381	0.05206	0.06073	0.06823	0.07404	0.07814
3	-3.83E-05	4.81E-04	0.00156	0.00322	0.00546	0.00826	0.01142	0.01521	0.01941	0.02395	0.02877	0.03387	0.03914	0.04431	0.04954	0.05749	0.06572	0.07281	0.07834	0.08229
3.02	3.54E-04	0.0014	0.00305	0.00529	0.00809	0.01142	0.01521	0.01941	0.02395	0.02877	0.03387	0.03914	0.04431	0.04954	0.05749	0.06572	0.07281	0.07834	0.08229	0.08476
3.04	7.88E-04	0.0024	0.00466	0.00752	0.0109	0.01474	0.01898	0.02355	0.02838	0.03341	0.03857	0.04381	0.04907	0.05431	0.0618	0.06966	0.07604	0.08109	0.08476	0.086
3.06	0.00124	0.00344	0.00633	0.0098	0.01376	0.01812	0.0228	0.02771	0.0328	0.03799	0.04325	0.04851	0.05374	0.05892	0.06403	0.06981	0.07524	0.07987	0.08359	0.08644
3.08	0.00167	0.00442	0.0079	0.01195	0.01645	0.02129	0.02636	0.03158	0.03689	0.04222	0.04754	0.0528	0.05798	0.06307	0.06805	0.07298	0.07733	0.08101	0.08403	0.08645
3.1	0.00204	0.00526	0.00925	0.0138	0.01876	0.024	0.0294	0.03489	0.04038	0.04583	0.05119	0.05645	0.06158	0.06658	0.07146	0.07563	0.07904	0.08191	0.08432	0.08636
3.12	0.00231	0.00589	0.01025	0.01517	0.02048	0.02602	0.03168	0.03736	0.043	0.04854	0.05394	0.0592	0.0643	0.06925	0.07405	0.07768	0.08042	0.08268	0.08465	0.08642
3.14	0.00246	0.00624	0.0108	0.01593	0.02144	0.02716	0.03297	0.03878	0.04451	0.05011	0.05556	0.06084	0.06594	0.07089	0.07567	0.07903	0.08143	0.08339	0.08515	0.08678
3.16	0.00247	0.00626	0.01084	0.016	0.02153	0.02728	0.03313	0.03898	0.04475	0.05039	0.05588	0.0612	0.06634	0.07133	0.07615	0.07966	0.08201	0.08402	0.0858	0.08746
3.18	0.00233	0.00594	0.01035	0.01533	0.02071	0.02634	0.03209	0.03788	0.04362	0.04927	0.05479	0.06017	0.06539	0.07046	0.07538	0.07916	0.08204	0.08444	0.08651	0.08836
3.2	0.00205	0.00532	0.00937	0.014	0.01906	0.02442	0.02996	0.03559	0.04125	0.04686	0.0524	0.05783	0.06314	0.06833	0.07338	0.0778	0.08147	0.08454	0.08712	0.08929
3.22	0.0017	0.00452	0.00809	0.01226	0.0169	0.0219	0.02715	0.03257	0.03808	0.04363	0.04917	0.05465	0.06006	0.06537	0.07059	0.0756	0.07966	0.08372	0.08759	0.09015
3.24	0.0013	0.0036	0.00663	0.01026	0.01442	0.01898	0.02388	0.02903	0.03436	0.03981	0.04532	0.05084	0.05632	0.06175	0.0671	0.07317	0.07886	0.08372	0.08865	0.09062
3.26	8.68E-04	0.00261	0.00505	0.0081	0.0117	0.01578	0.02027	0.02509	0.03019	0.03548	0.0409	0.0464	0.05191	0.0574	0.06286	0.06976	0.07649	0.08227	0.08865	0.09026
3.28	4.37E-04	0.00161	0.00343	0.00587	0.00888	0.01243	0.01646	0.0209	0.02568	0.03075	0.03602	0.04142	0.04669	0.05236	0.05785	0.06546	0.07312	0.07971	0.08489	0.08866
3.3	1.78E-05	6.30E-04	0.00183	0.00363	0.00602	0.009	0.0125	0.01649	0.02089	0.02564	0.03066	0.03586	0.04118	0.04653	0.05194	0.06008	0.06847	0.0757	0.08135	0.08539
3.32	-3.71E-04	-2.97E-04	2.95E-04	0.00146	0.00322	0.00558	0.00851	0.01197	0.0159	0.02024	0.02489	0.02977	0.03481	0.03991	0.04509	0.05351	0.06235	0.06939	0.07532	0.08011
3.34	-7.92E-04	-0.00111	-0.00108	-0.00197	-0.00123	-3.55E-05	0.00234	0.00465	0.00753	0.0109	0.01471	0.01887	0.0233	0.02791	0.03261	0.04578	0.05473	0.06247	0.06845	0.07261
3.36	-8.95E-04	-0.00161	-0.00174	-0.00187	-0.00123	-3.55E-05	0.00234	0.00465	0.00753	0.0109	0.01471	0.01887	0.0233	0.02791	0.03261	0.04578	0.05473	0.06247	0.06845	0.07261
3.38	-9.15E-04	-0.00174	-0.00227	-0.00242	-0.00212	-0.00132	-0.00171	-8.19E-04	0.00174	0.00396	0.00657	0.00951	0.0127	0.01607	0.01953	0.02311	0.02695	0.03067	0.03334	0.03526
3.4	-7.92E-04	-0.00154	-0.00174	-0.00232	-0.00221	-0.00171	-8.19E-04	0.00174	0.00396	0.00657	0.00951	0.0127	0.01607	0.01953	0.02311	0.02695	0.03067	0.03334	0.03526	0.0378
3.42	-5.63E-04	-0.00111	-0.00152	-0.00174	-0.00172	-0.00144	-8.88E-04	-8.88E-04	9.80E-04	0.00225	0.00371	0.00531	0.007	0.00876	0.01058	0.01421	0.02802	0.03315	0.03709	0.03978
3.44	-2.80E-04	-5.61E-04	-7.84E-04	-9.19E-04	-9.45E-04	-8.49E-04	-6.28E-04	-2.84E-04	1.76E-04	7.38E-04	0.00139	0.0021	0.00287	0.00366	0.00448	0.00617	0.00803	0.00965	0.01088	0.01173
3.46	1.28E-05	8.47E-06	-1.54E-05	-6.06E-05	-1.28E-04	-2.18E-04	-3.23E-04	-4.60E-04	-6.08E-04	-7.71E-04	-9.45E-04	-0.00113	-0.00132	-0.00151	-0.0017	-0.00201	-0.00234	-0.00263	-0.00285	-0.003
3.48	3.23E-04	6.21E-04	8.27E-04	9.06E-04	0.00192	0.00333	0.00478	0.00628	0.00771	0.00925	0.01079	0.01237	0.01394	0.01553	0.01715	0.01883	0.02049	0.02215	0.02381	0.02547
3.5	6.33E-04	0.00124	0.00163	0.00214	0.00277	0.00333	0.00396	0.00464	0.00531	0.00607	0.00683	0.00768	0.00853	0.00948	0.01043	0.01148	0.01253	0.01368	0.01483	0.01608
3.52	9.01E-04	0.00178	0.00244	0.00309	0.00377	0.00442	0.0051	0.00584	0.00661	0.00744	0.00836	0.00934	0.01037	0.01144	0.01253	0.01368	0.01483	0.01608	0.01733	0.01868
3.54	0.0011	0.00216	0.00296	0.00338	0.0038	0.00427	0.00474	0.00521	0.00568	0.00615	0.00662	0.00709	0.00756	0.00803	0.0085	0.00901	0.00948	0.00995	0.01042	0.01089
3.56	0.00119	0.00231	0.00314	0.00363	0.004	0.0044	0.0048	0.0052	0.0056	0.006	0.0064	0.0068	0.0072	0.0076	0.008	0.0084	0.0088	0.0092	0.0096	0.01
3.58	0.00115	0.0022	0.00291	0.00336	0.0038	0.0042	0.0046	0.005	0.0054	0.0058	0.0062	0.0066	0.007	0.0074	0.0078	0.0082	0.0086	0.009	0.0094	0.0098
3.6	9.82E-04	0.0018	0.00225	0.00271	0.00316	0.0036	0.00406	0.0045	0.005	0.0054	0.0058	0.0062	0.0066	0.007	0.0074	0.0078	0.0082	0.0086	0.009	0.0094
3.62	6.94E-04	0.00114	0.00148	0.0018	0.0021	0.0024	0.0027	0.003	0.0033	0.0036	0.0039	0.0042	0.0045	0.0048	0.0051	0.0054	0.0057	0.006	0.0063	0.0066
3.64	3.22E-04	2.95E-04	-1.45E-04	-0.00104	-0.00242	-0.00428	-0.00661	-0.00936	-0.0125	-0.01596	-0.01968	-0.02359	-0.02762	-0.03171	-0.03587	-0.04026	-0.04498	-0.04997	-0.05514	-0.06074
3.66	-1.07E-04	-6.67E-04	-0.00165	-0.00307	-0.0049	-0.00713	-0.00972	-0.01264	-0.01584	-0.01926	-0.02286	-0.02658	-0.03037	-0.03418	-0.03802	-0.04194	-0.04592	-0.05002	-0.05437	-0.05926

3.68	-5.80E-04	-0.00168	-0.00323	-0.00517	-0.00746	-0.01005	-0.01289	-0.01694	-0.01916	-0.02251	-0.02593	-0.02934	-0.03288	-0.03634	-0.03978	-0.04411	-0.04833	-0.05195	-0.05482	-0.05696
3.7	-0.00101	-0.00266	-0.00476	-0.00721	-0.00993	-0.01286	-0.01592	-0.01909	-0.0223	-0.02553	-0.02875	-0.03194	-0.03508	-0.03817	-0.04119	-0.04419	-0.04684	-0.04903	-0.05093	-0.05241
3.72	-0.00141	-0.00356	-0.00616	-0.00906	-0.01217	-0.01539	-0.01864	-0.02189	-0.02508	-0.02819	-0.0312	-0.03411	-0.03693	-0.03965	-0.04227	-0.04401	-0.0452	-0.04617	-0.04705	-0.0479
3.74	-0.00175	-0.00432	-0.00734	-0.01062	-0.01405	-0.01751	-0.02092	-0.02422	-0.02739	-0.03039	-0.03322	-0.03588	-0.03841	-0.04081	-0.04308	-0.04475	-0.04569	-0.04636	-0.04705	-0.0479
3.76	-0.00201	-0.0049	-0.00823	-0.0118	-0.01547	-0.01911	-0.02264	-0.02599	-0.02913	-0.03205	-0.03473	-0.03722	-0.03952	-0.04168	-0.04368	-0.0454	-0.0462	-0.04699	-0.04789	-0.04893
3.78	-0.00217	-0.00525	-0.00877	-0.01252	-0.01634	-0.0201	-0.0237	-0.02708	-0.03021	-0.03307	-0.03567	-0.03804	-0.04021	-0.04222	-0.04406	-0.04573	-0.0472	-0.04869	-0.04999	-0.05109
3.8	-0.00221	-0.00533	-0.0089	-0.01269	-0.01653	-0.02031	-0.02392	-0.0273	-0.03042	-0.03327	-0.03584	-0.03818	-0.04031	-0.04228	-0.04407	-0.04573	-0.0472	-0.04869	-0.04999	-0.05109
3.82	-0.00212	-0.00512	-0.00856	-0.01224	-0.01598	-0.01968	-0.02322	-0.02657	-0.02967	-0.03252	-0.03512	-0.0375	-0.03968	-0.04171	-0.04357	-0.0452	-0.04682	-0.04828	-0.04954	-0.05059
3.84	-0.00189	-0.00462	-0.00778	-0.0112	-0.01471	-0.01822	-0.02163	-0.0249	-0.02797	-0.03085	-0.03351	-0.03599	-0.03831	-0.04049	-0.04252	-0.04426	-0.04581	-0.04719	-0.04841	-0.04949
3.86	-0.00158	-0.00391	-0.00667	-0.00971	-0.01289	-0.01614	-0.01936	-0.02251	-0.02555	-0.02847	-0.03124	-0.03387	-0.03638	-0.03878	-0.04106	-0.04294	-0.04459	-0.04607	-0.04736	-0.04844
3.88	-0.0012	-0.00307	-0.00535	-0.00794	-0.01073	-0.01366	-0.01666	-0.01968	-0.02269	-0.02564	-0.02854	-0.03136	-0.0341	-0.03677	-0.03935	-0.04188	-0.04426	-0.04637	-0.04819	-0.04976
3.9	-8.06E-04	-0.00219	-0.00398	-0.0061	-0.00849	-0.01109	-0.01386	-0.01674	-0.01971	-0.02272	-0.02574	-0.02876	-0.03175	-0.0347	-0.0376	-0.04052	-0.04329	-0.04587	-0.04824	-0.04981
3.92	-4.40E-04	-0.00137	-0.0027	-0.00439	-0.0064	-0.00871	-0.01126	-0.01403	-0.01696	-0.02002	-0.02317	-0.02638	-0.0296	-0.03281	-0.03601	-0.03916	-0.04225	-0.04519	-0.04784	-0.04955
3.94	-1.44E-04	-7.11E-04	-0.00167	-0.00301	-0.00473	-0.00679	-0.00918	-0.01185	-0.01477	-0.01788	-0.02114	-0.0245	-0.02792	-0.03136	-0.03481	-0.03827	-0.04169	-0.04497	-0.04804	-0.05059
3.96	4.85E-05	-2.84E-04	-0.001	-0.00212	-0.00365	-0.00557	-0.00786	-0.01049	-0.0134	-0.01656	-0.01991	-0.02339	-0.02685	-0.03035	-0.03381	-0.03727	-0.04064	-0.04382	-0.04679	-0.04944
3.98	1.24E-04	-1.17E-04	-7.47E-04	-0.00179	-0.00325	-0.00513	-0.00739	-0.01001	-0.01295	-0.01614	-0.01954	-0.02309	-0.02673	-0.03041	-0.03413	-0.03796	-0.04162	-0.04512	-0.04839	-0.05124
4	1.14E-04	-1.40E-04	-7.84E-04	-0.00184	-0.00332	-0.0052	-0.00748	-0.0101	-0.01304	-0.01624	-0.01964	-0.02319	-0.02683	-0.0305	-0.03423	-0.03803	-0.04166	-0.04512	-0.04839	-0.05124
4.02	3.86E-05	-3.06E-04	-0.00104	-0.00217	-0.00371	-0.00564	-0.00794	-0.01056	-0.01348	-0.01664	-0.01998	-0.02346	-0.02702	-0.0306	-0.03423	-0.03803	-0.04166	-0.04512	-0.04839	-0.05124
4.04	-9.79E-05	-6.03E-04	-0.00149	-0.00277	-0.00441	-0.00635	-0.00875	-0.01137	-0.01425	-0.01733	-0.02056	-0.0239	-0.02731	-0.03073	-0.03417	-0.03764	-0.04112	-0.04459	-0.04806	-0.05124
4.06	-2.81E-04	-0.001	-0.0021	-0.00386	-0.00535	-0.00746	-0.00983	-0.01245	-0.01526	-0.01822	-0.02131	-0.02446	-0.02766	-0.03085	-0.03405	-0.03724	-0.04043	-0.04362	-0.04681	-0.04999
4.08	-4.94E-04	-0.00144	-0.00277	-0.00442	-0.00637	-0.00857	-0.01098	-0.01357	-0.01629	-0.01912	-0.02202	-0.02495	-0.02788	-0.0308	-0.03371	-0.03653	-0.03936	-0.04215	-0.04494	-0.04773
4.1	-6.85E-04	-0.00187	-0.00342	-0.00526	-0.00735	-0.00963	-0.01205	-0.01459	-0.01721	-0.01987	-0.02255	-0.02523	-0.02789	-0.03051	-0.0331	-0.03563	-0.0382	-0.04078	-0.04324	-0.0457
4.12	-8.73E-04	-0.00227	-0.00402	-0.00603	-0.00823	-0.01057	-0.013	-0.01547	-0.01797	-0.02046	-0.02292	-0.02533	-0.0277	-0.03002	-0.03228	-0.03453	-0.03678	-0.03894	-0.04101	-0.043
4.14	-0.00103	-0.00262	-0.00463	-0.00667	-0.00896	-0.01134	-0.01375	-0.01615	-0.01852	-0.02083	-0.02307	-0.02524	-0.02734	-0.02937	-0.03133	-0.03318	-0.03493	-0.03659	-0.03816	-0.03964
4.16	-0.00116	-0.00289	-0.00492	-0.00716	-0.00952	-0.01191	-0.01429	-0.01662	-0.01887	-0.02102	-0.02306	-0.02501	-0.02686	-0.02864	-0.03032	-0.0319	-0.03343	-0.03489	-0.03626	-0.03754
4.18	-0.00126	-0.00308	-0.0052	-0.00751	-0.00989	-0.01228	-0.01463	-0.01688	-0.01902	-0.02103	-0.02292	-0.02468	-0.02633	-0.02789	-0.02937	-0.03074	-0.03203	-0.03324	-0.03437	-0.03544
4.2	-0.00131	-0.0032	-0.00537	-0.0077	-0.0101	-0.01248	-0.01479	-0.01698	-0.01904	-0.02095	-0.02271	-0.02434	-0.02585	-0.02727	-0.02859	-0.0298	-0.03103	-0.03213	-0.0331	-0.03409
4.22	-0.00134	-0.00325	-0.00544	-0.00778	-0.01017	-0.01254	-0.01482	-0.01698	-0.01898	-0.02083	-0.02253	-0.02408	-0.02552	-0.02685	-0.02808	-0.02924	-0.03034	-0.03134	-0.03224	-0.0331
4.24	-0.00134	-0.00325	-0.00544	-0.00778	-0.01017	-0.01254	-0.01481	-0.01696	-0.01896	-0.02078	-0.02248	-0.02403	-0.02545	-0.02677	-0.02799	-0.0291	-0.03016	-0.03111	-0.03197	-0.03284
4.26	-0.00133	-0.00323	-0.00541	-0.00775	-0.01016	-0.01254	-0.01484	-0.01702	-0.01906	-0.02094	-0.02268	-0.02428	-0.02576	-0.02714	-0.02842	-0.0296	-0.0307	-0.03166	-0.03251	-0.0333
4.28	-0.00131	-0.0032	-0.00539	-0.00776	-0.01019	-0.01262	-0.01499	-0.01725	-0.01939	-0.02138	-0.02323	-0.02495	-0.02656	-0.02807	-0.02948	-0.03079	-0.03203	-0.03319	-0.03426	-0.03524
4.3	-0.0013	-0.00319	-0.0054	-0.0078	-0.0103	-0.01282	-0.0153	-0.01769	-0.01996	-0.02213	-0.02416	-0.02607	-0.02787	-0.02957	-0.03118	-0.0327	-0.03419	-0.03552	-0.03676	-0.03791
4.32	-0.00129	-0.00319	-0.00544	-0.00792	-0.01052	-0.01316	-0.0158	-0.01837	-0.02085	-0.02323	-0.02549	-0.02764	-0.02969	-0.03165	-0.03352	-0.03529	-0.03697	-0.03854	-0.03999	-0.04134
4.34	-0.00128	-0.00321	-0.00551	-0.00808	-0.0108	-0.01361	-0.01643	-0.01922	-0.02195	-0.02469	-0.02714	-0.02958	-0.03193	-0.03418	-0.03637	-0.03851	-0.04059	-0.04254	-0.04437	-0.04609
4.36	-0.00125	-0.00317	-0.00551	-0.00815	-0.01098	-0.01394	-0.01695	-0.01997	-0.02296	-0.02589	-0.02874	-0.03151	-0.0342	-0.03681	-0.03933	-0.04181	-0.04425	-0.04664	-0.04897	-0.05116
4.38	-0.00114	-0.00297	-0.00523	-0.00784	-0.01069	-0.01371	-0.01684	-0.02003	-0.02324	-0.02643	-0.02958	-0.03268	-0.03571	-0.03869	-0.04157	-0.04444	-0.0472	-0.04997	-0.05264	-0.05519

4.4	-9.77E-04	-0.00262	-0.00474	-0.00722	-0.01001	-0.01302	-0.01621	-0.01952	-0.02291	-0.02633	-0.02976	-0.03318	-0.03655	-0.03987	-0.04313	-0.04653	-0.04961	-0.05223	-0.05436	-0.05603
4.42	-7.80E-04	-0.00221	-0.00411	-0.00643	-0.0091	-0.01206	-0.01526	-0.01865	-0.02218	-0.0258	-0.02948	-0.03318	-0.03687	-0.04053	-0.04415	-0.0484	-0.05244	-0.0559	-0.05866	-0.06076
4.44	-5.68E-04	-0.00175	-0.00342	-0.00554	-0.00805	-0.01092	-0.01409	-0.01752	-0.02115	-0.02493	-0.02881	-0.03276	-0.03673	-0.04068	-0.04462	-0.04958	-0.05466	-0.05892	-0.0623	-0.06481
4.46	-3.39E-04	-0.00124	-0.00264	-0.00451	-0.00682	-0.00954	-0.01262	-0.01601	-0.01968	-0.02355	-0.02758	-0.03171	-0.03589	-0.04007	-0.04426	-0.04907	-0.05391	-0.05894	-0.06489	-0.06777
4.48	-8.71E-05	-6.78E-04	-0.00175	-0.00331	-0.00534	-0.00783	-0.01074	-0.01403	-0.01764	-0.02151	-0.02553	-0.02961	-0.03411	-0.03844	-0.0428	-0.04925	-0.05587	-0.06158	-0.06804	-0.06924
4.5	1.87E-04	-4.57E-05	-7.37E-04	-0.00192	-0.0036	-0.00577	-0.00841	-0.01148	-0.01493	-0.01869	-0.02271	-0.02691	-0.03122	-0.03558	-0.04	-0.04697	-0.05424	-0.06052	-0.0654	-0.06886
4.52	4.57E-04	5.87E-04	3.00E-04	-4.64E-04	-0.00174	-0.00353	-0.00563	-0.00853	-0.01178	-0.01532	-0.01916	-0.02321	-0.02741	-0.03167	-0.03601	-0.0433	-0.05101	-0.05767	-0.06284	-0.06646
4.54	6.93E-04	0.00116	0.00126	9.09E-04	5.68E-05	-0.00132	-0.00321	-0.00559	-0.00943	-0.01165	-0.01518	-0.01896	-0.0229	-0.02893	-0.03105	-0.03838	-0.04623	-0.05304	-0.05829	-0.06193
4.56	8.68E-04	0.00161	0.00204	0.00206	0.00161	6.59E-04	-8.03E-04	-0.00275	-0.00515	-0.00795	-0.01107	-0.01445	-0.018	-0.02164	-0.0254	-0.03244	-0.04008	-0.0467	-0.0518	-0.0553
4.58	9.59E-04	0.00187	0.00255	0.00288	0.00278	0.00223	0.0012	-2.80E-04	-0.00219	-0.00448	-0.00708	-0.00993	-0.01296	-0.01608	-0.01932	-0.02572	-0.03274	-0.03883	-0.0435	-0.04669
4.6	9.50E-04	0.00193	0.00273	0.00326	0.00344	0.00323	0.00262	0.00161	2.32E-04	-0.00148	-0.00348	-0.0057	-0.00808	-0.01055	-0.01313	-0.01852	-0.0245	-0.02969	-0.03366	-0.03635
4.62	8.32E-04	0.00174	0.00254	0.00315	0.00351	0.00358	0.00334	0.00279	0.00195	8.49E-04	-4.79E-04	-0.00199	-0.00362	-0.00534	-0.00714	-0.01118	-0.0157	-0.01964	-0.02264	-0.02465
4.64	6.07E-04	0.00131	0.00197	0.00254	0.00297	0.00322	0.00328	0.00315	0.00284	0.00236	0.00174	9.97E-04	1.68E-04	-0.00166	-0.00404	-0.00676	-0.00913	-0.01093	-0.01212	-0.01212
4.66	2.83E-04	6.54E-04	0.00105	0.00145	0.00182	0.00216	0.00245	0.00268	0.00286	0.00239	0.00307	0.00311	0.00312	0.0031	0.00306	0.00255	0.00191	0.00134	9.15E-04	6.95E-04
4.68	-1.03E-04	-1.45E-04	-1.05E-04	2.91E-05	2.65E-04	6.05E-04	-8.42E-04	-2.51E-04	-0.00119	-8.42E-04	-0.00105	0.00105	0.00158	0.0022	0.0029	0.00366	0.00446	0.00528	0.00613	0.00639
4.7	-4.69E-04	-8.93E-04	-0.00119	-0.0013	-0.00119	-0.00187	-0.0011	-0.00114	-0.0011	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114
4.72	-7.59E-04	-0.00148	-0.00203	-0.00231	-0.00227	-0.00187	-0.0011	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114	-0.00114
4.74	-3.56E-04	-0.00188	-0.00257	-0.00293	-0.00289	-0.00239	-0.00144	-4.32E-05	0.00177	0.00396	0.00645	0.00919	0.0121	0.01511	0.01823	0.02444	0.03127	0.03719	0.04173	0.04483
4.76	-0.00106	-0.00206	-0.00279	-0.00314	-0.00302	-0.00239	-0.00124	4.27E-04	0.00256	0.00512	0.00902	0.0112	0.01467	0.01804	0.02165	0.02676	0.03655	0.04331	0.04849	0.05203
4.78	-0.00106	-0.00204	-0.00272	-0.00297	-0.00272	-0.00193	-5.78E-04	0.00131	0.0037	0.00692	0.00972	0.0132	0.01688	0.02067	0.02459	0.03218	0.04048	0.04768	0.05321	0.05699
4.8	-9.92E-04	-0.00186	-0.00241	-0.00251	-0.0021	-0.00114	3.79E-04	0.00244	0.00499	0.00798	0.01134	0.01497	0.0188	0.02274	0.0268	0.0345	0.04287	0.05013	0.05571	0.05994
4.82	-8.66E-04	-0.00157	-0.00194	-0.00187	-0.0013	-2.01E-04	0.00144	0.00359	0.00621	0.00925	0.01263	0.01627	0.02009	0.024	0.02803	0.03549	0.04355	0.05054	0.05592	0.05963
4.84	-7.10E-04	-0.00123	-0.00142	-0.00118	-4.80E-04	7.17E-04	0.00241	0.00456	0.00715	0.01011	0.01337	0.01687	0.02053	0.02427	0.02811	0.03502	0.04247	0.04891	0.05398	0.05733
4.86	-5.02E-04	-7.84E-04	-7.43E-04	-3.19E-04	5.27E-04	0.00181	0.00351	0.00562	0.00809	0.01088	0.01393	0.01716	0.02053	0.02396	0.02747	0.03356	0.04006	0.04569	0.05004	0.05307
4.88	-1.85E-04	-9.46E-05	3.07E-04	0.00105	0.00214	0.00358	0.00536	0.00745	0.0098	0.01239	0.01516	0.01807	0.02106	0.02409	0.02716	0.03209	0.03726	0.04173	0.0452	0.04785
4.9	2.20E-04	7.92E-04	0.00167	0.00283	0.00426	0.00594	0.00784	0.00994	0.01219	0.01457	0.01704	0.01957	0.02214	0.0247	0.02727	0.03081	0.03436	0.03741	0.03982	0.04157
4.92	6.74E-04	0.00179	0.0032	0.00485	0.00687	0.00864	0.0107	0.01283	0.015	0.01717	0.01934	0.02149	0.02361	0.02569	0.02773	0.02975	0.03155	0.03307	0.03431	0.03531
4.94	0.00113	0.00279	0.00474	0.00688	0.00911	0.01138	0.01362	0.01579	0.01789	0.01988	0.02176	0.02354	0.02523	0.02685	0.02838	0.02992	0.03155	0.03298	0.0341	0.03495
4.96	0.00154	0.00369	0.00613	0.00872	0.01132	0.01386	0.01626	0.01849	0.02053	0.02236	0.024	0.02546	0.02678	0.02799	0.02906	0.02996	0.03081	0.03155	0.0321	0.03235
4.98	0.00189	0.00447	0.00735	0.01033	0.01327	0.01606	0.01863	0.02093	0.02295	0.02468	0.02615	0.02737	0.02841	0.02931	0.03003	0.03067	0.03124	0.03173	0.03216	0.03245
5	0.00218	0.00513	0.00837	0.0117	0.01495	0.018	0.02076	0.02318	0.02524	0.02695	0.02834	0.02944	0.03031	0.03102	0.03154	0.03194	0.03231	0.03261	0.03286	0.03306
5.02	0.00238	0.00569	0.00911	0.01272	0.01622	0.01949	0.02244	0.025	0.02717	0.02895	0.03037	0.03148	0.03233	0.033	0.03346	0.03381	0.0341	0.03431	0.03446	0.03456
5.04	0.00248	0.00582	0.00951	0.01329	0.01698	0.02043	0.02356	0.0263	0.02863	0.03057	0.03213	0.03337	0.03435	0.03514	0.03571	0.0361	0.0364	0.0366	0.0367	0.0368
5.06	0.00246	0.00581	0.00952	0.01336	0.01714	0.02072	0.02401	0.02693	0.02948	0.03164	0.03345	0.03496	0.03621	0.03727	0.03812	0.03888	0.0393	0.0396	0.0397	0.0398
5.08	0.00232	0.00553	0.00914	0.01292	0.0167	0.02034	0.02374	0.02686	0.02965	0.03211	0.03427	0.03615	0.0378	0.03929	0.04057	0.04165	0.04246	0.04306	0.04336	0.04346
5.1	0.00207	0.00501	0.00838	0.01199	0.01567	0.0193	0.02279	0.02608	0.02914	0.03196	0.03453	0.03688	0.03904	0.04106	0.04291	0.0446	0.0461	0.0473	0.0481	0.0484

5.12	0.00173	0.00429	0.00732	0.01065	0.01415	0.01771	0.02124	0.0247	0.02804	0.03123	0.03427	0.03716	0.03991	0.04254	0.04504	0.04612	0.04647	0.04657	0.04703	0.04754
5.14	0.00134	0.00347	0.00609	0.00908	0.01235	0.0158	0.01936	0.02237	0.02559	0.03018	0.03371	0.03717	0.04055	0.04385	0.04706	0.04981	0.05207	0.05396	0.05555	0.05689
5.16	3.95E-04	0.00265	0.00487	0.00755	0.0106	0.01395	0.01754	0.02132	0.02523	0.02923	0.03326	0.03731	0.04133	0.0453	0.04922	0.05366	0.05782	0.06137	0.06422	0.06641
5.18	6.18E-04	0.00194	0.00383	0.00623	0.00911	0.01241	0.01607	0.02003	0.02424	0.02863	0.03316	0.03776	0.0424	0.04701	0.05162	0.05761	0.06353	0.06886	0.07262	0.07558
5.2	3.57E-04	0.0014	0.00304	0.00527	0.00806	0.01135	0.01512	0.01928	0.02379	0.02856	0.03355	0.03866	0.04385	0.04905	0.05426	0.06158	0.06898	0.07534	0.08034	0.08397
5.22	1.95E-04	0.00108	0.0026	0.00476	0.00754	0.01091	0.01481	0.0192	0.02399	0.02912	0.0345	0.04006	0.04571	0.05139	0.05711	0.06545	0.07396	0.0813	0.08704	0.09118
5.24	1.35E-04	9.80E-04	0.0025	0.0047	0.00756	0.01106	0.01515	0.01975	0.02481	0.03024	0.03595	0.04185	0.04787	0.05392	0.06002	0.06902	0.07825	0.08621	0.09242	0.09689
5.26	1.74E-04	0.0011	0.00272	0.00506	0.00808	0.01177	0.01605	0.02087	0.02616	0.03182	0.03777	0.04392	0.05019	0.05649	0.06283	0.07214	0.08167	0.08988	0.09631	0.10093
5.28	2.98E-04	0.0014	0.00322	0.00577	0.00902	0.01291	0.01741	0.02243	0.02789	0.03372	0.03982	0.04611	0.05251	0.05892	0.06537	0.07465	0.0841	0.09223	0.0986	0.10321
5.3	5.20E-04	0.00191	0.00405	0.00692	0.01047	0.01464	0.01936	0.02458	0.0302	0.03614	0.04232	0.04866	0.05507	0.06149	0.06793	0.07684	0.0858	0.09351	0.09957	0.10399
5.32	8.44E-04	0.00265	0.00523	0.00853	0.01247	0.01698	0.022	0.02743	0.0332	0.03922	0.04543	0.05174	0.05809	0.06442	0.07074	0.07896	0.08708	0.09404	0.09955	0.10362
5.34	0.00123	0.00352	0.00661	0.0104	0.01479	0.01968	0.025	0.03065	0.03654	0.04262	0.04881	0.05504	0.06127	0.06744	0.07357	0.0809	0.08792	0.09393	0.09873	0.10235
5.36	0.00163	0.00444	0.00806	0.01236	0.01721	0.02249	0.02811	0.03396	0.03998	0.04608	0.05222	0.05834	0.0644	0.07038	0.07627	0.0826	0.08843	0.09339	0.0974	0.10053
5.38	0.00201	0.0053	0.00942	0.01419	0.01946	0.02509	0.03097	0.037	0.0431	0.04921	0.05528	0.06127	0.06716	0.07293	0.07858	0.08395	0.08861	0.09255	0.0958	0.09844
5.4	0.00233	0.006	0.01052	0.01567	0.02128	0.02719	0.03327	0.03943	0.04559	0.05169	0.05768	0.06355	0.06927	0.07485	0.08027	0.08481	0.08849	0.09156	0.09416	0.09639
5.42	0.00254	0.00646	0.01124	0.01664	0.02245	0.02853	0.03473	0.04095	0.04712	0.05319	0.0591	0.06485	0.07044	0.07586	0.0811	0.08506	0.08803	0.09049	0.09264	0.09457
5.44	0.00261	0.00662	0.01148	0.01634	0.02281	0.02891	0.03512	0.04133	0.04746	0.05346	0.0593	0.06496	0.07044	0.07576	0.08089	0.08455	0.08719	0.08937	0.09129	0.09308
5.46	0.00254	0.00645	0.0112	0.01655	0.0223	0.02829	0.03439	0.04049	0.04653	0.05245	0.05821	0.06381	0.06922	0.07448	0.07956	0.08325	0.08596	0.08819	0.09015	0.09195
5.48	0.00235	0.00601	0.01048	0.01555	0.02104	0.02679	0.03268	0.03861	0.04451	0.05032	0.05601	0.06156	0.06695	0.0722	0.07729	0.08129	0.0844	0.08659	0.08822	0.09118
5.5	0.00206	0.00534	0.00942	0.01409	0.0192	0.02461	0.03021	0.03591	0.04163	0.04733	0.05294	0.05846	0.06385	0.06912	0.07426	0.07879	0.08258	0.08575	0.08841	0.09064
5.52	0.0017	0.00453	0.00811	0.01229	0.01693	0.02193	0.02719	0.03261	0.03812	0.04367	0.0492	0.05469	0.06009	0.0654	0.07061	0.07581	0.08043	0.08434	0.08754	0.0901
5.54	0.0013	0.0036	0.00682	0.01023	0.01435	0.01888	0.02372	0.02881	0.03408	0.03945	0.04487	0.0503	0.0557	0.06104	0.0663	0.07222	0.07776	0.08249	0.08629	0.08921
5.56	8.77E-04	0.00261	0.00502	0.00803	0.01157	0.01556	0.01995	0.02466	0.02962	0.03476	0.04003	0.04536	0.05071	0.05603	0.06132	0.06793	0.07438	0.07991	0.08429	0.08757
5.58	4.46E-04	0.00161	0.00339	0.00575	0.00867	0.01209	0.01597	0.02024	0.02483	0.02968	0.03472	0.03989	0.04511	0.05034	0.05558	0.0628	0.07005	0.07629	0.08119	0.08477
5.6	2.97E-05	6.24E-04	0.00177	0.00348	0.00576	0.00857	0.01189	0.01565	0.01981	0.02428	0.02901	0.03391	0.03892	0.04396	0.04905	0.05669	0.06456	0.07134	0.07664	0.08043
5.62	-3.95E-04	-3.05E-04	2.24E-04	0.00128	0.0029	0.00507	0.00778	0.01097	0.01461	0.01862	0.02293	0.02746	0.03212	0.03685	0.04166	0.04949	0.05771	0.06483	0.07034	0.07423
5.64	-7.03E-04	-0.00116	-0.00121	-7.95E-04	1.59E-04	0.00166	0.0037	0.00626	0.00929	0.01273	0.0165	0.02052	0.02471	0.02899	0.03337	0.0411	0.04937	0.05654	0.06207	0.06591
5.66	-9.95E-04	-0.0019	-0.0025	-0.0027	-0.00241	-0.0016	-2.54E-04	0.00161	0.00394	0.0067	0.0098	0.01318	0.01675	0.02042	0.02422	0.03152	0.03948	0.04639	0.05169	0.05533
5.68	-0.00121	-0.00247	-0.00354	-0.00428	-0.00462	-0.00448	-0.00385	-0.00273	-0.00116	8.18E-04	0.00315	0.00575	0.00855	0.01146	0.01451	0.02102	0.02825	0.03454	0.03934	0.04258
5.7	-0.00131	-0.00281	-0.00423	-0.00542	-0.00628	-0.00678	-0.00685	-0.00649	-0.00573	-0.0046	-0.00315	-0.00144	4.61E-04	0.00247	0.00463	0.00954	0.01599	0.02126	0.02526	0.02791
5.72	-0.00131	-0.00291	-0.00454	-0.00607	-0.00738	-0.00843	-0.00915	-0.00955	-0.00962	-0.00939	-0.0089	-0.00818	-0.0073	-0.0063	-0.00518	-0.00144	0.00299	0.00686	0.00977	0.01164
5.74	-0.00121	-0.00281	-0.00465	-0.0063	-0.00798	-0.00952	-0.01087	-0.01202	-0.01294	-0.01365	-0.01417	-0.01452	-0.01474	-0.01486	-0.01488	-0.01301	-0.01056	-0.0084	-0.00681	-0.00587
5.76	-0.00105	-0.00256	-0.00433	-0.00625	-0.00824	-0.01023	-0.01219	-0.01406	-0.01585	-0.01752	-0.0191	-0.02056	-0.02194	-0.02325	-0.02448	-0.02469	-0.02445	-0.0242	-0.0241	-0.02419
5.78	-8.53E-04	-0.00225	-0.00401	-0.00606	-0.00832	-0.01074	-0.01328	-0.01589	-0.01853	-0.02118	-0.02382	-0.02643	-0.02899	-0.0315	-0.03397	-0.03635	-0.03843	-0.0402	-0.04165	-0.04282
5.8	-6.54E-04	-0.00192	-0.00366	-0.00582	-0.00834	-0.01118	-0.01428	-0.0176	-0.02108	-0.02469	-0.02838	-0.0321	-0.03584	-0.03954	-0.04223	-0.04777	-0.05217	-0.05594	-0.05894	-0.06118
5.82	-4.68E-04	-0.00162	-0.00334	-0.00561	-0.00839	-0.01163	-0.01527	-0.01927	-0.02356	-0.02808	-0.03277	-0.03757	-0.04241	-0.04725	-0.0521	-0.05869	-0.06529	-0.07096	-0.07542	-0.07868

5.84	-3.22E-04	-0.00139	-0.00314	-0.00555	-0.00859	-0.01223	-0.0164	-0.02104	-0.02609	-0.03146	-0.03708	-0.04286	-0.04872	-0.05461	-0.06052	-0.06685	-0.07751	-0.08487	-0.09065	-0.09483
5.86	-2.40E-04	-0.0013	-0.00314	-0.00573	-0.00907	-0.01311	-0.0178	-0.02305	-0.0288	-0.03494	-0.04139	-0.04805	-0.05482	-0.06162	-0.06847	-0.07844	-0.08862	-0.09739	-0.10425	-0.1092
5.88	-2.26E-04	-0.00138	-0.00328	-0.00622	-0.0099	-0.01436	-0.01954	-0.02537	-0.03174	-0.03857	-0.04573	-0.05314	-0.06068	-0.06825	-0.07588	-0.08703	-0.09843	-0.10826	-0.11595	-0.12148
5.9	-3.19E-04	-0.00164	-0.00388	-0.00705	-0.01111	-0.01601	-0.02167	-0.02802	-0.03495	-0.04236	-0.05012	-0.05814	-0.06629	-0.07447	-0.0827	-0.09465	-0.10683	-0.11732	-0.12554	-0.13147
5.92	-4.91E-04	-0.00208	-0.00467	-0.00823	-0.01271	-0.01807	-0.0242	-0.03103	-0.03844	-0.04633	-0.05467	-0.06304	-0.07165	-0.08028	-0.08895	-0.10128	-0.11378	-0.12455	-0.13239	-0.13911
5.94	-7.47E-04	-0.00271	-0.00572	-0.00973	-0.01469	-0.02051	-0.02711	-0.03437	-0.04219	-0.05045	-0.05905	-0.06785	-0.07676	-0.08567	-0.09461	-0.10684	-0.11933	-0.12999	-0.13837	-0.14448
5.96	-0.00108	-0.00349	-0.007	-0.01153	-0.017	-0.0233	-0.03034	-0.03799	-0.04615	-0.05471	-0.06354	-0.07255	-0.08162	-0.09068	-0.09972	-0.11171	-0.1236	-0.13381	-0.14187	-0.14781
5.98	-0.00147	-0.0044	-0.00847	-0.01356	-0.01956	-0.02635	-0.03381	-0.04182	-0.05026	-0.05903	-0.06801	-0.07711	-0.08624	-0.09532	-0.10435	-0.1157	-0.12676	-0.13625	-0.14378	-0.1494
6	-0.00189	-0.00537	-0.01003	-0.0157	-0.02224	-0.0295	-0.03736	-0.04569	-0.05437	-0.06328	-0.07234	-0.08145	-0.09054	-0.09955	-0.10847	-0.11899	-0.12901	-0.13758	-0.14443	-0.14963
6.02	-0.00231	-0.00632	-0.01154	-0.01776	-0.0248	-0.0325	-0.04071	-0.0493	-0.05815	-0.06716	-0.07623	-0.08529	-0.09428	-0.10315	-0.1119	-0.1215	-0.1304	-0.13798	-0.1441	-0.14884
6.04	-0.00268	-0.00715	-0.01285	-0.01963	-0.02699	-0.03505	-0.04353	-0.05232	-0.06128	-0.07031	-0.07935	-0.08831	-0.09717	-0.10587	-0.11442	-0.12314	-0.13097	-0.13762	-0.14304	-0.14733
6.06	-0.00295	-0.00777	-0.01383	-0.02084	-0.0286	-0.03689	-0.04556	-0.05445	-0.06345	-0.07247	-0.08143	-0.09028	-0.09898	-0.1075	-0.11584	-0.12382	-0.13077	-0.13664	-0.14148	-0.1454
6.08	-0.00313	-0.00816	-0.01443	-0.02164	-0.02956	-0.03797	-0.04671	-0.05564	-0.06462	-0.07368	-0.08245	-0.09117	-0.09971	-0.10808	-0.11624	-0.12367	-0.12997	-0.13527	-0.13969	-0.14334
6.1	-0.0032	-0.00831	-0.01484	-0.0219	-0.02985	-0.03828	-0.047	-0.05588	-0.06481	-0.07368	-0.08244	-0.09104	-0.09945	-0.10768	-0.1157	-0.1228	-0.12873	-0.13372	-0.13789	-0.14137
6.12	-0.00316	-0.00821	-0.01446	-0.02164	-0.02956	-0.03797	-0.04671	-0.05564	-0.06462	-0.07368	-0.08244	-0.09104	-0.09945	-0.10768	-0.1157	-0.1228	-0.12873	-0.13372	-0.13789	-0.14137
6.14	-0.00301	-0.00785	-0.01388	-0.02082	-0.02844	-0.03653	-0.04495	-0.05353	-0.06218	-0.0708	-0.07933	-0.08772	-0.09594	-0.10399	-0.11184	-0.11899	-0.12506	-0.13017	-0.13442	-0.13793
6.16	-0.00276	-0.00727	-0.01294	-0.01951	-0.02677	-0.03453	-0.04265	-0.05098	-0.05941	-0.06786	-0.07625	-0.08454	-0.09269	-0.10068	-0.1085	-0.11599	-0.12251	-0.12802	-0.13256	-0.13625
6.18	-0.00244	-0.00652	-0.01172	-0.01782	-0.02462	-0.03197	-0.03971	-0.04772	-0.05589	-0.06413	-0.07237	-0.08055	-0.08862	-0.09566	-0.10436	-0.11231	-0.11945	-0.12552	-0.13046	-0.13438
6.2	-0.00208	-0.00567	-0.01033	-0.01588	-0.02217	-0.02903	-0.03634	-0.04398	-0.05184	-0.05984	-0.0679	-0.07594	-0.08391	-0.09178	-0.09954	-0.10801	-0.11585	-0.12252	-0.12791	-0.13209
6.22	-0.0017	-0.00478	-0.00888	-0.01366	-0.01959	-0.02593	-0.03277	-0.04	-0.04762	-0.05524	-0.06306	-0.07093	-0.07876	-0.08652	-0.09421	-0.10316	-0.11165	-0.11891	-0.12472	-0.12915
6.24	-0.00133	-0.00392	-0.00747	-0.01188	-0.01704	-0.02286	-0.0292	-0.03599	-0.04312	-0.05051	-0.05806	-0.06569	-0.07333	-0.08092	-0.08846	-0.09778	-0.1068	-0.11453	-0.12068	-0.12529
6.26	-0.001	-0.00312	-0.00615	-0.0096	-0.0146	-0.01986	-0.0257	-0.03201	-0.03871	-0.04571	-0.05291	-0.06024	-0.0676	-0.07494	-0.08227	-0.09176	-0.10113	-0.10916	-0.11552	-0.12022
6.28	-7.07E-04	-0.00241	-0.00494	-0.00826	-0.01231	-0.01703	-0.02233	-0.02813	-0.03435	-0.04089	-0.04767	-0.0546	-0.0616	-0.06859	-0.07559	-0.08505	-0.09451	-0.10264	-0.10904	-0.11373
6.3	-4.68E-04	-0.0018	-0.0039	-0.00673	-0.01025	-0.01443	-0.01918	-0.02443	-0.03011	-0.03613	-0.04241	-0.04885	-0.05537	-0.06191	-0.06847	-0.07765	-0.08691	-0.09469	-0.10115	-0.1057
6.32	-2.93E-04	-0.00133	-0.00306	-0.00545	-0.00849	-0.01214	-0.01634	-0.02102	-0.02612	-0.03155	-0.03723	-0.04309	-0.04904	-0.05501	-0.06101	-0.06962	-0.07838	-0.08592	-0.09183	-0.0961
6.34	-1.87E-04	-0.00102	-0.00244	-0.00446	-0.00706	-0.01021	-0.01386	-0.01795	-0.02242	-0.02721	-0.03223	-0.03741	-0.04268	-0.04798	-0.05331	-0.06107	-0.0699	-0.07583	-0.08118	-0.08503
6.36	-1.46E-04	-0.00079	-0.00179	-0.00322	-0.00506	-0.00727	-0.00983	-0.01269	-0.01581	-0.01914	-0.02263	-0.02623	-0.02989	-0.03357	-0.03727	-0.04261	-0.04806	-0.05275	-0.05643	-0.05908
6.38	-1.54E-04	-7.62E-04	-0.00166	-0.00286	-0.00435	-0.00612	-0.00813	-0.01035	-0.01275	-0.0153	-0.01795	-0.02068	-0.02344	-0.0262	-0.02898	-0.03285	-0.03677	-0.04013	-0.04278	-0.04447
6.42	-2.66E-04	-8.15E-04	-0.00159	-0.00257	-0.00373	-0.00506	-0.00662	-0.0081	-0.00977	-0.01151	-0.0133	-0.01512	-0.01695	-0.01876	-0.02057	-0.02229	-0.02517	-0.02713	-0.02868	-0.02983
6.44	-3.35E-04	-8.70E-04	-0.00153	-0.00229	-0.00313	-0.00401	-0.00492	-0.00585	-0.00679	-0.00772	-0.00864	-0.00954	-0.01042	-0.01128	-0.01212	-0.01287	-0.01349	-0.01401	-0.01445	-0.01481
6.46	-3.89E-04	-8.92E-04	-0.00143	-0.00195	-0.00244	-0.00297	-0.00351	-0.00401	-0.00451	-0.00501	-0.00551	-0.00601	-0.00651	-0.00701	-0.00751	-0.00801	-0.00851	-0.00901	-0.00951	-0.00991
6.48	-4.07E-04	-8.33E-04	-0.0012	-0.00145	-0.00166	-0.00186	-0.00206	-0.00226	-0.00246	-0.00266	-0.00286	-0.00306	-0.00326	-0.00346	-0.00366	-0.00386	-0.00406	-0.00426	-0.00446	-0.00466
6.5	-3.66E-04	-6.47E-04	-7.67E-04	-6.84E-04	-3.70E-04	1.88E-04	9.88E-04	0.00202	0.00326	0.00469	0.00628	0.00798	0.00976	0.01158	0.01345	0.01685	0.02052	0.0237	0.02615	0.02784
6.52	-2.57E-04	-3.10E-04	-1.06E-04	3.88E-04	0.00119	0.00231	0.00373	0.00543	0.00738	0.00955	0.01189	0.01436	0.01691	0.0195	0.02215	0.02654	0.03119	0.03521	0.03832	0.0405
6.54	-8.20E-05	1.72E-04	7.76E-04	0.00175	0.0031	0.00481	0.00686	0.00923	0.01187	0.01474	0.01779	0.02096	0.02422	0.0275	0.03083	0.03539	0.04134	0.04596	0.04956	0.05212

6.56	1.53E-04	7.84E-04	0.00186	0.00336	0.0063	0.00763	0.01034	0.01336	0.01666	0.02019	0.02389	0.02771	0.03159	0.03549	0.03941	0.0451	0.0509	0.0559	0.05981	0.06264
6.58	4.37E-04	0.0015	0.00309	0.00518	0.00773	0.01071	0.01405	0.01772	0.02166	0.0258	0.03009	0.03449	0.03892	0.04336	0.04779	0.05382	0.05984	0.06501	0.06939	0.07208
6.6	7.52E-04	0.00228	0.00442	0.00711	0.01029	0.01391	0.01789	0.02218	0.02671	0.03142	0.03626	0.04116	0.04609	0.05099	0.05586	0.06206	0.06813	0.07333	0.07745	0.08051
6.62	0.00108	0.00308	0.00577	0.00906	0.01286	0.0171	0.02169	0.02656	0.03165	0.03688	0.04221	0.04757	0.05292	0.05823	0.06349	0.06976	0.07575	0.08087	0.08497	0.08806
6.64	0.00139	0.00384	0.00706	0.01091	0.0153	0.02011	0.02527	0.03069	0.03628	0.04199	0.04776	0.05354	0.05927	0.06494	0.07054	0.07682	0.0827	0.08771	0.09174	0.09484
6.66	0.00168	0.00455	0.00825	0.01263	0.01755	0.0229	0.02858	0.0345	0.04056	0.04671	0.05288	0.05903	0.06512	0.07112	0.07703	0.08332	0.08907	0.09397	0.09794	0.10104
6.68	0.00194	0.00517	0.0093	0.01414	0.01954	0.02538	0.03152	0.03789	0.04438	0.05093	0.05748	0.06398	0.0704	0.07671	0.0829	0.08924	0.09492	0.09975	0.10369	0.10681
6.7	0.00214	0.00568	0.01015	0.01538	0.02119	0.02743	0.03399	0.04076	0.04763	0.05455	0.06145	0.06828	0.07501	0.08162	0.0881	0.09455	0.10026	0.10511	0.10907	0.11225
6.72	0.00228	0.00604	0.01079	0.01632	0.02245	0.02904	0.03594	0.04305	0.05026	0.05751	0.06474	0.07188	0.07892	0.08583	0.09259	0.09925	0.10511	0.11008	0.11416	0.11743
6.74	0.00236	0.00626	0.01119	0.01693	0.0233	0.03015	0.03733	0.04473	0.05224	0.05979	0.06732	0.07476	0.0821	0.0893	0.09636	0.10332	0.10947	0.11468	0.11896	0.12238
6.76	0.00238	0.00633	0.01135	0.01721	0.02374	0.03077	0.03815	0.04578	0.05354	0.06136	0.06916	0.0769	0.08452	0.09201	0.09936	0.10673	0.1133	0.11887	0.12343	0.12706
6.78	0.00234	0.00626	0.01128	0.01717	0.02376	0.03089	0.03841	0.0462	0.05417	0.06221	0.07025	0.07825	0.08615	0.09392	0.10155	0.10943	0.11653	0.12256	0.12748	0.13136
6.8	0.00224	0.00606	0.01098	0.01682	0.02339	0.03053	0.03811	0.04601	0.05411	0.06233	0.07059	0.07881	0.08696	0.09498	0.10289	0.11133	0.11906	0.12564	0.13096	0.13512
6.82	0.00209	0.00573	0.01049	0.01619	0.02265	0.02973	0.0373	0.04523	0.05341	0.06175	0.07016	0.07857	0.08693	0.09517	0.10331	0.11235	0.12076	0.12793	0.1337	0.13816
6.84	0.00189	0.00531	0.00983	0.01531	0.02159	0.02853	0.036	0.04389	0.05208	0.06048	0.06898	0.07752	0.08603	0.09444	0.10277	0.11239	0.12149	0.12926	0.13549	0.14024
6.86	0.00167	0.00479	0.00902	0.01421	0.02023	0.02695	0.03425	0.04201	0.05013	0.0585	0.06702	0.07561	0.0842	0.09271	0.10116	0.11131	0.12106	0.1294	0.13606	0.14108
6.88	0.00142	0.00423	0.00812	0.01297	0.01866	0.0251	0.03215	0.03971	0.04768	0.05593	0.06439	0.07294	0.08152	0.09004	0.09853	0.10911	0.11941	0.12823	0.13524	0.14048
6.9	0.0012	0.00371	0.00726	0.01176	0.01712	0.02323	0.02999	0.03729	0.04503	0.0531	0.0614	0.06983	0.0783	0.08674	0.09515	0.10598	0.11663	0.12577	0.133	0.13836
6.92	0.00102	0.00328	0.00653	0.01072	0.01575	0.02154	0.02799	0.035	0.04246	0.05027	0.05832	0.06653	0.07479	0.08304	0.09127	0.1021	0.11283	0.12204	0.12932	0.13469
6.94	9.02E-04	0.00296	0.00598	0.00989	0.01462	0.02009	0.02621	0.03288	0.04	0.04748	0.05521	0.06309	0.07104	0.07897	0.08691	0.09748	0.10789	0.11703	0.12415	0.12939
6.96	8.32E-04	0.00275	0.00558	0.00925	0.0137	0.01885	0.02463	0.03092	0.03766	0.04472	0.05203	0.0595	0.06702	0.07454	0.08205	0.0921	0.10211	0.11071	0.11749	0.12247
6.98	8.05E-04	0.00263	0.00531	0.00877	0.01295	0.01779	0.02319	0.02907	0.03536	0.04194	0.04875	0.0557	0.0627	0.06969	0.07667	0.08596	0.0952	0.10313	0.10939	0.11399
7	8.21E-04	0.0026	0.00516	0.00844	0.01237	0.01688	0.02189	0.02733	0.03311	0.03916	0.04539	0.05173	0.05812	0.06449	0.07084	0.07916	0.08738	0.09444	0.10002	0.10414
7.02	8.75E-04	0.00255	0.00513	0.00825	0.01194	0.01613	0.02075	0.02572	0.03096	0.03642	0.04202	0.0477	0.0534	0.05907	0.06472	0.07188	0.07889	0.0849	0.08966	0.09321
7.04	9.59E-04	0.00276	0.0052	0.00819	0.01166	0.01554	0.01976	0.02424	0.02893	0.03376	0.03869	0.04365	0.04861	0.05353	0.05841	0.06429	0.06993	0.07476	0.07861	0.08151
7.06	0.00106	0.0029	0.0053	0.00817	0.01142	0.01499	0.0188	0.02278	0.0269	0.03109	0.03531	0.03953	0.04373	0.04787	0.05195	0.05647	0.06067	0.06425	0.06713	0.06936
7.08	0.00114	0.003	0.00535	0.00808	0.01109	0.01432	0.0177	0.02118	0.0247	0.02823	0.03174	0.03521	0.03863	0.04198	0.04526	0.04843	0.0512	0.05355	0.05548	0.05703
7.1	0.00118	0.00302	0.00527	0.0078	0.01053	0.01339	0.01632	0.01925	0.02217	0.02503	0.02783	0.03066	0.0332	0.03578	0.03827	0.04017	0.04162	0.04282	0.04386	0.04479
7.12	0.00117	0.00291	0.00498	0.00725	0.00963	0.01207	0.01449	0.01686	0.01916	0.02136	0.02345	0.02545	0.02735	0.02918	0.03091	0.0317	0.032	0.03221	0.03247	0.03285
7.14	0.00109	0.00284	0.00443	0.00635	0.00831	0.01026	0.01213	0.01391	0.01557	0.01711	0.01852	0.01981	0.02101	0.02213	0.02317	0.02392	0.024	0.0241	0.02415	0.02437
7.16	9.30E-04	0.0022	0.00382	0.00556	0.00735	0.00923	0.01109	0.01288	0.0146	0.01628	0.01795	0.01956	0.02112	0.02261	0.02406	0.02546	0.02686	0.02825	0.02963	0.03099
7.18	7.07E-04	0.00162	0.00259	0.00356	0.00445	0.00524	0.00599	0.00664	0.00724	0.00779	0.00824	0.00869	0.00914	0.00959	0.01004	0.01049	0.01094	0.01139	0.01184	0.01229
7.2	4.40E-04	9.43E-04	0.00142	0.00182	0.00211	0.00228	0.0023	0.00219	0.00193	0.00156	0.00107	5.05E-04	-1.28E-04	-7.99E-04	-0.00152	-0.00329	-0.00532	-0.00708	-0.00841	-0.0093
7.22	1.43E-04	2.01E-04	1.47E-04	-3.65E-04	-0.00211	-0.00228	-0.00145	-0.00219	-0.00305	-0.00402	-0.00506	-0.00617	-0.00732	-0.00849	-0.00968	-0.01171	-0.01386	-0.01573	-0.01717	-0.01818
7.24	-1.71E-04	-5.76E-04	-0.00118	-0.00291	-0.00402	-0.00526	-0.00662	-0.00807	-0.0096	-0.01118	-0.01279	-0.01442	-0.01605	-0.01768	-0.01938	-0.02107	-0.02287	-0.02466	-0.02643	-0.02822
7.26	-4.83E-04	-0.00195	-0.00248	-0.00385	-0.00542	-0.00714	-0.009	-0.01095	-0.01297	-0.01503	-0.01713	-0.01922	-0.02131	-0.02337	-0.02541	-0.02774	-0.02993	-0.0318	-0.03329	-0.03444

7.28	-7.95E-04	-0.00208	-0.00372	-0.00565	-0.0078	-0.01012	-0.01256	-0.01507	-0.01764	-0.02023	-0.02281	-0.02537	-0.0279	-0.03038	-0.03282	-0.03528	-0.03748	-0.03935	-0.04087	-0.04208
7.3	-0.00105	-0.00274	-0.00486	-0.00731	-0.01	-0.01287	-0.01586	-0.01892	-0.02201	-0.0251	-0.02816	-0.03118	-0.03414	-0.03704	-0.03987	-0.04251	-0.04478	-0.04669	-0.04827	-0.04957
7.32	-0.00128	-0.00332	-0.00586	-0.00877	-0.01197	-0.01535	-0.01886	-0.02243	-0.02602	-0.0296	-0.03313	-0.0366	-0.03999	-0.04331	-0.04655	-0.04944	-0.05186	-0.0533	-0.0546	-0.055702
7.34	-0.00147	-0.00381	-0.0067	-0.01003	-0.01367	-0.01752	-0.0215	-0.02556	-0.02964	-0.03363	-0.03768	-0.04161	-0.04545	-0.0492	-0.05286	-0.05608	-0.05877	-0.06103	-0.06232	-0.063451
7.36	-0.00161	-0.00419	-0.00738	-0.01106	-0.01509	-0.01936	-0.02379	-0.0283	-0.03283	-0.03735	-0.04181	-0.0462	-0.05049	-0.05469	-0.05878	-0.06244	-0.06562	-0.06831	-0.07027	-0.07206
7.38	-0.0017	-0.00445	-0.00789	-0.01185	-0.0162	-0.02084	-0.02567	-0.0306	-0.03558	-0.04054	-0.04546	-0.05031	-0.05507	-0.05972	-0.06427	-0.06846	-0.07205	-0.07508	-0.07759	-0.07965
7.4	-0.00175	-0.0046	-0.0082	-0.01237	-0.01699	-0.02193	-0.0271	-0.03242	-0.0378	-0.0432	-0.04857	-0.05387	-0.05909	-0.06421	-0.06922	-0.07405	-0.07828	-0.08186	-0.0848	-0.08718
7.42	-0.00174	-0.00463	-0.00832	-0.01264	-0.01745	-0.02264	-0.0281	-0.03375	-0.03951	-0.04531	-0.05111	-0.05686	-0.06254	-0.06812	-0.07359	-0.07915	-0.08412	-0.08833	-0.09177	-0.09451
7.44	-0.0017	-0.00459	-0.00831	-0.01272	-0.01767	-0.02306	-0.02877	-0.03471	-0.04081	-0.04699	-0.0532	-0.05938	-0.06549	-0.07152	-0.07745	-0.08376	-0.08953	-0.09444	-0.09842	-0.10152
7.46	-0.00164	-0.0045	-0.00823	-0.01289	-0.01776	-0.02331	-0.02923	-0.03544	-0.04185	-0.04838	-0.05496	-0.06154	-0.06807	-0.07453	-0.08089	-0.08795	-0.09452	-0.10011	-0.10462	-0.1081
7.48	-0.00157	-0.00439	-0.00812	-0.01282	-0.01777	-0.02346	-0.02957	-0.03601	-0.04289	-0.04953	-0.05645	-0.0634	-0.07031	-0.07715	-0.08392	-0.09168	-0.09899	-0.10524	-0.11025	-0.11408
7.5	-0.00151	-0.00428	-0.00798	-0.0125	-0.01771	-0.0235	-0.02976	-0.0364	-0.04331	-0.05041	-0.05763	-0.06489	-0.07214	-0.07931	-0.08642	-0.09481	-0.1028	-0.10963	-0.1151	-0.11924
7.52	-0.00144	-0.00416	-0.00783	-0.01235	-0.01759	-0.02345	-0.02983	-0.03661	-0.0437	-0.05101	-0.05847	-0.06598	-0.07349	-0.08094	-0.08834	-0.09725	-0.10582	-0.11315	-0.11899	-0.1234
7.54	-0.00138	-0.00404	-0.00768	-0.01218	-0.01743	-0.02333	-0.02978	-0.03666	-0.04387	-0.05134	-0.05896	-0.06666	-0.07437	-0.08202	-0.08962	-0.09894	-0.10795	-0.11567	-0.12181	-0.12642
7.56	-0.00134	-0.00395	-0.00755	-0.01202	-0.01727	-0.02318	-0.02966	-0.03658	-0.04387	-0.05142	-0.05914	-0.06695	-0.07477	-0.08254	-0.09027	-0.09895	-0.10916	-0.11713	-0.12346	-0.1282
7.58	-0.00131	-0.00389	-0.00746	-0.01191	-0.01714	-0.02304	-0.02951	-0.03644	-0.04374	-0.05131	-0.05905	-0.06689	-0.07475	-0.08256	-0.09033	-0.10001	-0.10943	-0.1175	-0.12391	-0.1287
7.6	-0.00131	-0.00388	-0.00744	-0.01187	-0.01707	-0.02294	-0.02937	-0.03627	-0.04353	-0.05105	-0.05875	-0.06654	-0.074435	-0.08211	-0.08983	-0.09944	-0.10879	-0.1168	-0.12317	-0.12792
7.62	-0.00133	-0.00392	-0.00748	-0.01191	-0.01708	-0.02291	-0.02929	-0.03611	-0.04327	-0.0507	-0.05828	-0.0657	-0.07363	-0.08126	-0.08885	-0.09823	-0.10732	-0.1151	-0.12129	-0.12593
7.64	-0.00138	-0.00402	-0.00761	-0.01204	-0.01719	-0.02297	-0.02932	-0.03598	-0.04302	-0.05028	-0.05769	-0.06517	-0.07266	-0.08008	-0.08746	-0.09643	-0.10509	-0.1125	-0.1184	-0.12284
7.66	-0.00146	-0.00417	-0.00781	-0.01225	-0.01739	-0.02312	-0.02932	-0.0359	-0.04276	-0.04983	-0.05701	-0.06425	-0.07147	-0.07863	-0.08672	-0.09416	-0.10222	-0.10912	-0.11463	-0.11879
7.68	-0.00155	-0.00434	-0.00804	-0.01251	-0.01763	-0.02329	-0.02937	-0.0358	-0.04246	-0.04929	-0.0562	-0.06314	-0.07005	-0.07689	-0.08365	-0.09144	-0.09879	-0.10508	-0.11012	-0.11396
7.7	-0.00164	-0.00452	-0.00825	-0.01274	-0.01783	-0.0234	-0.02935	-0.0358	-0.04201	-0.04856	-0.05517	-0.06177	-0.06833	-0.07481	-0.0812	-0.08828	-0.09487	-0.10049	-0.10502	-0.10851
7.72	-0.00172	-0.00466	-0.00843	-0.0129	-0.01792	-0.02337	-0.02915	-0.03517	-0.04134	-0.04759	-0.05386	-0.06011	-0.06629	-0.07238	-0.07838	-0.08474	-0.09055	-0.09549	-0.10024	-0.10263
7.74	-0.00178	-0.00476	-0.00853	-0.01289	-0.01788	-0.02319	-0.02878	-0.03455	-0.04044	-0.04638	-0.0523	-0.05817	-0.06397	-0.06966	-0.07525	-0.08091	-0.08596	-0.09024	-0.09374	-0.09552
7.76	-0.00182	-0.0048	-0.00854	-0.01289	-0.01789	-0.02283	-0.02821	-0.03372	-0.03931	-0.04492	-0.05048	-0.05598	-0.06139	-0.0667	-0.07189	-0.07688	-0.08123	-0.08491	-0.08794	-0.09039
7.78	-0.00182	-0.00475	-0.00841	-0.01282	-0.01725	-0.02218	-0.0273	-0.03254	-0.03781	-0.04308	-0.04829	-0.05342	-0.05845	-0.06338	-0.06818	-0.0726	-0.07636	-0.07953	-0.08216	-0.08432
7.8	-0.00177	-0.0046	-0.0081	-0.01212	-0.01653	-0.0212	-0.02603	-0.03095	-0.0359	-0.04082	-0.04567	-0.05044	-0.05511	-0.05967	-0.06412	-0.06807	-0.07137	-0.07414	-0.07646	-0.0784
7.82	-0.00166	-0.00431	-0.00759	-0.01134	-0.01545	-0.0198	-0.0243	-0.02887	-0.03346	-0.03803	-0.04253	-0.04695	-0.05127	-0.05549	-0.0596	-0.06321	-0.06621	-0.06873	-0.07084	-0.07262
7.84	-0.00149	-0.00388	-0.00684	-0.01025	-0.01398	-0.01794	-0.02205	-0.02624	-0.03045	-0.03464	-0.03878	-0.04285	-0.04684	-0.05074	-0.05454	-0.05795	-0.06081	-0.06322	-0.06524	-0.06691
7.86	-0.00126	-0.00331	-0.00589	-0.00887	-0.01215	-0.01566	-0.01933	-0.02308	-0.02688	-0.03068	-0.03446	-0.03818	-0.04184	-0.04542	-0.04893	-0.05225	-0.05513	-0.05756	-0.05956	-0.06119
7.88	-9.85E-04	-0.00264	-0.00475	-0.00723	-0.01001	-0.01301	-0.01618	-0.01946	-0.02282	-0.02621	-0.0296	-0.03297	-0.03629	-0.03957	-0.04278	-0.0461	-0.0491	-0.05164	-0.05371	-0.05534
7.9	-6.74E-04	-0.00188	-0.00348	-0.00542	-0.00763	-0.01008	-0.01271	-0.01549	-0.01836	-0.02131	-0.0243	-0.02729	-0.03028	-0.03323	-0.03615	-0.0395	-0.04267	-0.04538	-0.04755	-0.04921
7.92	-3.46E-04	-0.00109	-0.00215	-0.0035	-0.00512	-0.00698	-0.00904	-0.01127	-0.01364	-0.01612	-0.01867	-0.02127	-0.02388	-0.02649	-0.02908	-0.03247	-0.03581	-0.03867	-0.04094	-0.04262
7.94	-2.19E-05	-2.94E-04	-8.11E-04	-0.00158	-0.00259	-0.00384	-0.0053	-0.00697	-0.0088	-0.01078	-0.01286	-0.01502	-0.01722	-0.01944	-0.02168	-0.02502	-0.02847	-0.03143	-0.03375	-0.03541
7.96	2.80E-04	4.52E-04	7.85E-04	2.67E-04	-1.45E-04	-0.00165	-0.00273	-0.004	-0.0054	-0.0073	-0.00943	-0.0117	-0.014043	-0.01621	-0.01843	-0.021723	-0.02464	-0.02689	-0.02848	-0.02948
7.98	5.34E-04	0.00109	0.00157	0.0019	0.00205	0.00189	0.00171	0.00122	5.31E-04	-3.42E-04	-0.00137	-0.00252	-0.00375	-0.00503	-0.00638	-0.00825	-0.01245	-0.01522	-0.01734	-0.01877



8	7.23E-04	0.00159	0.00246	0.00324	0.00389	0.00437	0.00465	0.00474	0.00463	0.00435	0.0039	0.00333	0.00266	0.00193	0.00113	-0.00122	-0.00395	-0.00634	-0.00814	-0.00931
8.02	8.95E-04	0.00196	0.00315	0.00432	0.00542	0.0064	0.00723	0.00789	0.00837	0.0087	0.00887	0.00883	0.00888	0.00877	0.00858	0.00695	0.0049	0.00209	0.00176	9.35E-04
8.04	9.39E-04	0.00223	0.00369	0.00521	0.00672	0.00817	0.00952	0.01075	0.01185	0.01281	0.01365	0.01437	0.015	0.01556	0.01604	0.01529	0.01411	0.01306	0.01231	0.01193
8.06	9.84E-04	0.00242	0.00409	0.00591	0.0078	0.0097	0.01157	0.01337	0.01509	0.01671	0.01823	0.01966	0.02101	0.02229	0.02349	0.02376	0.02362	0.02345	0.02341	0.02353
8.08	9.93E-04	0.00252	0.00437	0.00645	0.00869	0.01101	0.01338	0.01575	0.01809	0.02038	0.0226	0.02476	0.02666	0.02868	0.03084	0.03225	0.03326	0.0341	0.03483	0.03552
8.1	9.77E-04	0.00257	0.00466	0.00688	0.00943	0.01216	0.01501	0.01793	0.02088	0.02384	0.02678	0.02968	0.03253	0.03532	0.03805	0.04065	0.0429	0.0448	0.04638	0.04765
8.12	9.47E-04	0.00258	0.0047	0.00722	0.01007	0.01318	0.0165	0.01995	0.02351	0.02713	0.03077	0.0344	0.038	0.04155	0.04506	0.04886	0.05238	0.05537	0.05779	0.05967
8.14	9.16E-04	0.00259	0.00483	0.00755	0.01068	0.01416	0.01792	0.0219	0.02604	0.03029	0.03461	0.03895	0.04328	0.04757	0.05182	0.05681	0.06155	0.06561	0.06885	0.07131
8.16	8.94E-04	0.00262	0.00486	0.0079	0.01131	0.01514	0.01933	0.02381	0.02851	0.03336	0.03833	0.04334	0.04836	0.05334	0.0583	0.06438	0.07027	0.07531	0.07932	0.08233
8.18	8.93E-04	0.00269	0.00518	0.00832	0.01201	0.0162	0.0208	0.02575	0.03097	0.03639	0.04195	0.04758	0.05324	0.05886	0.06446	0.07151	0.0784	0.08431	0.089	0.09249
8.2	9.23E-04	0.00282	0.00548	0.00884	0.01283	0.01736	0.02237	0.02776	0.03347	0.03941	0.04551	0.0517	0.05792	0.06411	0.07027	0.07815	0.08587	0.09249	0.09774	0.10164
8.22	9.89E-04	0.00302	0.00589	0.00935	0.0138	0.01868	0.02407	0.02989	0.03604	0.04245	0.04903	0.0557	0.06241	0.06909	0.07575	0.08425	0.0926	0.09976	0.10543	0.10964
8.24	0.00109	0.00331	0.0064	0.0103	0.01491	0.02014	0.02591	0.03211	0.03867	0.04548	0.05248	0.05957	0.06669	0.07377	0.08082	0.08978	0.09853	0.10604	0.112	0.11643
8.26	0.00123	0.00365	0.00701	0.0112	0.01613	0.0217	0.02782	0.03437	0.04128	0.04845	0.05578	0.06321	0.07066	0.07806	0.08543	0.09484	0.10361	0.11129	0.1174	0.12196
8.28	0.00138	0.00403	0.00765	0.01214	0.01738	0.02327	0.0297	0.03657	0.04377	0.05122	0.05883	0.06652	0.07422	0.08186	0.08945	0.09876	0.10777	0.11548	0.12162	0.12623
8.3	0.00154	0.00441	0.00829	0.01306	0.01868	0.02475	0.03145	0.03857	0.04601	0.05368	0.06149	0.06937	0.07723	0.08503	0.09277	0.10206	0.11097	0.1186	0.12468	0.12927
8.32	0.00168	0.00476	0.00887	0.01387	0.01963	0.02603	0.03294	0.04025	0.04787	0.05569	0.06363	0.07161	0.07958	0.08747	0.09528	0.10445	0.11318	0.12065	0.12662	0.13115
8.34	0.00181	0.00505	0.00934	0.01453	0.02047	0.02703	0.03408	0.04152	0.04924	0.05715	0.06515	0.07319	0.08119	0.0891	0.09693	0.10553	0.11443	0.12168	0.1275	0.13194
8.36	0.0019	0.00526	0.00968	0.01496	0.02103	0.02769	0.03482	0.04232	0.05008	0.058	0.06601	0.07403	0.08201	0.08989	0.09768	0.10647	0.11472	0.12176	0.1274	0.13175
8.38	0.00195	0.00538	0.00985	0.01521	0.0213	0.02798	0.03511	0.0426	0.05033	0.05821	0.06616	0.07412	0.08202	0.08982	0.09752	0.10611	0.11411	0.12093	0.12643	0.13066
8.4	0.00196	0.00539	0.00986	0.01519	0.0214	0.02786	0.03493	0.04234	0.04998	0.05775	0.06559	0.07343	0.08121	0.08889	0.09647	0.10484	0.11263	0.11926	0.12461	0.12874
8.42	0.00193	0.00553	0.00969	0.01492	0.02086	0.02736	0.03429	0.04155	0.04903	0.05665	0.06433	0.072	0.07961	0.08713	0.09455	0.10273	0.11032	0.11679	0.12201	0.12604
8.44	0.00186	0.00511	0.00936	0.01443	0.02018	0.02647	0.0332	0.04025	0.04752	0.05492	0.06239	0.06985	0.07726	0.08458	0.0918	0.09979	0.10722	0.11356	0.11867	0.12261
8.46	0.00176	0.00485	0.00889	0.01373	0.01923	0.02527	0.03173	0.03851	0.04551	0.05265	0.05986	0.06707	0.07424	0.08132	0.0883	0.09611	0.10339	0.10961	0.11461	0.11846
8.48	0.00162	0.00451	0.0083	0.01286	0.01805	0.02378	0.02992	0.03637	0.04305	0.04988	0.05678	0.0637	0.07057	0.07737	0.08409	0.0917	0.09884	0.10493	0.10982	0.11358
8.5	0.00147	0.00411	0.0076	0.01183	0.01668	0.02203	0.02779	0.03387	0.04018	0.04665	0.0532	0.05977	0.06631	0.07279	0.0792	0.08658	0.09356	0.09952	0.1043	0.10794
8.52	0.0013	0.00367	0.00684	0.01071	0.01516	0.0201	0.02544	0.0311	0.03699	0.04305	0.04919	0.05538	0.06155	0.06765	0.07371	0.08082	0.0876	0.09339	0.09803	0.10154
8.54	0.00115	0.00329	0.00616	0.00969	0.01376	0.0183	0.02322	0.02845	0.03391	0.03953	0.04525	0.051	0.05675	0.06245	0.06811	0.07485	0.0813	0.08682	0.09123	0.09456
8.56	0.00105	0.00302	0.00566	0.0089	0.01284	0.01682	0.02135	0.02617	0.0312	0.03637	0.04164	0.04699	0.05224	0.0575	0.06271	0.06893	0.07489	0.07999	0.08406	0.08714
8.58	0.00101	0.00286	0.00534	0.00836	0.01183	0.01569	0.01987	0.02429	0.02889	0.03362	0.03843	0.04326	0.04808	0.05286	0.05759	0.06316	0.06846	0.073	0.07662	0.07937
8.6	0.00101	0.00281	0.00518	0.00803	0.01129	0.01488	0.01873	0.02278	0.02697	0.03126	0.0356	0.03994	0.04427	0.04854	0.05277	0.05757	0.06208	0.06593	0.06902	0.07139
8.62	0.00105	0.00283	0.00514	0.00787	0.01096	0.01429	0.01784	0.02154	0.02534	0.02919	0.03306	0.03691	0.04073	0.04449	0.04819	0.05215	0.05578	0.05886	0.06136	0.06331
8.64	0.0011	0.00289	0.00516	0.00779	0.0107	0.01383	0.0171	0.02046	0.02387	0.02729	0.03069	0.03406	0.03737	0.04062	0.0438	0.04689	0.0496	0.0519	0.05378	0.0553
8.66	0.00114	0.00294	0.00517	0.0077	0.01045	0.01336	0.01635	0.01939	0.02242	0.02542	0.02837	0.03126	0.03408	0.03684	0.03951	0.04176	0.04358	0.04511	0.0464	0.04751
8.68	0.00117	0.00295	0.00511	0.00752	0.0101	0.01277	0.01549	0.01819	0.02085	0.02345	0.02597	0.02841	0.03076	0.03304	0.03523	0.03672	0.03775	0.03858	0.03934	0.04006
8.7	0.00116	0.00288	0.00492	0.00717	0.00955	0.01197	0.01439	0.01676	0.01906	0.02126	0.02337	0.02538	0.0273	0.02914	0.0309	0.03174	0.0321	0.03237	0.03268	0.03308

8.72	0.0011	0.0027	0.00457	0.00661	0.00873	0.01086	0.01296	0.01499	0.01693	0.01875	0.02047	0.02209	0.02361	0.02506	0.02643	0.02677	0.02664	0.02649	0.02546	0.02662
8.74	3.89E-04	0.0024	0.00403	0.0058	0.00761	0.00941	0.01117	0.01284	0.01441	0.01587	0.01723	0.01848	0.01965	0.02075	0.02178	0.02178	0.02135	0.02094	0.0207	0.02069
8.76	8.22E-04	0.00199	0.00333	0.00476	0.00622	0.00765	0.00904	0.01034	0.01155	0.01266	0.01368	0.01461	0.01546	0.01626	0.01698	0.0168	0.01624	0.01573	0.01541	0.0153
8.78	6.21E-04	0.0015	0.00249	0.00355	0.00462	0.00566	0.00666	0.00769	0.00845	0.00922	0.00992	0.01055	0.01113	0.01166	0.01213	0.01188	0.01135	0.01086	0.01054	0.0104
8.8	3.92E-04	0.00156	0.00221	0.00287	0.00354	0.00421	0.00488	0.00546	0.00596	0.00642	0.00682	0.00719	0.00753	0.00783	0.00807	0.00826	0.00842	0.00855	0.00865	0.00871
8.82	1.41E-04	3.34E-04	5.50E-04	7.74E-04	9.95E-04	0.00121	0.0014	0.00158	0.00173	0.00186	0.00198	0.00207	0.00216	0.00223	0.00229	0.0023	0.0023	0.0023	0.0023	0.0023
8.84	-1.18E-04	-2.89E-04	-4.88E-04	-7.03E-04	-9.25E-04	-0.00115	-0.00136	-0.00157	-0.00177	-0.00196	-0.00213	-0.00229	-0.00244	-0.00258	-0.00272	-0.00273	-0.0027	-0.00267	-0.00265	-0.00266
8.86	-3.69E-04	-8.94E-04	-0.00146	-0.00245	-0.00351	-0.00469	-0.00586	-0.00706	-0.00827	-0.00941	-0.01017	-0.01088	-0.01153	-0.01213	-0.01269	-0.01258	-0.01221	-0.01187	-0.01173	-0.01169
8.88	-6.04E-04	-0.00146	-0.00235	-0.00341	-0.00461	-0.00587	-0.00719	-0.00859	-0.00994	-0.01135	-0.01274	-0.01415	-0.01559	-0.01708	-0.01862	-0.01921	-0.01973	-0.02019	-0.02059	-0.02094
8.9	-8.21E-04	-0.002	-0.00335	-0.00481	-0.0063	-0.00779	-0.00932	-0.01089	-0.01251	-0.01415	-0.01582	-0.01751	-0.01924	-0.02099	-0.02276	-0.02454	-0.02633	-0.02812	-0.02991	-0.03169
8.92	-0.00102	-0.00249	-0.0042	-0.00604	-0.00795	-0.00995	-0.01197	-0.01401	-0.01607	-0.01816	-0.02027	-0.02241	-0.02458	-0.02677	-0.02897	-0.03119	-0.03343	-0.03569	-0.03795	-0.04021
8.94	-0.00121	-0.00296	-0.00501	-0.00724	-0.00966	-0.01188	-0.01417	-0.01637	-0.01847	-0.02045	-0.0223	-0.02404	-0.02568	-0.02724	-0.0287	-0.02902	-0.02882	-0.0285	-0.0282	-0.0279
8.96	-0.00138	-0.00342	-0.00581	-0.00843	-0.01116	-0.01394	-0.01688	-0.01934	-0.0219	-0.02434	-0.02655	-0.02883	-0.0309	-0.03287	-0.03474	-0.0354	-0.03547	-0.03548	-0.03551	-0.03551
8.98	-0.00152	-0.00378	-0.00647	-0.00943	-0.01256	-0.01575	-0.01894	-0.02207	-0.02511	-0.02803	-0.03082	-0.03348	-0.03503	-0.03637	-0.03748	-0.0382	-0.0385	-0.0385	-0.0385	-0.0385
9	-0.00155	-0.00382	-0.00677	-0.00995	-0.01335	-0.01687	-0.02043	-0.02397	-0.02744	-0.03083	-0.03411	-0.03727	-0.04032	-0.04328	-0.04612	-0.04797	-0.04821	-0.04825	-0.04825	-0.04825
9.02	-0.0015	-0.00386	-0.00675	-0.01004	-0.01361	-0.01736	-0.02121	-0.02511	-0.02899	-0.03282	-0.03659	-0.04026	-0.04384	-0.04733	-0.05071	-0.05348	-0.05567	-0.0575	-0.05906	-0.06041
9.04	-0.00138	-0.00364	-0.00648	-0.00978	-0.01343	-0.01734	-0.02142	-0.02562	-0.02986	-0.03412	-0.03836	-0.04254	-0.04666	-0.05069	-0.05464	-0.05844	-0.06176	-0.06457	-0.06688	-0.06874
9.06	-0.00121	-0.00331	-0.00602	-0.00926	-0.01292	-0.01691	-0.02116	-0.02561	-0.03018	-0.03483	-0.03951	-0.04419	-0.04882	-0.05339	-0.0579	-0.06281	-0.06735	-0.07122	-0.07434	-0.07676
9.08	-9.96E-04	-0.00286	-0.00538	-0.00848	-0.01207	-0.01608	-0.02043	-0.02506	-0.0299	-0.03488	-0.03986	-0.04508	-0.0502	-0.05527	-0.0603	-0.06535	-0.070215	-0.07491	-0.07946	-0.08406
9.1	-7.63E-04	-0.00237	-0.00466	-0.00757	-0.01104	-0.01501	-0.0194	-0.02416	-0.0292	-0.03446	-0.03987	-0.04537	-0.05091	-0.05642	-0.06192	-0.06746	-0.07294	-0.07837	-0.08375	-0.08908
9.12	-5.38E-04	-0.00189	-0.00394	-0.00655	-0.00998	-0.01387	-0.01826	-0.02308	-0.02826	-0.03373	-0.0394	-0.0452	-0.05107	-0.05694	-0.06282	-0.06869	-0.07456	-0.08043	-0.0863	-0.0922
9.14	-3.43E-04	-0.00147	-0.00329	-0.00581	-0.00898	-0.01277	-0.01712	-0.02196	-0.02721	-0.0328	-0.03864	-0.04465	-0.05075	-0.05687	-0.06302	-0.06917	-0.07532	-0.08147	-0.08762	-0.09377
9.16	-1.96E-04	-0.00115	-0.0028	-0.00515	-0.00819	-0.01187	-0.01615	-0.02096	-0.02622	-0.03185	-0.03776	-0.04387	-0.05009	-0.05634	-0.06263	-0.06892	-0.07521	-0.0815	-0.08784	-0.09417
9.18	-1.32E-04	-9.93E-04	-0.00255	-0.00481	-0.00776	-0.01136	-0.01557	-0.02032	-0.02554	-0.03113	-0.03703	-0.04312	-0.04934	-0.05568	-0.06203	-0.06838	-0.07473	-0.08108	-0.08743	-0.09378
9.2	-1.64E-04	-0.00105	-0.00263	-0.00489	-0.00783	-0.0114	-0.01556	-0.02025	-0.02538	-0.03098	-0.03667	-0.04265	-0.04874	-0.05487	-0.06103	-0.06718	-0.07333	-0.07948	-0.08563	-0.09178
9.22	-3.11E-04	-0.00137	-0.0031	-0.00549	-0.00852	-0.01214	-0.0163	-0.02094	-0.02598	-0.03134	-0.03695	-0.04273	-0.0486	-0.05448	-0.06034	-0.0662	-0.07207	-0.07792	-0.08377	-0.08962
9.24	-5.71E-04	-0.00193	-0.00396	-0.00661	-0.00994	-0.0136	-0.01782	-0.02243	-0.02738	-0.03258	-0.03797	-0.04348	-0.04904	-0.05459	-0.06015	-0.06572	-0.07129	-0.07686	-0.08243	-0.08801
9.26	-8.99E-04	-0.00265	-0.00505	-0.00804	-0.01153	-0.01547	-0.01977	-0.02438	-0.02922	-0.03424	-0.03936	-0.04454	-0.04973	-0.05489	-0.06002	-0.06515	-0.07028	-0.07541	-0.08054	-0.08567
9.28	-0.00125	-0.00341	-0.00621	-0.00954	-0.01331	-0.01743	-0.02182	-0.0264	-0.03112	-0.03592	-0.04075	-0.04558	-0.05036	-0.05508	-0.05973	-0.06441	-0.06904	-0.07367	-0.0783	-0.08293
9.3	-0.00158	-0.00414	-0.00732	-0.01098	-0.01501	-0.01929	-0.02375	-0.0283	-0.03288	-0.03745	-0.04198	-0.04644	-0.05081	-0.05509	-0.05926	-0.06339	-0.06746	-0.07153	-0.0756	-0.07967
9.32	-0.00187	-0.00474	-0.00823	-0.01215	-0.01637	-0.02077	-0.02524	-0.02972	-0.03415	-0.0385	-0.04272	-0.04682	-0.0508	-0.05465	-0.05838	-0.06201	-0.06564	-0.06921	-0.07278	-0.07635
9.34	-0.00205	-0.00514	-0.00881	-0.01288	-0.01719	-0.02161	-0.02604	-0.03041	-0.03466	-0.03877	-0.04271	-0.04648	-0.0501	-0.05358	-0.05691	-0.06014	-0.06327	-0.06631	-0.06926	-0.07221
9.36	-0.00212	-0.00526	-0.00896	-0.01302	-0.01728	-0.02161	-0.02591	-0.0301	-0.03415	-0.03801	-0.04168	-0.04516	-0.04848	-0.05165	-0.05466	-0.05751	-0.06021	-0.06276	-0.06521	-0.06756
9.38	-0.00205	-0.00506	-0.0086	-0.01248	-0.01653	-0.02064	-0.0247	-0.02865	-0.03244	-0.03605	-0.03947	-0.0427	-0.04577	-0.0487	-0.05147	-0.05401	-0.05641	-0.05866	-0.06081	-0.06286
9.4	-0.00183	-0.00453	-0.00773	-0.01123	-0.01491	-0.01865	-0.02236	-0.02599	-0.02949	-0.03283	-0.036	-0.03902	-0.04189	-0.04464	-0.04725	-0.04981	-0.05226	-0.05456	-0.05671	-0.05876
9.42	-0.00148	-0.00372	-0.00639	-0.00936	-0.01251	-0.01575	-0.01902	-0.02225	-0.0254	-0.02845	-0.03133	-0.03422	-0.03693	-0.03955	-0.04206	-0.04452	-0.04693	-0.04929	-0.05151	-0.05366

9.44	-0.00104	-0.00269	-0.00472	-0.00704	-0.00956	-0.01221	-0.01495	-0.01772	-0.02026	-0.02324	-0.02594	-0.02859	-0.03117	-0.03368	-0.03613	-0.03819	-0.03986	-0.04126	-0.04244	-0.04345
9.46	-5.64E-04	-0.00157	-0.0029	-0.0045	-0.00634	-0.00836	-0.01053	-0.01281	-0.01518	-0.0176	-0.02005	-0.02251	-0.02496	-0.02737	-0.02977	-0.03249	-0.03506	-0.03726	-0.03902	-0.04037
9.48	-3.28E-05	-4.68E-04	-0.0011	-0.002	-0.00314	-0.00452	-0.00612	-0.0079	-0.00985	-0.01194	-0.01412	-0.01637	-0.01866	-0.02096	-0.02327	-0.02563	-0.03004	-0.03298	-0.03529	-0.03695
9.5	3.19E-04	5.04E-04	4.88E-04	2.34E-04	-2.82E-04	-0.00107	-0.00212	-0.00343	-0.00496	-0.00669	-0.00858	-0.0106	-0.01269	-0.01482	-0.01701	-0.02081	-0.02487	-0.02838	-0.03109	-0.03298
9.52	6.24E-04	0.00123	0.0017	0.00196	0.00195	0.00166	0.00108	2.11E-04	9.27E-04	-0.0023	-0.00388	-0.00561	-0.00745	-0.00935	-0.01133	-0.0153	-0.01967	-0.02346	-0.02636	-0.02834
9.54	8.04E-04	0.00168	0.00247	0.00308	0.00346	0.00356	0.00336	0.00287	0.00211	0.00109	-1.37E-04	-0.00154	-0.00306	-0.00466	-0.00635	-0.01016	-0.01444	-0.01816	-0.021	-0.0229
9.56	8.96E-04	0.00184	0.00295	0.00382	0.00449	0.00491	0.00507	0.00495	0.00457	0.00395	0.00312	0.00211	9.85E-04	-2.21E-04	-0.00162	-0.00469	-0.00976	-0.01213	-0.01468	-0.01636
9.58	9.07E-04	0.00202	0.00314	0.00419	0.00508	0.00578	0.00626	0.0065	0.00652	0.00632	0.00593	0.00539	0.00473	0.004	0.00318	5.10E-04	-0.00263	-0.00538	-0.00745	-0.00879
9.6	8.45E-04	0.00193	0.00309	0.00422	0.00528	0.0062	0.00697	0.00756	0.00798	0.00823	0.00833	0.0083	0.00818	0.00799	0.00772	0.00599	0.00384	0.00195	5.43E-04	-3.28E-04
9.62	7.22E-04	0.00171	0.00283	0.00398	0.00513	0.00624	0.00726	0.00819	0.00901	0.00972	0.01034	0.01087	0.01133	0.01173	0.01208	0.01146	0.01051	0.00967	0.00907	0.00875
9.64	5.51E-04	0.00139	0.00239	0.00352	0.00471	0.00585	0.0072	0.00844	0.00965	0.01084	0.01198	0.01308	0.01414	0.01517	0.01615	0.01678	0.01719	0.01751	0.01782	0.01812
9.66	3.43E-04	9.74E-04	0.00182	0.00285	0.00404	0.00537	0.0068	0.00832	0.00991	0.01154	0.01319	0.01486	0.01652	0.01817	0.0198	0.02173	0.02357	0.02514	0.0264	0.02735
9.68	1.19E-04	5.22E-04	0.00118	0.00209	0.00324	0.00462	0.00621	0.00797	0.00989	0.01193	0.01407	0.01627	0.0185	0.02074	0.02299	0.0262	0.02946	0.03227	0.03448	0.03607
9.7	-6.95E-05	1.49E-04	6.58E-04	0.00148	0.00262	0.00407	0.0058	0.00781	0.01004	0.01247	0.01504	0.01773	0.02049	0.02327	0.02608	0.03044	0.03496	0.03887	0.04192	0.04408
9.72	-1.89E-04	-7.88E-05	3.68E-04	0.00118	0.00236	0.00382	0.00584	0.00809	0.01062	0.01341	0.01638	0.0195	0.02271	0.02596	0.02926	0.03454	0.04006	0.04484	0.04855	0.05117
9.74	-2.34E-04	-1.41E-04	3.23E-04	0.00119	0.00249	0.0042	0.00632	0.00881	0.01163	0.01472	0.01804	0.02152	0.02511	0.02873	0.03242	0.03835	0.04457	0.04995	0.05413	0.05707
9.76	-2.02E-04	-3.61E-05	5.35E-04	0.00154	0.00301	0.00492	0.00725	0.00997	0.01304	0.0164	0.02	0.02376	0.02762	0.03153	0.03549	0.0418	0.04839	0.05409	0.05852	0.06185
9.78	-3.72E-05	2.25E-04	9.84E-04	0.0022	0.00388	0.00602	0.00858	0.01153	0.01482	0.01839	0.02218	0.02514	0.03019	0.03427	0.03841	0.04481	0.05146	0.0572	0.06167	0.06485
9.8	6.69E-05	6.14E-04	0.00162	0.0031	0.00504	0.00742	0.01021	0.01336	0.01683	0.02055	0.02448	0.02855	0.03269	0.03686	0.04107	0.04732	0.05374	0.05927	0.06359	0.0667
9.82	2.69E-04	0.00108	0.00237	0.00414	0.00634	0.00897	0.01196	0.01529	0.01889	0.02271	0.0267	0.0308	0.03496	0.03912	0.04331	0.0492	0.05517	0.06031	0.06434	0.06727
9.84	4.85E-04	0.00157	0.00315	0.0052	0.00766	0.0105	0.01367	0.01713	0.02081	0.02467	0.0285	0.03272	0.03681	0.0409	0.04498	0.0504	0.05577	0.06038	0.06402	0.0667
9.86	6.91E-04	0.00203	0.00388	0.00617	0.00885	0.01186	0.01516	0.0187	0.02241	0.02625	0.03017	0.03414	0.03812	0.04207	0.04599	0.05084	0.05555	0.05957	0.06278	0.06517
9.88	8.70E-04	0.00243	0.00449	0.00697	0.00981	0.01295	0.01632	0.01988	0.02356	0.02733	0.03115	0.03498	0.03879	0.04256	0.04629	0.05056	0.05459	0.05803	0.06079	0.0629
9.9	0.00101	0.00274	0.00496	0.00758	0.01052	0.01372	0.01711	0.02064	0.02426	0.02792	0.03159	0.03525	0.03888	0.04244	0.04595	0.04967	0.05306	0.05595	0.05829	0.06012
9.92	0.00112	0.00296	0.00528	0.00799	0.01098	0.01419	0.01756	0.02102	0.02453	0.02806	0.03157	0.03505	0.03846	0.04182	0.04511	0.04832	0.05114	0.05353	0.05549	0.05707
9.94	0.00119	0.0031	0.00547	0.0082	0.01119	0.01437	0.01767	0.02104	0.02443	0.02781	0.03114	0.03443	0.03764	0.04079	0.04386	0.04664	0.04898	0.05096	0.0526	0.05397
9.96	0.00122	0.00314	0.0055	0.00821	0.01115	0.01425	0.01745	0.0207	0.02394	0.02716	0.03032	0.03342	0.03645	0.0394	0.04227	0.0447	0.04668	0.04834	0.04974	0.05093
9.98	0.00121	0.0031	0.00542	0.00805	0.01091	0.01391	0.01699	0.0201	0.02319	0.02625	0.02925	0.03218	0.03503	0.0378	0.04049	0.04267	0.04439	0.04582	0.04705	0.04811
10	0.00117	0.00299	0.00522	0.00775	0.01048	0.01335	0.01629	0.01925	0.0222	0.0251	0.02794	0.03071	0.03341	0.03603	0.03857	0.04059	0.04215	0.04346	0.04458	0.04556
	0.00261	0.00662	0.01148	0.01721	0.02376	0.03089	0.03841	0.0462	0.05417	0.06233	0.07059	0.07881	0.08696	0.09517	0.10331	0.11239	0.12149	0.1294	0.13606	0.14108
	-0.0032	-0.00831	-0.01464	-0.0219	-0.02985	-0.03828	-0.047	-0.05588	-0.06481	-0.07368	-0.08245	-0.09117	-0.09971	-0.10808	-0.11624	-0.12382	-0.13097	-0.13798	-0.14443	-0.14963

TAK

ugas Akhir

I M E H I S T O R Y D A T A

ME	Joint2:	Joint3:	Joint4:	Joint5:	Joint6:	Joint7:	Joint8:	Joint9:	Joint10:	Joint11:	Joint12:	Joint13:	Joint14:	Joint15:	Joint16:	Joint17:	Joint18:	Joint19:	Joint20:	Joint21:
JUNCTION	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint	Joint
JUNCTION	2 Displacement UY	3 Displacement UY	4 Displacement UY	5 Displacement UY	6 Displacement UY	7 Displacement UY	8 Displacement UY	9 Displacement UY	10 Displacement UY	11 Displacement UY	12 Displacement UY	13 Displacement UY	14 Displacement UY	15 Displacement UY	16 Displacement UY	17 Displacement UY	18 Displacement UY	19 Displacement UY	20 Displacement UY	21 Displacement UY
JUNCTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUNCTION	0.02	0	0	0	-1.09E-06	-1.36E-06	-1.58E-06	-1.75E-06	-1.85E-06	-1.90E-06	-1.88E-06	-1.88E-06	-1.88E-06	-1.78E-06	-1.61E-06	-1.53E-06	-1.45E-06	-1.48E-06	-1.59E-06	-1.72E-06
JUNCTION	0.04	-2.07E-06	-3.88E-06	-6.08E-06	-8.32E-06	-1.04E-05	-1.21E-05	-1.34E-05	-1.42E-05	-1.48E-05	-1.46E-05	-1.44E-05	-1.38E-05	-1.34E-05	-1.28E-05	-1.22E-05	-1.16E-05	-1.18E-05	-1.26E-05	-1.35E-05
JUNCTION	0.06	-6.94E-06	-1.38E-05	-2.14E-05	-2.90E-05	-3.58E-05	-4.15E-05	-4.57E-05	-4.84E-05	-4.98E-05	-5.00E-05	-4.93E-05	-4.90E-05	-4.84E-05	-4.46E-05	-4.30E-05	-4.13E-05	-4.20E-05	-4.45E-05	-4.73E-05





0.8	-1.22E-04	-3.94E-04	-6.86E-04	-0.0011	-0.00159	-0.00214	-0.00274	-0.00336	-0.00401	-0.00466	-0.00532	-0.00597	-0.00666	-0.00722	-0.00781	-0.00827	-0.00857	-0.00878	-0.00895	-0.00912
0.82	-7.61E-05	-2.43E-04	-5.08E-04	-8.60E-04	-0.00129	-0.00178	-0.00232	-0.0029	-0.0035	-0.00413	-0.00475	-0.00538	-0.006	-0.0066	-0.00718	-0.00767	-0.00801	-0.00827	-0.00847	-0.00865
0.84	-3.17E-06	-8.25E-05	-2.46E-04	-4.32E-04	-8.15E-04	-0.00121	-0.00166	-0.00217	-0.00272	-0.00329	-0.00388	-0.00447	-0.00507	-0.00565	-0.00622	-0.00676	-0.00718	-0.00749	-0.00773	-0.00793
0.86	7.78E-05	9.41E-05	4.83E-05	-6.95E-05	-2.64E-04	-8.74E-04	-4.46E-05	-3.19E-04	-6.59E-04	-0.00128	-0.00223	-0.00276	-0.0033	-0.00385	-0.00443	-0.00555	-0.00607	-0.00647	-0.00677	-0.007
0.88	1.48E-04	2.97E-04	3.29E-04	3.44E-04	2.89E-04	1.60E-04	4.46E-05	-3.19E-04	-6.59E-04	-0.00104	-0.00204	-0.00276	-0.0033	-0.00385	-0.00443	-0.00555	-0.00607	-0.00647	-0.00677	-0.007
0.9	2.02E-04	4.05E-04	5.91E-04	7.35E-04	8.22E-04	8.40E-04	7.87E-04	6.63E-04	4.73E-04	2.25E-04	7.11E-05	-4.03E-04	-7.60E-04	-0.00288	-0.00335	-0.00404	-0.00469	-0.00521	-0.0056	-0.00588
0.92	2.46E-04	5.46E-04	8.47E-04	0.00112	0.00135	0.00163	0.00164	0.00169	0.00167	0.00159	0.00146	0.00129	0.00108	8.52E-04	5.95E-04	-0.00226	-0.00304	-0.0037	-0.0042	-0.00453
0.94	2.94E-04	6.75E-04	0.00109	0.0015	0.00189	0.00223	0.00253	0.00277	0.00294	0.00306	0.00313	0.00314	0.00311	0.00305	-1.78E-04	-0.00109	-0.00188	-0.00248	-0.00287	-0.00328
0.96	3.20E-04	7.87E-04	0.00131	0.00187	0.00242	0.00295	0.00345	0.0039	0.00429	0.00463	0.00491	0.00513	0.0053	0.00544	0.00552	0.0048	0.00376	0.00279	0.00205	0.00161
0.98	3.56E-04	8.91E-04	0.00153	0.00222	0.00295	0.00368	0.00439	0.00506	0.00569	0.00626	0.00676	0.00721	0.0076	0.00795	0.00823	0.00761	0.00661	0.00565	0.00492	0.0045
1	3.95E-04	0.00101	0.00176	0.00261	0.00351	0.00443	0.00535	0.00625	0.0071	0.0079	0.00864	0.00932	0.00994	0.0105	0.011	0.01057	0.0097	0.00884	0.0082	0.00786
1.02	4.51E-04	0.00116	0.00203	0.00302	0.0041	0.00521	0.00633	0.00744	0.00852	0.00956	0.01052	0.01143	0.01228	0.01308	0.01381	0.01363	0.01302	0.01237	0.0119	0.01169
1.04	5.11E-04	0.00133	0.00233	0.00348	0.00472	0.00602	0.00734	0.00866	0.00995	0.01121	0.01241	0.01355	0.01464	0.01567	0.01664	0.0168	0.01653	0.0162	0.01588	0.01555
1.06	5.72E-04	0.00149	0.00253	0.00382	0.00533	0.00681	0.00833	0.00985	0.01136	0.01284	0.01428	0.01566	0.01699	0.01827	0.01948	0.02005	0.02021	0.02027	0.02036	0.02055
1.08	6.26E-04	0.00164	0.00269	0.00433	0.00659	0.00859	0.00926	0.01099	0.01272	0.01443	0.01611	0.01774	0.01932	0.02085	0.02233	0.02334	0.024	0.0245	0.02494	0.02538
1.1	6.66E-04	0.00176	0.00311	0.00467	0.00669	0.00821	0.01011	0.01205	0.014	0.01595	0.01787	0.01975	0.0216	0.0234	0.02515	0.02664	0.02783	0.02881	0.02963	0.03033
1.12	6.98E-04	0.00183	0.00327	0.00494	0.00679	0.00877	0.01085	0.01299	0.01517	0.01735	0.01953	0.02168	0.0238	0.02588	0.02792	0.0299	0.03163	0.03309	0.03429	0.03526
1.14	6.98E-04	0.00184	0.00337	0.00511	0.00707	0.00921	0.01146	0.01381	0.01621	0.01864	0.02108	0.0235	0.02591	0.02827	0.0306	0.03307	0.03533	0.03726	0.03982	0.04005
1.16	6.72E-04	0.00182	0.00338	0.00526	0.00727	0.00954	0.01197	0.01451	0.01713	0.0198	0.0225	0.0252	0.02788	0.03053	0.03315	0.03609	0.03866	0.04123	0.04314	0.0446
1.18	6.53E-04	0.0018	0.00339	0.00532	0.00743	0.00983	0.01241	0.01513	0.01796	0.02087	0.02381	0.02677	0.02971	0.03263	0.03552	0.03892	0.04217	0.04495	0.04718	0.04887
1.2	6.35E-04	0.00177	0.00337	0.00533	0.00757	0.01007	0.01279	0.01567	0.01868	0.02179	0.02495	0.02814	0.03133	0.03449	0.03763	0.04145	0.04514	0.04831	0.05084	0.05274
1.22	6.06E-04	0.00171	0.00328	0.00533	0.00757	0.01021	0.01303	0.01604	0.01921	0.02249	0.02584	0.02923	0.03262	0.036	0.03936	0.04355	0.04764	0.05116	0.05396	0.05605
1.24	5.84E-04	0.00161	0.00315	0.00509	0.00741	0.01005	0.01298	0.01614	0.0195	0.02301	0.02661	0.03028	0.03397	0.03765	0.04132	0.04509	0.0508	0.05484	0.05805	0.06041
1.26	5.17E-04	0.00156	0.00307	0.00501	0.00732	0.00996	0.0129	0.01608	0.01947	0.02301	0.02666	0.03037	0.03411	0.03785	0.04158	0.04533	0.05146	0.05571	0.05906	0.06153
1.28	4.98E-04	0.00163	0.00317	0.00512	0.00744	0.01009	0.01301	0.01618	0.01954	0.02305	0.02667	0.03036	0.03407	0.03779	0.04151	0.04525	0.05164	0.05606	0.05956	0.06211
1.3	5.36E-04	0.00186	0.00335	0.00553	0.00789	0.01055	0.01346	0.01658	0.01988	0.0233	0.02693	0.03041	0.03403	0.03765	0.04128	0.04483	0.05151	0.05605	0.05966	0.06229
1.32	6.46E-04	0.00224	0.00406	0.00623	0.0087	0.0114	0.01431	0.01738	0.02059	0.0239	0.02728	0.03072	0.03418	0.03764	0.04113	0.044608	0.05124	0.05583	0.0595	0.06215
1.34	8.25E-04	0.00224	0.00406	0.00623	0.0087	0.0114	0.01431	0.01738	0.02059	0.0239	0.02728	0.03072	0.03418	0.03764	0.04113	0.044608	0.05124	0.05583	0.0595	0.06215
1.36	0.00104	0.0027	0.00475	0.00711	0.00971	0.0125	0.01544	0.01849	0.02163	0.02483	0.02808	0.03136	0.03465	0.03795	0.04127	0.044599	0.05098	0.05547	0.05908	0.0617
1.38	0.00123	0.00313	0.00541	0.00798	0.01075	0.01366	0.01667	0.01975	0.02287	0.02602	0.02917	0.03234	0.0355	0.03866	0.04183	0.04519	0.05081	0.055	0.05839	0.06087
1.4	0.00138	0.00345	0.00582	0.00868	0.01163	0.0147	0.01784	0.02101	0.02418	0.02735	0.0305	0.03363	0.03673	0.03981	0.04289	0.04578	0.05082	0.05448	0.05747	0.05969
1.42	0.00144	0.00362	0.00623	0.00915	0.01227	0.01551	0.01881	0.02214	0.02545	0.02873	0.03196	0.03515	0.03829	0.04138	0.04443	0.04778	0.05105	0.05398	0.05641	0.05827
1.44	0.00143	0.00365	0.00634	0.00937	0.01294	0.01607	0.01967	0.0231	0.02661	0.03008	0.03348	0.03682	0.04007	0.04325	0.04635	0.04914	0.05154	0.05361	0.05535	0.05679
1.46	0.00139	0.0036	0.00634	0.00947	0.01289	0.0165	0.02022	0.02398	0.02773	0.03144	0.03507	0.0386	0.04203	0.04535	0.04856	0.05081	0.05235	0.05354	0.05459	0.0556
1.48	0.00135	0.00358	0.00638	0.00962	0.01319	0.01699	0.02093	0.02494	0.02894	0.03289	0.03675	0.0405	0.04411	0.0476	0.05093	0.05274	0.05354	0.05399	0.05444	0.05508
1.5	0.00134	0.00361	0.00648	0.00985	0.01358	0.01757	0.02171	0.02594	0.03017	0.03434	0.03842	0.04236	0.04616	0.04981	0.05327	0.05678	0.05906	0.06149	0.06306	0.06539

1.52	0.00137	0.00369	0.00666	0.01015	0.01403	0.01818	0.02251	0.02692	0.03134	0.0357	0.03995	0.04406	0.04802	0.05181	0.05539	0.05684	0.05684	0.05653	0.05661
1.54	0.00142	0.00381	0.00688	0.01048	0.01448	0.01877	0.02323	0.02778	0.03234	0.03684	0.04123	0.04548	0.04956	0.05348	0.05718	0.05868	0.0588	0.0584	0.05871
1.56	0.00146	0.00382	0.00707	0.01075	0.01483	0.0192	0.02376	0.0284	0.03305	0.03765	0.04214	0.04649	0.05069	0.05472	0.05856	0.06036	0.06084	0.06106	0.06157
1.58	0.00149	0.00388	0.00714	0.01086	0.01496	0.01936	0.02395	0.02864	0.03334	0.03801	0.04258	0.04703	0.05134	0.05555	0.05948	0.06176	0.06286	0.06351	0.06435
1.6	0.00137	0.0037	0.00669	0.01022	0.01418	0.01845	0.02271	0.0284	0.03313	0.03784	0.04249	0.04705	0.05148	0.05578	0.05992	0.06284	0.06475	0.06617	0.06738
1.62	0.0012	0.00332	0.00661	0.00942	0.01318	0.0173	0.02169	0.02628	0.031	0.03578	0.04057	0.04534	0.05005	0.05468	0.05921	0.06351	0.06636	0.06864	0.07216
1.64	9.83E-04	0.00282	0.0063	0.00832	0.01183	0.01573	0.01995	0.02442	0.02908	0.03385	0.0387	0.04356	0.0484	0.05319	0.0579	0.06318	0.06804	0.07215	0.07539
1.66	7.23E-04	0.00222	0.00434	0.00702	0.01019	0.01381	0.0178	0.0221	0.02664	0.03137	0.03621	0.04113	0.04605	0.05095	0.05582	0.06187	0.06772	0.07271	0.07797
1.7	4.47E-04	0.00158	0.0033	0.00558	0.00837	0.01164	0.01533	0.01939	0.02375	0.02835	0.03312	0.03801	0.04295	0.04789	0.05284	0.05959	0.06635	0.07216	0.07962
1.72	1.79E-04	9.42E-04	0.00225	0.00403	0.00646	0.00933	0.01266	0.01639	0.02048	0.02486	0.02946	0.03422	0.03906	0.04394	0.04886	0.05619	0.06375	0.07029	0.07908
1.74	-5.42E-05	3.53E-04	0.00126	0.00267	0.00453	0.00701	0.0099	0.01323	0.01694	0.02098	0.02529	0.02979	0.03441	0.03909	0.04385	0.05159	0.05979	0.06695	0.07647
1.76	-2.17E-04	-7.31E-05	4.77E-04	0.00147	0.00294	0.00488	0.00728	0.01012	0.01335	0.01693	0.0208	0.02489	0.02914	0.03347	0.03792	0.04585	0.05451	0.06213	0.07219
1.78	-3.00E-04	-3.45E-04	-7.66E-05	5.56E-04	0.00159	0.00304	0.00491	0.00719	0.00985	0.01285	0.01615	0.01969	0.02341	0.02724	0.03122	0.03909	0.04794	0.05581	0.06616
1.8	-3.19E-04	-4.82E-04	-4.36E-04	-1.22E-04	5.01E-04	0.00146	0.00278	0.00445	0.00647	0.00881	0.01144	0.01431	0.01737	0.02057	0.02395	0.03145	0.04017	0.04802	0.05829
1.82	-3.07E-04	-5.66E-04	-6.86E-04	-6.72E-04	-4.37E-04	4.75E-05	8.06E-04	0.00185	0.0032	0.00482	0.00671	0.00884	0.01116	0.01362	0.01629	0.02312	0.0313	0.03877	0.0446
1.84	-2.95E-04	-6.08E-04	-7.15E-04	-0.00115	-0.00128	-0.00125	-0.00103	-5.93E-04	7.25E-05	3.73E-04	0.0021	0.00344	0.00497	0.00664	0.00852	0.01434	0.02156	0.02824	0.03689
1.86	-2.66E-04	-6.38E-04	-8.00E-04	-0.00109	-0.00155	-0.00238	-0.00265	-0.0028	-0.00278	-0.00259	-0.00221	-0.00166	-9.51E-04	-1.03E-04	3.42E-04	0.00542	0.01126	0.01673	0.02378
1.88	-2.00E-04	-5.94E-04	-8.00E-04	-0.00112	-0.00175	-0.00245	-0.00318	-0.00389	-0.00455	-0.00514	-0.00562	-0.00599	-0.00622	-0.00632	-0.00631	-0.00613	-0.00325	8.08E-04	0.0097
1.9	-7.63E-05	-3.76E-04	-8.78E-04	-0.00156	-0.00241	-0.00338	-0.00444	-0.00555	-0.00668	-0.00779	-0.00886	-0.00985	-0.01076	-0.01159	-0.01228	-0.01123	-0.00925	-0.00719	-0.00462
1.92	1.01E-04	-2.86E-05	-4.02E-04	-0.00104	-0.00193	-0.00304	-0.00435	-0.00582	-0.0074	-0.00907	-0.01077	-0.01247	-0.01415	-0.01578	-0.01733	-0.01825	-0.01856	-0.01856	-0.01865
1.94	2.80E-04	3.45E-04	1.31E-04	-4.90E-04	-0.00125	-0.00242	-0.00388	-0.0056	-0.00754	-0.00965	-0.01188	-0.0142	-0.01655	-0.01889	-0.02122	-0.02418	-0.02691	-0.03079	-0.03204
1.96	4.24E-04	6.55E-04	5.94E-04	1.92E-04	-5.81E-04	-0.00173	-0.00325	-0.00511	-0.00728	-0.00971	-0.01234	-0.01514	-0.01803	-0.02096	-0.02395	-0.02689	-0.03408	-0.03953	-0.04437
1.98	5.03E-04	8.35E-04	8.82E-04	6.04E-04	-7.27E-05	-0.00116	-0.00267	-0.00457	-0.00685	-0.00946	-0.01236	-0.01548	-0.01876	-0.02213	-0.02563	-0.03241	-0.03993	-0.04655	-0.05169
2	5.11E-04	8.76E-04	9.82E-04	7.84E-04	1.94E-04	-8.14E-04	-0.00226	-0.00413	-0.00642	-0.0091	-0.01211	-0.01541	-0.01891	-0.02256	-0.02641	-0.03475	-0.04433	-0.05291	-0.05652
2.02	4.98E-04	7.95E-04	9.17E-04	7.45E-04	2.15E-04	-7.15E-04	-0.00207	-0.00387	-0.00611	-0.00875	-0.01177	-0.01511	-0.0187	-0.02248	-0.02651	-0.03604	-0.04725	-0.05588	-0.0641
2.04	3.89E-04	6.39E-04	7.22E-04	5.45E-04	4.55E-05	-8.26E-04	-0.00211	-0.00381	-0.00595	-0.0085	-0.01144	-0.01473	-0.0183	-0.02208	-0.02616	-0.03641	-0.04868	-0.05988	-0.07064
2.06	2.72E-04	4.58E-04	4.77E-04	2.85E-04	-2.37E-04	-0.00108	-0.0023	-0.00392	-0.00595	-0.00839	-0.01122	-0.0144	-0.01796	-0.02155	-0.02556	-0.03602	-0.04867	-0.06027	-0.07448
2.08	1.90E-04	2.91E-04	2.35E-04	-3.21E-05	-5.64E-04	-0.00141	-0.0026	-0.00416	-0.00611	-0.00844	-0.01114	-0.01417	-0.01748	-0.02101	-0.02485	-0.03499	-0.0473	-0.05861	-0.07339
2.1	1.33E-04	1.55E-04	2.17E-05	-3.15E-04	-9.01E-04	-0.00178	-0.00297	-0.00451	-0.00639	-0.00863	-0.0112	-0.01407	-0.01719	-0.02051	-0.02411	-0.03342	-0.04468	-0.05503	-0.06956
2.12	8.97E-05	3.45E-05	-1.86E-04	-6.11E-04	-0.00128	-0.00221	-0.00345	-0.00498	-0.00683	-0.00898	-0.01142	-0.01411	-0.01701	-0.02006	-0.02335	-0.03138	-0.04099	-0.04977	-0.06128
2.14	4.09E-05	-1.04E-04	-4.33E-04	-9.74E-04	-0.00175	-0.00278	-0.00407	-0.00563	-0.00745	-0.00951	-0.0118	-0.01427	-0.0169	-0.01964	-0.02253	-0.02993	-0.03641	-0.04318	-0.05209
2.16	-5.28E-05	-3.38E-04	-8.26E-04	-0.00153	-0.00247	-0.00362	-0.005	-0.00658	-0.00835	-0.0103	-0.01239	-0.0146	-0.0169	-0.01925	-0.02168	-0.0262	-0.03124	-0.03575	-0.04172
2.18	-2.30E-04	-7.43E-04	-0.00148	-0.00244	-0.00358	-0.00493	-0.00637	-0.00797	-0.00988	-0.01146	-0.01331	-0.01519	-0.01708	-0.01897	-0.02086	-0.02338	-0.02588	-0.02803	-0.03098
2.2	-4.97E-04	-0.00134	-0.00242	-0.00369	-0.0051	-0.00661	-0.00819	-0.00979	-0.0114	-0.01298	-0.01453	-0.01602	-0.01745	-0.01883	-0.02013	-0.02066	-0.02066	-0.02055	-0.02059
2.22	-7.97E-04	-0.00201	-0.00345	-0.00506	-0.00675	-0.00845	-0.01012	-0.01172	-0.01321	-0.01457	-0.0158	-0.01689	-0.01786	-0.01871	-0.01943	-0.01806	-0.01577	-0.01357	-0.01095

2.24	-0.00106	-0.00259	-0.00436	-0.00626	-0.00818	-0.01005	-0.01179	-0.01337	-0.01475	-0.01592	-0.01686	-0.01759	-0.01814	-0.01853	-0.01872	-0.01568	-0.01136	-0.00731	-0.00422	-0.00234
2.26	-0.00122	-0.00295	-0.00492	-0.007	-0.00907	-0.01103	-0.01282	-0.01438	-0.01588	-0.01669	-0.01742	-0.01788	-0.0181	-0.01814	-0.01792	-0.01353	-0.00751	-0.00191	0.00239	0.00506
2.28	-0.00122	-0.00297	-0.00496	-0.00706	-0.00915	-0.01112	-0.01291	-0.01444	-0.01567	-0.0166	-0.0172	-0.01751	-0.01754	-0.01737	-0.01689	-0.01151	-0.00421	0.0026	0.00784	0.01113
2.3	-0.00105	-0.00259	-0.00439	-0.00632	-0.00827	-0.01014	-0.01185	-0.01332	-0.01452	-0.0154	-0.01597	-0.01623	-0.01621	-0.01595	-0.01537	-0.00944	-0.00135	0.00624	0.01212	0.01583
2.32	-7.39E-04	-0.0019	-0.00333	-0.00492	-0.00658	-0.00822	-0.00975	-0.01111	-0.01223	-0.01309	-0.01366	-0.01394	-0.01395	-0.01372	-0.01316	-0.00714	0.00115	0.00902	0.01514	0.01901
2.34	-3.77E-04	-0.00108	-0.00203	-0.00317	-0.00443	-0.00572	-0.00697	-0.00812	-0.00911	-0.0099	-0.01044	-0.01074	-0.01079	-0.01062	-0.01013	-0.00451	0.00334	0.01085	0.01673	0.02046
2.36	-4.80E-05	-3.07E-04	-7.77E-04	-0.00142	-0.0022	-0.00306	-0.00393	-0.00476	-0.0055	-0.0061	-0.00653	-0.00677	-0.00681	-0.00666	-0.00625	-0.00148	0.00525	0.01174	0.01686	0.02011
2.38	1.77E-04	2.63E-04	2.16E-04	4.08E-05	-2.43E-04	0.00123	0.00138	0.0016	-0.00178	-0.00207	-0.00225	-0.00231	-0.00224	-0.00203	-0.00163	0.00192	0.00691	0.01176	0.0166	0.01806
2.4	2.66E-04	5.60E-04	8.27E-04	0.00105	0.00157	0.00215	0.00277	0.00341	0.00406	0.00472	0.00537	0.00602	0.00672	0.00737	0.00806	0.00895	0.00935	0.00969	0.00997	0.0102
2.42	2.24E-04	5.89E-04	9.87E-04	0.00172	0.00262	0.00365	0.00476	0.00593	0.00711	0.00827	0.00938	0.01042	0.01138	0.01224	0.01298	0.01197	0.01003	0.00801	0.00642	0.00549
2.44	1.01E-04	4.39E-04	9.87E-04	0.00177	0.00292	0.00427	0.00577	0.00735	0.00896	0.01054	0.01203	0.01341	0.01464	0.01573	0.01659	0.0143	0.01036	0.00635	0.00317	0.00125
2.46	-1.92E-05	2.77E-04	8.00E-04	0.00197	0.00331	0.00489	0.00665	0.00851	0.01039	0.01222	0.01394	0.0155	0.01688	0.01806	0.01886	0.01574	0.01041	0.00501	7.32E-04	-0.00188
2.48	-5.79E-05	2.54E-04	9.36E-04	0.00197	0.00331	0.00489	0.00665	0.00851	0.01039	0.01222	0.01394	0.0155	0.01688	0.01806	0.01886	0.01574	0.01041	0.00501	7.32E-04	-0.00188
2.5	3.29E-05	4.71E-04	0.0013	0.00248	0.00397	0.00569	0.00758	0.00954	0.01149	0.01337	0.01511	0.01667	0.01802	0.01916	0.01989	0.01627	0.01027	0.00425	-5.02E-04	-0.00342
2.52	2.62E-04	9.50E-04	0.002	0.00336	0.00495	0.00674	0.00862	0.01051	0.01236	0.01409	0.01566	0.01703	0.01819	0.01915	0.01981	0.01604	0.01013	0.00429	-3.09E-04	-0.00313
2.54	5.92E-04	0.00162	0.00294	0.00449	0.00618	0.00795	0.00972	0.01143	0.01303	0.01447	0.01573	0.01679	0.01765	0.01834	0.01877	0.01536	0.01022	0.00522	0.00133	-0.00106
2.56	9.53E-04	0.00233	0.00393	0.00566	0.00741	0.00913	0.01074	0.01221	0.0135	0.01461	0.01551	0.01622	0.01677	0.01717	0.01739	0.01467	0.01075	0.00707	0.00426	0.00255
2.58	0.00124	0.00289	0.0047	0.00653	0.00833	0.00993	0.01138	0.01262	0.01364	0.01445	0.01507	0.01551	0.01582	0.01604	0.01614	0.01431	0.01186	0.00707	0.00426	0.00255
2.6	0.00135	0.00309	0.00492	0.00674	0.00844	0.00996	0.01126	0.01235	0.01321	0.01387	0.01435	0.0147	0.01496	0.01515	0.0153	0.01447	0.0135	0.01279	0.01237	0.01218
2.62	0.00123	0.0028	0.00446	0.00609	0.00762	0.0089	0.0102	0.01121	0.01206	0.01275	0.01322	0.01379	0.01421	0.0146	0.01499	0.01519	0.01553	0.01603	0.01656	0.01697
2.64	8.71E-04	0.00203	0.0033	0.00469	0.00595	0.00705	0.00818	0.00922	0.01019	0.01109	0.01193	0.01274	0.01353	0.01431	0.01512	0.01629	0.01771	0.01912	0.02031	0.02118
2.66	3.45E-04	9.15E-04	0.00162	0.00245	0.00337	0.00436	0.00543	0.00655	0.00772	0.00894	0.01018	0.01145	0.01274	0.01404	0.01536	0.01745	0.01972	0.02178	0.02342	0.02458
2.68	-2.50E-04	-3.52E-04	-2.72E-04	2.27E-05	5.48E-04	0.00131	0.00229	0.00349	0.00487	0.0064	0.00806	0.00981	0.01162	0.01344	0.01529	0.0182	0.02121	0.02376	0.02573	0.02712
2.7	-7.84E-04	-0.00151	-0.00202	-0.00224	-0.00211	-0.00162	-7.63E-04	4.33E-04	0.00193	0.00369	0.00566	0.00777	0.00997	0.01221	0.01447	0.01815	0.02185	0.02492	0.02723	0.02885
2.72	-0.00112	-0.00227	-0.00321	-0.00382	-0.00403	-0.00381	-0.00315	-0.00207	-6.05E-04	0.00118	0.00323	0.00548	0.00784	0.01026	0.01274	0.01709	0.02156	0.02528	0.02806	0.02999
2.74	-0.00118	-0.00246	-0.00356	-0.00438	-0.00462	-0.00485	-0.00444	-0.00361	-0.00238	-8.09E-04	0.00105	0.00314	0.00538	0.0077	0.01011	0.01503	0.02035	0.0249	0.02833	0.03066
2.76	-9.65E-04	-0.00205	-0.00306	-0.00387	-0.00442	-0.00465	-0.00454	-0.00406	-0.00324	-0.0021	-6.79E-04	9.76E-04	0.00291	0.00476	0.00695	0.01216	0.01832	0.02379	0.02797	0.03075
2.78	-5.66E-04	-0.00127	-0.00199	-0.00287	-0.00322	-0.00361	-0.00378	-0.00372	-0.0034	-0.00282	-0.00199	-9.42E-04	3.02E-04	0.00169	0.00329	0.00873	0.01553	0.02178	0.02664	0.02981
2.8	-1.34E-04	-4.10E-04	-8.06E-04	-0.00129	-0.0018	-0.00229	-0.00272	-0.00304	-0.00321	-0.0032	-0.00239	-0.00257	-0.00197	-0.00119	-1.70E-04	0.00508	0.01209	0.01873	0.02394	0.02731
2.82	1.79E-04	2.06E-04	4.78E-05	-2.82E-04	-7.55E-04	-0.00133	-0.00195	-0.00256	-0.00311	-0.00356	-0.00386	-0.00399	-0.00393	-0.00371	-0.00322	0.00146	0.00807	0.01447	0.01954	0.02278
2.84	2.66E-04	3.61E-04	2.54E-04	-5.71E-05	-5.53E-04	-0.0012	-0.00194	-0.00273	-0.00351	-0.00423	-0.00484	-0.00532	-0.00585	-0.00681	-0.00774	-0.00201	0.0035	0.00894	0.01325	0.01699
2.86	8.85E-05	-1.76E-05	-3.05E-04	-0.00149	-0.00226	-0.00309	-0.00396	-0.00484	-0.0057	-0.00652	-0.00728	-0.00797	-0.00859	-0.00914	-0.00961	-0.00541	-0.00162	0.00215	0.00514	0.00701
2.88	-3.02E-04	-8.29E-04	-0.00149	-0.00226	-0.00309	-0.00396	-0.00484	-0.0057	-0.00652	-0.00728	-0.00797	-0.00859	-0.00914	-0.00961	-0.00969	-0.00698	-0.00733	-0.0057	-0.00444	-0.0037
2.9	-7.78E-04	-0.00182	-0.00284	-0.00409	-0.0052	-0.00625	-0.00722	-0.00809	-0.00887	-0.00958	-0.01021	-0.0108	-0.01136	-0.0119	-0.01244	-0.01297	-0.0136	-0.01427	-0.01487	-0.01533
2.92	-0.00119	-0.00268	-0.00424	-0.00575	-0.00716	-0.00842	-0.00954	-0.01051	-0.01135	-0.01211	-0.0128	-0.01347	-0.01414	-0.01485	-0.01563	-0.01764	-0.02037	-0.02313	-0.02543	-0.027
2.94	-0.00141	-0.00318	-0.00501	-0.00688	-0.00847	-0.00989	-0.01134	-0.01254	-0.01363	-0.01463	-0.0156	-0.01657	-0.01757	-0.01864	-0.01963	-0.02312	-0.02753	-0.03191	-0.03549	-0.03792



2.96	-0.00138	-0.00317	-0.00608	-0.00701	-0.00888	-0.01067	-0.01235	-0.01395	-0.01548	-0.01698	-0.01849	-0.02002	-0.02161	-0.02327	-0.02507	-0.02939	-0.0349	-0.04024	-0.04458	-0.04753
2.98	-0.00113	-0.00273	-0.00454	-0.00649	-0.00853	-0.0106	-0.01271	-0.01485	-0.01702	-0.01923	-0.02149	-0.02381	-0.0262	-0.02864	-0.03121	-0.03628	-0.04233	-0.04801	-0.05257	-0.05573
3	-7.64E-04	-0.00206	-0.0037	-0.00563	-0.00781	-0.01022	-0.01282	-0.01568	-0.0185	-0.02154	-0.02468	-0.02792	-0.03121	-0.03454	-0.03794	-0.04352	-0.04966	-0.05521	-0.05962	-0.06274
3.02	-4.24E-04	-0.00144	-0.00293	-0.00488	-0.00726	-0.01003	-0.01315	-0.01657	-0.02024	-0.02411	-0.02813	-0.03226	-0.03643	-0.04061	-0.04481	-0.05071	-0.05671	-0.0619	-0.06599	-0.06896
3.04	-2.28E-04	-0.00111	-0.00259	-0.00467	-0.00731	-0.01047	-0.01409	-0.01811	-0.02246	-0.02705	-0.03183	-0.0367	-0.04161	-0.0465	-0.05136	-0.05747	-0.06329	-0.06813	-0.07193	-0.07476
3.06	-2.43E-04	-0.00122	-0.00287	-0.00524	-0.00822	-0.01179	-0.01587	-0.02038	-0.02525	-0.03038	-0.03569	-0.0411	-0.04653	-0.05191	-0.05723	-0.06349	-0.06923	-0.07393	-0.0776	-0.0804
3.08	-4.87E-04	-0.00181	-0.00387	-0.00662	-0.01002	-0.01399	-0.01846	-0.02335	-0.02857	-0.03403	-0.03965	-0.04535	-0.05105	-0.05669	-0.06227	-0.06867	-0.07451	-0.0793	-0.08307	-0.08597
3.1	-9.08E-04	-0.00276	-0.00536	-0.00863	-0.01249	-0.01687	-0.02168	-0.02684	-0.03226	-0.03788	-0.04361	-0.04939	-0.05517	-0.06089	-0.06654	-0.07306	-0.07914	-0.08423	-0.08828	-0.09138
3.12	-0.00142	-0.00389	-0.0071	-0.01093	-0.01528	-0.02006	-0.02517	-0.03053	-0.03608	-0.04175	-0.04749	-0.05324	-0.05898	-0.06466	-0.07028	-0.0769	-0.08324	-0.08871	-0.0931	-0.09644
3.14	-0.00191	-0.00498	-0.00879	-0.01317	-0.018	-0.02316	-0.02856	-0.03412	-0.03979	-0.04551	-0.05124	-0.05696	-0.06264	-0.06827	-0.07395	-0.08048	-0.08701	-0.09276	-0.09743	-0.10095
3.16	-0.0023	-0.00584	-0.01015	-0.01501	-0.02028	-0.02581	-0.03152	-0.03733	-0.04317	-0.04902	-0.05483	-0.0606	-0.06631	-0.07195	-0.07755	-0.08411	-0.09061	-0.09641	-0.10116	-0.10475
3.18	-0.00251	-0.00635	-0.011	-0.01623	-0.02186	-0.02775	-0.0338	-0.03991	-0.04604	-0.05214	-0.05817	-0.06414	-0.07002	-0.07592	-0.08155	-0.08794	-0.09417	-0.09972	-0.10429	-0.10779
3.2	-0.00251	-0.00642	-0.01121	-0.01664	-0.02254	-0.02874	-0.03514	-0.04163	-0.04815	-0.05464	-0.06105	-0.06738	-0.0736	-0.07972	-0.08573	-0.0919	-0.09761	-0.10261	-0.10675	-0.11
3.22	-0.0023	-0.00605	-0.01076	-0.01622	-0.02226	-0.0287	-0.03543	-0.04209	-0.04831	-0.05429	-0.06022	-0.06632	-0.0726	-0.07876	-0.08474	-0.09058	-0.0961	-0.10112	-0.10575	-0.11139
3.24	-0.00193	-0.00535	-0.00982	-0.01516	-0.02121	-0.0278	-0.03481	-0.04209	-0.04908	-0.05573	-0.06219	-0.06889	-0.07515	-0.08123	-0.0871	-0.09289	-0.09839	-0.10333	-0.1082	-0.1122
3.26	-0.00155	-0.00458	-0.00874	-0.01389	-0.01986	-0.02651	-0.0337	-0.04126	-0.04908	-0.05702	-0.06498	-0.07286	-0.08059	-0.08814	-0.09543	-0.1021	-0.10827	-0.11363	-0.11863	-0.1227
3.28	-0.00126	-0.00399	-0.00769	-0.01284	-0.0187	-0.02533	-0.03257	-0.04028	-0.0483	-0.05649	-0.06474	-0.07293	-0.08098	-0.08884	-0.09643	-0.1024	-0.10847	-0.11333	-0.1182	-0.1228
3.3	-0.00115	-0.00376	-0.00753	-0.01235	-0.01809	-0.02462	-0.03179	-0.03945	-0.04746	-0.05566	-0.06394	-0.07219	-0.08032	-0.08826	-0.09596	-0.10233	-0.10889	-0.11428	-0.11924	-0.1238
3.32	-0.00126	-0.00394	-0.00773	-0.01251	-0.01816	-0.02454	-0.03153	-0.03897	-0.04673	-0.0547	-0.06276	-0.0708	-0.07875	-0.08654	-0.09413	-0.10108	-0.108	-0.11428	-0.11924	-0.1238
3.34	-0.00154	-0.00447	-0.00841	-0.01324	-0.01882	-0.02502	-0.03173	-0.03882	-0.04619	-0.05373	-0.06135	-0.06898	-0.07654	-0.08399	-0.09131	-0.09894	-0.1057	-0.11129	-0.11577	-0.11932
3.36	-0.00189	-0.00513	-0.00928	-0.01419	-0.01972	-0.02573	-0.03213	-0.03892	-0.04571	-0.05273	-0.05982	-0.06693	-0.07401	-0.08102	-0.08798	-0.09482	-0.10138	-0.10742	-0.11222	-0.11562
3.38	-0.00219	-0.00568	-0.00989	-0.01494	-0.02038	-0.0262	-0.03229	-0.03858	-0.04502	-0.05155	-0.05814	-0.06475	-0.07137	-0.07796	-0.08456	-0.09139	-0.09804	-0.10388	-0.10952	-0.11362
3.4	-0.00231	-0.00589	-0.01021	-0.0151	-0.0204	-0.026495	-0.03281	-0.03934	-0.04615	-0.05313	-0.06021	-0.0673	-0.07444	-0.08154	-0.08866	-0.09578	-0.10284	-0.10931	-0.11533	-0.12174
3.42	-0.00222	-0.00566	-0.00981	-0.01449	-0.01957	-0.02495	-0.03054	-0.03629	-0.04215	-0.04811	-0.05414	-0.06021	-0.06632	-0.07245	-0.07866	-0.08486	-0.09138	-0.09784	-0.10388	-0.10952
3.44	-0.00194	-0.00504	-0.00886	-0.01323	-0.01804	-0.02319	-0.02861	-0.03424	-0.04002	-0.04593	-0.05193	-0.058	-0.0641	-0.07021	-0.07639	-0.08257	-0.08881	-0.09493	-0.10095	-0.1062
3.46	-0.00155	-0.0042	-0.0076	-0.0116	-0.01612	-0.02107	-0.02636	-0.03193	-0.03772	-0.04368	-0.04975	-0.0559	-0.06208	-0.06824	-0.07444	-0.08063	-0.08681	-0.09295	-0.09895	-0.1036
3.48	-0.00117	-0.00337	-0.00635	-0.01001	-0.01426	-0.01902	-0.02421	-0.02975	-0.03556	-0.04157	-0.04771	-0.05393	-0.06016	-0.06637	-0.07255	-0.07878	-0.08493	-0.09107	-0.09695	-0.10036
3.5	-8.73E-04	-0.00274	-0.0054	-0.00878	-0.01281	-0.0174	-0.02247	-0.02793	-0.0337	-0.03968	-0.0458	-0.05199	-0.05818	-0.06431	-0.07038	-0.07654	-0.08268	-0.08877	-0.09481	-0.09967
3.52	-7.11E-04	-0.00236	-0.00481	-0.00799	-0.01183	-0.01624	-0.02114	-0.02645	-0.03205	-0.03787	-0.04382	-0.04983	-0.05581	-0.06172	-0.06754	-0.07339	-0.07924	-0.08507	-0.09087	-0.09567
3.54	-6.69E-04	-0.00223	-0.00456	-0.00758	-0.01124	-0.01544	-0.02021	-0.02513	-0.03043	-0.03594	-0.04155	-0.04719	-0.0528	-0.05833	-0.06376	-0.06936	-0.07497	-0.08057	-0.08617	-0.09067
3.56	-7.06E-04	-0.00226	-0.00451	-0.00739	-0.01084	-0.01476	-0.01909	-0.02373	-0.02861	-0.03364	-0.03876	-0.04389	-0.04899	-0.05407	-0.05911	-0.06421	-0.06936	-0.07451	-0.07966	-0.08471
3.58	-7.66E-04	-0.00232	-0.00448	-0.00719	-0.01036	-0.01394	-0.01784	-0.022	-0.02634	-0.03079	-0.0353	-0.03982	-0.04429	-0.0487	-0.05311	-0.05728	-0.06181	-0.06634	-0.07087	-0.07531
3.6	-8.01E-04	-0.00231	-0.00433	-0.00679	-0.01036	-0.01394	-0.01784	-0.022	-0.02634	-0.03079	-0.0353	-0.03982	-0.04429	-0.0487	-0.05311	-0.05728	-0.06181	-0.06634	-0.07087	-0.07531
3.62	-7.95E-04	-0.00215	-0.00394	-0.00609	-0.00853	-0.01112	-0.01405	-0.01704	-0.02012	-0.02325	-0.0264	-0.02954	-0.03266	-0.03572	-0.03874	-0.04188	-0.04491	-0.04806	-0.05121	-0.05436
3.64	-6.64E-04	-0.0018	-0.00327	-0.00501	-0.00696	-0.00909	-0.01135	-0.0137	-0.01612	-0.01858	-0.02105	-0.02352	-0.02596	-0.02837	-0.03075	-0.03315	-0.03556	-0.03796	-0.04037	-0.04278
3.66	-4.65E-04	-0.00127	-0.00231	-0.00355	-0.00495	-0.00649	-0.00812	-0.00983	-0.01159	-0.01339	-0.0152	-0.01702	-0.01883	-0.02061	-0.02238	-0.02414	-0.02591	-0.02768	-0.02945	-0.03099

3.68	-1.98E-04	-5.89E-04	-0.00113	-0.00181	-0.00261	-0.0035	-0.00448	-0.00554	-0.00664	-0.00779	-0.00897	-0.01015	-0.01135	-0.01253	-0.01371	-0.01521	-0.01667	-0.01794	-0.01894	-0.01989
3.7	1.01E-04	1.59E-04	1.53E-04	7.49E-05	-8.09E-05	-3.15E-04	-6.24E-04	-0.001	-0.00144	-0.00194	-0.00247	-0.00303	-0.00361	-0.0042	-0.00479	-0.00571	-0.00666	-0.00746	-0.00808	-0.00851
3.72	3.93E-04	8.93E-04	0.00142	0.00195	0.00244	0.00288	0.00326	0.00358	0.00383	0.00401	0.00415	0.00424	0.0043	0.00434	0.00436	0.00402	0.0036	0.00325	0.00302	0.0029
3.74	6.41E-04	0.00154	0.00257	0.00367	0.0048	0.00591	0.007	0.00803	0.009	0.00991	0.01075	0.01155	0.0123	0.01301	0.01369	0.01394	0.01403	0.01411	0.01424	0.01441
3.76	8.21E-04	0.00205	0.00351	0.00514	0.00686	0.00864	0.01043	0.01219	0.01392	0.0156	0.01722	0.01877	0.02027	0.02171	0.0231	0.02398	0.02456	0.02503	0.02547	0.0259
3.78	9.29E-04	0.0024	0.00422	0.00631	0.00859	0.011	0.01348	0.01599	0.0185	0.02098	0.02341	0.02578	0.02808	0.03031	0.03246	0.034	0.03506	0.0359	0.03663	0.03733
3.8	9.78E-04	0.00263	0.00474	0.00723	0.01001	0.01302	0.01617	0.01941	0.02271	0.026	0.02926	0.03246	0.03558	0.03862	0.04156	0.04382	0.04543	0.04666	0.0477	0.04866
3.82	0.00101	0.00282	0.0052	0.00805	0.0113	0.01486	0.01865	0.02259	0.02663	0.03071	0.03477	0.03879	0.04273	0.04657	0.05029	0.05333	0.05558	0.05731	0.05873	0.06001
3.84	0.00108	0.00306	0.00572	0.00895	0.01255	0.01673	0.02111	0.0257	0.03043	0.03523	0.04004	0.04481	0.04951	0.0541	0.05856	0.06246	0.06549	0.06787	0.06938	0.07146
3.86	0.00121	0.00343	0.00641	0.01003	0.01418	0.01877	0.02371	0.02889	0.03424	0.03968	0.04515	0.05058	0.05595	0.06121	0.06635	0.07116	0.07514	0.07834	0.08093	0.08307
3.88	0.00139	0.0039	0.00724	0.01126	0.01567	0.02035	0.02539	0.03071	0.03629	0.04199	0.04786	0.05381	0.05983	0.06591	0.07206	0.07738	0.08282	0.08839	0.09195	0.09465
3.9	0.00159	0.00439	0.00808	0.0125	0.01753	0.02305	0.02895	0.03513	0.04151	0.04801	0.05456	0.0611	0.06758	0.07397	0.08026	0.08702	0.09318	0.09838	0.10258	0.10596
3.92	0.00176	0.00482	0.00881	0.01358	0.01897	0.02489	0.0312	0.03781	0.04463	0.05159	0.05861	0.06563	0.07261	0.07951	0.08632	0.09403	0.10129	0.10751	0.11252	0.11636
3.94	0.00187	0.00513	0.00936	0.01439	0.0201	0.02635	0.03303	0.04003	0.04727	0.05466	0.06213	0.06962	0.07708	0.08447	0.09179	0.10039	0.10866	0.1158	0.12153	0.12588
3.96	0.00194	0.00534	0.00975	0.01502	0.02099	0.02754	0.03455	0.04192	0.04955	0.05736	0.06527	0.07321	0.08113	0.08899	0.09679	0.10619	0.11533	0.12324	0.12989	0.13437
3.98	0.00199	0.0055	0.01007	0.01554	0.02175	0.02859	0.03592	0.04364	0.05164	0.05984	0.06816	0.07653	0.08488	0.09317	0.10141	0.11148	0.12133	0.12986	0.13671	0.14184
4	0.00202	0.00562	0.01032	0.01597	0.02241	0.02951	0.03713	0.04518	0.05353	0.0621	0.0708	0.07955	0.0883	0.09698	0.10562	0.11622	0.12659	0.13558	0.14278	0.14818
4.02	0.00202	0.00565	0.01044	0.01623	0.02285	0.03017	0.03805	0.04639	0.05505	0.06396	0.073	0.08211	0.09121	0.10024	0.10922	0.12021	0.13093	0.1402	0.14752	0.15318
4.04	0.00198	0.00561	0.01043	0.0163	0.02305	0.03054	0.03863	0.0472	0.05613	0.06532	0.07466	0.08408	0.09349	0.10281	0.11207	0.12332	0.13422	0.14361	0.15111	0.15675
4.06	0.00193	0.00562	0.01034	0.01624	0.02306	0.03066	0.0389	0.04764	0.05678	0.06618	0.07574	0.08538	0.09501	0.10456	0.11404	0.12543	0.13638	0.14576	0.15326	0.15891
4.08	0.00187	0.00542	0.01022	0.01612	0.02296	0.03061	0.03892	0.04776	0.057	0.06653	0.07622	0.086	0.09576	0.10543	0.11503	0.12645	0.13735	0.14656	0.15408	0.15969
4.1	0.00182	0.00533	0.01008	0.01594	0.02275	0.03038	0.03868	0.04752	0.05678	0.06632	0.07604	0.08583	0.09561	0.10531	0.11491	0.12627	0.13706	0.14624	0.15355	0.1591
4.12	0.00179	0.00523	0.00992	0.0157	0.02243	0.02997	0.03818	0.04693	0.05609	0.06553	0.07516	0.08485	0.09454	0.10414	0.11364	0.12485	0.13547	0.14449	0.15169	0.15714
4.14	0.00179	0.0052	0.00983	0.01552	0.02214	0.02954	0.03759	0.04616	0.05511	0.06435	0.07375	0.08322	0.09268	0.10205	0.11134	0.1223	0.13272	0.14159	0.14866	0.15403
4.16	0.00191	0.00542	0.01009	0.01578	0.02232	0.02959	0.03744	0.04576	0.05442	0.06332	0.07237	0.08147	0.09056	0.09957	0.1085	0.11913	0.1292	0.13806	0.14505	0.15034
4.18	0.00211	0.00578	0.01057	0.01629	0.02279	0.02992	0.03756	0.04558	0.05389	0.06238	0.07099	0.07963	0.08825	0.0968	0.10528	0.11547	0.12537	0.13394	0.14082	0.14601
4.2	0.0023	0.00615	0.01106	0.01682	0.02327	0.03026	0.03767	0.04539	0.05332	0.0614	0.06954	0.0777	0.08592	0.09397	0.10187	0.11151	0.12097	0.12923	0.13589	0.1409
4.22	0.00242	0.00636	0.01131	0.01704	0.0234	0.03023	0.03741	0.04484	0.05244	0.06013	0.06785	0.07556	0.08323	0.09083	0.09837	0.10734	0.11614	0.12387	0.13013	0.13485
4.24	0.00238	0.00626	0.01111	0.0167	0.02289	0.02952	0.03647	0.04364	0.05095	0.05832	0.06572	0.07308	0.08038	0.0876	0.09474	0.10294	0.11086	0.11778	0.1234	0.12769
4.26	0.00217	0.00578	0.01034	0.01566	0.02157	0.02793	0.03463	0.04156	0.04863	0.05577	0.06292	0.07002	0.07706	0.08399	0.09082	0.09818	0.10501	0.11089	0.11568	0.11934
4.28	0.0018	0.00496	0.00905	0.01393	0.01945	0.02547	0.03187	0.03854	0.04539	0.05233	0.05928	0.0662	0.07302	0.07973	0.0863	0.09281	0.09917	0.10319	0.10702	0.11009
4.3	0.00134	0.0039	0.00741	0.01172	0.01673	0.0223	0.02832	0.03467	0.04125	0.04795	0.05469	0.0614	0.06801	0.07449	0.0808	0.08652	0.09108	0.09467	0.09756	0.10001
4.32	8.60E-04	0.00281	0.00567	0.00935	0.01375	0.01877	0.02429	0.03002	0.03608	0.04273	0.04914	0.05554	0.06184	0.06801	0.07399	0.07904	0.08272	0.08541	0.08755	0.08948
4.34	4.67E-04	0.00187	0.00412	0.00714	0.01088	0.01524	0.02013	0.02544	0.03105	0.03685	0.04275	0.04865	0.05447	0.06017	0.06568	0.07022	0.07337	0.07555	0.07725	0.07883
4.36	2.15E-04	0.00121	0.00232	0.0037	0.00532	0.007	0.00912	0.011612	0.014548	0.017952	0.021867	0.026192	0.030927	0.036072	0.041627	0.047592	0.053967	0.060342	0.067117	0.074283
4.38	1.20E-04	8.42E-04	0.00213	0.00396	0.00632	0.00916	0.01241	0.016	0.01986	0.02391	0.02808	0.0323	0.03649	0.04063	0.04466	0.04864	0.05183	0.05426	0.05613	0.05768

4.4	1.45E-04	7.08E-04	0.00165	0.00297	0.00464	0.00665	0.00894	0.01149	0.01424	0.01715	0.02017	0.02325	0.02635	0.02944	0.0325	0.0363	0.03989	0.04287	0.04521	0.04696
4.42	2.02E-04	6.32E-04	0.00125	0.00205	0.00303	0.00417	0.00547	0.00691	0.00848	0.01018	0.01197	0.01384	0.01577	0.01773	0.01975	0.02233	0.0273	0.03086	0.03367	0.03562
4.44	1.89E-04	4.08E-04	0.0011	8.64E-04	0.001136	0.00136	0.00185	0.002	0.00241	0.00291	0.0035	0.00418	0.00496	0.00581	0.00679	0.01002	0.01416	0.01806	0.02116	0.0232
4.46	5.52E-05	-5.73E-05	-0.00128	-7.42E-04	-0.00191	-0.00191	-0.00259	-0.00328	-0.00395	-0.00456	-0.00507	-0.00548	-0.00578	-0.00595	-0.00596	-0.00329	6.36E-04	0.00449	0.00754	0.00946
4.48	-2.22E-04	-8.06E-04	-0.00168	-0.00282	-0.00416	-0.00567	-0.00727	-0.00892	-0.01056	-0.01214	-0.01364	-0.01501	-0.01625	-0.01735	-0.01826	-0.01641	-0.01314	-0.00983	0.00754	0.00946
4.5	-6.14E-04	-0.00178	-0.00335	-0.00525	-0.00741	-0.00976	-0.01222	-0.01473	-0.01724	-0.01968	-0.02203	-0.02425	-0.02633	-0.02826	-0.03	-0.02921	-0.02706	-0.02476	-0.02229	-0.02206
4.52	-0.00105	-0.00282	-0.00509	-0.00775	-0.0107	-0.01385	-0.01711	-0.02041	-0.0237	-0.02693	-0.03005	-0.03304	-0.0359	-0.03862	-0.04116	-0.04166	-0.04098	-0.04007	-0.03942	-0.03929
4.54	-0.00138	-0.00364	-0.00648	-0.00977	-0.01338	-0.01722	-0.0212	-0.02524	-0.02927	-0.03326	-0.03715	-0.04094	-0.0446	-0.04813	-0.05151	-0.05348	-0.05449	-0.05514	-0.05575	-0.0565
4.56	-0.00156	-0.00412	-0.00735	-0.0111	-0.01524	-0.01967	-0.02429	-0.02901	-0.03379	-0.03855	-0.04325	-0.04788	-0.0524	-0.05681	-0.06109	-0.06465	-0.06743	-0.06969	-0.07158	-0.07323
4.58	-0.00157	-0.00424	-0.00766	-0.0117	-0.01623	-0.02114	-0.02633	-0.03172	-0.03722	-0.04278	-0.04834	-0.05386	-0.0593	-0.06465	-0.06969	-0.07509	-0.07965	-0.08348	-0.0866	-0.0891
4.6	-0.00144	-0.00405	-0.0075	-0.01168	-0.01647	-0.02176	-0.02745	-0.03345	-0.03966	-0.04602	-0.05244	-0.05887	-0.06526	-0.07157	-0.07779	-0.08464	-0.09094	-0.09626	-0.10054	-0.10395
4.62	-0.00123	-0.00368	-0.00707	-0.01128	-0.01624	-0.02182	-0.02793	-0.03446	-0.04132	-0.04842	-0.05566	-0.06296	-0.07026	-0.07749	-0.08465	-0.0931	-0.10109	-0.10785	-0.11323	-0.11732
4.64	-0.00102	-0.00328	-0.00655	-0.01075	-0.01579	-0.02158	-0.02802	-0.03499	-0.04239	-0.05011	-0.05806	-0.06612	-0.07421	-0.08226	-0.09026	-0.10023	-0.10986	-0.11803	-0.12449	-0.12932
4.66	-8.39E-04	-0.00293	-0.00607	-0.01022	-0.01529	-0.0212	-0.02785	-0.03513	-0.04292	-0.05112	-0.0596	-0.06825	-0.07697	-0.08567	-0.09435	-0.10573	-0.11692	-0.12647	-0.13399	-0.13954
4.68	-7.43E-04	-0.00274	-0.00581	-0.00991	-0.01498	-0.02093	-0.02769	-0.03513	-0.04315	-0.05162	-0.06043	-0.06946	-0.07869	-0.08773	-0.09689	-0.1095	-0.12216	-0.13305	-0.1416	-0.14784
4.7	-7.62E-04	-0.00277	-0.00584	-0.00994	-0.015	-0.02095	-0.02771	-0.03518	-0.04325	-0.0518	-0.06072	-0.06989	-0.0792	-0.08855	-0.09795	-0.11156	-0.12553	-0.13764	-0.14717	-0.15405
4.72	-8.93E-04	-0.00303	-0.00619	-0.01033	-0.0164	-0.02232	-0.02901	-0.03538	-0.04335	-0.0518	-0.06063	-0.06973	-0.079	-0.08832	-0.09775	-0.11206	-0.12706	-0.14021	-0.15056	-0.15797
4.74	-0.00111	-0.00346	-0.00678	-0.01102	-0.01611	-0.02196	-0.02856	-0.03577	-0.04353	-0.05174	-0.06033	-0.06919	-0.07822	-0.08734	-0.09661	-0.11124	-0.12688	-0.14074	-0.15168	-0.15944
4.76	-0.00137	-0.00397	-0.00751	-0.01188	-0.01702	-0.02377	-0.03012	-0.03631	-0.04381	-0.05172	-0.05997	-0.06848	-0.07717	-0.08595	-0.0949	-0.10944	-0.12522	-0.13931	-0.15047	-0.15836
4.78	-0.00162	-0.00448	-0.00823	-0.01275	-0.01796	-0.02465	-0.03094	-0.03762	-0.04465	-0.05197	-0.05953	-0.06727	-0.07515	-0.0831	-0.0912	-0.10423	-0.11946	-0.1329	-0.14702	-0.15474
4.8	-0.00182	-0.00491	-0.00886	-0.01353	-0.01883	-0.02465	-0.03094	-0.03762	-0.04465	-0.05197	-0.05953	-0.06727	-0.07515	-0.0831	-0.0912	-0.10423	-0.11946	-0.1329	-0.14702	-0.15474
4.82	-0.00196	-0.00521	-0.00932	-0.01413	-0.01952	-0.02539	-0.03166	-0.03827	-0.04516	-0.05227	-0.05956	-0.06698	-0.07449	-0.08204	-0.08969	-0.10135	-0.11391	-0.1252	-0.13422	-0.14068
4.84	-0.00201	-0.00534	-0.00955	-0.01445	-0.01993	-0.02587	-0.03218	-0.03877	-0.04559	-0.05257	-0.05967	-0.06684	-0.07404	-0.08122	-0.08845	-0.09943	-0.10982	-0.11908	-0.12552	-0.13093
4.86	-0.00198	-0.00531	-0.00954	-0.0145	-0.02005	-0.02606	-0.03242	-0.03904	-0.04584	-0.05275	-0.05972	-0.06669	-0.07363	-0.0805	-0.08731	-0.09543	-0.10334	-0.11024	-0.11581	-0.12001
4.88	-0.0019	-0.00517	-0.00938	-0.01435	-0.01993	-0.02599	-0.0324	-0.03905	-0.04584	-0.0527	-0.05956	-0.06635	-0.07304	-0.07961	-0.08604	-0.09223	-0.09756	-0.10199	-0.10561	-0.10854
4.9	-0.00181	-0.00499	-0.00915	-0.0141	-0.01968	-0.02575	-0.03217	-0.0388	-0.04556	-0.05233	-0.05904	-0.06563	-0.07207	-0.07832	-0.08435	-0.08871	-0.09159	-0.09368	-0.09544	-0.09717
4.92	-0.00175	-0.00487	-0.00898	-0.01388	-0.01943	-0.02545	-0.0318	-0.03835	-0.04498	-0.05168	-0.05808	-0.06441	-0.07053	-0.07642	-0.08202	-0.08477	-0.08554	-0.08564	-0.08583	-0.08632
4.94	-0.00173	-0.00483	-0.00888	-0.01372	-0.01917	-0.02508	-0.03128	-0.03764	-0.04404	-0.05037	-0.05655	-0.06262	-0.06825	-0.07372	-0.07886	-0.08031	-0.07948	-0.07809	-0.0771	-0.07702
4.96	-0.00175	-0.00483	-0.00883	-0.01356	-0.01886	-0.02456	-0.03051	-0.03657	-0.04283	-0.04858	-0.05434	-0.05987	-0.06514	-0.07014	-0.07479	-0.07532	-0.07347	-0.07116	-0.06947	-0.0689
4.98	-0.00179	-0.00484	-0.00875	-0.01332	-0.0184	-0.0238	-0.0294	-0.03506	-0.04067	-0.04615	-0.05142	-0.05645	-0.06121	-0.06571	-0.06986	-0.06987	-0.06759	-0.06495	-0.06301	-0.06224
5	-0.00182	-0.00481	-0.00867	-0.01292	-0.01769	-0.02272	-0.02788	-0.03306	-0.03815	-0.04309	-0.04793	-0.05232	-0.05636	-0.06006	-0.06342	-0.06587	-0.06424	-0.06194	-0.05972	-0.05701
5.02	-0.0018	-0.00467	-0.00821	-0.01226	-0.01664	-0.02123	-0.02589	-0.03053	-0.03507	-0.03946	-0.04385	-0.04761	-0.05136	-0.0549	-0.05817	-0.05823	-0.05661	-0.05478	-0.05349	-0.05304
5.04	-0.0017	-0.00435	-0.00758	-0.01122	-0.01514	-0.01921	-0.02333	-0.02742	-0.03141	-0.03525	-0.03893	-0.04242	-0.04574	-0.04888	-0.05182	-0.05234	-0.05158	-0.04965	-0.04805	-0.04745
5.06	-0.00148	-0.00378	-0.00657	-0.0097	-0.01307	-0.01657	-0.02011	-0.02364	-0.0271	-0.03046	-0.03369	-0.0368	-0.03976	-0.04251	-0.04531	-0.04647	-0.04676	-0.04684	-0.04703	-0.04745
5.08	-0.00115	-0.00295	-0.00517	-0.00768	-0.01042	-0.01329	-0.01625	-0.01923	-0.02219	-0.02512	-0.02798	-0.03078	-0.03349	-0.03612	-0.03867	-0.04057	-0.04197	-0.0431	-0.04408	-0.04498
5.1	-7.30E-04	-0.00195	-0.0035	-0.00533	-0.00737	-0.00969	-0.01194	-0.01438	-0.01688	-0.01941	-0.02195	-0.02448	-0.027	-0.02947	-0.03192	-0.03459	-0.03709	-0.03923	-0.04096	-0.04231

5.12	-2.98E-04	-9.13E-04	-0.00173	-0.00232	-0.00427	-0.00583	-0.00757	-0.00947	-0.0115	-0.01364	-0.01586	-0.01813	-0.02044	-0.02276	-0.0251	-0.0285	-0.03203	-0.03513	-0.03757	-0.03933
5.14	5.78E-05	-4.58E-05	-3.37E-04	-6.33E-04	-0.00155	-0.00248	-0.00362	-0.00497	-0.00651	-0.00821	-0.0100E	-0.01202	-0.01407	-0.01616	-0.01832	-0.02235	-0.02683	-0.03008	-0.03391	-0.03605
5.16	2.78E-04	5.30E-04	6.80E-04	6.88E-04	5.21E-04	1.54E-04	-4.25E-04	-0.00122	-0.00223	-0.00345	-0.00484	-0.00639	-0.00807	-0.00983	-0.01172	-0.0162	-0.02147	-0.02623	-0.02984	-0.03242
5.18	3.94E-04	8.74E-04	0.00135	0.00175	0.00205	0.00219	0.00214	0.0019	0.00144	7.64E-04	-1.14E-04	-0.00118	-0.0024	-0.00374	-0.00524	-0.00995	-0.01577	-0.02112	-0.02527	-0.02801
5.2	4.49E-04	0.00109	0.0018	0.00254	0.00322	0.00382	0.00428	0.00456	0.00465	0.00453	0.00421	0.00388	0.00298	0.00213	0.00107	-0.00358	-0.00961	-0.01522	-0.0196	-0.02242
5.22	4.59E-04	0.00118	0.00207	0.00305	0.00406	0.00504	0.00594	0.00672	0.00733	0.00776	0.00799	0.00802	0.00786	0.00755	0.00701	0.00273	-0.00309	-0.0086	-0.01289	-0.01582
5.24	4.18E-04	0.00117	0.00214	0.00328	0.00453	0.00581	0.00708	0.00828	0.00936	0.0103	0.01107	0.01165	0.01206	0.0123	0.01232	0.00874	0.00356	-0.00141	-0.0053	-0.00773
5.26	3.41E-04	0.00105	0.00204	0.00325	0.00463	0.00613	0.00767	0.00921	0.0107	0.01208	0.01334	0.01445	0.0154	0.0162	0.01679	0.01423	0.01015	0.00613	0.00298	0.00107
5.28	2.38E-04	8.51E-04	0.00178	0.00297	0.0044	0.006	0.00772	0.0095	0.0113	0.01306	0.01474	0.01632	0.01778	0.01911	0.02026	0.01899	0.01642	0.01375	0.01165	0.01045
5.3	1.24E-04	6.08E-04	0.00142	0.00253	0.00391	0.00552	0.00731	0.00924	0.01124	0.01327	0.01529	0.01726	0.01917	0.02098	0.02266	0.0229	0.02217	0.02119	0.02041	0.02007
5.32	3.07E-05	3.92E-04	0.00107	0.00206	0.00334	0.00489	0.00666	0.00862	0.01072	0.01292	0.01518	0.01745	0.01971	0.02192	0.02406	0.02594	0.0273	0.02825	0.02898	0.02984
5.34	0	2.97E-04	8.84E-04	0.00176	0.00293	0.00438	0.00608	0.008	0.01011	0.01238	0.01476	0.01722	0.01972	0.02223	0.02475	0.02829	0.03184	0.03485	0.03721	0.03881
5.36	4.87E-05	3.69E-04	9.37E-04	0.00176	0.00285	0.00419	0.00579	0.00763	0.00989	0.01194	0.01435	0.0169	0.01955	0.02225	0.02504	0.03015	0.03582	0.04087	0.04484	0.04758
5.38	1.51E-04	5.66E-04	0.00116	0.00199	0.00303	0.0043	0.00581	0.00756	0.00953	0.01173	0.01413	0.0167	0.01942	0.02224	0.02522	0.03166	0.03921	0.04608	0.05149	0.05516
5.4	2.71E-04	7.87E-04	0.00147	0.00234	0.00338	0.00463	0.00609	0.00777	0.00969	0.01184	0.01422	0.0168	0.01956	0.02246	0.02557	0.03304	0.04202	0.0503	0.05693	0.06123
5.42	3.70E-04	0.00115	0.00202	0.00306	0.00426	0.00564	0.00721	0.00889	0.011	0.01324	0.01471	0.01732	0.02014	0.02311	0.02632	0.03441	0.04425	0.05338	0.06059	0.06543
5.44	4.40E-04	0.00131	0.00232	0.00351	0.00488	0.00645	0.0082	0.01017	0.01235	0.01475	0.0173	0.0202	0.0232	0.02635	0.02973	0.03583	0.046	0.05534	0.06272	0.06768
5.46	4.98E-04	0.0015	0.0027	0.00411	0.00574	0.00757	0.0096	0.01183	0.01426	0.01689	0.01971	0.0227	0.02583	0.02908	0.03251	0.03986	0.04947	0.05806	0.06517	0.06918
5.48	5.82E-04	0.00176	0.00319	0.00489	0.00683	0.009	0.01138	0.01394	0.01668	0.01959	0.02263	0.02581	0.02908	0.03241	0.03587	0.04224	0.04947	0.05606	0.06128	0.06491
5.5	6.45E-04	0.00207	0.00378	0.00581	0.00813	0.01069	0.01345	0.01639	0.01948	0.02268	0.02597	0.02933	0.03273	0.03614	0.03959	0.04476	0.05026	0.05517	0.05907	0.06188
5.52	7.50E-04	0.00242	0.00443	0.00682	0.00954	0.01251	0.01568	0.01901	0.02244	0.02594	0.02947	0.033	0.03651	0.03998	0.04341	0.04727	0.05089	0.05399	0.05649	0.05841
5.54	8.73E-04	0.00278	0.00509	0.00784	0.01095	0.01432	0.01789	0.02158	0.02534	0.02911	0.03286	0.03654	0.04014	0.04365	0.04703	0.04959	0.05137	0.05271	0.05382	0.05487
5.56	0.001	0.00278	0.00572	0.00879	0.01225	0.01598	0.01989	0.0239	0.02794	0.03195	0.03588	0.03968	0.04335	0.04687	0.0502	0.05159	0.05172	0.05147	0.05136	0.05163
5.58	0.00113	0.00312	0.00624	0.00958	0.01331	0.01733	0.02152	0.02578	0.03005	0.03423	0.03829	0.04219	0.0459	0.04942	0.0527	0.05315	0.05195	0.05043	0.04932	0.04896
5.6	0.00124	0.00341	0.00624	0.00958	0.01331	0.01733	0.02152	0.02578	0.03005	0.03423	0.03829	0.04219	0.0459	0.04942	0.0527	0.05315	0.05195	0.05043	0.04932	0.04896
5.62	0.00131	0.00367	0.00659	0.01011	0.01403	0.01824	0.02261	0.02705	0.03145	0.03576	0.0399	0.04385	0.04759	0.05112	0.05436	0.05415	0.05204	0.04964	0.04785	0.04707
5.64	0.00133	0.00367	0.00659	0.01013	0.01409	0.01856	0.02301	0.02752	0.03199	0.03634	0.04053	0.0445	0.04825	0.05178	0.055	0.05449	0.05194	0.04913	0.04701	0.04602
5.66	0.00131	0.0036	0.00659	0.01013	0.01409	0.01856	0.02301	0.02752	0.03199	0.03634	0.04053	0.0445	0.04825	0.05178	0.055	0.05449	0.05168	0.04893	0.04686	0.0459
5.68	0.00126	0.00348	0.00636	0.00978	0.01361	0.01771	0.02199	0.02634	0.03067	0.03491	0.03901	0.04292	0.04662	0.05012	0.05335	0.05416	0.05136	0.04915	0.0475	0.04681
5.7	0.00122	0.00334	0.00608	0.00932	0.01294	0.01683	0.0209	0.02504	0.02918	0.03325	0.03721	0.04101	0.04464	0.0481	0.05132	0.05195	0.05103	0.04979	0.04889	0.04868
5.72	0.00118	0.00319	0.00578	0.00881	0.01213	0.01581	0.0196	0.02347	0.02736	0.03121	0.03498	0.03864	0.04217	0.04556	0.04879	0.05032	0.05073	0.05078	0.05091	0.05133
5.74	0.00114	0.00304	0.00545	0.00825	0.01136	0.01469	0.01817	0.02174	0.02535	0.02895	0.03251	0.03601	0.03942	0.04274	0.04597	0.04853	0.05046	0.052	0.05329	0.05443
5.76	0.00108	0.00284	0.00504	0.00759	0.01041	0.01343	0.0166	0.01986	0.02319	0.02654	0.0299	0.03324	0.03655	0.03982	0.04305	0.04669	0.05017	0.05321	0.05667	0.05757
5.78	9.74E-04	0.00254	0.00449	0.00676	0.00927	0.01197	0.01483	0.0178	0.02087	0.02401	0.02721	0.03043	0.03367	0.03691	0.04018	0.04482	0.04973	0.05413	0.05767	0.06023
5.8	8.07E-04	0.00213	0.00379	0.00574	0.00792	0.01032	0.01288	0.0156	0.01846	0.02143	0.0245	0.02765	0.03086	0.03411	0.03743	0.04293	0.04903	0.05455	0.05895	0.06205
5.82	6.18E-04	0.00168	0.00305	0.00469	0.00657	0.00868	0.011	0.0135	0.01619	0.01903	0.02202	0.02512	0.02832	0.03158	0.03495	0.0411	0.04806	0.05438	0.0594	0.06288

5.84	4.49E-04	0.00128	0.0024	0.00378	0.00542	0.0073	0.00941	0.01175	0.01423	0.01703	0.01994	0.023	0.02618	0.02944	0.03282	0.03936	0.04684	0.05363	0.05899	0.0627
5.86	3.11E-04	9.57E-04	0.00187	0.00306	0.0045	0.00621	0.00816	0.01036	0.01279	0.01543	0.01827	0.02127	0.02439	0.02761	0.03097	0.03761	0.04524	0.05216	0.05761	0.06135
5.88	2.16E-04	7.34E-04	0.00151	0.00256	0.00387	0.00544	0.00727	0.00936	0.01168	0.01422	0.01696	0.01987	0.0229	0.02603	0.02929	0.03577	0.04319	0.0489	0.0519	0.05682
5.9	1.61E-04	6.06E-04	0.0013	0.00226	0.00348	0.00496	0.00669	0.00867	0.01083	0.01331	0.01593	0.0187	0.02159	0.02456	0.02766	0.03371	0.04061	0.04682	0.0517	0.05506
5.92	1.37E-04	5.47E-04	0.0012	0.00211	0.00326	0.00467	0.00632	0.0082	0.01023	0.01258	0.01504	0.01763	0.02033	0.02309	0.02596	0.03136	0.03744	0.04289	0.04718	0.05014
5.94	1.37E-04	5.40E-04	0.00118	0.00206	0.00317	0.00451	0.00608	0.00785	0.00981	0.01193	0.0142	0.01657	0.01902	0.02152	0.02409	0.02865	0.03383	0.03818	0.04171	0.04417
5.96	1.77E-04	6.14E-04	0.00128	0.00216	0.00326	0.00456	0.00604	0.00769	0.00949	0.01142	0.01344	0.01554	0.0177	0.01987	0.02209	0.02568	0.02953	0.03293	0.0356	0.03743
5.98	2.69E-04	7.96E-04	0.00154	0.00248	0.00359	0.00485	0.00626	0.00773	0.00939	0.01108	0.01283	0.01461	0.01641	0.01821	0.02002	0.02255	0.02514	0.02739	0.02918	0.03047
6	3.97E-04	0.00106	0.00192	0.00294	0.00408	0.00533	0.00665	0.00803	0.00944	0.01088	0.01231	0.01375	0.01516	0.01656	0.01793	0.01937	0.02068	0.02179	0.02269	0.0234
6.02	5.26E-04	0.00133	0.0023	0.0034	0.00457	0.0058	0.00704	0.00827	0.00948	0.01065	0.01178	0.01286	0.0139	0.01489	0.01583	0.0162	0.01626	0.01625	0.01628	0.01641
6.04	6.16E-04	0.00151	0.00256	0.0037	0.00488	0.00606	0.00721	0.0083	0.00932	0.01026	0.0111	0.01186	0.01255	0.01317	0.01371	0.01309	0.01197	0.01089	0.01009	0.00987
6.06	6.95E-04	0.00164	0.00258	0.0037	0.00483	0.00594	0.00699	0.00794	0.00879	0.00952	0.01013	0.01063	0.01102	0.01133	0.01154	0.01003	0.00783	0.00577	0.00421	0.00327
6.08	6.66E-04	0.00137	0.00231	0.00332	0.00434	0.00533	0.00625	0.00707	0.00776	0.00832	0.00874	0.00903	0.0092	0.00928	0.00921	0.00698	0.00388	9.67E-04	-0.00127	-0.00267
6.1	4.23E-04	0.00104	0.00178	0.00259	0.00343	0.00424	0.00499	0.00564	0.00618	0.00659	0.00686	0.00699	0.00698	0.00688	0.00662	0.00386	8.71E-05	-0.00348	-0.00624	-0.00799
6.12	2.35E-04	6.12E-04	0.00109	0.00164	0.00222	0.0028	0.00333	0.00379	0.00415	0.00439	0.00448	0.00448	0.00434	0.00408	0.00367	6.17E-04	-0.00353	-0.00748	-0.01056	-0.01253
6.14	5.02E-05	1.78E-04	3.80E-04	6.38E-04	9.25E-04	0.00122	0.00149	0.0017	0.00184	0.00188	0.0018	0.00161	0.00131	9.00E-04	3.40E-04	-0.00277	-0.00695	-0.01094	-0.01407	-0.0161
6.16	-3.08E-05	-1.78E-04	-2.35E-04	-2.66E-04	-2.82E-04	-3.00E-04	-3.40E-04	-4.23E-04	-5.68E-04	-7.91E-04	-0.00111	-0.00151	-0.00202	-0.00261	-0.00332	-0.00626	-0.01013	-0.01381	-0.01672	-0.01862
6.18	-1.64E-04	-4.04E-04	-6.71E-04	-9.59E-04	-0.00127	-0.00161	-0.00199	-0.00241	-0.00289	-0.00344	-0.00405	-0.00474	-0.0055	-0.00631	-0.00721	-0.00979	-0.01304	-0.01609	-0.0185	-0.02011
6.2	-1.75E-04	-5.02E-04	-9.25E-04	-0.00143	-0.00202	-0.00268	-0.00334	-0.00402	-0.00474	-0.00505	-0.00596	-0.00693	-0.00793	-0.00897	-0.01004	-0.01325	-0.01565	-0.01783	-0.01956	-0.02076
6.22	-1.68E-04	-5.69E-04	-0.00112	-0.00183	-0.00269	-0.00366	-0.00474	-0.00591	-0.00714	-0.00842	-0.00973	-0.01106	-0.01239	-0.01371	-0.01502	-0.01657	-0.01802	-0.01925	-0.02022	-0.02095
6.24	-1.94E-04	-6.79E-04	-0.0014	-0.00234	-0.00347	-0.00476	-0.00617	-0.00769	-0.00927	-0.01088	-0.01251	-0.01412	-0.0157	-0.01723	-0.0187	-0.01971	-0.02027	-0.02059	-0.02084	-0.02115
6.26	-2.95E-04	-9.53E-04	-0.0019	-0.00311	-0.00453	-0.00613	-0.00786	-0.00968	-0.01155	-0.01343	-0.01529	-0.01711	-0.01886	-0.02055	-0.02213	-0.02267	-0.02249	-0.02209	-0.02179	-0.02176
6.28	-4.78E-04	-0.00193	-0.00264	-0.00415	-0.00588	-0.00778	-0.00978	-0.01185	-0.01394	-0.01602	-0.01804	-0.01998	-0.02184	-0.02351	-0.02525	-0.02544	-0.02477	-0.02391	-0.02326	-0.02302
6.3	-6.92E-04	-0.0019	-0.00344	-0.00526	-0.00728	-0.00944	-0.01169	-0.01396	-0.01621	-0.01841	-0.02054	-0.02256	-0.02448	-0.0263	-0.02798	-0.02798	-0.02705	-0.02598	-0.02519	-0.02487
6.32	-8.79E-04	-0.00233	-0.00413	-0.0062	-0.00846	-0.01084	-0.01327	-0.0157	-0.01808	-0.02039	-0.0226	-0.0247	-0.02668	-0.02855	-0.03028	-0.03025	-0.0293	-0.02822	-0.02745	-0.02715
6.34	-9.82E-04	-0.00257	-0.00452	-0.00675	-0.00916	-0.01169	-0.01425	-0.01681	-0.01932	-0.02174	-0.02406	-0.02626	-0.02834	-0.300	-0.03213	-0.03223	-0.03143	-0.03051	-0.02987	-0.02967
6.36	-9.74E-04	-0.00256	-0.00453	-0.00679	-0.00926	-0.01186	-0.01451	-0.01718	-0.0198	-0.02235	-0.02481	-0.02715	-0.02938	-0.03151	-0.03349	-0.03388	-0.03339	-0.03274	-0.03226	-0.03226
6.38	-8.69E-04	-0.00234	-0.00421	-0.00654	-0.00883	-0.01142	-0.01411	-0.01684	-0.01958	-0.02227	-0.02488	-0.02741	-0.02984	-0.03216	-0.03436	-0.03517	-0.03514	-0.03489	-0.03476	-0.03491
6.4	-7.02E-04	-0.00198	-0.00367	-0.0057	-0.00801	-0.01053	-0.0132	-0.01597	-0.01878	-0.02159	-0.02437	-0.02708	-0.02971	-0.03226	-0.03468	-0.03605	-0.03664	-0.03693	-0.03718	-0.03759
6.42	-5.20E-04	-0.00158	-0.00305	-0.00489	-0.00703	-0.00943	-0.01202	-0.01477	-0.0176	-0.02049	-0.02338	-0.02625	-0.02906	-0.0318	-0.03445	-0.03647	-0.03782	-0.03878	-0.03955	-0.0403
6.44	-3.70E-04	-0.00124	-0.00225	-0.00413	-0.00609	-0.00833	-0.0108	-0.01346	-0.01626	-0.01916	-0.0221	-0.02505	-0.02797	-0.03085	-0.03366	-0.0364	-0.03865	-0.04043	-0.04183	-0.04298
6.46	-2.85E-04	-0.00102	-0.00212	-0.00357	-0.00535	-0.00742	-0.00973	-0.01226	-0.01495	-0.01777	-0.02067	-0.02361	-0.02656	-0.02949	-0.03239	-0.03517	-0.03786	-0.04043	-0.04298	-0.04456
6.48	-2.75E-04	-9.49E-04	-0.00196	-0.00328	-0.0049	-0.00679	-0.00893	-0.01127	-0.01379	-0.01646	-0.01923	-0.02208	-0.02496	-0.02786	-0.03076	-0.03361	-0.03639	-0.03916	-0.04181	-0.04456
6.5	-3.23E-04	-0.001	-0.00197	-0.00321	-0.0047	-0.00643	-0.00837	-0.01051	-0.01282	-0.01528	-0.01787	-0.02055	-0.0233	-0.02608	-0.02892	-0.03165	-0.03431	-0.03698	-0.03967	-0.04244
6.52	-3.97E-04	-0.00112	-0.00208	-0.00326	-0.00465	-0.00623	-0.00799	-0.00992	-0.01202	-0.01426	-0.01664	-0.01912	-0.02169	-0.02432	-0.02705	-0.02922	-0.03165	-0.03436	-0.03702	-0.03957
6.54	-4.63E-04	-0.00123	-0.00219	-0.00333	-0.00464	-0.0061	-0.0077	-0.00946	-0.01136	-0.01341	-0.01558	-0.01788	-0.02027	-0.02274	-0.02533	-0.02768	-0.03033	-0.03306	-0.03586	-0.03872

6.56	-5.03E-04	-0.00129	-0.00225	-0.00337	-0.00461	-0.00599	-0.00749	-0.00912	-0.01088	-0.01277	-0.01479	-0.01692	-0.01916	-0.02148	-0.02394	-0.02651	-0.02923	-0.03203	-0.03491	-0.03787
6.58	-5.03E-04	-0.00128	-0.00222	-0.00331	-0.00452	-0.00585	-0.00729	-0.00885	-0.01053	-0.01234	-0.01425	-0.01628	-0.0184	-0.0206	-0.02292	-0.02538	-0.02791	-0.03051	-0.03317	-0.03588
6.6	-4.95E-04	-0.00118	-0.00207	-0.00313	-0.00431	-0.00562	-0.00706	-0.0086	-0.01026	-0.01203	-0.01391	-0.01587	-0.01792	-0.02002	-0.02223	-0.02457	-0.02699	-0.02947	-0.03195	-0.03443
6.62	-3.89E-04	-0.001	-0.00183	-0.00284	-0.00401	-0.00533	-0.00677	-0.00834	-0.01002	-0.0118	-0.01367	-0.01561	-0.0176	-0.01963	-0.02172	-0.02389	-0.02613	-0.02844	-0.03079	-0.03317
6.64	-2.97E-04	-8.00E-04	-0.00156	-0.00252	-0.00367	-0.00498	-0.00645	-0.00805	-0.00976	-0.01156	-0.01342	-0.01534	-0.01728	-0.01923	-0.0212	-0.02329	-0.02544	-0.02769	-0.02994	-0.03219
6.66	-1.73E-04	-6.18E-04	-0.0013	-0.00222	-0.00334	-0.00465	-0.00612	-0.00773	-0.00944	-0.01123	-0.01306	-0.01493	-0.01679	-0.01863	-0.02044	-0.02229	-0.02413	-0.02598	-0.02782	-0.02965
6.68	-1.08E-04	-4.89E-04	-0.00112	-0.00198	-0.00306	-0.00434	-0.00578	-0.00735	-0.00901	-0.01073	-0.01248	-0.01423	-0.01595	-0.01763	-0.01924	-0.02084	-0.02241	-0.02398	-0.02554	-0.02709
6.7	-9.38E-05	-4.52E-04	-0.00105	-0.00188	-0.00291	-0.00413	-0.00549	-0.00696	-0.0085	-0.01008	-0.01166	-0.01322	-0.01472	-0.01617	-0.01752	-0.01885	-0.02019	-0.02152	-0.02284	-0.02416
6.72	-1.50E-04	-5.47E-04	-0.00116	-0.00198	-0.00297	-0.00411	-0.00535	-0.00668	-0.008	-0.00935	-0.01067	-0.01194	-0.01315	-0.01429	-0.01532	-0.01629	-0.01717	-0.01795	-0.01864	-0.01933
6.74	-2.73E-04	-7.73E-04	-0.00146	-0.00229	-0.00324	-0.00428	-0.00536	-0.00646	-0.00754	-0.00858	-0.00957	-0.01049	-0.01134	-0.01211	-0.01277	-0.01332	-0.01378	-0.01415	-0.01443	-0.01471
6.76	-4.22E-04	-0.00105	-0.00192	-0.00287	-0.00386	-0.00489	-0.00598	-0.00702	-0.00772	-0.00823	-0.00835	-0.00888	-0.00934	-0.00972	-0.01002	-0.00989	-0.00954	-0.00905	-0.00848	-0.00788
6.78	-5.43E-04	-0.00127	-0.00208	-0.00292	-0.00375	-0.00462	-0.00551	-0.00638	-0.00699	-0.00729	-0.00734	-0.00766	-0.00771	-0.00724	-0.00662	-0.00582	-0.00486	-0.00375	-0.0025	-0.00129
6.8	-5.88E-04	-0.00133	-0.00211	-0.00287	-0.00357	-0.00417	-0.00466	-0.00501	-0.00524	-0.00533	-0.00532	-0.0052	-0.00501	-0.00477	-0.00446	-0.00393	-0.00323	-0.00233	-0.00129	0.00027
6.82	-5.27E-04	-0.00116	-0.00181	-0.00241	-0.00293	-0.00333	-0.00361	-0.00376	-0.00377	-0.00366	-0.00344	-0.00313	-0.00276	-0.00233	-0.00185	-0.00129	-0.00062	0.00014	0.00078	0.00152
6.84	-3.95E-04	-7.68E-04	-0.00117	-0.00152	-0.00179	-0.00197	-0.00205	-0.00201	-0.00187	-0.00162	-0.00129	-8.78E-04	-4.07E-04	9.96E-05	6.59E-04	0.00222	0.00466	0.00806	0.01243	0.01684
6.86	-9.40E-05	-1.82E-04	-2.44E-04	-2.89E-04	-2.45E-04	-1.67E-04	-2.68E-05	1.78E-04	4.47E-04	7.80E-04	0.00117	0.00161	0.0021	0.00262	0.00318	0.00407	0.00572	0.00837	0.0116	0.01538
6.88	2.13E-04	5.09E-04	8.41E-04	0.00119	0.00155	0.00192	0.00229	0.00267	0.00306	0.00347	0.0039	0.00436	0.00484	0.00534	0.00589	0.00644	0.00702	0.00769	0.00837	0.00906
6.9	5.10E-04	0.00119	0.00192	0.00266	0.00338	0.00405	0.00469	0.00528	0.00583	0.00635	0.00686	0.00735	0.00786	0.00837	0.00891	0.00939	0.00999	0.01058	0.01116	0.01174
6.92	7.54E-04	0.00177	0.00286	0.00397	0.00505	0.00606	0.00702	0.00785	0.00863	0.00934	0.01	0.01062	0.01121	0.0118	0.0124	0.01319	0.0139	0.01465	0.01538	0.01606
6.94	9.01E-04	0.00215	0.00352	0.00495	0.00636	0.00772	0.00909	0.01019	0.01127	0.01227	0.01318	0.01403	0.01483	0.0156	0.01634	0.01681	0.01724	0.0177	0.01815	0.01854
6.96	9.28E-04	0.00226	0.00381	0.00547	0.00717	0.00886	0.01051	0.01207	0.01355	0.01493	0.01621	0.0174	0.01852	0.01958	0.02057	0.02073	0.02037	0.02032	0.02042	0.02042
6.98	8.27E-04	0.00212	0.00371	0.00549	0.00741	0.00939	0.01139	0.01336	0.01527	0.0171	0.01883	0.02046	0.02199	0.02343	0.02476	0.02469	0.02369	0.0225	0.02229	0.02229
7	6.27E-04	0.00176	0.00327	0.00507	0.00711	0.00931	0.0116	0.01395	0.01628	0.01857	0.02078	0.02289	0.02489	0.02677	0.02849	0.02833	0.02711	0.02573	0.02469	0.02422
7.02	3.87E-04	0.00131	0.00266	0.0044	0.00647	0.00879	0.01131	0.01384	0.01654	0.01934	0.02198	0.02453	0.02697	0.02927	0.03139	0.03133	0.02995	0.02829	0.027	0.02639
7.04	1.93E-04	9.31E-04	0.00214	0.00379	0.00582	0.00819	0.01083	0.01364	0.01658	0.01955	0.02251	0.02539	0.02817	0.03081	0.03225	0.03263	0.03085	0.02863	0.02609	0.02309
7.06	1.14E-04	7.64E-04	0.00189	0.00347	0.00546	0.00782	0.01047	0.01333	0.01635	0.01943	0.02253	0.02558	0.02853	0.03137	0.03402	0.03487	0.03238	0.03085	0.02834	0.02445
7.08	1.92E-04	9.01E-04	0.00206	0.00364	0.00561	0.00791	0.01049	0.01328	0.01622	0.01924	0.02229	0.02531	0.02827	0.03113	0.03386	0.03546	0.03604	0.03616	0.03624	0.03654
7.1	4.22E-04	0.00134	0.00266	0.00433	0.00631	0.00856	0.01102	0.01364	0.01638	0.0192	0.02204	0.02489	0.02769	0.03045	0.03313	0.03558	0.03752	0.03902	0.04021	0.04123
7.12	7.50E-04	0.00199	0.00356	0.00539	0.00743	0.00963	0.01196	0.01439	0.01688	0.01942	0.02199	0.02457	0.02715	0.02971	0.03228	0.03487	0.03752	0.04021	0.04284	0.04547
7.14	0.00107	0.00264	0.00447	0.00647	0.00859	0.01078	0.013	0.01526	0.01754	0.01983	0.02215	0.02449	0.02686	0.02926	0.03172	0.03428	0.03684	0.03941	0.04198	0.04455
7.16	0.00128	0.00307	0.00508	0.00721	0.00939	0.01158	0.01377	0.01594	0.01811	0.02028	0.02247	0.0247	0.02698	0.02931	0.03174	0.03428	0.03684	0.03941	0.04198	0.04455
7.18	0.00132	0.00315	0.00521	0.00738	0.00959	0.01182	0.01404	0.01625	0.01846	0.02068	0.02293	0.02523	0.02759	0.03	0.03254	0.03509	0.03765	0.04021	0.04278	0.04535
7.2	0.0012	0.00291	0.00489	0.00702	0.00926	0.01156	0.0139	0.01627	0.01868	0.02112	0.02361	0.02616	0.02876	0.03141	0.03416	0.03691	0.03966	0.04241	0.04516	0.04791
7.22	9.57E-04	0.00245	0.00426	0.00632	0.00857	0.01098	0.01351	0.01614	0.01886	0.02166	0.02452	0.02743	0.0304	0.03339	0.03644	0.03949	0.04254	0.04559	0.04864	0.05169
7.24	6.52E-04	0.00187	0.00348	0.00544	0.0077	0.01023	0.01298	0.01592	0.019	0.02221	0.02549	0.02884	0.0322	0.03557	0.03896	0.04235	0.04574	0.04913	0.05252	0.05591
7.26	3.80E-04	0.00132	0.00273	0.0046	0.00687	0.00952	0.01247	0.01569	0.01912	0.0227	0.02637	0.0301	0.03394	0.03754	0.04121	0.04488	0.04855	0.05222	0.05589	0.05956

7.28	1.74E-04	9.20E-04	0.0022	0.004	0.00628	0.00901	0.01211	0.01553	0.0192	0.02304	0.02699	0.03099	0.03497	0.03889	0.04275	0.04668	0.04996	0.05251	0.0545	0.0561
7.3	8.32E-05	7.49E-04	0.00374	0.00374	0.00603	0.00878	0.01194	0.01545	0.01921	0.02315	0.0272	0.03128	0.03534	0.03933	0.04322	0.04683	0.04958	0.05159	0.05314	0.05447
7.32	1.12E-04	8.06E-04	0.00381	0.00381	0.00609	0.00881	0.01193	0.01537	0.01906	0.02292	0.02687	0.03085	0.0348	0.03868	0.04244	0.04582	0.04832	0.05011	0.05148	0.05269
7.34	2.35E-04	0.00103	0.00412	0.00412	0.00636	0.00899	0.01196	0.01521	0.01867	0.02227	0.02595	0.02965	0.03333	0.03693	0.04044	0.04368	0.04618	0.04803	0.04948	0.05071
7.36	4.14E-04	0.00136	0.00454	0.00454	0.0067	0.00918	0.01192	0.01487	0.01798	0.0212	0.02448	0.02777	0.03104	0.03426	0.03742	0.04059	0.04327	0.0454	0.04709	0.04846
7.38	6.01E-04	0.00169	0.00492	0.00492	0.00697	0.00924	0.01169	0.01428	0.01698	0.01974	0.02255	0.02536	0.02817	0.03094	0.03369	0.0362	0.03876	0.04226	0.04426	0.0458
7.4	7.42E-04	0.00192	0.0051	0.0051	0.00699	0.00901	0.01114	0.01335	0.01562	0.01793	0.02025	0.02259	0.02493	0.02726	0.02959	0.03267	0.03563	0.03865	0.04092	0.04259
7.42	7.97E-04	0.00198	0.00496	0.00496	0.00684	0.0084	0.01021	0.01205	0.01392	0.01581	0.01772	0.01963	0.02156	0.02349	0.02545	0.0284	0.03163	0.0346	0.037	0.03873
7.44	7.91E-04	0.00183	0.00445	0.00445	0.00589	0.00738	0.00889	0.01041	0.01195	0.0135	0.01506	0.01663	0.01822	0.01983	0.02148	0.02421	0.02731	0.0302	0.03254	0.03419
7.46	6.21E-04	0.00151	0.00357	0.00357	0.00495	0.00607	0.00731	0.00857	0.00984	0.01113	0.01243	0.01375	0.01508	0.01644	0.01783	0.02024	0.02299	0.02556	0.02763	0.02909
7.48	4.99E-04	0.00111	0.00276	0.00276	0.0037	0.00467	0.00569	0.00673	0.00779	0.00887	0.00998	0.0111	0.01224	0.01339	0.01457	0.01654	0.01878	0.02083	0.02249	0.02365
7.5	2.81E-04	7.23E-04	0.00127	0.00191	0.00252	0.00339	0.00421	0.00506	0.00595	0.00687	0.0078	0.00875	0.00971	0.01067	0.01165	0.01313	0.01472	0.01616	0.01731	0.01813
7.52	1.37E-04	3.90E-04	7.42E-04	0.00118	0.0017	0.00228	0.00292	0.00361	0.00433	0.00507	0.00584	0.00661	0.00739	0.00816	0.00892	0.00987	0.01078	0.01156	0.01218	0.01285
7.54	2.98E-05	1.38E-04	6.00E-04	0.00118	9.45E-04	0.00136	0.00182	0.00233	0.00287	0.00344	0.00401	0.00459	0.00515	0.0057	0.00624	0.00685	0.00705	0.00717	0.0073	0.0073
7.56	-3.61E-05	-2.83E-05	3.93E-05	1.69E-04	3.57E-04	5.37E-04	8.81E-04	0.0012	0.00154	0.00189	0.00223	0.00257	0.0029	0.0032	0.00347	0.00337	0.00304	0.00265	0.00233	0.00216
7.58	-5.19E-05	-9.15E-05	-1.02E-04	-8.19E-05	-3.17E-05	-4.34E-05	-1.37E-04	2.40E-04	3.44E-04	4.42E-04	5.27E-04	5.92E-04	6.38E-04	6.58E-04	6.40E-04	7.94E-05	-7.50E-04	-0.00157	-0.00222	-0.00264
7.6	-1.95E-05	-5.69E-05	-1.05E-04	-1.57E-04	-2.23E-04	-3.04E-04	-4.05E-04	-5.30E-04	-6.82E-04	-8.63E-04	-0.00107	-0.00132	-0.00158	-0.00187	-0.0022	-0.00316	-0.00438	-0.00551	-0.0064	-0.00699
7.62	4.84E-05	5.14E-05	6.21E-06	-9.41E-05	-2.55E-04	-4.81E-04	-7.71E-04	-0.00113	-0.00154	-0.00201	-0.00253	-0.00309	-0.00368	-0.00429	-0.00493	-0.00624	-0.00774	-0.00908	-0.01013	-0.01084
7.64	1.20E-04	1.71E-04	1.33E-04	1.61E-04	2.54E-04	3.79E-04	5.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04	6.13E-04
7.66	1.58E-04	2.20E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04	1.61E-04
7.68	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04
7.7	1.12E-05	-1.41E-04	-4.47E-04	-9.10E-04	-0.00153	-0.0023	-0.00322	-0.00426	-0.00542	-0.00667	-0.008	-0.00937	-0.01078	-0.01221	-0.01364	-0.01586	-0.01817	-0.02017	-0.02173	-0.02284
7.72	-1.81E-04	-5.75E-04	-0.00112	-0.00181	-0.00264	-0.00358	-0.00464	-0.00579	-0.00703	-0.00833	-0.0097	-0.01111	-0.01254	-0.01399	-0.01547	-0.01779	-0.02027	-0.02247	-0.02421	-0.02544
7.74	-4.17E-04	-0.0011	-0.00194	-0.0029	-0.00397	-0.00511	-0.00632	-0.00759	-0.0089	-0.01026	-0.01165	-0.01306	-0.01449	-0.01594	-0.01741	-0.01976	-0.02235	-0.02469	-0.02657	-0.0279
7.76	-6.38E-04	-0.0016	-0.00273	-0.00397	-0.00529	-0.00665	-0.00804	-0.00945	-0.01088	-0.0123	-0.01374	-0.01519	-0.01664	-0.0181	-0.01958	-0.02188	-0.02443	-0.0268	-0.02871	-0.03008
7.78	-8.09E-04	-0.00198	-0.00334	-0.00483	-0.00639	-0.00798	-0.00958	-0.01118	-0.01276	-0.01432	-0.01588	-0.01741	-0.01895	-0.02047	-0.02202	-0.02419	-0.02655	-0.02876	-0.03056	-0.03187
7.8	-8.68E-04	-0.00216	-0.00369	-0.00537	-0.00713	-0.00895	-0.01078	-0.0126	-0.01441	-0.01618	-0.01793	-0.01965	-0.02135	-0.02302	-0.02469	-0.02667	-0.0287	-0.03055	-0.03209	-0.03325
7.82	-8.37E-04	-0.00215	-0.00374	-0.00553	-0.00747	-0.00949	-0.01155	-0.01364	-0.01572	-0.01777	-0.01979	-0.02178	-0.02372	-0.02562	-0.02748	-0.02924	-0.03082	-0.03219	-0.03334	-0.03427
7.84	-7.24E-04	-0.00196	-0.00353	-0.00537	-0.00742	-0.00951	-0.0119	-0.01426	-0.01663	-0.01901	-0.02135	-0.02364	-0.02588	-0.02805	-0.03015	-0.03172	-0.03282	-0.03366	-0.03437	-0.03504
7.86	-5.69E-04	-0.00167	-0.00316	-0.00499	-0.00709	-0.00942	-0.0119	-0.0145	-0.01715	-0.01983	-0.02249	-0.0251	-0.02764	-0.0301	-0.03245	-0.03389	-0.03458	-0.03496	-0.03528	-0.03572
7.88	-4.16E-04	-0.00138	-0.00277	-0.00455	-0.00667	-0.00907	-0.01169	-0.01446	-0.01734	-0.02025	-0.02317	-0.02604	-0.02884	-0.03154	-0.03412	-0.03553	-0.03601	-0.03619	-0.03649	-0.03699
7.9	-3.17E-04	-0.00118	-0.0025	-0.00423	-0.00634	-0.00876	-0.01144	-0.0143	-0.01729	-0.02035	-0.02342	-0.02645	-0.02941	-0.03227	-0.035	-0.03653	-0.03705	-0.03714	-0.03721	-0.03751
7.92	-3.04E-04	-0.00114	-0.00243	-0.00414	-0.00622	-0.00862	-0.01128	-0.01414	-0.01713	-0.0202	-0.02329	-0.02635	-0.02935	-0.03226	-0.03505	-0.03683	-0.03769	-0.03809	-0.0384	-0.03887
7.94	-3.69E-04	-0.00125	-0.00256	-0.00426	-0.0063	-0.00864	-0.01121	-0.01387	-0.01685	-0.01981	-0.0228	-0.02577	-0.0287	-0.03155	-0.03431	-0.03646	-0.03791	-0.03889	-0.03967	-0.04043
7.96	-4.79E-04	-0.00144	-0.00278	-0.00446	-0.00644	-0.00867	-0.0111	-0.01368	-0.01637	-0.01914	-0.02193	-0.02473	-0.0275	-0.03022	-0.03288	-0.03548	-0.03767	-0.03941	-0.04081	-0.04195
7.98	-5.71E-04	-0.00159	-0.00295	-0.00458	-0.00646	-0.00854	-0.01078	-0.01314	-0.0156	-0.01813	-0.02069	-0.02327	-0.02585	-0.02841	-0.03094	-0.034	-0.03697	-0.03952	-0.04157	-0.04311

8.72	6.94E-04	0.00185	0.00331	0.00505	0.00702	0.0092	0.01158	0.01415	0.01689	0.01979	0.02283	0.0266	0.02927	0.03262	0.03609	0.04263	0.05011	0.05694	0.06236	0.06612
8.74	6.21E-04	0.0016	0.00282	0.00423	0.00591	0.00756	0.00946	0.01153	0.01375	0.01613	0.01866	0.02132	0.02411	0.02699	0.03003	0.03644	0.044	0.05098	0.05651	0.06029
8.76	4.90E-04	0.00126	0.00219	0.00327	0.00449	0.00584	0.00732	0.00895	0.01073	0.01267	0.01475	0.01698	0.01933	0.02179	0.0244	0.03038	0.03756	0.04421	0.04948	0.05305
8.78	3.22E-04	8.42E-04	0.00149	0.00225	0.00313	0.00413	0.00526	0.00652	0.00794	0.00949	0.0112	0.01304	0.015	0.01705	0.01926	0.02452	0.03086	0.03674	0.04138	0.04452
8.8	1.40E-04	4.11E-04	7.90E-04	0.00125	0.00183	0.00253	0.00335	0.00431	0.00541	0.00664	0.008	0.00948	0.01107	0.01273	0.01452	0.0188	0.02394	0.02868	0.03241	0.03492
8.82	-3.40E-05	2.94E-04	1.20E-04	3.30E-04	6.47E-04	0.00108	0.00163	0.00232	0.00312	0.00404	0.00508	0.0062	0.00741	0.00867	0.01002	0.01312	0.01679	0.02013	0.02274	0.0245
8.84	-1.90E-04	-3.65E-04	-4.78E-04	-5.07E-04	-4.35E-04	2.54E-04	3.93E-05	4.44E-04	9.54E-04	0.00156	0.00224	0.00299	0.00379	0.00462	0.00549	0.00731	0.00935	0.01115	0.01255	0.0135
8.86	-3.21E-04	-6.82E-04	-0.00101	-0.00126	-0.00144	-0.00151	-0.0015	-0.0014	-0.00121	-9.67E-04	-6.70E-04	-3.39E-04	9.68E-06	3.61E-04	7.10E-04	0.00119	0.00159	0.00186	0.00203	0.00215
8.88	-4.12E-04	-9.20E-04	-0.00143	-0.0019	-0.00232	-0.00258	-0.00258	-0.00233	-0.00343	-0.0036	-0.00375	-0.0039	-0.00407	-0.00425	-0.00447	-0.00528	-0.00643	-0.0076	-0.00856	-0.0092
8.9	-4.40E-04	-0.00103	-0.00168	-0.00234	-0.00301	-0.00367	-0.00432	-0.00496	-0.00561	-0.00627	-0.00695	-0.00767	-0.00841	-0.00919	-0.01003	-0.01204	-0.01455	-0.01694	-0.01866	-0.02017
8.92	-4.08E-04	-0.00102	-0.00176	-0.00259	-0.0035	-0.00447	-0.00551	-0.00661	-0.00776	-0.00898	-0.01026	-0.01159	-0.01298	-0.0144	-0.0159	-0.01898	-0.0226	-0.02596	-0.02864	-0.03048
8.94	-3.35E-04	-9.41E-04	-0.00175	-0.00274	-0.00389	-0.0052	-0.00664	-0.00822	-0.00993	-0.01174	-0.01365	-0.01564	-0.01769	-0.01979	-0.02195	-0.02593	-0.03043	-0.03452	-0.03775	-0.03999
8.96	-2.88E-04	-9.21E-04	-0.00183	-0.00301	-0.00444	-0.00611	-0.00799	-0.01005	-0.01232	-0.01472	-0.01725	-0.01988	-0.02258	-0.02531	-0.02811	-0.03284	-0.038	-0.04261	-0.04624	-0.04879
8.98	-3.28E-04	-0.00109	-0.00221	-0.00366	-0.00543	-0.0075	-0.00983	-0.0124	-0.01518	-0.01813	-0.02123	-0.02443	-0.0277	-0.031	-0.03435	-0.03965	-0.04532	-0.05032	-0.05426	-0.05706
9	-4.82E-04	-0.00151	-0.00295	-0.00478	-0.00687	-0.00948	-0.01228	-0.01533	-0.0186	-0.02205	-0.02563	-0.02932	-0.03306	-0.03683	-0.04063	-0.04636	-0.05239	-0.05769	-0.06188	-0.06488
9.02	-7.43E-04	-0.00215	-0.00403	-0.00634	-0.00901	-0.01202	-0.01531	-0.01884	-0.02256	-0.02645	-0.03045	-0.03453	-0.03866	-0.0428	-0.04697	-0.05297	-0.05921	-0.06472	-0.06909	-0.07225
9.04	-0.00107	-0.00293	-0.00533	-0.00818	-0.0114	-0.01494	-0.01874	-0.02274	-0.02691	-0.0312	-0.03558	-0.04002	-0.04447	-0.04892	-0.05339	-0.05951	-0.06593	-0.07141	-0.07588	-0.07914
9.06	-0.00141	-0.00373	-0.00665	-0.01006	-0.01395	-0.01794	-0.02226	-0.02676	-0.03138	-0.03609	-0.04084	-0.04562	-0.0504	-0.05515	-0.05989	-0.06601	-0.07221	-0.07771	-0.08213	-0.08541
9.08	-0.00169	-0.00443	-0.00784	-0.01178	-0.01612	-0.02077	-0.02563	-0.03064	-0.03575	-0.04091	-0.04608	-0.05124	-0.05637	-0.06144	-0.06648	-0.07248	-0.0784	-0.08361	-0.08784	-0.09103
9.1	-0.0019	-0.00498	-0.00881	-0.01323	-0.01809	-0.02328	-0.02869	-0.03424	-0.03988	-0.04554	-0.05118	-0.05678	-0.06232	-0.06777	-0.07315	-0.07896	-0.08444	-0.0892	-0.09309	-0.0961
9.12	-0.00203	-0.00536	-0.00953	-0.01437	-0.01937	-0.02541	-0.03166	-0.03748	-0.04367	-0.04988	-0.05605	-0.06215	-0.06815	-0.07403	-0.0798	-0.08541	-0.09035	-0.09465	-0.09801	-0.10079
9.14	-0.00209	-0.00559	-0.01003	-0.01522	-0.02098	-0.02717	-0.03366	-0.04034	-0.0471	-0.05388	-0.06061	-0.06724	-0.07374	-0.0801	-0.08629	-0.09173	-0.09615	-0.09978	-0.10278	-0.10532
9.16	-0.00211	-0.00574	-0.0104	-0.01588	-0.02203	-0.02866	-0.03565	-0.04285	-0.05017	-0.05751	-0.06479	-0.07196	-0.07897	-0.0858	-0.09243	-0.09779	-0.10181	-0.10497	-0.10761	-0.10995
9.18	-0.00213	-0.00586	-0.01071	-0.01646	-0.02294	-0.02997	-0.0374	-0.04508	-0.0529	-0.06075	-0.06854	-0.0762	-0.08367	-0.09099	-0.09804	-0.10346	-0.1073	-0.11021	-0.11264	-0.11469
9.2	-0.00216	-0.006	-0.01102	-0.01701	-0.02377	-0.03114	-0.03894	-0.04702	-0.05527	-0.06355	-0.07177	-0.07987	-0.08778	-0.09549	-0.10293	-0.10859	-0.11253	-0.11548	-0.11793	-0.12024
9.22	-0.00219	-0.00611	-0.01125	-0.01741	-0.02439	-0.03232	-0.04008	-0.04847	-0.05704	-0.06567	-0.07425	-0.08271	-0.09099	-0.09905	-0.10685	-0.11295	-0.1173	-0.12058	-0.12331	-0.12582
9.24	-0.00221	-0.00617	-0.01138	-0.01763	-0.02474	-0.03258	-0.04076	-0.04936	-0.05816	-0.06704	-0.07589	-0.08463	-0.09321	-0.10158	-0.10969	-0.11641	-0.12147	-0.12539	-0.12861	-0.13147
9.26	-0.00221	-0.00619	-0.01142	-0.01771	-0.02486	-0.03268	-0.04103	-0.04973	-0.05866	-0.06769	-0.07672	-0.08567	-0.09447	-0.10308	-0.11147	-0.11897	-0.12499	-0.1298	-0.13373	-0.13706
9.28	-0.00221	-0.00617	-0.01138	-0.01764	-0.02475	-0.03256	-0.04089	-0.0496	-0.05867	-0.06766	-0.07679	-0.08587	-0.09483	-0.10363	-0.11225	-0.12062	-0.1278	-0.1337	-0.13848	-0.14236
9.3	-0.00219	-0.00611	-0.01125	-0.01742	-0.02444	-0.03216	-0.04041	-0.04906	-0.05798	-0.06707	-0.07623	-0.08537	-0.09443	-0.10335	-0.11214	-0.12084	-0.12986	-0.13694	-0.14265	-0.14713
9.32	-0.00215	-0.00599	-0.01103	-0.01707	-0.02395	-0.03152	-0.03963	-0.04816	-0.05698	-0.06601	-0.07513	-0.08428	-0.09338	-0.10238	-0.11128	-0.12014	-0.1298	-0.13603	-0.1403	-0.1511
9.34	-0.00209	-0.00583	-0.01072	-0.0166	-0.0233	-0.03068	-0.03861	-0.04699	-0.05567	-0.06458	-0.07363	-0.08273	-0.09183	-0.10086	-0.10983	-0.12084	-0.1316	-0.14092	-0.14839	-0.15399
9.36	-0.00201	-0.0056	-0.01032	-0.016	-0.02248	-0.02965	-0.03738	-0.04555	-0.05407	-0.06295	-0.07179	-0.08082	-0.08987	-0.09888	-0.10787	-0.11951	-0.1318	-0.14137	-0.14951	-0.15553
9.38	-0.00189	-0.0053	-0.00998	-0.01523	-0.02148	-0.0284	-0.0359	-0.04386	-0.05219	-0.0608	-0.06961	-0.07853	-0.0875	-0.09645	-0.10542	-0.11749	-0.12978	-0.14056	-0.14915	-0.15545
9.4	-0.00172	-0.00491	-0.00914	-0.01431	-0.02027	-0.02692	-0.03416	-0.04189	-0.05001	-0.05844	-0.06708	-0.07587	-0.08472	-0.09356	-0.10244	-0.1147	-0.12728	-0.14056	-0.14713	-0.15363
9.42	-0.00153	-0.00444	-0.00838	-0.01323	-0.01888	-0.02523	-0.03219	-0.03965	-0.04753	-0.05573	-0.06418	-0.07278	-0.08145	-0.09013	-0.09886	-0.11105	-0.12359	-0.13458	-0.14331	-0.14966



9.44	-0.00133	-0.00395	-0.00757	-0.01209	-0.0174	-0.02342	-0.03006	-0.03721	-0.0448	-0.05273	-0.06081	-0.06925	-0.07768	-0.08611	-0.09459	-0.10346	-0.11184	-0.12029	-0.12929	-0.13772	-0.14385
9.46	-0.00115	-0.00351	-0.00682	-0.011	-0.01697	-0.02164	-0.02791	-0.03471	-0.04195	-0.04952	-0.05735	-0.06533	-0.07341	-0.08148	-0.08959	-0.10091	-0.11245	-0.12252	-0.13048	-0.13627	-0.143827
9.48	-0.00102	-0.00316	-0.0062	-0.01007	-0.01469	-0.01998	-0.02586	-0.03224	-0.03904	-0.04616	-0.05352	-0.06103	-0.06863	-0.07622	-0.08383	-0.09437	-0.10508	-0.11437	-0.12173	-0.12708	-0.132708
9.5	-9.48E-04	-0.00293	-0.00575	-0.00934	-0.01361	-0.01851	-0.02394	-0.02994	-0.03611	-0.04267	-0.04946	-0.05637	-0.06336	-0.07034	-0.07733	-0.08691	-0.09659	-0.10499	-0.11163	-0.11648	-0.121648
9.52	-9.23E-04	-0.0028	-0.00543	-0.00875	-0.01268	-0.01715	-0.0221	-0.02744	-0.03311	-0.03903	-0.04513	-0.05134	-0.0576	-0.06386	-0.07012	-0.07858	-0.0871	-0.09448	-0.10033	-0.10462	-0.109462
9.54	-9.04E-04	-0.00267	-0.0051	-0.00813	-0.01168	-0.0157	-0.02011	-0.02485	-0.02985	-0.03505	-0.0404	-0.04583	-0.05129	-0.05674	-0.06219	-0.0694	-0.07663	-0.08289	-0.08766	-0.09151	-0.095151
9.56	-8.48E-04	-0.00246	-0.00464	-0.00732	-0.01045	-0.01396	-0.01778	-0.02187	-0.02616	-0.03061	-0.03516	-0.03977	-0.04439	-0.04899	-0.05357	-0.05945	-0.06526	-0.07028	-0.07428	-0.07724	-0.07724
9.58	-7.51E-04	-0.00215	-0.00402	-0.00631	-0.00896	-0.01191	-0.01511	-0.01851	-0.02207	-0.02573	-0.02945	-0.03321	-0.03697	-0.04069	-0.04439	-0.04887	-0.05319	-0.05689	-0.05984	-0.06207	-0.06207
9.6	-6.28E-04	-0.00177	-0.0033	-0.00516	-0.00729	-0.00965	-0.01219	-0.01488	-0.01767	-0.02052	-0.0234	-0.02629	-0.02917	-0.032	-0.0348	-0.03785	-0.04064	-0.043	-0.04488	-0.04635	-0.04635
9.62	-4.98E-04	-0.00139	-0.00256	-0.00397	-0.00557	-0.00732	-0.00919	-0.01114	-0.01314	-0.01516	-0.01719	-0.01919	-0.02116	-0.02309	-0.02496	-0.02661	-0.02791	-0.02894	-0.02979	-0.03051	-0.03051
9.64	-3.88E-04	-0.00104	-0.00187	-0.00284	-0.00391	-0.00505	-0.00624	-0.00744	-0.00864	-0.00982	-0.01096	-0.01206	-0.01312	-0.01412	-0.01507	-0.01595	-0.01524	-0.01504	-0.01491	-0.01493	-0.01493
9.66	-2.91E-04	-0.00121	-0.00175	-0.0023	-0.00283	-0.00333	-0.00383	-0.00437	-0.00491	-0.00545	-0.00604	-0.00663	-0.00722	-0.00781	-0.0084	-0.00904	-0.00968	-0.01036	-0.01108	-0.01184	1.66E-04
9.68	-1.70E-04	-3.41E-04	-4.79E-04	-5.58E-04	-5.58E-04	-4.88E-04	-2.78E-04	1.95E-05	4.22E-04	9.26E-04	0.00162	0.0022	0.00294	0.00373	0.00459	0.00676	0.00936	0.01171	0.01354	0.01476	0.01476
9.7	1.31E-05	1.65E-04	4.55E-04	8.91E-04	0.00148	0.00222	0.00311	0.00416	0.00533	0.00664	0.00805	0.00954	0.01111	0.01272	0.01439	0.01763	0.02129	0.02457	0.02714	0.0289	0.0289
9.72	2.78E-04	8.49E-04	0.00165	0.00268	0.00391	0.00535	0.00696	0.00874	0.01068	0.01274	0.01481	0.01717	0.01949	0.02185	0.02427	0.02843	0.03301	0.03711	0.04035	0.04261	0.04261
9.74	6.14E-04	0.00169	0.0031	0.00479	0.00674	0.00891	0.01127	0.0138	0.01647	0.01927	0.02216	0.02513	0.02816	0.03121	0.03431	0.03923	0.04457	0.04936	0.05317	0.05587	0.05587
9.76	9.79E-04	0.00259	0.00463	0.00703	0.00972	0.01265	0.01578	0.01908	0.0225	0.02603	0.02964	0.03331	0.03701	0.04073	0.04448	0.05001	0.05591	0.06119	0.06542	0.06846	0.06846
9.78	0.00129	0.0034	0.00606	0.00914	0.01257	0.01627	0.02018	0.02426	0.02846	0.03276	0.03711	0.0415	0.0459	0.05029	0.0547	0.06069	0.06691	0.07245	0.07691	0.08016	0.08016
9.8	0.00151	0.00401	0.00717	0.01086	0.01497	0.01941	0.02411	0.02899	0.03401	0.03911	0.04426	0.04942	0.05457	0.05988	0.06477	0.0711	0.0774	0.08295	0.08742	0.09076	0.09076
9.82	0.00161	0.00438	0.00793	0.01212	0.01684	0.02197	0.02743	0.03311	0.03896	0.0449	0.05089	0.05687	0.06281	0.06868	0.07448	0.08105	0.08727	0.09282	0.09635	0.10026	0.10026
9.84	0.00164	0.00456	0.00841	0.01302	0.01827	0.02404	0.0302	0.03666	0.04332	0.0501	0.05692	0.06372	0.07046	0.07709	0.08361	0.09039	0.09645	0.10153	0.10563	0.10887	0.10887
9.86	0.00163	0.00468	0.00876	0.01373	0.01945	0.02578	0.03259	0.03975	0.04716	0.05471	0.06231	0.06989	0.07737	0.08473	0.09192	0.09893	0.10489	0.10974	0.11365	0.11683	0.11683
9.88	0.00164	0.0048	0.0091	0.01438	0.02051	0.02732	0.03468	0.04246	0.05051	0.05873	0.067	0.07524	0.08338	0.09137	0.09916	0.10647	0.11248	0.11728	0.12115	0.12435	0.12435
9.9	0.00169	0.00498	0.00949	0.01506	0.02153	0.02874	0.03655	0.04448	0.05335	0.06209	0.0709	0.07967	0.08833	0.09682	0.10511	0.11284	0.11913	0.12413	0.12815	0.1315	0.1315
9.92	0.00178	0.00524	0.00996	0.01578	0.02252	0.03003	0.03816	0.04675	0.05567	0.06477	0.07394	0.08309	0.09213	0.101	0.10966	0.11791	0.12474	0.13022	0.13462	0.13825	0.13825
9.94	0.00192	0.00557	0.0105	0.01653	0.02348	0.03121	0.03955	0.04834	0.05746	0.06678	0.07617	0.08554	0.09481	0.10393	0.11286	0.12172	0.12932	0.13553	0.14052	0.14454	0.14454
9.96	0.0021	0.00596	0.01109	0.0173	0.02442	0.03229	0.04074	0.04963	0.05884	0.06823	0.07771	0.08718	0.09657	0.10582	0.11491	0.12444	0.13295	0.14006	0.14578	0.15029	0.15029
9.98	0.00229	0.00637	0.01169	0.01806	0.0253	0.03325	0.04175	0.05066	0.05987	0.06926	0.07873	0.08821	0.09762	0.10692	0.11609	0.12529	0.13377	0.14385	0.15035	0.15537	0.15537
10	0.00248	0.00674	0.01223	0.01874	0.02607	0.03407	0.04258	0.05147	0.06064	0.06988	0.0794	0.08884	0.09824	0.10753	0.11675	0.12593	0.13791	0.14689	0.15413	0.15961	0.15961
0.00248	0.00674	0.01223	0.01874	0.02607	0.03407	0.04258	0.05147	0.06064	0.06988	0.0794	0.08884	0.09824	0.10753	0.11675	0.12593	0.13791	0.14689	0.15413	0.15969	0.15969	0.15969
-0.00251	-0.00642	-0.01142	-0.01771	-0.02466	-0.03268	-0.04103	-0.04973	-0.05866	-0.06769	-0.07693	-0.08638	-0.09587	-0.10548	-0.11525	-0.12519	-0.13524	-0.14547	-0.15588	-0.16646	-0.17724	-0.18827

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Tugas Akhir

TIME HISTORY DATA

FUNCTION Base	Shear X:	Base	Shear	X
FUNCTION Base	Shear Y:	Base	Shear	Y
FUNCTION Base	Moment X:	Base	Mom	X
FUNCTION Base	Moment Y:	Base	Mom	Y

TIME	FUNCTION Base Shear	FUNCTION Base Shear	FUNCTION Base Moment	FUNCTION Base Moment
0	0	0	0	0
0.02	-2.18272	0.90883	-17.79589	-42.5753
0.04	-12.88518	6.8308	-133.56772	-253.50459
0.06	-32.01478	22.85322	-408.48499	-639.13245
0.08	-57.26789	40.57418	-725.047	-1167.464
0.1	-87.49586	56.11193	-1005.4058	-1831.811
0.12	-122.73169	73.35391	-1255.9355	-2650.3601
0.14	-162.29169	95.46161	-1541.6561	-3628.804
0.16	-202.95392	113.22776	-1925.7883	-4723.591
0.18	-240.73866	117.16658	-2455.9036	-5873.802
0.2	-272.05679	117.80663	-3109.5286	-7020.563
0.22	-296.28839	134.15591	-3812.785	-8155.046
0.24	-316.84372	164.98755	-4469.643	-9339.414
0.26	-337.74503	196.93645	-5036.411	-10642.995
0.28	-360.54837	227.14799	-5685.151	-12085.014
0.3	-383.4296	259.60431	-6714.292	-13617.52
0.32	-404.56503	279.26437	-8045.166	-15190.236
0.34	-421.65625	294.10904	-9456.28	-16740.486
0.36	-432.95261	324.33197	-10846.016	-18212.154
0.38	-437.48608	374.23459	-12215.33	-19559.783
0.4	-439.28488	417.5181	-13419.544	-20831.346
0.42	-445.93979	428.51187	-14319.834	-22144.477
0.44	-463.83521	387.08899	-14774.377	-23599.395
0.46	-492.63205	298.51276	-14768.29	-25175.41
0.48	-522.13605	200.55058	-14621.354	-26668.297
0.5	-541.94452	128.74274	-14771.126	-27871.045
0.52	-546.80945	110.20221	-15399.255	-28671.969
0.54	-549.56946	157.08318	-16287.229	-29306.127
0.56	-559.36096	264.26126	-17273.281	-29940.498
0.58	-579.28973	410.79144	-18360.939	-30633.619
0.6	-613.15588	552.10974	-19548.082	-31468.158
0.62	-664.1781	631.07172	-20635.516	-32528.13
0.64	-733.27539	630.58917	-21459.479	-33866.61
0.66	-812.93304	567.78741	-21837.32	-35384.8
0.68	-888.97882	471.3782	-21551.758	-36858.91
0.7	-955.2514	381.09036	-20774.459	-38215.88

0.72	-1005.8844	331.36948	-19952.109	-39378.62
0.74	-1036.1471	331.35812	-19535.197	-40278.11
0.76	-1037.4529	361.69312	-19819.656	-40752.41
0.78	-1001.8752	376.08167	-20348.729	-40629.13
0.8	-923.00037	326.19983	-19960.564	-39737.91
0.82	-800.70972	177.13756	-17520.086	-38001.55
0.84	-641.78296	-62.6652	-12797.331	-35451.27
0.86	-451.18539	-328.85669	-6824.397	-32064.5
0.88	-233.2253	-556.99829	-981.24438	-27793.617
0.9	-0.47974	-726.42456	3836.23901	-22746.873
0.92	226.85907	-855.98511	8024.68115	-17188.836
0.94	429.36703	-964.24963	12782.8994	-11393.534
0.96	590.36725	-1064.4519	18897.9766	-5620.242
0.98	702.95258	-1165.0938	26172.3008	12.61937
1	774.34589	-1280.9755	33607.402	5610.50488
1.02	816.70349	-1418.0928	40911.035	11331.0752
1.04	847.26581	-1578.1072	48272.316	17398.3691
1.06	884.50555	-1737.2656	55909.984	24042.6113
1.08	942.78058	-1869.8981	63640.863	31411.3066
1.1	1024.33044	-1956.5029	70981	39424.23
1.12	1126.66455	-1980.2416	77681.391	47920.613
1.14	1240.35864	-1935.2324	83750.68	56615.973
1.16	1360.29639	-1839.1423	89239.727	65318.082
1.18	1458.64587	-1733.1469	94155.203	73397.789
1.2	1493.5509	-1628.9268	97827.102	79939.117
1.22	1450.89038	-1503.3698	100048.359	84530.055
1.24	1354.16064	-1337.4398	100983.688	87456.352
1.26	1233.74133	-1162.9196	101294.531	89126.008
1.28	1124.98352	-1090.0975	102121.945	90057.32
1.3	1058.91602	-1209.9885	103979.18	90724.578
1.32	1060.04858	-1575.9524	107279.586	91536.781
1.34	1144.7301	-2173.8994	112450.695	92820.891
1.36	1322.29663	-2888.1018	119109.68	94852.109
1.38	1596.44348	-3554.615	126207.313	97881.867
1.4	1966.78357	-4044.292	132457.172	102164.102
1.42	2424.0979	-4281.582	136716.078	107853.289
1.44	2951.36597	-4272.739	138839.938	115008.18
1.46	3500.68506	-4136.803	140111.281	123116.977
1.48	4006.32129	-4030.734	142239.813	131305.594
1.5	4413.11523	-4009.149	145697.516	138838.563
1.52	4690.06006	-4086.795	150481.703	145343.875
1.54	4824.26367	-4226.448	155853.344	150674.828
1.56	4811.65527	-4359.44	160635.25	154721.703
1.58	4669.05957	-4398.443	163782.297	157649.578
1.6	4430.41406	-4266.861	164588.484	159844.328
1.62	4127.979	-3913.716	162574.516	161579.297
1.64	3716.08496	-3334.447	157420.172	161553.406
1.66	3101.44556	-2565.5269	149002.297	157450.766
1.68	2279.63501	-1674.8356	137701.047	148559.063
1.7	1318.59314	-742.58081	124130.516	135477.922
1.72	298.16934	149.55521	108917.086	119010.5
1.74	-691.23376	910.51257	92740.625	100209.766

1.76	-1574.8682	1421.47742	76608.844	79942.438
1.78	-2302.6252	1650.23022	61113.789	58771.441
1.8	-2844.4128	1645.021	46226.066	37082.449
1.82	-3190.115	1515.66138	31317.1777	15102.4395
1.84	-3335.071	1333.14795	16284.0352	-6816.853
1.86	-3284.957	1110.39587	1483.29565	-28302.059
1.88	-3063.325	786.50806	-12234.433	-49126.57
1.9	-2705.9614	229.54521	-22925.617	-69138.53
1.92	-2255.1235	-505.88434	-30207.426	-88196.66
1.94	-1755.5122	-1244.6985	-35104.39	-106145.62
1.96	-1253.8114	-1858.1427	-38481.41	-122863.27
1.98	-791.35663	-2243.8928	-41623.96	-138173.69
2	-402.79126	-2370.2886	-45297.93	-151870.95
2.02	-109.4673	-2268.7559	-49505.5	-163632.16
2.04	79.0434	-2016.3459	-53600.21	-173075.61
2.06	170.92151	-1705.0496	-56624.01	-179660.08
2.08	181.9566	-1409.9338	-57704.06	-182882.53
2.1	136.79889	-1163.8364	-56552.54	-182244.73
2.12	63.68497	-938.68433	-53820.99	-177337.59
2.14	-11.44318	-670.9209	-50721.96	-167930.98
2.16	-104.56207	-238.12759	-49149.41	-154725.27
2.18	-278.09085	480.89389	-50607.63	-139442.05
2.2	-734.55396	1492.1156	-55164.56	-126696.29
2.22	-1515.2822	2600.80908	-60722.45	-118232.64
2.24	-2492.0657	3569.55884	-65017.59	-112729.02
2.26	-3540.25	4172.3291	-66012.98	-109043.23
2.28	-4493.464	4242.97119	-62236.86	-105212.53
2.3	-5207.098	3713.33032	-52800.21	-99550.93
2.32	-5558.258	2707.00317	-38447.32	-90532.48
2.34	-5471.424	1504.08984	-21549.406	-77200.58
2.36	-4907.45	390.59433	-4696.764	-58904.11
2.38	-3870.99	-399.45847	9597.0127	-35426.53
2.4	-2406.6057	-748.06366	19444.4883	-6933.971
2.42	-603.85645	-667.28943	24301.0938	25869.1465
2.44	1283.67688	-313.99185	25359.4395	59315.5
2.46	2913.81567	33.08196	25327.5605	88018.68
2.48	4192.00098	124.85011	26646.1855	111194.609
2.5	5054.70215	-194.72751	30718.0391	128378.563
2.52	5504.83154	-953.03333	38065.109	140067.438
2.54	5580.3125	-2025.9255	48080.207	147110.328
2.56	5340.53027	-3182.911	59186.379	150477.172
2.58	4759.02051	-4091.925	68575.016	149207.297
2.6	3810.04834	-4407.126	72739.609	142084.469
2.62	2587.87866	-3940.645	69651.789	129979.336
2.64	1208.95325	-2707.9504	59261.027	114042.664
2.66	-193.93761	-918.62982	43232.59	95699.68
2.68	-1487.0559	1087.15369	24447.4297	76466.523
2.7	-2553.4822	2888.46411	6491.47949	57714.734
2.72	-3301.341	4037.05444	-6568.03	40602.777
2.74	-3671.712	4256.11963	-12295.876	25988.1133
2.76	-3640.705	3537.68604	-10548.391	14421.5088
2.78	-3221.809	2214.09595	-3895.196	6103.1709

2.8	-2470.2942	761.58466	3933.02808	765.19049
2.82	-1502.0884	-321.8623	8422.56543	-2765.9614
2.84	-461.53137	-677.25305	5623.79492	-6054.108
2.86	503.71091	-176.98831	-6402.244	-10693.68
2.88	1278.60828	1015.78113	-26528.229	-17733.924
2.9	1791.62634	2480.66235	-50630.43	-27562.771
2.92	1995.71851	3731.14014	-73638.31	-40340.44
2.94	1878.68689	4356.55469	-91162.83	-55838.2
2.96	1457.87512	4150.29004	-101004.62	-73552.21
2.98	780.19824	3230.0083	-104434.72	-92686.93
3	-87.16765	1953.29858	-105000.09	-112295.98
3.02	-1076.4818	765.68011	-106763.39	-131607.91
3.04	-2165.7927	55.52694	-112782.9	-150875.67
3.06	-3298.656	60.17833	-124597.3	-169780.28
3.08	-4373.285	819.55841	-142222.23	-187154.27
3.1	-5297.745	2172.33936	-164247.89	-201968.63
3.12	-5981.865	3823.06226	-188348.05	-213098.61
3.14	-6357.16	5433.92676	-211865.36	-219642.19
3.16	-6377.277	6695.01563	-232070.69	-220880.16
3.18	-6027.271	7390.51416	-246729.02	-216430.5
3.2	-5344.504	7380.02002	-253998.95	-206657.59
3.22	-4459.063	6671.2207	-253487.14	-193511.5
3.24	-3453.234	5470.99805	-246895.56	-177893.33
3.26	-2376.6689	4187.95752	-237972.45	-160014.61
3.28	-1291.7792	3226.64697	-230363.73	-140333.53
3.3	-233.56732	2868.0542	-226646.38	-118828.93
3.32	752.6488	3196.58691	-227765.78	-95774.98
3.34	1606.34509	4091.96045	-233177.34	-71876.84
3.36	2102.89941	5236.91016	-240655.11	-51243.14
3.38	2177.14624	6203.35986	-245948	-35227.03
3.4	1897.39868	6625.36182	-245192.94	-22939.332
3.42	1353.18457	6334.76758	-236781.41	-13364.859
3.44	676.14917	5426.56152	-222107.84	-4869.877
3.46	-25.1638	4171.23926	-204159.56	3641.68286
3.48	-771.12726	2937.65894	-186565.69	10745.2715
3.5	-1519.6674	2029.87622	-171768.45	16232.7568
3.52	-2166.6631	1553.20166	-159947.75	21170.3242
3.54	-2633.5149	1479.09412	-150187.22	26283.9707
3.56	-2842.0295	1672.80139	-140986.58	32515.934
3.58	-2743.1584	1944.06738	-130666.92	40523.625
3.6	-2315.7776	2137.98511	-118189.8	50734.168
3.62	-1593.2517	2132.92554	-102736.68	62829.109
3.64	-665.04083	1853.60754	-83705.94	75668.102
3.66	403.34338	1287.03381	-60960.88	88771.461
3.68	1529.49158	498.43756	-35139.88	101459.688
3.7	2634.73315	-396.70325	-7464.278	113176.766
3.72	3643.03735	-1266.1732	20459.8086	123393.258
3.74	4494.76416	-1990.156	47195.809	131803.594
3.76	5140.41406	-2489.5137	71763.734	138147.781
3.78	5535.46924	-2746.1611	93713.313	142065.109
3.8	5626.91602	-2810.8662	113182.164	142791.766
3.82	5389.63428	-2823.6462	131501.516	139834.172

3.84	4839.56738	-2942.9329	150408.438	133218.75
3.86	4049.39014	-3275.786	171047.109	123827.602
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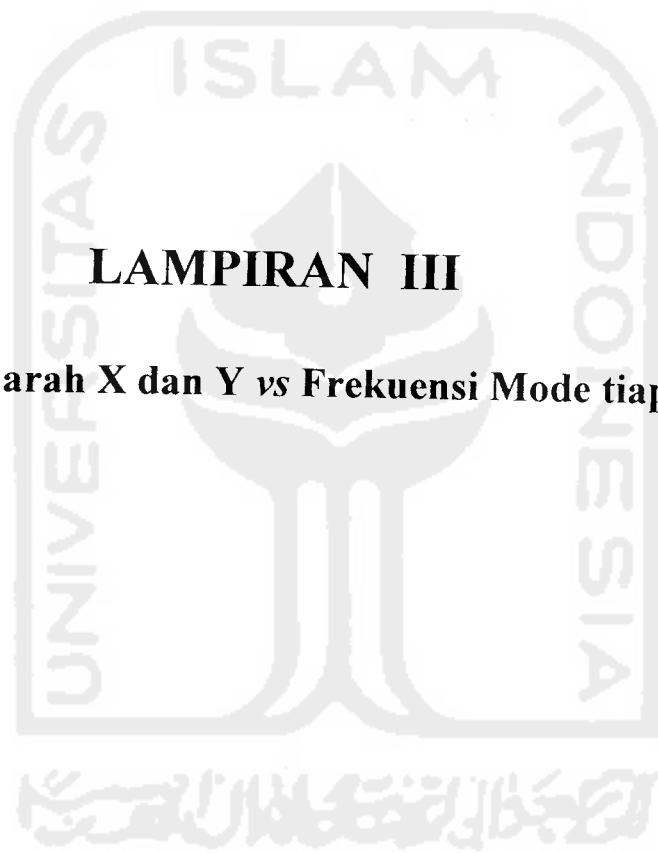
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5.26	-661.5965	-1200.6625	37848.109	-146691.16
5.28	-976.70966	-761.68475	43282.516	-154856.7
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9.58	-2254.2324	1933.29346	-114720.29	-24590.248
9.6	-2117.2346	1662.57617	-90283.18	-33773.46
9.62	-1829.3018	1386.01025	-65489.66	-41358.74
9.64	-1422.15	1169.62549	-41364.04	-47401.34
9.66	-920.36523	990.47174	-17841.012	-51733.96
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9.72	358.57574	-510.4259	61400.902	-63160.3
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9.8	-316.57001	-4224.438	181721.391	-94990.11
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9.88	-2320.491	-4408.626	251163.969	-122246.75
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9.94	-3098.7979	-5178.019	288521.563	-122785.12
9.96	-3158.3618	-5711.783	299584.531	-119656.81
9.98	-3134.8877	-6304.67	309767.844	-115479.32
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### **LAMPIRAN III**

***A/V ratio* max arah X dan Y vs Frekuensi Mode tiap variasi**

Program SAP2000 Nonlinear Version 7.42

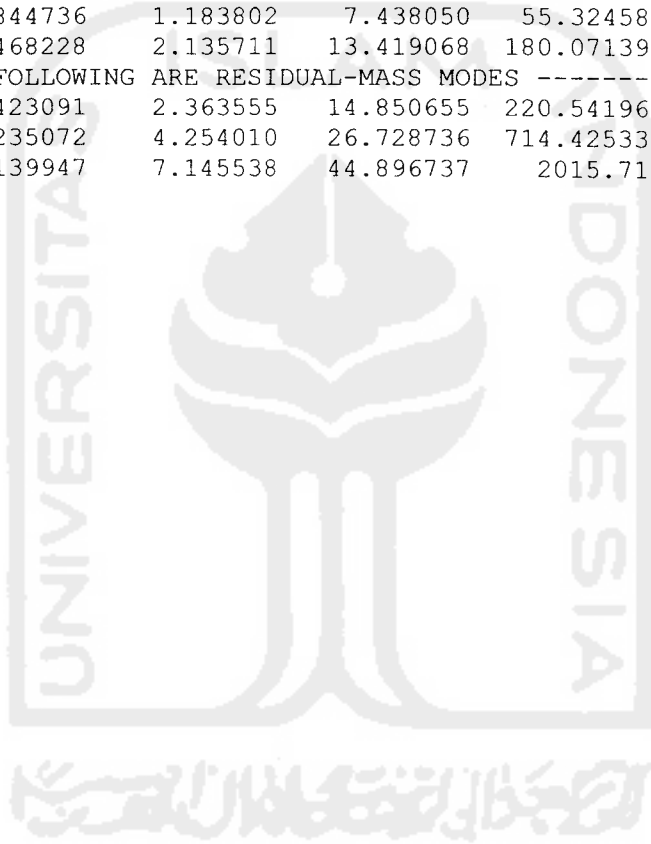
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Page

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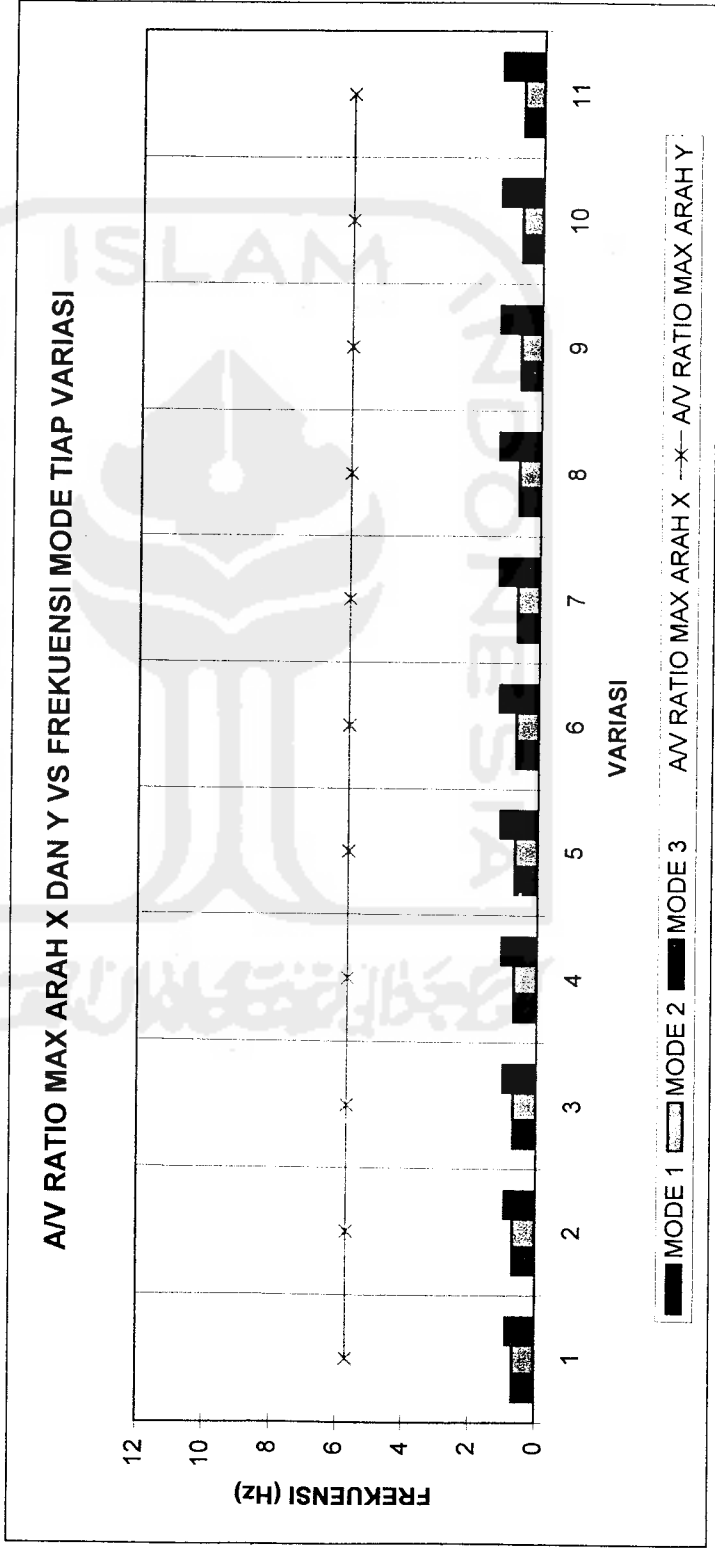
## M O D A L P E R I O D S A N D F R E Q U E N C I E S

MODE	PERIOD (TIME)	FREQUENCY (CYC/TIME)	FREQUENCY (RAD/TIME)	EIGENVALUE (RAD/TIME)**2
1	1.474196	0.678336	4.262111	18.165592
2	1.472690	0.679030	4.266469	18.202760
3	0.844736	1.183802	7.438050	55.324588
4	0.468228	2.135711	13.419068	180.071397
----- THE FOLLOWING ARE RESIDUAL-MASS MODES -----				
5	0.423091	2.363555	14.850655	220.541967
6	0.235072	4.254010	26.728736	714.425339
7	0.139947	7.145538	44.896737	2015.717



	var1	var2	var3	var4	var5	var6	var7	var8	var9	var10	var11
mode1	0.666764	0.682582	0.691929	0.693941	0.688955	0.678336	0.663887	0.6473	0.62989	0.615351	0.599346
mode2	0.667194	0.683098	0.692523	0.694594	0.68964	0.67903	0.664569	0.64796	0.630523	0.615958	0.599925
mode3	0.867341	0.92928	0.995958	1.064569	1.129651	1.183802	1.221219	1.241246	1.247753	1.247244	1.242937
a/v ratio max n-s	10.21537	10.21537	10.21537	10.21537	10.21537	10.21537	10.21537	10.21537	10.21537	10.21537	10.21537
a/v ratio max e-w	5.691653	5.691653	5.691653	5.691653	5.691653	5.691653	5.691653	5.691653	5.691653	5.691653	5.691653

a/v ratio max n-s      a/v ratio max n-s      a/v ratio max e-w  
 a max                    341.6953    210.1423    10.21537      5.691653  
 v max                    33.44914    36.92113



6.96	-2357.8037	-2951.7998	69913.906	-203124.56
6.98	-2275.1687	-2617.6965	74314.477	-190364.83
7	-2291.2393	-1940.8413	74193.656	-177355.64
7.02	-2400.6726	-1124.7574	71100.508	-164391.28
7.04	-2585.6179	-453.4176	68032.07	-151620.41
7.06	-2800.1433	-152.47151	67612.117	-138713.53
7.08	-2981.4846	-363.99442	71573.305	-125033.34
7.1	-3069.9778	-1075.864	80014.563	-109966.8
7.12	-3014.1538	-2108.0967	91371.898	-92973.88
7.14	-2778.5286	-3125.6536	102603.281	-73697.84
7.16	-2353.9617	-3779.505	110522.906	-52141.1
7.18	-1772.8646	-3870.804	113537.43	-28959.475
7.2	-1081.6339	-3438.401	112382.602	-4952.146
7.22	-317.21439	-2641.218	108433.047	19361.0957
7.24	487.89944	-1666.71	102732.961	43614.289
7.26	1287.9303	-741.4939	96671.734	67220.063
7.28	2046.32837	-71.74652	91556.023	89770.734
7.3	2734.28687	217.77437	88242.32	110979.898
7.32	3330.10083	110.40015	87039.547	130646.266
7.34	3818.92383	-313.75668	87380.961	148631.266
7.36	4194.47705	-926.62579	88159.406	164881.484
7.38	4447.52783	-1564.8488	87868.594	179199.922
7.4	4569.03809	-2055.5061	84996.664	191302.438
7.42	4566.74268	-2269.229	78787.211	201140.141
7.44	4477.02441	-2153.8481	69295.75	209146.219
7.46	4344.49854	-1766.8003	57510.77	215872.641
7.48	4198.00049	-1245.2537	44979.195	221558.906
7.5	4042.72876	-737.0318	33160.754	226001.688
7.52	3889.25098	-311.72775	22493.7461	229129.766
7.54	3749.33691	-9.26126	13048.1523	230936.703
7.56	3638.87354	160.2494	4751.80762	231551.172
7.58	3574.0415	167.22043	-1919.501	231176.844
7.6	3565.20215	18.42748	-6748.293	229984.984
7.62	3621.67725	-242.82861	-10036.509	228213.484
7.64	3744.38281	-510.87738	-12871.28	226025.703
7.66	3926.51709	-658.24359	-16419.021	223518.406
7.68	4144.49756	-579.63263	-21571.971	220531.609
7.7	4361.7251	-220.79985	-28944.578	216695.531
7.72	4547.81738	398.73206	-38793.11	211772.125
7.74	4688.52246	1165.54993	-50513.93	205821.609
7.76	4768.74658	1893.54846	-62238.93	198856.313
7.78	4748.46338	2419.40771	-72134.08	190350.953
7.8	4609.03418	2638.88599	-79025.65	180114.438
7.82	4325.75342	2532.25781	-82599.77	167740.984
7.84	3884.6416	2155.4458	-83227.01	152920.75
7.86	3298.63281	1628.79346	-81755.48	135752.531
7.88	2590.3501	1112.5083	-79479.95	116424.688
7.9	1797.30371	770.01312	-77897.26	95340.68
7.92	962.21503	704.26105	-77985.16	72965.297
7.94	132.91074	893.28613	-79525.78	49860.703
7.96	-641.651	1215.36926	-81341.32	26648.8379
7.98	-1296.2069	1509.64124	-81914	4348.50586