

TUGAS AKHIR

**ANALISIS DINAMIS 3D PENGARUH VARIASI POSISI DAN KETINGGIAN
DINDING GESER PADA BANGUNAN DENGAN LONCATAN BIDANG
MUKA MENGGUNAKAN EKSITASI RIWAYAT WAKTU
GEMPA EL-CENTRO**

**(3D Dynamic Analysis of the Effects of Position and Height Variation of Shear Walls in
a Building with Set Backs Using the 1940 El-Centro Earthquake Excitation)**



Disusun Oleh :

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**JURUSAN TEKNIK SIPIL
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
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LEMBAR PENGESAHAN TUGAS AKHIR

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Building with Set Facets Using the 1940 El-Centro Earthquake Excitation)*

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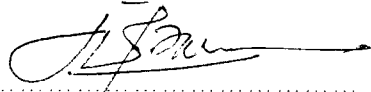
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“..... Allah meninggikan orang-orang yang beriman diantara kamu dan orang yang diberi ilmu pengetahuan beberapa derajat.....”

(TQS. Al Mujadilah : 11)

“.....Kebutaan sejati adalah kesesatan setelah mendapatkan petunjuk, sebaik-baiknya ilmu adalah ilmu yang bermanfaat, sebaik-baiknya petunjuk adalah yang diikuti serta paling jelek kebutaan adalah buta mata hati.....”

(Al-'allamah' abdullah bin Husain bin Thahir)

“.....Kalau seseorang merasa berada di jalan buntu, dimana tak ada langkah pun berharga, dan ketika segalanya merasa salah maka satu-satunya kesempatan yang indah ialah memulai semua dari awal dan berani menulisi kembali sebuah buku yang kosong.....”

(Hilman.L)

“..... Ilmu itu adalah pengertian dari hasil penelitian, jalan mencapai tujuan, makrifat untuk membuka tabir hakikat, landasan perbuatan dan tindakan, daya pikir dalam mencapai kebenaran dan motor kehidupan yang disinari iman dalam melaksanakan amal bakti kepada ALLAH AR-ROHMAN.....”

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ABSTRAKSI

Perancangan bangunan bertingkat banyak (multy story building) merupakan salah satu alternatif untuk menjawab terhadap konsentrasi penduduk yang padat, kelangkaan bahan, lahan dan harga yang semakin tinggi. Perancangan struktur yang berkembang tidak hanya mempertimbangkan fungsi dan kekuatan bangunan tetapi juga mempertimbangkan nilai seni atau artistik bangunan. Dengan demikian sering dijumpai bangunan yang tidak simetri sebagai pertimbangan dari nilai artistik tersebut. Dalam mendesain bangunan bertingkat sangat mempertimbangkan beban gempa yang merupakan salah satu beban sementara yang penting untuk diperhitungkan bagi struktur didaerah rawan gempa. Gaya gempa cenderung menimbulkan gaya lateral pada struktur yang menimbulkan simpangan relatif, gaya geser dasar, dan momen guling dasar.

Tujuan penelitian untuk menganalisis seberapa besar pengaruh bangunan dengan loncatan bidang muka terhadap posisi dan variasi ketinggian dinding geser terhadap simpangan relatif, gaya geser dasar, momen guling dasar, dan momen torsi pada struktur portal dinding 3D dengan menggunakan eksitasi riwayat waktu El Centro. Metode yang dilakukan adalah dengan memposisikan dan memvariasikan dinding geser sebesar 100% ,80 %, 60%, dan 50% pada bangunan dengan loncatan bidang muka sebesar 33%B.

Proses analisis dinamis dilakukan dengan menggunakan program komputer yang merupakan aplikasi dari fasilitas program SAP 2000. Hasil program berupa simpangan relatif, simpangan antar tingkat, gaya geser dasar, momen guling dasar, momen torsi dan perbandingan A V ratio maksimum dengan frekuensi bangunan.

Pada analisis sebelumnya digunakan ukuran kolom 50 70 dan balok 35 70 dan dengan posisi dinding geser yang sama didapatkan bangunan yang masih sangat kaku untuk menahan beban gempa yang ditinjau dari parameter-parameter respon struktur.

Hasil penelitian ini adalah bahwa pada variasi I, II, III, IV, V, dan VI merupakan variasi yang paling efektif dan aman ditinjau dari simpangan antar tingkat yang sesuai dengan PPKURG 1987 dengan menggunakan eksitasi gempa El Centro dari berbagai macam arah sudut datang gempa. Dengan nilai gaya geser dasar sebesar 12740 kN atau terjadi kenaikan 111,66% dari variasi I, nilai momen guling dasar sebesar 397100 kN-m atau terjadi kenaikan 146,32% dari variasi I, dan momen torsi sebesar 6,8895 kN-m.

BAB I

PENDAHULUAN

Permasalahan yang ada pada dinamika struktur yang diakibatkan oleh guncangan gempa yang sangat menarik untuk diteliti dan untuk dipelajari. Bab ini berisi tentang latar belakang masalah, rumusan masalah, tujuan penelitian, manfaat penelitian, dan batasan masalah, sebagaimana yang akan diuraikan berikut ini.

1.1. Latar Belakang Masalah

Perancangan gedung bertingkat banyak (*multy story building*) harus memperhitungkan beban-beban yang bekerja secara dominan. Selain beban mati dan beban hidup, beban yang harus diperhitungkan adalah beban gempa. Beban gempa merupakan salah satu beban sementara yang penting untuk diperhitungkan bagi struktur di daerah rawan gempa.

Gempa mempunyai kecenderungan menimbulkan gaya-gaya lateral pada struktur yang menimbulkan simpangan, gaya geser, dan momen guling. Selama gempa bumi bangunan mengalami gerakan vertikal dan gerakan horizontal. Kedua gaya ini, gaya dalam arah vertikal hanya sedikit mengubah gaya gravitasi yang bekerja pada struktur, sedangkan struktur biasanya direncanakan terhadap gaya vertikal dengan faktor keamanan yang memadai. Oleh sebab itu, struktur umumnya jarang sekali runtuh akibat gaya beban vertikal. Dan sebaliknya gaya gempa horizontal menyerang titik-titik lemah struktur yang kekuatannya tidak memadai, dan

dapat menyebabkan keruntuhan (*failure*). Atas dasar alasan ini, prinsip utama dalam perancangan tahan gempa ialah meningkatkan kekuatan struktur terhadap gaya lateral yang umumnya tidak memadai. Kemajuan teknologi telah menghasilkan berbagai mode untuk mengurangi kerusakan suatu struktur akibat gempa yaitu dengan menggunakan peredam dan dinding geser.

Sistem struktur utama yang dapat dipakai untuk meningkatkan daya tahan terhadap gempa (terutama horizontal) dari gedung bertingkat banyak adalah portal terbuka (*open frame*), portal dinding (*wall-frame*), dinding geser (*shear wall*) dan portal dengan penyokong diagonal (*diagonal-braced frame*) (Muto, 1987).

Kombinasi pemakaian dinding geser dan portal (*wall-frame*) berfungsi sebagai penahan gaya horizontal beban gempa sehingga bangunan terhindar dari bahaya keruntuhan. Fungsi portal dinding tidak hanya mengurangi defleksi pada bagian-bagian struktur seperti pertemuan antara balok dan kolom, dan dapat menjaga tidak berpindah posisi sendi plastis sebelum runtuh. Disamping itu portal dinding juga mempunyai kemampuan untuk melindungi komponen non struktur, seperti penyimpangan relatif antar tingkat (*inter-storey drifts*) yang lebih kecil dibandingkan portal terbuka (Muto, 1987).

Daya tahan balok yang dihubungkan dengan dinding geser akan besar pengaruhnya terhadap distribusi momen lentur dan deformasi lentur. Disamping itu portal dinding mempunyai kekuatan untuk menahan gaya horizontal yang cukup besar dan mempunyai kekakuan yang lebih besar dibandingkan dengan portal, sehingga memberikan kekakuan tambahan terhadap struktur secara keseluruhan.

Kekakuan yang cukup besar diharapkan dapat mengendalikan simpangan lateral yang terjadi (Widodo, 1998).

Bentuk bangunan yang berkembang menuntut fungsi bangunan, juga harus mempunyai nilai artistik, sehingga banyak menuntut bangunan yang tidak selamanya simetris sebagai konsekuensi dari artistik tersebut. Pekerjaan bangunan yang asimetris akan memberikan pekerjaan tambahan pada perhitungan kekuatan struktur dengan adanya torsi pada bangunan. Kenyataan yang terjadi di lapangan bangunan asimetris banyak dijumpai. Bangunan yang asimetris pada bangunan tingkat banyak dengan loncatan bidang muka (*set-back*) akan memberikan perubahan elevasi struktur yang mengakibatkan reduksi kekakuan dan massa yang cukup signifikan sehingga memungkinkan struktur mengalami penyimpangan relatif antar tingkat dan torsi yang cukup besar.

Eksitasi riwayat waktu merupakan sejarah penggoyangan terhadap waktu yang berupa rekaman percepatan tanah akibat goncangan gempa terhadap fungsi waktu. Beban eksitasi riwayat waktu merupakan beban dinamik, yang digunakan pada gedung-gedung dengan loncatan bidang muka yang besar, gedung-gedung yang sangat tidak beraturan, gedung-gedung dengan kekakuan tingkat yang tidak sama, gedung-gedung dengan ketinggian lebih dari 40 m, dan gedung-gedung yang bentuk, ukuran dan peruntukannya tidak umum.

Semakin tinggi suatu bangunan, aksi gaya lateral semakin penting. Pada ketinggian tertentu ayunan lateral bangunan menjadi besar, sehingga pertimbangan atas kekakuan, kekuatan bahan struktur, dan menentukan rancangan. Karena derajat kekakuannya sangat tergantung pada jenis sistem struktur yang dipilih. Dan efisiensi

suatu sistem tertentu berkaitan langsung dengan jumlah bahan yang digunakan. Dengan optimasi suatu struktur untuk kebutuhan ruang tertentu harus menghasilkan kekakuan yang maksimum dan volume yang sekecilnya, sehingga akan dihasilkan sistem struktur yang inovatif dan dapat diterapkan pada batas tertentu. Perpaduan antara dinding geser dengan portal pada suatu struktur di Indonesia masih kurang efektif karena belum memperhitungkan posisi dan ketinggian dinding geser.

1.2 Rumusan Masalah

Berdasarkan latar belakang yang ada, peneliti merumuskan sebuah masalah yaitu seberapa besarkah pengaruh variasi posisi dan ketinggian dinding geser terhadap parameter-parameter respon struktur berupa simpangan relatif, gaya geser momen guling dan momen torsi yang terjadi pada bangunan dengan loncatan bidang muka (*setback*) sebesar 33%B akibat eksitasi riwayat waktu (*time history*) guncangan gempa yaitu El Centro.

1.3 Tujuan Penelitian

Tujuan dari penelitian ini adalah untuk mengetahui keefektifan variasi posisi dan ketinggian dinding geser terhadap parameter-parameter respon struktur berupa simpangan relatif, gaya geser, momen guling dan momen torsi pada bangunan dengan loncatan bidang muka dengan menggunakan analisis dinamis tiga dimensi dan eksitasi riwayat waktu (*time history*) guncangan gempa yaitu El Centro.

1.4 Manfaat Penelitian

Manfaat dari penelitian ini adalah untuk:

1. mengetahui keefektifan posisi dan ketinggian dinding geser ditinjau dari simpangan, gaya geser, momen torsi, dan momen guling akibat guncangan gempa El Centro,
2. dijadikan sebagai bahan pertimbangan untuk desain bangunan bertingkat tinggi tahan gempa dengan menggunakan posisi dan ketinggian dinding geser, dan
3. dijadikan sebagai bahan perbandingan dengan metode analisis statik.

1.5 Batasan Masalah

Batasan masalah dalam penelitian tugas akhir ini adalah:

1. Model struktur berupa gedung dengan ketinggian bangunan 48 meter dengan loncatan bidang muka sebesar 33%B dengan tiga variasi posisi dinding geser dan variasi ketinggian dinding geser sebesar 100%, 80%, 60%, 50%,
2. Sistem penahan gaya adalah dinding geser menerus,
3. Analisis struktur menggunakan program SAP 2000,
4. Pengeluaran hasil menggunakan aplikasi *Microsoft Excel*,
5. Bentuk struktur bangunan asimetris sehingga pusat kekakuan struktur tidak berhimpit dengan pusat massa,
6. Analisis dinamika struktur dibatasi pada kondisi linier elastis,
7. Tinjauan arah pembebanan searah sumbu-x yang diputar berlawanan arah jarum jam pada arah 0° , 30° , 45° , 60° , dan 90° ,

8. Input berupa eksitasi rekaman gempa El Centro, dan
9. Hubungan antara struktur dengan tanah dianggap jepit.

BAB II

TINJAUAN PUSTAKA

Tinjauan pustaka merupakan kerangka teoritis yang akan dijadikan sebagai landasan pemikiran, dan mempertajam konsep yang digunakan, dan memuat penelitian yang sebelumnya untuk menghindari penggandaan dari penelitian sebelumnya. Bab ini berisi tentang tinjauan umum dan penelitian sejenis sebelumnya sebagaimana yang akan diuraikan sebagai berikut ini.

2.1 Tinjauan Umum

Dinding geser adalah unsur pengaku vertikal yang dirancang untuk menahan gaya lateral atau gempa yang bekerja pada bangunan. Fungsi dinding geser dalam struktur bangunan akan memberikan kekuatan, kekakuan dan daktilitas struktur (Park dan Paulay, 1974).

Dinding geser daktail adalah suatu dinding tanpa lubang-lubang yang mempunyai pengaruh penting terhadap perilaku dari struktur gedung yang bersangkutan, dan baru akan runtuh secara daktail setelah beberapa dari tulangan vertikalnya meleleh dalam tarikan akibat momen (Yayasan Badan Penerbit Pekerjaan Umum).

Struktur dinding geser pada umumnya mempunyai kekuatan yang cukup besar sehingga dapat menahan beban horizontal yang cukup. Kadang-kadang direncanakan seluruh beban horizontal pada struktur dinding geser, dan ada juga

suatu bangunan yang sebagian gaya horizontalnya akan ditahan oleh struktur dinding geser (Widodo, 1998).

Dinding geser pada sebuah bangunan portal seharusnya dijadikan penyeimbang yang memiliki kekakuan yang diperlukan untuk mengurangi simpangan relatif antar tingkat yang disebabkan gerakan tanah, dinding geser akan memperkecil momen tambahan (*P- Δ effect*), gaya geser aksial yang terjadi pada portal dapat dikurangi.

Disamping mempunyai kekuatan yang besar, struktur dinding umumnya sangat kaku dibanding kolom, sehingga struktur ini memberikan kekakuan tambahan terhadap struktur secara keseluruhan kekakuan yang cukup diharapkan dapat mengendalikan simpangan yang terjadi.

Perbandingan antara tinggi dan lebar dinding geser akan mempunyai arti yang sangat penting. Apabila perbandingan terlalu besar atau lebar dinding geser relatif kecil, maka struktur kurang memiliki kekakuan yang cukup serta diperlukan baja tulangan yang cukup besar. Akibatnya lengan momen antara gaya desak dan gaya tarik menjadi relatif kecil. Karena lengan momen relatif kecil maka kadang-kadang keseimbangan momen sulit diperoleh sehingga diperlukan kemampuan desak maupun tarik baja yang relatif besar dan struktur berperilaku secara dominan terhadap gaya momen (Widodo, 1998).

2.2 Penelitian Sejenis Sebelumnya

Beberapa penelitian sebelumnya yang digunakan sebagai tinjauan pustaka pada penelitian ini adalah sebagai berikut ini.

1. Penelitian Adinata dan Gunawan (2002)

Kedua peneliti mengambil bahasan dengan judul *Analisis Dinamis 3D Pengaruh Jumlah Dan Ketinggian Dinding Geser Portal Terhadap Simpangan, Gaya Geser, Dan Momen Guling Menggunakan Eksitasi Gempa El Centro*. Dalam penelitian ini meninjau penggunaan dinding geser dengan jumlah dan ketinggian yang makin bertambah pada struktur bangunan bertingkat akan lebih memperkaku struktur. Pada variasi dengan jumlah dinding geser 3 (tiga) dan dengan ketinggian sebesar 80% dari total tinggi struktur lebih efektif.

2. Penelitian Daud dan Sariyadi (2001)

Topik penelitian ini mengenai *Analisis Dinamis 3D Pada Dinding Geser dengan Variasi Loncatan Bidang Muka Bangunan*. Pada penelitian ini beban gempa yang digunakan masih menggunakan statik ekuivalen, sehingga kurang sesuai dengan kondisi gempa yang sebenarnya, bila gedung tersebut memiliki $h > 40\text{m}$ maka harus dianalisis secara dinamik dengan beban gempa sebenarnya yaitu riwayat waktu (*time history*).

3. Penelitian Husni dan Suwarjono (2002)

Kedua peneliti mengambil bahasan mengenai *Analisis Dinamika 3D Pada Portal Dinding Dengan Variasi Loncatan Bidang Muka Menggunakan Eksitasi Riwayat Waktu*. Dalam penelitian ini didapatkan bahwa keadaan bangunan *setback* sebesar 33%B adalah yang paling stabil, dengan momen torsi terkecil.

BAB III

LANDASAN TEORI

Landasan teori adalah teori-teori yang dipakai untuk pemecahan masalah dan merumuskan hipotesis pada suatu penelitian ilmiah. Bab ini berisi tentang beban rencana gempa, analisis dinamis, persamaan gerak akibat beban gempa, loncatan bidang muka, dan perencanaan dimensi dinding geser.

3.1 Beban gempa rencana

Gempa menggocangkan gedung pada arah tiga dimensi yaitu dua pada arah horizontal dan satu arah vertikal. Gaya vertikal kadang-kadang sampai dua per tiga gaya horizontalnya walaupun demikian gaya vertikal itu dianggap tidak ada karena pemberian angka keamanan pada beban mati ditambah beban hidup yang pembesaran gaya batang akibat beban arah vertikal tidak berpengaruh karena sudah cukup besar yaitu:

- a. untuk beban mati dan hidup

$$U_1 = 1,2 U_D + 1,6 U_L$$

- b. Jika diberi beban gempa

$$U_2 = 1,05 (U_D + U_{LR} + U_E)$$

dengan:

$$U_D = \text{beban mati,}$$

$$U_L = \text{beban hidup,}$$

U_{LR} = beban hidup tereduksi,

U_E = beban gempa.

3.2 Analisis Dinamis

Pada ilmu statika keseimbangan gaya-gaya didasarkan atas kondisi statik, artinya beban statis tidak akan mengalami perubahan intensitas, maka penyelesaian statis merupakan penyelesaian tunggal, artinya penyelesaian cukup dilakukan sekali saja.

Beban dinamis merupakan fungsi berubah waktu. Oleh karena itu penyelesaian persoalan merupakan fungsi dari waktu yang mana solusi selengkapnya dapat dikerjakan secara berulang-ulang bergantung pada fungsi waktu yang ditinjau.

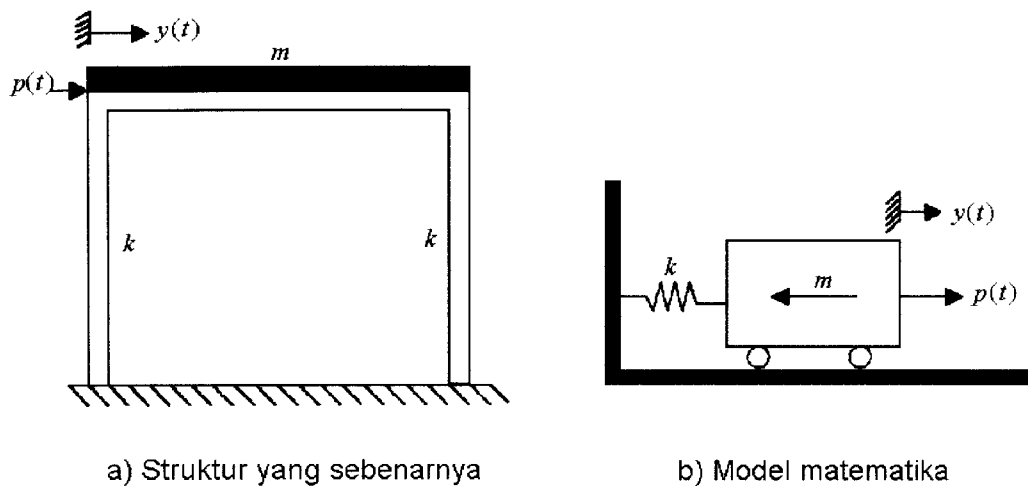
Analisis dinamis dalam menentukan gaya geser tingkat akibat gerakan tanah oleh gempa dan dapat dilakukan dengan cara analisis respon spektrum (*spektrum response*) dan analisis respon riwayat waktu (*time history response*). Bagian gaya geser tingkat tersebut adalah untuk menggantikan pembagian yang didapat dari analisis statis ekuivalen untuk gedung-gedung yang tidak memerlukan analisis dinamis.

Dalam Pedoman Perencanaan Ketahanan Gempa untuk Rumah dan Gedung pasal 2.5 (Yayasan Badan Penerbit PU, 1987) disebutkan bahwa analisis dinamis harus dilakukan untuk struktur:

1. gedung-gedung yang strukturnya sangat tidak beraturan (titik berat berjauhan dengan pusat kekakuan),
2. gedung-gedung dengan loncatan bidang muka yang besar (bagian atas gedung ada dimensinya yang mengecil),

3. gedung-gedung dengan tingkat kekakuan yang tidak seragam akibat dari (2) atau dimensi kolom yang bervariasi tiap tingkat,
4. gedung-gedung yang lebih tinggi dari 40 meter, dan
5. gedung-gedung yang bentuk, ukuran, dan penggunaannya tidak umum.

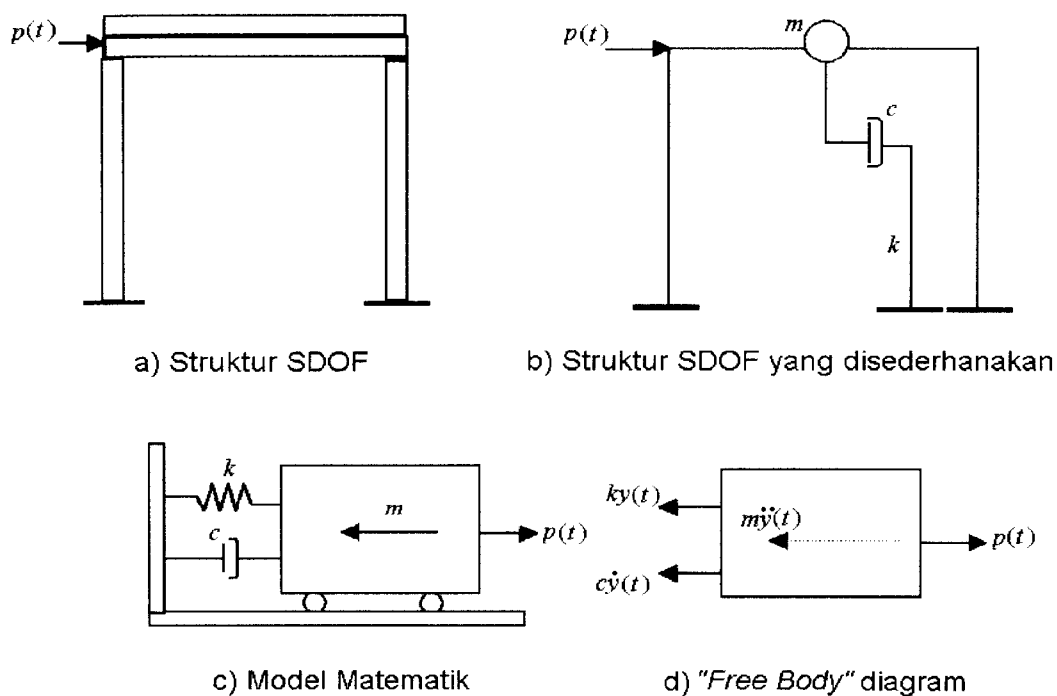
Hubungan antara struktur yang sesungguhnya dengan representasi secara matematik disebut model matematika, sebagai contoh seperti Gambar 3.1.



Gambar 3.1 Struktur yang disederhanakan
(Widodo, 2001)

3.2.1 Persamaan gerak derajat kebebasan tunggal (SDOF)

Struktur dengan derajat kebebasan tunggal atau *single degree of freedom* adalah derajat independensi yang diperlukan untuk menyatakan posisi suatu sistem pada suatu saat tertentu. Jadi sistem kebebasan berderajat tunggal adalah suatu sistem yang mempunyai titik yang dapat berpindah secara bebas, untuk menyusun persamaan differensial gerak (*differential equation of motion*) untuk sistem dengan derajat kebebasan tunggal dapat diambil suatu model struktur SDOF seperti Gambar 3.2.



Gambar 3.2 Struktur SDOF
(Widodo, 2001)

Simbol $p(t)$ pada Gambar 3.2.a adalah beban dinamis yang merupakan fungsi dari waktu, Gambar 3.2.b adalah penyederhanaan stuktur atau struktur yang diidealkan agar dapat dipahami secara matematika. Simbol-simbol m , c , dan k seperti tampak pada Gambar 3.2 dengan notasi:

m = massa struktur yang diidealkan menggumpal pada suatu tempat (*lumped mass*) termasuk berat kolom dan bagian-bagian struktur lain,

c = sistem peredam (*damper*) yaitu sistem yang mampu menyerap atau melepaskan sejumlah energi pada saat terjadi getaran,

k = kekauan struktur yang dimanifestasikan oleh kekuatan kolom apabila struktur tersebut mendapat pembabana horizontal, dan

$p(t)$ = beban dinamis.

Berdasarkan keseimbangan dinamis menurut *free body diagram* pada Gambar 3.2.d maka diperoleh:

$$F_M(t) + F_D(t) + F_S(t) = p(t), \quad (3.1)$$

Dengan:

$$F_M(t) = m \ddot{y}(t), F_D(t) = c \dot{y}(t) \text{ dan } F_S(t) = ky(t) \quad (3.2)$$

Yang mana $F_M(t)$ adalah gaya inersia, $F_D(t)$ adalah gaya redam, $F_S(t)$ adalah gaya tarik/desak pegas yang merepresentasikan kekakuan kolom, $p(t)$ adalah beban dinamis, $\ddot{y}(t)$, $\dot{y}(t)$ dan $y(t)$, masing-masing adalah percepatan, kecepatan serta simpangan dan m , c , serta k masing-masing adalah massa, redaman dan kekakuan kolom.

$$m\ddot{y}(t) + c\dot{y}(t) + ky(t) = p(t) \quad (3.3)$$

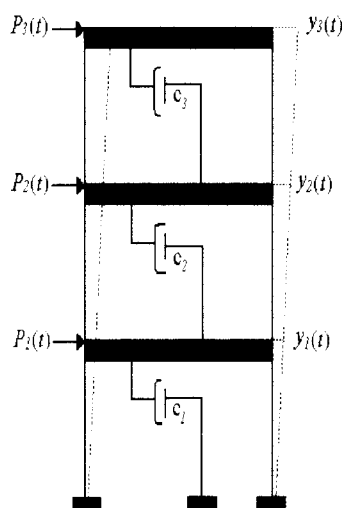
Persamaan 3.3 disebut persamaan diferensial gerakan (*differential equation of motion*) pada struktur dengan derajat kebebasan tunggal.

3.2.2. Persamaan gerak derajat kebebasan banyak (MDOF)

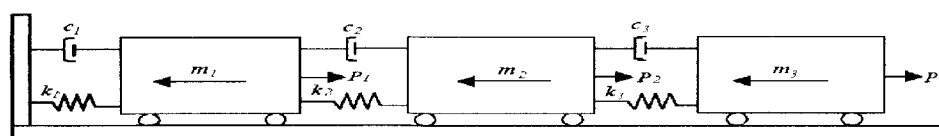
Secara umum struktur bangunan gedung tidak selalu dapat dinyatakan dengan suatu sistem yang mempunyai derajat kebebasan tunggal (SDOF). Umumnya struktur bangunan gedung justru mempunyai derajat kebebasan banyak (*multi degree of freedom*).

Pada struktur bangunan gedung tingkat banyak, umumnya massa struktur dapat digumpalkan (*lumped mass*) pada tiap-tiap tingkat. Banyak derajat kebebasan berasosiasi dengan jumlah massa. Pada struktur yang mempunyai n tingkat, akan mempunyai n mode. Pada prinsip bangunan geser (*shear building*), setiap massa struktur hanya terkonsentrasi pada tiap tingkat bidang lantai balok, pada lantai kaku

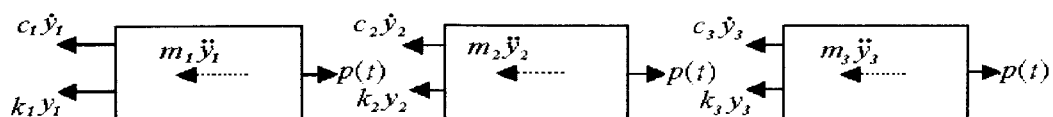
tak berhingga dibandingkan dengan kolom dan deformasi dari struktur tidak dipengaruhi gaya aksial yang terjadi pada kolom (Widodo, 2001). Gambar 3.3.a merupakan model-model yang ekuivalen untuk bangunan geser sedang untuk model matematisnya terdapat pada Gambar 3.3.b. Selanjutnya didapat persamaan-persamaan gerak dari bangunan berlantai tiga yang berasal dari diagram *free body*. Gambar 3.3.c dengan menyamakan jumlah gaya-gaya yang bekerja pada setiap massa sama dengan nol.



Gambar 3.3.a Model Struktur MDOF



Gambar 3.3.b Model matematik struktur MDOF



Gambar 3.3.c Model kesetimbangan gaya
(Widodo, 2001)

Persamaan diferensial untuk bangunan diatas disusun berdasarkan atas goyangan struktur mode pertama. Berdasarkan pada prinsip kesetimbangan dinamik pada gambar diagram *free body*, maka diperoleh:

$$m_1 \ddot{y}_1(t) + c_1 \dot{y}_1(t) + k_1 y_1(t) - k_2 (y_2(t) - y_1(t)) - c_2 (\dot{y}_2(t) - \dot{y}_1(t)) - p_1(t) = 0 \quad (3.4a)$$

$$m_2 \ddot{y}_2(t) + c_2 (\dot{y}_2(t) - \dot{y}_1(t)) + k_2 (y_2(t) - y_1(t)) - k_3 (y_3(t) - y_2(t)) - c_3 (\dot{y}_3(t) - \dot{y}_2(t)) - p_2(t) = 0 \quad (3.4b)$$

$$m_3 \ddot{y}_3(t) + c_3 (\dot{y}_3(t) - \dot{y}_2(t)) + k_3 (y_3(t) - y_2(t)) - p_3(t) = 0 \quad (3.4c)$$

Dari persamaan-persamaan berikut bahwa kesetimbangan dinamik suatu massa yang di tinjau ternyata dipengaruhi oleh kekakuan, redaman, dan simpangan massa sebelum dan sesudahnya. Persamaan dengan sifat-sifat seperti disebut *Couple equation* karena persamaan-persamaan tersebut akan tergantung satu sama lain (Widodo, 2001). Dengan menyusun persamaan diatas menurut parameter yang sama (percepatan, kecepatan dan simpangan), maka persamaan (3.4) dapat ditulis:

$$m_1 \ddot{y}_1(t) + (c_1 + c_2) \dot{y}_1(t) - c_2 \dot{y}_2(t) + (k_1 + k_2) y_1(t) - k_2 y_2(t) = p_1(t) \quad (3.5a)$$

$$m_2 \ddot{y}_2(t) - c_2 \dot{y}_2(t) + (c_2 + c_3) \dot{y}_2(t) - c_3 \dot{y}_3(t) - k_2 y_1(t) + (k_2 + k_3) y_2(t) - k_3 y_3(t) = p_2(t) \quad (3.5b)$$

$$m_3 \ddot{y}_3(t) - c_3 \dot{y}_2(t) + c_3 \dot{y}_3(t) - k_3 y_2(t) + k_3 y_3(t) = p_3(t) \quad (3.5c)$$

Selanjutnya persamaan (3.5) dapat ditulis dalam bentuk matrik sebagai berikut:

$$[M] \{\ddot{y}\} + [C] \{\dot{y}\} + [K] \{y\} = p(t) \quad (3.6)$$

dimana $[M]$, $[C]$, $[K]$ berturut turut adalah matrik massa yang merupakan matrik diagonal sedangkan matrik redaman dan kekakuan merupakan matrik yang simetris,

$$[M] = \begin{bmatrix} m_1 & 0 & 0 \\ 0 & m_2 & 0 \\ 0 & 0 & m_3 \end{bmatrix} \quad (3.7a)$$

$$[C] = \begin{bmatrix} c_1 + c_2 & -c_2 & 0 \\ -c_2 & -c_2 + c_3 & -c_3 \\ 0 & -c_3 & c_3 \end{bmatrix} \quad (3.7b)$$

$$[K] = \begin{bmatrix} k_1 + k_2 & -k_2 & 0 \\ -k_2 & -k_2 + k_3 & -k_3 \\ 0 & -k_3 & k_3 \end{bmatrix} \quad (3.7c)$$

sedangkan untuk vektor percepatan, vektor kecepatan, vektor simpangan dan vektor beban dalam bentuk:

$$\{\ddot{y}\} = \begin{Bmatrix} \ddot{y}_1 \\ \ddot{y}_2 \\ \ddot{y}_3 \end{Bmatrix}, \{\dot{y}\} = \begin{Bmatrix} \dot{y}_1 \\ \dot{y}_2 \\ \dot{y}_3 \end{Bmatrix}, \{y\} = \begin{Bmatrix} y_1 \\ y_2 \\ y_3 \end{Bmatrix} \text{ dan } \{p(t)\} = \begin{Bmatrix} p_1(t) \\ p_2(t) \\ p_3(t) \end{Bmatrix} \quad (3.8)$$

3.2.3 Nilai Karakteristik (*Eigen Problem*)

Struktur akan bergoyang apabila memperoleh pembebanan dari luar, misalnya akibat beban angin, getaran akibat mesin (beban harmonik) ataupun akibat beban gerakan tanah atau gempa. Gerakan tersebut dikelompokkan sebagai getaran dipaksa (*force vibration system*). Analisis getaran dibagi menjadi dua yaitu getaran bebas (*free vibration*) dan getaran dipaksa (*forced vibration*).

Getaran atau goyangan suatu struktur yang disebabkan oleh adanya kondisi awal (*initial values*) baik berupa simpangan awal maupun kecepatan awal disebut getaran bebas (*free vibration system*). Pada kenyataan getaran bebas (*free vibration system*) jarang terjadi pada struktur MDOF, tetapi jenis getaran ini akan diperoleh suatu besaran atau karakteristik dari struktur yang selanjutnya akan sangat berguna

untuk pembahasan-pembahasan respon struktur berikutnya. Besaran-besaran tersebut adalah frekuensi dan normal mode (*mode shape*).

Pada getaran bebas untuk struktur dengan derajat kebebasan banyak, maka persamaan diferensial geraknya adalah seperti persamaan (3.6) dengan nilai $\{p(t)\}$ sama dengan nol, yaitu:

$$[M]\{\ddot{y}\} + [C]\{\dot{y}\} + [K]\{y\} = 0 \quad (3.9)$$

Frekuensi sudut pada struktur redaman (*damped frequency*) nilainya hampir sama dengan frekuensi pada struktur tanpa redaman, bila nilai rasio tanpa redaman (*damping ratio*) cukup kecil dan diadopsi untuk struktur dengan derajat kebebasan banyak. Untuk nilai $[C] = 0$, persamaan (3.9) menjadi:

$$[M]\{\ddot{y}\} + [K]\{y\} = 0 \quad (3.10)$$

Persamaan (3.10) adalah persamaan diferensial pada struktur MDOF dianggap tidak mempunyai redaman, maka penyelesaian persamaan tersebut diharapkan dalam fungsi harmonik. Penyelesaian persamaan (3.10) dalam fungsi harmonik dapat ditulis:

$$y(t) = \{\Phi\}_j \sin(\omega t), \quad (3.11a)$$

$$\dot{y}(t) = \omega \{\Phi\}_j \cos(\omega t), \text{ dan} \quad (3.11b)$$

$$\ddot{y}(t) = -\omega^2 \{\Phi\}_j \sin(\omega t). \quad (3.11c)$$

Dengan $\{\Phi\}_j$ adalah suatu ordinat massa pada *mode* ke-*j* persamaan (3.11) disubstitusikan kedalam persamaan (3.10), sehingga akan diperoleh:

$$-\omega^2 [M] \{\Phi\}_j \sin(\omega t) + [K] \{\Phi\}_j \sin(\omega t) = 0, \text{ atau} \\ ([K] - \omega^2 [M] \{\Phi\}_j) \quad (3.12)$$

Persamaan tersebut adalah persamaan yang disebut *eigen problem* atau *problem karakteristik*. Persamaan simultan yang homogen maupun tidak homogen dapat diselesaikan memakai dalil *Cramer* (1704-1752). Dalil tersebut menyatakan bahwa penyelesaian persamaan simultan yang homogen akan ada nilainya apabila determinan dari matrik yang merupakan koefisien dari vektor $\{\Phi\}_j$ adalah nol, sehingga

$$([K] - \omega^2[M]) = 0. \quad (3.13)$$

Jumlah mode pada struktur dengan derajat kebebasan banyak biasanya dapat dihubungkan dengan jumlah massa. Mode itu sendiri adalah ragam goyangan suatu struktur bangunan. Apabila jumlah derajat kebebasan n , maka persamaan (3.13) akan menghasilkan satu polinomial pangkat n yang frekuensi sudut $\{\omega_j\}$ disubstitusikan kedalam persamaan (3.12) sehingga diperoleh nilai-nilai $\Phi_1, \Phi_2, \Phi_3, \dots, \Phi_n$.

3.2.4 Frekuensi Sudut dan Normal Mode

Setiap struktur yang dibebani dengan beban dinamik akan mengalami goyangan. Untuk struktur derajat kebebasan banyak, maka struktur yang bersangkutan akan mempunyai banyak ragam pola goyangan. *Normal mode* adalah suatu istilah yang sering dipakai pada problem dinamika struktur, dan kata tersebut diterjemahkan sebagai ragam atau pola goyangan (Widodo, 2001). Suatu persamaan diferensial gerakan dapat diperoleh dengan memperhatikan diagram gaya (*free body diagram*). Untuk menghitung sekaligus menggambarkan *normal mode*, maka diambil

model struktur 3 DOF dengan mengabaikan redaman (c) sehingga persamaan menjadi:

$$m_1 \ddot{y}_1(t) + k_1 y_1(t) - k_2 (y_2(t) - y_1(t)) = 0, \quad (3.14a)$$

$$m_2 \ddot{y}_2(t) + k_2 (y_2(t) - y_1(t)) - k_3 (y_3(t) - y_2(t)) = 0 \quad (3.14b)$$

$$m_2 \ddot{y}_2(t) + k_3 (y_3(t) - y_2(t)) = 0 \quad (3.14c)$$

Persamaan (3.14) dapat ditulis dalam bentuk sederhana, yaitu:

$$m_1 \ddot{y}_1(t) + (k_1 + k_2) y_1(t) - k_2 y_2(t) = 0, \quad (3.15a)$$

$$m_2 y_2(t) + k_2 y_1(t) + (k_2 + k_3) y_2(t) - k_3 y_3(t) = 0, \text{ dan} \quad (3.15b)$$

$$m_2 y_2(t) - k_3 y_2(t) + k_3 y_3(t) = 0. \quad (3.15c)$$

Persamaan (3.15) juga dapat ditulis dalam bentuk matriks, yaitu:

$$\begin{bmatrix} m_1 & 0 & 0 \\ 0 & m_2 & 0 \\ 0 & 0 & m_3 \end{bmatrix} \begin{Bmatrix} \ddot{y}_1 \\ \ddot{y}_2 \\ \ddot{y}_3 \end{Bmatrix} + \begin{bmatrix} k_1 + k_2 & -k_2 & 0 \\ -k_2 & -k_2 + k_3 & -k_3 \\ 0 & -k_3 & k_3 \end{bmatrix} \begin{Bmatrix} y_1 \\ y_2 \\ y_3 \end{Bmatrix} = \begin{Bmatrix} 0 \\ 0 \\ 0 \end{Bmatrix} \quad (3.16)$$

Selanjutnya *eigen problem* dapat ditulis menjadi,

$$\begin{bmatrix} (k_1 + k_2) - \omega^2 m_1 & k_2 & 0 \\ -k_2 & (k_2 + k_3) - \omega^2 m_2 & -k_3 \\ 0 & -k_3 & k_3 - \omega^2 m_2 \end{bmatrix} \begin{Bmatrix} \Phi_1 \\ \Phi_2 \\ \Phi_3 \end{Bmatrix} = \begin{Bmatrix} 0 \\ 0 \\ 0 \end{Bmatrix} \quad (3.17)$$

Dengan Φ adalah nilai atau ordinat yang berhubungan dengan massa ke- i pada pola goyangan ke- j . Persamaan (3.17) akan ada penyelesaian apabila dipenuhi nilai determinannya, yaitu:

$$\begin{bmatrix} (k_1 + k_2 - \omega^2 m_1) & -k_2 & 0 \\ -k_2 & (k_2 + k_3) - \omega^2 m_2 & -k_3 \\ 0 & -k_3 & k_3 - \omega^2 m_2 \end{bmatrix} = 0 \quad (3.18)$$

Apabila persamaan (3.18) tersebut diteruskan, maka nilai determinannya adalah:

$$\begin{aligned} & (k_3(k_2 + k_3))\{(k_1 + k_2) - \omega^2\} - (k_2 + k_3)\{k_3 m_2 \omega^2 - (m_2 m_3 \omega^2) + k_3^2\} - \\ & \omega^4 \{(k_3 m_3 m_2) - ((k_2 + k_3)m_1 m_3) + (m_1 m_2 m_3 \omega^2)\} + k_2^2(k_3 - \omega^2 m_3) \\ & m_1 \omega^2 k_3^2 = 0 \end{aligned} \quad (3.19)$$

Determinan persamaan (3.19) akan menghasilkan persamaan polinomial dengan derajat $-n$ yang menghasilkan nilai ω , maka dengan mensubstitusikan kedalam persamaan (3.17) akan menghasilkan nilai vektor *mode shape* $\{\Phi\}$. Nilai-nilai dalam persamaan *mode shape* umumnya ditulis dalam bentuk baku yaitu Φ_{ij} . Indeks $-i$ menunjukkan massa dan indeks $-j$ menunjukkan nomor pola goyangan, dengan demikian Φ_{ij} adalah suatu ordinat yang berhubungan dengan massa ke- i pada pola goyangan ke- j . Substitusi ω_1 kedalam persamaan (3.17) akan diperoleh nilai-nilai koordinat untuk pola goyangan ke-1, substitusi ω_2 akan diperoleh berupa nilai-nilai koordinat untuk pola goyangan ke-2, dan substitusi ω_3 akan diperoleh berupa nilai-nilai koordinat untuk pola goyangan ke-3. Nilai Φ_{ij} dapat ditulis dalam bentuk matriks yang umum disebut modal matriks, yaitu:

$$\Phi_{ij} = \begin{bmatrix} \Phi_{11} & \Phi_{12} & \Phi_{13} \\ \Phi_{21} & \Phi_{22} & \Phi_{23} \\ \Phi_{31} & \Phi_{32} & \Phi_{33} \end{bmatrix} \quad (3.20)$$

Dengan diperoleh nilai-nilai frekuensi sudut untuk setiap mode, maka akan diperoleh pula nilai periode getar (T) dan nilai frekuensi struktur (f) dengan bentuk:

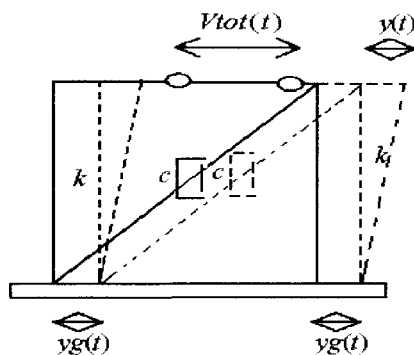
$$T = \frac{2\pi}{\omega} \quad \text{dan} \quad f = \frac{1}{T} \quad (3.21)$$

Nilai-nilai *mode shape* Φ_{ij} tidak tergantung pada beban luar, melainkan tergantung dari properti fisik struktur, misalnya massa m_1 dan kekakuan tingkat k_1 . Selain itu nilai-nilai *mode shape* tidak dipengaruhi oleh waktu, artinya nilai tersebut akan tetap asal nilai massa dan nilai kekakuan tingkatnya tidak berubah, nilai *mode shape* juga tidak dipengaruhi oleh frekuensi beban. Dengan demikian dapat ditarik kesimpulan bahwa nilai *mode shape* adalah:

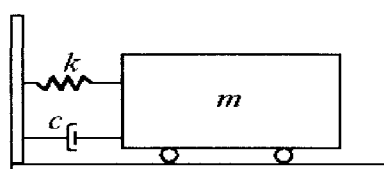
- a. bebas dari pengaruh redaman,
- b. bebas dari pengaruh waktu,
- c. bebas dari pengaruh frekuensi beban, dan
- d. hanya ada struktur yang elastik dan linier.

3.3 Persamaan Gerak Akibat Beban Gempa

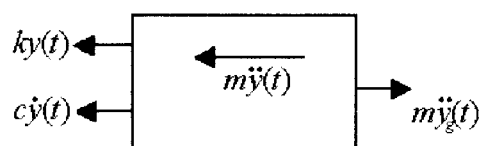
Beban gempa merupakan beban yang bekerja pada struktur akibat getaran yang dipaksa (*forced vibration*). Beban gempa berasal dari getaran pada permukaan tanah yang terekam dalam bentuk percepatan (*accelerogram*). Getaran di permukaan tanah yang berupa percepatan tanah akan menghasilkan simpangan horizontal baik pada tanah maupun struktur. Persamaan gerakan struktur yang dikenai beban gempa dapat diturunkan melalui suatu pendekatan yang sama pada persamaan gerakan struktur berderajat kebebasan tunggal, Gambar 3.4.



a) Struktur SDOF



b) Model matematika



c) Free body diagram

Gambar 3.4 Sistem derajat kebebasan tunggal dengan beban gempa (Widodo 2001)

Berdasarkan pada *free body diagram* 3.4.c maka persamaan diferensial gerak adalah,

$$m\ddot{y}_1 + c\dot{y}_1 + ky_1 = 0 \quad (3.22)$$

dimana \ddot{y}_1 , \dot{y}_1 dan y_1 berturut-turut adalah percepatan, kecepatan, dan simpangan absolut massa yang dihitung dari referensi awal.

$$y_1 = y_g + y$$

$$\dot{y}_1 = \dot{y}_g + \dot{y} \quad (3.23)$$

$$\ddot{y}_1 = \ddot{y}_g + \ddot{y}$$

Substitusi persamaan 3.23 kedalam persamaan 3.22 menghasilkan persamaan baru

$$m(\ddot{y}_g + \ddot{y}) + c(\dot{y}_g + \dot{y}) + k(y_g + y) = 0 \quad (3.24a)$$

$$m\ddot{y} + c\dot{y} + ky = -m\ddot{y}_g - c\dot{y}_g - ky_g \quad (3.24b)$$

Karena antara tanah dan lantai tingkat belum terjadi perbedaan simpangan maka nilai $-(c\dot{y}_g + ky_g) = 0$, sehingga persamaan menjadi:

$$m\ddot{y} + c\dot{y} + ky = -m\ddot{y}_g \quad (3.25)$$

3.4 Kandungan Frekuensi (*Frequency Contents*)

Persamaan diferensial gerakan suatu massa SDOF tanpa redaman beban harmonik sederhana adalah:

$$y(t) = (P_0 / m(\omega^2 - \Omega^2)) \{ \sin(\Omega t) - (\Omega \sin(\omega t) / \omega) \} \quad (3.27)$$

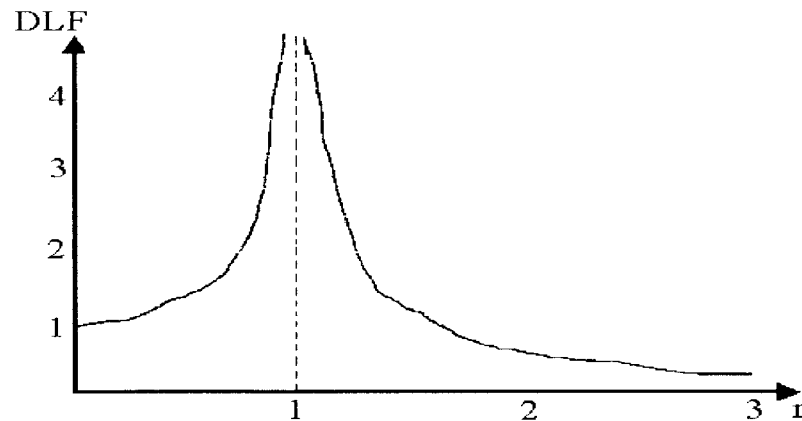
Dengan y (respon struktur), P_0 (beban harmonik), m (massa struktur), ω (frekuensi sudut akibat getaran), dan Ω (frekuensi sudut beban dinamik). Dari persamaan diatas bahwa respon struktur akan dipengaruhi baik oleh frekuensi sudut beban dinamik akibat getaran struktur. Respon struktur terdiri dari dua bagian pokok yaitu *steady state response* yang ditunjukkan oleh suku $\sin(\Omega t)$ dan *transient response* yang ditunjukkan oleh suku $\sin(\omega t)$. Apabila frekuensi sudut beban dinamik sama dengan frekuensi sudut getaran struktur maka nilai penyebut diatas sama dengan nol, sehingga respon struktur menjadi tak terhingga. Keadaan ini disebut resonansi (Gambar 3.5) persamaan (3.27) dapat ditulis dalam fungsi *Dynamic Load Factor* (DLF), yaitu:

$$y(t) = y_M DLF, y_M = P_0 / k, r = \Omega / \omega, \text{ dan } DLF = (1 / \sqrt{1 - r^2}) \{ \sin(\Omega t) - r \sin(\omega t) \} \quad (3.28)$$

Didalam soal-soal praktis, *transient response* sering diabaikan karena nilainya dianggap relatif kecil. Nilai *DLF* akan diperoleh apabila $\sin(\Omega t) = 1$, maka dapat ditulis rumus:

$$DLF = 1/|1-r^2| \quad (3.29)$$

Plot antara DLF dan nilai frekuensi rasio r dapat dilihat pada Gambar 3.5



Gambar 3.5 Grafik DLF lawan frekuensi rasio (Chopra, 1995)

Housner (1971) sudah mensinyalir adanya kandungan frekuensi gempa terhadap respon struktur. Pada dasarnya dalam suatu gempa akan terkandung beberapa frekuensi yang merupakan perbandingan antara percepatan maksimum (A maks) dan kecepatan maksimum (V maks) dan beberapa literatur sering menyebut frekuensi $f = 0.2-10$ Hz. Analisis Housner pada waktu itu timbul karena adanya suatu kenyataan bahwa gempa Koyna, India tahun 1967 yang mempunyai frekuensi 3,46776 Hz dan memiliki kecepatan tanah maksimum jauh lebih besar dari gempa El Centro tahun 1940 yang memiliki percepatan 312,62 cm/dt^2 dan frekuensi 0,96312 Hz, namun kerusakan struktur yang terjadi begitu berarti. Kedekatan frekuensi beban gempa dengan frekuensi beban struktur akan cenderung menyebabkan resonansi yang akan mengakibatkan respon struktur menjadi sangat besar.

3.5 Jenis-Jenis Simpangan dan Efeknya Terhadap Kerusakan Struktur

Jenis-jenis simpangan yang terjadi pada struktur gedung bertingkat umumnya ada tiga macam yaitu simpangan relatif, simpangan antar tingkat dan simpangan absolut. Jenis-jenis simpangan tersebut akan diuraikan sebagai berikut:

1. Simpangan relatif

Simpangan relatif tiap lantai menurut persamaan differensial independen (uncoupling) adalah simpangan suatu massa yang diperoleh dengan menjumlahkan pengaruh atau kontribusi tiap-tiap mode.

$$y_i(t) = \sum \Phi_{ij} \cdot Z_j \quad (3.30)$$

Dengan : $y_i(t)$ = Simpangan relatif lantai ke- i

Φ_{ij} = Mode shape lantai i , mode j , dan

Z_j = Modal amplitudo model j

Simpangan relatif yang besar dapat mengakibatkan terjadinya benturan antar bangunan, sehingga simpangan relatif menentukan jarak antar bangunan agar tidak terjadi benturan antar tingkat disamping perpindahan dukungan bantuan.

2. Simpangan antar tingkat (*inter-story drift*)

Simpangan antar tingkat adalah simpangan yang terjadi pada tiap lantai, simpangan ini dihitung dengan cara simpangan relatif lantai atas dikurangi simpangan relatif lantai dibawahnya. Simpangan antar tingkat yang melebihi persyaratan dapat menimbulkan efek tingkat lemah yang menyebabkan struktur runtuh. *Inter-story drift* dapat dihitung dengan rumus:

$$\Delta y_i(t) = y_i(t) - y_{i-1}(t) \quad (3.31)$$

Dengan : $\Delta y_i(t)$ = simpangan antar tingkat,

y_i = simpangan relatif lantai ke- i , dan

y_{i-1} = simpangan relatif lantai ke- $(i-1)$.

3. Simpangan absolut

Simpangan absolut adalah merupakan penjumlahan antara simpangan relatif tiap lantai dengan simpangan akibat tanah. Simpangan absolut dihitung dengan rumus:

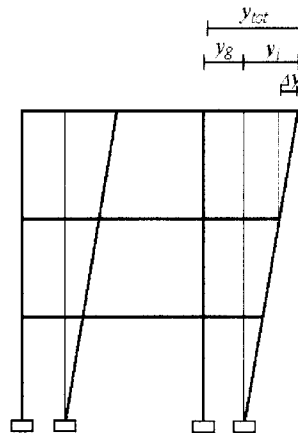
$$y_{tot}(t) = y(t) + y_g(t) \quad (3.32)$$

Dengan: $y_{tot}(t)$ = simpangan absolut,

$y(t)$ = simpangan relatif ke- i , dan

$y_g(t)$ = simpangan akibat tanah.

Simpangan absolut mempunyai pengaruh terhadap kemungkinan terjadinya benturan antar bangunan yang berdekatan (*structural pounding*). Masalah *structural pounding* ini biasanya terjadi pada bangunan yang berdekatan untuk memaksimalkan penggunaan lahan, hal ini dapat mengakibatkan kerusakan yang fatal pada bangunan bahkan dapat menyebabkan kerusakan total. Hal ini dapat diatasi dengan memperhitungkan jarak antara dua bangunan yang berdekatan. Jarak tersebut dapat dihitung dengan menghitung simpangan absolut pada lantai.

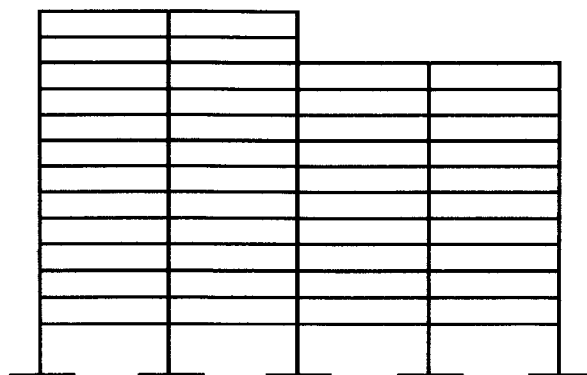


Gambar 3.6 Model struktur dengan jenis-jenis simpangannya
(Widodo, 2001)

3.6 Loncatan Bidang Muka (*setback*)

Untuk gedung-gedung yang mempunyai loncatan bidang muka, ukuran denah dari bagian yang menjulang dalam masing-masing arah adalah paling sedikit 75% dari ukuran terbesar yang bersangkutan untuk bagian sebelah bawahnya, maka pengaruh gempa rencana dapat ditentukan dengan cara beban statik ekuivalen.

Untuk gedung-gedung dengan loncatan bidang muka yang tidak memenuhi pembatasan ini, maka pembagian gaya-gaya geser tingkat sepanjang tinggi gedung harus ditentukan dengan cara analisis dinamis. Salah satu contoh gedung yang mempunyai loncatan bidang muka dapat dilihat pada Gambar 3.7.



Gambar 3.7 Loncatan bidang muka

3.7 Massa Tranlasi dan Rotasi

Massa tranlasi merupakan massa yang banyak bergerak secara horizontal pada arah $-X$ dan arah $-Y$ sedangkan massa rotasi adalah massa yang berotasi pada sumbu $-Z$ akibat adanya beban gempa.

Persamaan massa tranlasi adalah :

$$m_t = \frac{(DL + LL) \times L_x \times L_y}{g} \quad (3.33)$$

Persamaan massa rotasi adalah :

$$m_r = \frac{(L_x + L_y) \times \left(\frac{DL + LL_R}{g} \right)}{12} \quad (3.34)$$

Dengan : L_x = Panjang sisi arah-x pada lantai,

L_y = Panjang sisi arah-y pada lantai,

DL = Beban mati (*dead load*),

LL_R = Beban hidup reduksi (*live load*),

g = Percepatan gravitasi ($9,81 \text{ m/s}^2$).

3.8 Pusat Massa dan Pusat Kekakuan

Pusat massa suatu benda adalah tempat kedudukan titik berat benda tersebut. Pada suatu massa yang terbagi rata maka pusat massanya berhimpit dengan pusat geometrinya. Sedangkan massa yang tidak terbagi rata pusat massa tidak berhimpit dengan pusat geometrinya. Bila bagian massa itu mengalami percepatan horizontal maka terjadi gaya horizontal. Untuk menentukan pusat massa digunakan persamaan:

$$CM = \frac{\sum x_i \cdot m_i}{\sum m_i} \quad (3.35)$$

Dengan : $\sum x_i \cdot m_i$ = Jumlah dari massa dikalikan dengan jarak massa kesisi
acuannya

$$\sum m_i = \text{Jumlah massa}$$

$$CM = \text{Pusat massa (centre of mass)}$$

Kekakuan suatu elemen adalah ketahanan dalam menerima suatu gaya terhadap besarnya perpindahan relatif, sehingga ukuran kekakuan adalah simpangan atau defleksi. Untuk menentukan pusat kekakuan digunakan persamaan:

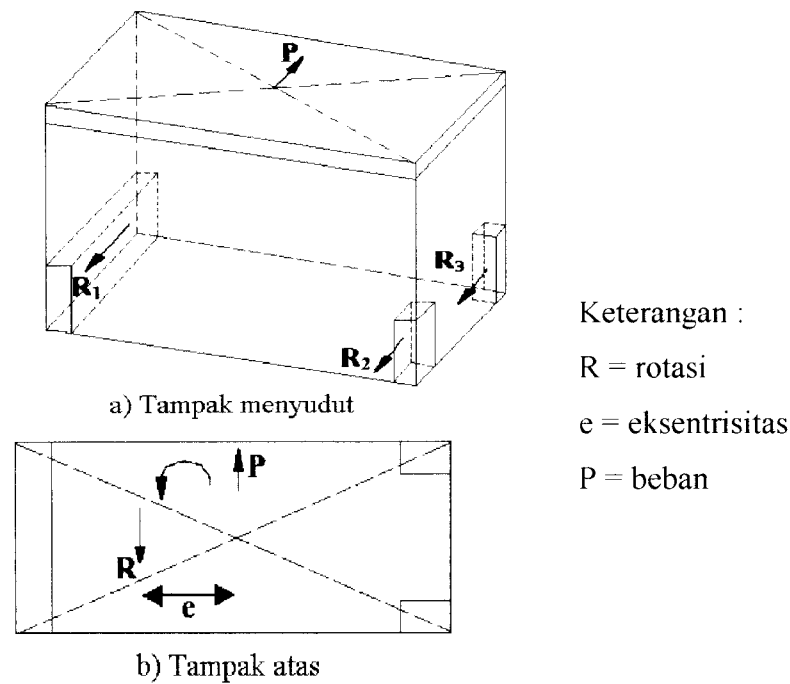
$$CR = \frac{\sum x_i \cdot k_i}{\sum k_i} \quad (3.36)$$

Dengan : $\sum x_i \cdot k_i$ = Jumlah dari kekakuan dikalikan dengan jarak ke pusat massa

$$\sum k_i = \text{Jumlah kekakuan}$$

$$CR = \text{Jumlah kekakuan (centre of rigidity)}$$

Bila massa diatas lantai terbagi rata maka resultante gaya horizontal itu akan melalui tengah-tengahnya. Bila resultante gaya penahan atau pusat kekakuan juga melalui tengah-tengah maka gaya –gaya horizontal itu akan seimbang. Akan tetapi bila gaya yang terjadi pada pusat massa tidak berimpit dengan pusat kekakuannya maka akan timbul rotasi di bidang horizontal dan hal ini menyebabkan gedung mengalami puntiran yaitu bagian atas berputar tetapi bagian bawah (bagian pondasi) tetap seperti pada Gambar 3.8



Gambar 3.8 Torsi pada gedung
(Husni, 2002)

3.9 Stabilitas dan Perencanaan Dinding Geser

Terjadinya lentur pada dinding geser dapat dihindari dengan memakai elemen pembatas (*boundary element*) yang berfungsi untuk mengakukan dinding geser. Elemen pembatas diperlukan bila dinding geser terjadi tegangan akibat terfaktor termasuk pengaruh gempa pada serat terluar mencapai nilai maksimum dan melebihi $0.2 f''c$ (yayasan LPMB, 1991).

Komponen struktur pembatas dalam dinding struktur harus diproporsikan untuk menahan beban gravitasi terfaktor yang bekerja pada dinding termasuk berat sendiri dan gaya vertikal yang diperlukan untuk menahan momen guling yang dihitung dari gaya berfaktor yang berhubungan dengan pengaruh gempa.

Stabilitas dinding geser sangat perlu untuk menjamin kestabilan dinding geser dalam menerima beban. Stabilitas dinding geser juga ditunjukkan agar tampang dapat mengembangkan regangan plastis tanpa mengalami kegagalan. Jika tidak dilakukan terhadap stabilitas maka kemungkinan besar dinding geser runtuh sebelum mengalami regangan plastis (*prematuur*).

Asumsi yang dapat dilakukan terhadap dinding geser untuk menghindari tekuk adalah memperlakukan sebagai kolom (Park dan Paulay, 1974), maka dimensi dinding geser perlu dibatasi.

Batasan dimensi dinding geser adalah

$$B_w = \frac{l_w}{25} \text{ dan} \quad (3.37)$$

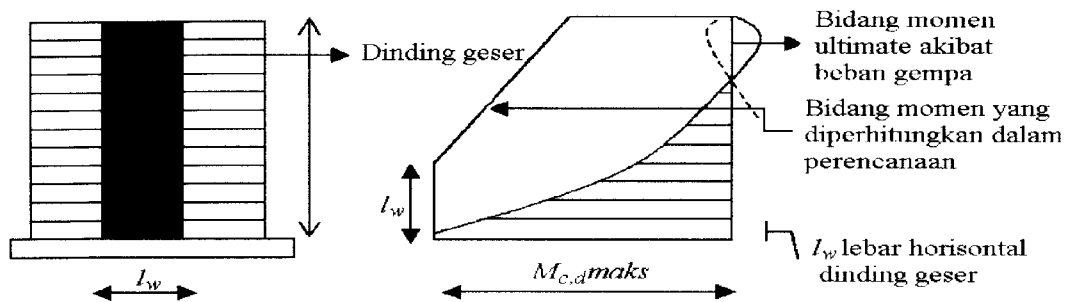
$$B_w > 100 \text{ mm} \quad (3.38)$$

Dengan b_w = tebal dinding

sedangkan batasan untuk sayap adalah

$$l_c \geq 0.10 l_w \quad (3.39)$$

Untuk menjamin agar saat terjadinya gempa kuat dinding geser tetap berperilaku elastis pada penampang dasar, dimana sendi plastis dapat terbentuk, maka bidang momen akibat beban gempa harus digeser keatas sejauh lebar horizontal dinding geser, seperti pada Gambar 3.9



Gambar 3.9 Bidang momen dinding geser akibat beban gempa yang diperhitungkan dalam perencanaan.
(Paulay dan Priestley 1992)

3.10 Gaya Geser Dasar

Gaya geser lantai dapat diperoleh setelah simpangan relatif diperoleh. Gaya horizontal lantai atau gaya lantai maksimum yang bekerja pada suatu massa ke- i sebagai akibat dari mode ke- j dapat dicari yaitu:

$$F_i(t) = \sum_{j=1}^n [M] (\Phi_{ij} Z_j) \quad (3.40)$$

dimana: F_i = gaya lantai ke- i M = massa lantai,

Φ_{ij} = mode shape Z_j = modal amplitudo

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

$$V = - \left(\sum_{i=1}^n F_i \right) \quad (3.41)$$

dimana V = gaya geser dasar, dan

F_i = gaya lantai ke- i

3.11 Momen Guling

Momen guling didapat dengan mengalikan gaya lantai yang terjadi pada setiap tingkat (F_i) dengan tinggi lantai (h_i), maka :

$$M = \sum_{i=1}^n F_i \cdot h_i \quad (3.42)$$

dimana M = momen guling,

F_i = gaya lantai ke- i , dan

h_i = tinggi tiap lantai

BAB IV

METODE PENELITIAN

Metode penelitian merupakan salah satu urutan atau tata cara pelaksanaan penelitian yang diuraikan menurut suatu tahapan yang sistematis. Metode penelitian yang digunakan dalam penelitian tugas akhir ini yaitu pengumpulan data struktur dan parameter bahan, model struktur serta tahapan analisis. Metode penelitian yang digunakan secara sistematis dapat dilihat pada Gambar 4.2, dan Gambar 4.3 dengan penjelasan sebagai berikut ini.

4.1 Data Struktur dan Parameter Bahan

Data dan parameter bahan yang digunakan dalam perencanaan struktur gedung dua belas lantai ini adalah:

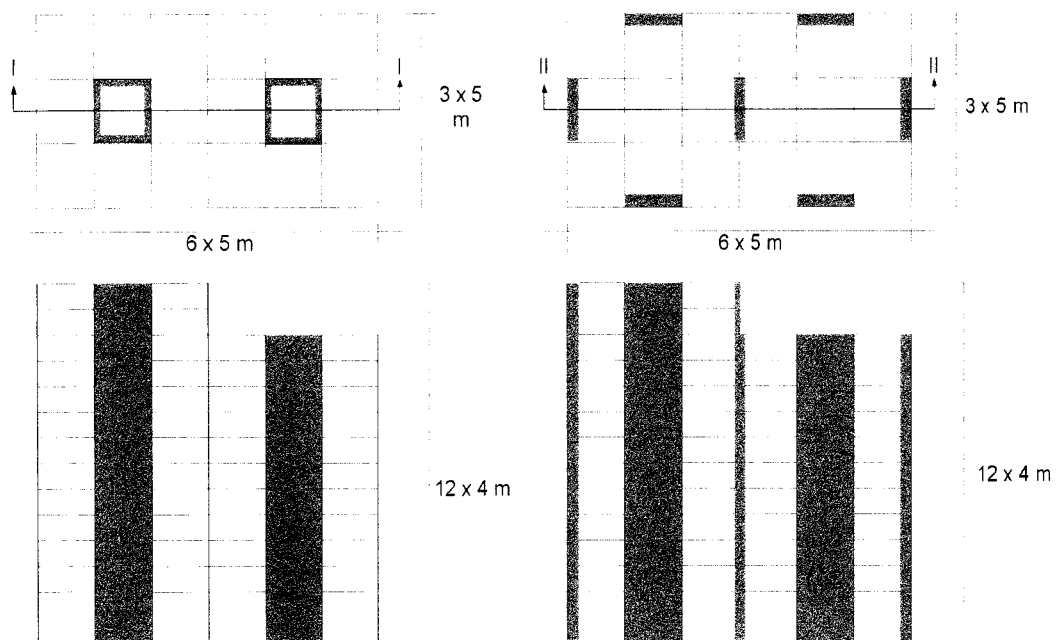
1. Gedung digunakan untuk hotel,
2. Penelitian menggunakan beban riwayat waktu El Centro,
3. Mutu beton dipakai $f'_c = 350 \text{ kg/cm}^2 = 35 \text{ MPa}$,
4. Mutu baja dipakai $f_y = 400 \text{ MPa}$,
5. Modulus elastis beton $E_c = 4700 \sqrt{f'_c} \text{ MPa}$,
6. Dimensi balok 35/50 cm,
7. Dimensi kolom 50/50 cm,
8. Tebal plat atap 12 cm, dan
9. Tebal plat lantai 12 cm.

4.2 Model Struktur

Model struktur yang akan digunakan dalam analisis ini ada 12 variasi, yaitu dengan loncatan bidang muka sebesar 16.67%, dengan variasi posisi dinding geser 1, 2, dan 3 dan variasi ketinggian dinding geser 100%, 80%, 60%, dan 50% terhadap tinggi total bangunan yang dapat dilihat pada Tabel 4.1 dan Gambar 4.1.

Tabel 4.1 Variasi model struktur

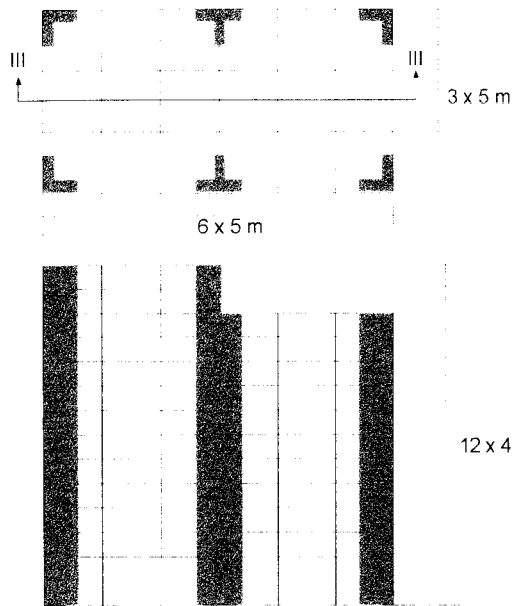
H \ P	Posisi 1	Posisi 2	Posisi 3
100%	Variasi I	Variasi II	Variasi III
80%	Variasi IV	Variasi V	Variasi VI
60%	Variasi VII	Variasi VII	Variasi IX
50%	Variasi X	Variasi XI	Variasi XII



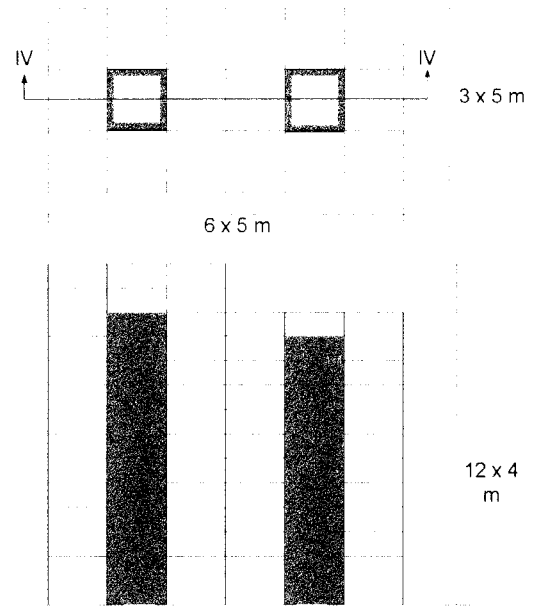
a) Denah struktur variasi I

b) Denah struktur variasi II

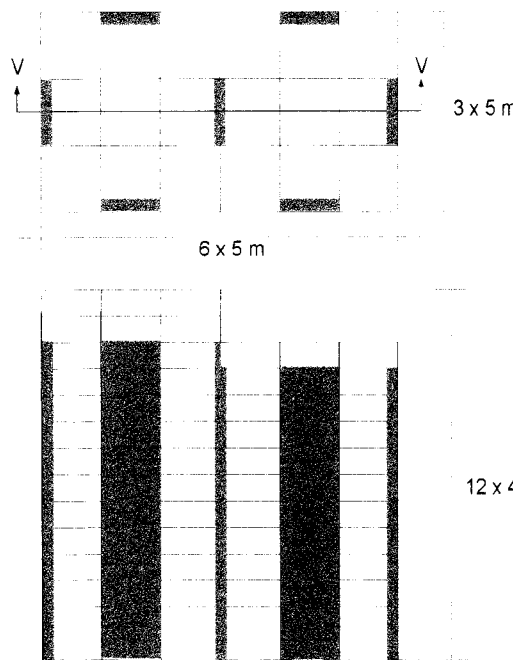
Gambar 4.1 Variasi posisi dan ketinggian dinding geser



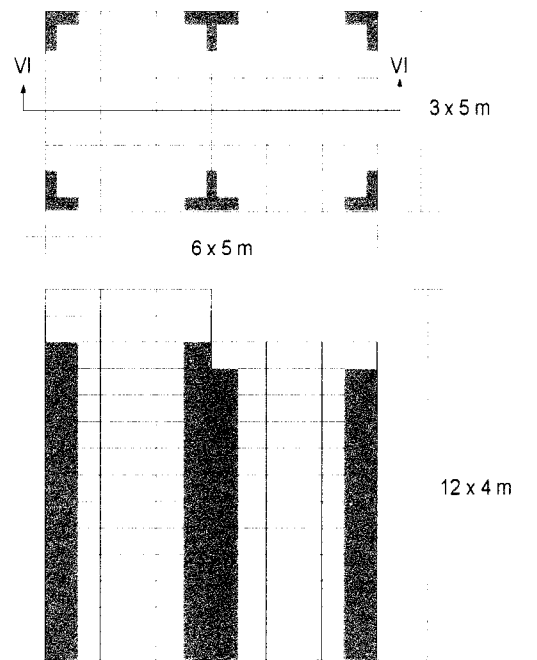
c) Denah struktur variasi III



d) Denah struktur variasi IV

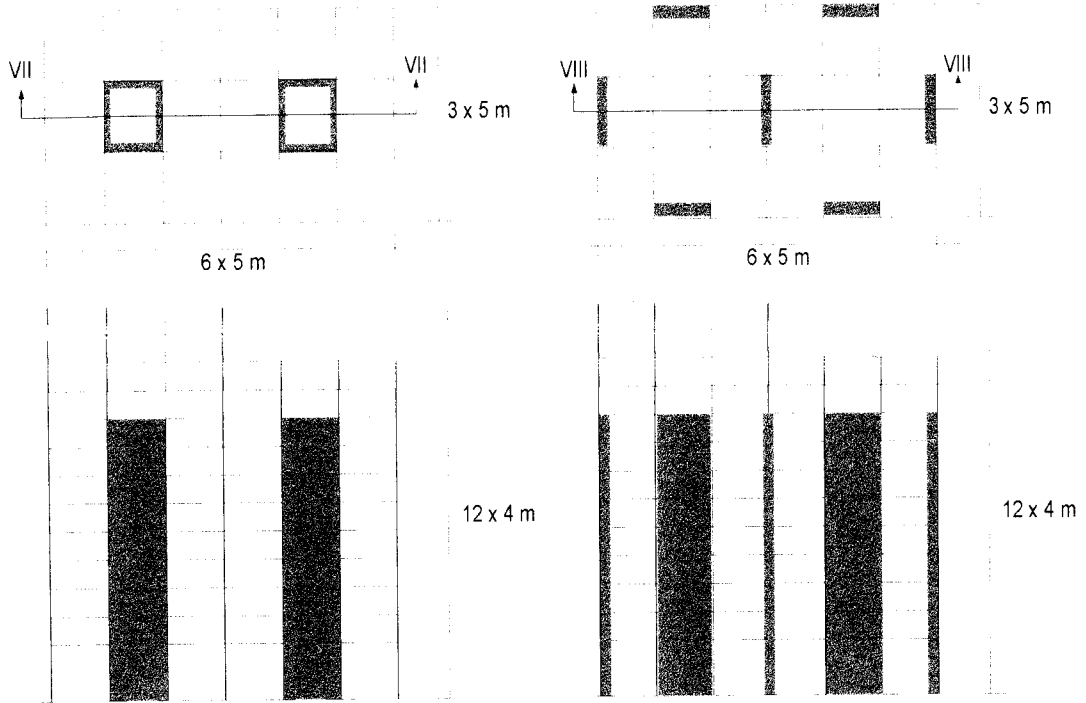


e) Denah struktur variasi V



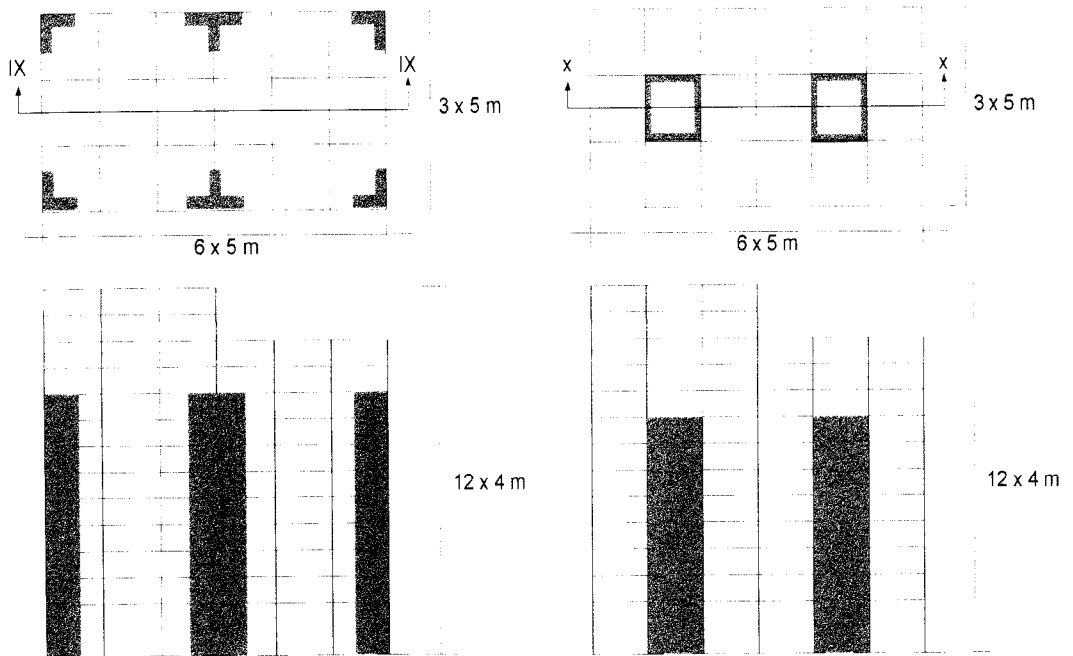
f) Denah struktur variasi VI

Gambar 4.1 Lanjutan



g) Denah struktur variasi VII

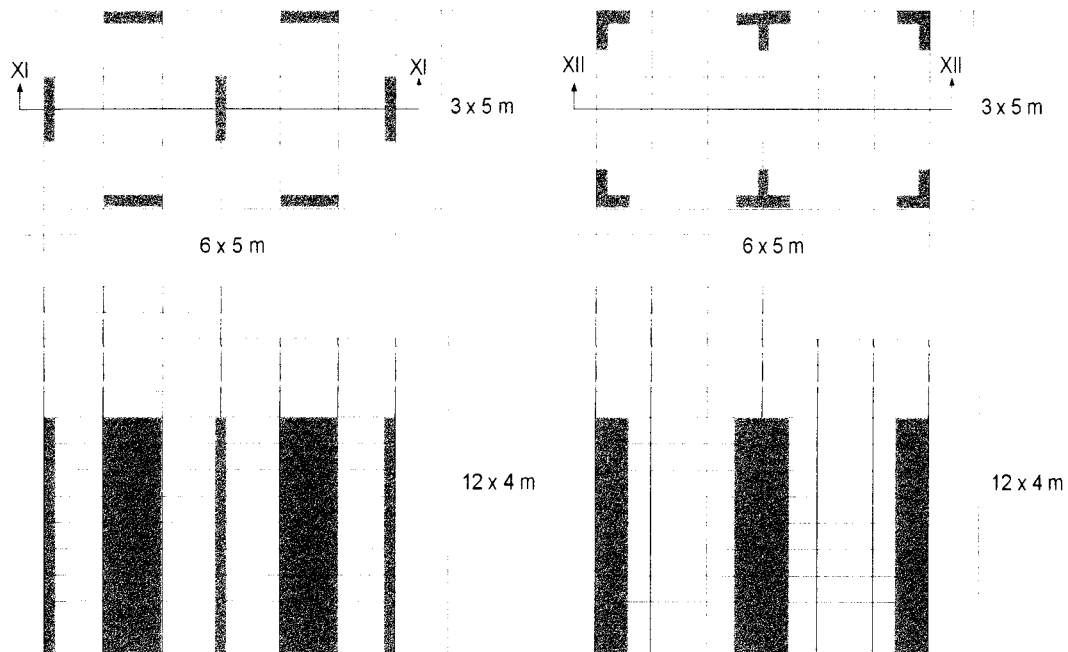
h) Denah struktur variasi VIII



i) Denah struktur variasi IX

j) Denah struktur variasi X

Gambar 4.1 Lanjutan



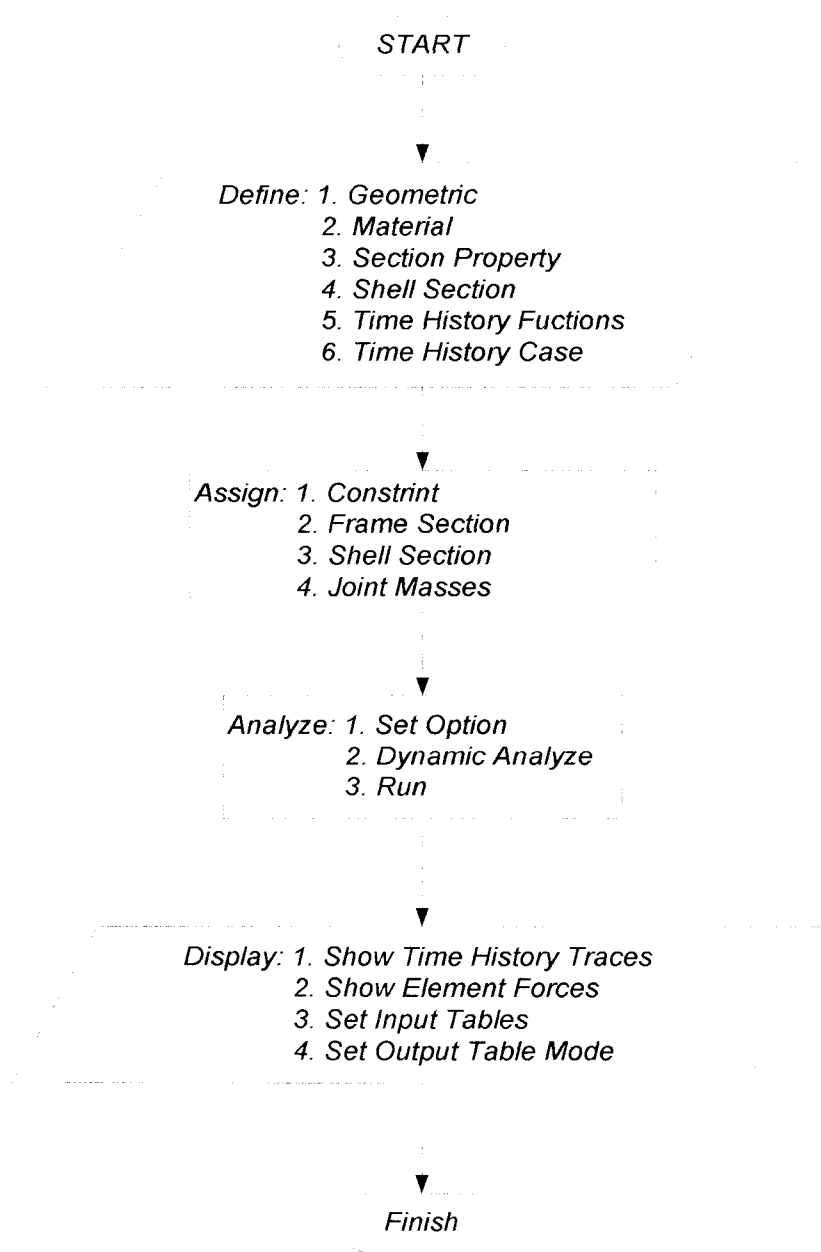
k) Denah struktur variasi XI

l) Denah struktur variasi XII

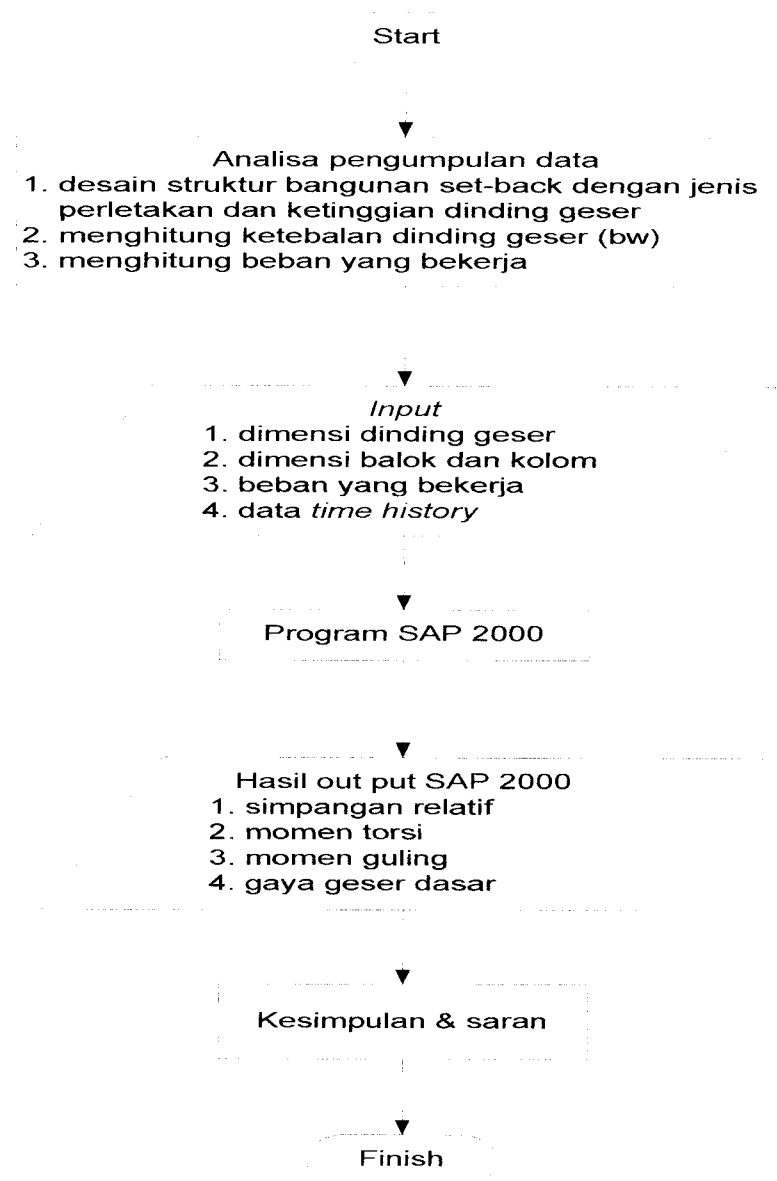
Gambar 4.1 Lanjutan

4.3 Pengolahan Data

Setelah data terkumpul, maka dilakukan pengolahan dan analisis data dengan langkah – langkah yang sesuai dengan Gambar 4.2



Gambar 4.2 Bagan alir analisis SAP 2000



Gambar 4.3 Bagan alir pengolahan data

BAB V

PERHITUNGAN DAN ANALISIS STRUKTUR

Pada bab ini berisi tentang asumsi dinding geser, pembebanan struktur, perhitungan massa translasi dan rotasi, pengaruh variasi posisi dan ketinggian dinding geser, dan analisa struktur dinamis yang digunakan untuk mencari simpangan relatif, gaya geser, momen guling dan momen torsi dengan menggunakan program bantu SAP 2000.

Dalam menganalisa struktur tersebut diperlukan asumsi dimensi dinding geser yang diperlukan untuk mendapatkan berat bangunan total per lantai. Hasil *output* dari perhitungan SAP 2000 yang akan dianalisis dalam bentuk grafik hubungan bangunan *set-back* dengan variasi posisi dan ketinggian dinding geser untuk mendapatkan simpangan relatif, momen torsi, momen guling dan gaya geser dasar. Sedangkan untuk analisis menggunakan hotel dengan posisi dinding geser dan ketinggian dinding geser 100%, 80%, 60%, dan 50% dari total ketinggian bangunan.

5.1 Asumsi yang digunakan

- | | |
|------------------------|------------|
| a. tebal plat atap | = 0,12 m |
| b. tebal plat lantai | = 0,12 m |
| c. dimensi kolom | = 50/50 cm |
| d. dimensi balok | = 35/50 cm |
| e. tebal dinding geser | = 0,30 m |

- f. berat volume beton $= 2400 \text{ kg/m}^3$
- g. portal melintang pada gedung lantai 12
- h. guna ruang sebagai hotel dengan beban hidup lantai 250 kg/m^2 dan beban hidup lantai 100 kg/m^2 .
- i. bangunan tidak simetris, sehingga pusat kekakuan dan pusat masa struktur tidak berhimpit.

5.1.1 Perhitungan tebal dinding geser

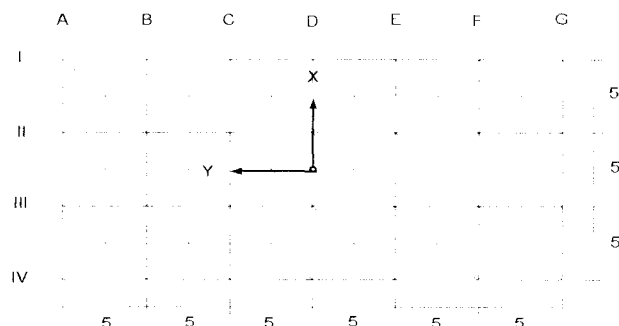
Untuk menghindari bahaya torsi yang besar dinding geser dapat diperlakukan sebagai kolom yang ketebalannya perlu dibatasi. Batasan tebal dinding geser dapat dihitung dengan persamaan,

$$b_w = \frac{h_f}{20} \geq 150 \text{ mm},$$

$$= \frac{4}{20} = 0.20 \Leftrightarrow 200 \text{ mm, dipakai tebal dinding geser } (b_w) = 300 \text{ mm.}$$

5.2 Mekanisme Pembebanan

Perhitungan pembebanan ditentukan berdasarkan Peraturan Pembebanan Indonesia (Yayasan LPMB, 1983 dan 1991). Distribusi pembebanan untuk tiap portal ditunjukkan pada Gambar 5.1



Gambar 5.1 Denah

Perhitungan beban atap dan lantai adalah sebagai berikut ini.

1. Beban atap

a. berat plat 12 cm	=	$0.12 \cdot 2400$	=	288 kg/m^2
b. berat plafon dan penggantung	=	$11 + 7$	=	18 kg/m^2
			=	$\frac{306 \text{ kg/m}^2}{}$
c. beban hidup			=	100 kg/m^2

2. Beban Lantai

a. berat plat 12 cm	=	$0.12 \cdot 2400$	=	288 kg/m^2
b. berat plafon dan penggantung	=	$11 + 7$	=	18 kg/m^2
c. berat tegel (2 cm)	=	$0.02 \cdot 2400$	=	48 kg/m^2
d. berat pasir (3 cm)	=	$0.03 \cdot 1800$	=	54 kg/m^2
e. berat spesi (2 cm)	=	$0.02 \cdot 2100$	=	42 kg/m^2
			=	$\frac{450 \text{ kg/m}^2}{}$
f. beban hidup lantai hotel			=	250 kg/m^2

3. Berat tembok $\frac{1}{2}$ bata = 250 kg/m^2

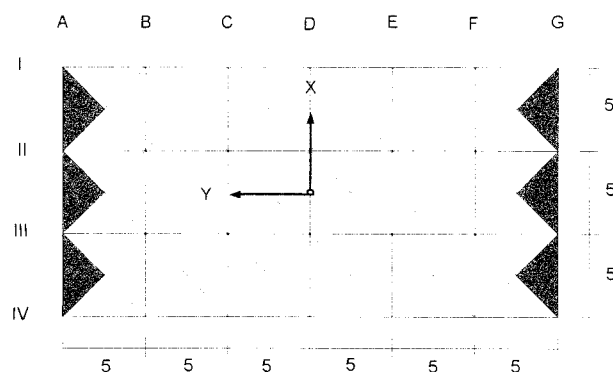
5.3. Mekanisme Distribusi Beban Gravitasi Pada Portal

Penentuan pembebanan ditentukan berdasarkan Peraturan Pembebanan Indonesia (Yayasan LPMB, 1983 dan 1991). Pembagian pembebanan pada setiap portal menggunakan system amplop sehingga perhitungan untuk portal arah Y dan arah X dapat dilihat pada penyelesaian berikut ini.

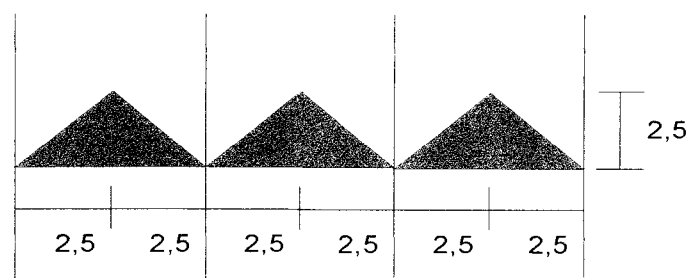
5.3.1 Pembebanan Untuk Portal Arah -X

Pembebanan untuk portal arah X meliputi portal as-A, as-B, as-C, as-D, as-E, as-F, dan as-G.

a. Portal as-A = Portal as-G



Gambar 5.2 Pembagian beban *trapezoidal* portal as-A = as-G

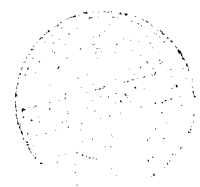


Gambar 5.3 Perhitungan beban *trapezoidal* portal as-A = as-G

1. Beban gravitasi pada balok atap as-A = as-G.

a. Beban mati tiap m

1. plat $= 2,5 \cdot 0,12 \cdot 2400 = 720 \text{ kg/m}$



2. plafon dan penggantung	= 2,5 . 18	= 45 kg/m
	$W_{D(TRAP)}$	= 765 kg/m
3. berat dinding (uniform)	= 250 . 2	= 500 kg/m

b. Beban hidup tiap meter

1. beban hidup atap	= 100 kg/m	
2. beban hidup, $W_{L(TRAP)}$	= 100 . 2,5	= 250 kg/m

2. Beban gravitasi pada balok lantai as-A = as-G

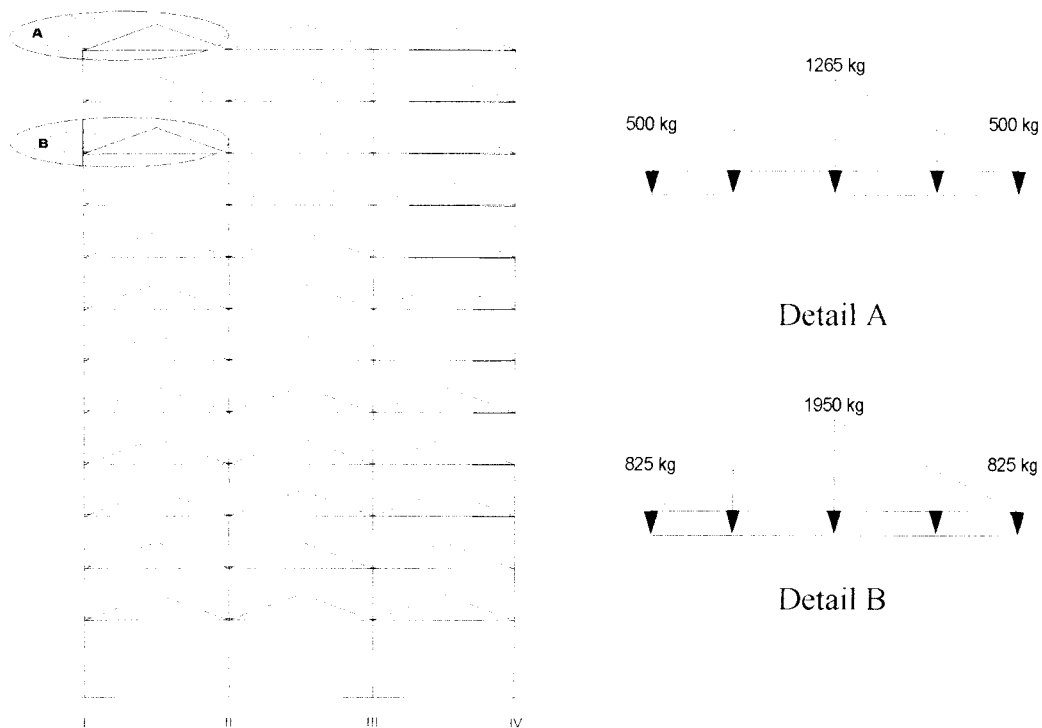
a. Beban mati tiap meter

1. plat 12 cm	= 2,5 . 0,12 . 2400	= 720 kg/m
2. berat plafon	= 2,5 . 18	= 45 kg/m
3. berat tegel (2 cm)	= 2,5 . 0,02 . 2400	= 120 kg/m
4. berat pasir (3 cm)	= 2,5 . 0,03 . 1800	= 135 kg/m
5. berat spesi (2 cm)	= 2,5 . 0,02 . 2100	= 105 kg/m
	$W_{D(TRAP)}$	= 1125 kg/m
6. dinding (<i>uniform</i>)	= 250 . (4 - 0,7)	= 825 kg/m

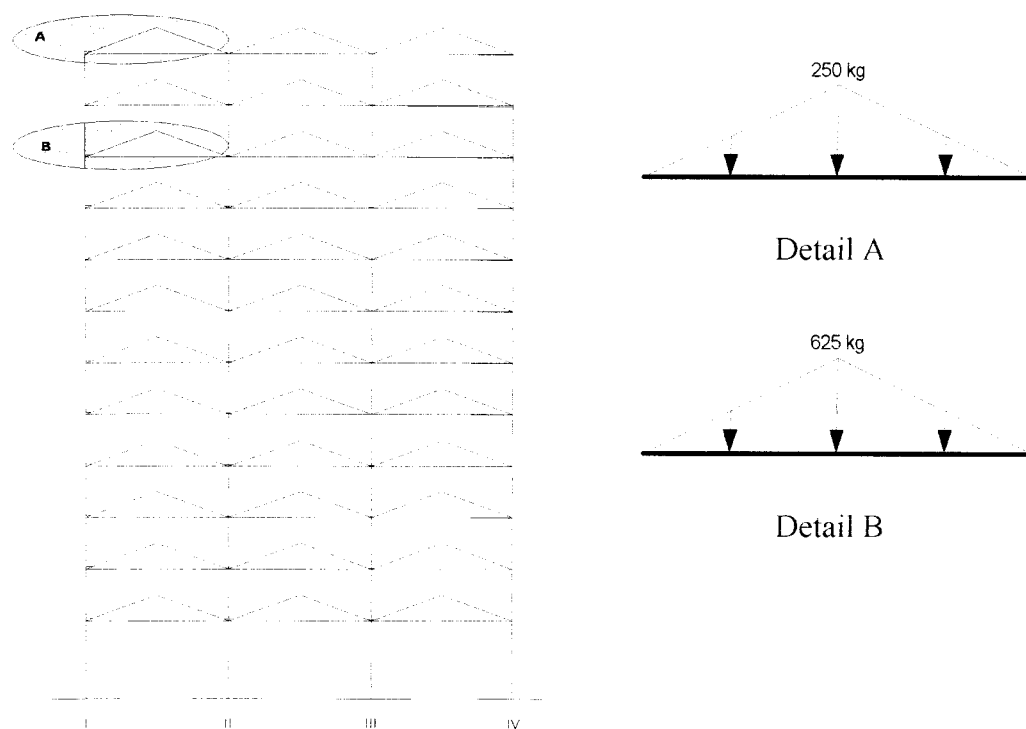
b. Beban hidup tiap meter

1. beban hidup lantai	= 250 kg/m	
2. beban hidup, $W_{L(TRAP)}$	= 250 . 2,5	= 625 kg/m

Hasil perhitungan beban mati dan beban hidup tiap lantai untuk portal as-A=as-G dapat dilihat pada Gambar 5.4 dan Gambar 5.5.

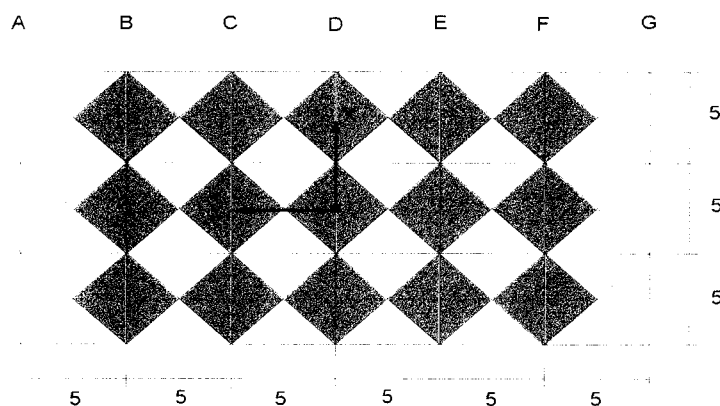


Gambar 5.4 Beban mati portal as-A = as-G



Gambar 5.5 Beban hidup portal as-A = as-G

b. Portal as-B = as-C = as-D = as-E = as-F



Gambar 5.6 Pembagian beban *trapezoidal* portal as-B = as-C = as-D = as-E = as-F

Pada Gambar 5.6 terlihat bahwa luas lantai portal as-B dua kali luas lantai portal as-A.

1. Beban gravitasi pada balok atap as-B = as-C = as-D = as-E = as-F (distribusi beban amplop tiap portal).

a. Beban mati tiap meter

$$1. \text{ plat} = 0,12 \cdot 2400 \cdot 2 \cdot 2,5 = 1440 \text{ kg/m}$$

$$2. \text{ plafon dan penggantung} = (11 + 7) \cdot 2,5 \cdot 2 = 90 \text{ kg/m}$$

$$W_{D(TRAP)} = 1530 \text{ kg/m}$$

$$3. \text{ berat dinding (uniform)} = 250 \cdot 2 = 500 \text{ kg/m}$$

b. Beban hidup tiap meter

$$1. \text{ beban hidup atap} = 100 \text{ kg/m}$$

$$2. \text{ beban hidup } W_{L(TRAP)} = 100 \cdot 2,5 \cdot 2 = 500 \text{ kg/m}$$

2. Beban gravitasi pada balok lantai as-B = as-C = as-D = as-E = as-F

a. Beban mati tiap meter

$$1. \text{ berat plat (12 cm)} = 2 \cdot 2,5 \cdot 0,12 \cdot 2400 = 1440 \text{ kg/m}$$

$$2. \text{ berat plafon} = 2 \cdot 2,5 \cdot 18 = 90 \text{ kg/m}$$

$$3. \text{ berat tegel (2cm)} = 2 \cdot 2,5 \cdot 0,02 \cdot 2400 = 240 \text{ kg/m}$$

$$4. \text{ berat pasir (3 cm)} = 2 \cdot 2,5 \cdot 0,03 \cdot 1800 = 270 \text{ kg/m}$$

$$5. \text{ berat spesi (2 cm)} = 2 \cdot 2,5 \cdot 0,02 \cdot 2100 = 210 \text{ kg/m}$$

$$W_{D(TRAP)} = 2250 \text{ kg/m}$$

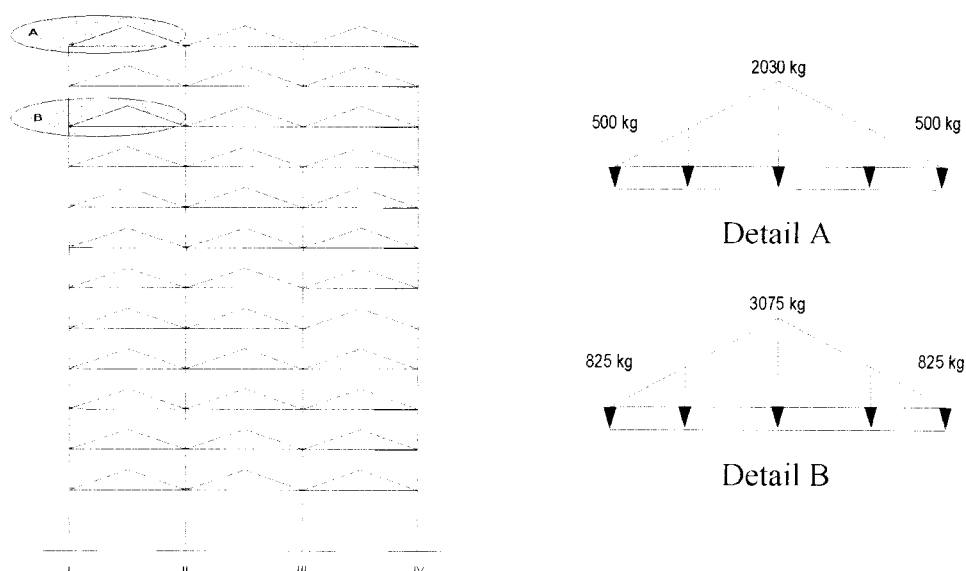
$$6. \text{ dinding (uniform)} = 250 \cdot (4 - 0,7) = 825 \text{ kg/m}$$

b. Beban hidup tiap meter

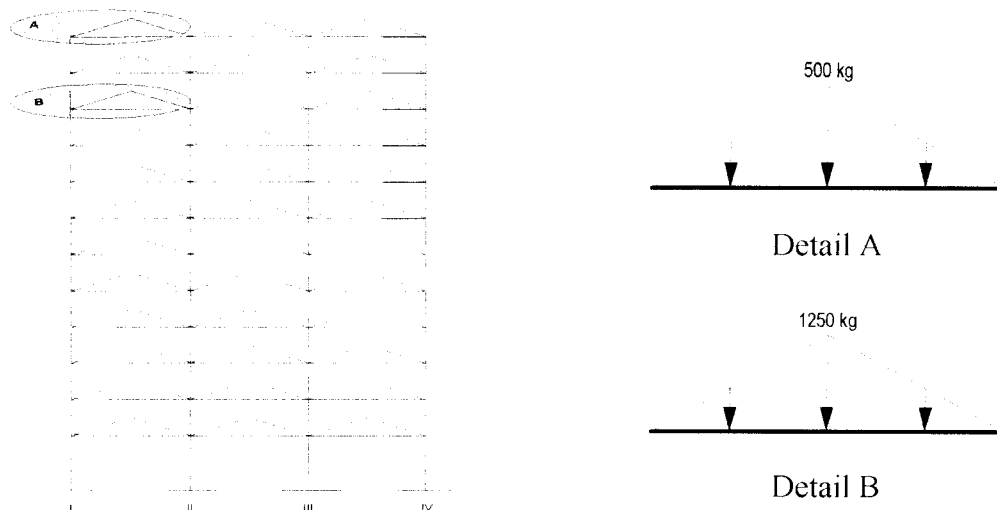
$$1. \text{ beban hidup lantai} = 250 \text{ kg/m}$$

$$2. \text{ beban hidup } W_{L(TRAP)} = 2 \cdot 2,5 \cdot 250 = 1250 \text{ kg/m}$$

Hasil perhitungan beban mati dan beban hidup tiap lantai untuk portal as-B = as-C = as-D = as-E = as-F dapat dilihat pada Gambar 5.7 dan Gambar 5.8.



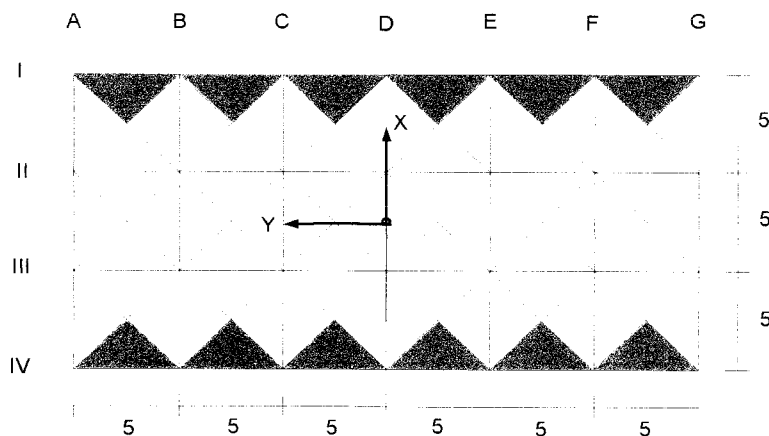
Gambar 5.7 Beban mati portal as-B = as-C = as-D = as-E = as-F



Gambar 5.8 Beban hidup portal as-B = as-C = as-D = as-E = as-F

5.3.2 Pembebanan Portal Arah – Y

a. Portal as-I = as-IV



Gambar 5.9 Pembagian beban merata portal as-I = as-IV

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

a. Beban mati tiap meter

1. plat $= 0,12 \cdot 2400 \cdot 2,5 = 720 \text{ kg/m}$

2. plafon dan penggantung $= (11 + 7) \cdot 2,5 = 54 \text{ kg/m}$

$$W_{D(TRAP)} = 765 \text{ kg/m}$$

$$3. \text{ berat dinding (uniform)} = 250 \cdot 2 = 500 \text{ kg/m}$$

b. Beban hidup tiap meter

$$1. \text{ beban hidup atap} = 100 \text{ kg/m}^2$$

$$2. \text{ beban hidup } W_{L(TRAP)} = 100 \cdot 2,5 = 250 \text{ kg/m}$$

2. Beban gravitasi pada balok lantai as-I = as-IV

a. beban mati tiap meter

$$1. \text{ berat plat (12 cm)} = 0,12 \cdot 2,5 \cdot 2400 = 720 \text{ kg/m}$$

$$2. \text{ berat plafon} = 2,5 \cdot (11 + 7) = 45 \text{ kg/m}$$

$$3. \text{ berat tegel (2cm)} = 2,5 \cdot 0,02 \cdot 2400 = 120 \text{ kg/m}$$

$$4. \text{ berat pasir (3 cm)} = 2,5 \cdot 0,03 \cdot 1800 = 135 \text{ kg/m}$$

$$5. \text{ berat spesi (2 cm)} = 2,5 \cdot 0,02 \cdot 2100 = 105 \text{ kg/m}$$

$$W_{D(TRAP)} = \frac{720 + 45 + 120 + 135 + 105}{5} = 1125 \text{ kg/m}$$

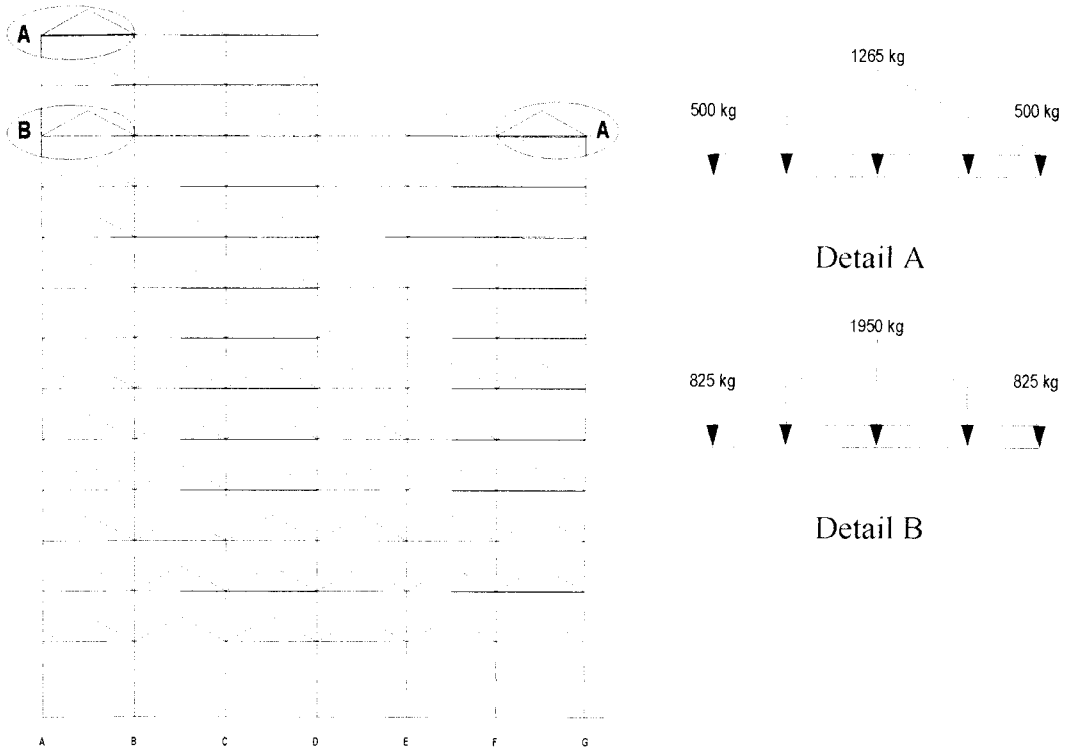
$$6. \text{ dinding (uniform)} = 250 \cdot (4 - 0,7) = 825 \text{ kg/m}$$

b. beban hidup tiap meter

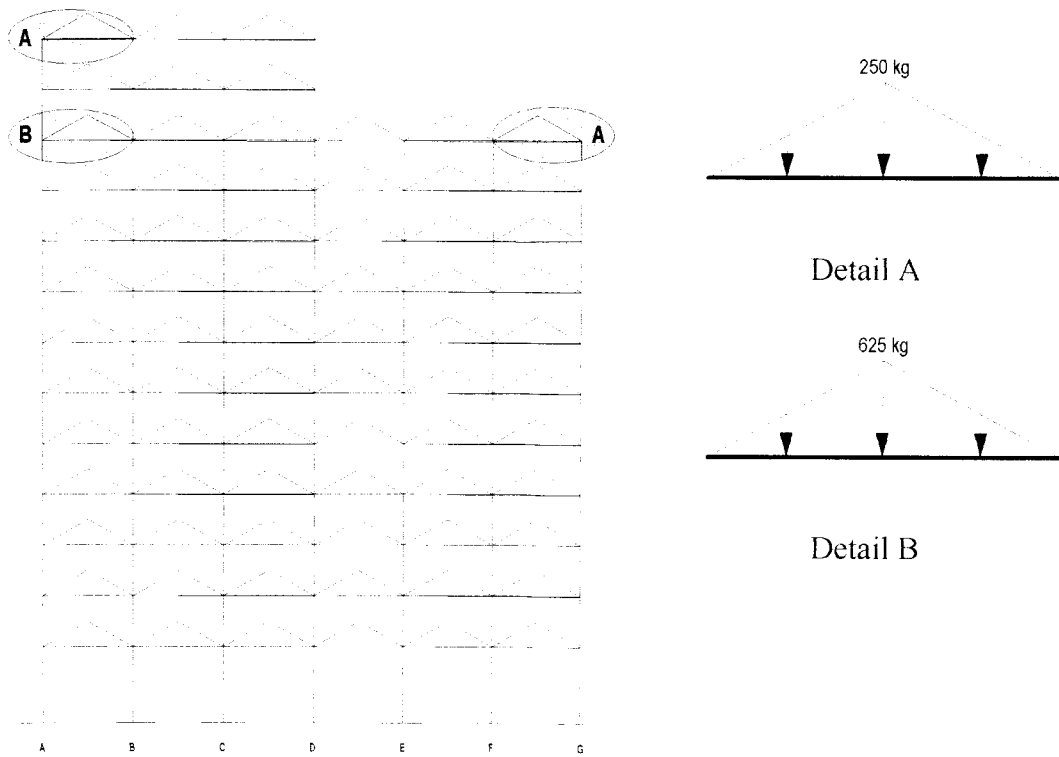
$$1. \text{ beban hidup lantai} = 250 \text{ kg/m}$$

$$2. \text{ beban hidup } W_{L(TRAP)} = 250 \cdot 2,5 = 625 \text{ kg/m}$$

Hasil perhitungan beban mati dan beban hidup tiap lantai untuk portal as-I = as IV dapat dilihat pada Gambar 5.10 dan Gambar 5.11.

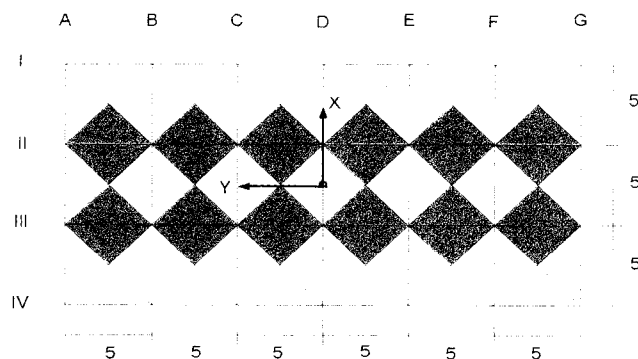


Gambar 5.10 Beban mati portal as-I = as-IV



Gambar 5.11 Beban hidup portal as-I = as-IV

b. Portal as-II = as-III



Gambar 5.12 Pembagian beban merata portal as-II = as-III

1. Beban gravitasi pada atap as-II = as-III

a. beban mati tiap meter

1. plat	$= 0,12 \cdot 2 \cdot 2,5 \cdot 2400$	$= 1440 \text{ kg/m}$
2. plafond dan penggantung	$= 18 \cdot 2,5 \cdot 2$	$= 90 \text{ kg/m}$
	$W_{D(TRAP)}$	$= 1530 \text{ kg/m}$
3. berat dinding	$= 250 \cdot 2$	$= 500 \text{ kg/m}$

b. beban hidup tiap meter

1. beban hidup atap	$= 100 \text{ kg/m}^2$	
2. beban hidup $W_{L(TRAP)}$	$= 100 \cdot 2,5 \cdot 2$	$= 500 \text{ kg/m}$

2. Beban gravitasi pada balok lantai as-II = as-III

a. beban mati tiap meter

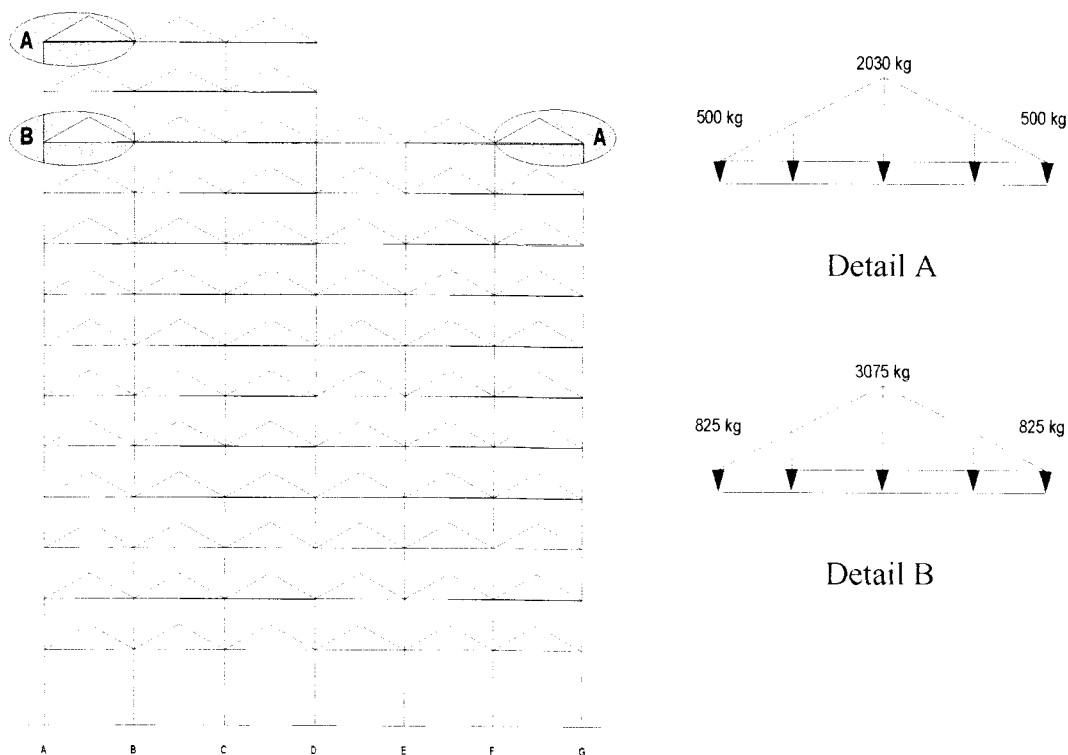
1. berat plat	$= 2 \cdot 2,5 \cdot 0,12 \cdot 2400$	$= 1440 \text{ kg/m}$
2. berat plafon	$= 2 \cdot 2,5 \cdot 18$	$= 90 \text{ kg/m}$

3. berat tegel (2 cm)	$= 2 \cdot 2,5 \cdot 0,02 \cdot 2400$	$= 240 \text{ kg/m}$
4. berat pasir (3 cm)	$= 2 \cdot 2,5 \cdot 0,03 \cdot 1800$	$= 270 \text{ kg/m}$
5. berat spesi (2 cm)	$= 2 \cdot 2,5 \cdot 0,02 \cdot 2100$	$= 210 \text{ kg/m}$
	$W_{D(TRAP)}$	$= 2250 \text{ kg/m}$
6. dinding (<i>uniform</i>)	$= 250 \cdot (4 - 0,7)$	$= 825 \text{ kg/m}$

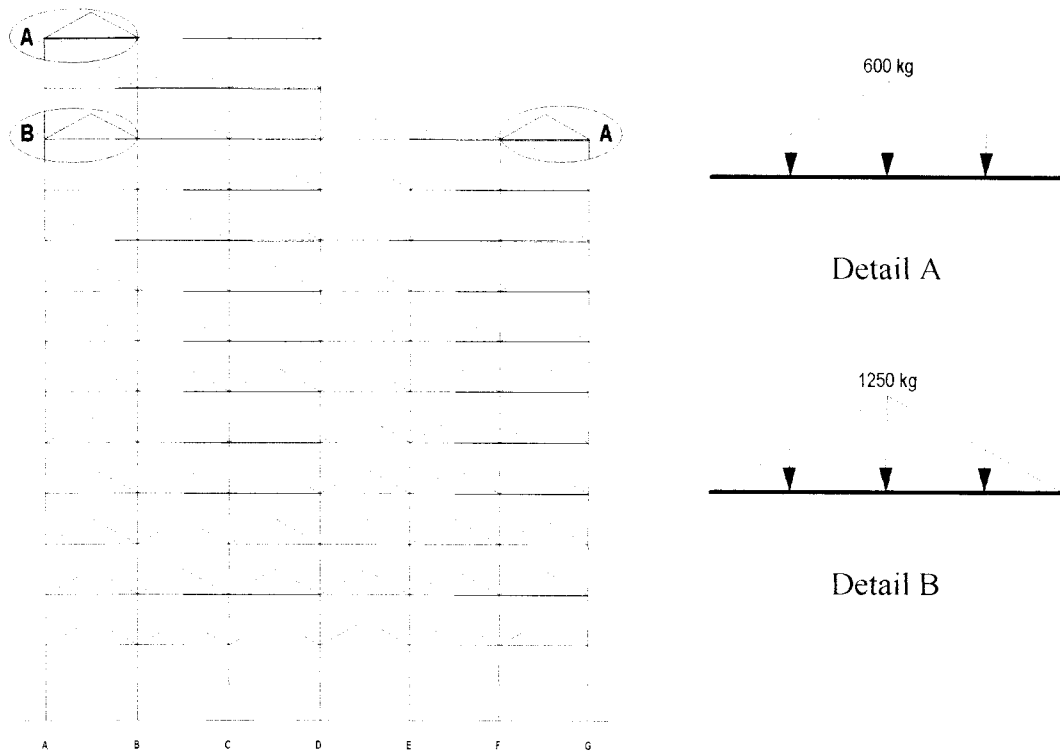
b. beban hidup tiap meter

1. beban hidup lantai	$= 250 \text{ kg/m}^2$	
2. beban hidup $W_{L(TRAP)}$	$= 2 \cdot 250 \cdot 2,5$	$= 1250 \text{ kg/m}$

Hasil perhitungan beban mati dan beban hidup tiap lantai untuk portal as-II dan as-III dapat dilihat pada Gambar 5.13 dan Gambar 5.14.



Gambar 5.13 Beban Mati portal as-II = as-III



Gambar 5.14 Beban hidup portal as-II = as-III

5.4 Massa Tranlasi dan Massa Rotasi Tiap Lantai

Anggapan yang dipakai dalam analisa penentuan massa adalah *lumped mass*. Massa dihitung pada tiap lantai dan diletakkan pada pusat massa lantai. Massa yang dihitung disini merupakan massa elemen non struktur sedangkan massa struktur dihitung langsung oleh SAP 2000.

Dengan menggunakan persamaan (3.33) dan (3.34) maka massa tranlasi dan rotasi untuk tiap lantai dapat dihitung.

1. Perhitungan Massa Tranlasi dan Rotasi Atap

$$m_t = \frac{(556 + 0.3 \times 100) \times 15 \times 15}{9.81} = 13440,37 \text{ kgdt}^2 / m$$

$$m_r = \frac{15^2 + 15^2 \times \frac{(556 + 0.3 \times 100)}{9.81}}{12} = 2240,061 \text{ kgdt}^2 / m$$

2. Perhitungan Massa Tranlasi dan Rotasi Lantai 1-9 dan Lantai 11

untuk perhitungan massa tranlasi dan rotasi lantai 1-9 perhitungan adalah sebagai berikut ini.

$$m_t = \frac{(700 + 0.3 \times 250) \times 30 \times 15}{9.81} = 36.671,92 \text{ kgdt}^2 / m$$

$$m_r = \frac{(30^2 + 15^2) \times \frac{(700 + 0.3 \times 250)}{9.81}}{12} = 7406,35 \text{ kgdt}^2 / m$$

sedangkan untuk massa tranlasi dan rotasi pada lantai 11 adalah sebagai berikut ini.

$$m_t = \frac{(700 + 0.3 \times 250) \times 15 \times 15}{9.81} = 17.775,23 \text{ kgdt}^2 / m$$

$$m_r = \frac{(15^2 + 15^2) \times \frac{(700 + 0.3 \times 250)}{9.81}}{12} = 2962,5 \text{ kgdt}^2 / m$$

3. Perhitungan massa tranlasi dan rotasi lantai 10

$$\begin{aligned} m_t &= \text{massa lt} + \text{massa atap} = 2962,5 + 13.440,37 \text{ kgdt}^2 / m \\ &= 16402,87 \text{ kgdt}^2 / m \end{aligned}$$

$$\begin{aligned} m_r &= \text{mass alt} + \text{massa atap} = 2962,5 + 2440.061 \text{ kgdt}^2 / m \\ &= 5402,561 \text{ kgdt}^2 / m \end{aligned}$$

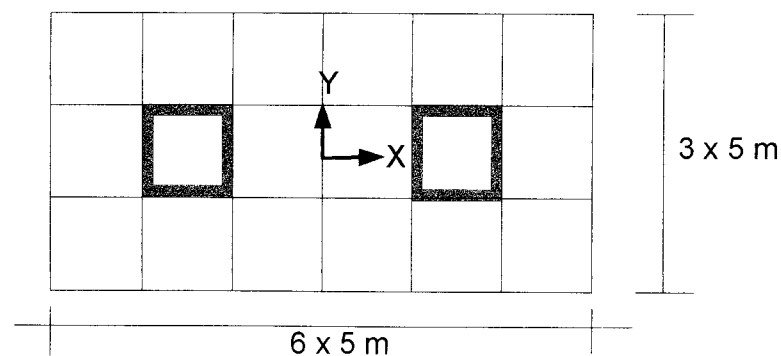
Untuk lebih memudahkan dalam menganalisis, maka perhitungan massa tranlasi dan rotasi pada tiap lantai dapat dilihat pada Table 5.1.

Tabel 5.1 Massa Translasi dan Rotasi tiap lantai

Tingkat	Massa Translasi Kgd ² /m	Massa Rotasi Kgd ² /m
1	36671,92	7406,35
2	36671,92	7406,35
3	36671,92	7406,35
4	36671,92	7406,35
5	36671,92	7406,35
6	36671,92	7406,35
7	36671,92	7406,35
8	36671,92	7406,35
9	36671,92	7406,35
10	16402,87	5402,56
11	17775,23	2962,50
Atap	13440,37	2240,06

5.5 Pusat Massa dan Pusat Kekakuan

Jarak pusat massa dan pusat kekakuan ditunjukkan pada perhitungan dibawah ini, dimana CM adalah pusat massa dan CR adalah pusat massa kekakuan lantai.

**Gambar 5.15** Denah lantai satu *set-back*

Gambar 5.15 menunjukkan denah lantai satu yang belum mengalami loncatan bidang muka, lebar dari semua dinding geser tersebut sama ($b_w = 0.3$ m). Panjang dinding geser (2) l_{w2} , adalah $l_{w2} = l_{w1}$.

5.5.1 Menentukan Pusat Massa

Dengan menggunakan persamaan (3.35) maka diperoleh massa dinding geser lantai sebagai berikut:

$$m_1 = \frac{0,3 \cdot 4 \cdot 5 \cdot 2400}{9,81} = 1467,89 \text{ kg}$$

$$m_2 = \frac{0,3 \cdot 4 \cdot 5 \cdot 2400}{9,81} = 1467,89 \text{ kg}$$

$$\sum m_i = 2935,78 \text{ kg}$$

letak pusat massa terhadap sisi as-A

$$CM = \frac{1467,89 \cdot 5 + 1467,89 \cdot 25}{2935,78} = 15 \text{ m}$$

5.5.2 Menentukan Pusat Kekakuan

Dengan menggunakan persamaan (3.37) maka diperoleh kekakuan dinding geser sebagai berikut:

- a. Distribusi kekuatan elemen untuk menahan gaya geser dasar $V_{EX} = 1,000$ satuan gaya maka:

$$V_1 = \frac{1^2}{1^2 + 1^2} = 0,5$$

$$V_2 = \frac{1^2}{1^2 + 1^2} = 0,5$$

- b. Perpindahan relative saat leleh dan kekakuan elemen

$$\Delta_{y1} = \frac{1}{1,000} = 1,0 \text{ dan } k_1 = \frac{0,5}{1,0} = 0,5$$

$$\Delta_{y2} = \frac{1}{1,000} = 1,0 \text{ dan } k_2 = \frac{0,5}{1,0} = 0,5$$

c. Eksentrisitas pusat kekakuan terhadap pusat massa

$$CR = \frac{-0,5 \cdot 15 + 0,5 \cdot 15}{0,5 + 0,5} = 0 \text{ m}$$

Dari hasil hitungan dengan menggunakan lebar dan ketinggian dinding geser didapat pusat massa dan pusat kekakuan berhimpit atau melalui tengah-tengah struktur. Akan tetapi terjadinya torsi atau puntiran diakibatkan oleh gaya datangnya beban yang mengenai struktur baik pada struktur atas maupun bawah.

5.6 Input dan Output SAP 2000

Setelah menghitung semua beban gravitasi, massa translasi dan rotasi selanjutnya diproses dalam program SAP 2000. Langkah-langkah pengerjaan SAP 2000 dapat dilihat pada Gambar 4.2. Beban percepatan tanah yang digunakan yaitu riwayat waktu gempa El Centro arah Utara-Selatan. Idealnya, diperlukan tiga arah rekaman percepatan tanah untuk analisis ini, yaitu rekaman percepatan tanah arah Utara-Selatan, Barat-Timur, dan arah vertikal. Dalam penelitian ini hanya digunakan satu arah gempa karena keterbatasan data rekaman gempa yang diperoleh. Arah beban percepatan yang digoyangkan pada struktur yaitu percepatan sumbu I atau sumbu-X, kemudian arah pembebanan diputar berlawanan dengan arah jarum jam yaitu pada 0^0 , 30^0 , 45^0 , 60^0 , dan 90^0 . maksud perputaran arah ini adalah untuk memperoleh nilai gaya-gaya dalam yang maksimum. Pada setiap pemutaran sudut ini, dilakukan dalam sekali eksekusi. Penentuan nilai gaya-gaya dalam maksimum dilakukan dengan meninjau semua elemen dan *joint* pada tiap lantai. Kemudian diambil salah satu elemen dan *joint* yang memiliki nilai gaya-gaya dalam yang maksimum tiap lantai dan dicatat nilainya secara manual. Nilai gaya-gaya dalam maksimum ini dapat dilihat dalam bentuk grafik pada menu *time history traces*.

Peninjauan gaya-gaya dalam maksimum pada elemen dan *joint* ini dilakukan untuk setiap arah pembebanan percepatan tanah, sehingga diperoleh arah pembebanan yang menimbulkan gaya-gaya dalam maksimum yang ditinjau.

Nilai simpangan relatif diambil pada joint perpotongan antara as-A dan as-I (Gambar 5.1) yang merupakan sudut bangunan karena relatif memiliki simpangan yang besar. Sedangkan nilai momen torsi dan gaya geser diambil pada perpotongan as-A dan as-I (sudut bangunan) karena struktur relatif memutar atau menyebabkan torsi dan gaya geser pada kolom yang cukup besar akibat adanya loncatan bidang muka dan daerah sudut bangunan merupakan daerah struktur yang rawan akibat kerusakan puntir. Nilai momen guling diambil pada kolom lantai pertama pada arah X dan arah Y. Nilai simpangan, momen guling, momen torsi dan gaya geser yang diambil untuk contoh perhitungan adalah dengan sudut datang gempa 45° , sedangkan sudut datang lainnya dapat dilihat pada Lampiran 1.

5.6.1. Simpangan Relatif Lantai

Nilai simpangan massa ke- i atau Y_i diperoleh dengan menjumlahkan pengaruh atau kontribusi tiap-tiap mode. Kontribusi ke- j terhadap simpangan horizontal massa ke- i dikatakan dalam produk antara Φ_{ij} dengan suatu modal amplitude Z_j seperti pada persamaan 3.30.

Hasil proses SAP 2000 berupa grafik fungsi simpangan relatif arah X dan arah Y terhadap waktu untuk sudut 45° dilihat pada Tabel 5.2 dan Tabel 5.3 yang kemudian dimanifestasikan ke dalam Gambar 5.16 dan Gambar 5.17.

5.6.2. Simpangan Antar Tingkat

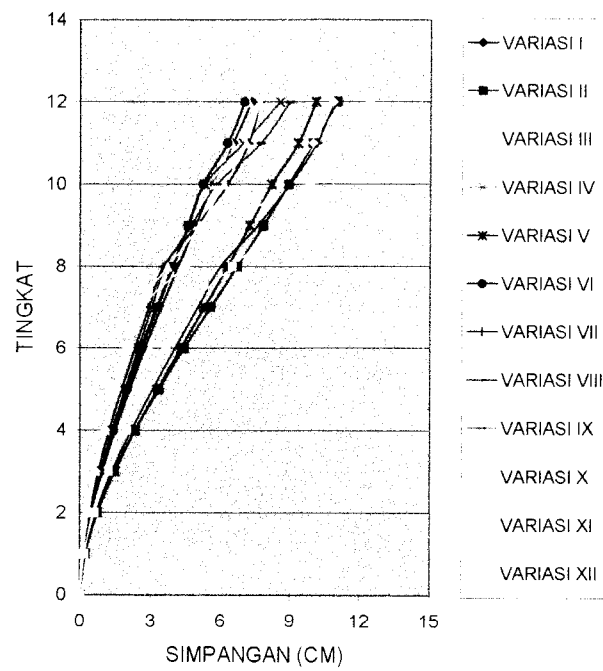
Simpangan antar tingkat diperoleh dari selisih simpangan antar lantai atas dengan lantai bawah. Hasil perhitungan simpangan antar tingkat arah-X dan arah-Y dapat dilihat pada Tabel 5.4 dan Tabel 5.5 yang kemudian dimanifestasikan ke dalam Gambar 5.18 dan Gambar 5.19.

Tabel 5.2 Simpangan relatif sudut 45^0 arah X

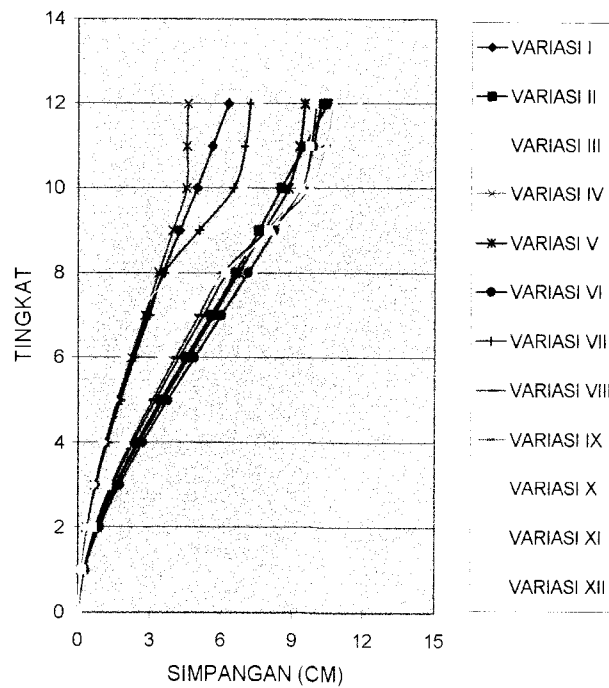
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,164	0,224	0,178	0,152	0,228	0,150	0,128	0,204	0,149	0,107	0,184	0,116
2	0,494	0,733	0,547	0,458	0,748	0,460	0,401	0,679	0,457	0,342	0,615	0,356
3	0,948	1,447	1,047	0,872	1,478	0,897	0,785	1,354	0,875	0,679	1,228	0,681
4	1,492	2,334	1,637	1,359	2,349	1,425	1,251	2,172	1,368	1,094	1,970	1,063
5	2,096	3,345	2,280	1,935	3,303	2,016	1,771	3,082	1,906	1,567	2,795	1,481
6	2,747	4,436	2,957	2,570	4,298	2,647	2,332	4,043	2,468	2,074	3,659	1,923
7	3,437	5,565	3,641	3,234	5,299	3,296	2,928	5,019	3,038	2,604	4,530	2,386
8	4,165	6,702	4,316	3,912	6,286	3,949	3,534	5,985	3,605	4,477	6,480	3,719
9	4,925	7,822	4,989	4,591	7,248	4,595	4,955	7,594	4,728	6,711	8,370	5,085
10	5,692	8,911	5,721	5,302	8,181	5,237	6,293	8,962	5,819	8,560	9,823	6,140
11	6,514	9,966	6,462	6,948	9,316	6,282	7,173	10,126	7,706	9,964	11,410	7,084
12	7,305	11,003	7,177	8,531	10,074	7,017	7,662	10,844	8,956	10,839	12,407	7,666

Tabel 5.3 Simpangan relatif sudut 45^0 arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,107	0,242	0,281	0,104	0,248	0,285	0,112	0,219	0,223	0,097	0,189	0,200
2	0,352	0,780	0,889	0,344	0,813	0,892	0,369	0,722	0,709	0,319	0,622	0,637
3	0,712	1,544	1,730	0,696	1,603	1,719	0,744	1,430	1,384	0,640	1,230	1,247
4	1,162	2,458	2,734	1,139	2,542	2,695	1,215	2,282	2,198	1,039	1,956	1,983
5	1,681	3,466	3,844	1,648	3,566	3,763	1,761	3,230	3,104	1,491	2,747	2,799
6	2,258	4,517	5,011	2,203	4,622	4,878	2,356	4,230	4,070	1,975	3,557	3,663
7	2,883	5,571	6,207	2,784	5,683	6,006	2,978	5,255	5,066	2,476	4,364	4,548
8	3,551	6,596	7,393	3,374	6,731	7,127	3,614	6,275	6,066	3,987	6,189	6,170
9	4,249	7,571	8,552	3,962	7,779	8,233	5,061	7,917	7,903	5,528	7,975	8,111
10	4,978	8,529	9,682	4,521	8,816	9,314	6,517	9,362	9,749	6,861	9,322	9,780
11	5,616	9,498	10,765	4,535	9,286	9,858	6,990	9,776	10,402	7,323	9,710	10,428
12	6,291	10,450	11,814	4,579	9,507	10,183	7,205	9,976	10,739	7,537	9,898	10,763



Gambar 5.16 Simpangan relatif sudut 45° arah X



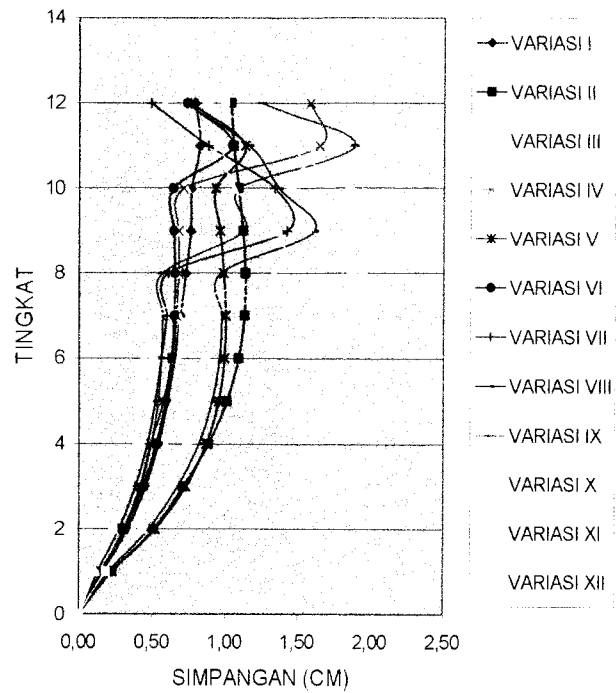
Gambar 5.17 Simpangan relatif sudut 45° arah Y

Tabel 5.4 Simpangan antar tingkat sudut 45° arah X

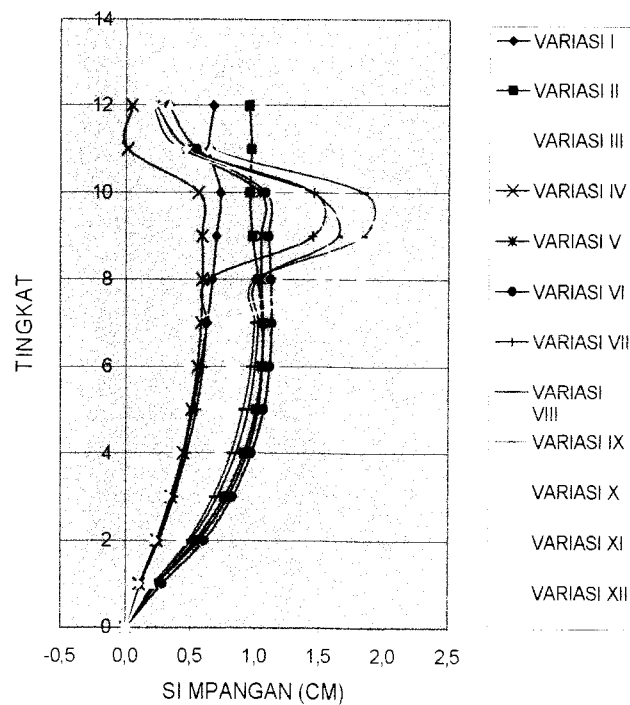
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,164	0,224	0,178	0,152	0,228	0,150	0,128	0,204	0,149	0,107	0,184	0,116
2	0,331	0,509	0,369	0,306	0,521	0,311	0,273	0,475	0,308	0,235	0,430	0,240
3	0,454	0,713	0,500	0,414	0,730	0,437	0,384	0,675	0,418	0,337	0,613	0,325
4	0,543	0,888	0,589	0,488	0,871	0,528	0,466	0,818	0,493	0,416	0,743	0,383
5	0,604	1,011	0,643	0,576	0,955	0,591	0,520	0,911	0,539	0,473	0,825	0,417
6	0,651	1,090	0,677	0,634	0,994	0,631	0,561	0,961	0,562	0,507	0,864	0,442
7	0,690	1,130	0,684	0,664	1,001	0,650	0,596	0,976	0,570	0,530	0,872	0,463
8	0,728	1,137	0,675	0,678	0,987	0,653	0,606	0,967	0,567	1,873	1,949	1,333
9	0,760	1,120	0,674	0,679	0,962	0,646	1,421	1,609	1,123	2,234	1,890	1,366
10	0,766	1,089	0,732	0,712	0,933	0,642	1,338	1,368	1,090	1,849	1,453	1,055
11	0,822	1,054	0,741	1,645	1,135	1,046	0,880	1,164	1,888	1,404	1,587	0,944
12	0,791	1,037	0,716	1,583	0,758	0,734	0,489	0,718	1,249	0,875	0,997	0,581

Tabel 5.5 Simpangan antar tingkat sudut 45° arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,107	0,242	0,281	0,104	0,248	0,285	0,112	0,219	0,223	0,097	0,189	0,200
2	0,245	0,538	0,608	0,240	0,565	0,607	0,257	0,503	0,486	0,221	0,433	0,437
3	0,360	0,764	0,840	0,352	0,790	0,827	0,375	0,708	0,675	0,322	0,608	0,610
4	0,450	0,915	1,004	0,443	0,940	0,976	0,471	0,852	0,814	0,398	0,726	0,735
5	0,519	1,007	1,110	0,510	1,024	1,068	0,546	0,948	0,906	0,453	0,791	0,817
6	0,577	1,052	1,167	0,555	1,055	1,115	0,595	1,000	0,966	0,484	0,810	0,863
7	0,626	1,054	1,195	0,581	1,061	1,128	0,623	1,025	0,995	0,501	0,807	0,885
8	0,668	1,025	1,186	0,590	1,048	1,121	0,636	1,020	1,001	1,511	1,825	1,623
9	0,698	0,975	1,159	0,588	1,048	1,106	1,447	1,642	1,837	1,540	1,785	1,940
10	0,729	0,958	1,130	0,559	1,036	1,081	1,456	1,445	1,846	1,333	1,347	1,670
11	0,638	0,969	1,084	0,014	0,470	0,544	0,473	0,414	0,654	0,463	0,388	0,648
12	0,675	0,952	1,049	0,044	0,221	0,326	0,215	0,199	0,336	0,214	0,188	0,334



Gambar 5.18 Simpangan antar tingkat sudut 45^0 arah X



Gambar 5.19 Simpangan antar tingkat sudut 45^0 arah Y

5.6.3. Gaya Geser Dasar (*Base Shear*)

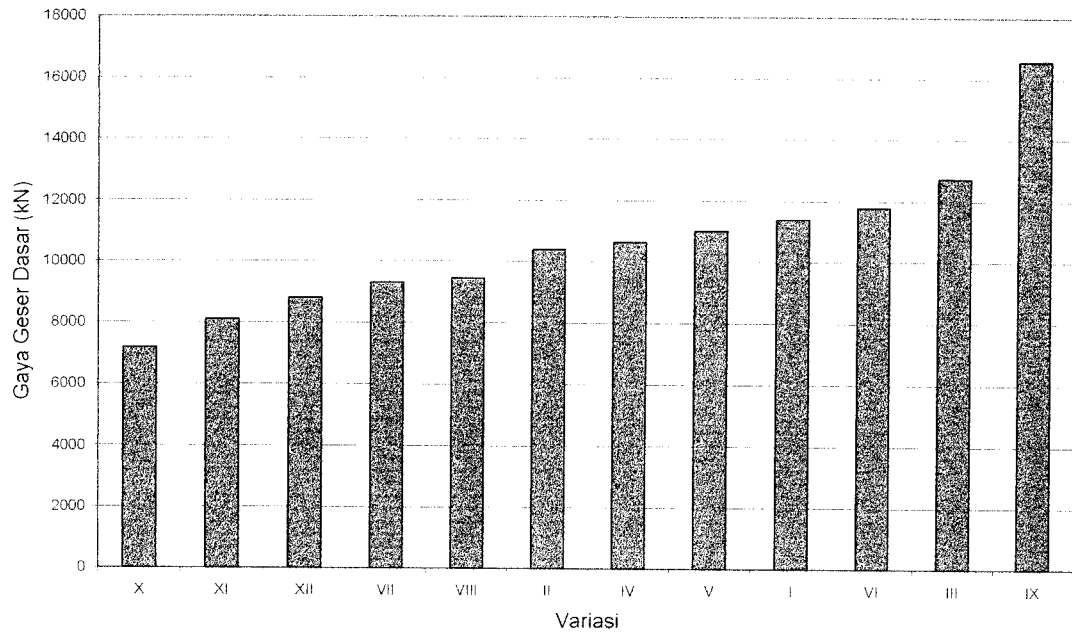
Salah satu fungsi utama dinding geser adalah menahan gaya geser yang terjadi akibat beban lateral gempa. Gaya geser adalah salah satu gaya dalam yang bekerja tegak lurus terhadap sumbu batang. Pada penelitian ini nilai gaya geser ditinjau dari hasil *output* SAP 2000 pada arah X dan arah Y. Hal ini dapat dilihat pada Tabel 5.6 dan Tabel 5.7, kemudian dimanifestasikan pada Gambar 5.20 dan Gambar 5.21.

Tabel 5.6 Gaya geser dasar arah X

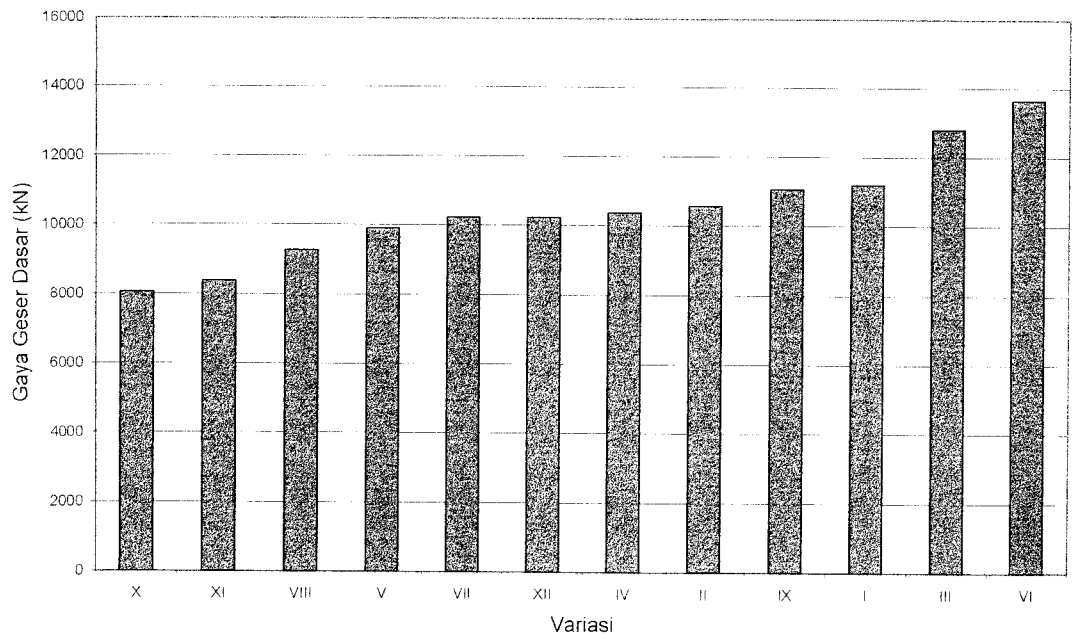
Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	11410	100
II	10390	91,06
III	12740	111,66
IV	10630	93,16
V	11020	96,58
VI	11810	103,51
VII	9316	81,65
VIII	9440	82,73
IX	16560	145,14
X	7182	62,94
XI	8103	71,02
XII	8812	77,23

Tabel 5.7 Gaya geser dasar arah Y

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	11200	100
II	10560	94,29
III	12790	114,20
IV	10360	92,50
V	9903	88,42
VI	13650	121,88
VII	10220	91,25
VIII	9261	82,69
IX	11060	98,75
X	8067	72,03
XI	8377	74,79
XII	10220	91,25



Gambar 5.20 Gaya geser dasar arah X



Gambar 5.21 Gaya geser dasar arah Y

5.6.4. Momen Guling Dasar (*Base Moment*)

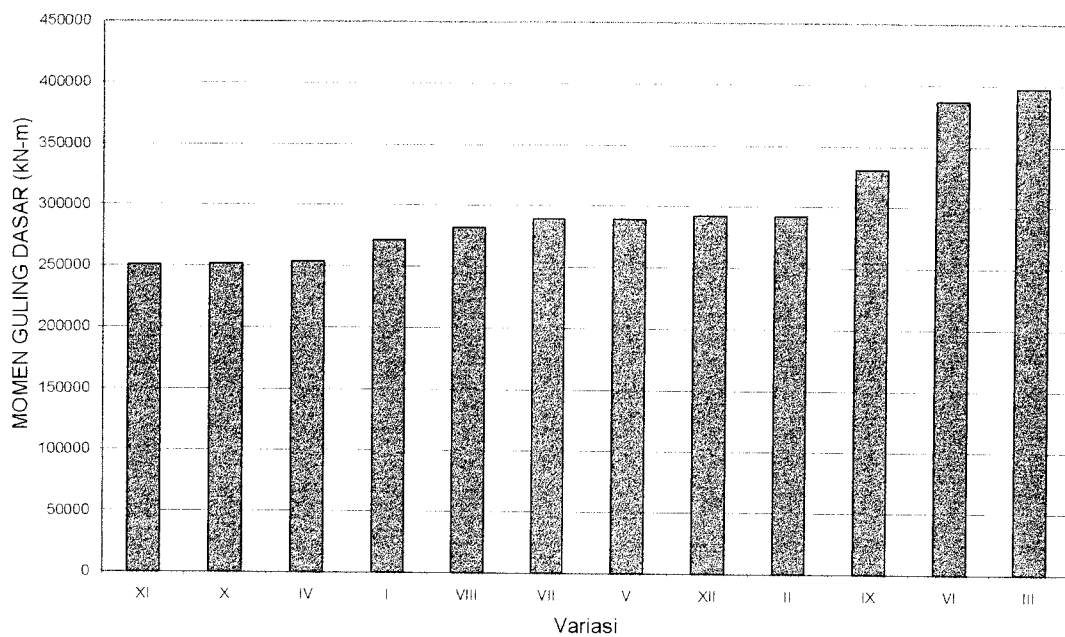
Besarnya momen guling dasar didapat dari hasil kali gaya gempa horisontal dengan tinggi setiap tingkatnya. Pada penelitian ini nilai momen guling didapat dari hasil *output* SAP 2000 ditinjau pada arah X dan arah Y. Hasil ini dapat dilihat pada Tabel 5.8 dan Tabel 5.9, kemudian dimanifestasikan pada Gambar 5.22 dan Gambar 5.23.

Tabel 5.8 Momen guling dasar arah X

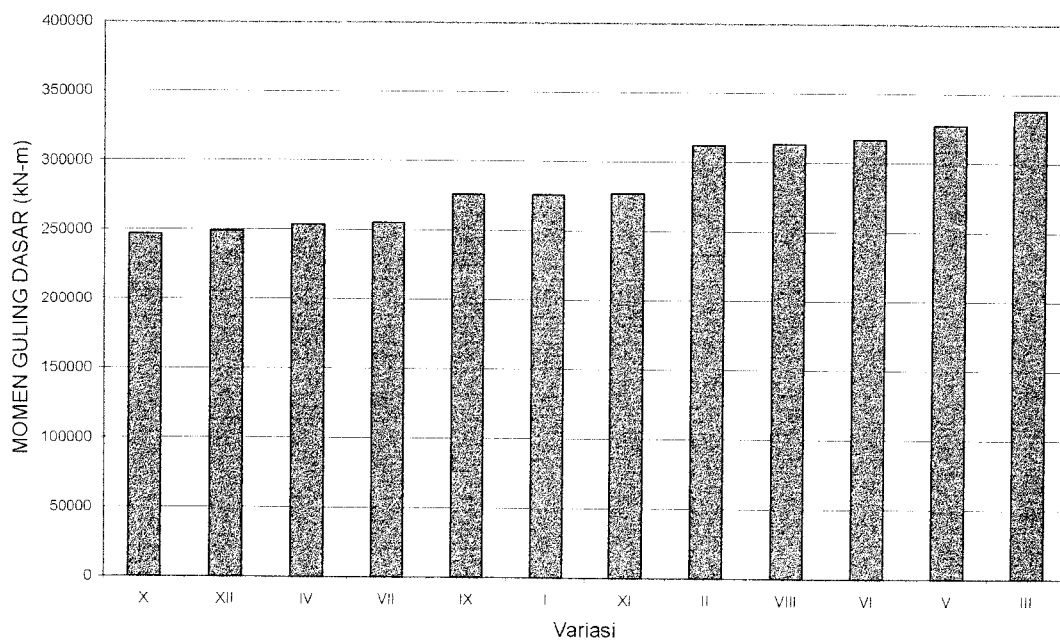
Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1
I	271400	100
II	292200	107,66
III	397100	146,32
IV	253900	93,55
V	289200	106,56
VI	386900	142,56
VII	289000	106,48
VIII	282100	103,94
IX	330300	121,70
X	251900	92,82
XI	250800	92,41
XII	292100	107,63

Tabel 5.9 Momen Guling dasar arah Y

Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1
I	276100	100
II	312100	113,04
III	338000	122,42
IV	253700	91,89
V	327000	118,44
VI	316900	114,78
VII	255200	92,43
VIII	313400	113,51
IX	275900	99,93
X	246800	89,39
XI	277300	100,43
XII	249200	90,26



Gambar 5.22 Momen guling dasar arah X



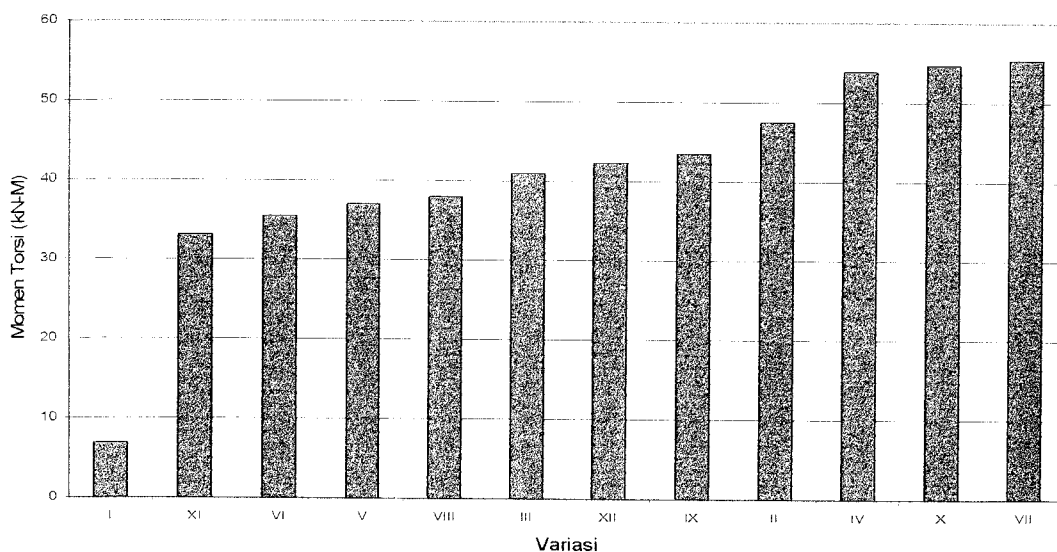
Gambar 5.23 Momen guling dasar arah Y

5.6.5. Momen Torsi

Momen torsi akan terjadi jika pusat massa struktur tidak berhimpit dengan pusat kekakuan, hal ini akan menyebabkan gedung mengalami puntiran pada bagian atas tapi bagian bawah (bagian pondasi) tetap. Pada penelitian ini nilai momen torsi didapat dari hasil *output* SAP 2000. Hasil ini dapat dilihat pada Tabel 5.10, kemudian dimanifestasikan pada Gambar 5.24.

Tabel 5.10 Momen Torsi

Variasi	Momen Torsi (kN-M)	% terhadap variasi 1
I	6,889536	100
II	47,49732	689,41
III	40,9367	594,19
IV	53,87891	782,04
V	36,93548	536,11
VI	35,41196	514,00
VII	55,31966	802,95
VIII	37,97863	551,25
IX	43,54079	631,98
X	54,69629	793,90
XI	33,05182	479,74
XII	42,33701	614,51



Gambar 5.24 Momen Torsi

5.7 Pembahasan

Dari hasil *output* SAP 2000 dan hitungan dengan *microsoft excel* berupa tabel dan grafik seperti diatas, kemudian dibahu 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.

5.7.1 Simpangan Relatif

Nilai simpangan relatif lantai akan semakin besar untuk lantai yang lebih tinggi, hal ini sesuai dengan pola goyangan pada mode pertama. Dari Table 5.2 dan Gambar 5.16 simpangan relatif maksimum arah X terlihat bahwa simpangan pada Variasi I, II, III dari lantai 1 sampai 12 berupa garis linier, hal ini karena struktur didominasi oleh kekakuan dinding geser yang penuh. Simpangan pada Variasi IV, V, VI dari lantai 1 sampai 10 berupa garis linier, hal ini karena struktur masih didominasi oleh kekakuan dinding geser, sedangkan simpangan dari lantai 11 sampai 12 berupa garis lengkung karena struktur telah didominasi oleh kekakuan *frame*. Simpangan pada Variasi VII, VIII, IX dari lantai 1 sampai 6 berupa garis linier, sedangkan lantai 7 sampai 12 berupa garis lengkung karena didominasi oleh kekakuan *frame*. Simpangan pada Variasi X, XI, XII dari lantai 1 sampai 5 berupa garis linier, sedangkan lantai 6 sampai 12 berupa garis lengkung karena didominasi oleh kekakuan *frame* yang semakin berkurang sehingga semakin tinggi tingkat struktur maka simpangan struktur akan semakin besar.

Pada Tabel 5.2 dan Gambar 5.16 juga terlihat bahwa simpangan terkecil dan paling efektif terjadi pada variasi IV, V, dan VI. Jadi tinggi efektif dinding geser

berkisar sampai 80% dari total tinggi struktur. Hasil simpangan relatif keseluruhan dapat dilihat pada lampiran I.

Pada Tabel 5.3 dan Gambar 5.17 simpangan relatif maksimum pada arah Y terlihat bahwa simpangan pada Variasi I, II, III dari lantai 1 sampai 12 berupa garis linier, hal ini karena struktur didominasi oleh kekakuan dinding geser yang penuh. Simpangan pada Variasi IV, V, VI dari lantai 1 sampai 10 berupa garis linier, hal ini karena struktur masih didominasi oleh kekakuan dinding geser, sedangkan simpangan dari lantai 11 sampai 12 berupa garis lengkung karena struktur telah didominasi oleh kekakuan *frame*. Simpangan pada Variasi VII, VIII, IX dari lantai 1 sampai 6 berupa garis linier, sedangkan lantai 7 sampai 12 berupa garis lengkung karena didominasi oleh kekakuan *frame*. Simpangan pada Variasi X, XI, XII dari lantai 1 sampai 5 berupa garis linier, sedangkan lantai 6 sampai 12 berupa garis lengkung karena didominasi oleh kekakuan *frame* yang semakin berkurang sehingga semakin tinggi tingkat struktur maka simpangan struktur akan semakin besar.

Pada Tabel 5.3 dan Gambar 5.17 juga terlihat bahwa simpangan terkecil dan paling efektif terjadi pada variasi IV, V, dan VI. Jadi tinggi efektif dinding geser berkisar diatas 60% sampai 80% dari total tinggi struktur. Hasil simpangan relatif keseluruhan dapat dilihat pada lampiran C.

5.7.2 Simpangan Antar Tingkat (*Inter-story Drift*)

Simpangan antar tingkat didapatkan dari selisih simpangan lantai atas dengan simpangan lantai bawahnya. Pada Gambar 5.18 simpangan antar tingkat arah X (lantai 1 sampai 12) pada setiap lantai. Variasi I sebesar 0,822 cm pada lantai 11, Variasi II sebesar 1,137 cm pada lantai 8, Variasi III sebesar 0,741 cm pada lantai 11,

Variasi IV sebesar 1,645 cm pada lantai 11, Variasi V sebesar 1,135 cm pada lantai 11, Variasi VI sebesar 1,046 cm pada lantai 11, Variasi VII sebesar 1,421 cm pada lantai 9, Variasi VIII sebesar 1,609 cm pada lantai 9, Variasi IX sebesar 1,888 cm pada lantai 11, Variasi X sebesar 2,234 cm pada lantai 9, Variasi XI sebesar 1,949 cm pada lantai 8, dan Variasi XII sebesar 1,366 cm pada lantai 9. Hasil simpangan antar tingkat keseluruhan dapat dilihat pada Lampiran 1.

Pada Gambar 5.19 simpangan antar tingkat arah Y (lantai 1 sampai 12) tiap lantai. Variasi I sebesar 0,729 cm pada lantai 10, Variasi II sebesar 1,054 cm pada lantai 7, Variasi III sebesar 1,195 cm pada lantai 7, Variasi IV sebesar 0,590 cm pada lantai 8, Variasi V sebesar 1,061 cm pada lantai 7, Variasi VI sebesar 1,128 cm pada lantai 7, Variasi VII sebesar 1,456 cm pada lantai 10, Variasi VIII sebesar 1,642 cm pada lantai 9, Variasi IX sebesar 1,846 cm pada lantai 10, Variasi X sebesar 1,540 cm pada lantai 9, Variasi XI sebesar 1,825 cm pada lantai 8, dan Variasi XII sebesar 1,940 cm pada lantai 9. Hasil simpangan antar tingkat keseluruhan dapat dilihat pada Lampiran 1.

Pada pasal 2.6.3 Pedoman Perencanaan Ketahanan Gempa Untuk Rumah dan Gedung 1987 menyebutkan adanya pembayasan simpangan relatif antar tingkat, yang mana perbandingan antara simpangan antar tingkat dan tinggi tingkat yang bersangkutan 0.005, dengan ketentuan bahwa dalam segala hal simpangan tersebut tidak boleh lebih dari 2 cm. Secara keseluruhan struktur ini dapat dikatakan bahwa simpangan antar tingkat masing-masing variasi dalam batas aman sesuai dengan persyaratan simpang antar tingkat.

5.7.3 Gaya Geser Dasar

Besarnya gaya geser dasar dipengaruhi oleh simpangan relatif dan kekakuan tingkat. Disini gaya geser dasar ditinjau dari nilai total gaya geser yang terjadi pada kolom lantai pertama pada arah X dan arah Y.

Dari tabel 5.6 dan Gambar 5.20b dapat dilihat pada Variasi I, IV, VII dan X memiliki nilai gaya geser terkecil sebesar 7182 kN, dan nilai gaya geser dasar terbesar 11410 kN. Pada variasi II, V, VIII, dan XI memiliki gaya geser terkecil sebesar 8103 kN, dan nilai gaya geser terbesar sebesar 11020 kN. Sedangkan untuk Variasi III, IV, IX, dan XII memiliki nilai gaya geser terkecil sebesar 8812 kN, dan nilai gaya geser terbesar sebesar 16560 kN. Jadi secara keseluruhan gaya geser dasar arah X yang terkecil dan efektif pada variasi X

Dari Tabel 5.7 dan Gambar 5.21b terlihat pada Variasi I, IV, VII, dan X memiliki nilai gaya geser terkecil sebesar 8067 kN, dan nilai gaya geser dasar terbesar 11200 kN. Pada variasi II, V, VIII, dan XI memiliki gaya geser terkecil sebesar 8377 kN, dan nilai gaya geser terbesar sebesar 10560 kN. Sedangkan untuk Variasi III, IV, IX, dan XII memiliki nilai gaya geser terkecil sebesar 10220 kN, dan nilai gaya geser terbesar sebesar 12790 kN. Jadi secara keseluruhan gaya geser dasar arah Y yang terkecil dan efektif pada variasi X.

Pada penelitian ini besarnya gaya geser dasar ini sangat fluktuatif karena pengaruh kekakuan tingkat dan penambahan massa yang diakibatkan oleh dinding geser yang bekerja secara bersama-sama. Perilaku yang sebenarnya adalah semakin kecil simpangan struktur, dengan semakin tinggi dinding geser maka struktur memiliki kekakuan yang semakin meningkat hal ini menyebabkan simpangan

horizontal struktur semakin kecil sehingga semakin kecil pula gaya horizontal lantainya, dan ini mengakibatkan gaya geser dasar semakin besar. Namun hal ini tidak terjadi pada Variasi X dan XI.

5.7.4 Momen Guling Dasar (*Base Moment*)

Momen guling dipengaruhi oleh gaya dan elevasi lantai. Untuk mendapatkan nilai momen guling dasar ditinjau dari nilai total momen guling yang terjadi pada kolom lantai pertama pada arah X dan arah Y.

Hasil dari perhitungan SAP 2000 pada Tabel 5.8 dan Gambar 5.22b terlihat pada Variasi I, IV, VII, dan X memiliki nilai momen guling dasar terkecil sebesar 251900 kN, dan nilai momen guling dasar terbesar 289000 kN. Pada variasi II, V, VIII, dan XI memiliki momen guling dasar terkecil sebesar 250800 kN, dan nilai momen guling dasar terbesar sebesar 292200 kN. Sedangkan untuk Variasi III, IV, IX, dan XII memiliki nilai momen guling dasar terkecil sebesar 292100 kN, dan nilai gaya geser terbesar sebesar 397100 kN. Maka secara keseluruhan momen guling dasar arah X terkecil dan efisien pada Variasi XII.

Pada Tabel 5.9 dan Gambar 5.23b terlihat pada Variasi I, IV, VII, dan X memiliki nilai momen guling dasar terkecil sebesar 246800 kN, dan nilai momen guling dasar terbesar 276100 kN. Pada variasi II, V, VIII, dan XI memiliki momen guling dasar terkecil sebesar 277300 kN, dan nilai momen guling dasar terbesar sebesar 327000 kN. Sedangkan untuk Variasi III, IV, IX, dan XII memiliki nilai momen guling dasar terkecil sebesar 249200 kN, dan nilai gaya geser terbesar sebesar 338000 kN. Maka secara keseluruhan momen guling dasar arah Y terkecil dan efektif pada Variasi X.

BAB VI

KESIMPULAN DAN SARAN

Dari hasil analisis dan pembahasan dapat diambil kesimpulan serta saran sebagai berikut ini.

6.1 Kesimpulan

Kesimpulan yang dapat diambil dari hasil penelitian tentang pengaruh variasi posisi dan ketinggian dinding geser terhadap simpangan relatif, gaya geser dasar, momen guling dasar dan momen torsi adalah sebagai berikut ini.

1. Dari hasil perhitungan SAP 2000, diperoleh nilai simpangan relatif efektif pada arah X yaitu pada variasi 6 sebesar 7,071 cm dan arah Y yaitu pada variasi 4 sebesar 4,579 cm.
2. Dari hasil perhitungan SAP 2000, simpangan antar tingkat pada struktur dinding geser dengan arah sudut datang gempa 0° , 30° , 45° , 60° , dan 90° dalam arah X dan Y diperoleh Variasi I, II, III, IV, V, dan VI relatif aman dan sesuai persyaratan PPKGURG 1987 yaitu lebih kecil dari 0,5% dari tingkat = $0,005 \times 4$ cm = 2 cm.
3. Nilai gaya geser dasar yang efektif pada variasi 10 dengan nilai gaya geser dasar sebesar 7182 kN atau terjadi perubahan sebesar 62,94% dari variasi 1.
4. Nilai momen guling dasar yang efektif pada variasi 11 dengan nilai momen guling dasar sebesar 250800 kN-m atau terjadi perubahan sebesar 92,41% dari variasi 1.

5. Nilai momen torsi yang efektif pada variasi 1 dengan nilai momen torsi sebesar 6,8895 kN-m.
6. Hasil analisis kekakuan optimum dinding geser menerus dengan posisi dinding geser terhadap bangunan dengan loncatan bidang muka adalah dengan menggunakan posisi dinding geser yang berada ditengah dengan variasi ketinggian berkisar 80% terhadap tinggi bangunan.

6.2 Saran

Beberapa saran yang dapat disampaikan untuk digunakan dalam penelitian selanjutnya yang diharapkan bisa lebih menyempurnakan penelitian ini. Adapun saran- saran yang diusulkan adalah:

1. perlu diadakan penelitian yang dapat memperhitungkan *P-Δ effect*, beban angin dan penulangan pada struktur,
2. pembebanan gempa dengan riwayat waktu yang lain seperti Gempa Bucharest yang berfrekuensi rendah dan Gempa Koyna yang berfrekuensi tinggi untuk mengetahui kerusakan pada struktur bangunan dan juga perlu disilidiki,
3. perlu dilakukan penelitian dengan memvariasikan denah perletakan komponen struktur dinding geser yang berlubang dengan memperhitungkan rotasi akibat momen puntir,
4. perencanaan pendetailan tulangan pada daerah *set-back* perlu dilakukan agar diperoleh bangunan yang dapat menahan gempa lebih baik..

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LAMPIRAN 1

- A.** KARTU PESERTA TUGAS AKHIR
- B.** GAMBAR STRUKTUR TIAP VARIASI
- C.** TABEL DAN GRAFIK SIMPANGAN RELATIF ARAH X DAN ARAH Y
- D.** TABEL DAN GRAFIK SIMPANGAN ANTAR TINGKAT ARAH X DAN ARAH Y
- E.** TABEL DAN GRAFIK GAYA GESER DASAR ARAH X DAN ARAH Y
- F.** TABEL DAN GRAFIK MOMEN GULING DASAR ARAH X DAN ARAH Y
- G.** TABEL DAN GRAFIK MOMEN TORSI

KARTU PESERTA TUGAS AKHIR

NO.	N A M A	NO. MHS.	BID.STUDI
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JUDUL TUGAS AKHIR :

Analisis Dinamis 3 D pada bangunan gedung bertingkat bidang arsitektur pengantun
 pada perancangan dan visualisasi struktur gedung-gedung yang menggunakan ekuitasi ekwayat
 waktu (retroplacentro).....

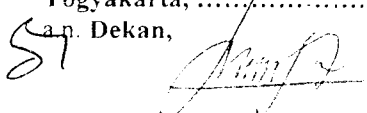
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TAHUN : 2002 / 2003

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
 DOSEN PEMBIMBING II

Ir. Hery Akbar Gale, M.T.
 Ir. H. Sarwidi, MSCE, Ph.D.



Yogyakarta, 12 Mei 2003
 Kap. Dekan,

 Ir. H. Munandar, MS

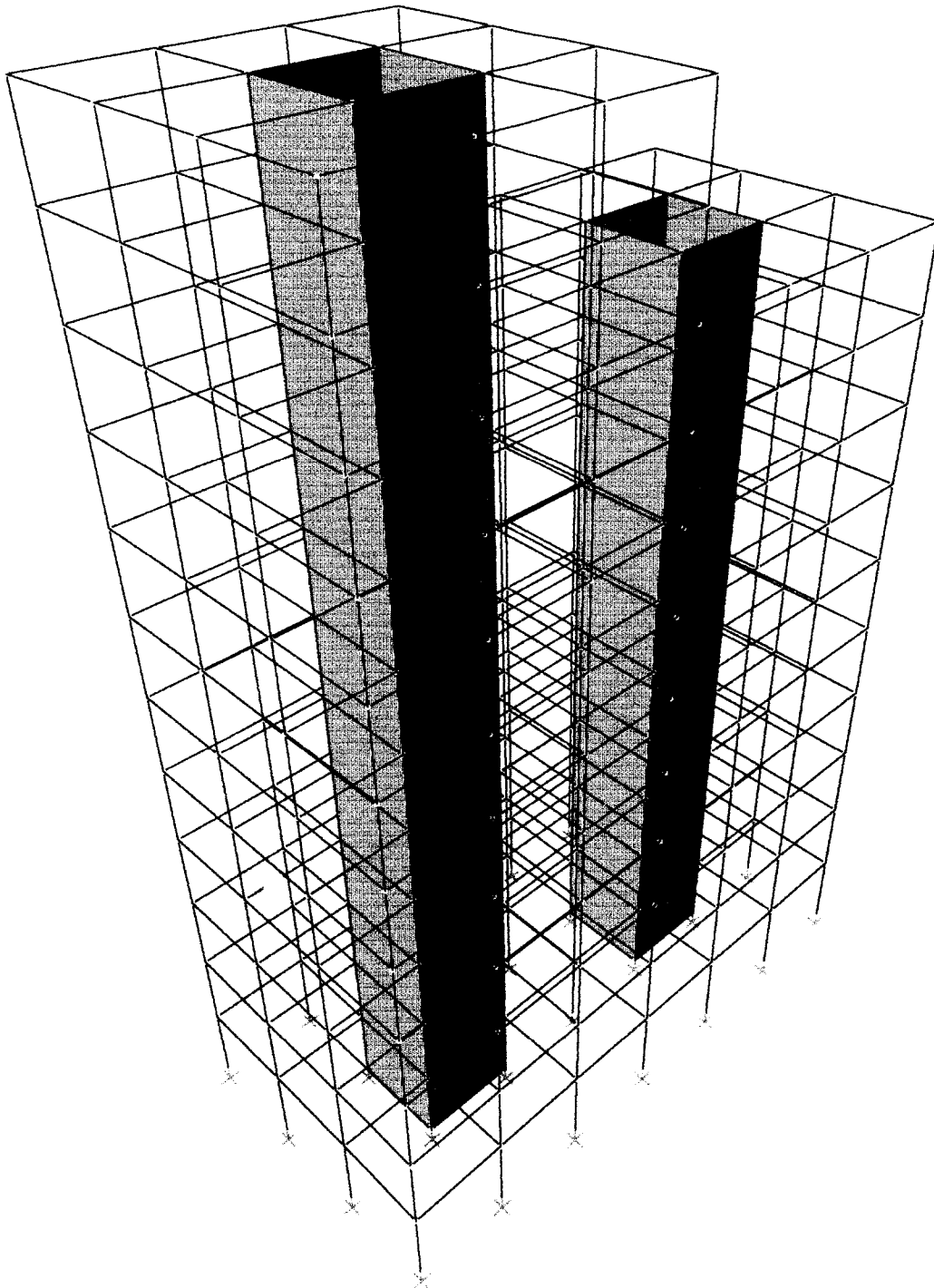
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 Sidang : 14 JULI 2003
 Pendadaran : 9 SEPTEMBER 2003

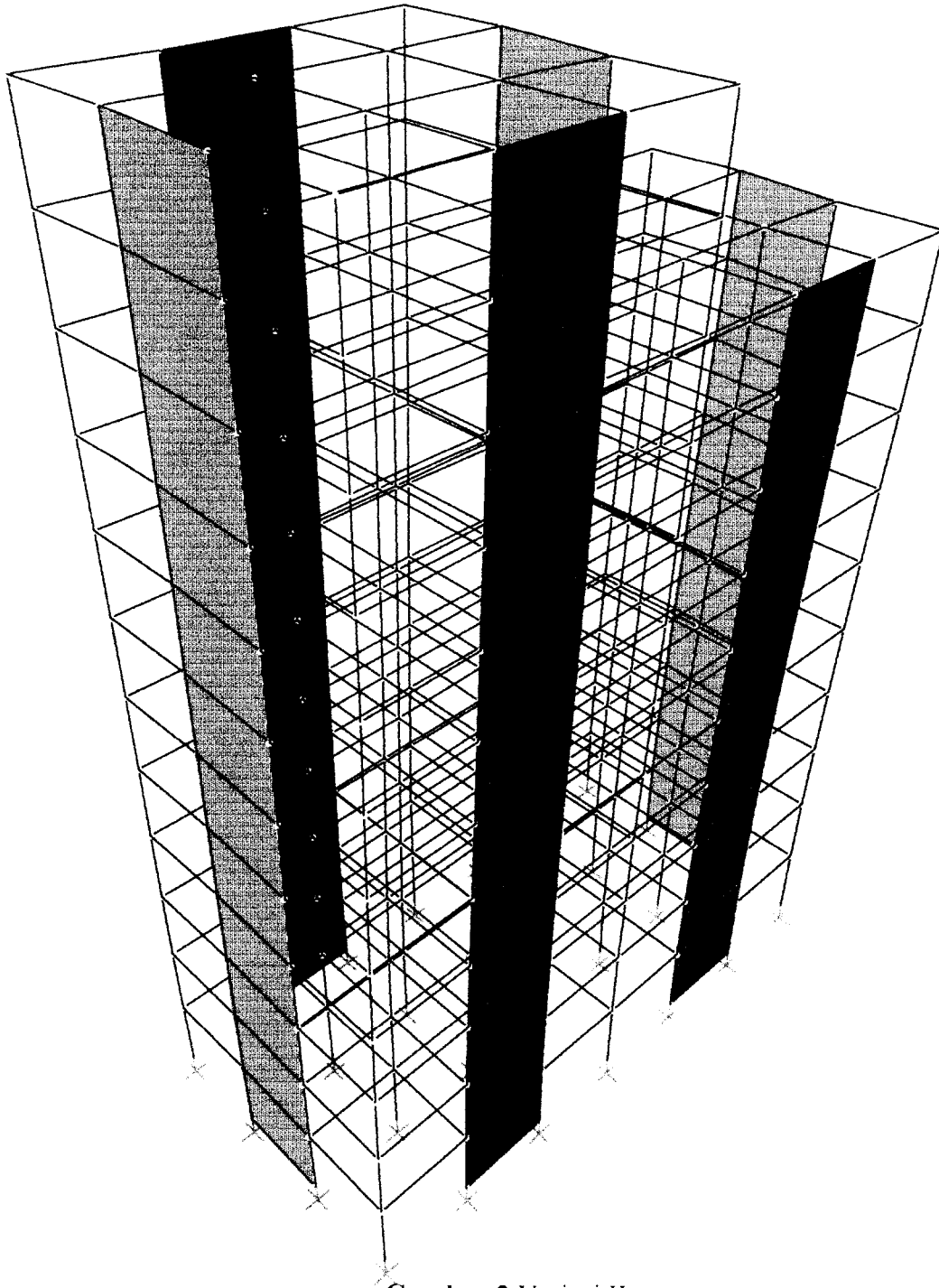
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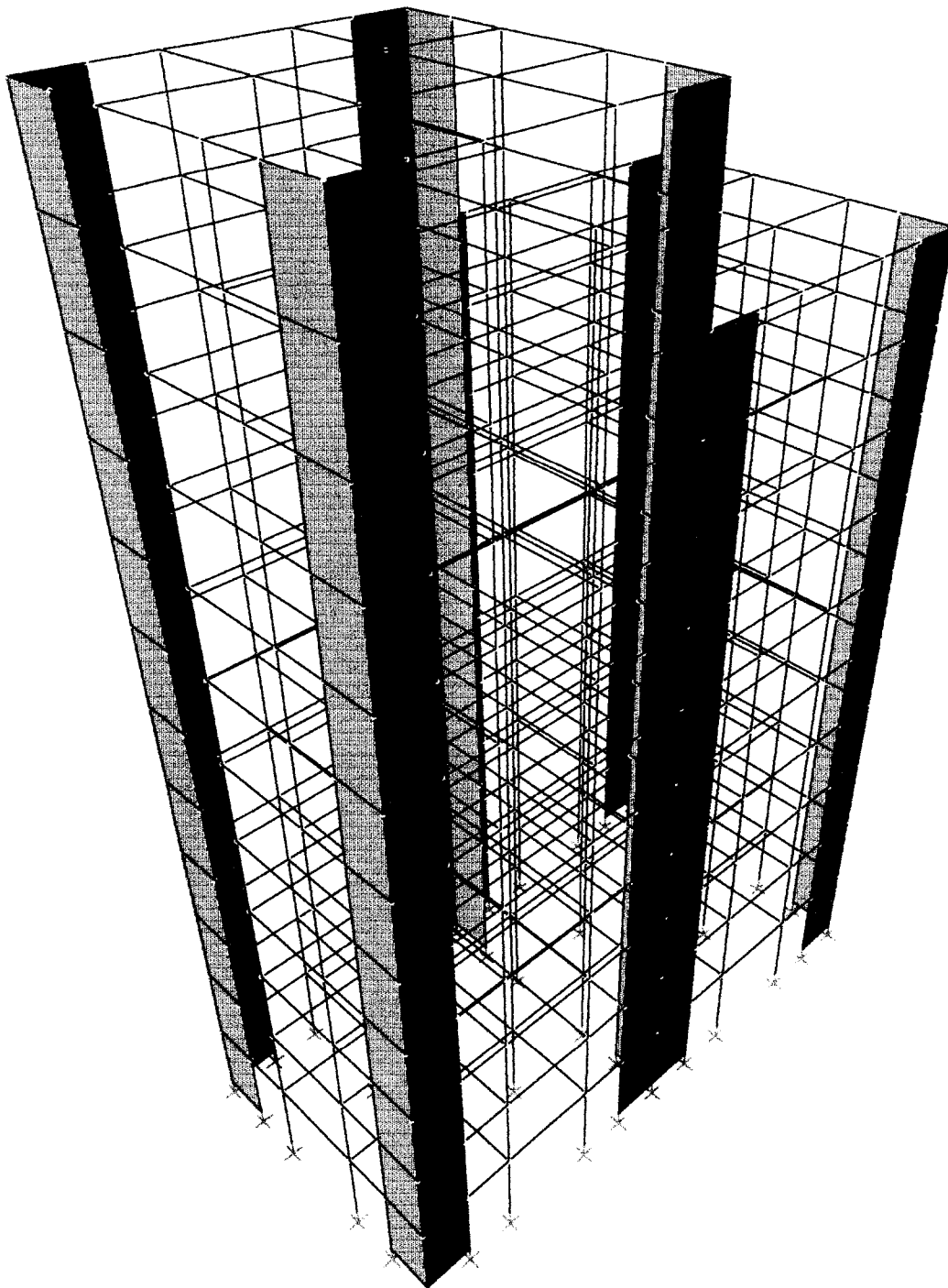
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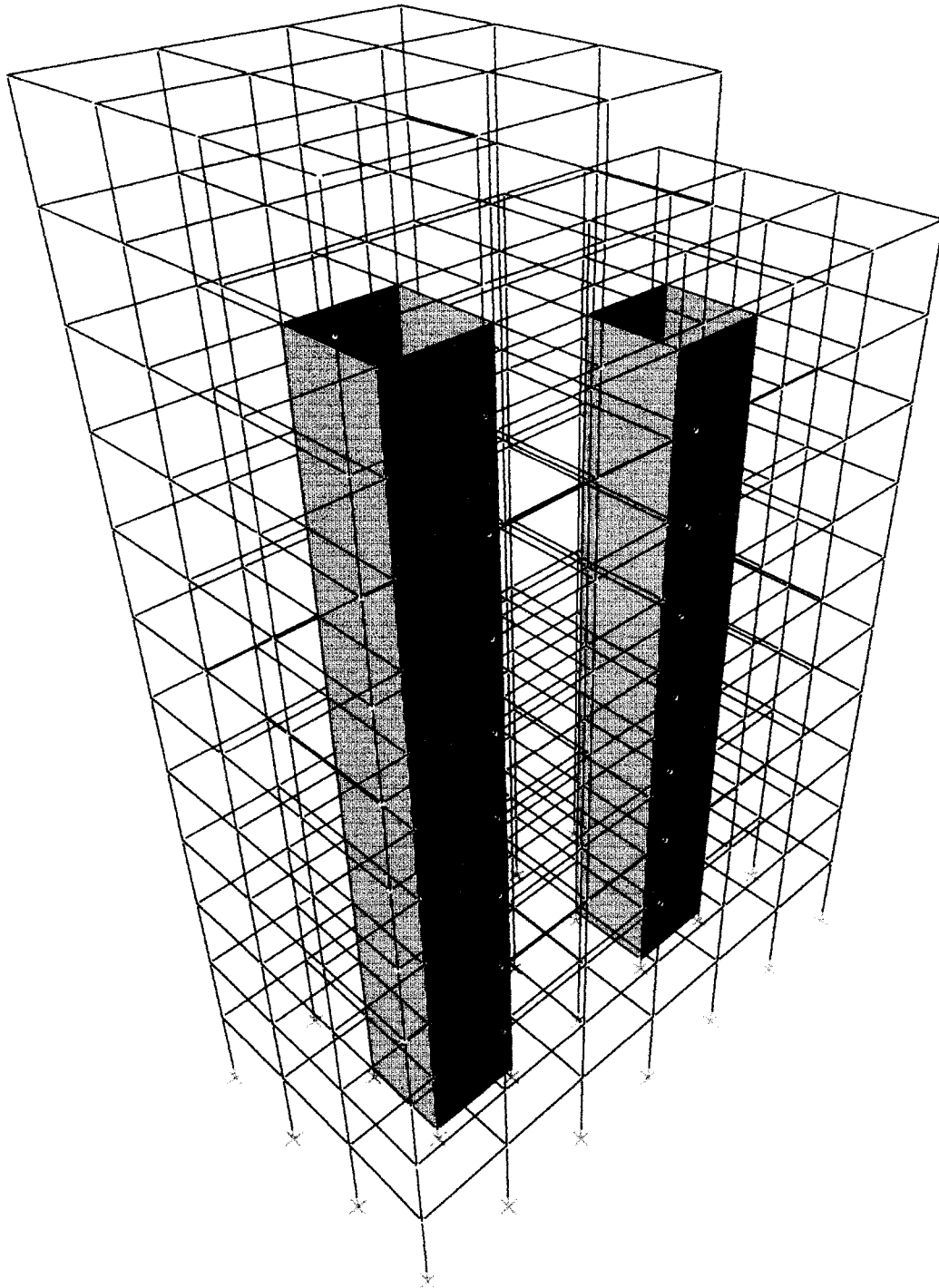
Gambar 1 Variasi I



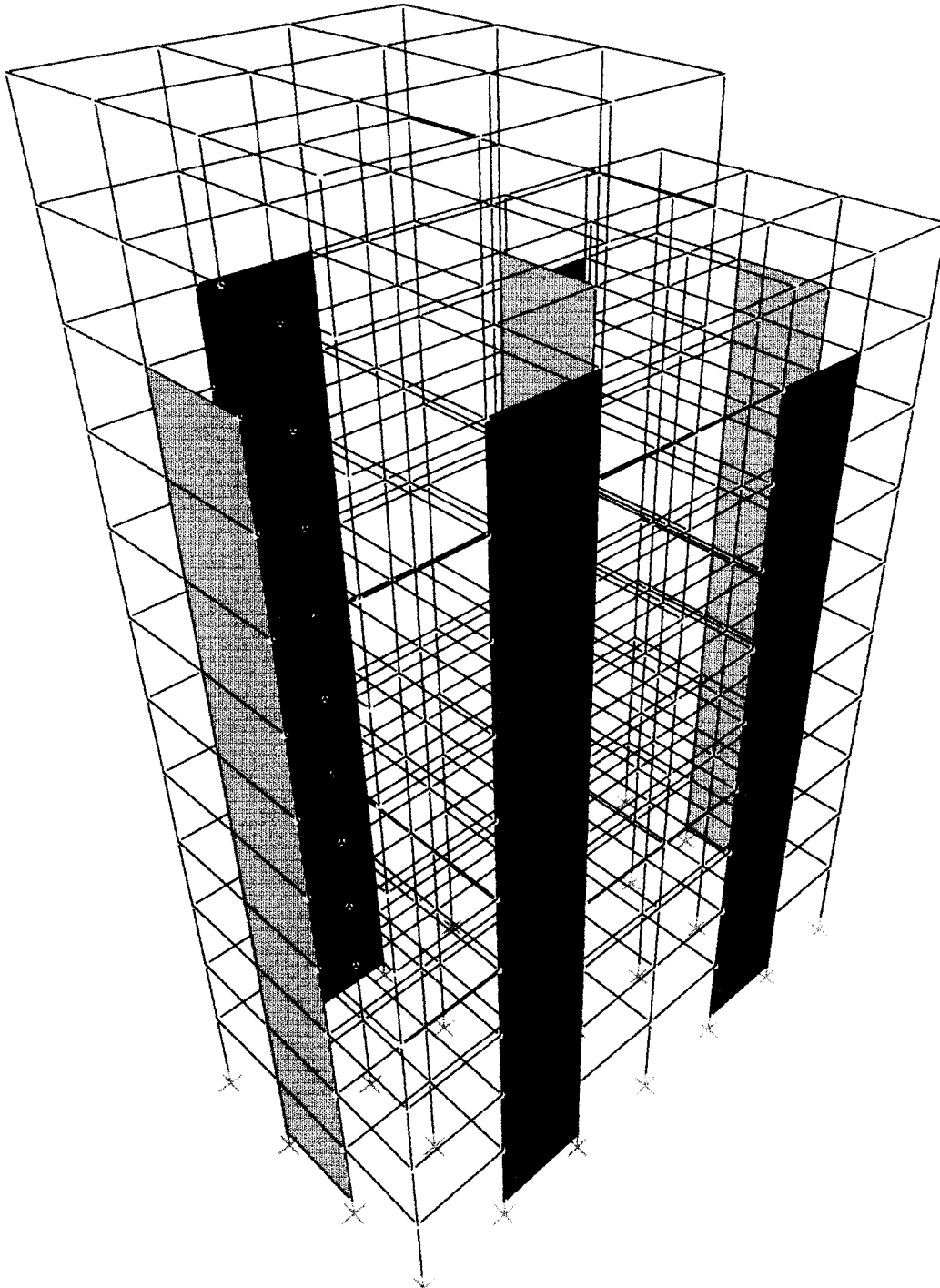
Gambar 2 Variasi II



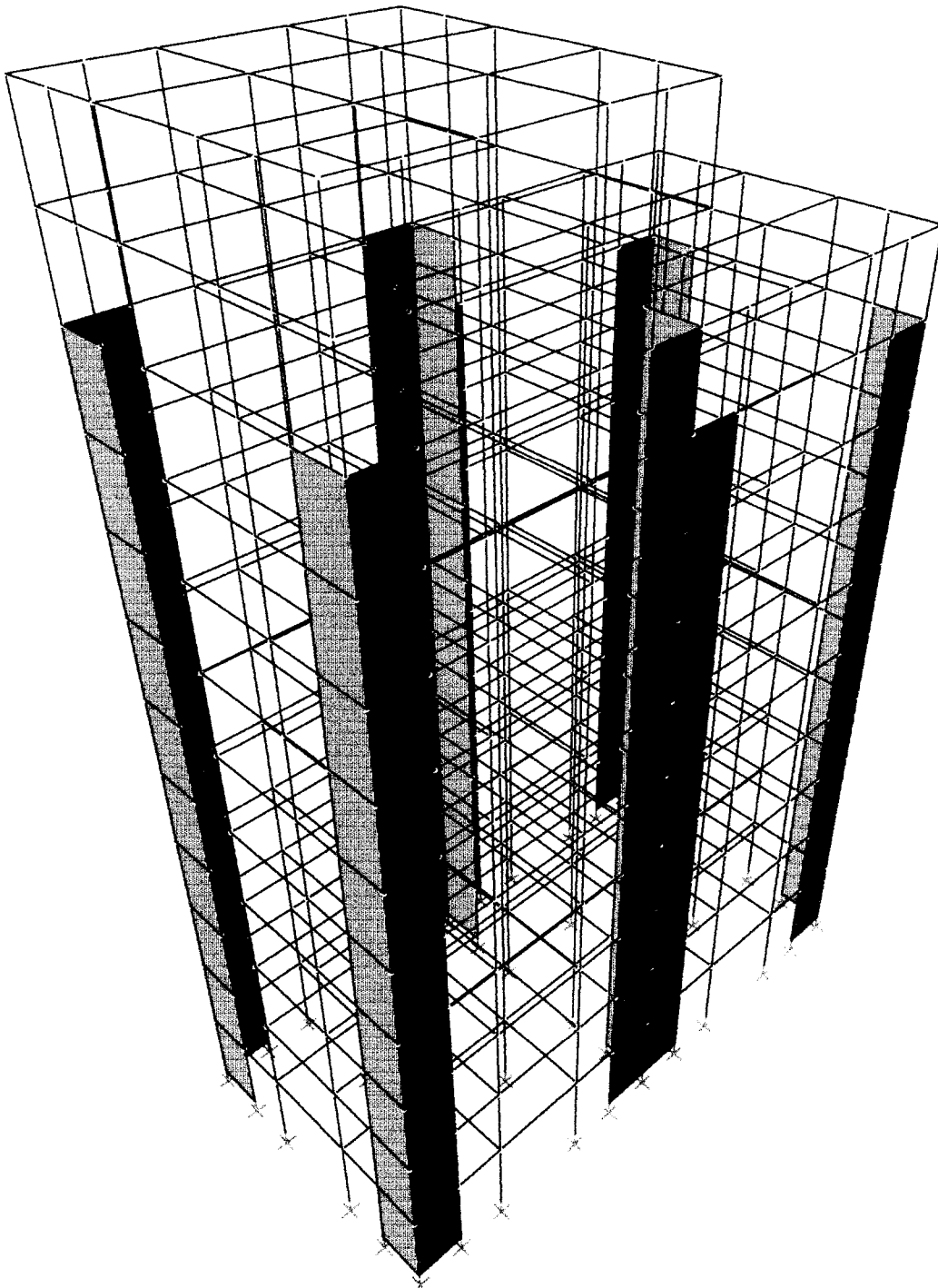
Gambar 3 Variasi III



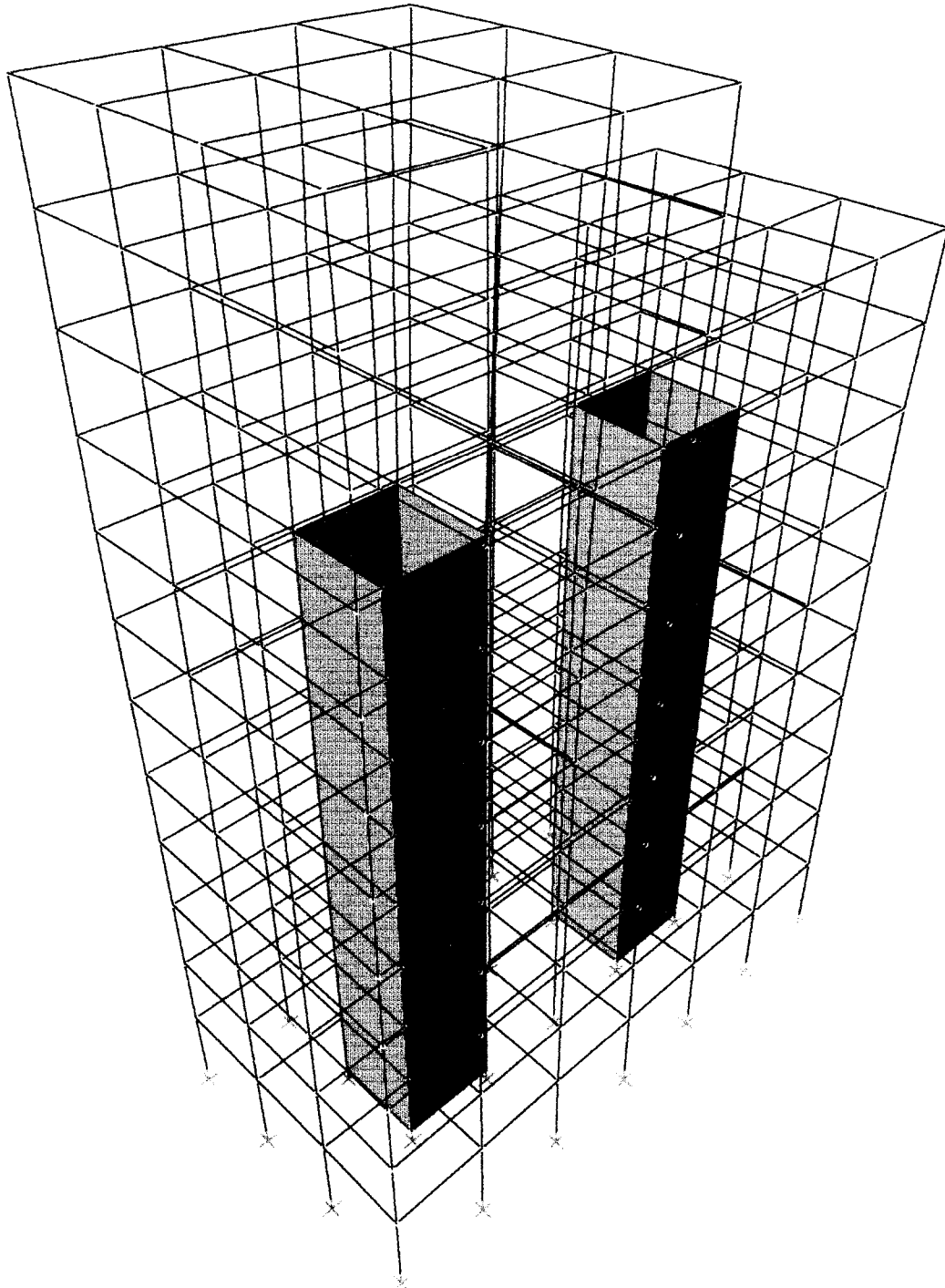
Gambar 4 Variasi IV



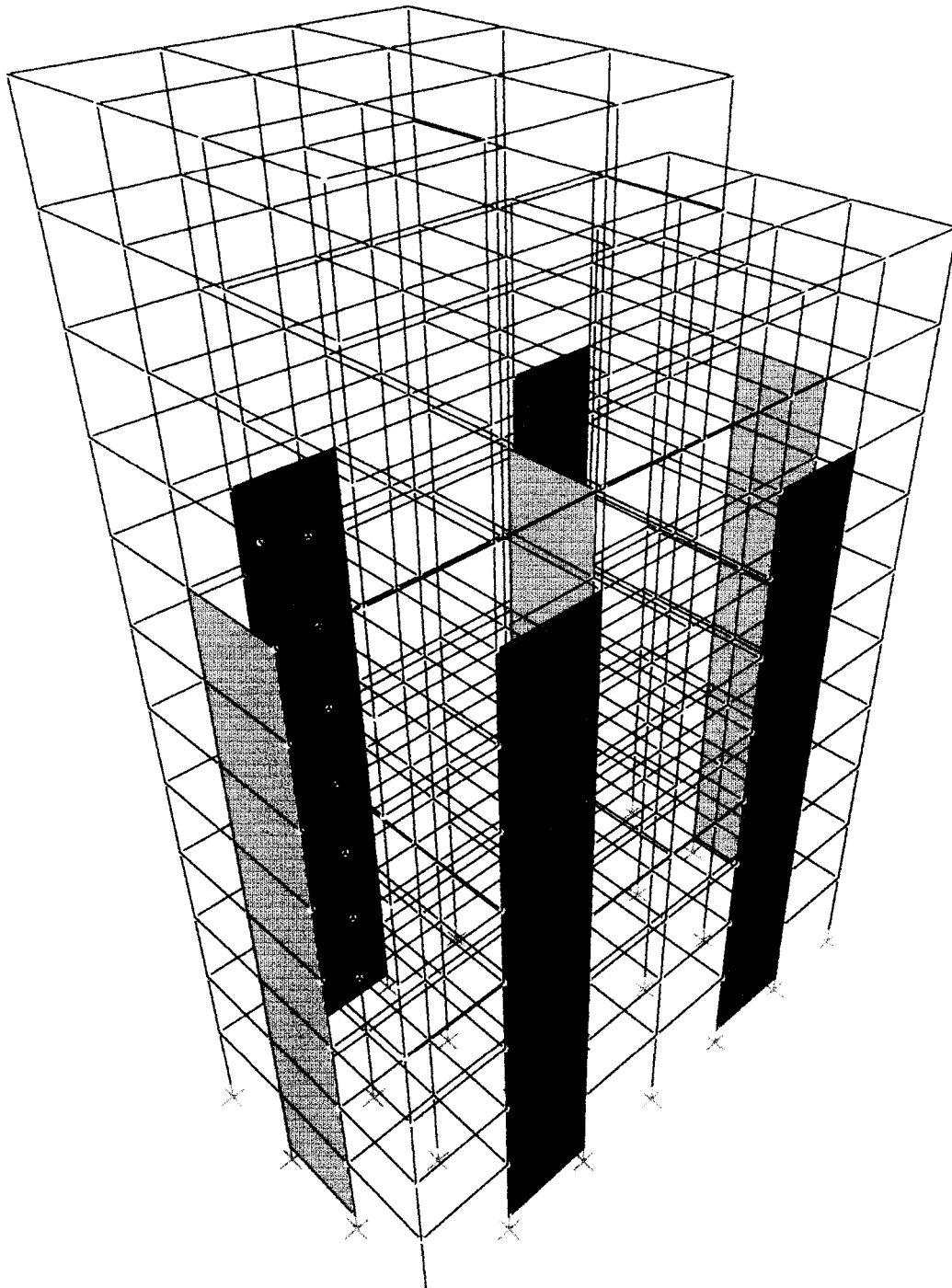
Gambar 5 Variasi V



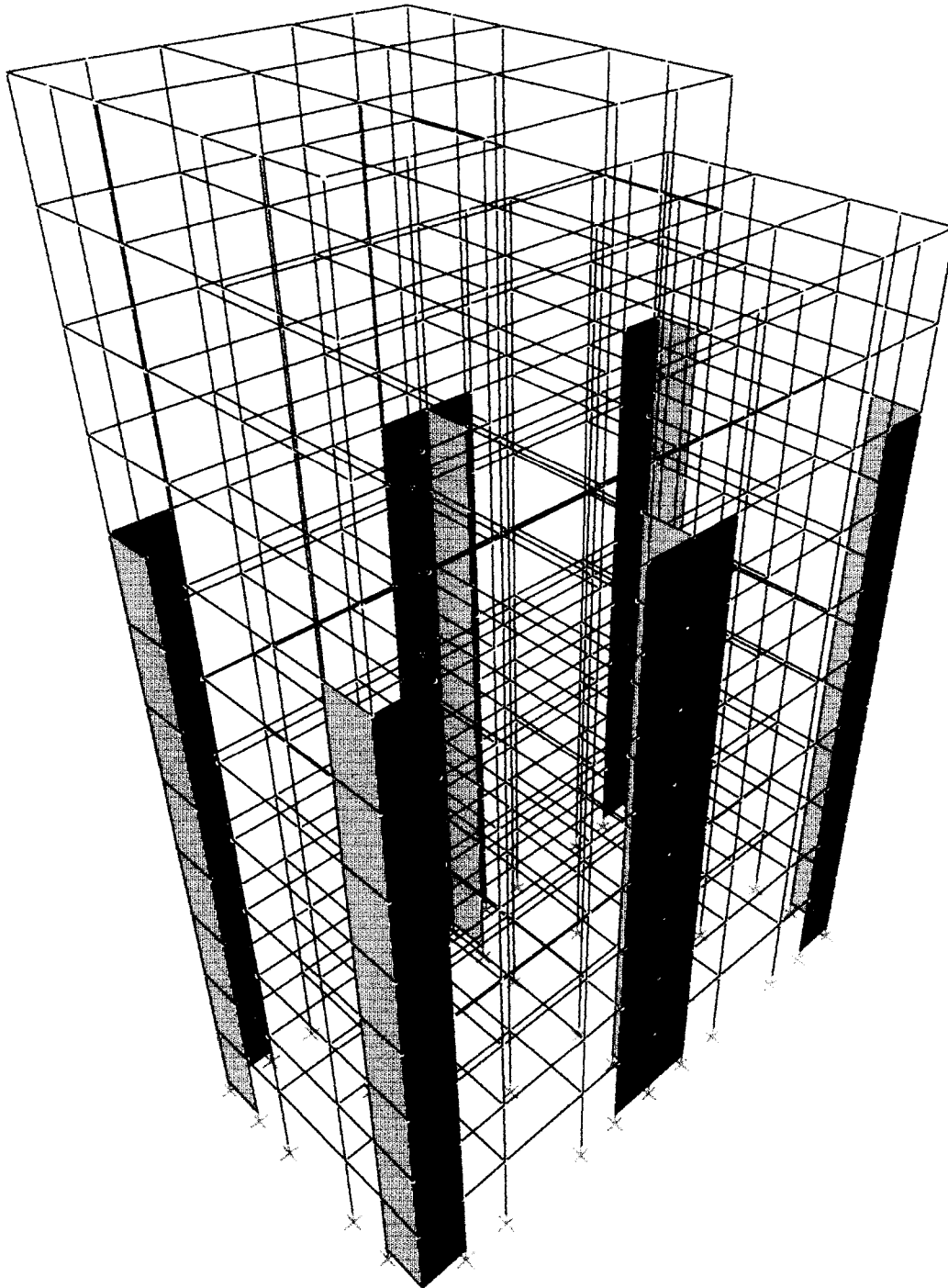
Gambar 6 Variasi VI



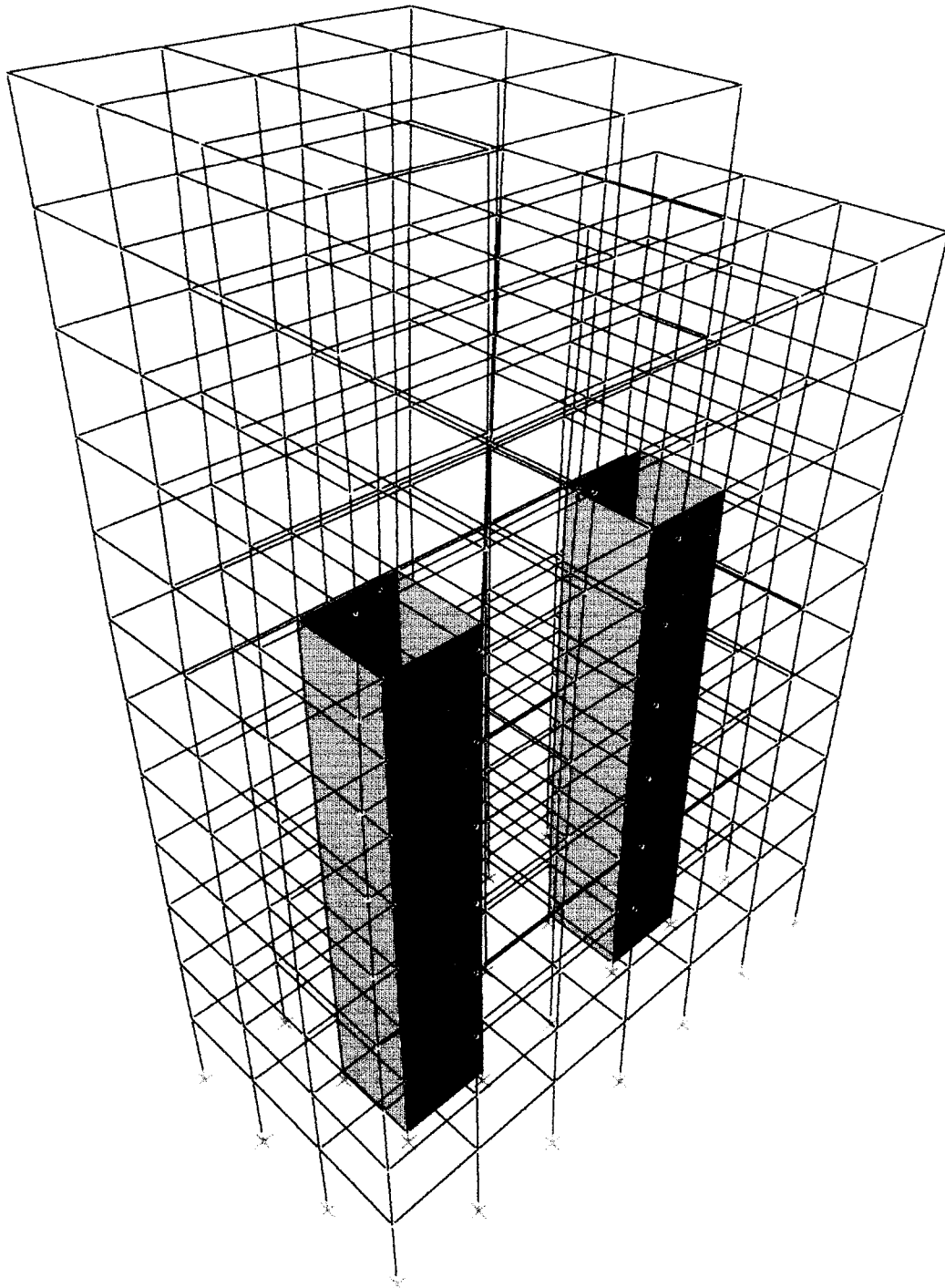
Gambar 7 Variasi VII



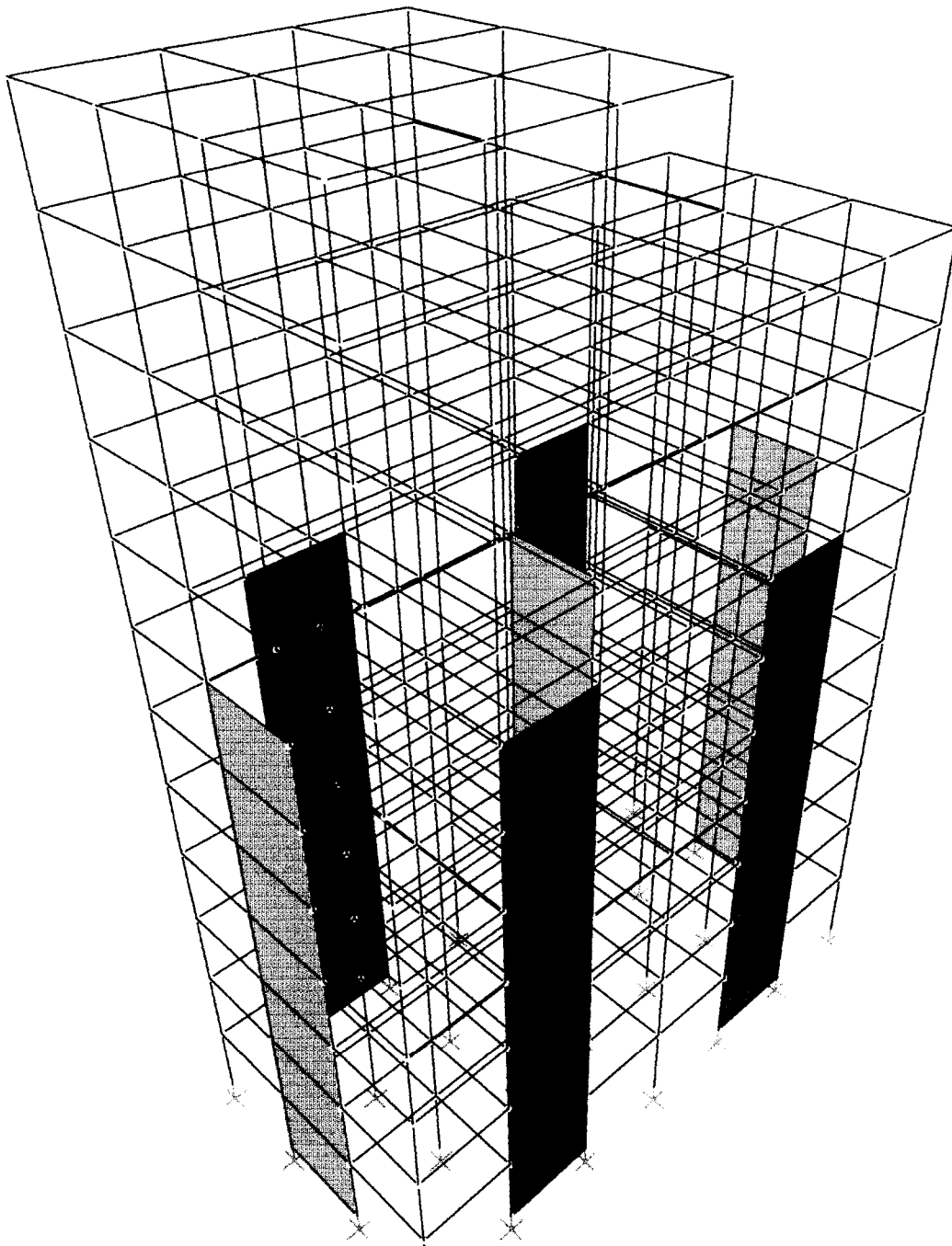
Gambar 8 Variasi VIII



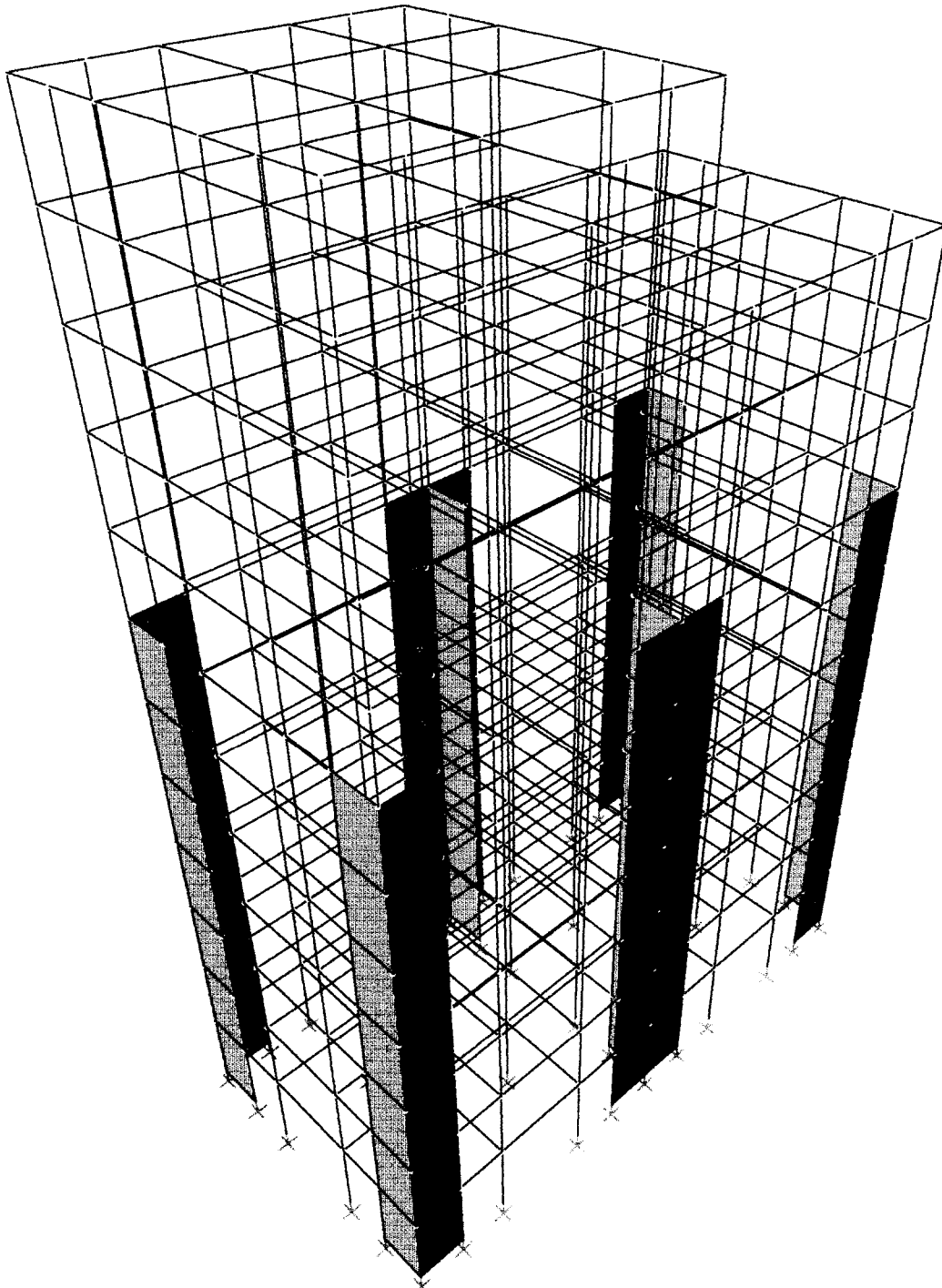
Gambar 9 Variasi IX



Gambar 10 Variasi X



Gambar 11 Variasi XI



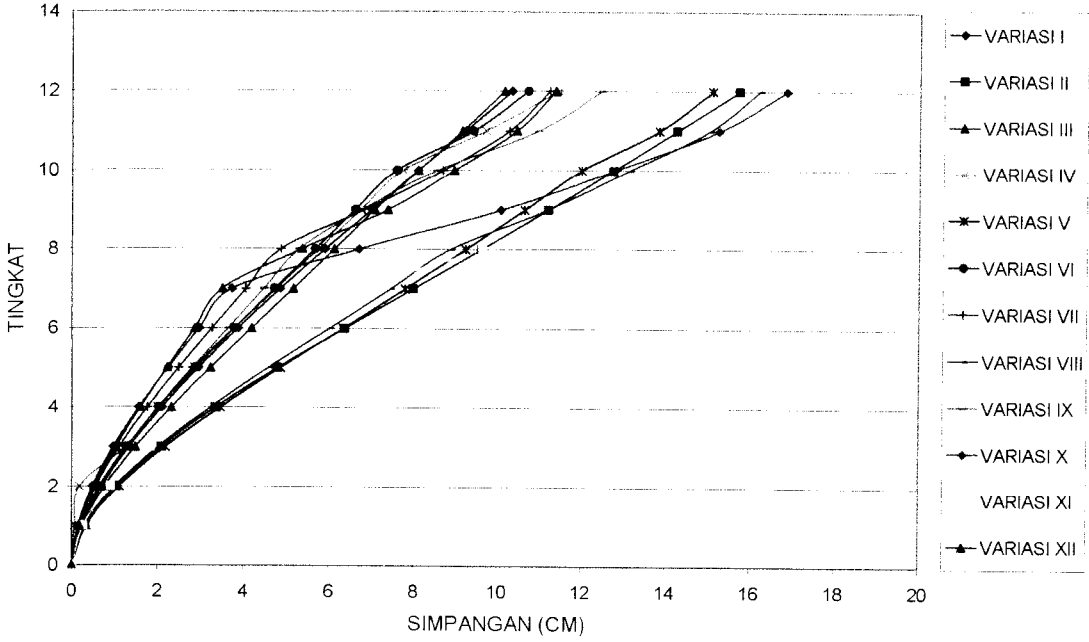
Gambar 12 Variasi XII

Tabel 1 Simpangan relatif sudut 0⁰ arah X

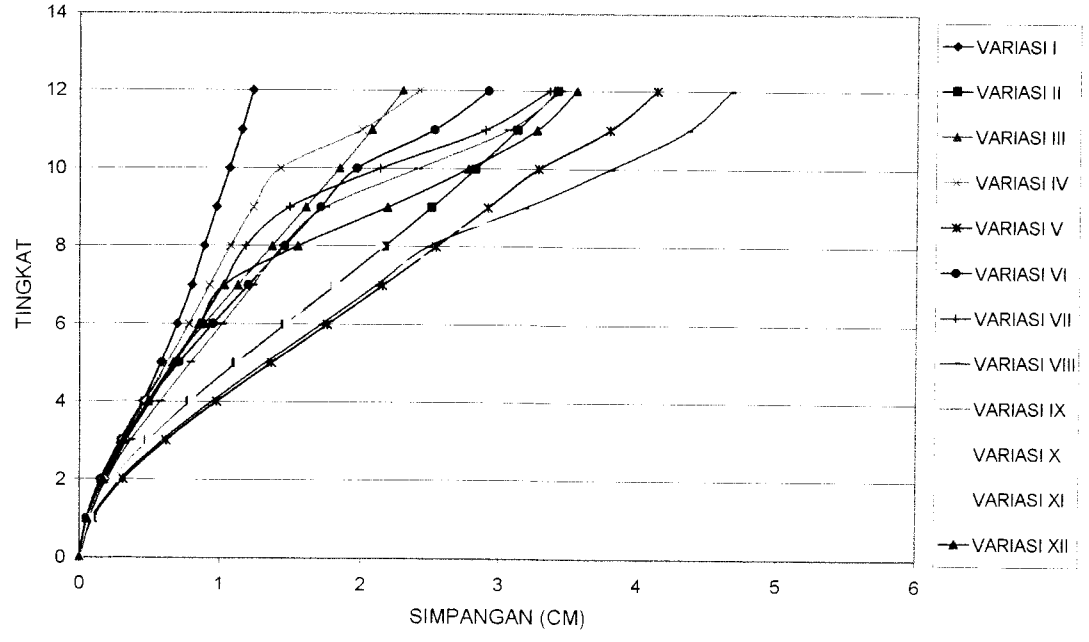
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,231	0,322	0,253	0,066	0,336	0,208	0,179	0,304	0,218	0,152	0,275	0,176
2	0,698	1,051	0,775	0,178	1,103	0,652	0,561	1,011	0,669	0,487	0,917	0,538
3	1,335	2,080	1,483	1,242	2,176	1,273	1,098	2,014	1,282	0,968	1,832	1,026
4	2,099	3,343	2,317	1,994	3,455	2,026	1,751	3,226	2,007	1,562	2,939	1,598
5	2,948	4,788	3,227	2,849	4,855	2,871	2,481	4,573	2,800	2,238	4,167	2,218
6	3,867	6,348	4,183	3,774	6,310	3,776	3,255	5,990	3,627	2,963	5,453	2,858
7	4,844	7,964	5,149	4,744	7,774	4,711	4,045	7,427	4,460	3,723	6,750	3,499
8	5,885	9,589	6,101	5,732	9,216	5,654	4,851	8,848	5,285	6,681	9,622	5,350
9	6,976	11,190	7,050	6,720	10,620	6,587	6,805	11,159	6,743	10,058	12,381	7,366
10	8,075	12,743	8,086	7,719	11,984	7,566	8,671	13,122	8,527	12,763	14,473	8,943
11	9,209	14,244	9,127	9,695	13,825	9,400	10,251	15,014	10,942	15,243	16,505	10,436
12	10,314	15,721	10,133	11,432	15,079	10,699	11,213	16,201	12,447	16,841	17,759	11,362

Tabel 2 Simpangan relatif sudut 0⁰ arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,073	0,077	0,053	0,068	0,097	0,051	0,070	0,091	0,065	0,063	0,077	0,057
2	0,189	0,252	0,157	0,178	0,315	0,154	0,190	0,300	0,197	0,175	0,254	0,171
3	0,320	0,498	0,297	0,315	0,618	0,305	0,340	0,591	0,372	0,317	0,504	0,321
4	0,455	0,791	0,461	0,467	0,975	0,493	0,508	0,939	0,575	0,481	0,805	0,492
5	0,582	1,115	0,663	0,623	1,361	0,710	0,682	1,319	0,792	0,656	1,135	0,673
6	0,695	1,458	0,887	0,777	1,757	0,947	0,855	1,711	1,013	0,836	1,476	0,852
7	0,798	1,812	1,123	0,924	2,151	1,196	1,020	2,101	1,230	1,022	1,815	1,027
8	0,886	2,164	1,364	1,069	2,539	1,451	1,177	2,480	1,438	2,136	2,671	1,545
9	0,972	2,504	1,604	1,232	2,913	1,708	1,488	3,177	1,741	3,381	3,493	2,184
10	1,062	2,823	1,840	1,419	3,280	1,964	2,130	3,798	2,400	4,311	4,075	2,769
11	1,149	3,123	2,071	1,998	3,794	2,525	2,890	4,357	3,058	5,091	4,588	3,266
12	1,227	3,417	2,295	2,413	4,134	2,914	3,357	4,662	3,437	5,552	4,875	3,553



Gambar 1 Simpangan relatif sudut 0° arah X



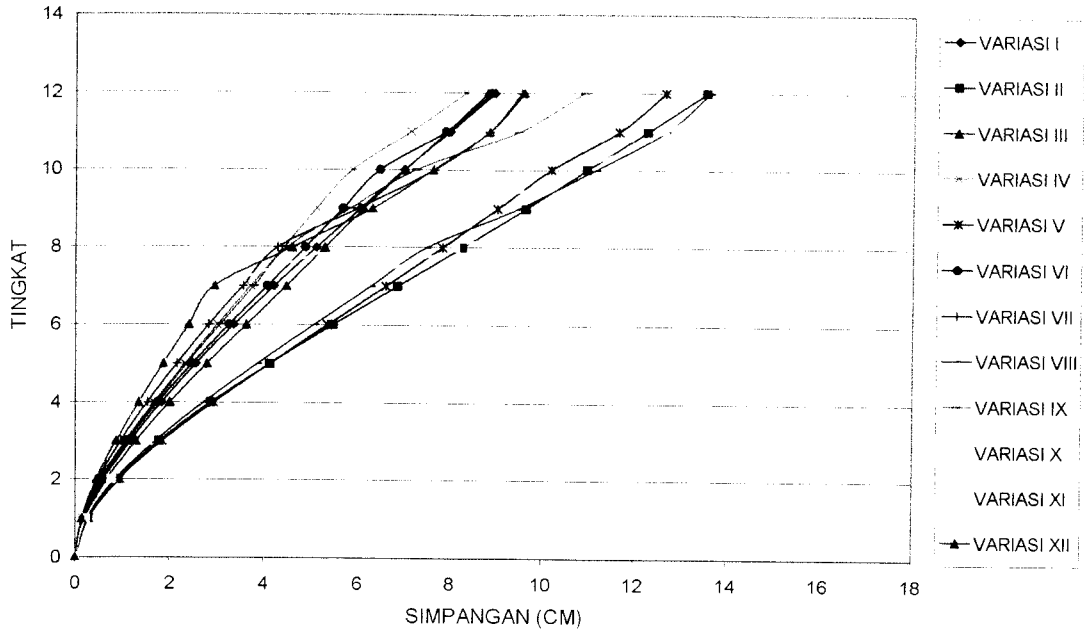
Gambar 2 Simpangan relatif sudut 0° arah Y

Tabel 3 Simpangan relatif sudut 30⁰ arah X

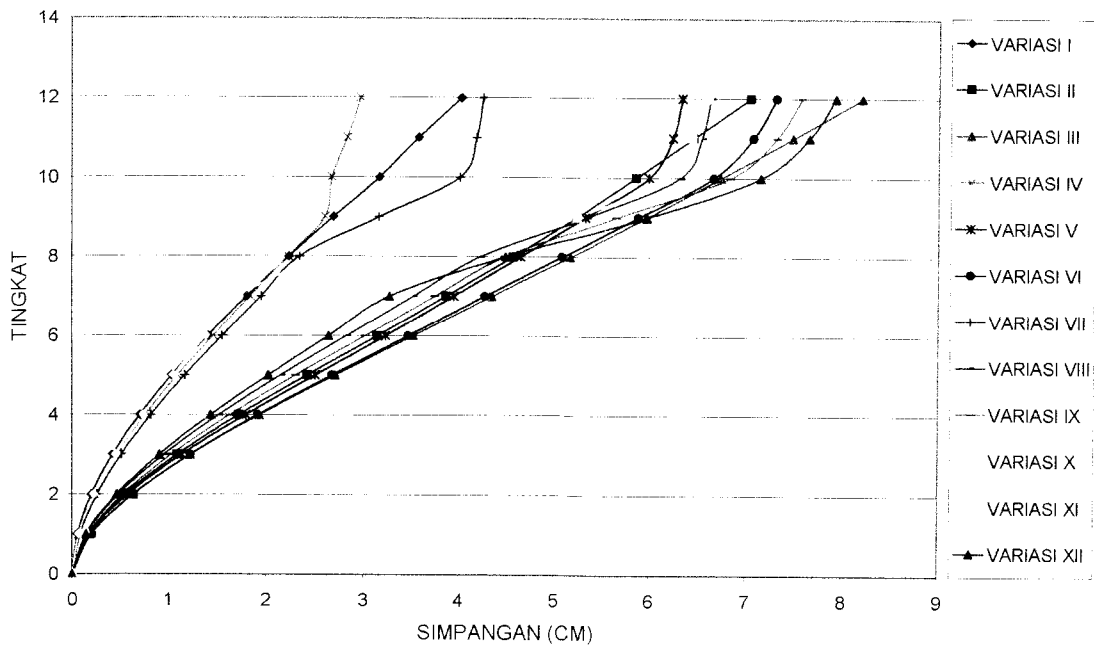
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,200	0,277	0,219	0,168	0,284	0,180	0,156	0,256	0,185	0,131	0,231	0,146
2	0,605	0,903	0,671	0,532	0,933	0,564	0,488	0,850	0,567	0,419	0,771	0,448
3	1,159	1,781	1,283	1,048	1,842	1,100	0,954	1,694	1,085	0,833	1,539	0,856
4	1,823	2,871	2,005	1,666	2,925	1,749	1,520	2,716	1,698	1,344	2,469	1,335
5	2,560	4,117	2,793	2,321	4,113	2,476	2,153	3,853	2,368	1,925	3,502	1,857
6	3,357	5,460	3,622	3,007	5,349	3,254	2,825	5,051	3,068	2,548	4,583	2,398
7	4,203	6,850	4,459	3,706	6,593	4,055	3,541	6,267	3,774	3,201	5,674	2,944
8	5,099	8,249	5,284	4,405	7,818	4,862	4,275	7,471	4,474	5,576	8,104	4,588
9	6,036	9,627	6,108	5,103	9,012	5,660	5,995	9,454	5,812	8,423	10,450	6,292
10	6,980	10,965	7,005	5,862	10,171	6,457	7,623	11,140	7,236	10,724	12,244	7,614
11	7,977	12,260	7,910	7,123	11,648	7,878	8,824	12,656	9,454	12,625	14,109	8,829
12	8,941	13,533	8,784	8,308	12,643	8,868	9,520	13,598	10,888	13,824	15,272	9,579

Tabel 4 Simpangan relatif sudut 30⁰ arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,055	0,168	0,199	0,067	0,176	0,202	0,081	0,145	0,170	0,067	0,131	0,144
2	0,198	0,549	0,628	0,224	0,576	0,631	0,257	0,478	0,523	0,222	0,429	0,460
3	0,416	1,082	1,220	0,457	1,131	1,218	0,506	0,947	1,021	0,447	0,845	0,900
4	0,695	1,717	1,925	0,749	1,789	1,911	0,808	1,511	1,623	0,725	1,338	1,429
5	1,023	2,414	2,702	1,085	2,500	2,670	1,158	2,143	2,295	1,039	1,871	2,018
6	1,393	3,137	3,517	1,449	3,227	3,464	1,544	2,820	3,010	1,373	2,414	2,636
7	1,795	3,860	4,345	1,830	3,943	4,269	1,941	3,516	3,742	1,715	2,943	3,266
8	2,227	4,562	5,166	2,215	4,643	5,080	2,334	4,218	4,479	2,554	4,027	4,483
9	2,684	5,229	5,964	2,597	5,322	5,878	3,153	5,338	5,650	3,523	5,237	5,972
10	3,159	5,857	6,737	2,666	5,991	6,661	4,003	6,311	6,831	4,361	6,142	7,149
11	3,571	6,451	7,484	2,825	6,236	7,070	4,179	6,537	7,311	4,691	6,437	7,655
12	4,017	7,039	8,206	2,959	6,333	7,313	4,245	6,630	7,576	4,859	6,609	7,929



Gambar 3 Simpangan relatif sudut 30^0 arah X



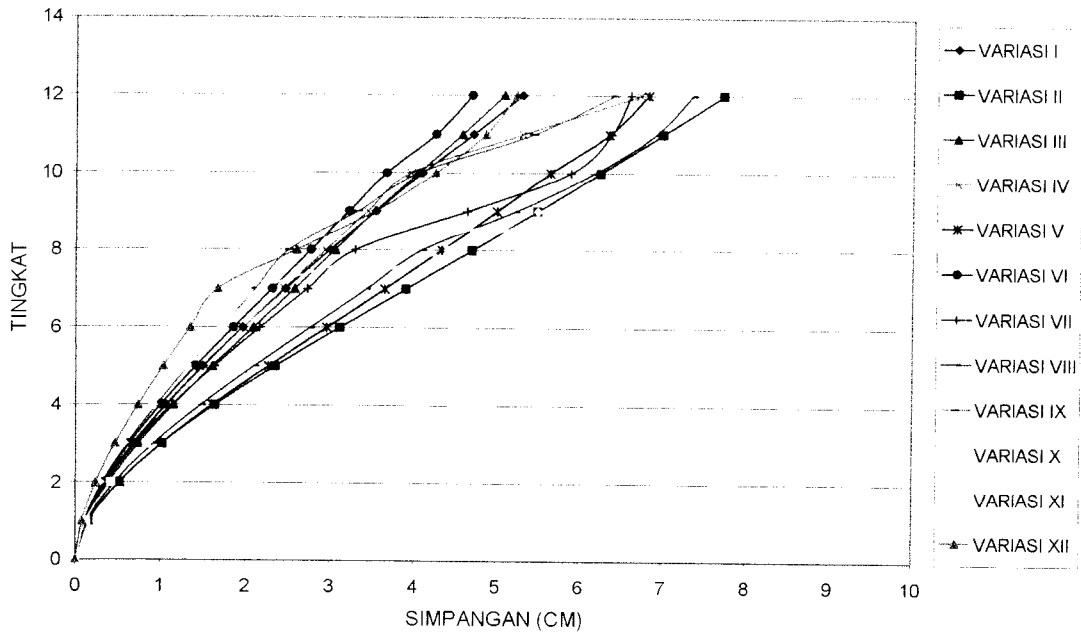
Gambar 4 Simpangan relatif sudut 30^0 arah Y

Tabel 5 Simpangan relatif sudut 60⁰ arah X

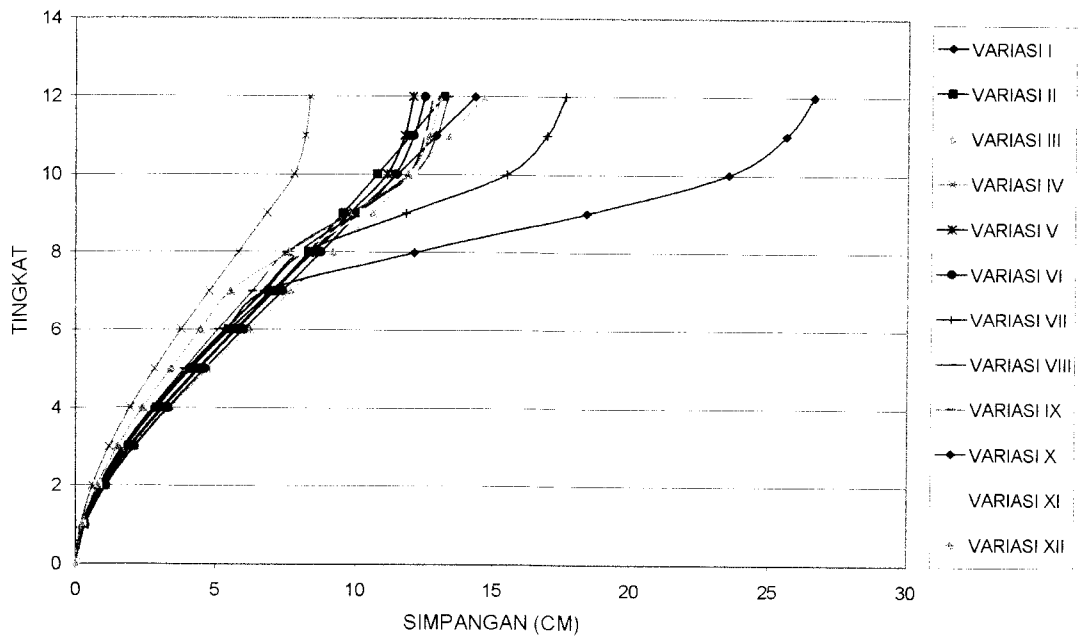
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,116	0,157	0,126	0,118	0,156	0,109	0,110	0,139	0,104	0,089	0,127	0,078
2	0,352	0,513	0,387	0,359	0,513	0,328	0,354	0,462	0,319	0,286	0,421	0,240
3	0,677	1,018	0,740	0,687	1,014	0,633	0,704	0,921	0,610	0,567	0,838	0,465
4	1,064	1,640	1,157	1,077	1,612	1,004	1,138	1,479	0,953	0,915	1,340	0,734
5	1,500	2,348	1,611	1,510	2,270	1,418	1,632	2,101	1,327	1,310	1,898	1,033
6	1,969	3,110	2,090	1,970	2,956	1,859	2,168	2,759	1,717	1,734	2,485	1,348
7	2,468	3,901	2,574	2,449	3,648	2,313	2,724	3,428	2,111	2,178	3,078	1,672
8	2,994	4,699	3,053	2,941	4,330	2,768	3,291	4,092	2,504	3,773	4,414	2,596
9	3,539	5,485	3,530	3,439	4,995	3,216	4,635	5,216	3,323	5,493	5,719	3,531
10	4,096	6,250	4,047	3,952	5,639	3,662	5,884	6,173	4,046	7,045	6,733	4,252
11	4,707	6,992	4,573	5,304	6,350	4,258	6,378	6,906	5,433	7,772	7,944	4,857
12	5,301	7,723	5,081	6,724	6,819	4,692	6,605	7,351	6,412	8,168	8,714	5,229

Tabel 6 Simpangan relatif sudut 60⁰ arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,270	0,305	0,346	0,186	0,305	0,349	0,259	0,279	0,279	0,275	0,246	0,242
2	0,875	0,975	1,095	0,598	1,002	1,092	0,848	0,918	0,886	0,884	0,802	0,771
3	1,755	1,935	2,129	1,197	1,978	2,106	1,704	1,819	1,728	1,760	1,578	1,510
4	2,853	3,088	3,369	1,947	3,140	3,303	2,774	2,902	2,742	2,842	2,511	2,403
5	4,119	4,360	4,744	2,814	4,413	4,613	4,003	4,102	3,875	4,073	3,539	3,397
6	5,504	5,687	6,194	3,764	5,740	5,982	5,342	5,369	5,073	5,394	4,606	4,444
7	6,967	7,017	7,670	4,764	7,078	7,367	6,742	6,657	6,292	6,782	5,680	5,519
8	8,472	8,309	9,152	5,789	8,423	8,742	8,176	7,937	7,507	12,111	7,979	7,583
9	9,991	9,537	10,600	6,816	9,777	10,092	11,816	10,037	9,815	18,407	10,267	9,805
10	11,503	10,758	12,004	7,785	11,108	11,412	15,474	11,881	12,085	23,527	12,044	11,868
11	12,897	11,974	13,361	8,169	11,747	12,088	16,934	12,480	12,909	25,608	12,617	12,652
12	14,314	13,169	14,674	8,340	12,053	12,494	17,606	12,776	13,330	26,618	12,903	13,056



Gambar 5 Simpangan relatif sudut 60° arah X



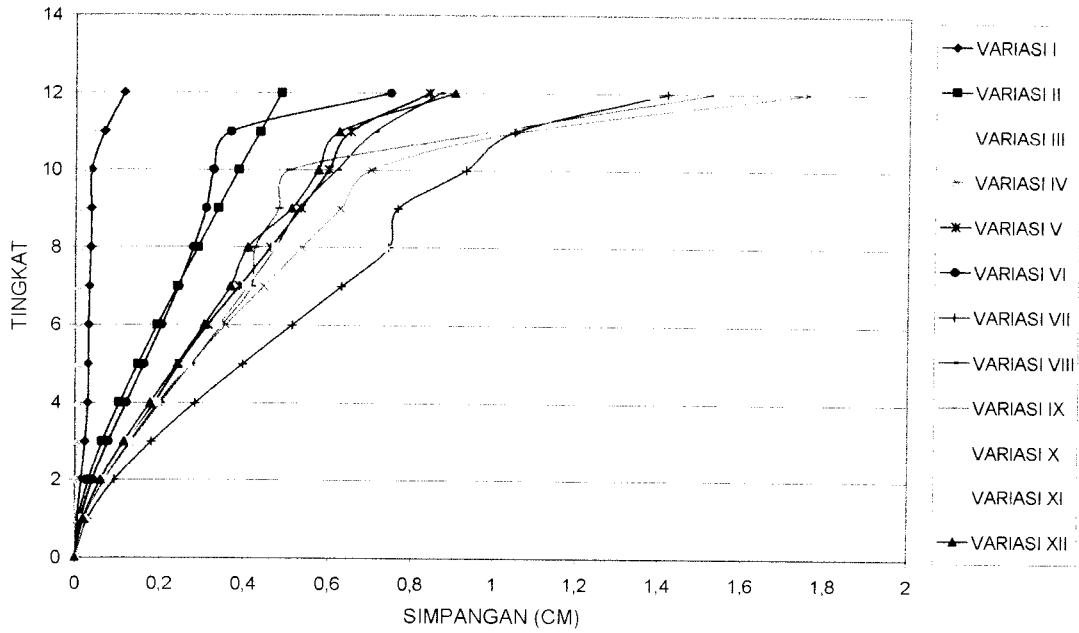
Gambar 6 Simpangan relatif sudut 60° arah Y

Tabel 7 Simpangan relatif sudut 90^0 arah X

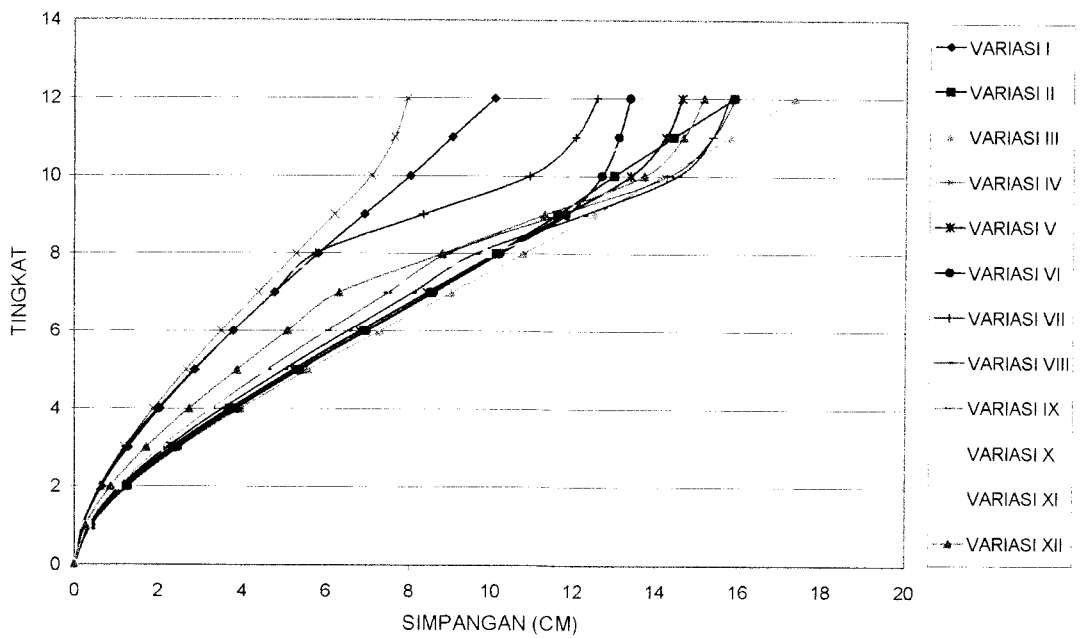
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,006	0,010	0,002	0,023	0,022	0,014	0,030	0,023	0,023	0,026	0,021	0,020
2	0,015	0,033	0,004	0,068	0,067	0,042	0,093	0,069	0,070	0,077	0,065	0,061
3	0,024	0,065	0,006	0,128	0,125	0,079	0,180	0,129	0,131	0,145	0,125	0,115
4	0,030	0,104	0,007	0,198	0,187	0,120	0,283	0,195	0,201	0,225	0,192	0,176
5	0,031	0,147	0,007	0,275	0,246	0,162	0,396	0,265	0,275	0,314	0,264	0,241
6	0,032	0,194	0,008	0,356	0,313	0,204	0,513	0,338	0,347	0,406	0,336	0,305
7	0,033	0,241	0,010	0,446	0,388	0,243	0,630	0,408	0,417	0,497	0,405	0,367
8	0,037	0,289	0,013	0,536	0,462	0,278	0,743	0,473	0,424	0,736	0,473	0,408
9	0,037	0,337	0,018	0,626	0,532	0,308	0,765	0,528	0,480	0,996	0,563	0,511
10	0,038	0,385	0,026	0,701	0,599	0,326	0,929	0,617	0,507	1,150	0,645	0,574
11	0,068	0,435	0,046	1,057	0,650	0,366	1,046	0,708	0,988	1,334	0,994	0,624
12	0,113	0,485	0,059	1,755	0,840	0,747	1,417	0,866	1,526	1,538	1,384	0,902

Tabel 8 Simpangan relatif sudut 90^0 arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,217	0,368	0,404	0,203	0,356	0,403	0,202	0,338	0,332	0,155	0,316	0,275
2	0,662	1,190	1,280	0,620	1,173	1,264	0,630	1,115	1,051	0,493	1,029	0,879
3	1,280	2,361	2,492	1,195	2,322	2,440	1,234	2,208	2,050	0,975	2,025	1,719
4	2,029	3,768	3,943	1,885	3,695	3,832	1,991	3,523	3,252	1,569	3,211	2,735
5	2,869	5,317	5,557	2,657	5,209	5,360	2,852	4,978	4,590	2,241	4,510	3,872
6	3,784	6,931	7,266	3,490	6,799	6,958	3,785	6,510	6,015	2,961	5,855	5,074
7	4,761	8,545	9,011	4,369	8,429	8,579	4,754	8,064	7,468	3,716	7,198	6,306
8	5,805	10,109	10,769	5,273	10,091	10,203	5,745	9,609	8,918	6,468	9,896	8,798
9	6,906	11,592	12,489	6,188	11,766	11,802	6,328	12,231	11,632	9,439	12,773	11,288
10	8,025	12,981	14,155	7,073	13,385	12,681	10,912	14,501	14,298	12,004	15,101	13,705
11	9,036	14,409	15,767	7,635	14,214	13,092	12,039	15,339	15,342	13,294	15,986	14,644
12	10,074	15,855	17,327	7,945	14,609	13,365	12,568	15,749	15,883	13,941	16,436	15,132



Gambar 7 Simpangan relatif sudut 90^0 arah X



Gambar 8 Simpangan relatif sudut 90^0 arah Y

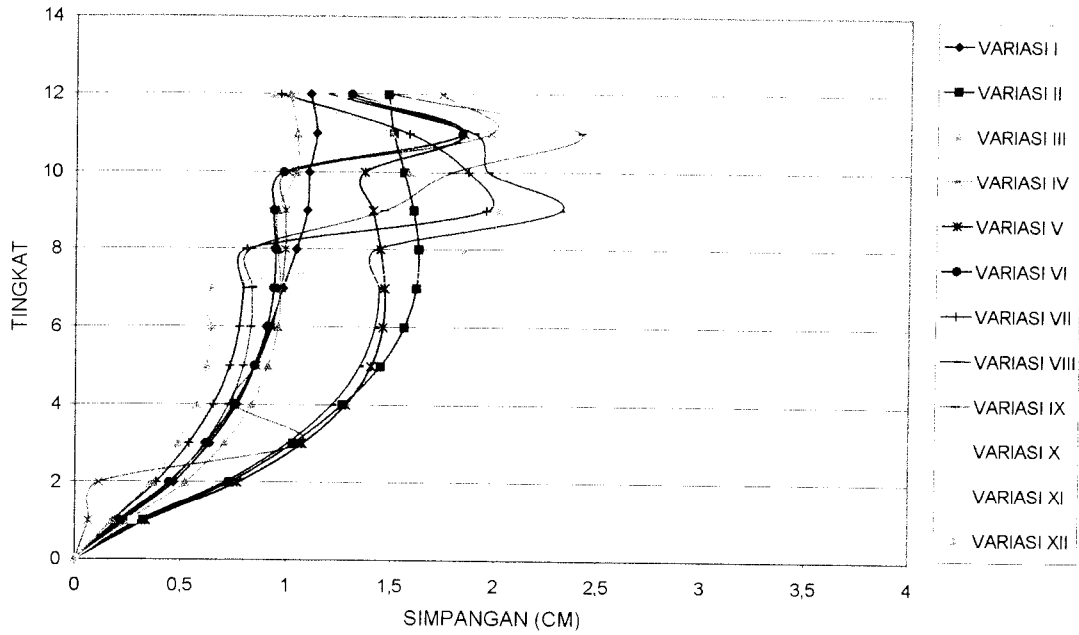
Tabel 1 Simpangan antar tingkat sudut 0^0 arah X

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,231	0,322	0,253	0,066	0,336	0,208	0,179	0,304	0,218	0,152	0,275	0,176
2	0,467	0,729	0,522	0,112	0,767	0,445	0,382	0,707	0,451	0,335	0,642	0,362
3	0,636	1,029	0,708	1,064	1,074	0,620	0,538	1,003	0,613	0,481	0,914	0,488
4	0,765	1,264	0,834	0,752	1,279	0,753	0,653	1,212	0,725	0,594	1,107	0,572
5	0,848	1,445	0,910	0,855	1,400	0,846	0,730	1,346	0,793	0,676	1,229	0,620
6	0,919	1,560	0,956	0,925	1,456	0,905	0,774	1,418	0,826	0,725	1,286	0,639
7	0,978	1,616	0,966	0,970	1,464	0,935	0,791	1,436	0,833	0,760	1,297	0,642
8	1,041	1,626	0,952	0,988	1,442	0,942	0,806	1,421	0,825	2,958	2,872	1,851
9	1,091	1,600	0,950	0,988	1,404	0,934	1,954	2,312	1,458	3,377	2,759	2,016
10	1,099	1,553	1,036	0,999	1,364	0,978	1,866	1,962	1,784	2,705	2,092	1,577
11	1,134	1,502	1,041	1,976	1,841	1,834	1,579	1,892	2,415	2,480	2,032	1,492
12	1,105	1,477	1,006	1,737	1,254	1,299	0,962	1,187	1,505	1,598	1,255	0,927

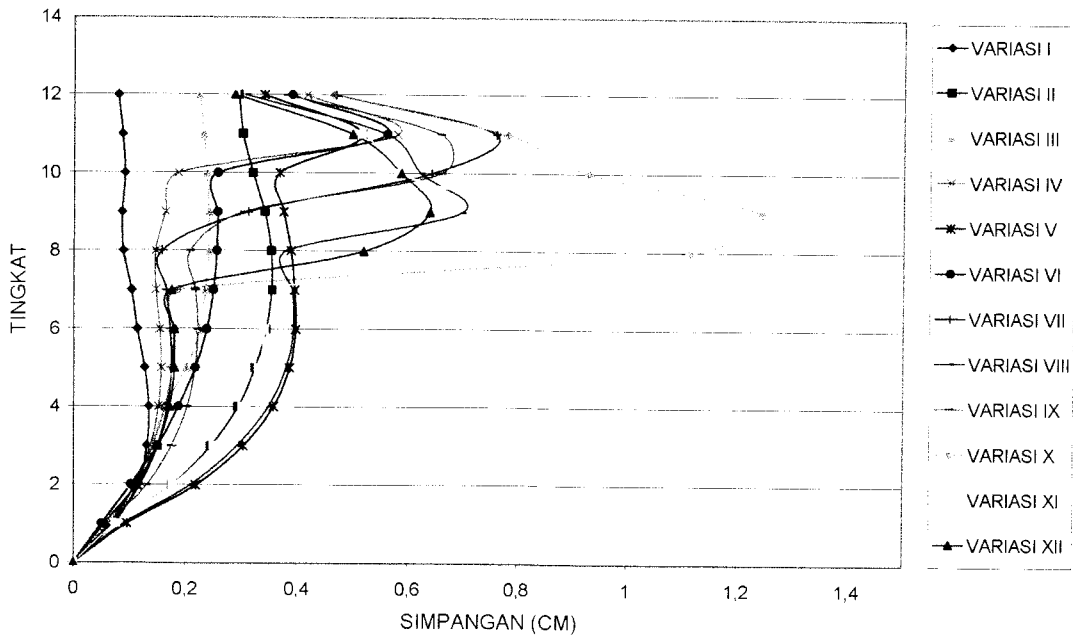
Tabel 2 Simpangan antar tingkat sudut 0^0 arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,073	0,077	0,053	0,068	0,097	0,051	0,070	0,091	0,065	0,063	0,077	0,057
2	0,115	0,176	0,104	0,110	0,219	0,103	0,119	0,208	0,131	0,112	0,177	0,114
3	0,131	0,245	0,140	0,138	0,303	0,151	0,150	0,292	0,175	0,142	0,250	0,150
4	0,134	0,294	0,164	0,152	0,357	0,188	0,168	0,348	0,203	0,164	0,300	0,171
5	0,127	0,324	0,202	0,156	0,386	0,217	0,175	0,380	0,217	0,175	0,330	0,180
6	0,114	0,343	0,224	0,154	0,396	0,237	0,172	0,393	0,221	0,180	0,341	0,180
7	0,103	0,353	0,236	0,146	0,394	0,249	0,165	0,390	0,217	0,186	0,339	0,175
8	0,088	0,352	0,241	0,146	0,388	0,255	0,157	0,379	0,208	1,114	0,856	0,518
9	0,085	0,340	0,241	0,163	0,375	0,256	0,311	0,696	0,303	1,244	0,822	0,638
10	0,090	0,319	0,236	0,186	0,367	0,257	0,642	0,621	0,659	0,930	0,581	0,586
11	0,086	0,301	0,231	0,579	0,514	0,560	0,760	0,559	0,658	0,780	0,513	0,497
12	0,078	0,293	0,223	0,416	0,339	0,389	0,467	0,305	0,379	0,461	0,287	0,287

Lampiran D-1



Gambar 1 Simpangan antar tingkat sudut 0^0 arah X



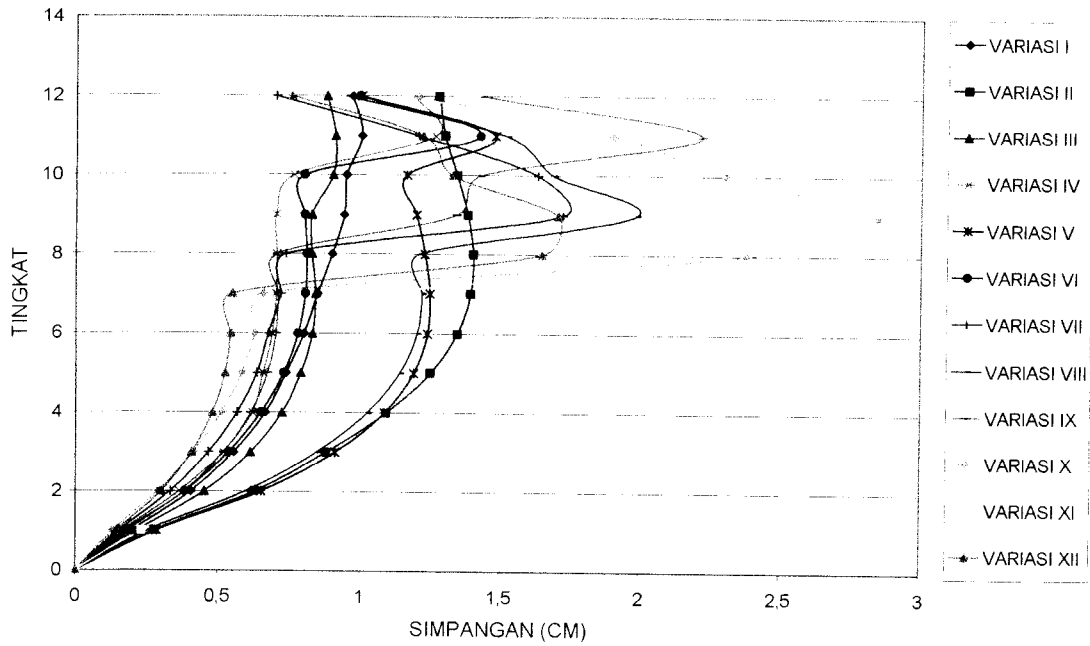
Gambar 2 Simpangan antar tingkat sudut 0^0 arah Y

Tabel 3 Simpangan antar tingkat sudut 30⁰ arah X

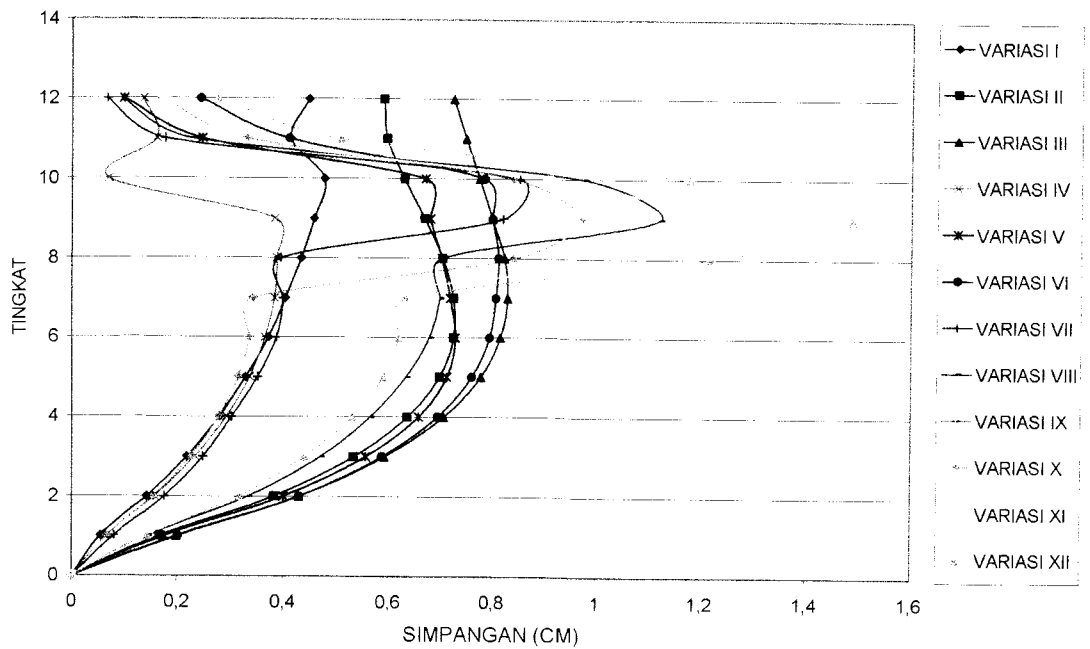
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,200	0,277	0,219	0,168	0,284	0,180	0,156	0,256	0,185	0,131	0,231	0,146
2	0,405	0,626	0,452	0,363	0,649	0,384	0,332	0,594	0,382	0,288	0,539	0,302
3	0,553	0,878	0,613	0,517	0,909	0,536	0,467	0,845	0,518	0,414	0,768	0,407
4	0,665	1,090	0,722	0,618	1,084	0,649	0,566	1,022	0,613	0,511	0,930	0,479
5	0,736	1,247	0,788	0,655	1,187	0,728	0,633	1,137	0,671	0,581	1,033	0,522
6	0,798	1,342	0,828	0,686	1,236	0,777	0,672	1,198	0,699	0,623	1,081	0,541
7	0,846	1,391	0,837	0,699	1,244	0,802	0,716	1,216	0,706	0,653	1,091	0,546
8	0,896	1,399	0,825	0,700	1,226	0,807	0,733	1,204	0,701	2,375	2,430	1,644
9	0,937	1,378	0,824	0,697	1,194	0,798	1,720	1,984	1,337	2,847	2,347	1,704
10	0,944	1,338	0,897	0,760	1,159	0,797	1,629	1,685	1,424	2,301	1,793	1,322
11	0,997	1,295	0,905	1,261	1,477	1,421	1,201	1,516	2,219	1,900	1,866	1,215
12	0,964	1,273	0,874	1,186	0,995	0,990	0,695	0,942	1,434	1,200	1,162	0,750

Tabel 4 Simpangan antar tingkat sudut 30⁰ arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,055	0,168	0,199	0,067	0,176	0,202	0,081	0,145	0,170	0,067	0,131	0,144
2	0,142	0,381	0,429	0,157	0,399	0,430	0,176	0,333	0,353	0,155	0,298	0,316
3	0,218	0,533	0,591	0,233	0,556	0,586	0,249	0,470	0,498	0,225	0,416	0,439
4	0,279	0,635	0,705	0,293	0,657	0,693	0,302	0,564	0,602	0,278	0,493	0,530
5	0,328	0,697	0,777	0,336	0,711	0,759	0,350	0,633	0,672	0,314	0,533	0,589
6	0,370	0,723	0,815	0,364	0,727	0,794	0,385	0,676	0,714	0,334	0,543	0,618
7	0,402	0,723	0,828	0,381	0,717	0,805	0,397	0,696	0,732	0,341	0,529	0,630
8	0,432	0,702	0,822	0,386	0,700	0,811	0,393	0,701	0,737	0,839	1,084	1,217
9	0,457	0,667	0,798	0,382	0,678	0,798	0,819	1,121	1,172	0,969	1,209	1,489
10	0,475	0,628	0,773	0,069	0,669	0,783	0,850	0,973	1,181	0,838	0,906	1,177
11	0,412	0,595	0,747	0,159	0,245	0,409	0,175	0,226	0,479	0,329	0,295	0,506
12	0,447	0,588	0,722	0,134	0,098	0,242	0,067	0,093	0,265	0,168	0,172	0,275



Gambar 3 Simpangan antar tingkat sudut 30^0 arah X



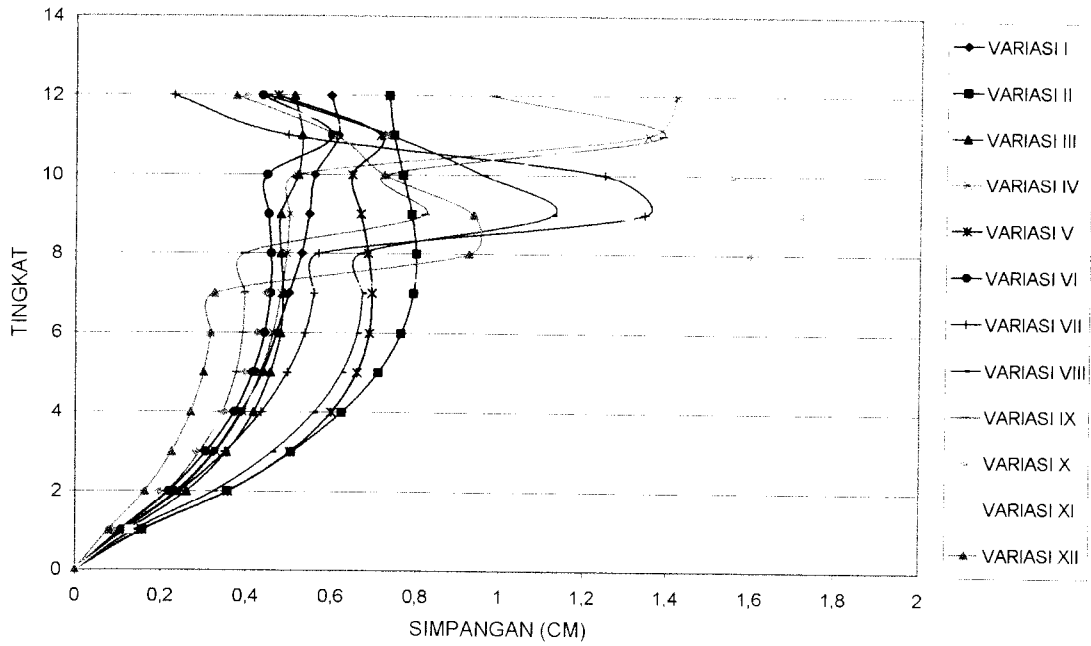
Gambar 4 Simpangan antar tingkat sudut 30^0 arah Y

Tabel 5 Simpangan antar tingkat sudut 60^0 arah X

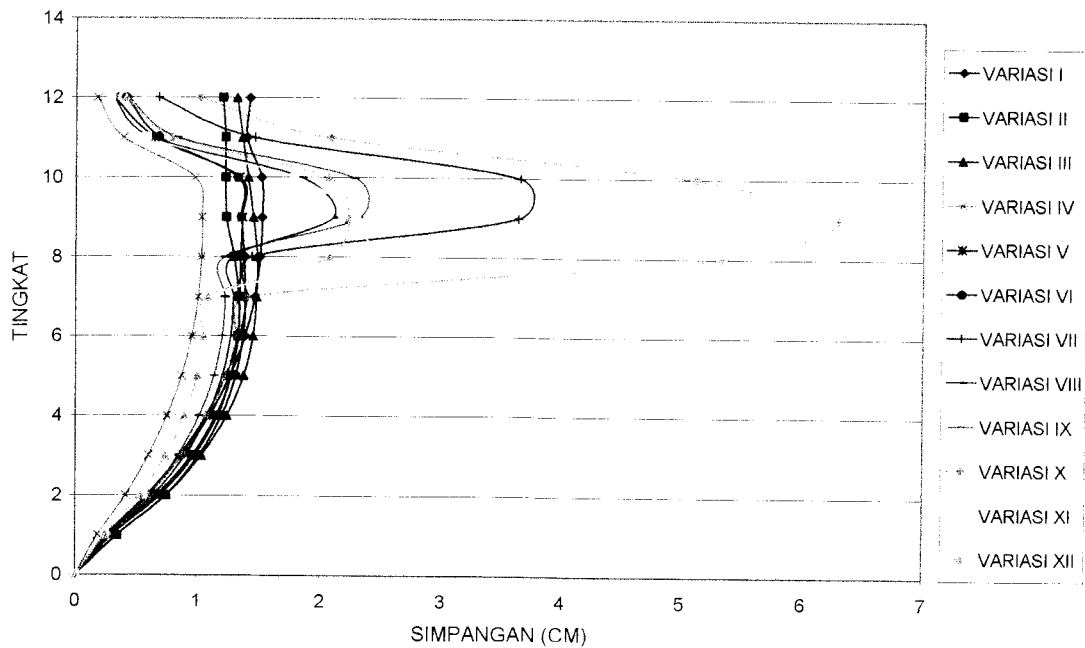
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,116	0,157	0,126	0,118	0,156	0,109	0,110	0,139	0,104	0,089	0,127	0,078
2	0,236	0,356	0,261	0,241	0,357	0,219	0,244	0,323	0,215	0,196	0,294	0,162
3	0,324	0,505	0,353	0,328	0,501	0,305	0,350	0,459	0,291	0,282	0,417	0,225
4	0,387	0,622	0,417	0,390	0,598	0,371	0,434	0,558	0,343	0,347	0,503	0,269
5	0,437	0,708	0,455	0,432	0,658	0,414	0,495	0,622	0,375	0,395	0,557	0,299
6	0,469	0,763	0,479	0,460	0,686	0,441	0,535	0,658	0,390	0,424	0,587	0,315
7	0,498	0,791	0,484	0,479	0,692	0,454	0,556	0,669	0,394	0,444	0,593	0,324
8	0,527	0,797	0,478	0,491	0,683	0,455	0,567	0,664	0,393	1,595	1,336	0,925
9	0,544	0,786	0,477	0,499	0,665	0,449	1,344	1,124	0,819	1,721	1,305	0,935
10	0,557	0,765	0,517	0,513	0,644	0,445	1,249	0,957	0,723	1,552	1,014	0,721
11	0,611	0,743	0,526	1,352	0,711	0,597	0,494	0,733	1,387	0,727	1,210	0,605
12	0,594	0,731	0,508	1,420	0,470	0,434	0,227	0,445	0,979	0,396	0,770	0,373

Tabel 6 Simpangan antar tingkat sudut 60^0 arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,270	0,305	0,346	0,186	0,305	0,349	0,259	0,279	0,279	0,275	0,246	0,242
2	0,606	0,670	0,749	0,413	0,697	0,744	0,588	0,640	0,607	0,609	0,556	0,529
3	0,879	0,960	1,034	0,598	0,976	1,013	0,857	0,901	0,842	0,875	0,777	0,739
4	1,099	1,153	1,240	0,751	1,162	1,197	1,070	1,083	1,014	1,082	0,932	0,893
5	1,266	1,272	1,375	0,867	1,273	1,311	1,229	1,200	1,133	1,231	1,028	0,994
6	1,385	1,327	1,449	0,949	1,327	1,369	1,339	1,268	1,198	1,321	1,067	1,047
7	1,463	1,330	1,476	1,000	1,338	1,385	1,400	1,288	1,219	1,388	1,073	1,076
8	1,504	1,292	1,483	1,025	1,344	1,375	1,434	1,280	1,215	5,328	2,299	2,063
9	1,519	1,228	1,448	1,028	1,354	1,350	3,640	2,100	2,308	6,297	2,288	2,223
10	1,512	1,220	1,404	0,969	1,331	1,320	3,658	1,843	2,270	5,119	1,777	2,063
11	1,394	1,217	1,357	0,384	0,639	0,676	1,460	0,599	0,823	2,082	0,573	0,784
12	1,417	1,195	1,313	0,171	0,306	0,406	0,672	0,296	0,421	1,010	0,286	0,404



Gambar 5 Simpangan antar tingkat sudut 60^0 arah X



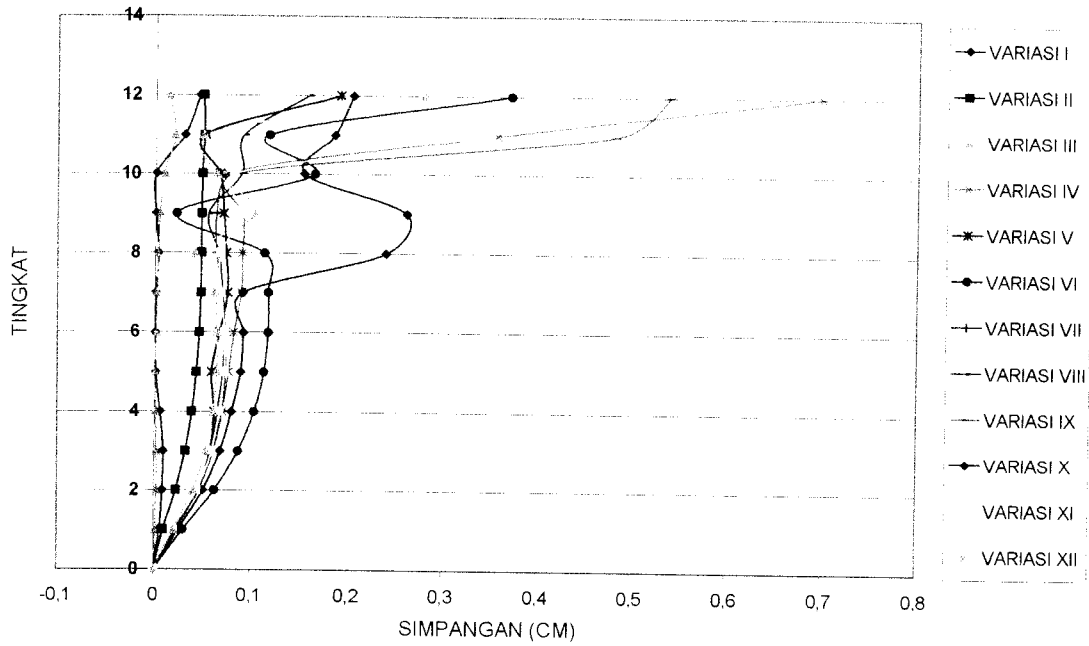
Gambar 6 Simpangan antar tingkat sudut 60^0 arah Y

Tabel 7 Simpangan antar tingkat sudut 90^0 arah X

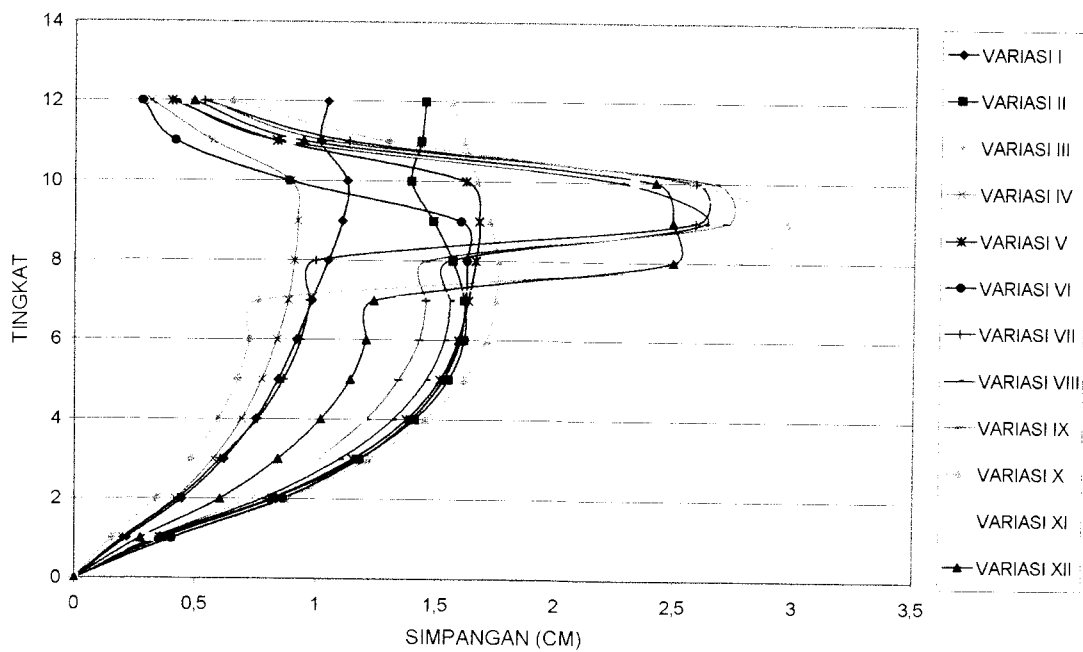
Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,006	0,010	0,002	0,023	0,022	0,014	0,030	0,023	0,023	0,026	0,021	0,020
2	0,009	0,023	0,002	0,045	0,045	0,028	0,063	0,047	0,047	0,051	0,045	0,041
3	0,009	0,032	0,002	0,060	0,058	0,036	0,087	0,060	0,061	0,069	0,059	0,054
4	0,006	0,039	0,001	0,070	0,062	0,041	0,103	0,065	0,070	0,080	0,067	0,061
5	0,001	0,044	0,000	0,077	0,059	0,042	0,113	0,070	0,073	0,089	0,072	0,065
6	0,001	0,046	0,001	0,082	0,067	0,042	0,117	0,073	0,073	0,092	0,072	0,064
7	0,001	0,047	0,002	0,089	0,075	0,039	0,117	0,070	0,069	0,091	0,069	0,061
8	0,003	0,048	0,003	0,090	0,074	0,035	0,113	0,066	0,064	0,239	0,068	0,041
9	0,000	0,048	0,004	0,090	0,071	0,030	0,022	0,055	0,064	0,261	0,090	0,103
10	0,000	0,048	0,008	0,075	0,066	0,017	0,164	0,089	0,082	0,153	0,082	0,063
11	0,030	0,050	0,020	0,356	0,051	0,040	0,117	0,091	0,481	0,185	0,349	0,050
12	0,045	0,050	0,013	0,699	0,190	0,381	0,370	0,158	0,539	0,204	0,390	0,278

Tabel 8 Simpangan antar tingkat sudut 90^0 arah Y

Lantai	VARIASI I	VARIASI II	VARIASI III	VARIASI IV	VARIASI V	VARIASI VI	VARIASI VII	VARIASI VIII	VARIASI IX	VARIASI X	VARIASI XI	VARIASI XII
0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1	0,217	0,368	0,404	0,203	0,356	0,403	0,202	0,338	0,332	0,155	0,316	0,275
2	0,445	0,823	0,876	0,418	0,817	0,861	0,428	0,777	0,719	0,338	0,714	0,603
3	0,618	1,171	1,212	0,574	1,149	1,176	0,604	1,094	0,999	0,483	0,995	0,840
4	0,749	1,407	1,451	0,690	1,374	1,392	0,756	1,315	1,202	0,594	1,187	1,016
5	0,840	1,549	1,615	0,773	1,513	1,528	0,862	1,455	1,339	0,672	1,298	1,137
6	0,914	1,614	1,709	0,833	1,591	1,598	0,932	1,531	1,425	0,719	1,346	1,201
7	0,978	1,614	1,745	0,879	1,630	1,621	0,969	1,555	1,453	0,756	1,343	1,232
8	1,044	1,564	1,757	0,903	1,662	1,625	0,991	1,545	1,450	2,752	2,698	2,492
9	1,101	1,483	1,720	0,916	1,675	1,598	2,584	2,622	2,714	2,971	2,877	2,490
10	1,119	1,389	1,666	0,884	1,619	0,879	2,584	2,270	2,666	2,565	2,327	2,417
11	1,010	1,428	1,612	0,563	0,829	0,411	1,126	0,838	1,044	1,290	0,885	0,939
12	1,039	1,446	1,560	0,310	0,395	0,273	0,529	0,410	0,541	0,647	0,451	0,487



Gambar 7 Simpangan antar tingkat sudut 90^0 arah X

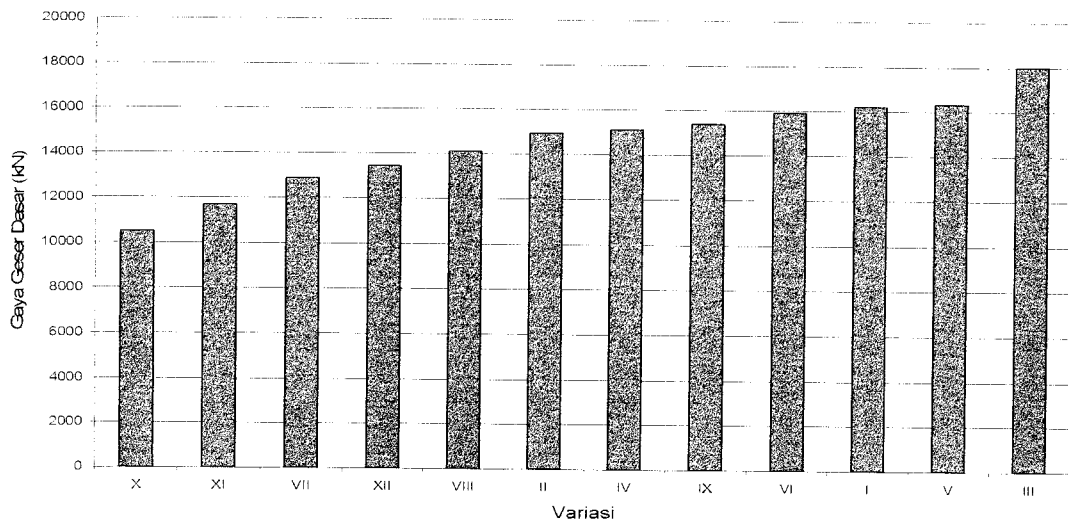


Gambar 8 Simpangan antar tingkat sudut 90^0 arah Y

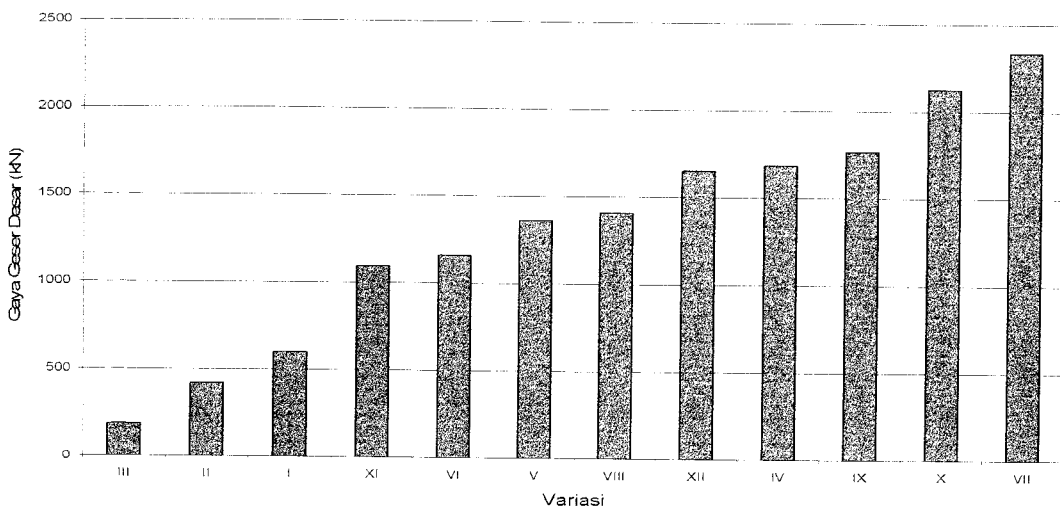
Tabel 1 Gaya geser dasar sudut 0^0 arah X dan arah Y

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	16200	100
II	14940	92,22
III	18010	111,17
IV	15120	93,33
V	16340	100,86
VI	15920	98,27
VII	12890	79,57
VIII	14110	87,10
IX	15400	95,06
X	10500	64,81
XI	11690	72,16
XII	13440	82,96

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	601	100
II	421,8	70,18
III	188,8	31,41
IV	1686	280,53
V	1363	226,79
VI	1159	192,85
VII	2337	388,85
VIII	1409	234,44
IX	1765	293,68
X	2128	354,08
XI	1096	182,36
XII	1652	274,88



Gambar 1 Gaya geser dasar sudut 0^0 arah X

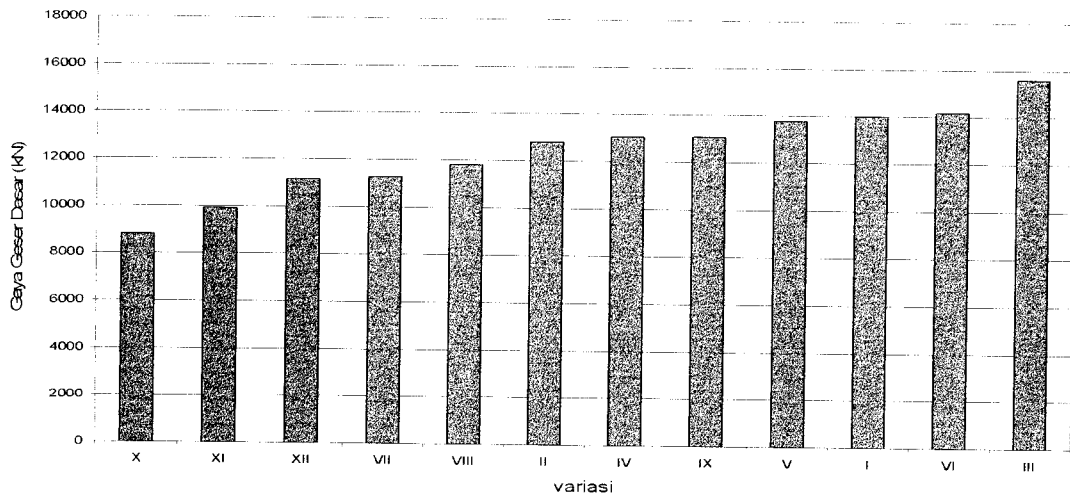


Gambar 2 Gaya geser dasar sudut 0^0 arah Y

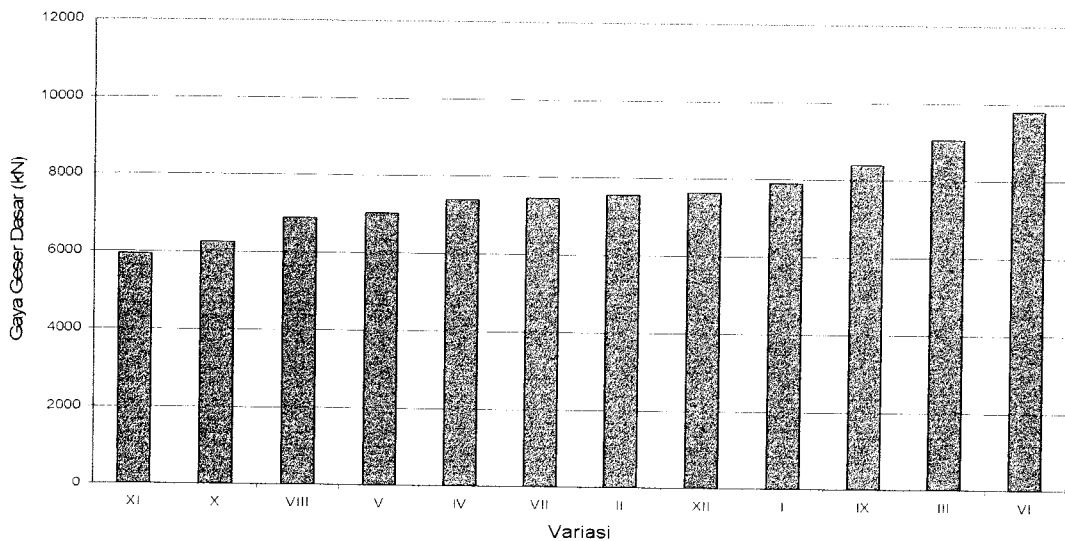
Tabel 2 Gaya geser dasar sudut 30^0 arah X dan arah Y

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	14000	100
II	12820	91,57
III	15590	111,36
IV	13050	93,21
V	13780	98,43
VI	14180	101,29
VII	11280	80,57
VIII	11820	84,43
IX	13070	93,36
X	8809	62,92
XI	9923	70,88
XII	11150	79,64

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	7905	100
II	7556	95,59
III	9061	114,62
IV	7391	93,50
V	7027	88,89
VI	9795	123,91
VII	7454	94,29
VIII	6887	87,12
IX	8384	106,06
X	6255	79,13
XI	5931	75,03
XII	7640	96,65



Gambar 3 Gaya geser dasar sudut 30^0 arah X

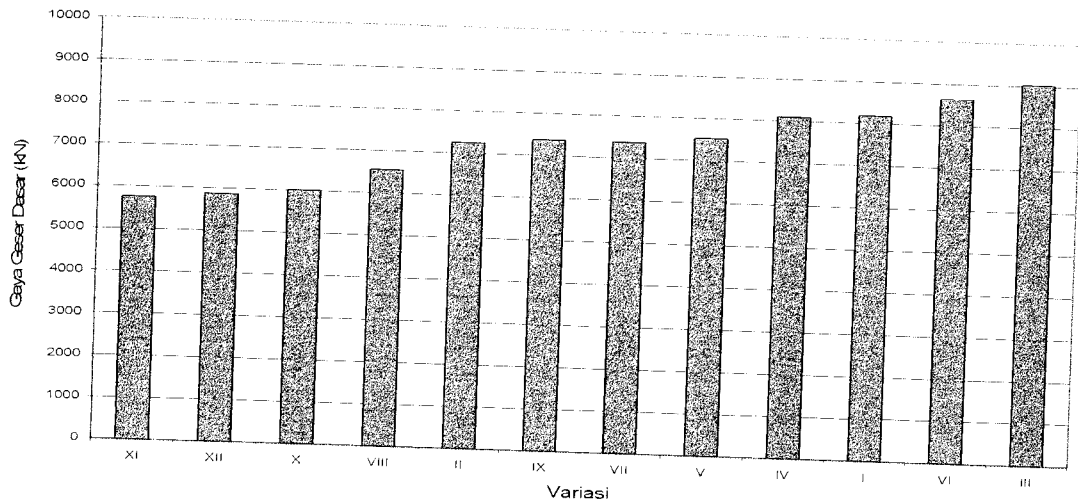


Gambar 4 Gaya geser dasar sudut 30^0 arah Y

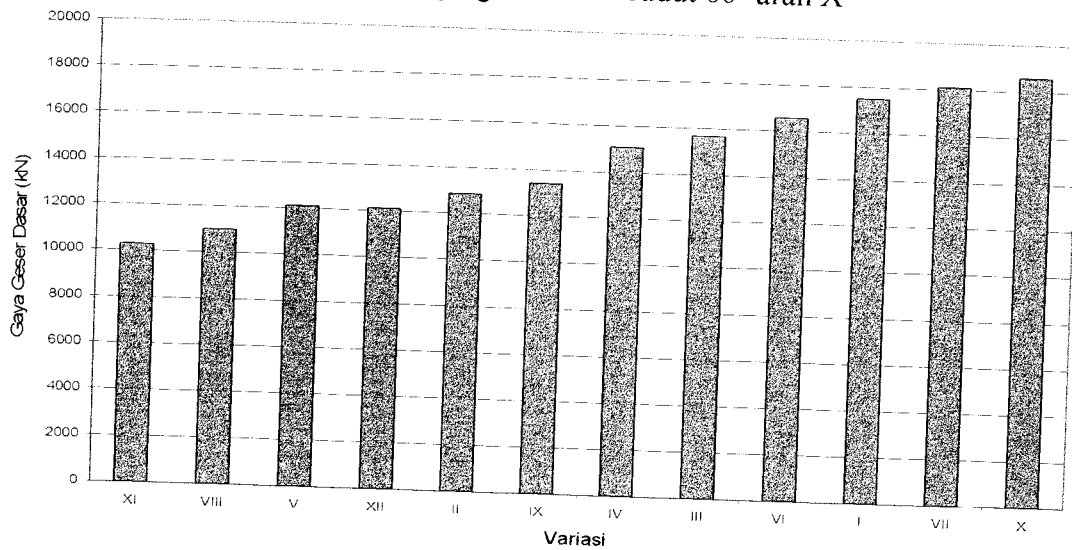
Tabel 3 Gaya geser dasar sudut 60⁰ arah X dan arah Y

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	8182	100
II	7252	88,63
III	9030	110,36
IV	8098	98,97
V	7522	91,93
VI	8641	105,61
VII	7381	90,21
VIII	6547	80,02
IX	7368	90,05
X	6000	73,33
XI	5748	70,25
XII	5874	71,79

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	17500	100
II	12840	73,37
III	15680	89,60
IV	15110	86,34
V	12100	69,14
VI	16570	94,69
VII	18100	103,43
VIII	11000	62,86
IX	13430	76,74
X	18610	106,34
XI	10280	58,74
XII	12100	69,14



Gambar 5 Gaya geser dasar sudut 60⁰ arah X

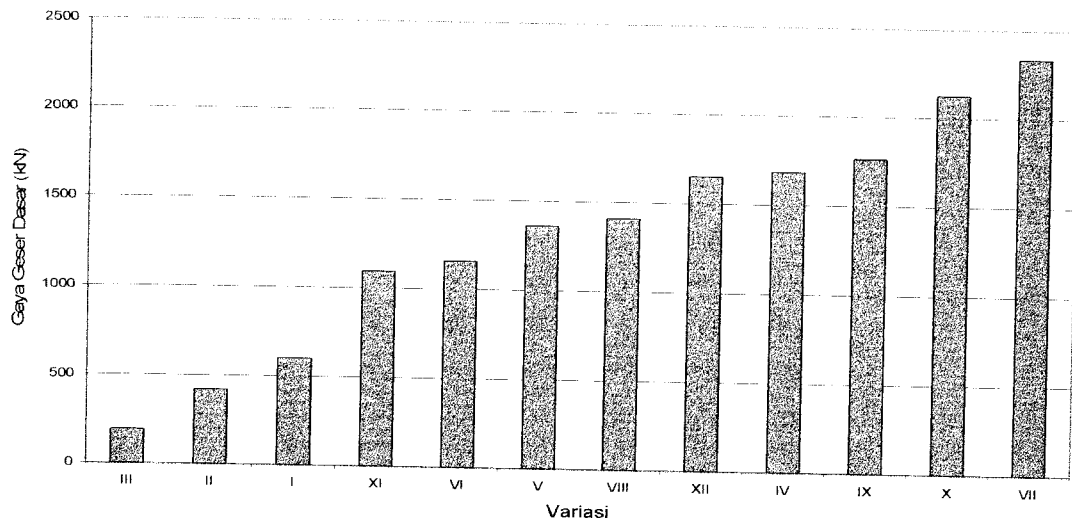


Gambar 6 Gaya geser dasar sudut 60⁰ arah Y

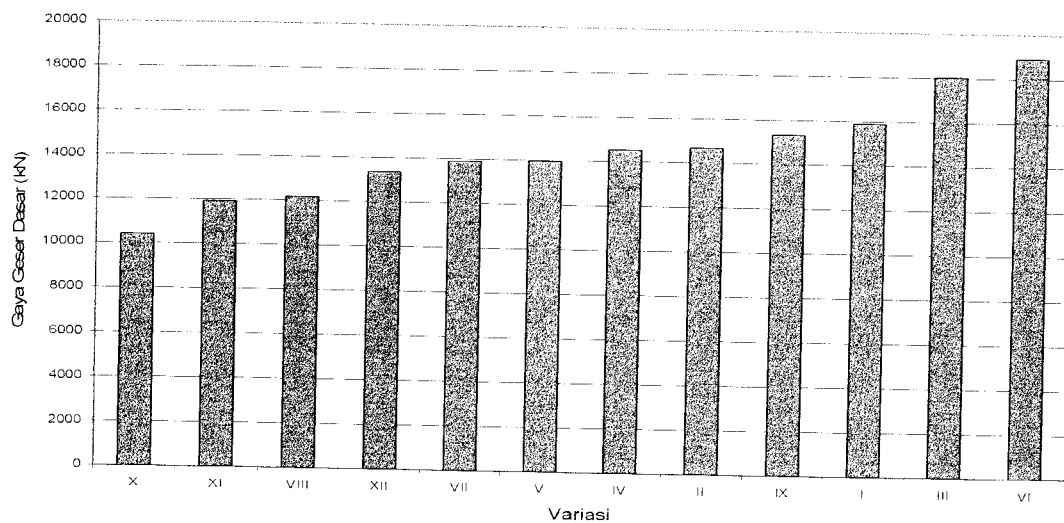
Tabel 4 Gaya geser dasar sudut 90^0 arah X dan arah Y

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	601	100
II	422	70,22
III	189	31,45
IV	1686	280,53
V	1363	226,79
VI	1159	192,85
VII	2337	388,85
VIII	1409	234,44
IX	1765	293,68
X	2128	354,08
XI	1095	182,20
XII	1652	274,88

Variasi	Gaya Geser Dasar (kN)	% terhadap variasi 1
I	15880	100
II	14690	92,51
III	18030	113,54
IV	14540	91,56
V	13940	87,78
VI	18910	119,08
VII	13870	87,34
VIII	12170	76,64
IX	15330	96,54
X	10400	65,49
XI	11910	75,00
XII	13330	83,94



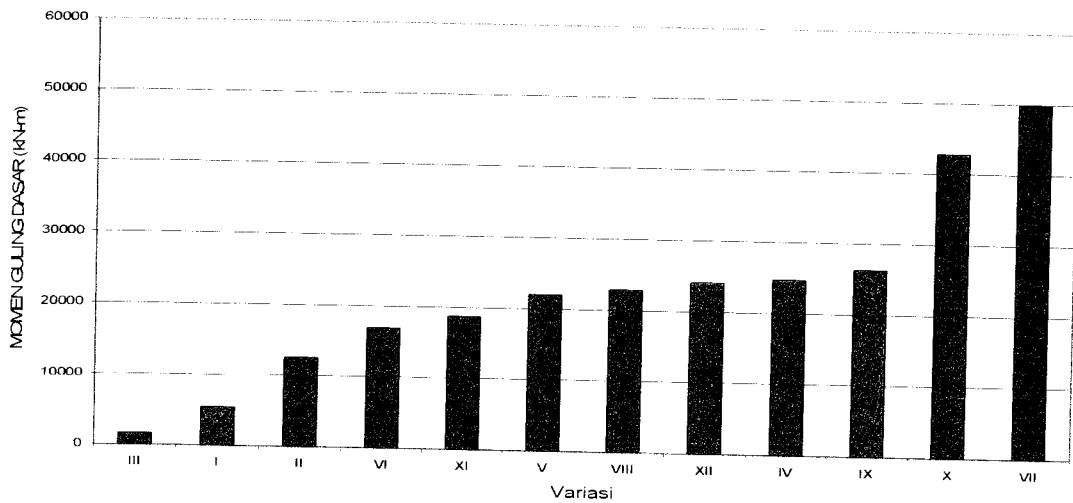
Gambar 7 Gaya geser dasar sudut 90^0 arah X



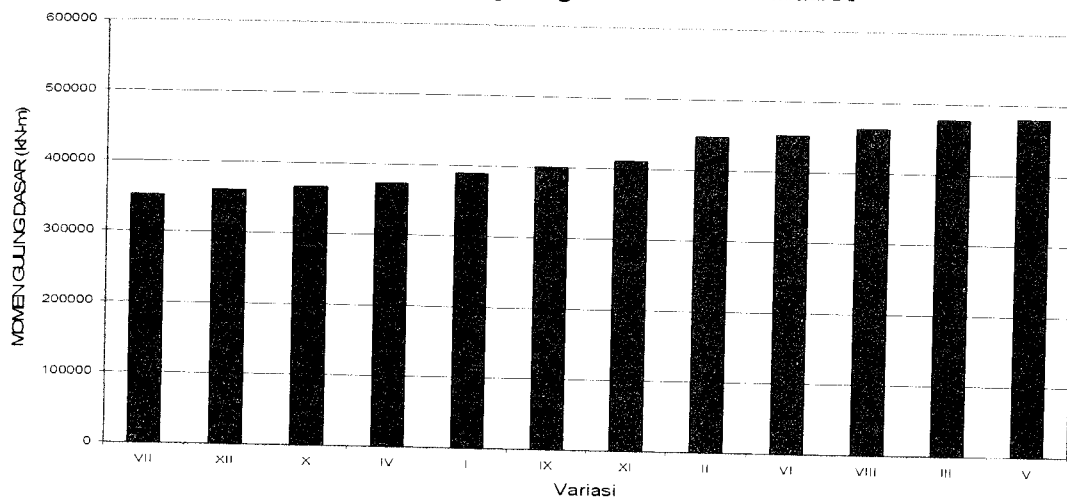
Gambar 8 Gaya geser dasar sudut 90^0 arah Y

Tabel 1 Momen guling dasar sudut 0° arah X dan arah Y

Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1	Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1
I	5368	100	I	389100	100
II	12580	234,35	II	447900	115,11
III	1641	30,57	III	477400	122,69
IV	24740	460,88	IV	372900	95,84
V	22010	410,02	V	480400	123,46
VI	16980	316,32	VI	452100	116,19
VII	49870	929,02	VII	351400	90,31
VIII	22890	426,42	VIII	463200	119,04
IX	26330	490,50	IX	400400	102,90
X	42790	797,13	X	366100	94,09
XI	18730	348,92	XI	410900	105,60
XII	24090	448,77	XII	360200	92,57



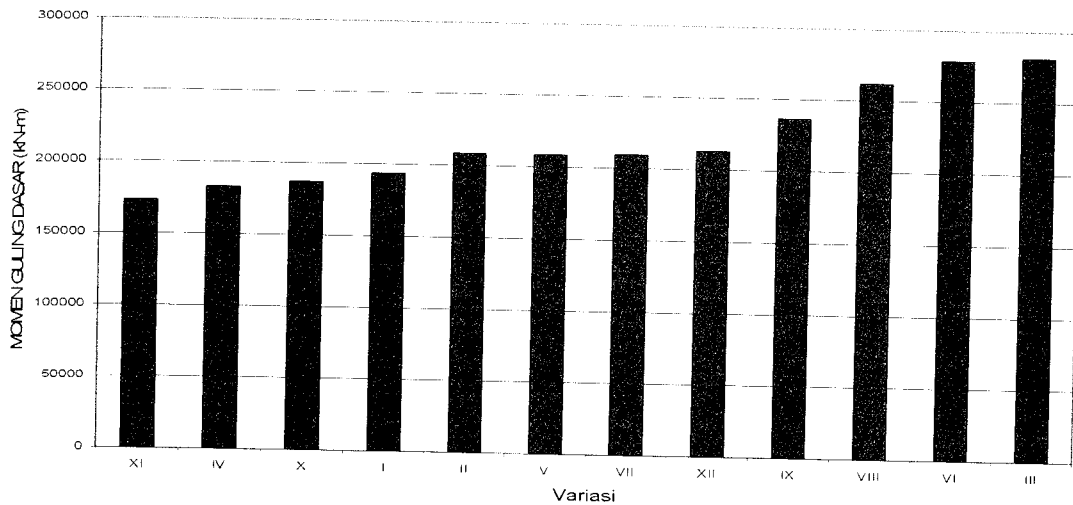
Gambar 1 Momen guling dasar sudut 0° arah X



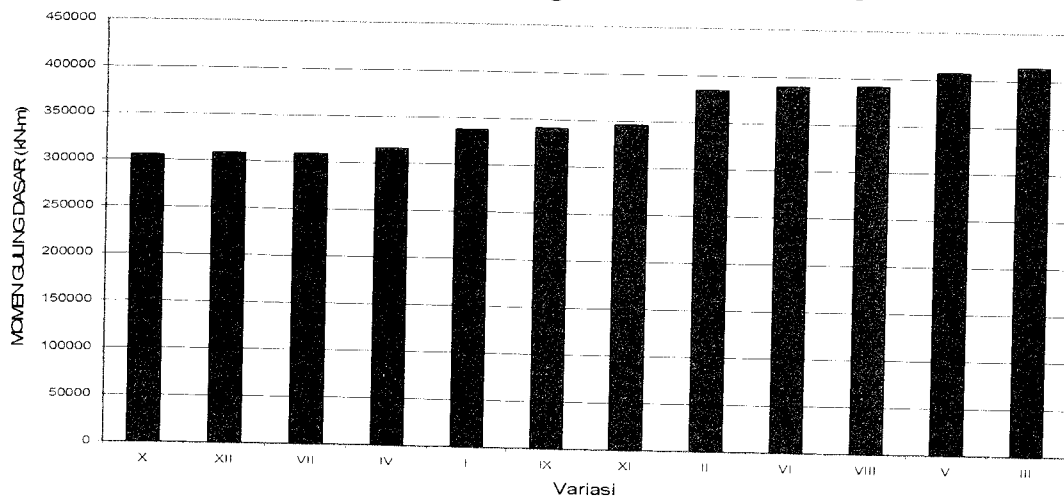
Gambar 2 Momen guling dasar sudut 0° arah Y

Tabel 2 Momen guling dasar sudut 30⁰ arah X dan arah Y

Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1	Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1
I	193500	100	I	337700	100
II	208300	107,65	II	384500	113,86
III	281000	145,22	III	413700	122,51
IV	182700	94,42	IV	315700	93,49
V	208300	107,65	V	407100	120,55
VI	278500	143,93	VI	389500	115,34
VII	209600	108,32	VII	308800	91,44
VIII	261600	135,19	VIII	391100	115,81
IX	236400	122,17	IX	341100	101,01
X	186900	96,59	X	305200	90,38
XI	172800	89,30	XI	346400	102,58
XII	213000	110,08	XII	308000	91,21



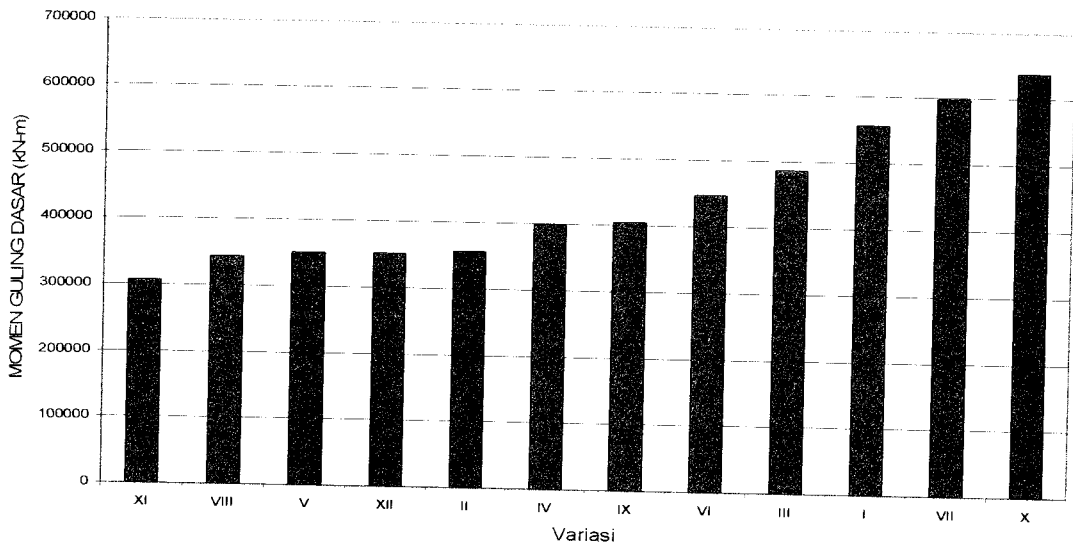
Gambar 3 Momen guling dasar sudut 30⁰ arah X



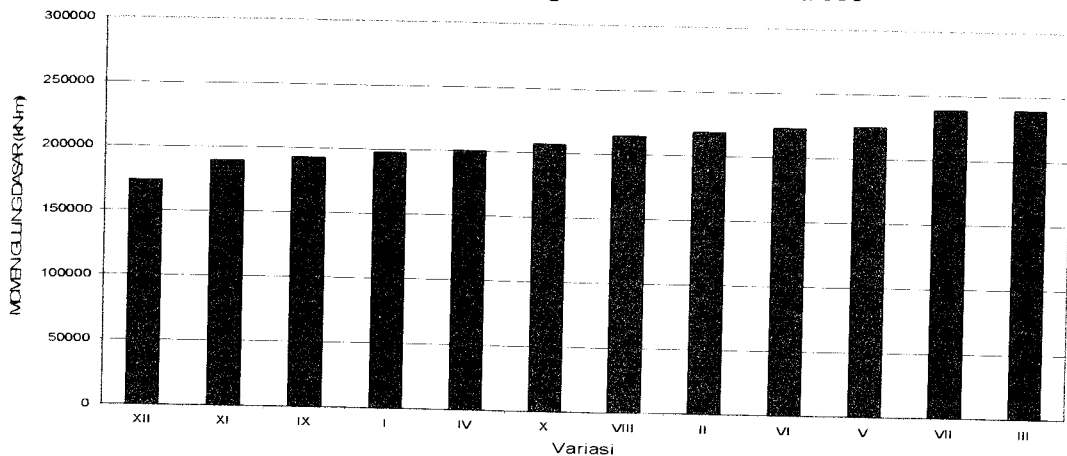
Gambar 4 Momen guling dasar sudut 30⁰ arah Y

Tabel 3 Momen guling dasar sudut 60^0 arah X dan arah Y

Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1	Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1
I	556600	100	I	197500	100
II	356500	64,05	II	218500	110,63
III	486200	87,35	III	239200	121,11
IV	398700	71,63	IV	200400	101,47
V	350800	63,03	V	224700	113,77
VI	447100	80,33	VI	222600	112,71
VII	598300	107,49	VII	238500	120,76
VIII	343400	61,70	VIII	214200	108,46
IX	404100	72,60	IX	192600	97,52
X	637700	114,57	X	206700	104,66
XI	306400	55,05	XI	189400	95,90
XII	351200	63,10	XII	173600	87,90



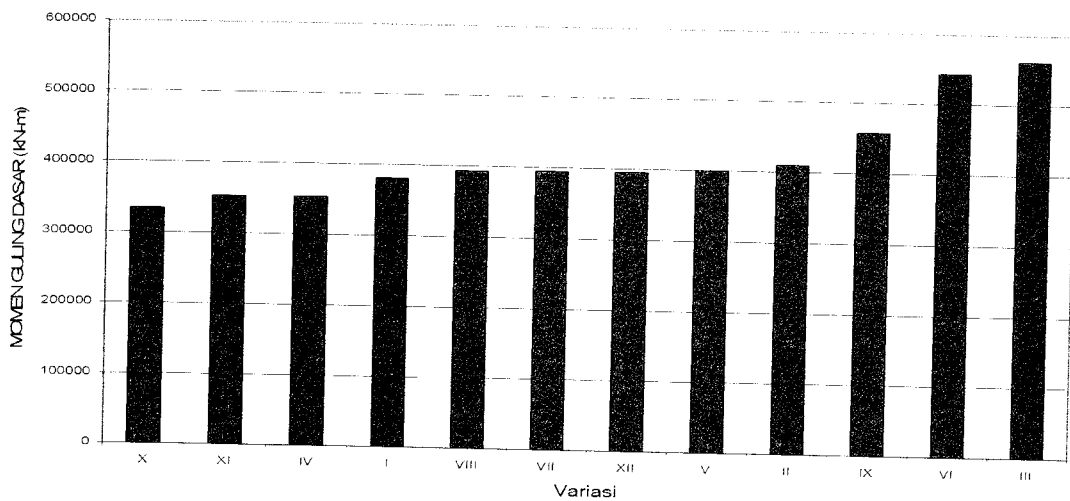
Gambar 5 Momen guling dasar sudut 60^0 arah X



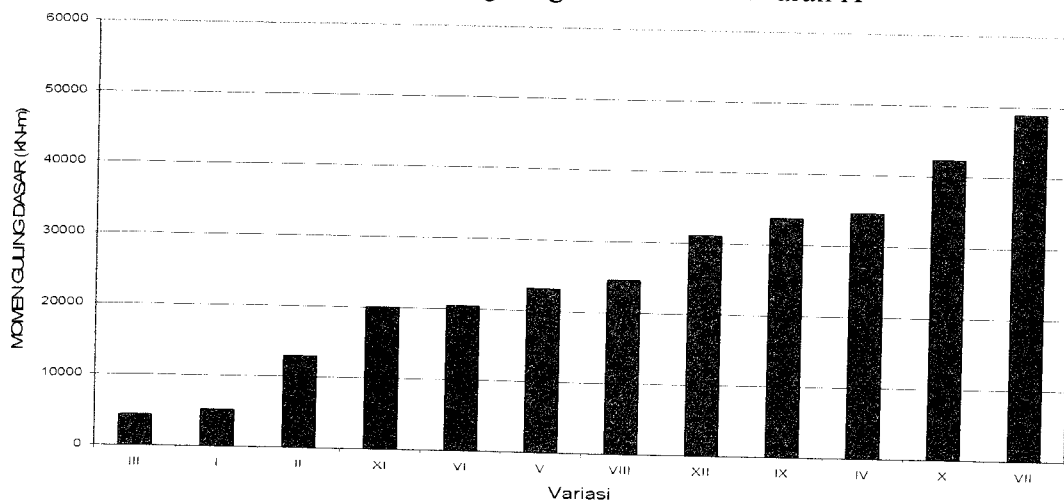
Gambar 6 Momen guling dasar sudut 60^0 arah Y

Tabel 4 Momen guling dasar sudut 90^0 arah X dan arah Y

Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1	Variasi	MOMEN GULING DASAR (kN-m)	% terhadap variasi 1
I	380900	100	I	5147	100
II	409300	107,46	II	12890	250,44
III	561100	147,31	III	4304	83,62
IV	353000	92,68	IV	34610	672,43
V	399600	104,91	V	23140	449,58
VI	542700	142,48	VI	20400	396,35
VII	394400	103,54	VII	48930	950,65
VIII	393100	103,20	VIII	24540	476,78
IX	456900	119,95	IX	33700	654,75
X	334200	87,74	X	42370	823,20
XI	352400	92,52	XI	20040	389,35
XII	395400	103,81	XII	31030	602,88



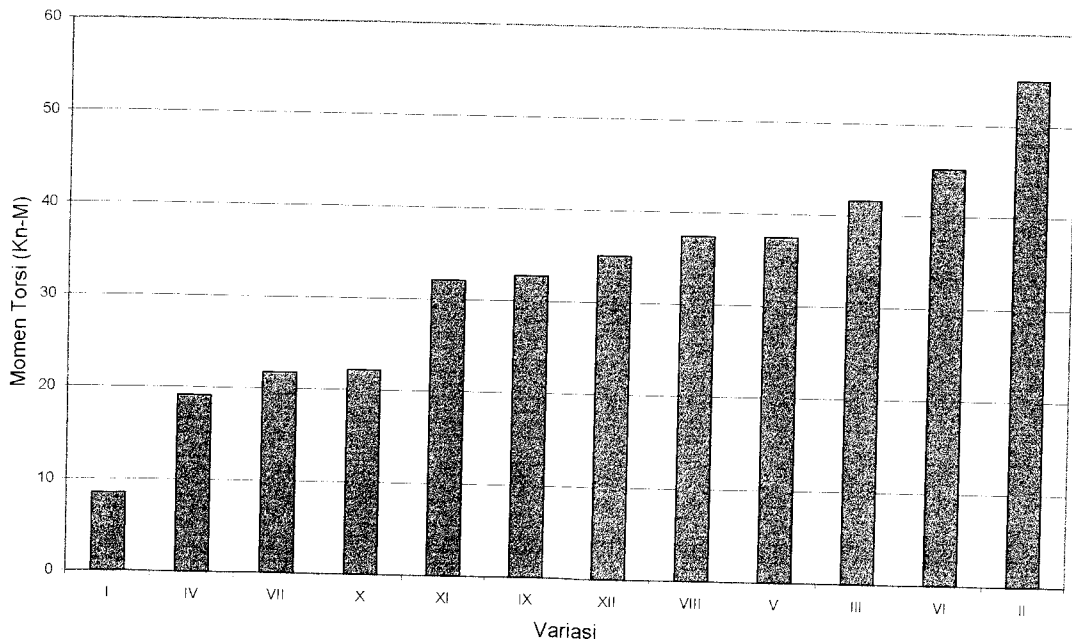
Gambar 7 Momen guling dasar sudut 90^0 arah X



Gambar 8 Momen guling dasar sudut 90^0 arah Y

Tabel 1 Momen Torsi sudut 0^0

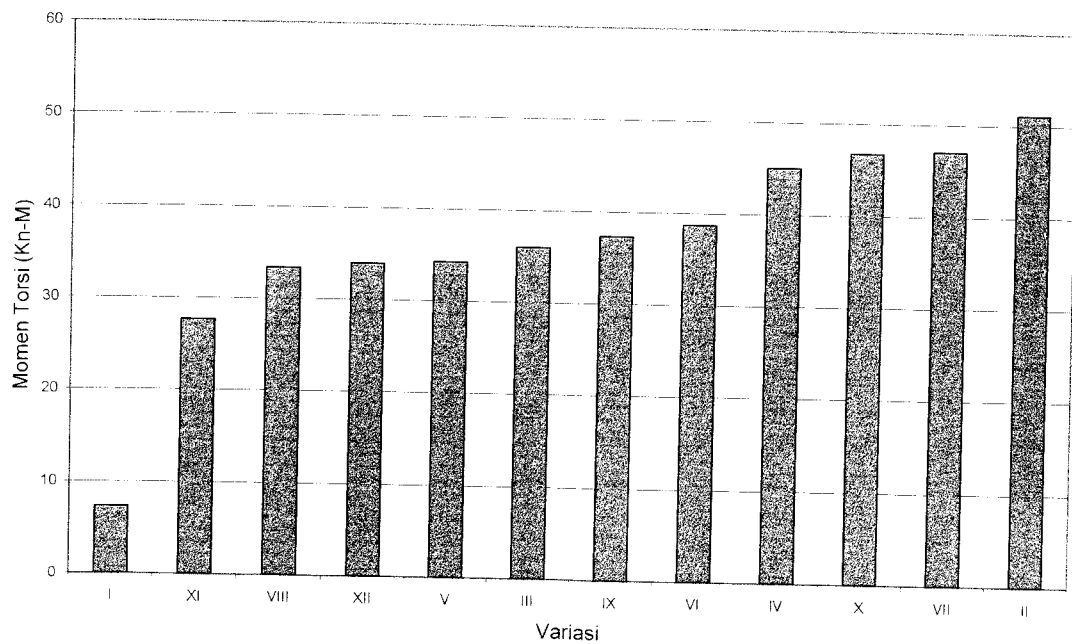
Variasi	Torsi (Kn-M)	% terhadap variasi 1
I	8,502069	100
II	54,90825	645,82
III	41,62757	489,62
IV	19,11885	224,87
V	37,40699	439,98
VI	45,22406	531,92
VII	21,75235	255,85
VIII	37,32623	439,03
IX	32,74033	385,09
X	22,15511	260,58
XI	32,07314	377,24
XII	35,0565	412,33



Gambar 1 Momen torsi sudut 0^0

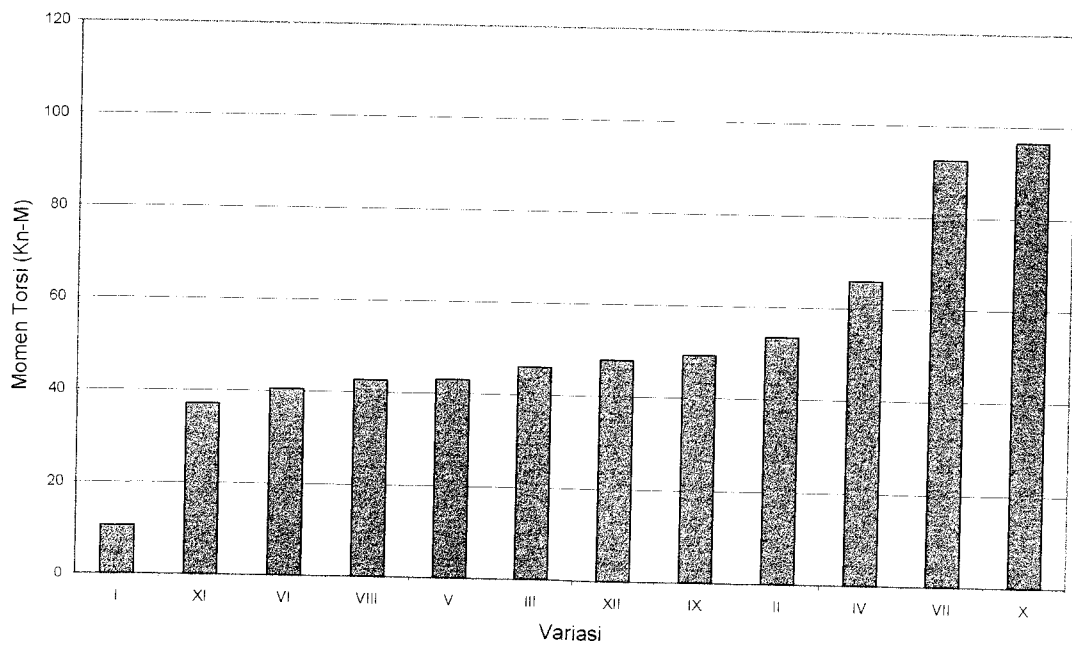
Tabel 2 Momen Torsi sudut 30^0

Variasi	Torsi (Kn-M)	% terhadap variasi 1
I	7,332884	100
II	51,1263	697,22
III	36,00624	491,02
IV	45,09613	614,98
V	34,19395	466,31
VI	38,77408	528,77
VII	47,07882	642,02
VIII	33,33613	454,61
IX	37,3566	509,44
X	46,74334	637,45
XI	27,67238	377,37
XII	33,905	462,37

Gambar 2 Momen torsi sudut 30^0

Tabel 3 Momen torsi sudut 60^0

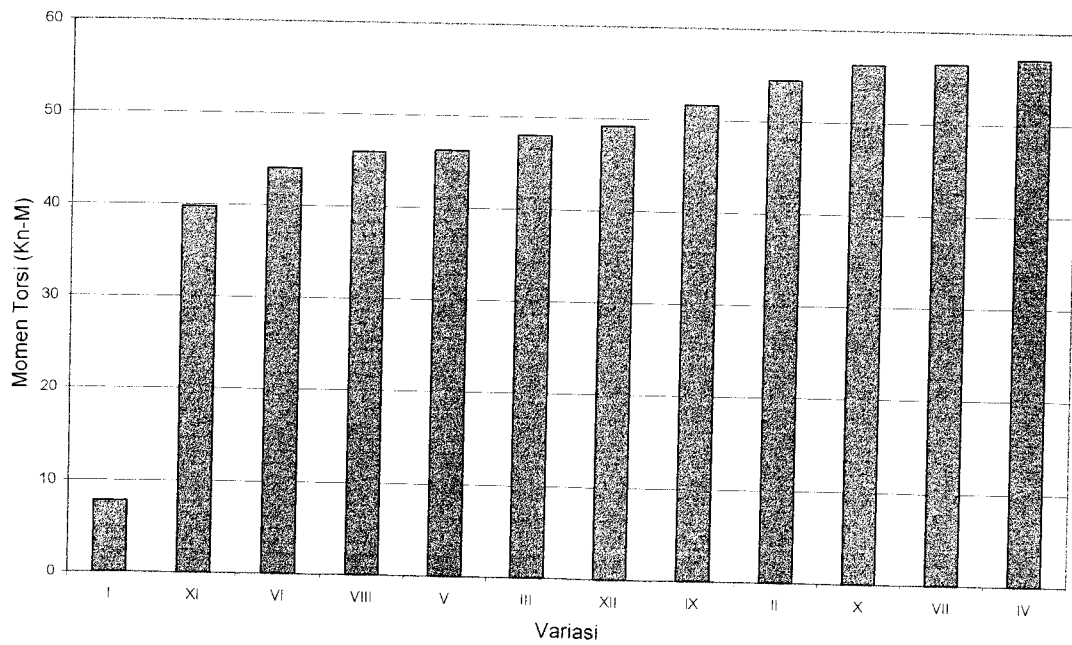
Variasi	Torsi (Kn-M)	% terhadap variasi 1
I	10,57821	100
II	53,47231	505,49
III	46,10415	435,84
IV	65,92516	623,22
V	42,99349	406,43
VI	40,50834	382,94
VII	92,49924	874,43
VIII	42,69283	403,59
IX	49,30107	466,06
X	96,50311	912,28
XI	37,10605	350,78
XII	47,88382	452,66



Gambar 3 Momen torsi sudut 60^0

Tabel 4 Momen torsi sudut 90⁰

Variasi	Torsi (Kn-M)	% terhadap variasi 1
I	7,780238	100
II	54,4642	700,03
III	48,0075	617,04
IV	57,07743	733,62
V	46,23389	594,25
VI	44,03567	565,99
VII	56,48147	725,96
VIII	45,94331	590,51
IX	51,61705	663,44
X	56,23706	722,82
XI	39,81048	511,69
XII	49,16214	631,88



Gambar 4 Momen torsi sudut 90⁰

LAMPIRAN 2

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A T I C L O A D C A S E S

STATIC CASE	CASE TYPE	SELF WT FACTOR
DL	DEAD	1,0000
LL	LIVE	0,0000

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

HISTORY CASE	HISTORY TYPE	NUMBER OF TIME STEPS	TIME STEP INCREMENT
ELC1	LINEAR	1000	0,01000
ELC2	LINEAR	1000	0,01000
ELCTR3	LINEAR	1000	0,01000
ELCTR4	LINEAR	1000	0,01000
ELCTR5	LINEAR	1000	0,01000

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I N T D A T A

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	RESTRAINTS	ANGLE-A	ANGLE-B	ANGLE-C
1	-15,00000	-7,50000	0,00000	1 1 1 1 1 1	0,000	0,000	0,000
2	-15,00000	-7,50000	4,00000	0 0 0 0 0 0	0,000	0,000	0,000
3	-15,00000	-7,50000	8,00000	0 0 0 0 0 0	0,000	0,000	0,000
4	-15,00000	-7,50000	12,00000	0 0 0 0 0 0	0,000	0,000	0,000
5	-15,00000	-7,50000	16,00000	0 0 0 0 0 0	0,000	0,000	0,000
6	-15,00000	-7,50000	20,00000	0 0 0 0 0 0	0,000	0,000	0,000
7	-15,00000	-7,50000	24,00000	0 0 0 0 0 0	0,000	0,000	0,000
8	-15,00000	-7,50000	28,00000	0 0 0 0 0 0	0,000	0,000	0,000
9	-15,00000	-7,50000	32,00000	0 0 0 0 0 0	0,000	0,000	0,000
10	-15,00000	-7,50000	36,00000	0 0 0 0 0 0	0,000	0,000	0,000
11	-15,00000	-7,50000	40,00000	0 0 0 0 0 0	0,000	0,000	0,000
12	-15,00000	-7,50000	44,00000	0 0 0 0 0 0	0,000	0,000	0,000
13	-15,00000	-7,50000	48,00000	0 0 0 0 0 0	0,000	0,000	0,000
14	-15,00000	-2,50000	0,00000	1 1 1 1 1 1	0,000	0,000	0,000
15	-15,00000	-2,50000	4,00000	0 0 0 0 0 0	0,000	0,000	0,000
16	-15,00000	-2,50000	8,00000	0 0 0 0 0 0	0,000	0,000	0,000
17	-15,00000	-2,50000	12,00000	0 0 0 0 0 0	0,000	0,000	0,000
18	-15,00000	-2,50000	16,00000	0 0 0 0 0 0	0,000	0,000	0,000
19	-15,00000	-2,50000	20,00000	0 0 0 0 0 0	0,000	0,000	0,000
20	-15,00000	-2,50000	24,00000	0 0 0 0 0 0	0,000	0,000	0,000
21	-15,00000	-2,50000	28,00000	0 0 0 0 0 0	0,000	0,000	0,000
22	-15,00000	-2,50000	32,00000	0 0 0 0 0 0	0,000	0,000	0,000
23	-15,00000	-2,50000	36,00000	0 0 0 0 0 0	0,000	0,000	0,000
24	-15,00000	-2,50000	40,00000	0 0 0 0 0 0	0,000	0,000	0,000
25	-15,00000	-2,50000	44,00000	0 0 0 0 0 0	0,000	0,000	0,000
26	-15,00000	-2,50000	48,00000	0 0 0 0 0 0	0,000	0,000	0,000
27	-15,00000	2,50000	0,00000	1 1 1 1 1 1	0,000	0,000	0,000
28	-15,00000	2,50000	4,00000	0 0 0 0 0 0	0,000	0,000	0,000
29	-15,00000	2,50000	8,00000	0 0 0 0 0 0	0,000	0,000	0,000
30	-15,00000	2,50000	12,00000	0 0 0 0 0 0	0,000	0,000	0,000
31	-15,00000	2,50000	16,00000	0 0 0 0 0 0	0,000	0,000	0,000
32	-15,00000	2,50000	20,00000	0 0 0 0 0 0	0,000	0,000	0,000
33	-15,00000	2,50000	24,00000	0 0 0 0 0 0	0,000	0,000	0,000
34	-15,00000	2,50000	28,00000	0 0 0 0 0 0	0,000	0,000	0,000
35	-15,00000	2,50000	32,00000	0 0 0 0 0 0	0,000	0,000	0,000
36	-15,00000	2,50000	36,00000	0 0 0 0 0 0	0,000	0,000	0,000
37	-15,00000	2,50000	40,00000	0 0 0 0 0 0	0,000	0,000	0,000
38	-15,00000	2,50000	44,00000	0 0 0 0 0 0	0,000	0,000	0,000
39	-15,00000	2,50000	48,00000	0 0 0 0 0 0	0,000	0,000	0,000
40	-15,00000	7,50000	0,00000	1 1 1 1 1 1	0,000	0,000	0,000
41	-15,00000	7,50000	4,00000	0 0 0 0 0 0	0,000	0,000	0,000
42	-15,00000	7,50000	8,00000	0 0 0 0 0 0	0,000	0,000	0,000
43	-15,00000	7,50000	12,00000	0 0 0 0 0 0	0,000	0,000	0,000
44	-15,00000	7,50000	16,00000	0 0 0 0 0 0	0,000	0,000	0,000
45	-15,00000	7,50000	20,00000	0 0 0 0 0 0	0,000	0,000	0,000
46	-15,00000	7,50000	24,00000	0 0 0 0 0 0	0,000	0,000	0,000
47	-15,00000	7,50000	28,00000	0 0 0 0 0 0	0,000	0,000	0,000
48	-15,00000	7,50000	32,00000	0 0 0 0 0 0	0,000	0,000	0,000
49	-15,00000	7,50000	36,00000	0 0 0 0 0 0	0,000	0,000	0,000
50	-15,00000	7,50000	40,00000	0 0 0 0 0 0	0,000	0,000	0,000
51	-15,00000	7,50000	44,00000	0 0 0 0 0 0	0,000	0,000	0,000
52	-15,00000	7,50000	48,00000	0 0 0 0 0 0	0,000	0,000	0,000
53	-10,00000	-7,50000	0,00000	1 1 1 1 1 1	0,000	0,000	0,000

352	15,00000	7,50000	0,00000	1	1	1	1	1	0,000	0,000	0,000
353	15,00000	7,50000	4,00000	0	0	0	0	0	0,000	0,000	0,000
354	15,00000	7,50000	8,00000	0	0	0	0	0	0,000	0,000	0,000
355	15,00000	7,50000	12,00000	0	0	0	0	0	0,000	0,000	0,000
356	15,00000	7,50000	16,00000	0	0	0	0	0	0,000	0,000	0,000
357	15,00000	7,50000	20,00000	0	0	0	0	0	0,000	0,000	0,000
358	15,00000	7,50000	24,00000	0	0	0	0	0	0,000	0,000	0,000
359	15,00000	7,50000	28,00000	0	0	0	0	0	0,000	0,000	0,000
360	15,00000	7,50000	32,00000	0	0	0	0	0	0,000	0,000	0,000
361	15,00000	7,50000	36,00000	0	0	0	0	0	0,000	0,000	0,000
362	15,00000	7,50000	40,00000	0	0	0	0	0	0,000	0,000	0,000

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INT MASS DATA

JOINT	M-U1	M-U2	M-U3	M-R1	M-R2	M-R3
171	348,631	348,631	0,000	0,000	0,000	72,631
172	348,631	348,631	0,000	0,000	0,000	72,631
173	348,631	348,631	0,000	0,000	0,000	72,631
174	348,631	348,631	0,000	0,000	0,000	72,631
175	348,631	348,631	0,000	0,000	0,000	72,631
176	348,631	348,631	0,000	0,000	0,000	72,631
177	348,631	348,631	0,000	0,000	0,000	72,631
178	348,631	348,631	0,000	0,000	0,000	72,631
179	348,631	348,631	0,000	0,000	0,000	72,631
180	306,120	306,120	0,000	0,000	0,000	48,372
181	174,316	174,316	0,000	0,000	0,000	29,053
182	131,805	131,805	0,000	0,000	0,000	21,968

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INT CONSTRAINT DATA

JOINT	TYPE
2	DIAPH1
15	DIAPH1
28	DIAPH1
41	DIAPH1
54	DIAPH1
67	DIAPH1
80	DIAPH1
93	DIAPH1
106	DIAPH1
119	DIAPH1
132	DIAPH1
145	DIAPH1
158	DIAPH1
171	DIAPH1
184	DIAPH1
197	DIAPH1
210	DIAPH1
223	DIAPH1
236	DIAPH1
249	DIAPH1
262	DIAPH1
275	DIAPH1
288	DIAPH1
301	DIAPH1
314	DIAPH1
327	DIAPH1
340	DIAPH1
353	DIAPH1
3	DIAPH2
16	DIAPH2
29	DIAPH2
42	DIAPH2
55	DIAPH2
68	DIAPH2
81	DIAPH2
94	DIAPH2
107	DIAPH2
120	DIAPH2
133	DIAPH2
146	DIAPH2
159	DIAPH2
172	DIAPH2
185	DIAPH2

198 DIAPH2
211 DIAPH2
224 DIAPH2
237 DIAPH2
250 DIAPH2
263 DIAPH2
276 DIAPH2
289 DIAPH2
302 DIAPH2
315 DIAPH2
328 DIAPH2
341 DIAPH2
354 DIAPH2
4 DIAPH3
17 DIAPH3
30 DIAPH3
43 DIAPH3
56 DIAPH3
69 DIAPH3
82 DIAPH3
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108 DIAPH3
121 DIAPH3
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147 DIAPH3
160 DIAPH3
173 DIAPH3
186 DIAPH3
199 DIAPH3
212 DIAPH3
225 DIAPH3
238 DIAPH3
251 DIAPH3
264 DIAPH3
277 DIAPH3
290 DIAPH3
303 DIAPH3
316 DIAPH3
329 DIAPH3
342 DIAPH3
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5 DIAPH4
18 DIAPH4
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57 DIAPH4
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161 DIAPH4
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331 DIAPH5
344 DIAPH5

357 DIAPH5
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193 DIAPH10
206 DIAPH10
219 DIAPH10
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271 DIAPH10
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168 DIAPH11
181 DIAPH11
194 DIAPH11
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143 DIAPH12
156 DIAPH12
169 DIAPH12
182 DIAPH12
195 DIAPH12
208 DIAPH12
286 DIAPH1
285 DIAPH2
273 DIAPH3
272 DIAPH4
260 DIAPH5
259 DIAPH6
247 DIAPH7
246 DIAPH8
234 DIAPH9
233 DIAPH10
221 DIAPH11
220 DIAPH12

A M E E L E M E N T D A T A

RAME	JNT-1	JNT-2	SECTION	ANGLE	RELEASES	SEGMENTS	R1	R2	FACTOR	LENGTH
1	1	2	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
2	2	3	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
3	3	4	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
4	4	5	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
5	5	6	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
6	6	7	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
7	7	8	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
8	8	9	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
9	9	10	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
10	10	11	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
11	11	12	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
12	12	13	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
13	14	15	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
14	15	16	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
15	16	17	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
16	17	18	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
17	18	19	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
18	19	20	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
19	20	21	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
20	21	22	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
21	22	23	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
22	23	24	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
23	24	25	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
24	25	26	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
25	27	28	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
26	28	29	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
27	29	30	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
28	30	31	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
29	31	32	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
30	32	33	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
31	33	34	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
32	34	35	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
33	35	36	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
34	36	37	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
35	37	38	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
36	38	39	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
37	40	41	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
38	41	42	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
39	42	43	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
40	43	44	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
41	44	45	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
42	45	46	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
43	46	47	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
44	47	48	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
45	48	49	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
46	49	50	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
47	50	51	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
48	51	52	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
49	53	54	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
50	54	55	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
51	55	56	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
52	56	57	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
53	57	58	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
54	58	59	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
55	59	60	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
56	60	61	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
57	61	62	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
58	62	63	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
59	63	64	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
60	64	65	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
61	66	67	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
62	67	68	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
63	68	69	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
64	69	70	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
65	70	71	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
66	71	72	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
67	72	73	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
68	73	74	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
69	74	75	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
70	75	76	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
71	76	77	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
72	77	78	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
73	79	80	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
74	80	81	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
75	81	82	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
76	82	83	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
77	83	84	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
78	84	85	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
79	85	86	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
80	86	87	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
81	87	88	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
82	88	89	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
83	89	90	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
84	90	91	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
85	92	93	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
86	93	94	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
87	94	95	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000
88	95	96	K50X50	0,000	000000	2	0,000	0,000	1,000	4,000

801	244	257	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
802	245	258	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
805	262	275	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
806	263	276	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
807	264	277	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
808	265	278	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
809	266	279	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
810	267	280	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
811	268	281	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
812	269	282	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
813	270	283	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
814	271	284	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
817	275	288	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
818	276	289	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
819	277	290	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
820	278	291	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
821	279	292	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
822	280	293	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
823	281	294	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
824	282	295	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
825	283	296	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
826	284	297	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
829	288	301	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
830	289	302	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
831	290	303	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
832	291	304	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
833	292	305	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
834	293	306	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
835	294	307	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
836	295	308	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
837	296	309	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
838	297	310	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
841	314	327	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
842	315	328	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
843	316	329	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
844	317	330	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
845	318	331	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
846	319	332	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
847	320	333	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
848	321	334	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
849	322	335	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
850	323	336	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
853	327	340	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
954	328	341	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
855	329	342	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
856	330	343	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
857	331	344	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
858	332	345	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
859	333	346	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
860	334	347	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
861	335	348	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
862	336	349	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
865	340	353	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
866	341	354	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
867	342	355	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
868	343	356	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
869	344	357	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
870	345	358	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
871	346	359	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
872	347	360	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
873	348	361	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000
874	349	362	B30X50	0,000	000000	4	0,000	0,000	1,000	5,000

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E L L E M E N T D A T A

SHELL	JNT-1	JNT-2	JNT-3	JNT-4	SECTION	ANGLE	AREA
1	77	90	78	91	SW1	0,000	20,000
2	76	89	77	90	SW1	0,000	20,000
3	75	88	76	89	SW1	0,000	20,000
4	74	87	75	88	SW1	0,000	20,000
5	73	86	74	87	SW1	0,000	20,000
6	72	85	73	86	SW1	0,000	20,000
7	71	84	72	85	SW1	0,000	20,000
8	70	83	71	84	SW1	0,000	20,000
9	69	82	70	83	SW1	0,000	20,000
10	68	81	69	82	SW1	0,000	20,000
11	67	80	68	81	SW1	0,000	20,000
12	66	79	67	80	SW1	0,000	20,000
13	129	142	130	143	SW1	0,000	20,000
14	128	141	129	142	SW1	0,000	20,000
15	127	140	128	141	SW1	0,000	20,000
16	126	139	127	140	SW1	0,000	20,000
17	125	138	126	139	SW1	0,000	20,000
18	124	137	125	138	SW1	0,000	20,000
19	123	136	124	137	SW1	0,000	20,000

20	122	135	123	136	SW1	0,000	20,000
21	121	134	122	135	SW1	0,000	20,000
22	120	133	121	134	SW1	0,000	20,000
23	119	132	120	133	SW1	0,000	20,000
24	118	131	119	132	SW1	0,000	20,000
25	77	129	78	130	SW1	0,000	20,000
26	76	128	77	129	SW1	0,000	20,000
27	75	127	76	128	SW1	0,000	20,000
28	74	126	75	127	SW1	0,000	20,000
29	73	125	74	126	SW1	0,000	20,000
30	72	124	73	125	SW1	0,000	20,000
31	71	123	72	124	SW1	0,000	20,000
32	70	122	71	123	SW1	0,000	20,000
33	69	121	70	122	SW1	0,000	20,000
34	68	120	69	121	SW1	0,000	20,000
35	67	119	68	120	SW1	0,000	20,000
36	66	118	67	119	SW1	0,000	20,000
37	90	142	91	143	SW1	0,000	20,000
38	89	141	90	142	SW1	0,000	20,000
39	88	140	89	141	SW1	0,000	20,000
40	87	139	88	140	SW1	0,000	20,000
41	86	138	87	139	SW1	0,000	20,000
42	85	137	86	138	SW1	0,000	20,000
43	84	136	85	137	SW1	0,000	20,000
44	83	135	84	136	SW1	0,000	20,000
45	82	134	83	135	SW1	0,000	20,000
46	81	133	82	134	SW1	0,000	20,000
47	80	132	81	133	SW1	0,000	20,000
48	79	131	80	132	SW1	0,000	20,000
49	283	296	284	297	SW1	0,000	20,000
50	282	295	283	296	SW1	0,000	20,000
51	281	294	282	295	SW1	0,000	20,000
52	280	293	281	294	SW1	0,000	20,000
53	279	292	280	293	SW1	0,000	20,000
54	278	291	279	292	SW1	0,000	20,000
55	277	290	278	291	SW1	0,000	20,000
56	276	289	277	290	SW1	0,000	20,000
57	275	288	276	289	SW1	0,000	20,000
58	274	287	275	288	SW1	0,000	20,000
59	231	244	232	245	SW1	0,000	20,000
60	230	243	231	244	SW1	0,000	20,000
61	229	242	230	243	SW1	0,000	20,000
62	228	241	229	242	SW1	0,000	20,000
63	227	240	228	241	SW1	0,000	20,000
64	226	239	227	240	SW1	0,000	20,000
65	225	238	226	239	SW1	0,000	20,000
66	224	237	225	238	SW1	0,000	20,000
67	223	236	224	237	SW1	0,000	20,000
68	222	235	223	236	SW1	0,000	20,000
69	231	283	232	284	SW1	0,000	20,000
70	230	282	231	283	SW1	0,000	20,000
71	229	281	230	282	SW1	0,000	20,000
72	228	280	229	281	SW1	0,000	20,000
73	227	279	228	280	SW1	0,000	20,000
74	226	278	227	279	SW1	0,000	20,000
75	225	277	226	278	SW1	0,000	20,000
76	224	276	225	277	SW1	0,000	20,000
77	223	275	224	276	SW1	0,000	20,000
78	222	274	223	275	SW1	0,000	20,000
79	244	296	245	297	SW1	0,000	20,000
80	243	295	244	296	SW1	0,000	20,000
81	242	294	243	295	SW1	0,000	20,000
82	241	293	242	294	SW1	0,000	20,000
83	240	292	241	293	SW1	0,000	20,000
84	239	291	240	292	SW1	0,000	20,000
85	238	290	239	291	SW1	0,000	20,000
86	237	289	238	290	SW1	0,000	20,000
87	236	288	237	289	SW1	0,000	20,000
88	235	287	236	288	SW1	0,000	20,000

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AME	SPAN	DISTRIBUTED	LOADS	Load Case	DL	
FRAME	TYPE	DIRECTION	DISTANCE-A	VALUE-A	DISTANCE-B	VALUE-B
337	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-11,2500
337	FORCE	GLOBAL-Z	0,5000	-11,2500	1,0000	0,0000
338	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-11,2500
338	FORCE	GLOBAL-Z	0,5000	-11,2500	1,0000	0,0000
339	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-11,2500
339	FORCE	GLOBAL-Z	0,5000	-11,2500	1,0000	0,0000
340	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-11,2500
340	FORCE	GLOBAL-Z	0,5000	-11,2500	1,0000	0,0000
341	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-11,2500
341	FORCE	GLOBAL-Z	0,5000	-11,2500	1,0000	0,0000
342	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-11,2500
342	FORCE	GLOBAL-Z	0,5000	-11,2500	1,0000	0,0000

420	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
420	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
444	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
444	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
454	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
454	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
478	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
478	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
492	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
492	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
516	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
516	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
526	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
526	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
550	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
550	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
672	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
672	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
696	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
696	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
708	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
708	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
732	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
732	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
778	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
778	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
802	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
802	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
814	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
814	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
838	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-15,3000
838	FORCE	GLOBAL-Z	0,5000	-15,3000	1,0000	0,0000
382	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
382	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
394	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
394	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
406	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
406	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
466	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
466	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
538	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
538	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
598	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
598	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
610	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
610	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
622	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
622	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
790	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
790	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
826	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
826	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
850	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
850	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
862	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
862	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
874	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-7,6500
874	FORCE	GLOBAL-Z	0,5000	-7,6500	1,0000	0,0000
323	FORCE	GLOBAL-Z	0,0000	0,0000	1,0000	-11,2500
323	FORCE	GLOBAL-Z	1,0000	-11,2500	1,0000	-11,2500
324	FORCE	GLOBAL-Z	0,0000	-11,2500	1,0000	0,0000
323	FORCE	GLOBAL-Z	0,0000	-10,0000	1,0000	-10,0000
324	FORCE	GLOBAL-Z	0,0000	-10,0000	1,0000	-10,0000
335	FORCE	GLOBAL-Z	0,0000	0,0000	1,0000	-7,6500
335	FORCE	GLOBAL-Z	1,0000	-7,6500	1,0000	-7,6500
336	FORCE	GLOBAL-Z	0,0000	-7,6500	1,0000	0,0000

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AME	SPAN	DISTRIBUTED	LOADS	Load Case	LL	
FRAME	TYPE	DIRECTION	DISTANCE-A	VALUE-A	DISTANCE-B	VALUE-B
337	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500
337	FORCE	GLOBAL-Z	0,5000	-6,2500	1,0000	0,0000
338	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500
338	FORCE	GLOBAL-Z	0,5000	-6,2500	1,0000	0,0000
339	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500
339	FORCE	GLOBAL-Z	0,5000	-6,2500	1,0000	0,0000
340	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500
340	FORCE	GLOBAL-Z	0,5000	-6,2500	1,0000	0,0000
341	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500
341	FORCE	GLOBAL-Z	0,5000	-6,2500	1,0000	0,0000
342	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500
342	FORCE	GLOBAL-Z	0,5000	-6,2500	1,0000	0,0000
343	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500
343	FORCE	GLOBAL-Z	0,5000	-6,2500	1,0000	0,0000
344	FORCE	GLOBAL-Z	0,0000	0,0000	0,5000	-6,2500

335	FORCE	GLOBAL-Z	0,0000	0,0000	1,0000	-2,5000
335	FORCE	GLOBAL-Z	1,0000	-2,5000	1,0000	-2,5000
336	FORCE	GLOBAL-Z	0,0000	-2,5000	1,0000	0,0000

0.02	0.00630	1.22	0.08870	2.42	0.01064	4.82	-0.17561	6.02	-0.01819	7.22	-0.04574	8.42	-0.03192	9.62	0.08446
0.04	0.00364	1.24	0.04524	2.44	0.02900	4.84	-0.22369	6.04	-0.04057	7.24	-0.02071	8.44	-0.02588	9.64	0.05023
0.06	0.00099	1.26	0.00179	2.46	0.02380	3.66	0.04737	6.06	-0.02914	7.26	0.00432	8.46	-0.01984	9.66	0.01600
0.08	0.00428	1.28	-0.04167	2.48	0.15662	3.68	-0.15851	6.08	-0.02417	7.28	0.02935	8.48	-0.01379	9.68	-0.01823
0.10	0.00758	1.30	-0.08513	2.50	0.08943	3.70	-0.04525	6.10	0.01460	7.30	0.01526	8.50	-0.00775	9.70	-0.05246
0.12	0.01087	1.32	-0.12858	2.52	-0.02224	3.72	-0.02530	6.12	0.05337	7.32	0.01806	8.52	-0.01449	9.72	-0.08669
0.14	0.00682	1.34	-0.17204	2.54	-0.07081	4.94	0.18128	6.14	0.02428	7.34	0.02086	8.54	-0.02123	9.74	-0.06769
0.16	0.00277	1.36	-0.12908	2.56	-0.04107	4.96	0.14464	6.16	-0.00480	7.36	0.00793	8.56	0.01523	9.76	-0.04870
0.18	-0.00128	1.38	-0.08613	2.58	-0.01133	4.98	0.10800	6.18	-0.03369	7.38	-0.00501	8.58	0.05170	9.78	-0.02970
0.20	0.00368	1.40	-0.08902	2.60	0.00268	5.00	0.07137	6.20	-0.00557	7.40	-0.01795	8.60	0.08816	9.80	-0.01071
0.22	0.00864	1.42	-0.09192	2.62	0.01709	5.02	0.03473	6.22	0.02274	7.42	-0.03089	8.62	0.12463	9.82	0.00829
0.24	0.01360	1.44	-0.09482	2.64	0.03131	5.04	0.09666	6.24	-0.00679	7.44	-0.01841	8.64	0.16109	9.84	-0.00314
0.26	0.00727	1.46	-0.09324	2.66	-0.02278	5.06	0.15860	6.26	-0.00915	7.46	-0.00593	8.66	0.12987	9.86	0.02966
0.28	0.00094	1.48	-0.09166	2.68	-0.07686	5.08	0.22053	6.28	-0.02509	7.48	0.00655	8.68	0.09864	9.88	0.06246
0.30	0.00420	1.50	-0.09478	2.70	0.10393	3.90	-0.13095	6.30	-0.04103	7.50	-0.02519	8.70	0.06741	9.90	-0.00234
0.32	0.00221	1.52	-0.09789	2.72	0.07027	3.92	-0.18504	6.32	-0.05698	7.52	-0.05693	8.72	0.03618	9.92	-0.06714
0.34	0.00021	1.54	-0.12902	2.74	-0.03661	3.94	-0.14347	6.34	-0.01826	7.54	-0.04045	8.74	0.00495	9.94	-0.04051
0.36	0.00444	1.56	-0.07652	2.76	0.02095	3.96	-0.10190	6.36	0.07023	7.56	-0.02398	8.76	0.00420	9.96	-0.01388
0.38	0.00867	1.58	-0.02401	2.78	-0.03071	3.98	0.03265	6.38	0.00454	7.58	-0.00750	8.78	0.00345	9.98	0.01274
0.40	0.01290	1.60	0.02849	2.80	-0.00561	4.00	-0.01877	6.40	-0.01138	7.60	0.00697	8.80	0.00269	10.00	0.00805
0.42	0.01713	1.62	0.08099	2.82	0.01948	4.02	0.02280	6.42	-0.00215	7.62	0.00384	8.82	-0.05922		
0.44	-0.00343	1.64	0.13350	2.84	0.04458	4.04	-0.00996	6.44	0.00708	7.64	-0.00129	8.84	-0.12112		
0.46	-0.02400	1.66	0.18600	2.86	0.06468	4.06	-0.04272	6.46	0.00496	7.66	-0.00642	8.86	-0.18303		
0.48	0.00992	1.68	0.23850	2.88	0.08478	4.08	-0.02147	6.48	0.00285	7.68	-0.01156	8.88	-0.12043		
0.50	0.00416	1.70	0.21983	2.90	0.10487	4.10	0.00074	6.50	0.00074	7.70	-0.02619	8.90	-0.05782		
0.52	0.00528	1.72	0.20135	2.92	0.08895	4.12	0.01097	6.52	-0.00534	7.72	-0.04082	8.92	0.00479		
0.54	0.01653	1.74	0.18277	2.94	0.01303	4.14	-0.01469	6.54	-0.01141	7.74	-0.05545	8.94	0.06740		
0.56	0.02779	1.76	0.16420	2.96	-0.03289	4.16	0.04438	6.56	0.00361	7.76	-0.04366	8.96	0.13001		
0.58	0.03904	1.78	0.14562	2.98	-0.07882	4.18	0.08685	6.58	0.01863	7.78	-0.03188	8.98	0.08373		
0.60	0.02449	1.80	0.16143	3.00	-0.03556	4.20	-0.12148	6.60	0.03365	7.80	-0.06964	9.00	0.03745		
0.62	0.00995	1.82	0.17725	3.02	0.00771	4.22	-0.15711	6.62	0.04867	7.82	-0.05634	9.02	0.06979		
0.64	0.00961	1.84	0.13215	3.04	0.05097	4.24	-0.19274	6.64	0.03551	7.84	-0.04303	9.04	0.10213		
0.66	0.00926	1.86	0.08705	3.06	0.10103	4.26	-0.22837	6.66	-0.03315	7.86	-0.02972	9.06	-0.03517		
0.68	0.00892	1.88	0.04196	3.08	-0.03071	4.28	-0.18145	6.68	-0.01800	7.88	-0.01642	9.08	-0.17247		
0.70	-0.00486	1.90	-0.00314	3.10	-0.07156	4.30	-0.13453	6.70	-0.02441	7.90	-0.00311	9.10	-0.13763		
0.72	-0.01664	1.92	-0.04624	3.12	-0.11240	4.32	-0.08761	6.72	0.01375	7.92	-0.02020	9.12	-0.10278		
0.74	-0.03242	1.94	-0.09334	3.14	-0.15324	4.34	-0.04069	6.74	0.01099	7.94	0.02350	9.14	-0.06794		
0.76	-0.03365	1.96	-0.13843	3.16	-0.11314	4.36	0.00623	6.76	0.00823	7.96	0.03681	9.16	-0.03310		
0.78	-0.05723	1.98	-0.18353	3.18	-0.07304	4.38	0.05316	6.78	0.00547	7.98	0.05011	9.18	-0.03647		
0.80	-0.04534	2.00	-0.22863	3.20	-0.03294	4.40	0.10008	6.80	0.00812	8.00	0.02436	9.20	-0.03984		
0.82	-0.03346	2.02	-0.27372	3.22	0.00715	4.42	-0.09060	6.82	0.01077	8.02	-0.01139	9.22	-0.00517		
0.84	-0.03201	2.04	-0.31882	3.24	-0.06350	4.44	-0.12578	6.84	-0.00892	8.04	-0.02714	9.24	0.02950		
0.86	-0.03056	2.06	-0.25024	3.26	-0.13415	4.46	0.04808	6.86	-0.02461	8.06	-0.00309	9.26	0.06417		
0.88	-0.02911	2.08	-0.18166	3.28	-0.20480	4.48	-0.19613	6.88	-0.04230	8.08	0.02096	9.28	0.09883		
0.90	-0.02766	2.10	-0.11309	3.30	-0.12482	4.50	0.05141	6.90	-0.14784	8.10	0.04501	9.30	0.13350		
0.92	-0.04116	2.12	-0.04451	3.32	-0.04485	4.52	0.10420	6.92	-0.07768	8.12	0.08906	9.32	0.05924		
0.94	-0.05466	2.14	0.02407	3.34	0.03513	4.54	0.15699	6.94	-0.05127	8.14	0.05773	9.34	-0.01503		
0.96	-0.06816	2.16	0.09265	3.36	0.11510	4.56	0.20979	6.96	-0.02098	8.16	0.04640	9.36	-0.08929		
0.98	-0.08166	2.18	0.16123	3.38	0.19508	4.58	0.26258	6.98	-0.01952	8.18	0.03507	9.38	-0.16355		
1.00	-0.08446	2.20	0.22981	3.40	0.12301	4.60	0.16996	7.00	-0.03605	8.20	0.03357	9.40	-0.06096		
1.02	-0.05527	2.22	0.29839	3.42	0.05094	4.62	-0.05259	7.02	0.03777	8.22	0.03207	9.42	0.04164		
1.04	-0.04208	2.24	0.23197	3.44	-0.02113	4.64	-0.01527	7.04	0.01773	8.24	0.03057	9.44	0.01551		
1.06	-0.04259	2.26	0.16554	3.46	-0.09320	4.66	-0.10789	7.06	-0.02310	8.26	0.03250	9.46	-0.01061		
1.08	-0.04311	2.28	0.09912	3.48	-0.02663	4.68	-0.20051	7.08	-0.02235	8.28	0.03444	9.48	-0.03674		
1.10	-0.02428	2.30	0.03270	3.50	0.03995	4.70	-0.06786	7.10	-0.02699	8.30	0.03637	9.50	-0.06287		
1.12	-0.00545	2.32	-0.03372	3.52	0.10653	4.72	0.06479	7.12	0.05816	8.32	0.01348	9.52	-0.08899		
1.14	0.01338	2.34	-0.10014	3.54	0.17311	4.74	0.01671	7.14	0.03738	8.34	-0.00942	9.54	-0.05430		
1.16	0.03221	2.36	-0.16656	3.56	0.11283	4.76	-0.03137	7.16	0.01660	8.36	-0.03231	9.56	-0.01961		
1.18	0.05104	2.38	-0.23299	3.58	0.05255	4.78	0.02656	7.18	-0.00418	8.38	-0.02997	9.58	0.01508		
1.20	0.06987	2.40	-0.29941	3.60	-0.00772	4.80	0.00419	7.20	-0.02496	8.40	-0.03095	9.60	0.04977		

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Structural Analysis Programs

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C O N S T R A I N T C O O R D I N A T E S A N D M A S S E S

CONS DIAPH1 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	8.45E-18
Z	4.000000	4.000000	4.000000

CONS DIAPH2 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	1.69E-17
Z	8.000000	8.000000	8.000000

CONS DIAPH3 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA

	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS

GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	2.53E-17
Z	12.000000	12.000000	12.000000

CONS DIAPH4 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER

GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA

	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS

GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	3.38E-17
Z	16.000000	16.000000	16.000000

CONS DIAPH5 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER

GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA

	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS

GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	4.22E-17
Z	20.000000	20.000000	20.000000

CONS DIAPH6 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER

GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA

	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS

GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	5.07E-17
Z	24.000000	24.000000	24.000000

CONS DIAPH7 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	5.91E-17
Z	28.000000	28.000000	28.000000

CONS DIAPH8 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	6.76E-17
Z	32.000000	32.000000	32.000000

CONS DIAPH9 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	348.630900	348.630900	.000000	.000000	.000000	72.631400

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	7.60E-17
Z	36.000000	36.000000	36.000000

CONS DIAPH10 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	306.120500	306.120500	.000000	.000000	.000000	48.372300

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	.000000	.000000	.000000
Y	-2.500000	-2.500000	8.45E-17
Z	40.000000	40.000000	40.000000

CONS DIAPH11 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	174.315500	174.315500	.000000	.000000	.000000	29.052900

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	.000000	.000000	-7.058824
Y	-2.500000	-2.500000	1.58E-16
Z	44.000000	44.000000	44.000000

CONS DIAPH12 ===== TYPE = DIAPH, NORMAL DIRECTION = U3

LOCAL COORDINATE SYSTEM FOR CONSTRAINT MASTER						
GLOBAL	U1	U2	U3	R1	R2	R3
X	1.000000	.000000	.000000	1.000000	.000000	.000000
Y	.000000	1.000000	.000000	.000000	1.000000	.000000
Z	.000000	.000000	1.000000	.000000	.000000	1.000000

TRANSLATIONAL MASS AND MASS MOMENTS OF INERTIA						
	U1	U2	U3	R1	R2	R3
	131.805000	131.805000	.000000	.000000	.000000	21.967500

CENTER OF MASS			
GLOBAL	U1	U2	U3
X	-8.88E-16	-8.88E-16	-7.058824
Y	-2.500000	-2.500000	1.73E-16
Z	48.000000	48.000000	48.000000

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D I S P L A C E M E N T D E G R E E S O F F R E E D O M

(A) = Active DOF, equilibrium equation
 (-) = Restrained DOF, reaction computed
 (+) = Constrained DOF
 (>) = External substructure DOF
 () = Null DOF

JOINTS		UX	UY	UZ	RX	RY	RZ
1		-	-	-	-	-	-
2 TO	13	+	+	A	A	A	+
14		-	-	-	-	-	-
15 TO	26	+	+	A	A	A	+
27		-	-	-	-	-	-
28 TO	39	+	+	A	A	A	+
40		-	-	-	-	-	-
41 TO	52	+	+	A	A	A	+
53		-	-	-	-	-	-
54 TO	65	+	+	A	A	A	+
66		-	-	-	-	-	-
67 TO	78	+	+	A	A	A	+
79		-	-	-	-	-	-
80 TO	91	+	+	A	A	A	+
92		-	-	-	-	-	-
93 TO	104	+	+	A	A	A	+
105		-	-	-	-	-	-
106 TO	117	+	+	A	A	A	+
118		-	-	-	-	-	-
119 TO	130	+	+	A	A	A	+
131		-	-	-	-	-	-
132 TO	143	+	+	A	A	A	+

144			-	-	-	-	-	-
145	TO	156	+	+	A	A	A	+
157			-	-	-	-	-	-
158	TO	169	+	+	A	A	A	+
170			-	-	-	-	-	-
171	TO	182	+	+	A	A	A	+
183			-	-	-	-	-	-
184	TO	195	+	+	A	A	A	+
196			-	-	-	-	-	-
197	TO	208	+	+	A	A	A	+
209			-	-	-	-	-	-
210	TO	221	+	+	A	A	A	+
222			-	-	-	-	-	-
223	TO	234	+	+	A	A	A	+
235			-	-	-	-	-	-
236	TO	247	+	+	A	A	A	+
248			-	-	-	-	-	-
249	TO	260	+	+	A	A	A	+
261			-	-	-	-	-	-
262	TO	273	+	+	A	A	A	+
274			-	-	-	-	-	-
275	TO	286	+	+	A	A	A	+
287			-	-	-	-	-	-
288	TO	297	+	+	A	A	A	+
300			-	-	-	-	-	-
301	TO	310	+	+	A	A	A	+
313			-	-	-	-	-	-
314	TO	323	+	+	A	A	A	+
326			-	-	-	-	-	-
327	TO	336	+	+	A	A	A	+
339			-	-	-	-	-	-
340	TO	349	+	+	A	A	A	+
352			-	-	-	-	-	-
353	TO	362	+	+	A	A	A	+

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A S S E M B L E D J O I N T M A S S E S

IN GLOBAL COORDINATES

JOINT	UX	UY	UZ	RX	RY	RZ
171	348.630900	348.630900	.000000	.000000	.000000	72.631400
172	348.630900	348.630900	.000000	.000000	.000000	72.631400
173	348.630900	348.630900	.000000	.000000	.000000	72.631400
174	348.630900	348.630900	.000000	.000000	.000000	72.631400
175	348.630900	348.630900	.000000	.000000	.000000	72.631400
176	348.630900	348.630900	.000000	.000000	.000000	72.631400
177	348.630900	348.630900	.000000	.000000	.000000	72.631400
178	348.630900	348.630900	.000000	.000000	.000000	72.631400
179	348.630900	348.630900	.000000	.000000	.000000	72.631400
180	306.120500	306.120500	.000000	.000000	.000000	48.372300
181	174.315500	174.315500	.000000	.000000	.000000	29.052900
182	131.805000	131.805000	.000000	.000000	.000000	21.967500

TOTAL ASSEMBLED JOINT MASSES
IN GLOBAL COORDINATES

	UX	UY	UZ	RX	RY	RZ
TOTAL	3749.919	3749.919	.000000	.000000	.000000	753.075300

TOTAL ACCELERATED MASS AND LOCATION
TOTAL MASS ACTIVATED BY ACCELERATION LOADS, IN GLOBAL COORDINATES

	UX	UY	UZ
MASS	3749.919	3749.919	.000000
X-LOC	.000000	.000000	.000000
Y-LOC	-2.500000	-2.500000	.000000
Z-LOC	23.732486	23.732486	.000000

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MODAL PERIODS AND FREQUENCIES

MODE	PERIOD (TIME)	FREQUENCY (CYC/TIME)	FREQUENCY (RAD/TIME)	EIGENVALUE (RAD/TIME)**2
1	0.729524	1.370756	8.612714	74.178842
2	0.722602	1.383888	8.695226	75.606956
3	0.167987	5.952856	37.402897	1398.977
4	0.163080	6.131950	38.528178	1484.421
5	0.088950	11.242333	70.637660	4989.679
6	0.074952	13.341797	83.828984	7027.299
7	0.053514	18.686615	117.411466	13785.452
8	0.047484	21.059870	132.323068	17509.394
9	0.037817	26.443224	166.147679	27605.051
10	0.033990	29.420500	184.854453	34171.169
11	0.033330	30.003026	188.514573	35537.744
12	0.026081	38.342294	240.911736	58038.465

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MODAL PARTICIPATION FACTORS

FOR UNIT ACCELERATION LOADS IN GLOBAL COORDINATES

MODE	PERIOD	UX	UY	UZ
1	0.729524	-1.763343	-49.546402	.000000
2	0.722602	-49.780335	1.765653	.000000
3	0.167987	7.998514	24.779637	.000000
4	0.163080	25.837929	-8.244446	.000000
5	0.088950	-4.310780	-14.991577	.000000
6	0.074952	15.041162	-4.649739	.000000
7	0.053514	-4.515090	-12.536692	.000000
8	0.047484	-10.467124	4.247810	.000000
9	0.037817	2.047900	5.382172	.000000
10	0.033990	-7.825095	-2.534883	.000000
11	0.033330	3.019923	-7.849915	.000000
12	0.026081	6.327491	0.946887	.000000

MODAL PARTICIPATING MASS RATIOS

MODE	PERIOD	INDIVIDUAL MODE (PERCENT)			CUMULATIVE SUM (PERCENT)		
		UX	UY	UZ	UX	UY	UZ
1	0.729524	0.0829	65.4640	0.0000	0.0829	65.4640	0.0000
2	0.722602	66.0836	0.0831	0.0000	66.1665	65.5471	0.0000
3	0.167987	1.7061	16.3745	0.0000	67.8726	81.9216	0.0000
4	0.163080	17.8030	1.8126	0.0000	85.6756	83.7342	0.0000
5	0.088950	0.4956	5.9934	0.0000	86.1712	89.7276	0.0000
6	0.074952	6.0331	0.5765	0.0000	92.2043	90.3041	0.0000
7	0.053514	0.5436	4.1913	0.0000	92.7479	94.4954	0.0000
8	0.047484	2.9217	0.4812	0.0000	95.6696	94.9766	0.0000
9	0.037817	0.1118	0.7725	0.0000	95.7814	95.7491	0.0000
10	0.033990	1.6329	0.1714	0.0000	97.4143	95.9204	0.0000
11	0.033330	0.2432	1.6433	0.0000	97.6575	97.5637	0.0000
12	0.026081	1.0677	0.0239	0.0000	98.7252	97.5876	0.0000

MODAL LOAD PARTICIPATION RATIOS

LOAD, ACC, OR NLLINK/DEF (TYPE)	(NAME)	STATIC (PERCENT)	DYNAMIC (PERCENT)	EFFECTIVE PERIOD
LOAD	DL	0.0054 ->	1.0423<- (*) SEE NOTE	0.004952
LOAD	LL	0.0038 ->	1.1637<- (*) SEE NOTE	0.003049
ACC	UX	99.9986	98.7252	0.716993
ACC	UY	99.9967	97.5876	0.723830
ACC	UZ	0.0000	0.0000	-INFINITY-
ACC	RX	100.0000	99.9918	0.729183
ACC	RY	100.0000	99.9938	0.722320
ACC	RZ	0.1376	0.1039	24.592613

(*) NOTE: DYNAMIC LOAD PARTICIPATION RATIO EXCLUDES LOAD APPLIED TO NON-MASS DEGREES OF FREEDOM

GLOBAL FORCE BALANCE

TOTAL FORCE AND MOMENT AT THE ORIGIN, IN GLOBAL COORDINATES

LOAD	DL	-----					
		FX	FY	FZ	MX	MY	MZ
APPLIED		-2.63E-28	3.67E-28	-69428.560	-5.72E-12	-51997.200	1.07E-27
INERTIA		.000000	.000000	.000000	.000000	.000000	.000000
REACTNS		4.96E-11	2.92E-11	69428.560	-6.99E-10	51997.200	-4.12E-11
CONSTRS		-8.75E-12	1.16E-11	.000000	-3.79E-10	-2.78E-10	-2.26E-11
TOTAL		4.09E-11	4.08E-11	-4.80E-10	-1.08E-09	3.26E-10	-6.39E-11
LOAD	LL	-----					
		FX	FY	FZ	MX	MY	MZ
APPLIED		2.62E-29	-2.76E-29	-10115.625	-7.82E-13	-7500.000	2.24E-28
INERTIA		.000000	.000000	.000000	.000000	.000000	.000000
REACTNS		5.94E-12	3.80E-12	10115.625	-9.94E-11	7500.000	-6.85E-12
CONSTRS		3.50E-13	1.70E-12	.000000	-5.88E-11	-1.22E-11	-3.12E-12
TOTAL		6.29E-12	5.50E-12	-4.73E-11	-1.59E-10	6.69E-11	-9.96E-12

MODE	1 -----					
	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	-130.802779	-3675.295	.000000	120972.949	-4326.341	-327.311121
REACTNS	130.802934	3675.295	1.54E-10	-120972.949	4326.342	327.311150
CONSTRS	-0.000155	-0.000251	.000000	0.000301	-0.000363	-2.92E-05
TOTAL	-2.82E-12	-6.77E-11	1.54E-10	1.05E-09	-7.05E-10	-5.66E-11

MODE	2 -----					
	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	-3763.740	133.495637	.000000	-4410.206	-123444.990	-9416.474
REACTNS	3763.740	-133.495721	7.74E-11	4410.206	123444.990	9416.474
CONSTRS	4.02E-05	8.42E-05	.000000	-0.000116	0.000124	-9.22E-05
TOTAL	-1.28E-10	1.57E-12	7.74E-11	5.45E-10	-7.02E-09	-3.14E-10

MODE	3 -----					
	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	11189.734	34666.135	.000000	-285384.542	84737.758	28209.166
REACTNS	-11188.581	-34664.785	-3.59E-10	285383.003	-84734.885	-28209.646
CONSTRS	-1.153561	-1.349718	.000000	1.538410	-2.872519	0.479623
TOTAL	-5.23E-12	1.13E-10	-3.59E-10	-3.34E-09	-9.65E-10	3.75E-10

MODE	4 -----					
	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	38354.352	-12238.225	.000000	97666.922	292794.620	96346.607
REACTNS	-38354.519	12237.455	-1.68E-10	-97665.835	-292794.618	-96347.738
CONSTRS	0.167325	0.769571	.000000	-1.086807	-0.001946	1.131328
TOTAL	-1.81E-11	7.64E-12	-1.68E-10	8.35E-10	-1.01E-09	-1.57E-09

MODE	5 -----					
	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	-21509.410	-74803.156	.000000	434353.768	-132344.550	-52618.894
REACTNS	21509.283	74802.064	-4.55E-12	-434352.281	132344.061	52617.764
CONSTRS	0.127312	1.092479	.000000	-1.486649	0.489583	1.129939
TOTAL	-2.52E-12	5.34E-11	-4.55E-12	-8.46E-10	5.21E-10	1.60E-10

MODE	6 -----					
	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	105698.734	-32675.105	.000000	175551.527	549295.178	265625.159
REACTNS	-105698.791	32669.859	-1.26E-10	-175544.564	-549296.883	-265629.739
CONSTRS	0.056916	5.245431	.000000	-6.962711	1.704698	4.580340
TOTAL	2.03E-12	1.25E-11	-1.26E-10	-6.28E-11	1.51E-09	-4.49E-11

MODE	7 -----					
	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	-62242.561	-172823.965	.000000	691215.736	-224167.076	-161277.602
REACTNS	62239.840	172820.089	-9.28E-11	-691209.515	224163.405	161258.199
CONSTRS	2.721511	3.875418	.000000	-6.220712	3.670561	19.403598
TOTAL	2.28E-11	2.83E-11	-9.28E-11	1.21E-09	-2.22E-10	4.37E-10

MODE 8 -----

	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	-183273.011	74376.576	.000000	-256274.752	-597286.500	-459762.370
REACTNS	183273.429	-74376.049	-5.37E-11	256273.647	597286.094	459774.402
CONSTRS	-0.418015	-0.526783	.000000	1.104626	0.406487	-12.032140
TOTAL	8.48E-11	-9.13E-12	-5.37E-11	8.54E-10	2.54E-09	5.89E-10

MODE 9 -----

	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	56532.393	148575.129	.000000	-420939.585	164653.575	128362.942
REACTNS	-56572.162	-148607.228	-7.42E-11	420991.532	-164712.994	-128525.503
CONSTRS	39.768945	32.099695	.000000	-51.946600	59.419408	162.560410
TOTAL	1.02E-11	-1.05E-10	-7.42E-11	-3.65E-10	-1.79E-10	-7.46E-11

MODE 10 -----

	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	-267392.627	-86619.922	.000000	193294.636	-623605.249	-680294.980
REACTNS	267398.383	86629.586	6.74E-11	-193300.811	623679.036	679819.929
CONSTRS	-5.756423	-9.664018	.000000	6.174948	-73.786794	475.050973
TOTAL	9.28E-11	1.70E-11	6.74E-11	-9.15E-10	1.68E-09	1.63E-10

MODE 11 -----

	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	107321.246	-278968.288	.000000	651505.934	251578.926	274948.983
REACTNS	-107368.484	278968.113	1.68E-10	-651490.225	-251647.519	-275140.048
CONSTRS	47.237784	0.174613	.000000	-15.709231	68.593331	191.065210
TOTAL	2.25E-12	-3.84E-11	1.68E-10	-9.75E-10	3.67E-09	8.68E-11

MODE 12 -----

	FX	FY	FZ	MX	MY	MZ
APPLIED	.000000	.000000	.000000	.000000	.000000	.000000
INERTIA	367237.863	54955.870	.000000	-113648.243	648257.837	921861.232
REACTNS	-367239.728	-54953.253	-2.02E-10	113633.290	-648262.879	-921872.539
CONSTRS	1.865394	-2.617355	.000000	14.953053	5.042178	11.307578
TOTAL	-2.52E-10	3.21E-11	-2.02E-10	7.42E-10	-6.80E-10	3.78E-10

0.33	-0.00158	-0.0014	-0.00121	-0.00105	-8.92E-04	7.32E-04	-4.31E-04	-2.99E-04	-1.84E-04	9.28E-05	-2.91E-05	0
0.34	-0.00159	-0.00141	-0.00122	-0.00106	-8.90E-04	7.29E-04	-4.18E-04	-2.87E-04	-1.75E-04	-8.71E-05	-2.70E-05	0
0.35	-0.00159	-0.00142	-0.00123	-0.00106	-8.86E-04	7.19E-04	-4.11E-04	-2.81E-04	-1.71E-04	-8.50E-05	-2.63E-05	0
0.36	-0.00158	-0.00141	-0.00122	-0.00105	-8.82E-04	7.16E-04	-4.12E-04	-2.83E-04	-1.73E-04	-8.70E-05	-2.74E-05	0
0.37	-0.00156	-0.00139	-0.0012	-0.00104	-8.79E-04	7.19E-04	-4.22E-04	-2.93E-04	-1.83E-04	-9.34E-05	-3.01E-05	0
0.38	-0.00153	-0.00137	-0.00119	-0.00103	-8.80E-04	7.28E-04	-4.40E-04	-3.11E-04	-1.88E-04	-1.04E-04	-3.47E-05	0
0.39	-0.0015	-0.00134	-0.00118	-0.00103	-8.85E-04	7.44E-04	-4.64E-04	-3.34E-04	-1.98E-04	-1.16E-04	-4.01E-05	0
0.4	-0.00145	-0.00132	-0.00117	-0.00104	-9.05E-04	7.68E-04	-4.91E-04	-3.59E-04	-2.36E-04	-1.29E-04	-4.52E-05	0
0.41	-0.00141	-0.00131	-0.00117	-0.00105	-9.23E-04	7.92E-04	-5.19E-04	-3.83E-04	-2.54E-04	-1.39E-04	-4.89E-05	0
0.42	-0.00138	-0.00128	-0.00118	-0.00106	-9.39E-04	8.12E-04	-5.37E-04	-4.06E-04	-2.61E-04	-1.40E-04	-4.83E-05	0
0.43	-0.00135	-0.00126	-0.00117	-0.00106	-9.41E-04	8.14E-04	-5.35E-04	-3.90E-04	-2.52E-04	-1.32E-04	-4.38E-05	0
0.44	-0.00132	-0.00124	-0.00116	-0.00104	-9.18E-04	7.88E-04	-5.04E-04	-3.60E-04	-2.27E-04	-1.15E-04	-3.59E-05	0
0.45	-0.00129	-0.00122	-0.00112	-9.95E-04	-8.64E-04	7.27E-04	-4.43E-04	-3.06E-04	-1.86E-04	-9.96E-05	-2.56E-05	0
0.46	-0.00128	-0.00116	-0.00105	-9.18E-04	-7.80E-04	6.38E-04	-3.98E-04	-2.43E-04	-1.42E-04	-6.53E-05	-1.77E-05	0
0.47	-0.00124	-0.00111	-9.64E-04	-8.20E-04	-7.80E-04	5.33E-04	-3.07E-04	-1.25E-04	-6.65E-05	-2.74E-05	-5.86E-06	0
0.49	-0.00121	-0.00104	-8.59E-04	-7.08E-04	-5.63E-04	-4.27E-04	-3.07E-04	-1.09E-04	-6.65E-05	-2.74E-05	-5.86E-06	0
0.5	-0.00104	-8.40E-04	-6.18E-04	-4.88E-04	-2.22E-04	-1.74E-04	-1.74E-04	-1.46E-05	-1.69E-05	4.02E-06	0	0
0.51	-8.74E-04	-6.98E-04	-5.05E-04	-3.98E-04	-2.99E-04	-2.11E-04	-1.38E-04	-1.24E-04	-1.05E-04	-8.40E-05	-6.40E-06	0
0.52	-6.63E-04	-5.42E-04	-4.05E-04	-3.27E-04	-2.52E-04	-1.83E-04	-1.13E-04	-7.70E-05	-4.31E-05	-2.14E-05	-8.80E-06	0
0.53	-4.39E-04	-3.83E-04	-3.18E-04	-2.70E-04	-2.22E-04	-1.75E-04	-1.32E-04	-9.43E-05	-6.41E-05	-4.10E-05	-2.31E-05	0
0.54	-2.34E-04	-2.38E-04	-2.42E-04	-2.28E-04	-2.07E-04	-1.86E-04	-1.61E-04	-1.04E-04	-7.50E-05	-4.62E-05	-1.89E-05	0
0.55	-7.05E-05	-1.23E-04	-1.82E-04	-1.96E-04	-2.07E-04	-2.11E-04	-1.87E-04	-1.21E-04	-1.10E-04	-7.64E-05	-3.17E-05	0
0.56	3.74E-05	-4.79E-05	-1.46E-04	-1.87E-04	-2.59E-04	-3.01E-04	-2.50E-04	-2.20E-04	-1.71E-04	-1.10E-04	-4.64E-05	0
0.57	8.56E-05	-2.05E-05	-1.45E-04	-2.04E-04	-2.59E-04	-3.01E-04	-2.50E-04	-2.20E-04	-1.71E-04	-1.10E-04	-4.64E-05	0
0.58	7.57E-05	-4.13E-05	-1.78E-04	-2.48E-04	-3.10E-04	-3.77E-04	-3.67E-04	-3.23E-04	-2.50E-04	-1.57E-04	-6.44E-05	0
0.59	9.48E-06	-1.07E-04	-2.44E-04	-3.11E-04	-3.69E-04	-4.06E-04	-4.19E-04	-3.98E-04	-2.56E-04	-1.57E-04	-6.28E-05	0
0.6	-1.11E-04	-2.14E-04	-3.38E-04	-3.88E-04	-4.28E-04	-4.47E-04	-4.38E-04	-3.97E-04	-3.28E-04	-2.39E-04	-1.43E-04	0
0.61	-2.81E-04	-3.57E-04	-4.53E-04	-4.76E-04	-4.65E-04	-4.78E-04	-4.30E-04	-2.95E-04	-2.07E-04	-1.19E-04	-4.44E-05	0
0.62	-5.02E-04	-5.35E-04	-5.78E-04	-5.50E-04	-5.13E-04	-4.65E-04	-3.31E-04	-2.51E-04	-1.69E-04	-9.44E-05	-3.40E-05	0
0.63	-7.65E-04	-7.33E-04	-7.01E-04	-6.22E-04	-5.40E-04	-3.70E-04	-2.85E-04	-2.05E-04	-1.33E-04	-7.11E-05	-2.44E-05	0
0.64	-0.00105	-9.37E-04	-8.15E-04	-6.88E-04	-5.64E-04	-4.47E-04	-3.40E-04	-1.85E-04	-9.99E-05	-5.00E-05	-1.59E-05	0
0.65	-0.00132	-0.00113	-9.17E-04	-7.53E-04	-5.95E-04	-4.51E-04	-3.25E-04	-1.37E-04	-7.50E-05	-3.30E-05	-8.32E-06	0
0.66	-0.00156	-0.0013	-0.00101	-8.24E-04	-6.42E-04	-4.75E-04	-2.20E-04	-1.37E-04	-7.50E-05	-3.30E-05	-8.32E-06	0
0.67	-0.00172	-0.00143	-0.00111	-8.24E-04	-6.42E-04	-4.75E-04	-2.20E-04	-1.37E-04	-7.50E-05	-3.30E-05	-8.32E-06	0
0.68	-0.00182	-0.00153	-0.0012	-9.05E-04	-7.06E-04	-5.23E-04	-3.83E-04	-1.33E-04	-6.41E-05	-2.22E-05	-2.45E-06	0
0.69	-0.00185	-0.00158	-0.00128	-9.81E-04	-7.84E-04	-5.90E-04	-4.18E-04	-2.73E-04	-1.80E-04	-7.88E-05	-2.79E-06	0
0.7	-0.00183	-0.00159	-0.00134	-0.00114	-8.57E-04	-6.67E-04	-4.86E-04	-3.29E-04	-2.01E-04	-1.03E-04	-5.87E-06	0
0.71	-0.00176	-0.00157	-0.00137	-0.00118	-8.31E-04	-6.00E-04	-4.44E-04	-2.93E-04	-1.87E-04	-1.35E-04	-5.56E-05	0
0.72	-0.00168	-0.00153	-0.00137	-0.00119	-8.31E-04	-6.00E-04	-4.44E-04	-2.93E-04	-1.87E-04	-1.35E-04	-5.56E-05	0
0.73	-0.00157	-0.00145	-0.00132	-0.00116	-8.25E-04	-5.85E-04	-4.90E-04	-3.25E-04	-1.91E-04	-9.79E-05	-2.34E-05	0
0.74	-0.00146	-0.00135	-0.00123	-0.00113	-8.33E-04	-6.22E-04	-4.68E-04	-3.20E-04	-1.91E-04	-8.89E-05	-2.48E-05	0
0.75	-0.00134	-0.00122	-0.00111	-8.08E-04	-6.85E-04	-5.49E-04	-4.09E-04	-2.78E-04	-1.63E-04	-7.40E-05	-1.89E-05	0
0.76	-0.00118	-0.00106	-0.001	-8.50E-04	-7.10E-04	-5.66E-04	-4.32E-04	-2.93E-04	-1.10E-04	-4.15E-05	-5.81E-06	0
0.77	-9.80E-04	-8.50E-04	-7.10E-04	-4.53E-04	-3.52E-04	-2.82E-04	-2.71E-04	-1.74E-04	-9.25E-05	6.07E-05	5.21E-06	0
0.78	-7.21E-04	-5.92E-04	-4.53E-04	-3.52E-04	-2.82E-04	-2.71E-04	-1.74E-04	-9.25E-05	6.07E-05	5.21E-06	5.19E-05	0
0.79	-4.01E-04	-2.85E-04	-1.56E-04	-6.80E-05	1.80E-05	9.31E-05	1.48E-04	1.78E-04	1.04E-04	1.04E-04	4.61E-05	0
0.8	-2.98E-05	8.79E-05	1.80E-04	3.11E-04	3.95E-04	3.72E-04	3.66E-04	3.66E-04	3.05E-04	2.38E-04	1.48E-04	0
0.81	4.00E-04	4.71E-04	5.84E-04	6.17E-04	6.17E-04	6.17E-04	5.86E-04	5.22E-04	4.27E-04	1.87E-04	7.28E-05	0
0.82	8.86E-04	9.29E-04	9.86E-04	9.27E-04	8.70E-04	7.85E-04	6.70E-04	6.10E-04	5.30E-04	3.75E-04	2.19E-04	0
0.83	0.00144	0.00143	0.00143	0.00143	0.00124	0.00111	9.70E-04	8.02E-04	4.27E-04	2.45E-04	9.08E-05	0
0.84	0.00207	0.00198	0.00189	0.00172	0.00154	0.00135	0.00114	6.21E-04	4.67E-04	2.61E-04	9.45E-05	0
0.85	0.00275	0.00255	0.00235	0.0021	0.00184	0.00156	0.00131	6.92E-04	5.00E-04	2.72E-04	9.55E-05	0
0.86	0.00344	0.00314	0.00282	0.00248	0.00215	0.00181	0.00147	8.19E-04	5.30E-04	2.83E-04	9.69E-05	0

0.87	0.00414	0.00372	0.00328	0.00287	0.00245	0.00204	0.00163	0.00124	8.83E-04	5.63E-04	2.98E-04	9.93E-05	0
0.88	0.00481	0.00429	0.00374	0.00326	0.00276	0.00228	0.00181	0.00136	9.58E-04	6.02E-04	3.12E-04	1.02E-04	0
0.89	0.00544	0.00484	0.0042	0.00364	0.00308	0.00253	0.002	0.00156	0.00104	6.51E-04	3.34E-04	1.08E-04	0
0.9	0.00602	0.00536	0.00464	0.00403	0.00341	0.0028	0.00221	0.00166	0.00115	7.20E-04	3.70E-04	1.20E-04	0
0.91	0.00656	0.00585	0.00508	0.00442	0.00375	0.00309	0.00245	0.00184	0.00129	8.12E-04	4.21E-04	1.38E-04	0
0.92	0.00705	0.00631	0.00552	0.00481	0.0041	0.0034	0.00271	0.00206	0.00145	9.23E-04	4.84E-04	1.62E-04	0
0.93	0.00751	0.00676	0.00596	0.00522	0.00447	0.00373	0.003	0.00229	0.00164	0.00105	5.58E-04	1.88E-04	0
0.94	0.00796	0.0072	0.0064	0.00563	0.00486	0.00408	0.0033	0.00255	0.00183	0.00118	6.32E-04	2.16E-04	0
0.95	0.00841	0.00765	0.00684	0.00605	0.00525	0.00444	0.00362	0.00281	0.00203	0.00132	7.09E-04	2.44E-04	0
0.96	0.00889	0.00811	0.0073	0.00649	0.00566	0.0048	0.00394	0.00307	0.00223	0.00146	7.87E-04	2.72E-04	0
0.97	0.0094	0.00861	0.00778	0.00694	0.00606	0.00517	0.00425	0.00333	0.00243	0.00159	8.60E-04	2.98E-04	0
0.98	0.00996	0.00914	0.00828	0.00739	0.00646	0.00551	0.00454	0.00356	0.0026	0.00178	9.38E-04	3.18E-04	0
0.99	0.01056	0.00969	0.00879	0.00783	0.00685	0.00583	0.0048	0.00375	0.00274	0.00184	9.98E-04	3.30E-04	0
1	0.0112	0.01027	0.00929	0.00826	0.0072	0.00612	0.00501	0.00391	0.00283	0.00184	9.82E-04	3.35E-04	0
1.01	0.01187	0.01085	0.00978	0.0087	0.00753	0.00636	0.00518	0.00401	0.00289	0.00186	9.88E-04	3.34E-04	0
1.02	0.01255	0.01143	0.01025	0.00904	0.00781	0.00656	0.00531	0.00408	0.00292	0.00187	9.80E-04	3.27E-04	0
1.03	0.01322	0.01198	0.01066	0.00937	0.00805	0.00672	0.00547	0.00412	0.00292	0.00185	9.63E-04	3.17E-04	0
1.04	0.01386	0.01249	0.01103	0.00965	0.00825	0.00695	0.00562	0.00417	0.00292	0.00183	9.98E-04	3.03E-04	0
1.05	0.01442	0.01293	0.01134	0.00988	0.00841	0.00695	0.00558	0.00418	0.00283	0.00183	9.34E-04	3.00E-04	0
1.06	0.01486	0.0133	0.0116	0.01008	0.00856	0.00714	0.00565	0.00424	0.00286	0.00184	9.38E-04	3.01E-04	0
1.07	0.01521	0.01357	0.0118	0.01025	0.00879	0.00723	0.00572	0.00429	0.00289	0.00186	9.45E-04	3.01E-04	0
1.08	0.01559	0.01373	0.01184	0.01037	0.00879	0.00723	0.00572	0.00429	0.00289	0.00188	9.53E-04	3.03E-04	0
1.09	0.01542	0.01377	0.01201	0.01045	0.00887	0.00731	0.00578	0.00434	0.00303	0.00188	9.53E-04	3.03E-04	0
1.1	0.01553	0.01371	0.012	0.01046	0.0089	0.00735	0.00583	0.00438	0.00306	0.00189	9.63E-04	3.05E-04	0
1.11	0.01506	0.01354	0.01191	0.01041	0.00888	0.00734	0.00584	0.0044	0.00306	0.00191	9.70E-04	3.08E-04	0
1.12	0.01473	0.01328	0.01173	0.01028	0.00877	0.00728	0.0058	0.00438	0.00307	0.00191	9.71E-04	3.08E-04	0
1.13	0.01432	0.01292	0.01144	0.01002	0.00858	0.00713	0.0057	0.00431	0.00303	0.00189	9.61E-04	3.06E-04	0
1.14	0.01382	0.01248	0.01105	0.00969	0.0083	0.0069	0.00552	0.00418	0.00294	0.00183	9.33E-04	2.97E-04	0
1.15	0.01323	0.01194	0.01056	0.00925	0.00792	0.00656	0.00526	0.00398	0.00279	0.00174	8.82E-04	2.79E-04	0
1.16	0.01254	0.01129	0.00986	0.00871	0.00744	0.00617	0.00491	0.00371	0.00259	0.0016	8.07E-04	2.52E-04	0
1.17	0.01173	0.01054	0.00926	0.00807	0.00687	0.00567	0.00448	0.00336	0.00233	0.00143	7.08E-04	2.17E-04	0
1.18	0.0108	0.00966	0.00845	0.00733	0.0062	0.00508	0.00398	0.00295	0.00202	0.00122	5.91E-04	1.74E-04	0
1.19	0.00973	0.00866	0.00751	0.00648	0.00544	0.00441	0.00341	0.00249	0.00167	9.86E-04	4.61E-04	1.28E-04	0
1.2	0.00851	0.00752	0.00646	0.00552	0.00459	0.00366	0.00279	0.00199	0.00133	7.37E-04	3.25E-04	7.98E-05	0
1.21	0.00714	0.00625	0.00528	0.00446	0.00364	0.00285	0.00212	0.00146	9.13E-04	4.84E-04	1.90E-04	3.39E-05	0
1.22	0.00581	0.00484	0.00399	0.00331	0.00264	0.00201	0.00143	0.00098	5.37E-04	2.50E-04	7.40E-05	-1.32E-06	0
1.23	0.00394	0.00332	0.00263	0.00212	0.00162	0.00116	7.58E-04	4.34E-04	1.86E-04	5.08E-05	-1.89E-05	-2.87E-05	0
1.24	0.00216	0.00171	0.00121	8.97E-04	5.89E-04	3.86E-04	1.29E-04	4.34E-04	1.86E-04	5.08E-05	-1.89E-05	-2.87E-05	0
1.25	2.79E-04	4.83E-05	-2.24E-04	-3.18E-04	-3.81E-04	-4.38E-04	-4.42E-04	-4.07E-04	-9.25E-05	-1.12E-04	-8.94E-05	-4.32E-05	0
1.26	-0.00166	-0.00163	-0.00163	-0.00148	-0.00132	-0.00114	-9.49E-04	-7.42E-04	-5.33E-04	-3.37E-04	-1.71E-04	-5.38E-05	0
1.27	-0.00362	-0.0033	-0.00297	-0.00256	-0.00218	-0.00178	-0.00139	-0.00102	-8.88E-04	-4.03E-04	-1.85E-04	-4.90E-05	0
1.28	-0.00551	-0.00488	-0.0042	-0.00358	-0.00296	-0.00235	-0.00178	-0.00126	-8.07E-04	-4.45E-04	-1.88E-04	-3.97E-05	0
1.29	-0.00725	-0.00631	-0.00531	-0.00447	-0.00365	-0.00285	-0.00211	-0.00145	-9.00E-04	-4.71E-04	-1.79E-04	-2.78E-05	0
1.3	-0.00874	-0.00756	-0.00627	-0.00525	-0.00424	-0.00327	-0.00239	-0.00161	-9.73E-04	-4.87E-04	-1.68E-04	-1.55E-05	0
1.31	-0.00983	-0.00859	-0.00705	-0.00589	-0.00473	-0.00363	-0.00262	-0.00174	-9.80E-04	-4.98E-04	-1.58E-04	-4.84E-06	0
1.32	-0.01077	-0.00928	-0.00764	-0.00637	-0.00511	-0.0039	-0.0028	-0.00185	-1.48E-04	-1.48E-04	-1.48E-04	5.22E-06	0
1.33	-0.01126	-0.0097	-0.008	-0.00667	-0.00535	-0.00406	-0.00292	-0.00192	-1.48E-04	-1.48E-04	-1.48E-04	9.52E-06	0
1.34	-0.01139	-0.00984	-0.00814	-0.00688	-0.00546	-0.00418	-0.00301	-0.00199	-1.58E-04	-1.58E-04	-1.46E-04	2.69E-06	0
1.35	-0.01121	-0.00972	-0.00808	-0.00677	-0.00547	-0.00422	-0.00307	-0.00199	-1.72E-04	-1.72E-04	-2.27E-04	-2.78E-05	0
1.36	-0.01075	-0.00896	-0.00783	-0.0066	-0.00537	-0.00419	-0.00311	-0.00215	-2.00125	-6.31E-04	-2.27E-04	-2.78E-05	0
1.37	-0.01005	-0.00879	-0.00741	-0.0063	-0.0052	-0.00413	-0.00313	-0.00223	-2.99E-04	-2.99E-04	-2.99E-04	-8.12E-05	0
1.38	-0.00913	-0.00804	-0.00686	-0.0059	-0.00485	-0.00401	-0.00311	-0.00228	-3.34E-04	-3.34E-04	-3.74E-04	-9.53E-05	0
1.39	-0.008	-0.00713	-0.0062	-0.00541	-0.00461	-0.0038	-0.00301	-0.00225	-4.30E-04	-4.30E-04	-4.30E-04	-1.20E-04	0
1.4	-0.00674	-0.00611	-0.00546	-0.00483	-0.00417	-0.0035	-0.00281	-0.00213	-4.58E-04	-4.58E-04	-4.51E-04	-1.36E-04	0

1.41	-0.00541	-0.00503	-0.00463	-0.00414	-0.00362	-0.00306	-0.00249	-0.00191	-0.00134	-8.31E-04	-4.12E-04	-1.25E-04	0
1.42	-0.00409	-0.00389	-0.00333	-0.00293	-0.00225	-0.00204	-0.00204	-0.00157	-0.00111	-8.83E-04	-3.36E-04	-1.01E-04	0
1.43	-0.00281	-0.00272	-0.00266	-0.00239	-0.00211	-0.0018	-0.00146	-0.00112	-7.89E-04	-4.76E-04	-2.27E-04	-6.37E-05	0
1.44	-0.00156	-0.00153	-0.00151	-0.00134	-0.00117	-9.77E-04	-7.79E-04	-5.79E-04	-3.87E-04	-2.18E-04	-8.97E-05	-1.77E-05	0
1.45	-3.06E-04	-2.85E-04	-2.74E-04	-2.02E-04	-1.31E-04	-8.48E-05	-5.20E-06	4.07E-05	7.15E-05	8.37E-05	7.23E-05	3.79E-05	0
1.46	0.00101	0.00102	0.00104	0.00101	9.70E-04	9.11E-04	8.28E-04	7.11E-04	5.72E-04	4.16E-04	2.54E-04	1.01E-04	0
1.47	0.00244	0.00242	0.00241	0.00227	0.00211	0.00192	0.00168	0.0014	0.00109	7.64E-04	4.44E-04	1.68E-04	0
1.48	0.00401	0.00392	0.00384	0.00357	0.00327	0.00293	0.00253	0.00209	0.00166	6.32E-04	2.35E-04	6.32E-04	0
1.49	0.00575	0.00552	0.00532	0.00489	0.00443	0.00392	0.00336	0.00274	0.00208	8.04E-04	2.94E-04	2.94E-04	0
1.5	0.00764	0.00723	0.00683	0.00623	0.00558	0.00489	0.00415	0.00335	0.00252	9.48E-04	3.42E-04	3.42E-04	0
1.51	0.00967	0.00903	0.00839	0.00758	0.00673	0.00564	0.00489	0.00399	0.00299	0.00183	0.00107	3.79E-04	0
1.52	0.01183	0.01092	0.00998	0.00894	0.00787	0.00675	0.00559	0.00441	0.00324	0.00214	0.00117	4.10E-04	0
1.53	0.01406	0.01287	0.01162	0.01033	0.00901	0.00766	0.00628	0.0049	0.00357	0.00233	0.00126	4.36E-04	0
1.54	0.01631	0.01483	0.01327	0.01172	0.01013	0.00854	0.00694	0.00538	0.00386	0.00249	0.00132	4.49E-04	0
1.55	0.01852	0.01675	0.01488	0.01307	0.01123	0.00939	0.00756	0.00579	0.00412	0.00282	0.00137	4.54E-04	0
1.56	0.02063	0.01859	0.01641	0.01435	0.01227	0.01019	0.00814	0.00617	0.00434	0.00273	0.0014	4.53E-04	0
1.57	0.02258	0.02028	0.01784	0.01555	0.01323	0.01092	0.00868	0.00651	0.00453	0.00281	0.00142	4.50E-04	0
1.58	0.02434	0.02181	0.0191	0.0166	0.01408	0.01156	0.00912	0.00681	0.00471	0.00289	0.00144	4.47E-04	0
1.59	0.02587	0.02312	0.02016	0.01749	0.01479	0.01211	0.00951	0.00707	0.00486	0.00286	0.00146	4.46E-04	0
1.6	0.02712	0.02412	0.02099	0.01819	0.01535	0.01254	0.00983	0.00728	0.00499	0.00302	0.00148	4.47E-04	0
1.61	0.02803	0.02492	0.02158	0.01867	0.01574	0.01285	0.01005	0.00743	0.00499	0.00302	0.00148	4.46E-04	0
1.62	0.02853	0.02534	0.02191	0.01895	0.01596	0.01301	0.01016	0.00751	0.00512	0.00209	0.00115	4.43E-04	0
1.63	0.02859	0.0254	0.02196	0.01898	0.01598	0.01301	0.01016	0.00751	0.00512	0.00209	0.00115	4.43E-04	0
1.64	0.02821	0.02508	0.02171	0.01876	0.01578	0.01284	0.01015	0.00749	0.00509	0.00306	0.00148	4.33E-04	0
1.65	0.0274	0.02438	0.02114	0.01825	0.01534	0.01246	0.00968	0.00735	0.00498	0.00288	0.00142	4.10E-04	0
1.66	0.02617	0.0233	0.0202	0.01743	0.01463	0.01166	0.00919	0.0067	0.00449	0.00284	0.00134	3.77E-04	0
1.67	0.02464	0.02163	0.01891	0.01629	0.01364	0.01102	0.0085	0.00617	0.00446	0.00264	0.00123	3.36E-04	0
1.68	0.02252	0.01989	0.01726	0.01463	0.01237	0.00995	0.00764	0.00551	0.0041	0.00238	0.00109	2.89E-04	0
1.69	0.02012	0.01778	0.01526	0.01269	0.01066	0.00869	0.00683	0.00474	0.00311	0.00177	7.64E-04	1.94E-04	0
1.7	0.01735	0.01526	0.013	0.01107	0.00914	0.00726	0.00549	0.00389	0.00252	0.00141	6.07E-04	1.41E-04	0
1.71	0.0142	0.0124	0.01044	0.00863	0.00723	0.00568	0.00424	0.00286	0.0018	1.95E-04	1.95E-04	1.29E-05	0
1.72	0.01066	0.00923	0.00785	0.00641	0.00518	0.004	0.00291	0.00197	0.00118	5.86E-04	2.56E-04	-5.71E-05	0
1.73	0.00682	0.00579	0.00467	0.00383	0.00303	0.00221	0.00151	9.15E-04	4.94E-04	-3.24E-04	-2.56E-04	-1.28E-04	0
1.74	0.00289	0.00214	0.00153	0.00111	7.13E-04	3.45E-04	4.12E-05	-1.77E-04	-2.99E-04	-7.91E-04	-4.88E-04	-2.65E-04	0
1.75	-0.00164	-0.00168	-0.00176	-0.00172	-0.00167	-0.0016	-0.00148	-0.0013	-0.00107	-7.91E-04	-4.88E-04	-2.65E-04	0
1.76	-0.00607	-0.00562	-0.00515	-0.00485	-0.00414	-0.0036	-0.00304	-0.00245	-0.00185	-0.00126	-7.18E-04	-2.65E-04	0
1.77	-0.01056	-0.00962	-0.00883	-0.00766	-0.00666	-0.00565	-0.00464	-0.00363	-0.00285	-0.00174	-9.54E-04	-3.36E-04	0
1.78	-0.01507	-0.01365	-0.01216	-0.01071	-0.00923	-0.00775	-0.00628	-0.00484	-0.00348	-0.00225	-0.00121	-4.14E-04	0
1.79	-0.01958	-0.01769	-0.01615	-0.01478	-0.01323	-0.01184	-0.00998	-0.0081	-0.00635	-0.00379	-0.00177	-5.06E-04	0
1.8	-0.02405	-0.02171	-0.01923	-0.01723	-0.01584	-0.01424	-0.01145	-0.00875	-0.00623	-0.00457	-0.00239	-7.98E-04	0
1.81	-0.02846	-0.02568	-0.02272	-0.01986	-0.01746	-0.01446	-0.01132	-0.0081	-0.00514	-0.00268	-0.00094	-8.88E-04	0
1.82	-0.03275	-0.02954	-0.02685	-0.02367	-0.02021	-0.01684	-0.01374	-0.01039	-0.0078	-0.00567	-0.00294	-9.67E-04	0
1.83	-0.03687	-0.03328	-0.02946	-0.02593	-0.02245	-0.01854	-0.01481	-0.01145	-0.0081	-0.00514	-0.00268	-0.00094	0
1.84	-0.0408	-0.03685	-0.03265	-0.02867	-0.02463	-0.02057	-0.01654	-0.01282	-0.00985	-0.00567	-0.00294	-9.67E-04	0
1.85	-0.04451	-0.04022	-0.03566	-0.03132	-0.02697	-0.02245	-0.01803	-0.01374	-0.00985	-0.00567	-0.00294	-9.67E-04	0
1.86	-0.04601	-0.04338	-0.03846	-0.03376	-0.02897	-0.02415	-0.01936	-0.01473	-0.01086	-0.00655	-0.00338	-0.0011	0
1.87	-0.05127	-0.04629	-0.04069	-0.03431	-0.02763	-0.02268	-0.01714	-0.01282	-0.00985	-0.00655	-0.00338	-0.0011	0
1.88	-0.05423	-0.0489	-0.04269	-0.03594	-0.02937	-0.02415	-0.01936	-0.01473	-0.01086	-0.00655	-0.00338	-0.0011	0
1.89	-0.05884	-0.05115	-0.04509	-0.03841	-0.03236	-0.02688	-0.02147	-0.01627	-0.01143	-0.00716	-0.00366	-0.00118	0
1.9	-0.059	-0.053	-0.04659	-0.03941	-0.03364	-0.02786	-0.02221	-0.01714	-0.01187	-0.00744	-0.00377	-0.00119	0
1.91	-0.06066	-0.05439	-0.04769	-0.04154	-0.03464	-0.02853	-0.02275	-0.01714	-0.01187	-0.00744	-0.00377	-0.00119	0
1.92	-0.06174	-0.05527	-0.04835	-0.04206	-0.03532	-0.02913	-0.02308	-0.01733	-0.01206	-0.00746	-0.00376	-0.00118	0
1.93	-0.06219	-0.05561	-0.04855	-0.04218	-0.03575	-0.02937	-0.02314	-0.01727	-0.01204	-0.00741	-0.00371	-0.00116	0
1.94	-0.06195	-0.05538	-0.04828	-0.0419	-0.03546	-0.02907	-0.02287	-0.01703	-0.01173	-0.00717	-0.00355	-0.00109	0

1.95	-0.06108	-0.05455	-0.04752	-0.04412	-0.03483	-0.02852	-0.02224	-0.01685	-0.01145	-0.00688	-0.00345	-0.00105	0
1.96	-0.05995	-0.05311	-0.04624	-0.04007	-0.03365	-0.02769	-0.02173	-0.01614	-0.01108	-0.00674	-0.00332	-0.001	0
1.97	-0.05721	-0.05106	-0.04444	-0.03851	-0.03252	-0.02659	-0.02085	-0.01547	-0.10106	-0.00644	-0.00316	-0.00074	0
1.98	-0.05424	-0.0484	-0.04213	-0.0365	-0.03082	-0.02519	-0.01974	-0.01463	-0.01002	-0.00607	-0.00287	-0.00087	0
1.99	-0.05061	-0.04516	-0.0393	-0.03405	-0.02875	-0.02348	-0.01839	-0.01362	-0.00893	-0.00562	-0.00273	-0.00073	0
2	-0.04635	-0.04135	-0.03597	-0.03116	-0.0263	-0.02147	-0.01688	-0.01241	-0.00848	-0.00509	-0.00246	-0.00074	0
2.01	-0.04415	-0.03999	-0.03215	-0.02783	-0.02347	-0.01913	-0.01494	-0.01101	-0.00748	-0.00447	-0.00214	-0.00074	0
2.02	-0.03908	-0.03212	-0.02786	-0.02408	-0.02026	-0.01648	-0.01282	-0.0094	-0.00634	-0.00376	-0.00177	-0.00074	0
2.03	-0.03013	-0.02677	-0.02313	-0.01993	-0.01617	-0.01351	-0.01044	-0.0076	-0.00507	-0.00295	-0.00136	-0.00074	0
2.04	-0.02372	-0.02096	-0.01801	-0.01543	-0.01264	-0.01039	-0.00766	-0.00563	-0.00388	-0.00209	-0.00136	-0.00074	0
2.05	-0.0169	-0.01482	-0.01255	-0.01064	-0.00873	-0.00686	-0.00512	-0.00356	-0.00225	-0.00121	-0.00074	-0.00074	0
2.06	-0.00874	-0.00636	-0.00463	-0.00363	-0.00244	-0.00144	-0.00074	-0.00045	-0.00023	-0.00014	-0.00005	-0.00005	0
2.07	-0.00231	-0.00165	-0.00094	-0.00044	-0.00026	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0
2.08	0.00535	0.00523	0.00514	0.00477	0.00436	0.0039	0.00337	0.00277	0.00212	0.00146	0.00074	0.00004	0
2.09	0.01317	0.0122	0.01118	0.00998	0.00875	0.00748	0.00616	0.00483	0.00352	0.0023	0.00124	0.00004	0
2.1	0.02104	0.01914	0.01715	0.01513	0.01306	0.01096	0.00887	0.00681	0.00486	0.0031	0.00162	0.00004	0
2.11	0.0288	0.02597	0.02298	0.02013	0.01724	0.01433	0.01147	0.00871	0.00613	0.00385	0.00198	0.00004	0
2.12	0.0363	0.03258	0.02861	0.02465	0.02125	0.01756	0.01395	0.01051	0.00734	0.00456	0.00231	0.00004	0
2.13	0.04341	0.03885	0.03395	0.02953	0.02507	0.02062	0.0163	0.0122	0.00847	0.00522	0.00262	0.00004	0
2.14	0.05001	0.04467	0.03895	0.03382	0.02863	0.02349	0.0185	0.0138	0.00953	0.00584	0.00281	0.00004	0
2.15	0.056	0.04998	0.04352	0.03774	0.03191	0.02613	0.02054	0.01528	0.01051	0.00641	0.00281	0.00004	0
2.16	0.06128	0.05468	0.0476	0.04126	0.03486	0.02852	0.02239	0.01683	0.01142	0.00685	0.00281	0.00004	0
2.17	0.06579	0.05872	0.05113	0.04431	0.03743	0.03061	0.02402	0.01763	0.01223	0.00744	0.00366	0.00111	0
2.18	0.06948	0.06203	0.05405	0.04695	0.03958	0.03237	0.0254	0.01886	0.01351	0.00821	0.00403	0.00111	0
2.19	0.07231	0.06458	0.0563	0.04882	0.04126	0.03377	0.02651	0.01968	0.01381	0.00845	0.00415	0.00125	0
2.2	0.07428	0.06635	0.05798	0.05019	0.04244	0.03475	0.02729	0.02027	0.01414	0.00859	0.00422	0.00127	0
2.21	0.0753	0.06729	0.0587	0.05093	0.04309	0.03528	0.02773	0.0206	0.01414	0.00864	0.00426	0.00129	0
2.22	0.07548	0.06745	0.05884	0.05107	0.04322	0.03541	0.02783	0.02069	0.01421	0.00864	0.00426	0.00129	0
2.23	0.07478	0.06685	0.05833	0.05063	0.04286	0.03513	0.02763	0.02056	0.01415	0.00863	0.00427	0.0013	0
2.24	0.0733	0.06553	0.05718	0.04965	0.04204	0.03448	0.02715	0.02024	0.01396	0.00855	0.00425	0.0013	0
2.25	0.07105	0.06352	0.05544	0.04816	0.04081	0.03351	0.02643	0.01974	0.01365	0.00838	0.00418	0.00129	0
2.26	0.06807	0.06098	0.05317	0.04623	0.03922	0.03225	0.02548	0.01907	0.01322	0.00814	0.00408	0.00127	0
2.27	0.0644	0.05786	0.05044	0.04391	0.0373	0.03073	0.02432	0.01824	0.01267	0.00783	0.00384	0.00123	0
2.28	0.06014	0.05395	0.04731	0.04124	0.03509	0.02896	0.02297	0.01727	0.01203	0.00746	0.00377	0.00119	0
2.29	0.05543	0.04982	0.04382	0.03826	0.03262	0.02698	0.02145	0.01616	0.0113	0.00703	0.00357	0.00114	0
2.3	0.05038	0.04537	0.04002	0.035	0.02991	0.0248	0.01977	0.01495	0.01049	0.00656	0.00335	0.00108	0
2.31	0.04509	0.04068	0.03598	0.03152	0.027	0.02245	0.01797	0.01364	0.00962	0.00605	0.00311	0.00101	0
2.32	0.03963	0.03582	0.03176	0.02788	0.02394	0.01966	0.01605	0.01225	0.00868	0.0055	0.00286	0.00101	0
2.33	0.03408	0.03086	0.02744	0.02414	0.02079	0.01742	0.01406	0.01078	0.0077	0.00491	0.00258	0.00101	0
2.34	0.02849	0.02588	0.02208	0.02037	0.0176	0.01481	0.01202	0.00927	0.00687	0.0043	0.00228	0.00101	0
2.35	0.02295	0.02091	0.01875	0.01661	0.01442	0.0122	0.00986	0.00775	0.00562	0.00365	0.00197	0.00101	0
2.36	0.01753	0.01606	0.01449	0.01291	0.01129	0.00963	0.00794	0.00623	0.00457	0.00301	0.00165	0.00101	0
2.37	0.01231	0.01137	0.01039	0.00927	0.00825	0.00714	0.00597	0.00477	0.00356	0.00239	0.00134	0.00101	0
2.38	0.00734	0.00692	0.00649	0.00595	0.00539	0.00478	0.00411	0.00338	0.00261	0.00182	0.00106	0.00101	0
2.39	0.00287	0.00273	0.00283	0.00276	0.00256	0.00236	0.00208	0.00172	0.00128	0.00074	0.00034	0.00034	0
2.4	-0.00177	-0.00125	-0.00125	-0.00125	-0.00125	-0.00125	-0.00125	-0.00125	-0.00125	-0.00125	-0.00125	-0.00125	0
2.41	-0.00605	-0.00512	-0.00408	-0.00329	-0.00251	-0.00178	-0.00115	-0.00074	-0.00042	-0.00026	-0.00016	-0.00016	0
2.42	-0.01025	-0.00894	-0.00748	-0.00619	-0.00519	-0.00412	-0.00315	-0.00231	-0.0016	-0.00103	-0.00065	-0.00065	0
2.43	-0.01441	-0.01276	-0.01095	-0.0095	-0.00807	-0.00687	-0.00581	-0.0048	-0.00398	-0.00308	-0.0022	-0.0022	0
2.44	-0.01845	-0.01654	-0.01453	-0.01284	-0.01116	-0.00949	-0.00783	-0.0062	-0.0046	-0.00308	-0.0022	-0.0022	0
2.45	-0.02332	-0.02032	-0.01827	-0.01634	-0.01437	-0.01237	-0.103	-0.00818	-0.00605	-0.00401	-0.0022	-0.0022	0
2.46	-0.02612	-0.02415	-0.02214	-0.01993	-0.01762	-0.01528	-0.01285	-0.01001	-0.00736	-0.00484	-0.00262	-0.00262	0
2.47	-0.03008	-0.02809	-0.02608	-0.02346	-0.02175	-0.01966	-0.01786	-0.0164	-0.00951	-0.00556	-0.00289	-0.00289	0
2.48	-0.03441	-0.03217	-0.02989	-0.02683	-0.02561	-0.02322	-0.01968	-0.01505	-0.00948	-0.00514	-0.00237	-0.00237	0

2.49	-0.03918	-0.03838	-0.03349	-0.02989	-0.02815	-0.02226	-0.01824	-0.01419	-0.01025	-0.00666	-0.00348	-0.00117	0
2.5	-0.04422	-0.04059	-0.03682	-0.03263	-0.02834	-0.02394	-0.01948	-0.01505	-0.01079	-0.00669	-0.00362	-0.0012	0
2.51	-0.04924	-0.04467	-0.03988	-0.03508	-0.03021	-0.02553	-0.02041	-0.01563	-0.01112	-0.00705	-0.00366	-0.0012	0
2.52	-0.05392	-0.04645	-0.04264	-0.03726	-0.03182	-0.02639	-0.02107	-0.01597	-0.01124	-0.00704	-0.00361	-0.00116	0
2.53	-0.05802	-0.05178	-0.04508	-0.03815	-0.03316	-0.02727	-0.02154	-0.01613	-0.01119	-0.00691	-0.00348	-0.00109	0
2.54	-0.06143	-0.05456	-0.04715	-0.04077	-0.03435	-0.02801	-0.02192	-0.01623	-0.01112	-0.00677	-0.00335	-0.00103	0
2.55	-0.06406	-0.05675	-0.04866	-0.04211	-0.03534	-0.02868	-0.0223	-0.01639	-0.01115	-0.00673	-0.0033	-9.94E-04	0
2.56	-0.06538	-0.05833	-0.05017	-0.04519	-0.03816	-0.02931	-0.02276	-0.0167	-0.01135	-0.00684	-0.00335	-0.00101	0
2.57	-0.06691	-0.05931	-0.05109	-0.044	-0.03691	-0.02966	-0.02333	-0.01719	-0.01174	-0.00714	-0.00353	-0.00108	0
2.58	-0.06716	-0.05969	-0.05163	-0.0446	-0.03755	-0.03064	-0.02401	-0.01784	-0.01231	-0.00757	-0.00368	-0.00119	0
2.59	-0.06872	-0.05955	-0.05184	-0.04469	-0.03812	-0.03133	-0.02478	-0.0186	-0.01297	-0.00808	-0.00412	-0.00132	0
2.6	-0.06572	-0.05899	-0.05177	-0.04523	-0.03861	-0.03202	-0.02568	-0.01838	-0.01367	-0.00861	-0.00445	-0.00146	0
2.61	-0.06436	-0.05813	-0.05115	-0.0453	-0.03869	-0.03262	-0.02629	-0.01832	-0.01432	-0.00912	-0.00477	-0.00158	0
2.62	-0.06281	-0.05711	-0.05108	-0.04521	-0.03919	-0.03304	-0.02684	-0.02072	-0.01486	-0.00953	-0.00502	-0.00166	0
2.63	-0.06125	-0.05602	-0.05054	-0.04483	-0.03914	-0.0332	-0.02713	-0.02106	-0.0152	-0.00979	-0.00519	-0.00175	0
2.64	-0.05982	-0.05496	-0.04988	-0.04444	-0.03882	-0.03302	-0.02707	-0.02109	-0.01527	-0.00988	-0.00525	-0.00178	0
2.65	-0.05866	-0.05393	-0.04907	-0.04371	-0.03816	-0.03248	-0.02684	-0.02076	-0.01505	-0.00975	-0.00519	-0.00176	0
2.66	-0.05761	-0.05294	-0.04809	-0.04274	-0.03723	-0.03158	-0.02583	-0.02006	-0.01452	-0.00938	-0.00498	-0.00168	0
2.67	-0.05678	-0.05195	-0.04689	-0.0415	-0.03596	-0.03037	-0.0247	-0.01908	-0.01371	-0.00879	-0.00463	-0.00155	0
2.68	-0.05598	-0.05087	-0.04546	-0.04002	-0.03448	-0.02888	-0.02329	-0.01784	-0.01289	-0.00806	-0.00442	-0.00138	0
2.69	-0.05504	-0.0496	-0.0438	-0.03832	-0.03276	-0.02719	-0.0217	-0.01644	-0.01156	-0.00725	-0.00372	-0.0012	0
2.7	-0.05378	-0.04805	-0.04189	-0.0364	-0.03068	-0.02537	-0.02003	-0.01489	-0.01041	-0.00644	-0.00325	-0.00103	0
2.71	-0.05201	-0.04612	-0.03974	-0.03431	-0.02866	-0.0235	-0.01836	-0.01356	-0.00931	-0.00568	-0.00282	-3.71E-04	0
2.72	-0.0496	-0.04371	-0.03733	-0.03206	-0.02678	-0.02164	-0.01676	-0.01228	-0.00833	-0.00502	-0.00246	-7.96E-04	0
2.73	-0.04644	-0.0408	-0.03467	-0.02967	-0.02468	-0.01984	-0.01528	-0.01113	-0.00749	-0.00447	-0.00216	-6.39E-04	0
2.74	-0.04256	-0.03739	-0.03175	-0.02715	-0.02256	-0.01811	-0.01392	-0.01011	-0.00679	-0.00404	-0.00195	-5.70E-04	0
2.75	-0.03903	-0.03395	-0.02857	-0.02448	-0.0204	-0.01642	-0.01286	-0.00822	-0.00621	-0.00371	-0.00179	-5.26E-04	0
2.76	-0.033	-0.02923	-0.02513	-0.02166	-0.01817	-0.01474	-0.01146	-0.00842	-0.00526	-0.00322	-0.0016	-4.92E-04	0
2.77	-0.02764	-0.02468	-0.02146	-0.01887	-0.01583	-0.013	-0.01024	-0.00763	-0.00526	-0.00344	-0.00168	-5.01E-04	0
2.78	-0.02212	-0.01987	-0.01785	-0.01553	-0.01337	-0.01116	-0.00896	-0.00681	-0.0048	-0.00301	-0.00154	-4.94E-04	0
2.79	-0.01659	-0.01521	-0.01375	-0.0123	-0.01078	-0.0092	-0.00756	-0.0059	-0.00427	-0.00276	-0.00146	-4.92E-04	0
2.8	-0.01115	-0.0105	-0.00983	-0.00899	-0.00808	-0.0071	-0.00601	-0.00484	-0.00362	-0.00242	-0.00133	-4.67E-04	0
2.81	-0.00591	-0.0059	-0.00595	-0.00565	-0.00531	-0.00487	-0.00431	-0.00381	-0.00281	-0.00194	-0.00111	-4.07E-04	0
2.82	-9.39E-04	-0.00148	-0.00213	-0.00232	-0.00247	-0.00253	-0.00245	-0.00221	-0.00182	-0.00133	-7.95E-04	-3.06E-04	0
2.83	0.00371	0.00271	0.00158	0.00057	9.86E-04	-9.42E-05	-4.52E-04	-6.54E-04	-6.96E-04	-6.00E-04	-4.07E-04	-1.77E-04	0
2.84	0.008	0.00666	0.00517	0.0042	0.00326	0.00239	0.00162	9.99E-04	5.25E-04	2.05E-04	2.78E-05	-2.68E-05	0
2.85	0.01192	0.01035	0.00864	0.00736	0.00609	0.00467	0.00372	0.00268	0.00177	0.00103	4.75E-04	1.28E-04	0
2.86	0.0155	0.0138	0.01197	0.01042	0.00884	0.00728	0.00575	0.00431	0.00298	0.00183	9.95E-04	2.78E-04	0
2.87	0.01884	0.01705	0.01513	0.01331	0.01145	0.00955	0.00766	0.00582	0.00409	0.00255	0.00129	4.08E-04	0
2.88	0.02204	0.02011	0.01809	0.016	0.01383	0.01161	0.00937	0.00716	0.00507	0.00318	0.00162	5.18E-04	0
2.89	0.02623	0.02362	0.02062	0.01842	0.01595	0.01341	0.01084	0.0083	0.00588	0.0037	0.00189	6.07E-04	0
2.9	0.03125	0.02846	0.02553	0.02248	0.01936	0.01619	0.01206	0.00922	0.00653	0.00411	0.00211	6.82E-04	0
2.92	0.03415	0.03092	0.02753	0.02413	0.02069	0.01723	0.01381	0.00995	0.00704	0.00444	0.00228	7.39E-04	0
2.93	0.03862	0.03516	0.03082	0.02683	0.02281	0.01882	0.01443	0.01082	0.00767	0.00481	0.00246	7.92E-04	0
2.94	0.03918	0.03513	0.03082	0.02683	0.02281	0.01882	0.01443	0.01082	0.00767	0.00481	0.00246	7.92E-04	0
2.95	0.04116	0.0368	0.03215	0.02792	0.02367	0.01946	0.01538	0.01124	0.00766	0.00489	0.00249	7.95E-04	0
2.96	0.04272	0.03816	0.03326	0.02866	0.02443	0.02004	0.0158	0.01181	0.00816	0.00506	0.00255	8.05E-04	0
2.97	0.04389	0.0392	0.03416	0.02964	0.02509	0.02058	0.01622	0.01212	0.0084	0.00519	0.00262	8.27E-04	0
2.98	0.04467	0.03992	0.03462	0.03024	0.02563	0.02106	0.01663	0.01245	0.00665	0.00535	0.0027	8.59E-04	0
2.99	0.04503	0.0403	0.03521	0.03065	0.02604	0.02146	0.017	0.01277	0.00689	0.00551	0.00279	8.89E-04	0
3	0.045	0.04034	0.03535	0.03084	0.02627	0.02172	0.01726	0.01301	0.00909	0.00566	0.00287	9.13E-04	0
3.01	0.0446	0.04007	0.03522	0.0306	0.02631	0.02182	0.01736	0.01314	0.00921	0.00575	0.00293	9.34E-04	0
3.02	0.04386	0.0395	0.03483	0.03051	0.02612	0.0217	0.01734	0.01314	0.00923	0.00577	0.00294	9.39E-04	0

3.03	0.04285	0.03885	0.05415	0.02568	0.02136	0.01709	0.01296	0.00911	0.00589	0.00329	9.28E-04
3.04	0.04162	0.03755	0.05321	0.02498	0.02079	0.01663	0.01262	0.00867	0.00555	0.00284	9.10E-04
3.05	0.04017	0.03623	0.05203	0.02405	0.02001	0.016	0.01214	0.00854	0.00535	0.00274	8.83E-04
3.06	0.03852	0.03471	0.05064	0.02282	0.01905	0.01522	0.01155	0.00813	0.0051	0.00262	8.47E-04
3.07	0.03686	0.03398	0.02905	0.02168	0.01798	0.01435	0.01087	0.00765	0.00481	0.00247	8.01E-04
3.08	0.03458	0.03106	0.02729	0.02031	0.01708	0.0134	0.01014	0.00713	0.00447	0.0023	7.48E-04
3.09	0.03227	0.02895	0.02542	0.01888	0.01561	0.01242	0.00939	0.00659	0.00413	0.00212	6.87E-04
3.1	0.02975	0.0267	0.02344	0.0174	0.01439	0.01144	0.00864	0.00606	0.0038	0.00196	6.36E-04
3.11	0.02709	0.02434	0.02139	0.01687	0.01317	0.01049	0.00793	0.00558	0.00351	0.00182	5.94E-04
3.12	0.02434	0.02191	0.0193	0.01688	0.01198	0.00958	0.00727	0.00514	0.00326	0.0017	5.64E-04
3.13	0.02155	0.01945	0.0172	0.01509	0.01082	0.00871	0.00667	0.00476	0.00305	0.00161	5.41E-04
3.14	0.01875	0.01698	0.0151	0.01296	0.00969	0.00787	0.00609	0.00439	0.00284	0.00151	5.16E-04
3.15	0.01595	0.01453	0.01302	0.01156	0.00856	0.00702	0.00548	0.00398	0.0026	0.0014	4.81E-04
3.16	0.0132	0.01211	0.01086	0.00982	0.0074	0.00612	0.00462	0.00353	0.00231	0.00125	4.33E-04
3.17	0.01053	0.00976	0.00894	0.00717	0.0062	0.00516	0.00409	0.00301	0.00198	0.00107	3.73E-04
3.18	0.008	0.00749	0.00695	0.00632	0.00492	0.00413	0.00329	0.00243	0.0016	8.70E-04	
3.19	0.00562	0.0053	0.00496	0.00409	0.00358	0.00302	0.00241	0.00179	0.00118	6.43E-04	
3.2	0.00337	0.00318	0.00297	0.00247	0.00217	0.00184	0.00148	0.0011	7.26E-04	3.94E-04	1.37E-04
3.21	0.00119	0.0011	9.87E-04	8.21E-04	7.28E-04	6.18E-04	4.98E-04	3.71E-04	2.48E-04	1.33E-04	4.63E-05
3.22	-9.59E-04	-9.41E-04	-9.58E-04	-7.97E-04	-6.98E-04	-5.87E-04	-4.68E-04	-3.39E-04	-2.14E-04	-1.06E-04	-3.15E-05
3.23	-0.00307	-0.00294	-0.00283	-0.00233	-0.00204	-0.00171	-0.00135	-9.73E-04	-6.14E-04	-3.09E-04	-9.53E-05
3.24	-0.00516	-0.00488	-0.00461	-0.00418	-0.00372	-0.00327	-0.0028	-0.00249	-9.35E-04	-4.98E-04	-1.44E-04
3.25	-0.00722	-0.00673	-0.00626	-0.00561	-0.00492	-0.00433	-0.00384	-0.0033	-0.0028	-0.00116	-5.71E-04
3.26	-0.0092	-0.00847	-0.00772	-0.00693	-0.0062	-0.00548	-0.0048	-0.00428	-0.0036	-0.0025	-5.76E-04
3.27	-0.0111	-0.01005	-0.00924	-0.0083	-0.0075	-0.0067	-0.00594	-0.0052	-0.0044	-0.0035	-1.73E-04
3.28	-0.01284	-0.01143	-0.00982	-0.00892	-0.00815	-0.00715	-0.00642	-0.00568	-0.0049	-0.0041	-1.54E-04
3.29	-0.01436	-0.0128	-0.0107	-0.00954	-0.00866	-0.00775	-0.00696	-0.0061	-0.0053	-0.0045	-1.19E-04
3.3	-0.01557	-0.01352	-0.01129	-0.00983	-0.0091	-0.0081	-0.0073	-0.0065	-0.0057	-0.0049	-8.86E-04
3.31	-0.01641	-0.01417	-0.01171	-0.00983	-0.0091	-0.0081	-0.0073	-0.0065	-0.0057	-0.0049	-1.16E-04
3.32	-0.01684	-0.01453	-0.01201	-0.0101	-0.00922	-0.00822	-0.0074	-0.0066	-0.0058	-0.005	-1.29E-04
3.33	-0.01686	-0.01464	-0.01224	-0.01036	-0.0093	-0.0083	-0.0075	-0.0067	-0.0059	-0.0051	-1.56E-04
3.34	-0.01656	-0.01457	-0.01243	-0.01066	-0.00969	-0.00869	-0.0078	-0.007	-0.0062	-0.0054	-2.02E-04
3.35	-0.01608	-0.01441	-0.01261	-0.01088	-0.0098	-0.0088	-0.008	-0.0072	-0.0064	-0.0056	-2.71E-04
3.36	-0.01581	-0.01425	-0.01281	-0.01133	-0.00982	-0.00882	-0.008	-0.0072	-0.0064	-0.0056	-3.60E-04
3.37	-0.01527	-0.01418	-0.01306	-0.01172	-0.01034	-0.00891	-0.00741	-0.0064	-0.0056	-0.0048	-4.63E-04
3.38	-0.01514	-0.01425	-0.01335	-0.01214	-0.01066	-0.0096	-0.0088	-0.008	-0.0072	-0.0064	-5.65E-04
3.39	-0.01525	-0.01446	-0.0137	-0.01255	-0.01132	-0.00988	-0.00864	-0.0074	-0.0064	-0.0056	-6.43E-04
3.4	-0.01561	-0.01483	-0.01409	-0.01324	-0.01189	-0.0103	-0.00878	-0.0073	-0.0064	-0.0056	-6.87E-04
3.41	-0.01621	-0.01535	-0.01451	-0.01344	-0.01204	-0.0104	-0.00878	-0.0073	-0.0064	-0.0056	-6.91E-04
3.42	-0.01703	-0.01597	-0.01488	-0.01344	-0.01191	-0.01028	-0.00864	-0.0074	-0.0064	-0.0056	-8.45E-04
3.43	-0.01802	-0.01682	-0.01513	-0.01347	-0.01173	-0.00983	-0.00809	-0.00625	-0.00447	-0.00284	-4.83E-04
3.44	-0.01803	-0.01718	-0.01522	-0.01331	-0.01136	-0.0094	-0.00746	-0.00561	-0.0039	-0.0024	-3.88E-04
3.45	-0.01985	-0.01757	-0.0151	-0.01298	-0.01082	-0.00872	-0.00689	-0.00489	-0.00327	-0.00192	-9.01E-04
3.46	-0.02035	-0.0177	-0.0148	-0.01249	-0.0102	-0.008	-0.00597	-0.00418	-0.0026	-0.00149	-2.51E-04
3.47	-0.02039	-0.01751	-0.01432	-0.01192	-0.00956	-0.00733	-0.00532	-0.0036	-0.00221	-0.00116	-1.81E-04
3.48	-0.01992	-0.01696	-0.01367	-0.01129	-0.00897	-0.0073	-0.00532	-0.0036	-0.00221	-0.00116	-1.02E-04
3.49	-0.01803	-0.01607	-0.01289	-0.01066	-0.00848	-0.00644	-0.00462	-0.00309	-0.00188	-0.0009	-7.31E-05
3.5	-0.01744	-0.01488	-0.01205	-0.01006	-0.00812	-0.00628	-0.00462	-0.00319	-0.00202	-0.00113	-5.01E-05
3.51	-0.01555	-0.01348	-0.01121	-0.00953	-0.00788	-0.0063	-0.00482	-0.00319	-0.00236	-0.00142	-1.33E-04
3.52	-0.01345	-0.012	-0.01041	-0.0091	-0.00777	-0.00645	-0.00517	-0.00385	-0.00236	-0.00182	-7.09E-04
3.53	-0.01139	-0.01057	-0.00869	-0.00773	-0.00689	-0.0056	-0.00447	-0.00334	-0.00224	-0.00125	-3.34E-04
3.54	-0.00954	-0.00827	-0.00692	-0.0064	-0.00571	-0.00495	-0.00409	-0.00379	-0.0026	-0.00147	-5.40E-04
3.55	-0.00806	-0.00689	-0.00543	-0.00487	-0.00407	-0.00325	-0.00259	-0.00161	-0.00082	-0.00047	-5.91E-04
3.56	-0.00702	-0.0074	-0.00762	-0.00773	-0.00743	-0.00625	-0.00529	-0.00406	-0.00282	-0.00164	-6.04E-04

4.11	0.01257	0.01188	0.01119	0.0102	0.00813	0.00797	0.00669	0.00533	0.00394	0.00259	0.00139	4.79E-04	C
4.12	0.01195	0.01085	0.00958	0.00852	0.00658	0.00754	0.00639	0.00513	0.00382	0.00253	0.00138	4.82E-04	C
4.13	0.01037	0.00984	0.00855	0.00875	0.00789	0.00694	0.00589	0.00474	0.00354	0.00238	0.0013	4.57E-04	C
4.14	0.00981	0.00914	0.0087	0.00792	0.00709	0.00623	0.00523	0.0042	0.00313	0.00209	0.00115	4.06E-04	0
4.15	0.00903	0.00844	0.00785	0.00706	0.00624	0.00538	0.00448	0.00356	0.00263	0.00174	9.52E-04	3.95E-04	0
4.16	0.00852	0.00778	0.00703	0.0062	0.00537	0.00453	0.0037	0.00287	0.00208	0.00135	7.30E-04	2.52E-04	0
4.17	0.00901	0.00714	0.00624	0.00539	0.00455	0.00373	0.00294	0.00221	0.00155	9.84E-04	5.17E-04	1.74E-04	0
4.18	0.00743	0.00665	0.00565	0.00464	0.0038	0.00301	0.00229	0.00165	0.00111	6.75E-04	3.44E-04	1.11E-04	0
4.19	0.00677	0.00583	0.0048	0.00388	0.00318	0.00243	0.00178	0.00123	7.89E-04	4.83E-04	2.29E-04	7.22E-05	0
4.2	0.00602	0.00513	0.00416	0.00341	0.00289	0.00203	0.00146	9.87E-04	6.25E-04	3.85E-04	1.83E-04	5.87E-05	0
4.21	0.00519	0.00443	0.00359	0.00296	0.00236	0.00181	0.00133	9.37E-04	6.24E-04	3.89E-04	2.10E-04	7.50E-05	0
4.22	0.00434	0.00376	0.00312	0.00265	0.0022	0.00178	0.0014	0.00108	7.72E-04	5.22E-04	3.04E-04	1.18E-04	0
4.23	0.00353	0.00317	0.00278	0.0025	0.00221	0.00193	0.00164	0.00134	0.00104	7.48E-04	4.52E-04	1.80E-04	0
4.24	0.00284	0.00273	0.00261	0.0025	0.00238	0.00222	0.00201	0.00173	0.0014	0.00103	6.31E-04	2.54E-04	0
4.25	0.00236	0.00249	0.00265	0.00288	0.00289	0.00262	0.00248	0.00218	0.0018	0.00133	8.18E-04	3.28E-04	0
4.26	0.00218	0.00205	0.00209	0.00208	0.00209	0.00208	0.00208	0.00208	0.00208	0.00208	8.18E-04	3.28E-04	0
4.27	0.00233	0.00278	0.00332	0.00347	0.00366	0.00364	0.00368	0.00362	0.00217	0.0016	9.71E-04	3.84E-04	0
4.28	0.00286	0.00334	0.00393	0.00402	0.00404	0.00395	0.00388	0.00389	0.00281	0.00188	0.00111	4.29E-04	0
4.29	0.00378	0.00417	0.00468	0.00463	0.00451	0.00427	0.00389	0.00384	0.00285	0.00188	0.00109	4.14E-04	0
4.3	0.00507	0.00525	0.00552	0.00525	0.00492	0.00451	0.00397	0.00332	0.00257	0.00178	0.00102	3.76E-04	0
4.31	0.00686	0.00665	0.00638	0.00585	0.00528	0.00466	0.00396	0.0032	0.00241	0.00162	8.88E-04	3.21E-04	0
4.32	0.00644	0.00784	0.00724	0.00643	0.0056	0.00475	0.00388	0.00302	0.00218	0.00141	7.53E-04	2.56E-04	0
4.33	0.01023	0.00917	0.00807	0.00698	0.00598	0.00481	0.00378	0.00282	0.00195	0.0012	6.04E-04	1.90E-04	0
4.34	0.01187	0.0104	0.00884	0.00749	0.00616	0.00488	0.0037	0.00284	0.00174	0.00101	4.70E-04	1.30E-04	0
4.35	0.01324	0.01145	0.00951	0.00796	0.00667	0.00513	0.00371	0.00249	0.00151	8.65E-04	3.66E-04	8.28E-05	0
4.36	0.01423	0.01223	0.01045	0.00868	0.00695	0.00531	0.00383	0.00255	0.00153	7.74E-04	3.01E-04	5.07E-05	0
4.37	0.01481	0.01272	0.01045	0.00868	0.00695	0.00531	0.00383	0.00255	0.00153	7.74E-04	3.01E-04	5.07E-05	0
4.38	0.01497	0.01291	0.01065	0.00886	0.00716	0.00551	0.00404	0.0027	0.00163	8.37E-04	3.11E-04	4.56E-05	0
4.39	0.01473	0.01278	0.01064	0.00886	0.00729	0.00568	0.00419	0.00289	0.0018	9.55E-04	3.79E-04	7.06E-05	0
4.4	0.01414	0.01236	0.01043	0.00887	0.00731	0.00579	0.00436	0.00308	0.00198	0.0011	4.86E-04	1.05E-04	0
4.41	0.01324	0.01169	0.01	0.0086	0.00719	0.00579	0.00436	0.00308	0.00198	0.0011	4.86E-04	1.05E-04	0
4.42	0.01213	0.01082	0.00938	0.00816	0.00692	0.00567	0.00445	0.00322	0.00213	0.00123	5.53E-04	1.42E-04	0
4.43	0.01088	0.0098	0.00863	0.00759	0.00652	0.00542	0.00433	0.00327	0.00228	0.00133	6.37E-04	1.83E-04	0
4.44	0.00955	0.00869	0.00777	0.00689	0.00599	0.00505	0.0041	0.00315	0.00225	0.00142	7.03E-04	2.17E-04	0
4.45	0.0082	0.00753	0.00684	0.00611	0.00536	0.00457	0.00376	0.00294	0.00213	0.00137	7.25E-04	2.38E-04	0
4.46	0.00686	0.00636	0.00586	0.00527	0.00465	0.00401	0.00333	0.00263	0.00193	0.00126	7.25E-04	2.42E-04	0
4.47	0.00534	0.0052	0.00437	0.00347	0.00307	0.00285	0.00221	0.00175	0.00117	8.35E-04	5.95E-04	2.02E-04	0
4.48	0.00425	0.00404	0.00389	0.00385	0.00347	0.00295	0.00221	0.00175	0.00117	8.35E-04	5.95E-04	2.02E-04	0
4.49	0.00298	0.00286	0.00276	0.00276	0.00247	0.00217	0.00152	0.00117	8.35E-04	5.20E-04	2.59E-04	7.89E-05	0
4.5	0.00172	0.00165	0.0016	0.00139	0.00118	9.65E-04	7.29E-04	5.11E-04	3.13E-04	1.52E-04	4.42E-05	-2.49E-06	0
4.51	4.19E-04	3.74E-04	3.50E-04	2.19E-04	8.69E-05	-3.83E-05	-1.45E-04	-2.18E-04	-2.53E-04	-2.42E-04	-1.83E-04	-8.80E-05	0
4.52	-9.68E-04	-9.82E-04	-0.00103	-0.00107	-0.00111	-0.00112	-0.00109	-9.95E-04	-8.47E-04	-6.48E-04	-4.12E-04	-1.71E-04	0
4.53	-0.00248	-0.0025	-0.00255	-0.00249	-0.0024	-0.00227	-0.00208	-0.0018	-0.00146	-0.00106	-8.41E-04	-2.54E-04	0
4.54	-0.0042	-0.0042	-0.00424	-0.00403	-0.00379	-0.00349	-0.0031	-0.00283	-0.00207	-0.00147	-8.72E-04	-3.39E-04	0
4.55	-0.0062	-0.00611	-0.00608	-0.00588	-0.00525	-0.00475	-0.00415	-0.00346	-0.00289	-0.00189	-0.0011	-4.18E-04	0
4.56	-0.00853	-0.00827	-0.00807	-0.00745	-0.00679	-0.00606	-0.00533	-0.0044	-0.00331	-0.00229	-0.00132	-4.95E-04	0
4.57	-0.01119	-0.01067	-0.01021	-0.00933	-0.00879	-0.00806	-0.00741	-0.00632	-0.00515	-0.00391	-0.00268	-5.62E-04	0
4.58	-0.01412	-0.01328	-0.01246	-0.01128	-0.01005	-0.00877	-0.0074	-0.00595	-0.00447	-0.00301	-0.00168	-8.06E-04	0
4.59	-0.01722	-0.01601	-0.01479	-0.01246	-0.01105	-0.00933	-0.00741	-0.00595	-0.00447	-0.00301	-0.00168	-8.06E-04	0
4.6	-0.02042	-0.01879	-0.01713	-0.01525	-0.01333	-0.01171	-0.01009	-0.00866	-0.00686	-0.00492	-0.00326	-6.24E-04	0
4.61	-0.02363	-0.02157	-0.01843	-0.01717	-0.01485	-0.01248	-0.0101	-0.00776	-0.00527	-0.00342	-0.00183	-6.24E-04	0
4.62	-0.02679	-0.02427	-0.01894	-0.01717	-0.01485	-0.01248	-0.0101	-0.00776	-0.00527	-0.00342	-0.00183	-6.24E-04	0
4.63	-0.02861	-0.02629	-0.02356	-0.02051	-0.01742	-0.01434	-0.01078	-0.00816	-0.00554	-0.00353	-0.00184	-6.08E-04	0
4.64	-0.03255	-0.02902	-0.02524	-0.02185	-0.01843	-0.01504	-0.01178	-0.00848	-0.00587	-0.00361	-0.00177	-5.30E-04	0

4.65	-0.03484	-0.03087	-0.0266	-0.02292	-0.01922	-0.01559	-0.01211	-0.00888	-0.00601	-0.00359	-0.00173	-0.01111	-5.01E-04	0
4.66	-0.03654	-0.03225	-0.0276	-0.0237	-0.0198	-0.01597	-0.01233	-0.00898	-0.00602	-0.00356	-0.00168	-0.01233	-4.72E-04	0
4.67	-0.03758	-0.03309	-0.02822	-0.02419	-0.02015	-0.01619	-0.01244	-0.00901	-0.00606	-0.00351	-0.00164	-0.01244	-4.52E-04	0
4.68	-0.03795	-0.03341	-0.02848	-0.02441	-0.02031	-0.0163	-0.0125	-0.00903	-0.006	-0.00352	-0.00165	-0.0125	-4.63E-04	0
4.69	-0.03774	-0.03327	-0.02842	-0.02438	-0.02032	-0.01635	-0.01258	-0.00913	-0.00612	-0.00363	-0.00174	-0.01258	-5.05E-04	0
4.7	-0.03702	-0.03274	-0.0281	-0.02417	-0.02023	-0.01638	-0.01271	-0.00934	-0.00635	-0.00384	-0.00189	-0.01271	-5.76E-04	0
4.71	-0.03587	-0.03188	-0.02755	-0.02338	-0.0201	-0.01644	-0.01282	-0.00984	-0.00668	-0.00413	-0.00209	-0.01282	-6.62E-04	0
4.72	-0.03433	-0.0307	-0.02683	-0.02258	-0.01991	-0.01648	-0.01313	-0.00984	-0.007	-0.0044	-0.00226	-0.01313	-7.32E-04	0
4.73	-0.03244	-0.02829	-0.02597	-0.02232	-0.01963	-0.01643	-0.01325	-0.01015	-0.00722	-0.00458	-0.00238	-0.01325	-7.79E-04	0
4.74	-0.03033	-0.02771	-0.02498	-0.02213	-0.0192	-0.01621	-0.01318	-0.01017	-0.00728	-0.00464	-0.00242	-0.01318	-7.99E-04	0
4.75	-0.0282	-0.02605	-0.02436	-0.02124	-0.01855	-0.01574	-0.01286	-0.00996	-0.00715	-0.00457	-0.00239	-0.01286	-7.86E-04	0
4.76	-0.02619	-0.02436	-0.0225	-0.02001	-0.01759	-0.01497	-0.01225	-0.0095	-0.00682	-0.00435	-0.00218	-0.01225	-7.79E-04	0
4.77	-0.02437	-0.02267	-0.02093	-0.01867	-0.01632	-0.01386	-0.01132	-0.00876	-0.00628	-0.00399	-0.00207	-0.01132	-6.76E-04	0
4.78	-0.02269	-0.02093	-0.01911	-0.01695	-0.01473	-0.01243	-0.0101	-0.00777	-0.00553	-0.00349	-0.00207	-0.0101	-5.79E-04	0
4.79	-0.02099	-0.01907	-0.01707	-0.01499	-0.01287	-0.01073	-0.0088	-0.00654	-0.00459	-0.00286	-0.00144	-0.0088	-4.52E-04	0
4.8	-0.01907	-0.01701	-0.0148	-0.0128	-0.0108	-0.00881	-0.00691	-0.00512	-0.0035	-0.00221	-0.00102	-0.00691	-2.96E-04	0
4.81	-0.0168	-0.01465	-0.0123	-0.01042	-0.00856	-0.00675	-0.00508	-0.00358	-0.0023	-0.00127	-5.41E-04	-0.00508	-1.21E-04	0
4.82	-0.01406	-0.01192	-0.00954	-0.00785	-0.00618	-0.0046	-0.00318	-0.00199	-0.00106	-4.13E-04	-4.86E-05	-0.00318	6.28E-05	0
4.83	-0.01076	-0.00877	-0.00653	-0.00508	-0.00368	-0.00238	-0.00127	-4.25E-04	1.35E-04	4.07E-04	4.17E-04	-0.00127	2.32E-04	0
4.84	-0.00688	-0.00518	-0.00325	-0.00213	-0.00106	-1.21E-04	8.09E-04	0.00107	0.00124	0.00175	8.14E-04	0.00124	3.71E-04	0
4.85	-0.00241	-0.00116	3.10E-04	0.00101	0.00184	0.00214	0.00243	0.00246	0.00222	0.00175	0.00113	0.00243	7.05E-04	0
4.86	0.00256	0.00324	0.00409	0.00427	0.00439	0.00437	0.00415	0.0037	0.00304	0.00222	0.00133	0.00415	5.18E-04	0
4.87	0.00793	0.00792	0.00802	0.0078	0.00711	0.00649	0.00571	0.00476	0.00368	0.00254	0.00144	0.00571	5.29E-04	0
4.88	0.01356	0.01278	0.01203	0.0078	0.00711	0.00649	0.00571	0.00476	0.00368	0.00254	0.00144	0.00571	5.15E-04	0
4.89	0.01928	0.01767	0.01616	0.01415	0.01225	0.0103	0.00834	0.00684	0.00417	0.00275	0.00149	0.00684	4.89E-04	0
4.9	0.02464	0.02245	0.01979	0.0172	0.01458	0.01197	0.00944	0.00704	0.00455	0.00239	0.00148	0.00944	4.55E-04	0
4.91	0.03035	0.02866	0.02339	0.02002	0.01673	0.01351	0.01046	0.00793	0.00513	0.00305	0.00146	0.01046	4.19E-04	0
4.92	0.03525	0.031	0.02641	0.02254	0.01868	0.01492	0.01139	0.00818	0.00554	0.00313	0.00144	0.01139	3.87E-04	0
4.93	0.03942	0.03447	0.02911	0.02475	0.02042	0.01621	0.01228	0.00874	0.0057	0.00324	0.00145	0.01228	3.72E-04	0
4.94	0.04272	0.0373	0.03139	0.02667	0.02198	0.01742	0.01317	0.00934	0.00608	0.00346	0.00155	0.01317	3.98E-04	0
4.95	0.04511	0.03844	0.03225	0.0283	0.02336	0.01957	0.01604	0.01085	0.00721	0.00422	0.00198	0.01604	4.63E-04	0
4.96	0.04692	0.04091	0.03469	0.02963	0.02458	0.01966	0.01504	0.01085	0.00721	0.00422	0.00198	0.01504	5.59E-04	0
4.97	0.04731	0.04174	0.0357	0.03067	0.02563	0.0207	0.01602	0.01171	0.00791	0.00473	0.00228	0.01602	6.68E-04	0
4.98	0.04726	0.042	0.03634	0.03143	0.0265	0.02163	0.01776	0.01335	0.00829	0.00575	0.00259	0.01776	7.91E-04	0
4.99	0.04681	0.04179	0.03665	0.03193	0.02716	0.0224	0.01776	0.01335	0.00829	0.00575	0.00259	0.01776	9.13E-04	0
5	0.04557	0.04123	0.03664	0.03215	0.02757	0.02296	0.01877	0.01439	0.01023	0.00648	0.00336	0.01877	0.00102	0
5.01	0.04434	0.04043	0.03632	0.03215	0.02757	0.02296	0.01877	0.01439	0.01023	0.00648	0.00336	0.01877	0.00112	0
5.02	0.04304	0.03944	0.03566	0.03162	0.02745	0.02316	0.01882	0.0145	0.01037	0.0066	0.00343	0.01882	0.0011	0
5.03	0.04173	0.03829	0.03473	0.03083	0.02728	0.02288	0.01847	0.01426	0.0102	0.00648	0.00337	0.01847	0.00103	0
5.04	0.04037	0.03688	0.03348	0.02969	0.02578	0.02177	0.01769	0.01362	0.00972	0.00616	0.00318	0.01769	9.20E-04	0
5.05	0.03898	0.03548	0.03193	0.02819	0.02434	0.02043	0.01646	0.01261	0.00893	0.00561	0.00287	0.01646	7.59E-04	0
5.06	0.0372	0.03371	0.03003	0.02653	0.02251	0.01869	0.01491	0.01126	0.00787	0.00487	0.00244	0.01491	5.69E-04	0
5.07	0.03522	0.03159	0.02771	0.02404	0.02032	0.01662	0.01303	0.00966	0.00696	0.00398	0.00193	0.01303	3.78E-04	0
5.08	0.03283	0.02906	0.02507	0.02142	0.01783	0.01432	0.01098	0.00792	0.00524	0.00304	0.0014	0.01098	2.04E-04	0
5.09	0.02989	0.02607	0.02191	0.01851	0.01514	0.01188	0.00885	0.00617	0.00392	0.00215	9.09E-04	0.01514	6.07E-05	0
5.1	0.0263	0.02257	0.01848	0.01537	0.01231	0.0094	0.00677	0.00451	0.0027	0.00136	4.87E-04	0.01231	-4.41E-05	0
5.11	0.02199	0.01855	0.01474	0.01205	0.00942	0.00697	0.00481	0.00301	0.00164	8.97E-04	1.54E-04	0.00942	-1.15E-04	0
5.12	0.01694	0.01402	0.01076	0.00862	0.00655	0.00465	0.00301	0.0017	7.63E-04	1.77E-04	-9.36E-05	0.00655	-1.54E-04	0
5.13	0.01121	0.00904	0.00613	0.00513	0.00372	0.00244	0.00138	5.77E-04	5.01E-05	-2.16E-04	-2.62E-04	0.00372	-1.59E-04	0
5.14	0.00495	0.00373	0.00234	0.00162	0.00118	3.48E-04	-1.13E-04	-4.05E-04	-5.29E-04	-5.03E-04	-3.63E-04	0.00118	-1.66E-04	0
5.15	-0.00162	-0.00177	-0.00198	-0.0019	-0.00181	-0.00168	-0.00151	-0.00129	-0.00102	-7.22E-04	-4.21E-04	-0.00181	-1.59E-04	0
5.16	-0.00823	-0.00729	-0.00629	-0.00541	-0.00463	-0.00369	-0.00289	-0.00215	-0.00148	-9.19E-04	-4.67E-04	-0.00215	-1.49E-04	0
5.17	-0.01492	-0.01267	-0.01054	-0.00727	-0.00589	-0.00457	-0.0034	-0.00204	-0.00169	-0.00115	-5.33E-04	-0.0034	-1.46E-04	0
5.18	-0.02062	-0.0178	-0.01472	-0.01237	-0.01005	-0.00785	-0.00594	-0.00407	-0.00261	-0.00147	-6.64E-04	-0.00407	-1.74E-04	0

5.73	0.07419	0.06873	0.05879	0.05126	0.04364	0.03605	0.02863	0.02156	0.01506	0.00937	0.00476	0.00152	0
5.74	0.07573	0.06774	0.0592	0.05138	0.04349	0.03569	0.02813	0.02101	0.01455	0.00886	0.00445	0.00141	0
5.75	0.07661	0.06812	0.05912	0.05112	0.04308	0.03516	0.02795	0.02043	0.01404	0.00857	0.00426	0.00131	0
5.76	0.07641	0.06782	0.05856	0.05052	0.04246	0.03453	0.02684	0.01989	0.0136	0.00826	0.00408	0.00124	0
5.77	0.07536	0.06679	0.05752	0.04859	0.04164	0.03383	0.02637	0.01945	0.01328	0.00806	0.00398	0.00121	0
5.78	0.07338	0.06505	0.05603	0.04636	0.04066	0.03309	0.02584	0.01911	0.01308	0.00797	0.00395	0.00121	0
5.79	0.07053	0.06265	0.05412	0.04684	0.03952	0.03235	0.02535	0.01885	0.01298	0.00796	0.00388	0.00123	0
5.8	0.06682	0.05967	0.05183	0.04606	0.03822	0.03143	0.02484	0.01861	0.01286	0.00804	0.00411	0.00132	0
5.81	0.06272	0.05622	0.04924	0.04302	0.03673	0.03043	0.02424	0.01833	0.01286	0.00804	0.00411	0.00132	0
5.82	0.05681	0.05243	0.04636	0.04074	0.03501	0.02923	0.02349	0.01781	0.01268	0.00801	0.00414	0.00135	0
5.83	0.05327	0.04841	0.04324	0.0382	0.03304	0.02778	0.02249	0.01729	0.01234	0.00766	0.0041	0.00135	0
5.84	0.04839	0.04426	0.03989	0.0354	0.03077	0.02603	0.0212	0.01639	0.01177	0.00754	0.00396	0.00132	0
5.85	0.04359	0.04005	0.03635	0.03235	0.02821	0.02384	0.01968	0.0152	0.01096	0.00704	0.00371	0.00124	0
5.86	0.03893	0.03585	0.03264	0.02856	0.02228	0.01866	0.0154	0.01194	0.0096	0.00553	0.00336	0.00113	0
5.87	0.03442	0.03165	0.02878	0.02556	0.02228	0.01886	0.0154	0.01194	0.0096	0.00553	0.00336	0.00113	0
5.88	0.02989	0.02744	0.02478	0.0219	0.01895	0.01596	0.01295	0.00987	0.00714	0.00456	0.00239	7.91E-04	0
5.89	0.02556	0.02317	0.02066	0.0181	0.01551	0.01291	0.01035	0.00787	0.00556	0.00351	0.00241	5.87E-04	0
5.9	0.021	0.01878	0.01641	0.01419	0.01197	0.00978	0.00788	0.00571	0.00354	0.00241	0.0012	3.71E-04	0
5.91	0.01623	0.01422	0.01204	0.102	0.00839	0.00664	0.00501	0.00356	0.00232	0.00133	6.05E-04	1.60E-04	0
5.92	0.01116	0.00945	0.00757	0.00617	0.00481	0.00354	0.00243	0.0015	8.02E-04	3.28E-04	5.44E-04	-1.78E-04	0
5.93	0.00578	0.00449	0.00302	0.00213	0.00129	5.58E-04	-1.62E-05	-0.00209	-0.00174	-0.00127	-7.81E-04	-2.84E-04	0
5.94	9.04E-05	-8.85E-04	-0.00158	-0.00188	-0.00214	-0.00228	-0.00227	-0.00209	-0.00174	-0.00127	-7.81E-04	-2.84E-04	0
5.95	-0.00585	-0.00597	-0.00621	-0.00586	-0.00545	-0.00495	-0.00433	-0.00358	-0.00274	-0.00187	-0.00105	-3.78E-04	0
5.96	-0.01199	-0.01138	-0.01082	-0.00975	-0.00884	-0.00746	-0.00621	-0.00491	-0.00336	-0.00236	-0.00127	-4.37E-04	0
5.97	-0.01624	-0.01679	-0.01532	-0.01352	-0.01168	-0.00981	-0.00784	-0.0061	-0.00435	-0.00277	-0.00144	-4.77E-04	0
5.98	-0.02444	-0.0221	-0.01966	-0.01713	-0.01458	-0.01148	-0.00927	-0.00827	-0.00569	-0.00348	-0.00159	-5.07E-04	0
5.99	-0.03042	-0.0272	-0.02379	-0.02057	-0.01735	-0.01418	-0.01112	-0.00827	-0.00569	-0.00348	-0.00159	-5.07E-04	0
6	-0.038	-0.03188	-0.02767	-0.02384	-0.02	-0.01624	-0.01285	-0.00932	-0.00635	-0.00385	-0.00173	-5.34E-04	0
6.01	-0.04103	-0.03633	-0.03128	-0.02389	-0.02253	-0.01824	-0.01416	-0.01039	-0.00706	-0.00425	-0.00208	-6.21E-04	0
6.02	-0.04542	-0.0402	-0.03455	-0.02974	-0.02491	-0.02018	-0.01567	-0.01151	-0.00781	-0.0047	-0.00229	-6.88E-04	0
6.03	-0.04915	-0.04354	-0.03748	-0.03232	-0.02714	-0.02205	-0.01717	-0.01285	-0.00861	-0.0052	-0.00255	-7.85E-04	0
6.04	-0.05218	-0.04634	-0.04002	-0.03461	-0.02917	-0.02359	-0.01862	-0.01378	-0.00844	-0.00574	-0.00263	-8.59E-04	0
6.05	-0.05455	-0.0486	-0.04218	-0.03681	-0.03098	-0.02539	-0.01998	-0.01488	-0.01026	-0.00628	-0.00313	-9.64E-04	0
6.06	-0.05632	-0.05037	-0.04397	-0.03829	-0.03254	-0.02688	-0.02121	-0.0159	-0.01105	-0.00683	-0.00344	-0.00108	0
6.07	-0.05759	-0.0517	-0.04539	-0.03965	-0.03393	-0.02896	-0.02228	-0.01681	-0.01177	-0.00733	-0.00373	-0.00119	0
6.08	-0.05843	-0.05264	-0.04645	-0.04069	-0.03484	-0.02896	-0.02318	-0.01757	-0.01237	-0.00776	-0.00398	-0.00128	0
6.09	-0.058694	-0.05324	-0.04718	-0.04142	-0.03556	-0.02966	-0.02381	-0.01814	-0.01283	-0.00809	-0.00417	-0.00136	0
6.1	-0.05916	-0.05355	-0.04776	-0.04186	-0.03601	-0.0301	-0.02422	-0.0185	-0.01312	-0.0083	-0.00443	-0.0014	0
6.11	-0.05913	-0.0536	-0.04775	-0.04201	-0.03616	-0.03025	-0.02437	-0.01863	-0.01323	-0.00838	-0.00435	-0.00142	0
6.12	-0.05887	-0.05339	-0.04776	-0.04187	-0.03602	-0.03012	-0.02425	-0.01853	-0.01315	-0.00832	-0.00431	-0.00141	0
6.13	-0.05637	-0.05292	-0.04715	-0.04142	-0.03558	-0.0297	-0.02366	-0.01819	-0.01287	-0.00812	-0.00419	-0.00136	0
6.14	-0.05763	-0.05216	-0.04637	-0.04065	-0.03483	-0.02899	-0.02321	-0.01763	-0.01242	-0.0078	-0.004	-0.00129	0
6.15	-0.05659	-0.05103	-0.04524	-0.03955	-0.03379	-0.02801	-0.02233	-0.01688	-0.01183	-0.00738	-0.00378	-0.0012	0
6.16	-0.0552	-0.04966	-0.04375	-0.03814	-0.03245	-0.02679	-0.02125	-0.01597	-0.01113	-0.00689	-0.00349	-0.0011	0
6.17	-0.0534	-0.04784	-0.04189	-0.0364	-0.03086	-0.02536	-0.02001	-0.01496	-0.01036	-0.00638	-0.0032	-9.98E-04	0
6.18	-0.05114	-0.04562	-0.03968	-0.03439	-0.02906	-0.02378	-0.01869	-0.0139	-0.00958	-0.00587	-0.00293	-9.06E-04	0
6.19	-0.04836	-0.04297	-0.03715	-0.03213	-0.02708	-0.02213	-0.01732	-0.01284	-0.00862	-0.00539	-0.00248	-8.26E-04	0
6.2	-0.04504	-0.03991	-0.03435	-0.02968	-0.02469	-0.02037	-0.01564	-0.01182	-0.00681	-0.00445	-0.00228	-7.06E-04	0
6.21	-0.04119	-0.03646	-0.03132	-0.02708	-0.02282	-0.01862	-0.01459	-0.01083	-0.00745	-0.00456	-0.00228	-7.06E-04	0
6.22	-0.03684	-0.03266	-0.0281	-0.02435	-0.02057	-0.01684	-0.01325	-0.00987	-0.00682	-0.00419	-0.00221	-6.55E-04	0
6.23	-0.03209	-0.02856	-0.02472	-0.0215	-0.01825	-0.01502	-0.01186	-0.00891	-0.00619	-0.00383	-0.00217	-6.06E-04	0
6.24	-0.02705	-0.02424	-0.02119	-0.01853	-0.01584	-0.01313	-0.01046	-0.0079	-0.00554	-0.00345	-0.00216	-5.60E-04	0
6.25	-0.02186	-0.01978	-0.01754	-0.01545	-0.01331	-0.01113	-0.00895	-0.00683	-0.00483	-0.00304	-0.00158	-5.06E-04	0
6.26	-0.01687	-0.01527	-0.01378	-0.01224	-0.01084	-0.009	-0.00732	-0.00565	-0.00404	-0.00257	-0.00134	-4.40E-04	0

6.27	-0.01155	-0.01076	-0.00893	-0.00891	-0.00785	-0.00673	-0.00555	-0.00435	-0.00315	-0.00203	-0.00107	-0.00035	-0.00107	-3.59E-04	0
6.28	-0.00656	-0.00629	-0.00602	-0.00555	-0.00494	-0.00432	-0.00394	-0.00291	-0.00215	-0.00141	-0.00084	-0.00035	-0.00141	-7.58E-04	0
6.29	-0.00187	-0.00187	-0.00209	-0.00202	-0.00192	-0.00179	-0.0016	-0.00134	-0.00104	-7.09E-04	-3.89E-04	-0.00104	-3.89E-04	-1.39E-04	0
6.3	0.00302	0.00247	0.00185	0.0015	0.00115	8.30E-04	5.53E-04	3.31E-04	1.72E-04	9.07E-05	2.14E-05	0	2.14E-05	0	0
6.31	0.00764	0.00675	0.00578	0.00502	0.00426	0.0035	0.00276	0.00207	0.00145	9.07E-04	4.67E-04	0	4.67E-04	0	0
6.32	0.01216	0.01095	0.00996	0.00851	0.00734	0.00615	0.00497	0.00382	0.00273	0.00174	9.11E-04	0	9.11E-04	0	0
6.33	0.01859	0.01508	0.01347	0.01193	0.01035	0.00874	0.00711	0.0055	0.00394	0.00252	0.00132	0	4.40E-04	0	0
6.34	0.02093	0.0191	0.01718	0.01524	0.01324	0.01119	0.00911	0.00704	0.00505	0.00323	0.00169	0	5.58E-04	0	0
6.35	0.02519	0.02302	0.02076	0.01839	0.01595	0.01346	0.01093	0.00842	0.00601	0.00383	0.00199	0	6.55E-04	0	0
6.36	0.02939	0.02683	0.02417	0.02135	0.01845	0.0155	0.01253	0.00981	0.00684	0.00433	0.00225	0	7.35E-04	0	0
6.37	0.03352	0.03052	0.02737	0.02408	0.02073	0.01734	0.01394	0.01064	0.00754	0.00476	0.00262	0	7.98E-04	0	0
6.38	0.03753	0.03403	0.03034	0.02659	0.02278	0.01896	0.01518	0.01153	0.00813	0.0051	0.00282	0	8.47E-04	0	0
6.39	0.04134	0.03731	0.03304	0.02886	0.02463	0.0204	0.01626	0.01228	0.00862	0.00539	0.00275	0	8.85E-04	0	0
6.4	0.04484	0.04029	0.03547	0.03089	0.02627	0.02188	0.0172	0.01295	0.00904	0.00562	0.00285	0	9.07E-04	0	0
6.41	0.04792	0.04282	0.0376	0.03288	0.02772	0.02281	0.01804	0.01352	0.00934	0.00581	0.00293	0	9.24E-04	0	0
6.42	0.0505	0.04515	0.03942	0.03422	0.02899	0.0238	0.01877	0.01403	0.00972	0.00589	0.00301	0	9.40E-04	0	0
6.43	0.05255	0.04694	0.04081	0.03551	0.03008	0.02466	0.01942	0.01449	0.01002	0.00616	0.00308	0	9.59E-04	0	0
6.44	0.05408	0.04828	0.04206	0.03652	0.03092	0.02537	0.01999	0.01491	0.01031	0.00634	0.00317	0	9.89E-04	0	0
6.45	0.05548	0.04917	0.04287	0.03725	0.03157	0.02594	0.02046	0.0153	0.0106	0.00653	0.00328	0	0.00102	0	0
6.46	0.05543	0.04965	0.04343	0.03789	0.032	0.02635	0.02084	0.01563	0.01086	0.00672	0.00339	0	0.00107	0	0
6.47	0.05491	0.04927	0.04321	0.03774	0.03219	0.02659	0.0211	0.01587	0.01107	0.00688	0.00349	0	0.0011	0	0
6.48	0.05491	0.04852	0.04268	0.03735	0.03193	0.02654	0.02121	0.01601	0.01121	0.00699	0.00356	0	0.00114	0	0
6.49	0.05396	0.04852	0.04268	0.03735	0.03193	0.02654	0.02121	0.01601	0.01121	0.00699	0.00356	0	0.00114	0	0
6.5	0.05268	0.04745	0.04186	0.03688	0.03142	0.02613	0.0209	0.01566	0.01116	0.007	0.00359	0	0.00116	0	0
6.51	0.05107	0.04608	0.04076	0.03576	0.03066	0.02553	0.02045	0.01554	0.01096	0.00688	0.00353	0	0.00114	0	0
6.52	0.04821	0.04445	0.03939	0.03457	0.02965	0.02471	0.0198	0.01506	0.01062	0.00668	0.00343	0	0.00111	0	0
6.53	0.04711	0.04258	0.03776	0.03312	0.0284	0.02365	0.01895	0.01441	0.01017	0.00639	0.00329	0	0.00108	0	0
6.54	0.04478	0.04046	0.03588	0.03143	0.02692	0.02239	0.01792	0.01361	0.00959	0.00602	0.00309	0	9.97E-04	0	0
6.55	0.04223	0.03811	0.03374	0.02951	0.02522	0.02093	0.01671	0.01266	0.00889	0.00657	0.00284	0	9.13E-04	0	0
6.56	0.03942	0.03551	0.03134	0.02736	0.02333	0.01931	0.01536	0.01159	0.0081	0.00505	0.00256	0	8.18E-04	0	0
6.57	0.03636	0.03266	0.02871	0.025	0.02126	0.01753	0.01388	0.01042	0.00725	0.00449	0.00226	0	7.11E-04	0	0
6.58	0.03301	0.02922	0.02584	0.02245	0.01902	0.01562	0.01232	0.00919	0.00636	0.0039	0.00195	0	6.05E-04	0	0
6.59	0.02838	0.0262	0.02277	0.01972	0.01665	0.01361	0.01068	0.00793	0.00545	0.00332	0.00164	0	5.02E-04	0	0
6.6	0.02545	0.02259	0.01949	0.01683	0.01416	0.01153	0.009	0.00684	0.00454	0.00274	0.00134	0	4.04E-04	0	0
6.61	0.02122	0.01874	0.01605	0.01382	0.01159	0.00899	0.00729	0.00635	0.00363	0.00218	0.00106	0	3.12E-04	0	0
6.62	0.01671	0.01489	0.01247	0.01071	0.00895	0.00722	0.00558	0.00407	0.00274	0.00163	7.85E-04	0	2.29E-04	0	0
6.63	0.01187	0.01047	0.00868	0.00754	0.00627	0.00504	0.00387	0.00281	0.00188	0.00111	5.30E-04	0	1.52E-04	0	0
6.64	0.00707	0.00613	0.00506	0.00433	0.00359	0.00287	0.00219	0.00157	0.00104	6.10E-04	2.88E-04	0	7.96E-05	0	0
6.65	0.0021	0.00174	0.00133	0.00111	9.03E-04	7.06E-04	5.23E-04	3.63E-04	2.27E-04	1.24E-04	5.20E-05	0	1.15E-05	0	0
6.66	-0.00287	-0.00264	-0.00244	-0.0021	-0.00176	-0.00143	-0.00112	-8.35E-04	-5.73E-04	-3.57E-04	-1.78E-04	0	-5.38E-05	0	0
6.67	-0.00777	-0.00695	-0.00601	-0.00524	-0.00439	-0.00355	-0.00275	-0.00202	-0.00137	-8.20E-04	-3.98E-04	0	-1.18E-04	0	0
6.68	-0.01252	-0.01114	-0.00966	-0.00831	-0.00695	-0.00563	-0.00436	-0.00319	-0.00216	-0.00129	-6.25E-04	0	-1.84E-04	0	0
6.69	-0.01706	-0.01514	-0.01308	-0.01127	-0.00945	-0.00766	-0.00695	-0.00537	-0.00379	-0.00278	-8.63E-04	0	-2.56E-04	0	0
6.7	-0.02134	-0.01984	-0.01836	-0.01412	-0.01188	-0.00966	-0.00753	-0.00566	-0.00379	-0.0023	-0.00113	0	-3.44E-04	0	0
6.71	-0.02533	-0.02352	-0.02184	-0.01947	-0.0142	-0.01162	-0.00911	-0.00676	-0.00468	-0.00285	-0.00142	0	-4.42E-04	0	0
6.72	-0.029	-0.02584	-0.02243	-0.01866	-0.0142	-0.01162	-0.00911	-0.00676	-0.00468	-0.00285	-0.00142	0	-5.42E-04	0	0
6.73	-0.03234	-0.02889	-0.02519	-0.02193	-0.01648	-0.01353	-0.01087	-0.00816	-0.00553	-0.00342	-0.00202	0	-6.40E-04	0	0
6.74	-0.03533	-0.03167	-0.02776	-0.02424	-0.02067	-0.01711	-0.01362	-0.01029	-0.0072	-0.0045	-0.00229	0	-7.32E-04	0	0
6.75	-0.038	-0.03419	-0.03013	-0.02637	-0.02255	-0.01872	-0.01494	-0.01132	-0.00795	-0.00498	-0.00254	0	-8.17E-04	0	0
6.76	-0.04039	-0.03646	-0.03228	-0.02829	-0.02423	-0.02015	-0.01612	-0.01223	-0.00861	-0.0054	-0.00277	0	-8.92E-04	0	0
6.77	-0.04255	-0.03849	-0.03417	-0.02997	-0.0257	-0.02139	-0.01713	-0.01301	-0.00917	-0.00578	-0.00296	0	-9.54E-04	0	0
6.78	-0.04451	-0.04028	-0.03558	-0.0314	-0.02693	-0.02242	-0.01796	-0.01365	-0.00962	-0.00604	-0.00371	0	-0.001	0	0
6.79	-0.04625	-0.04182	-0.03714	-0.03256	-0.02791	-0.02323	-0.0186	-0.01413	-0.00993	-0.00625	-0.00321	0	-0.00104	0	0
6.8	-0.04773	-0.04311	-0.03821	-0.03346	-0.02864	-0.02381	-0.01904	-0.01445	-0.01017	-0.00638	-0.00327	0	-0.00106	0	0

6.81	-0.04682	-0.04411	-0.059	-0.03411	-0.02915	-0.02419	-0.01631	-0.01463	-0.01028	-0.00644	-0.00333	-0.00106
6.82	-0.04977	-0.04479	-0.0395	-0.03449	-0.02943	-0.02437	-0.01941	-0.01466	-0.01028	-0.00642	-0.00327	-0.00105
6.83	-0.05023	-0.04613	-0.03869	-0.03461	-0.02946	-0.02436	-0.01935	-0.01457	-0.01018	-0.00633	-0.00321	-0.00102
6.84	-0.05028	-0.0451	-0.03856	-0.03446	-0.0293	-0.02416	-0.01914	-0.01437	0.01	-0.00619	-0.00312	-9.84E-04
6.85	-0.04969	-0.04469	-0.03912	-0.03403	-0.0288	-0.02378	-0.0188	-0.01408	-0.00977	-0.00603	-0.00303	-9.47E-04
6.86	-0.04606	-0.04389	-0.03834	-0.03333	-0.02826	-0.02323	-0.01834	-0.01371	-0.00949	-0.00584	-0.00293	-9.12E-04
6.87	-0.04777	-0.04269	-0.03722	-0.03234	-0.02741	-0.02251	-0.01775	-0.01326	-0.00917	-0.00564	-0.00282	-8.78E-04
6.88	-0.04601	-0.04109	-0.03576	-0.03108	-0.02633	-0.02162	-0.01705	-0.01273	-0.00881	-0.00541	-0.00271	-8.39E-04
6.89	-0.04379	-0.03908	-0.03401	-0.02955	-0.02505	-0.02057	-0.01623	-0.01212	-0.00839	-0.00516	-0.00258	-7.98E-04
6.9	-0.04111	-0.0367	-0.03194	-0.02777	-0.02356	-0.01936	-0.01443	-0.01063	-0.00791	-0.00486	-0.00243	-7.51E-04
6.91	-0.03802	-0.03397	-0.0296	-0.02575	-0.02186	-0.01789	-0.01421	-0.01063	-0.00736	-0.00452	-0.00226	-6.98E-04
6.92	-0.03455	-0.03099	-0.02698	-0.02349	-0.01966	-0.01643	-0.01289	-0.00972	-0.00673	-0.00414	-0.00206	-6.37E-04
6.93	-0.03075	-0.02755	-0.02411	-0.021	-0.01785	-0.01471	-0.01163	-0.00871	-0.00620	-0.0037	-0.00184	-5.69E-04
6.94	-0.02871	-0.02396	-0.02102	-0.01831	-0.01557	-0.01282	-0.01014	-0.00759	-0.00526	-0.00323	-0.00161	-4.98E-04
6.95	-0.02427	-0.02018	-0.01772	-0.01544	-0.01312	-0.1081	-0.00855	-0.00684	-0.00444	-0.00274	-0.00137	-4.28E-04
6.96	-0.01808	-0.01625	-0.01428	-0.01242	-0.10655	-0.00839	-0.00516	-0.00387	-0.00289	-0.00167	-8.41E-04	-2.65E-04
6.97	-0.01359	-0.0122	-0.01071	-0.00931	-0.00791	-0.00651	-0.00516	-0.00387	-0.00289	-0.00167	-8.41E-04	-2.65E-04
6.98	-0.00902	-0.00808	-0.00707	-0.00615	-0.0522	-0.0043	-0.00341	-0.00256	-0.00179	-0.00111	-5.64E-04	-1.78E-04
6.99	-0.00441	-0.00393	-0.00342	-0.00297	-0.00252	-0.00208	-0.00166	-0.00125	-8.78E-04	-5.52E-04	-2.85E-04	-9.35E-05
7	2.06E-04	2.02E-04	2.08E-04	1.77E-04	1.43E-04	1.09E-04	7.41E-05	4.24E-05	1.55E-05	-3.92E-06	-1.26E-05	-9.34E-06
7.01	0.00476	0.00427	0.00377	0.00328	0.00276	0.00225	0.00176	0.0013	8.64E-04	5.28E-04	2.52E-04	7.21E-05
7.02	0.00921	0.00825	0.00724	0.00628	0.00531	0.00434	0.00341	0.00253	0.00173	0.00105	5.18E-04	1.57E-04
7.03	0.01352	0.01211	0.01061	0.0092	0.00778	0.00637	0.00501	0.00373	0.00257	0.00157	7.85E-04	2.43E-04
7.04	0.01786	0.01581	0.01386	0.01202	0.01018	0.00835	0.00658	0.00491	0.0034	0.00209	0.00105	3.28E-04
7.05	0.02159	0.01935	0.01696	0.01474	0.01249	0.01027	0.00811	0.00608	0.00422	0.00261	0.00132	4.15E-04
7.06	0.02529	0.02268	0.01992	0.01733	0.01472	0.01213	0.00961	0.00722	0.00503	0.00312	0.00156	5.03E-04
7.07	0.02873	0.02581	0.02272	0.0198	0.01684	0.01391	0.01104	0.00832	0.00581	0.00362	0.00184	5.88E-04
7.08	0.0319	0.02871	0.02533	0.0221	0.01884	0.01558	0.01239	0.00935	0.00655	0.00408	0.00208	6.61E-04
7.09	0.03479	0.03135	0.0277	0.0242	0.02036	0.01711	0.01363	0.01029	0.0072	0.00448	0.00228	7.29E-04
7.1	0.0374	0.03372	0.02981	0.02607	0.02227	0.01846	0.0147	0.0111	0.00776	0.00483	0.00244	7.73E-04
7.11	0.03973	0.03581	0.03165	0.02787	0.02384	0.01959	0.01539	0.01176	0.00821	0.0051	0.00258	8.13E-04
7.12	0.04176	0.03761	0.03318	0.029	0.02475	0.02049	0.0163	0.01228	0.00857	0.00532	0.00269	8.57E-04
7.13	0.04349	0.03911	0.03442	0.03005	0.02562	0.02118	0.01683	0.01268	0.00805	0.0055	0.00279	8.83E-04
7.14	0.04439	0.04028	0.03536	0.03083	0.02625	0.02169	0.01722	0.01296	0.00805	0.00563	0.00285	9.05E-04
7.15	0.0459	0.04112	0.036	0.03136	0.02668	0.02202	0.01747	0.01315	0.00816	0.0057	0.00289	9.17E-04
7.16	0.04648	0.04116	0.03696	0.03167	0.02683	0.02221	0.01761	0.01324	0.00823	0.00573	0.00291	9.21E-04
7.17	0.04681	0.04172	0.03647	0.03176	0.027	0.02226	0.01764	0.01326	0.00824	0.00573	0.00291	9.21E-04
7.18	0.04632	0.0415	0.03632	0.03164	0.0269	0.02218	0.01758	0.01321	0.00821	0.00571	0.00289	9.18E-04
7.19	0.04566	0.04096	0.03592	0.03131	0.02654	0.02198	0.01744	0.01311	0.00815	0.00568	0.00288	9.16E-04
7.2	0.04467	0.04013	0.03527	0.03076	0.02621	0.02166	0.01721	0.01297	0.00806	0.00565	0.00287	9.18E-04
7.21	0.04339	0.03903	0.03438	0.03002	0.02562	0.02121	0.01689	0.01276	0.00806	0.00559	0.00286	9.18E-04
7.22	0.04184	0.03768	0.03326	0.02926	0.02486	0.02063	0.01647	0.01248	0.00816	0.0055	0.00282	9.10E-04
7.23	0.04003	0.0361	0.03192	0.02795	0.02393	0.0199	0.01592	0.01209	0.00852	0.00535	0.00275	8.89E-04
7.24	0.03799	0.0343	0.03038	0.02683	0.02293	0.01801	0.01523	0.01157	0.00816	0.00513	0.00264	8.51E-04
7.25	0.03575	0.0323	0.02863	0.02512	0.02155	0.01794	0.01438	0.01092	0.00823	0.00483	0.00248	7.98E-04
7.26	0.03332	0.03011	0.02669	0.02341	0.02007	0.01617	0.01337	0.01014	0.00713	0.00447	0.00228	7.32E-04
7.27	0.03075	0.02775	0.02454	0.0215	0.0184	0.01529	0.0122	0.00924	0.00648	0.00404	0.00206	6.55E-04
7.28	0.02802	0.02521	0.02221	0.01841	0.01657	0.01372	0.01092	0.00824	0.00576	0.00358	0.00206	5.76E-04
7.29	0.02511	0.02251	0.01971	0.01717	0.0146	0.01204	0.00954	0.00717	0.00498	0.00309	0.00156	4.93E-04
7.3	0.02202	0.01964	0.01706	0.01491	0.01253	0.01029	0.00811	0.00606	0.0042	0.00259	0.0013	4.06E-04
7.31	0.01871	0.01659	0.01428	0.01191	0.0104	0.00848	0.00685	0.00493	0.00339	0.00207	0.00103	3.16E-04
7.32	0.01519	0.01337	0.01139	0.00981	0.0081	0.00666	0.00517	0.0038	0.00258	0.00156	7.58E-04	2.26E-04
7.33	0.01144	0.01001	0.00843	0.00722	0.00601	0.00483	0.00371	0.00269	0.00179	0.00106	4.98E-04	1.42E-04
7.34	0.00754	0.00654	0.00542	0.00461	0.0038	0.00301	0.00227	0.00161	0.00104	5.91E-04	2.68E-05	0

7.35	0.00352	0.00299	0.00238	0.00198	0.00158	0.00112	8.59E-04	5.65E-04	3.33E-04	1.65E-04	5.66E-05	7.14E-06	0
7.36	-5.24E-04	-6.63E-04	-6.41E-04	-6.12E-04	-5.71E-04	-5.10E-04	-4.31E-04	-4.31E-04	-3.34E-04	-2.30E-04	-1.28E-04	-4.63E-05	0
7.37	-0.00455	-0.00412	-0.00366	-0.00324	-0.00277	-0.00231	-0.00184	-0.00139	-9.72E-04	-6.04E-04	-3.06E-04	-9.61E-05	0
7.38	-0.0085	-0.0076	-0.00686	-0.00577	-0.00488	-0.004	-0.00332	-0.00232	-9.69E-04	-4.77E-04	-1.45E-04	-1.45E-04	0
7.39	-0.01232	-0.01087	-0.00953	-0.00823	-0.00693	-0.00584	-0.0044	-0.00324	-0.00221	-0.00133	-6.51E-04	-1.96E-04	0
7.4	-0.01594	-0.01417	-0.01227	-0.01059	-0.00889	-0.00723	-0.00583	-0.00415	-0.00282	-0.0017	-8.31E-04	-2.48E-04	0
7.41	-0.01932	-0.01717	-0.01487	-0.01283	-0.01078	-0.00876	-0.00683	-0.00504	-0.00344	-0.00208	-0.00102	-3.06E-04	0
7.42	-0.02241	-0.01984	-0.01729	-0.01464	-0.01257	-0.01024	-0.008	-0.00592	-0.00467	-0.00285	-0.00142	-4.37E-04	0
7.43	-0.0252	-0.02246	-0.01954	-0.01691	-0.01427	-0.01166	-0.00914	-0.00679	-0.00467	-0.00285	-0.00142	-4.37E-04	0
7.44	-0.02769	-0.02474	-0.02158	-0.01873	-0.01585	-0.013	-0.01024	-0.00764	-0.00528	-0.00325	-0.00183	-5.07E-04	0
7.45	-0.02989	-0.02677	-0.02344	-0.02039	-0.01732	-0.01426	-0.01129	-0.00846	-0.00688	-0.00364	-0.00184	-5.78E-04	0
7.46	-0.0318	-0.02855	-0.0251	-0.0219	-0.01868	-0.01542	-0.01226	-0.00923	-0.00645	-0.00401	-0.00204	-6.48E-04	0
7.47	-0.03345	-0.03011	-0.02657	-0.02323	-0.01985	-0.01648	-0.01313	-0.00993	-0.00697	-0.00436	-0.00223	-7.14E-04	0
7.48	-0.03483	-0.03143	-0.02783	-0.02437	-0.02086	-0.01734	-0.01387	-0.01052	-0.00741	-0.00464	-0.00238	-7.64E-04	0
7.49	-0.03598	-0.03252	-0.02864	-0.02569	-0.02228	-0.01854	-0.01483	-0.01125	-0.00791	-0.00485	-0.00253	-8.08E-04	0
7.5	-0.0369	-0.03337	-0.03016	-0.02683	-0.02283	-0.0188	-0.01502	-0.01137	-0.00797	-0.00487	-0.00253	-8.08E-04	0
7.51	-0.03759	-0.03398	-0.03016	-0.02683	-0.02283	-0.0188	-0.01502	-0.01137	-0.00797	-0.00487	-0.00253	-8.08E-04	0
7.52	-0.03806	-0.03435	-0.0304	-0.0268	-0.02273	-0.01884	-0.01501	-0.01137	-0.00797	-0.00487	-0.00253	-8.08E-04	0
7.53	-0.03828	-0.03445	-0.03037	-0.02651	-0.0226	-0.01888	-0.01484	-0.01117	-0.00779	-0.00483	-0.00244	-7.72E-04	0
7.54	-0.03823	-0.03429	-0.03007	-0.02619	-0.02228	-0.01835	-0.01453	-0.01091	-0.00759	-0.00469	-0.00237	-7.47E-04	0
7.55	-0.03784	-0.03382	-0.03004	-0.02565	-0.02175	-0.01788	-0.01413	-0.01058	-0.00735	-0.00454	-0.00228	-7.16E-04	0
7.56	-0.03706	-0.03304	-0.02873	-0.02493	-0.0211	-0.01732	-0.01365	-0.0102	-0.00707	-0.00435	-0.00219	-6.84E-04	0
7.57	-0.03587	-0.03186	-0.02773	-0.02404	-0.02093	-0.01667	-0.01312	-0.00979	-0.00677	-0.00417	-0.00209	-6.52E-04	0
7.58	-0.03428	-0.03055	-0.02663	-0.02301	-0.01946	-0.01595	-0.01255	-0.00936	-0.00647	-0.00398	-0.00189	-6.22E-04	0
7.59	-0.03235	-0.02888	-0.02514	-0.02183	-0.01849	-0.01517	-0.01196	-0.00893	-0.00618	-0.00364	-0.00183	-5.78E-04	0
7.6	-0.03015	-0.02698	-0.02356	-0.02005	-0.0174	-0.01432	-0.01132	-0.00848	-0.00558	-0.00347	-0.00176	-5.57E-04	0
7.61	-0.02771	-0.02487	-0.02181	-0.01903	-0.0162	-0.01339	-0.01063	-0.008	-0.00558	-0.00347	-0.00176	-5.57E-04	0
7.62	-0.0251	-0.02259	-0.01991	-0.01742	-0.01469	-0.01236	-0.00987	-0.00747	-0.00524	-0.00328	-0.00167	-5.37E-04	0
7.63	-0.02235	-0.01969	-0.01788	-0.01569	-0.01347	-0.01123	-0.00902	-0.00686	-0.00485	-0.00306	-0.00157	-5.10E-04	0
7.64	-0.01951	-0.01769	-0.01574	-0.01366	-0.01194	-0.00987	-0.00807	-0.00617	-0.00439	-0.00278	-0.00144	-4.71E-04	0
7.65	-0.01682	-0.01511	-0.01335	-0.01183	-0.01031	-0.00867	-0.00701	-0.00639	-0.00384	-0.00244	-0.00127	-4.17E-04	0
7.66	-0.01371	-0.01249	-0.01119	-0.00991	-0.00856	-0.00723	-0.00586	-0.00451	-0.00322	-0.00205	-0.00107	-3.50E-04	0
7.67	-0.0108	-0.00984	-0.00863	-0.00751	-0.00677	-0.0057	-0.00462	-0.00355	-0.00253	-0.00161	-8.32E-04	-2.72E-04	0
7.68	-0.00788	-0.00717	-0.00641	-0.00566	-0.00488	-0.0041	-0.0033	-0.00253	-0.00179	-0.00113	-5.77E-04	-1.83E-04	0
7.69	-0.00495	-0.00447	-0.00384	-0.00345	-0.00294	-0.00243	-0.00193	-0.00145	-0.00101	-6.19E-04	-3.07E-04	9.37E-05	0
7.7	-0.00201	-0.00174	-0.00144	-0.0012	-9.64E-04	-7.39E-04	-5.34E-04	-3.55E-04	-2.08E-04	-9.93E-05	-2.96E-05	0	0
7.71	9.73E-04	0.00102	0.00111	0.00108	0.00103	9.96E-04	8.71E-04	7.45E-04	5.91E-04	4.21E-04	2.48E-04	9.55E-05	0
7.72	0.00401	0.00383	0.00368	0.00336	0.00302	0.00266	0.00226	0.00182	0.00137	9.27E-04	5.18E-04	1.87E-04	0
7.73	0.00713	0.00686	0.00625	0.00584	0.00499	0.00432	0.0036	0.00286	0.00212	0.0014	7.68E-04	2.70E-04	0
7.74	0.0103	0.00956	0.00825	0.00788	0.00692	0.00592	0.00489	0.00384	0.00281	0.00184	9.89E-04	3.41E-04	0
7.75	0.01351	0.01243	0.01134	0.01008	0.00878	0.00745	0.0061	0.00474	0.00343	0.00222	0.00118	3.98E-04	0
7.76	0.01672	0.01528	0.0138	0.0122	0.01056	0.0089	0.00722	0.00556	0.00398	0.00254	0.00133	4.44E-04	0
7.77	0.01989	0.01808	0.01618	0.01423	0.01225	0.01025	0.00825	0.0063	0.00447	0.00283	0.00147	4.83E-04	0
7.78	0.023	0.02079	0.01847	0.01618	0.01385	0.01152	0.00925	0.0063	0.00447	0.00283	0.00147	4.83E-04	0
7.79	0.02598	0.02339	0.02064	0.01802	0.01538	0.01273	0.01014	0.00767	0.00539	0.00338	0.00174	5.66E-04	0
7.8	0.02879	0.02584	0.02269	0.01977	0.01682	0.0139	0.01104	0.00767	0.00539	0.00338	0.00174	5.66E-04	0
7.81	0.03136	0.02808	0.02458	0.0214	0.0182	0.01501	0.01182	0.00838	0.00564	0.00368	0.00187	6.04E-04	0
7.82	0.03362	0.03009	0.02633	0.02292	0.01949	0.01608	0.01275	0.0096	0.00628	0.00392	0.002	6.41E-04	0
7.83	0.03556	0.03186	0.02791	0.02432	0.02068	0.01707	0.01354	0.01019	0.00711	0.00442	0.00225	7.17E-04	0
7.84	0.03719	0.03338	0.0293	0.02555	0.02175	0.01797	0.01426	0.01074	0.0075	0.00467	0.00237	7.56E-04	0
7.85	0.03854	0.03464	0.03048	0.0266	0.02268	0.01876	0.01491	0.01124	0.00786	0.0048	0.00249	7.95E-04	0
7.86	0.03963	0.03566	0.03142	0.02746	0.02344	0.01941	0.01546	0.01169	0.00818	0.0051	0.0026	8.32E-04	0
7.87	0.04046	0.03642	0.03213	0.0281	0.02401	0.01982	0.01569	0.01202	0.00844	0.00528	0.0027	8.64E-04	0
7.88	0.04101	0.03694	0.03261	0.02854	0.0244	0.02026	0.01618	0.01226	0.00862	0.0054	0.00276	8.86E-04	0

7.89	0.04128	0.0372	0.03285	0.02876	0.0246	0.02043	0.01633	0.01238	0.00871	0.00546	0.00278	9.01E-04	0
7.9	0.04128	0.0372	0.03286	0.02876	0.0246	0.02043	0.01632	0.01236	0.00869	0.00544	0.00278	8.95E-04	0
7.91	0.04101	0.03694	0.03261	0.02853	0.02439	0.02024	0.01615	0.01222	0.00857	0.00536	0.00273	8.74E-04	0
7.92	0.04045	0.03642	0.03212	0.02808	0.02398	0.01987	0.01582	0.01195	0.00836	0.00521	0.00265	8.43E-04	0
7.93	0.03862	0.03553	0.03137	0.02739	0.02335	0.01931	0.01535	0.01156	0.00807	0.00501	0.00254	8.08E-04	0
7.94	0.03848	0.03456	0.03037	0.02647	0.02253	0.01859	0.01474	0.01108	0.00771	0.00478	0.00241	7.58E-04	0
7.95	0.03705	0.03321	0.0291	0.02533	0.02151	0.01771	0.01401	0.0105	0.00729	0.00445	0.00226	7.08E-04	0
7.96	0.03528	0.03157	0.02758	0.02386	0.02031	0.01689	0.01317	0.00985	0.00682	0.00419	0.0021	6.52E-04	0
7.97	0.03318	0.02963	0.02581	0.0224	0.01896	0.01555	0.01224	0.00913	0.00663	0.00386	0.00192	5.94E-04	0
7.98	0.03074	0.0274	0.02381	0.02065	0.01746	0.0143	0.01124	0.00836	0.00578	0.00352	0.00175	5.40E-04	0
7.99	0.02789	0.02493	0.02163	0.01875	0.01585	0.01287	0.01019	0.00758	0.00522	0.0032	0.00159	4.91E-04	0
8	0.02487	0.02224	0.01928	0.01672	0.01414	0.01158	0.00911	0.00679	0.00489	0.00288	0.00144	4.47E-04	0
8.01	0.02172	0.01936	0.0168	0.01459	0.01236	0.01015	0.00801	0.00589	0.00416	0.00257	0.00129	4.07E-04	0
8.02	0.0183	0.01634	0.01422	0.01238	0.01053	0.00869	0.00689	0.00519	0.00363	0.00226	0.00115	3.68E-04	0
8.03	0.01475	0.01322	0.01158	0.01013	0.00867	0.00721	0.00577	0.00438	0.0031	0.00195	0.00101	3.30E-04	0
8.04	0.01113	0.01006	0.0089	0.00785	0.00678	0.00569	0.00461	0.00354	0.00253	0.00162	8.4E-04	2.79E-04	0
8.05	0.00749	0.00687	0.00619	0.00553	0.00484	0.00413	0.00339	0.00265	0.00192	0.00124	6.53E-04	2.19E-04	0
8.06	0.0039	0.00369	0.00347	0.00316	0.00286	0.0025	0.00211	0.00168	0.00124	8.14E-04	4.38E-04	1.49E-04	0
8.07	4.04E-04	5.69E-04	7.41E-04	8.17E-04	8.07E-04	7.50E-04	6.48E-04	4.52E-04	5.09E-04	3.46E-04	1.94E-04	8.85E-05	0
8.08	-0.00298	-0.0025	-0.0199	-0.0182	-0.0127	-9.54E-04	-6.78E-04	-4.52E-04	-2.78E-04	-1.54E-04	-3.55E-04	-1.15E-04	0
8.09	-0.00625	-0.00551	-0.00472	-0.00406	-0.0034	-0.00277	-0.00216	-0.00161	-0.00111	-8.91E-04	-8.58E-04	-2.18E-04	0
8.1	-0.00942	-0.00846	-0.00744	-0.00685	-0.00555	-0.00461	-0.00388	-0.00328	-0.0026	-0.00198	-0.00125	-9.58E-04	0
8.11	-0.01254	-0.01137	-0.01014	-0.00893	-0.00777	-0.00645	-0.00521	-0.00404	-0.00327	-0.00238	-0.00126	-3.24E-04	0
8.12	-0.01563	-0.01424	-0.0128	-0.01128	-0.00981	-0.00861	-0.00761	-0.00671	-0.00518	-0.00453	-0.00291	-5.18E-04	0
8.13	-0.01889	-0.01708	-0.01541	-0.01385	-0.01184	-0.0101	-0.00815	-0.0063	-0.00483	-0.00326	-0.00168	-4.25E-04	0
8.14	-0.02175	-0.01988	-0.01794	-0.01589	-0.01378	-0.01164	-0.00947	-0.00733	-0.00526	-0.00338	-0.00178	-5.96E-04	0
8.15	-0.02477	-0.02282	-0.02037	-0.01802	-0.01581	-0.01315	-0.01067	-0.00823	-0.00559	-0.00377	-0.00198	-6.58E-04	0
8.16	-0.02775	-0.02528	-0.02289	-0.02002	-0.01728	-0.01451	-0.01174	-0.00901	-0.00643	-0.00409	-0.00225	-7.36E-04	0
8.17	-0.03096	-0.02783	-0.02485	-0.02186	-0.01881	-0.01573	-0.01286	-0.00967	-0.00686	-0.00434	-0.00225	-7.36E-04	0
8.18	-0.03344	-0.03024	-0.02685	-0.02354	-0.02018	-0.01714	-0.01345	-0.01022	-0.00721	-0.00453	-0.00233	-7.57E-04	0
8.19	-0.03603	-0.03245	-0.02866	-0.02505	-0.02139	-0.01773	-0.01413	-0.01069	-0.0075	-0.00469	-0.0024	-7.71E-04	0
8.2	-0.03836	-0.03444	-0.03027	-0.02638	-0.02245	-0.01867	-0.01472	-0.01108	-0.00775	-0.00482	-0.00245	-7.83E-04	0
8.21	-0.04037	-0.03616	-0.03166	-0.02754	-0.02338	-0.01925	-0.01524	-0.01144	-0.00787	-0.00494	-0.00251	-7.95E-04	0
8.22	-0.042	-0.03756	-0.03281	-0.02851	-0.02417	-0.01987	-0.0157	-0.01176	-0.00817	-0.00506	-0.00256	-8.07E-04	0
8.23	-0.04323	-0.03864	-0.03372	-0.02929	-0.02483	-0.02041	-0.01611	-0.01206	-0.00837	-0.00516	-0.00261	-8.23E-04	0
8.24	-0.04405	-0.03938	-0.03438	-0.02989	-0.02535	-0.02085	-0.01648	-0.01234	-0.00857	-0.00534	-0.00268	-8.45E-04	0
8.25	-0.04447	-0.0398	-0.0346	-0.03029	-0.02573	-0.0212	-0.01676	-0.0126	-0.00877	-0.00544	-0.00275	-8.72E-04	0
8.26	-0.04451	-0.03961	-0.03462	-0.0303	-0.02592	-0.02143	-0.01702	-0.01281	-0.00885	-0.00558	-0.00283	-8.90E-04	0
8.27	-0.04422	-0.03972	-0.03491	-0.03049	-0.02596	-0.02155	-0.01716	-0.01297	-0.00899	-0.00568	-0.0029	-9.30E-04	0
8.28	-0.04363	-0.03927	-0.03462	-0.0303	-0.02592	-0.02152	-0.01712	-0.01304	-0.00917	-0.00575	-0.00295	-9.54E-04	0
8.29	-0.04277	-0.03858	-0.03411	-0.0299	-0.02563	-0.02134	-0.0171	-0.013	-0.00917	-0.00578	-0.00297	-9.65E-04	0
8.3	-0.0417	-0.03767	-0.03339	-0.02931	-0.02516	-0.02098	-0.01684	-0.01283	-0.00907	-0.00572	-0.00295	-9.59E-04	0
8.31	-0.04042	-0.03656	-0.03245	-0.02851	-0.02446	-0.02044	-0.01642	-0.01251	-0.00885	-0.00558	-0.00288	-9.34E-04	0
8.32	-0.03896	-0.03524	-0.03183	-0.02749	-0.02361	-0.01917	-0.01581	-0.01204	-0.00865	-0.00535	-0.00275	-8.90E-04	0
8.33	-0.03732	-0.03374	-0.02993	-0.02626	-0.02252	-0.01875	-0.01502	-0.01141	-0.00804	-0.00504	-0.00256	-8.31E-04	0
8.34	-0.0355	-0.03203	-0.02833	-0.02461	-0.02122	-0.01762	-0.01406	-0.01065	-0.00747	-0.00467	-0.00238	-7.58E-04	0
8.35	-0.03346	-0.03011	-0.02651	-0.02314	-0.01973	-0.01631	-0.01296	-0.00976	-0.00682	-0.00423	-0.00214	-6.76E-04	0
8.36	-0.0312	-0.02795	-0.02447	-0.02129	-0.01807	-0.01487	-0.01175	-0.0088	-0.0061	-0.00378	-0.00199	-5.90E-04	0
8.37	-0.02866	-0.02556	-0.02223	-0.01926	-0.01628	-0.01332	-0.01047	-0.00779	-0.00538	-0.00328	-0.00183	-5.03E-04	0
8.38	-0.02582	-0.02292	-0.01979	-0.01709	-0.01437	-0.0117	-0.00914	-0.00675	-0.00462	-0.0028	-0.00138	-4.19E-04	0
8.39	-0.02267	-0.02004	-0.01719	-0.01479	-0.01239	-0.01004	-0.0078	-0.00573	-0.00389	-0.0024	-0.00114	-3.39E-04	0
8.4	-0.01922	-0.01693	-0.01443	-0.01239	-0.01035	-0.00835	-0.00635	-0.0046	-0.00287	-0.0019	-9.12E-04	-2.86E-04	0
8.41	-0.0155	-0.01362	-0.01155	-0.00991	-0.00826	-0.00665	-0.00512	-0.00373	-0.0025	-0.00148	-7.05E-04	-2.02E-04	0
8.42	-0.01156	-0.01015	-0.00856	-0.00736	-0.00614	-0.00494	-0.0038	-0.00276	-0.00185	-0.00109	-5.17E-04	-1.47E-04	0

8.43 -0.00748 -0.00657 -0.00555 -0.00477 -0.00398 -0.00322 -0.00248 -0.00181 -0.00148 -0.00116 -0.00088 -0.00061 -0.00039 0 8.44 -0.00332 -0.00292 -0.00246 4.98E-04 -0.00214 -0.00181 -0.00148 -0.00116 -0.00088 -0.00061 -0.00039 0 8.45 8.27E-04 7.18E-04 6.27E-04 5.36E-04 4.45E-04 3.54E-04 2.63E-04 1.72E-04 8.1E-05 7.2E-05 6.3E-05 5.4E-05 4.5E-05 0 8.46 0.00491 0.00432 0.0037 0.00313 0.00257 0.00203 0.00153 0.00109 0.00061 0.00039 0.00021 0.00014 0.00007 0 8.47 0.00887 0.00762 0.00671 0.00573 0.00475 0.00378 0.00281 0.00184 0.00094 0.00049 0.00021 0.00011 0.00005 0 8.48 0.01265 0.01112 0.00964 0.00827 0.00691 0.00558 0.00426 0.00294 0.00162 0.00081 0.00041 0.00021 0.00011 0.00005 0 8.49 0.01622 0.01441 0.01246 0.01075 0.00903 0.00734 0.00573 0.00426 0.00294 0.00162 0.00081 0.00041 0.00021 0.00011 0.00005 0 8.5 0.01957 0.01744 0.01517 0.01314 0.01111 0.00909 0.00714 0.00532 0.00387 0.00269 0.00176 0.00113 0.00075 0.00048 0.00028 0 8.51 0.02268 0.0203 0.01774 0.01543 0.0131 0.01079 0.00853 0.0064 0.00445 0.00276 0.00168 0.00104 0.00068 0.00042 0.00025 0 8.52 0.02558 0.02296 0.02017 0.01761 0.01501 0.01242 0.00988 0.00745 0.00522 0.00326 0.00201 0.00135 0.00087 0.00052 0.0003 0 8.53 0.02826 0.02545 0.02245 0.01985 0.01681 0.01396 0.01115 0.00846 0.00595 0.00373 0.00231 0.00151 0.00096 0.00062 0.00037 0 8.54 0.03073 0.02773 0.02455 0.02153 0.01846 0.01537 0.01232 0.00936 0.00668 0.00415 0.00263 0.00173 0.00111 0.00072 0.00045 0 8.55 0.03298 0.02982 0.02648 0.02323 0.01993 0.01662 0.01333 0.01014 0.00715 0.00449 0.00279 0.00173 0.00111 0.00072 0.00045 0 8.56 0.03502 0.03168 0.02815 0.0247 0.0212 0.01766 0.01415 0.01075 0.00757 0.00475 0.00289 0.00181 0.00119 0.00072 0.00045 0 8.57 0.03683 0.03331 0.02968 0.02593 0.02222 0.01847 0.01477 0.01119 0.00786 0.00491 0.00301 0.00194 0.00122 0.00072 0.00045 0 8.58 0.03839 0.03467 0.03072 0.02688 0.02297 0.01905 0.01518 0.01146 0.00796 0.00498 0.00306 0.00199 0.00127 0.00072 0.00045 0 8.59 0.03968 0.03573 0.03154 0.02753 0.02345 0.01937 0.01537 0.01149 0.00796 0.00498 0.00306 0.00199 0.00127 0.00072 0.00045 0 8.6 0.04061 0.03645 0.03201 0.02786 0.02357 0.01931 0.01518 0.01129 0.00796 0.00498 0.00306 0.00199 0.00127 0.00072 0.00045 0 8.61 0.04113 0.03677 0.03212 0.02787 0.02357 0.01931 0.01518 0.01129 0.00796 0.00498 0.00306 0.00199 0.00127 0.00072 0.00045 0 8.62 0.04114 0.03666 0.03186 0.02756 0.02323 0.01895 0.01482 0.01096 0.00749 0.00452 0.00271 0.00164 0.00102 0.00065 0.00037 0 8.63 0.04059 0.03607 0.03132 0.02692 0.02262 0.01838 0.01431 0.01062 0.00721 0.00434 0.00257 0.00151 0.00091 0.00058 0.00032 0 8.64 0.03947 0.035 0.03018 0.02599 0.02178 0.01764 0.01368 0.01002 0.00677 0.00404 0.00242 0.00145 0.00087 0.00054 0.0003 0 8.65 0.03779 0.03347 0.02879 0.02477 0.02073 0.01678 0.01298 0.00948 0.00639 0.00381 0.00229 0.0014 0.00087 0.00054 0.0003 0 8.66 0.03567 0.03149 0.02706 0.02328 0.01949 0.01576 0.01221 0.00893 0.00603 0.0036 0.00218 0.0013 0.00079 0.00048 0.00028 0 8.67 0.03286 0.0281 0.02386 0.02015 0.0164 0.01298 0.0099 0.00678 0.00413 0.0025 0.00158 0.00096 0.00057 0.00033 0.00019 0 8.68 0.02971 0.02536 0.02173 0.01815 0.01474 0.01151 0.00857 0.00569 0.00322 0.0019 0.00119 0.0007 0.00045 0.00028 0.00016 0 8.69 0.02619 0.02232 0.01872 0.01532 0.0121 0.0093 0.00648 0.0039 0.00232 0.0014 0.00087 0.00054 0.0003 0.00018 0.0001 0 8.7 0.02239 0.02006 0.01755 0.01532 0.01296 0.01114 0.0093 0.00747 0.0047 0.00282 0.00168 0.0011 0.0007 0.00045 0.00028 0 8.71 0.01844 0.01686 0.01474 0.01296 0.01114 0.0093 0.00747 0.0047 0.00282 0.00168 0.0011 0.0007 0.00045 0.00028 0 8.72 0.01444 0.01318 0.01185 0.01051 0.00913 0.00771 0.00627 0.00466 0.00306 0.0019 0.00122 0.00072 0.00045 0.00028 0 8.73 0.01048 0.0097 0.00869 0.00797 0.00701 0.00601 0.00496 0.00388 0.00282 0.00183 0.0013 0.00087 0.00054 0.0003 0 8.74 0.00681 0.00626 0.00591 0.00538 0.00482 0.00421 0.00354 0.00283 0.0021 0.00156 0.00104 0.00068 0.00042 0.00028 0 8.75 0.00288 0.00269 0.00239 0.00216 0.00193 0.00168 0.00144 0.00119 0.00098 0.00079 0.0006 0.00043 0.0003 0.0002 0 8.76 -7.22E-04 -4.06E-04 -0.000381 -1.17E-04 -0.000251 -0.000205 -0.00016 -0.00011 0.00004 0.00002 0.00001 0.00001 0.00001 0 8.77 -0.00479 -0.00381 -0.00289 -0.00214 -0.00162 -0.00119 -0.00084 -0.00058 -0.00039 -0.00026 -0.00017 -0.00011 -0.00007 -0.00004 0 8.78 -0.00753 -0.00673 -0.00588 -0.00511 -0.00434 -0.00358 -0.00282 -0.00214 -0.00151 -0.00098 -0.00058 -0.00039 -0.00026 -0.00017 -0.00011 0 8.79 -0.01077 -0.00876 -0.00687 -0.00511 -0.00358 -0.00214 -0.00151 -0.00098 -0.00058 -0.00039 -0.00026 -0.00017 -0.00011 -0.00007 -0.00004 0 8.8 -0.01392 -0.0127 -0.01142 -0.0101 -0.00873 -0.00735 -0.00598 -0.00466 -0.00332 -0.00206 -0.0014 0.00004 0.00002 0 8.81 -0.01687 -0.01552 -0.01401 -0.01239 -0.01072 -0.00909 -0.00747 -0.00584 -0.00421 -0.00263 -0.0019 0.00004 0 8.82 -0.01992 -0.01819 -0.01641 -0.01448 -0.01251 -0.01049 -0.00846 -0.00646 -0.00444 -0.00282 0.00004 0 8.83 -0.02274 -0.0207 -0.01858 -0.01634 -0.01405 -0.01171 -0.00938 -0.00698 -0.00454 -0.00292 -0.0019 0.00004 0 8.84 -0.02537 -0.02289 -0.02048 -0.01791 -0.01529 -0.01266 -0.01049 -0.00778 -0.00534 -0.00332 0.00004 0 8.85 -0.02776 -0.02489 -0.02205 -0.01917 -0.01625 -0.01333 -0.01049 -0.00778 -0.00534 -0.00332 0.00004 0 8.86 -0.02983 -0.02666 -0.02329 -0.02012 -0.01684 -0.01379 -0.01075 -0.00791 -0.00537 -0.00332 0.00004 0 8.87 -0.03151 -0.02798 -0.02421 -0.02081 -0.01741 -0.01407 -0.01089 -0.00796 -0.00537 -0.00332 0.00004 0 8.88 -0.03271 -0.02891 -0.02481 -0.02126 -0.01772 -0.01426 -0.01098 -0.00796 -0.00537 -0.00332 0.00004 0 8.89 -0.03339 -0.02942 -0.02521 -0.02152 -0.01792 -0.01442 -0.01111 -0.00809 -0.00544 -0.00326 0.00004 0 8.9 -0.03352 -0.02962 -0.02521 -0.02152 -0.01792 -0.01442 -0.01111 -0.00809 -0.00544 -0.00326 0.00004 0 8.91 -0.03311 -0.02925 -0.02482 -0.02161 -0.01816 -0.01487 -0.01169 -0.00871 -0.00602 -0.00371 0.00004 0 8.92 -0.03225 -0.02868 -0.02482 -0.0215 0.00004 0.00004 0 8.93 -0.03109 -0.02787 -0.02442 -0.0213 -0.01815 -0.01501 -0.01194 -0.00901 -0.00632 -0.00396 0.00004 0 8.94 -0.02978 -0.02694 -0.02391 -0.02103 -0.01815 -0.01518 -0.01237 -0.00968 -0.00719 -0.00446 0.00004 0 8.95 -0.02844 -0.02596 -0.02334 -0.02117 -0.01815 -0.01511 -0.01243 -0.00973 -0.00738 -0.00461 0.00004 0

8.97	-0.0286	-0.0204	-0.0203	-0.01974	-0.01736	-0.01489	-0.01232	-0.00969	-0.00708	-0.00462	-0.00248	-8.50E-04	0
8.98	-0.02497	-0.02315	-0.0213	-0.01912	-0.01684	-0.01447	-0.01198	-0.00942	-0.00688	-0.00449	-0.0024	-8.21E-04	0
8.99	-0.02408	-0.02232	-0.02052	-0.01836	-0.01615	-0.01382	-0.0114	-0.00893	-0.00649	-0.00421	-0.00224	-7.60E-04	0
9	-0.02335	-0.02155	-0.01967	-0.01752	-0.01529	-0.01299	-0.01063	-0.00826	-0.00596	-0.00384	-0.00203	-6.84E-04	0
9.01	-0.02275	-0.02098	-0.01875	-0.01656	-0.01431	-0.01203	-0.00973	-0.00748	-0.00534	-0.00341	-0.00179	-5.98E-04	0
9.02	-0.02219	-0.02003	-0.01775	-0.01551	-0.01325	-0.01097	-0.00871	-0.00647	-0.00431	-0.00256	-0.00131	-5.10E-04	0
9.03	-0.02154	-0.01919	-0.01688	-0.01443	-0.01218	-0.00988	-0.00787	-0.00589	-0.0041	-0.00236	-0.00113	-4.21E-04	0
9.04	-0.02082	-0.01816	-0.01555	-0.01329	-0.01111	-0.00887	-0.00697	-0.00513	-0.00351	-0.00213	-0.00105	-3.18E-04	0
9.05	-0.01931	-0.01686	-0.01419	-0.01208	-0.00989	-0.00798	-0.00609	-0.00439	-0.0029	-0.00169	-0.0008	-2.12E-04	0
9.06	-0.01764	-0.01523	-0.01271	-0.01076	-0.00882	-0.00694	-0.00519	-0.00362	-0.0023	-0.00125	-0.00054	-1.09E-04	0
9.07	-0.01531	0.01328	-0.01101	-0.00926	-0.00732	-0.00582	-0.00424	-0.00285	-0.00171	-8.42E-04	-2.82E-04	-2.05E-05	0
9.08	-0.01274	-0.01101	-0.00908	-0.00758	-0.00607	-0.00461	-0.00328	-0.0021	-0.00117	-5.08E-04	-1.15E-04	3.03E-05	0
9.09	-0.00991	-0.0085	-0.00691	-0.0057	-0.00449	-0.00333	-0.00228	-0.0014	-7.2E-05	-2.82E-04	-1.26E-05	5.27E-05	0
9.1	-0.00686	-0.00578	-0.00454	-0.00366	-0.0028	-0.002	-0.00131	-7.48E-04	-3.98E-04	-7.29E-05	5.01E-05	5.71E-05	0
9.11	-0.00336	-0.00288	-0.00238	-0.00152	-0.00107	-6.73E-04	-3.54E-04	-1.21E-04	2.33E-05	1.01E-04	1.08E-04	5.97E-05	0
9.12	-1.19E-04	2.08E-04	6.07E-04	6.47E-04	6.86E-04	6.54E-04	6.03E-04	5.18E-04	4.10E-04	2.93E-04	1.76E-04	8.94E-05	0
9.13	0.00355	0.00336	0.00319	0.0028	0.00239	0.00198	0.00157	0.00118	8.31E-04	5.23E-04	2.72E-04	8.96E-05	0
9.14	0.00727	0.00652	0.00573	0.00481	0.00409	0.00331	0.00257	0.00189	7.88E-04	7.88E-04	3.65E-04	1.24E-04	0
9.15	0.01089	0.00959	0.0082	0.00689	0.0056	0.00466	0.00359	0.00263	0.00179	0.00108	5.38E-04	1.64E-04	0
9.16	0.01428	0.01251	0.01081	0.00906	0.00753	0.00605	0.00487	0.00342	0.00232	0.00141	6.94E-04	2.12E-04	0
9.17	0.01738	0.01525	0.01284	0.0111	0.00927	0.00749	0.0058	0.00426	0.0029	0.00176	8.71E-04	2.68E-04	0
9.18	0.02016	0.01778	0.01519	0.01311	0.01102	0.00895	0.00698	0.00516	0.00353	0.00215	0.00107	3.28E-04	0
9.19	0.02285	0.0201	0.01736	0.01506	0.01273	0.01043	0.0082	0.0061	0.0042	0.00258	0.00129	4.01E-04	0
9.2	0.02466	0.02223	0.0194	0.01691	0.01438	0.01186	0.00939	0.00705	0.0049	0.00303	0.00153	4.83E-04	0
9.21	0.02684	0.02416	0.02131	0.01863	0.01591	0.01319	0.01052	0.00795	0.00558	0.00348	0.00177	5.66E-04	0
9.22	0.02861	0.0259	0.02303	0.02019	0.0173	0.01444	0.01153	0.00876	0.00618	0.00398	0.00198	6.40E-04	0
9.23	0.03022	0.02745	0.02453	0.02154	0.0185	0.01543	0.01238	0.00943	0.00666	0.00419	0.00215	6.95E-04	0
9.24	0.0317	0.02881	0.02578	0.02265	0.01947	0.01625	0.01305	0.00993	0.00701	0.0044	0.00228	7.25E-04	0
9.25	0.03303	0.02967	0.02676	0.02351	0.02019	0.01693	0.01371	0.01025	0.00721	0.00451	0.0023	7.33E-04	0
9.26	0.03417	0.03091	0.02748	0.0241	0.02065	0.01717	0.01371	0.01038	0.00727	0.00452	0.00229	7.22E-04	0
9.27	0.03606	0.03159	0.02792	0.02441	0.02083	0.01724	0.01371	0.01032	0.00719	0.00445	0.00223	6.96E-04	0
9.28	0.03591	0.03195	0.02807	0.02443	0.02075	0.01708	0.0135	0.0101	0.00699	0.00429	0.00213	6.56E-04	0
9.29	0.03576	0.03196	0.02791	0.02418	0.02045	0.01671	0.01312	0.00874	0.00669	0.00407	0.002	6.09E-04	0
9.3	0.03548	0.0316	0.02743	0.02368	0.02043	0.01619	0.01262	0.0093	0.00634	0.00383	0.00187	5.81E-04	0
9.31	0.03477	0.03096	0.02696	0.02295	0.01922	0.01556	0.01208	0.00866	0.00601	0.00381	0.00176	5.25E-04	0
9.32	0.03363	0.02978	0.02563	0.02203	0.01843	0.0149	0.01154	0.00846	0.00573	0.00345	0.00168	5.05E-04	0
9.33	0.03209	0.02838	0.02436	0.02096	0.01756	0.01423	0.01106	0.00814	0.00554	0.00336	0.00186	5.05E-04	0
9.34	0.03017	0.0267	0.02283	0.01961	0.01668	0.0136	0.01065	0.0079	0.00544	0.00334	0.00168	5.28E-04	0
9.35	0.02792	0.0246	0.02143	0.01862	0.0159	0.01301	0.0103	0.00765	0.00548	0.00347	0.00183	6.12E-04	0
9.36	0.02544	0.02278	0.01981	0.01745	0.01495	0.01246	0.01001	0.00757	0.00548	0.00356	0.00191	6.55E-04	0
9.37	0.02296	0.02071	0.01842	0.0163	0.01414	0.01195	0.00974	0.00757	0.00544	0.00347	0.00183	6.84E-04	0
9.38	0.02028	0.01884	0.01693	0.01515	0.0133	0.01139	0.00942	0.00741	0.00543	0.00356	0.00192	6.84E-04	0
9.39	0.0178	0.01662	0.01543	0.01393	0.01237	0.01071	0.00895	0.0071	0.00523	0.00343	0.00185	6.37E-04	0
9.4	0.0155	0.01468	0.01368	0.01262	0.01128	0.00983	0.00824	0.00665	0.00482	0.00316	0.00169	5.78E-04	0
9.41	0.01343	0.01282	0.01226	0.01116	0.00968	0.00808	0.00727	0.00576	0.00422	0.00275	0.00146	4.84E-04	0
9.42	0.01162	0.01107	0.01055	0.00965	0.00848	0.00732	0.00607	0.00477	0.00347	0.00224	0.00118	3.98E-04	0
9.43	0.01005	0.00941	0.00884	0.00804	0.00704	0.00601	0.00504	0.0041	0.00324	0.00224	0.00118	3.98E-04	0
9.44	0.0086	0.00775	0.00684	0.00604	0.00504	0.00415	0.00329	0.00248	0.00173	0.00108	0.00073	2.82E-04	0
9.45	0.00707	0.00603	0.00507	0.00428	0.00328	0.00234	0.00188	0.00132	8.57E-04	4.94E-04	1.79E-04	1.79E-04	0
9.46	0.0053	0.0042	0.00327	0.00228	0.00168	0.00103	5.70E-04	2.42E-04	4.00E-05	5.55E-05	2.29E-04	6.96E-05	0
9.47	0.00321	0.00221	0.00107	5.35E-04	5.20E-05	-3.34E-04	-5.87E-04	-8.94E-04	-6.84E-04	-5.24E-04	-3.27E-04	-1.31E-04	0
9.48	3.08E-04	8.43E-05	-7.79E-04	-0.00108	-0.00134	-0.00151	-0.00154	-0.00144	-0.0012	-8.75E-04	-5.14E-04	-1.94E-04	0
9.49	-0.00179	-0.00214	-0.00261	-0.00258	-0.00258	-0.00248	-0.00228	-0.00197	-0.00156	-0.00108	-8.13E-04	-2.23E-04	0
9.5	-0.00448	-0.00439	-0.00437	-0.00404	-0.00368	-0.00327	-0.00281	-0.00229	-0.00172	-0.00115	-6.20E-04	-2.13E-04	0

9.51	-0.00714	-0.00659	-0.00606	-0.00536	-0.00464	-0.00391	-0.00317	-0.00244	-0.00173	-0.00109	-5.52E-04	-1.74E-04	C
9.52	-0.00972	-0.0087	-0.00857	-0.00857	-0.00855	-0.00845	-0.00843	-0.00849	-0.00866	-8.73E-04	-4.53E-04	-1.25E-04	C
9.53	-0.01212	-0.01085	-0.00909	-0.00788	-0.00627	-0.00492	-0.00366	-0.00254	-0.00163	-8.78E-04	-3.71E-05	-8.31E-05	C
9.54	-0.01426	-0.01239	-0.01038	-0.00867	-0.00699	-0.00538	-0.00396	-0.00266	-0.00163	-8.57E-04	-3.40E-04	-6.47E-05	C
9.55	-0.01607	-0.01389	-0.01151	-0.00958	-0.00788	-0.00659	-0.00426	-0.0029	-0.00178	-8.41E-04	-3.80E-04	-7.63E-05	C
9.56	-0.01748	-0.01509	-0.01247	-0.01041	-0.00839	-0.00649	-0.00476	-0.00328	-0.00206	-8.00E-04	-4.86E-04	-1.17E-04	C
9.57	-0.01846	-0.01569	-0.01321	-0.01121	-0.00914	-0.00718	-0.00538	-0.00368	-0.00247	-8.00E-04	-4.86E-04	-1.17E-04	C
9.58	-0.01904	-0.01684	-0.01403	-0.01197	-0.00993	-0.00796	-0.00611	-0.00444	-0.00329	-8.00E-04	-4.86E-04	-1.17E-04	C
9.59	-0.01929	-0.01707	-0.01486	-0.01272	-0.01074	-0.00888	-0.00692	-0.00516	-0.00356	-8.00E-04	-4.86E-04	-1.17E-04	C
9.6	-0.01934	-0.01738	-0.01529	-0.01344	-0.01155	-0.00965	-0.00775	-0.00592	-0.0042	-8.00E-04	-4.86E-04	-1.17E-04	C
9.61	-0.01932	-0.01784	-0.01588	-0.01412	-0.01231	-0.01045	-0.00855	-0.00664	-0.0048	-8.00E-04	-4.86E-04	-1.17E-04	C
9.62	-0.01936	-0.01792	-0.01643	-0.01475	-0.01289	-0.01115	-0.00923	-0.00727	-0.00532	-8.00E-04	-4.86E-04	-1.17E-04	C
9.63	-0.01954	-0.01825	-0.01684	-0.01527	-0.01353	-0.01168	-0.00974	-0.00771	-0.00567	-8.00E-04	-4.86E-04	-1.17E-04	C
9.65	-0.02043	-0.01909	-0.01775	-0.01596	-0.01409	-0.01202	-0.01001	-0.00793	-0.00583	-8.00E-04	-4.86E-04	-1.17E-04	C
9.66	-0.02111	-0.01957	-0.01801	-0.01608	-0.01407	-0.01199	-0.00984	-0.00766	-0.00564	-8.00E-04	-4.86E-04	-1.17E-04	C
9.67	-0.02187	-0.02003	-0.01813	-0.01602	-0.01386	-0.01165	-0.00943	-0.00723	-0.00515	-8.00E-04	-4.86E-04	-1.17E-04	C
9.68	-0.02258	-0.02039	-0.01808	-0.01579	-0.01347	-0.01115	-0.00866	-0.00687	-0.00465	-8.00E-04	-4.86E-04	-1.17E-04	C
9.69	-0.02308	-0.02055	-0.01785	-0.0154	-0.01294	-0.01052	-0.0082	-0.00604	-0.00411	-8.00E-04	-4.86E-04	-1.17E-04	C
9.7	-0.02323	-0.02043	-0.01742	-0.01485	-0.01229	-0.00982	-0.00749	-0.00539	-0.0039	-8.00E-04	-4.86E-04	-1.17E-04	C
9.71	-0.02292	-0.01987	-0.01678	-0.01415	-0.01157	-0.00909	-0.00688	-0.00477	-0.00306	-8.00E-04	-4.86E-04	-1.17E-04	C
9.72	-0.02208	-0.01912	-0.01586	-0.01331	-0.01078	-0.00837	-0.00516	-0.0024	-0.00143	-8.00E-04	-4.86E-04	-1.17E-04	C
9.73	-0.02073	-0.01789	-0.01476	-0.01234	-0.00896	-0.00769	-0.00562	-0.00355	-0.00221	-8.00E-04	-4.86E-04	-1.17E-04	C
9.74	-0.01989	-0.01693	-0.01343	-0.01126	-0.00811	-0.00706	-0.00461	-0.00316	-0.0021	-8.00E-04	-4.86E-04	-1.17E-04	C
9.75	-0.01665	-0.01441	-0.01192	-0.01007	-0.00623	-0.00466	-0.00316	-0.0021	-0.00119	-8.00E-04	-4.86E-04	-1.17E-04	C
9.76	-0.01407	-0.01227	-0.01029	-0.00881	-0.00733	-0.00598	-0.0042	-0.00316	-0.0021	-8.00E-04	-4.86E-04	-1.17E-04	C
9.77	-0.01126	-0.00968	-0.00857	-0.00749	-0.00638	-0.00528	-0.0042	-0.00316	-0.0021	-8.00E-04	-4.86E-04	-1.17E-04	C
9.78	-0.00834	-0.00761	-0.00682	-0.00612	-0.00559	-0.00463	-0.00383	-0.00275	-0.00208	-8.00E-04	-4.86E-04	-1.17E-04	C
9.79	-0.00547	-0.00526	-0.00506	-0.00472	-0.00433	-0.00389	-0.00336	-0.00275	-0.00215	-8.00E-04	-4.86E-04	-1.17E-04	C
9.8	-0.00276	-0.00301	-0.0033	-0.00328	-0.0032	-0.00303	-0.00275	-0.00235	-0.00185	-8.00E-04	-4.86E-04	-1.17E-04	C
9.81	-3.26E-04	-9.06E-04	-0.00158	-0.0016	-0.00197	-0.00205	-0.00205	-0.0018	-0.00148	-8.00E-04	-4.86E-04	-1.17E-04	C
9.82	0.0016	0.00101	1.10E-04	-2.98E-04	-6.59E-04	-9.33E-04	-0.00108	-0.00109	-9.68E-04	-7.39E-04	-4.55E-04	-1.81E-04	C
9.83	0.00363	0.00275	0.00176	0.00123	7.29E-04	2.95E-04	-3.57E-05	-2.46E-04	-3.34E-04	-3.18E-04	-2.25E-04	-1.01E-04	C
9.84	0.00518	0.00432	0.00337	0.00275	0.00215	0.00159	0.00111	0.00165	0.00111	6.90E-04	3.84E-05	8.62E-05	C
9.85	0.00655	0.00576	0.00449	0.00423	0.00356	0.00289	0.00225	0.00185	0.00111	6.90E-04	3.84E-05	8.62E-05	C
9.86	0.00779	0.00709	0.00635	0.00564	0.0049	0.00413	0.00334	0.00256	0.00181	5.74E-04	1.81E-04	8.62E-05	C
9.87	0.009	0.00837	0.00772	0.00694	0.00611	0.00524	0.00431	0.00336	0.00242	4.87E-04	1.81E-04	8.62E-05	C
9.88	0.01027	0.00964	0.00901	0.00813	0.0072	0.0062	0.00514	0.00404	0.00284	4.06E-04	1.81E-04	8.62E-05	C
9.89	0.01166	0.01094	0.01023	0.00922	0.00815	0.00702	0.00583	0.0046	0.00337	3.43E-04	1.81E-04	8.62E-05	C
9.9	0.01319	0.0123	0.0114	0.01023	0.0088	0.00773	0.00664	0.00504	0.0037	3.00E-04	1.81E-04	8.62E-05	C
9.91	0.01482	0.01368	0.01254	0.01118	0.00978	0.00834	0.00688	0.00539	0.00394	2.65E-04	1.81E-04	8.62E-05	C
9.92	0.01647	0.01507	0.01394	0.01264	0.01105	0.00968	0.00726	0.00565	0.00408	2.25E-04	1.81E-04	8.62E-05	C
9.93	0.01805	0.0164	0.01471	0.01294	0.01115	0.00935	0.00756	0.00581	0.00414	1.84E-04	1.81E-04	8.62E-05	C
9.94	0.01952	0.01765	0.0157	0.01373	0.01174	0.00975	0.00778	0.00611	0.00414	1.84E-04	1.81E-04	8.62E-05	C
9.95	0.02084	0.01877	0.01658	0.01443	0.01224	0.01007	0.00796	0.00639	0.00412	1.84E-04	1.81E-04	8.62E-05	C
9.96	0.02201	0.01974	0.0174	0.01469	0.01264	0.01032	0.00808	0.00658	0.0041	1.84E-04	1.81E-04	8.62E-05	C
9.97	0.02289	0.02051	0.01785	0.0154	0.01284	0.01051	0.00819	0.00663	0.0041	1.84E-04	1.81E-04	8.62E-05	C
9.98	0.02372	0.02106	0.01819	0.01567	0.01314	0.01068	0.00829	0.00669	0.00414	1.84E-04	1.81E-04	8.62E-05	C
9.99	0.02414	0.02136	0.01836	0.01582	0.01327	0.01077	0.00839	0.00678	0.00422	1.84E-04	1.81E-04	8.62E-05	C
10	0.0242	0.0214	0.01837	0.01585	0.01333	0.01085	0.00848	0.00678	0.0043	1.84E-04	1.81E-04	8.62E-05	C

0.97	0.00793	0.00714	0.00637	0.00557	0.00476	0.00395	0.00316	0.0024	0.00168	0.00105	5.31E-04	1.85E-04	0
0.98	0.0064	0.00757	0.00675	0.00592	0.00507	0.00422	0.00338	0.00257	0.00181	0.00113	5.72E-04	1.78E-04	0
0.99	0.00689	0.00802	0.00715	0.00628	0.00538	0.00449	0.00359	0.00273	0.00192	0.0012	6.03E-04	1.87E-04	0
1	0.00842	0.00849	0.00757	0.00665	0.00575	0.00488	0.00398	0.00313	0.00228	0.0015	6.25E-04	1.92E-04	0
1.01	0.00987	0.00898	0.00808	0.00718	0.00627	0.00537	0.00447	0.00357	0.00272	0.0019	6.41E-04	1.95E-04	0
1.02	0.01053	0.00847	0.00843	0.00736	0.00627	0.00518	0.00411	0.00309	0.00214	0.00132	6.59E-04	1.97E-04	0
1.03	0.01107	0.00994	0.00884	0.00769	0.00653	0.00557	0.00424	0.00317	0.00219	0.00134	6.62E-04	1.99E-04	0
1.04	0.01158	0.01039	0.00923	0.00799	0.00675	0.00553	0.00435	0.00324	0.0023	0.00136	6.68E-04	1.99E-04	0
1.05	0.01203	0.01078	0.00956	0.00828	0.00695	0.00567	0.00444	0.00329	0.00226	0.00137	6.70E-04	1.99E-04	0
1.06	0.01242	0.01112	0.00987	0.00848	0.00711	0.00578	0.00451	0.00334	0.00228	0.00138	6.71E-04	1.99E-04	0
1.07	0.01271	0.01137	0.0101	0.00866	0.00724	0.00587	0.00457	0.00337	0.00223	0.00139	6.72E-04	1.97E-04	0
1.08	0.01291	0.01154	0.01024	0.00877	0.00733	0.00593	0.00461	0.00339	0.00231	0.00139	6.71E-04	1.95E-04	0
1.09	0.0131	0.01162	0.01031	0.00893	0.00737	0.00597	0.00464	0.00341	0.00231	0.00139	6.71E-04	1.95E-04	0
1.1	0.01298	0.01116	0.01028	0.00882	0.00737	0.00597	0.00464	0.00341	0.00231	0.00139	6.67E-04	1.95E-04	0
1.11	0.01285	0.01149	0.01018	0.00874	0.00737	0.00597	0.00464	0.00341	0.00231	0.00139	6.61E-04	1.89E-04	0
1.12	0.01262	0.01128	0.00999	0.0086	0.00732	0.00593	0.00461	0.00339	0.00229	0.00137	6.55E-04	1.87E-04	0
1.13	0.01228	0.01099	0.00974	0.0084	0.00706	0.00574	0.00447	0.00329	0.00227	0.00136	6.49E-04	1.85E-04	0
1.14	0.01186	0.01062	0.00942	0.00813	0.00684	0.00557	0.00435	0.00329	0.00224	0.00134	6.41E-04	1.84E-04	0
1.15	0.01135	0.01017	0.00902	0.00779	0.00656	0.00535	0.00419	0.00309	0.00218	0.00131	6.28E-04	1.81E-04	0
1.16	0.01076	0.00964	0.00855	0.00738	0.00622	0.00507	0.00397	0.00293	0.00211	0.00126	6.07E-04	1.75E-04	0
1.17	0.01007	0.00902	0.00808	0.00689	0.00568	0.00472	0.00389	0.00282	0.002	0.0012	5.76E-04	1.68E-04	0
1.18	0.00929	0.00831	0.00737	0.00633	0.00531	0.00431	0.00335	0.00246	0.00185	0.00111	5.33E-04	1.53E-04	0
1.19	0.00839	0.0075	0.00664	0.00569	0.00474	0.00383	0.00296	0.00216	0.00167	9.93E-04	4.74E-04	1.35E-04	0
1.2	0.00738	0.00658	0.00581	0.00485	0.0041	0.00328	0.00251	0.00181	0.00145	8.52E-04	4.00E-04	1.11E-04	0
1.21	0.00624	0.00554	0.00489	0.00413	0.00339	0.00268	0.00202	0.00143	0.00119	6.86E-04	3.15E-04	8.32E-05	0
1.22	0.00497	0.0044	0.00387	0.00323	0.00261	0.00203	0.0015	0.00103	9.21E-04	5.16E-04	2.26E-04	5.47E-05	0
1.23	0.00359	0.00315	0.00277	0.00226	0.00178	0.00135	9.60E-04	6.35E-04	6.49E-04	3.48E-04	1.44E-04	3.07E-05	0
1.24	0.00211	0.00183	0.0016	0.00125	9.34E-04	6.90E-04	4.32E-04	2.58E-04	3.79E-04	1.92E-04	7.25E-05	1.17E-05	0
1.25	5.98E-04	4.53E-04	3.89E-04	2.23E-04	8.67E-05	-1.15E-05	-7.29E-05	-8.99E-05	1.31E-04	5.14E-05	9.62E-06	-4.13E-06	0
1.26	-0.00103	-9.49E-04	-8.43E-04	-8.06E-04	-7.45E-04	-6.57E-04	-5.50E-04	-4.29E-04	-3.05E-04	-1.89E-04	-9.30E-05	-2.76E-05	0
1.27	-0.00261	-0.00234	-0.00207	-0.00181	-0.00155	-0.00127	-9.69E-04	-7.32E-04	-4.91E-04	-2.87E-04	-1.33E-04	-3.57E-05	0
1.28	-0.00413	-0.00367	-0.00325	-0.00277	-0.0023	-0.00184	-0.0014	-0.001	-6.54E-04	-3.70E-04	-1.64E-04	-4.06E-05	0
1.29	-0.00553	-0.00491	-0.00433	-0.00384	-0.00338	-0.00294	-0.0024	-0.00176	-7.92E-04	-4.90E-04	-2.05E-04	-4.32E-05	0
1.3	-0.00677	-0.00599	-0.00528	-0.00444	-0.00355	-0.00277	-0.00206	-0.00143	-9.01E-04	-4.90E-04	-2.13E-04	-4.44E-05	0
1.31	-0.0076	-0.00689	-0.00606	-0.00502	-0.00402	-0.00311	-0.00228	-0.00157	-9.77E-04	-5.23E-04	-2.51E-04	-4.34E-05	0
1.32	-0.00858	-0.00756	-0.00664	-0.00547	-0.00437	-0.00335	-0.00244	-0.00166	-0.0102	-5.34E-04	-2.11E-04	-3.66E-05	0
1.33	-0.00908	-0.00788	-0.00699	-0.00576	-0.00459	-0.0035	-0.00254	-0.00171	-0.0103	-5.28E-04	-1.89E-04	-3.13E-05	0
1.34	-0.00925	-0.00814	-0.00713	-0.00588	-0.00468	-0.00357	-0.00256	-0.00172	-0.0102	-5.24E-04	-1.93E-04	-2.77E-05	0
1.35	-0.00917	-0.00807	-0.00707	-0.00584	-0.00466	-0.00357	-0.00256	-0.00172	-0.0102	-5.24E-04	-1.93E-04	-2.77E-05	0
1.36	-0.00883	-0.00779	-0.00663	-0.00566	-0.00454	-0.00356	-0.00256	-0.00172	-0.0102	-5.24E-04	-1.93E-04	-2.77E-05	0
1.37	-0.00827	-0.00731	-0.00644	-0.00537	-0.00435	-0.00339	-0.00252	-0.00175	-0.0111	-5.70E-04	-2.28E-04	-4.38E-05	0
1.38	-0.00753	-0.00669	-0.00591	-0.00498	-0.00408	-0.00324	-0.00245	-0.00175	-0.0111	-6.15E-04	-2.63E-04	-6.04E-05	0
1.39	-0.00668	-0.00595	-0.00527	-0.00445	-0.00374	-0.00302	-0.00233	-0.00175	-0.0114	-6.68E-04	-3.11E-04	-8.43E-05	0
1.4	-0.00571	-0.00512	-0.00454	-0.00393	-0.00332	-0.00272	-0.00214	-0.00159	-0.0108	-7.10E-04	-3.10E-04	-9.79E-05	0
1.41	-0.00469	-0.00422	-0.00374	-0.00329	-0.00283	-0.00235	-0.00187	-0.00141	-0.0108	-7.50E-04	-3.10E-04	-1.10E-04	0
1.42	-0.00385	-0.00329	-0.00281	-0.00239	-0.00203	-0.00166	-0.00128	-0.00088	-0.0108	-7.93E-04	-2.82E-04	-1.39E-04	0
1.43	-0.00257	-0.00233	-0.00207	-0.00189	-0.00168	-0.00143	-0.00115	-0.00088	-0.0108	-8.07E-04	-2.82E-04	-1.39E-04	0
1.44	-0.00149	-0.00136	-0.00121	-0.0011	-0.00102	-0.00094	-0.00088	-0.00088	-0.0108	-8.07E-04	-2.82E-04	-1.39E-04	0
1.45	-3.99E-04	-3.73E-04	-3.55E-04	-3.33E-04	-3.12E-04	-2.72E-04	-1.48E-04	-8.25E-05	-3.11E-05	-3.11E-05	-2.04E-06	5.70E-06	0
1.46	7.17E-04	6.50E-04	5.77E-04	4.95E-04	4.18E-04	3.39E-04	2.67E-04	2.06E-04	1.43E-04	8.11E-05	2.92E-05	2.92E-05	0
1.47	0.00189	0.00173	0.00154	0.00142	0.00128	0.00111	9.16E-04	7.17E-04	5.19E-04	3.33E-04	1.72E-04	5.51E-05	0
1.48	0.00315	0.00288	0.00258	0.0023	0.00213	0.00195	0.00179	0.00161	8.58E-04	5.47E-04	2.61E-04	8.88E-05	0
1.49	0.00451	0.00413	0.0037	0.00339	0.00302	0.00261	0.00226	0.00189	7.81E-04	7.81E-04	4.04E-04	1.30E-04	0
1.5	0.006	0.00547	0.00491	0.00445	0.00394	0.00348	0.00302	0.00258	7.00E-04	7.00E-04	3.20E-04	8.88E-05	0
1.51	0.0076	0.00681	0.0062	0.00556	0.00488	0.00417	0.00364	0.00313	6.00E-04	6.00E-04	2.60E-04	1.72E-04	0
1.52	0.0093	0.00843	0.00756	0.00672	0.00585	0.00495	0.00417	0.00342	5.00E-04	5.00E-04	2.10E-04	2.10E-04	0
1.53	0.01109	0.01003	0.00897	0.00791	0.00683	0.00573	0.00463	0.00356	4.00E-04	4.00E-04	1.40E-04	2.47E-04	0
1.54	0.01393	0.01166	0.01041	0.00911	0.0075	0.00649	0.00529	0.00419	3.00E-04	3.00E-04	8.80E-04	2.69E-04	0
1.55	0.01477	0.01328	0.01183	0.0103	0.00875	0.00723	0.00573	0.00443	2.00E-04	2.00E-04	9.13E-04	2.77E-04	0

1.56	0.01656	0.01486	0.01321	0.01144	0.00967	0.00791	0.00622	0.00482	0.00317	0.00192	9.35E-04	2.75E-04	0
1.57	0.01826	0.01635	0.01415	0.0125	0.0105	0.00864	0.00685	0.0049	0.00332	0.00198	9.54E-04	2.73E-04	0
1.58	0.01981	0.01777	0.01587	0.01344	0.01123	0.00909	0.00704	0.00515	0.00347	0.00206	9.77E-04	2.75E-04	0
1.59	0.02114	0.01886	0.01689	0.01426	0.01187	0.00969	0.00737	0.00537	0.0036	0.00213	0.001	2.80E-04	0
1.6	0.02221	0.0198	0.01752	0.01493	0.01239	0.00985	0.00765	0.00555	0.00371	0.00218	0.00103	2.84E-04	0
1.61	0.02399	0.02049	0.01812	0.01542	0.01278	0.00986	0.00786	0.00569	0.00379	0.00222	0.00104	2.83E-04	0
1.62	0.02344	0.02089	0.01847	0.01571	0.013	0.01041	0.00789	0.00577	0.00384	0.00224	0.00104	2.80E-04	0
1.63	0.02355	0.02088	0.01855	0.01577	0.01305	0.01045	0.00799	0.00578	0.00384	0.00223	0.00103	2.77E-04	0
1.64	0.02332	0.02077	0.01835	0.01561	0.01282	0.01034	0.00792	0.00571	0.00378	0.00222	0.00101	2.71E-04	0
1.65	0.02272	0.02023	0.01782	0.01521	0.01259	0.01008	0.00771	0.00556	0.00367	0.00213	9.77E-04	2.59E-04	0
1.66	0.02175	0.01937	0.0171	0.01457	0.01207	0.00966	0.00738	0.00531	0.0035	0.00202	9.20E-04	2.41E-04	0
1.67	0.02043	0.01819	0.01606	0.01368	0.01133	0.00906	0.00692	0.00497	0.00326	0.00187	8.47E-04	2.18E-04	0
1.68	0.01978	0.01697	0.01474	0.01255	0.01038	0.00829	0.00633	0.00453	0.00297	0.0017	7.66E-04	1.96E-04	0
1.69	0.01676	0.01492	0.01317	0.01119	0.00923	0.00736	0.0056	0.00401	0.00282	0.0015	6.77E-04	1.74E-04	0
1.7	0.01446	0.01266	0.01136	0.00961	0.00791	0.00629	0.00477	0.00341	0.00223	0.00127	5.71E-04	1.48E-04	0
1.71	0.01187	0.01055	0.00932	0.00785	0.00643	0.00509	0.00384	0.00273	0.00177	1.00E-03	4.44E-04	1.10E-04	0
1.72	0.00902	0.008	0.00707	0.00591	0.0048	0.00376	0.00282	0.00197	0.00126	8.95E-04	2.97E-04	6.93E-05	0
1.73	0.00595	0.00525	0.00462	0.00398	0.00303	0.00233	0.0017	0.00115	8.95E-04	3.55E-04	1.33E-04	2.07E-05	0
1.74	0.00268	0.00232	0.002	0.00156	0.00115	4.99E-04	4.99E-04	2.63E-04	9.29E-05	4.12E-05	2.24E-04	-2.99E-05	0
1.75	-7.56E-04	-7.63E-04	-7.42E-04	-7.88E-04	-8.13E-04	-8.01E-04	-7.50E-04	-6.81E-04	-5.37E-04	-3.86E-04	-2.24E-04	-8.30E-05	0
1.76	-0.00432	-0.00395	-0.00357	-0.00321	-0.00283	-0.00244	-0.00202	-0.0016	-0.00118	-7.55E-04	-4.13E-04	-1.39E-04	0
1.77	-0.00798	-0.00721	-0.00646	-0.00568	-0.00489	-0.0041	-0.00331	-0.00255	-0.00182	-0.00116	-6.02E-04	-1.94E-04	0
1.78	-0.01168	-0.01052	-0.00938	-0.00818	-0.00697	-0.00578	-0.00461	-0.00349	-0.00246	-0.00154	-7.85E-04	-2.47E-04	0
1.79	-0.01539	-0.01383	-0.01231	-0.01119	-0.00919	-0.00725	-0.00542	-0.00375	-0.0023	-0.0014	-3.45E-04	-2.98E-04	0
1.8	-0.01908	-0.01713	-0.01524	-0.01322	-0.01119	-0.00919	-0.00725	-0.00542	-0.00375	-0.0023	-0.0014	-3.45E-04	0
1.81	-0.02273	-0.0204	-0.01815	-0.01572	-0.01329	-0.00989	-0.00737	-0.00441	-0.0027	-0.00133	-3.89E-04	-2.47E-04	0
1.82	-0.02632	-0.02362	-0.021	-0.01818	-0.01536	-0.01258	-0.00989	-0.00737	-0.00441	-0.0027	-0.00133	-3.89E-04	0
1.83	-0.02981	-0.02674	-0.02377	-0.02056	-0.01737	-0.01422	-0.01118	-0.00833	-0.00573	-0.0031	-0.00152	-4.55E-04	0
1.84	-0.03316	-0.02974	-0.02642	-0.02285	-0.01923	-0.01579	-0.01241	-0.00924	-0.00635	-0.00387	-0.00219	-5.10E-04	0
1.85	-0.03636	-0.03259	-0.02894	-0.02502	-0.02111	-0.01726	-0.01356	-0.01008	-0.00692	-0.0042	-0.00235	-6.07E-04	0
1.86	-0.03935	-0.03526	-0.03129	-0.02704	-0.02228	-0.01863	-0.01461	-0.01084	-0.00743	-0.0045	-0.00239	-6.43E-04	0
1.87	-0.04209	-0.03771	-0.03349	-0.02904	-0.02424	-0.01986	-0.01555	-0.01151	-0.00787	-0.00475	-0.0023	-6.72E-04	0
1.88	-0.04457	-0.03991	-0.03541	-0.03096	-0.02571	-0.02096	-0.01638	-0.0121	-0.00825	-0.00467	-0.00224	-6.95E-04	0
1.89	-0.04672	-0.04183	-0.03711	-0.03199	-0.02689	-0.02189	-0.01709	-0.0126	-0.00857	-0.00515	-0.00248	-7.14E-04	0
1.9	-0.04953	-0.04343	-0.03852	-0.03317	-0.02784	-0.02264	-0.01785	-0.01329	-0.00902	-0.00529	-0.00254	-7.31E-04	0
1.91	-0.04863	-0.04467	-0.03962	-0.03408	-0.02855	-0.02319	-0.01805	-0.01345	-0.00912	-0.00546	-0.00256	-7.45E-04	0
1.92	-0.05089	-0.04551	-0.04035	-0.03465	-0.029	-0.02352	-0.0183	-0.01345	-0.00912	-0.00546	-0.00256	-7.45E-04	0
1.93	-0.05135	-0.04591	-0.0407	-0.03491	-0.02918	-0.02364	-0.01836	-0.01348	-0.00912	-0.00545	-0.00257	-7.45E-04	0
1.94	-0.05129	-0.04584	-0.04062	-0.03482	-0.02908	-0.02353	-0.01825	-0.01337	-0.00893	-0.00538	-0.00257	-7.29E-04	0
1.95	-0.05069	-0.04526	-0.04012	-0.03437	-0.02868	-0.02318	-0.01795	-0.01313	-0.00884	-0.00535	-0.00249	-7.03E-04	0
1.96	-0.04953	-0.04424	-0.03918	-0.03355	-0.02798	-0.02259	-0.01747	-0.01275	-0.00867	-0.00507	-0.00224	-6.71E-04	0
1.97	-0.04781	-0.04289	-0.0378	-0.03235	-0.02687	-0.02175	-0.01668	-0.01225	-0.00821	-0.00485	-0.00228	-6.36E-04	0
1.98	-0.04554	-0.04068	-0.03599	-0.03079	-0.02565	-0.02067	-0.01596	-0.01162	-0.00778	-0.00459	-0.00215	-5.97E-04	0
1.99	-0.04273	-0.03814	-0.03375	-0.02885	-0.02402	-0.01935	-0.01493	-0.01068	-0.00726	-0.00427	-0.002	-5.53E-04	0
2	-0.03839	-0.03514	-0.03109	-0.02656	-0.0221	-0.01778	-0.01371	-0.00966	-0.00685	-0.00391	-0.00183	-3.01E-04	0
2.01	-0.03553	-0.03189	-0.02802	-0.02382	-0.01988	-0.01586	-0.0123	-0.00862	-0.00594	-0.00348	-0.00162	-4.41E-04	0
2.02	-0.03118	-0.02779	-0.02456	-0.02073	-0.01737	-0.01393	-0.0107	-0.00773	-0.00513	-0.00298	-0.00138	-3.68E-04	0
2.03	-0.02638	-0.02346	-0.02073	-0.01764	-0.01459	-0.01099	-0.0081	-0.00513	-0.00243	-0.0011	-8.16E-04	-2.87E-04	0
2.04	-0.02112	-0.01879	-0.01657	-0.01405	-0.01157	-0.0092	-0.00697	-0.00467	-0.00243	-0.0011	-8.16E-04	-2.87E-04	0
2.05	-0.01553	-0.01377	-0.0121	-0.01021	-0.00834	-0.00657	-0.00462	-0.00345	-0.00221	-0.00122	-5.28E-04	-1.23E-04	0
2.06	-0.00982	-0.00849	-0.00745	-0.00618	-0.00496	-0.00382	-0.00279	-0.0019	-0.00116	-6.08E-04	-2.38E-04	-4.30E-05	0
2.07	-0.00345	-0.00289	-0.00245	-0.00201	-0.00148	-0.00101	-6.22E-04	-3.21E-04	-1.11E-04	4.92E-05	4.92E-05	3.46E-05	0
2.08	0.00298	0.00239	0.00226	0.00208	0.0018	0.00165	0.00157	0.00127	9.48E-04	6.25E-04	3.34E-04	1.11E-04	0
2.09	0.0083	0.00745	0.00657	0.00566	0.00478	0.00472	0.00378	0.00286	0.002	0.00124	6.20E-04	1.89E-04	0
2.1	0.01571	0.0141	0.01252	0.01089	0.00923	0.00758	0.00657	0.00444	0.00305	0.00185	9.04E-04	2.68E-04	0
2.11	0.02204	0.01974	0.01752	0.01512	0.01273	0.01039	0.00812	0.006	0.00409	0.00246	0.00118	3.42E-04	0
2.12	0.02818	0.02521	0.02236	0.01922	0.01611	0.01309	0.01019	0.0075	0.00509	0.00305	0.00146	4.19E-04	0
2.13	0.03404	0.03042	0.02697	0.02312	0.01933	0.01565	0.01216	0.00892	0.00604	0.00361	0.00173	4.93E-04	0
2.14	0.03951	0.03529	0.03127	0.02677	0.02234	0.01805	0.01389	0.01025	0.00692	0.00413	0.00197	5.60E-04	0

2.15	0.04451	0.03975	0.03521	0.03012	0.0251	0.02026	0.01568	0.01146	0.00772	0.00459	0.00218	6.15E-04
2.16	0.04896	0.04371	0.03871	0.03311	0.02759	0.02226	0.01722	0.01255	0.00843	0.00489	0.00236	6.80E-04
2.17	0.05292	0.04715	0.04175	0.03576	0.02976	0.02399	0.01853	0.01351	0.00908	0.00535	0.00252	7.00E-04
2.18	0.05603	0.05002	0.04428	0.03786	0.03157	0.02545	0.01965	0.01432	0.0096	0.00598	0.00266	7.39E-04
2.19	0.05865	0.05226	0.04627	0.03959	0.03333	0.02705	0.02085	0.01567	0.01004	0.00612	0.00278	7.74E-04
2.2	0.06034	0.05387	0.04769	0.04082	0.03402	0.02745	0.02121	0.01546	0.01037	0.00612	0.00288	8.01E-04
2.21	0.0614	0.05483	0.04854	0.04154	0.03463	0.02795	0.0216	0.01575	0.01057	0.00624	0.00284	8.18E-04
2.22	0.06173	0.05512	0.0488	0.04177	0.03463	0.02811	0.02174	0.01586	0.01065	0.0063	0.00287	8.30E-04
2.23	0.06136	0.05479	0.04851	0.04153	0.03464	0.02796	0.02163	0.01579	0.01062	0.00628	0.00288	8.36E-04
2.24	0.0603	0.05365	0.0477	0.04065	0.03408	0.02753	0.02131	0.01558	0.01049	0.00623	0.00286	8.33E-04
2.25	0.0596	0.05236	0.04639	0.03975	0.03319	0.02684	0.02079	0.01522	0.01027	0.00611	0.00281	8.22E-04
2.26	0.05832	0.05035	0.04464	0.03828	0.032	0.02591	0.0201	0.01473	0.00966	0.00572	0.00273	8.04E-04
2.27	0.05354	0.04788	0.04246	0.03646	0.03052	0.02474	0.01924	0.01413	0.00957	0.00572	0.00273	7.81E-04
2.28	0.05031	0.04501	0.03992	0.03432	0.02877	0.02337	0.0182	0.0134	0.00911	0.00546	0.00263	7.57E-04
2.29	0.04669	0.04179	0.03707	0.03192	0.02681	0.02181	0.01703	0.01257	0.00857	0.00516	0.0025	7.28E-04
2.3	0.04276	0.0383	0.03398	0.02833	0.02468	0.02012	0.01575	0.01166	0.00797	0.00482	0.00234	6.89E-04
2.31	0.03859	0.0346	0.03073	0.02657	0.02241	0.01832	0.01437	0.01087	0.00732	0.00444	0.00216	6.58E-04
2.32	0.03427	0.03075	0.02734	0.02369	0.02004	0.01643	0.01293	0.00962	0.00662	0.00403	0.00197	5.85E-04
2.33	0.02996	0.02683	0.02387	0.02074	0.01759	0.01447	0.01142	0.00854	0.0059	0.00381	0.00178	5.33E-04
2.34	0.02545	0.02289	0.02039	0.01775	0.0151	0.01246	0.00988	0.00742	0.00516	0.00319	0.00159	4.84E-04
2.35	0.02107	0.01898	0.01692	0.01478	0.01281	0.01045	0.00833	0.0063	0.00442	0.00275	0.00139	4.32E-04
2.36	0.01678	0.01514	0.01353	0.01196	0.01017	0.00846	0.0068	0.00519	0.00367	0.00231	0.00118	3.75E-04
2.37	0.01263	0.01143	0.01024	0.00904	0.00781	0.00657	0.00532	0.0041	0.00294	0.00187	9.73E-04	3.15E-04
2.38	0.00887	0.0079	0.0071	0.00635	0.00556	0.00474	0.00399	0.00305	0.00223	0.00145	7.73E-04	2.58E-04
2.39	0.00493	0.00456	0.00415	0.00381	0.00343	0.00306	0.00266	0.00227	0.00156	0.00105	5.77E-04	2.02E-04
2.4	0.0014	0.0014	0.0014	0.00139	0.0014	0.00136	0.00126	0.0011	8.7E-04	8.18E-04	1.29E-04	1.29E-04
2.41	-0.00197	-0.00163	-0.00137	-9.59E-04	-5.91E-04	-2.86E-04	-9.29E-05	7.59E-05	1.32E-04	1.26E-04	8.59E-05	3.65E-05
2.42	-0.00324	-0.0046	-0.00406	-0.00332	-0.00264	-0.00202	-0.00149	-7.11E-04	-0.00032	-4.35E-04	-2.18E-04	-8.75E-05
2.43	-0.00647	-0.00758	-0.00679	-0.00578	-0.00482	-0.00391	-0.00307	-0.00232	-0.00165	-0.00105	-5.50E-04	-2.81E-04
2.44	-0.00847	-0.01063	-0.00957	-0.00832	-0.00709	-0.00591	-0.00476	-0.00366	-0.00282	-0.00228	-0.00143	-3.67E-04
2.45	-0.01518	-0.01377	-0.01238	-0.01089	-0.00941	-0.00793	-0.00644	-0.00498	-0.00356	-0.00226	-0.00116	-8.68E-04
2.46	-0.01875	-0.017	-0.01521	-0.01348	-0.01171	-0.00989	-0.00804	-0.00622	-0.00443	-0.0028	-0.00143	-4.50E-04
2.47	-0.02251	-0.02034	-0.01811	-0.01609	-0.01397	-0.01177	-0.00953	-0.00732	-0.00516	-0.00327	-0.00166	-5.20E-04
2.48	-0.02639	-0.0238	-0.02112	-0.01874	-0.01623	-0.0136	-0.01094	-0.00833	-0.00586	-0.00385	-0.00184	-5.65E-04
2.49	-0.03033	-0.02732	-0.02426	-0.02144	-0.01847	-0.01539	-0.01229	-0.00927	-0.00645	-0.00425	-0.00241	-5.90E-04
2.5	-0.0343	-0.03098	-0.02744	-0.0241	-0.02064	-0.01711	-0.01356	-0.01093	-0.00789	-0.00498	-0.0027	-6.06E-04
2.51	-0.03826	-0.03439	-0.03058	-0.02684	-0.02284	-0.01863	-0.01469	-0.01193	-0.00848	-0.00452	-0.00216	-6.32E-04
2.52	-0.04207	-0.03773	-0.03353	-0.02896	-0.02441	-0.01985	-0.01564	-0.0128	-0.00949	-0.00452	-0.00216	-6.71E-04
2.53	-0.04557	-0.04076	-0.03619	-0.03102	-0.02595	-0.02105	-0.01641	-0.01359	-0.00989	-0.00498	-0.00241	-7.08E-04
2.54	-0.04881	-0.04339	-0.03847	-0.0328	-0.02727	-0.02199	-0.01703	-0.01411	-0.00989	-0.00498	-0.00241	-7.08E-04
2.55	-0.05107	-0.04553	-0.03847	-0.0328	-0.02727	-0.02199	-0.01703	-0.01411	-0.00989	-0.00498	-0.00241	-7.08E-04
2.56	-0.05288	-0.04712	-0.04172	-0.03543	-0.02927	-0.02279	-0.01756	-0.01306	-0.00863	-0.00514	-0.00246	-7.04E-04
2.57	-0.05405	-0.04817	-0.04263	-0.03628	-0.03002	-0.02347	-0.01843	-0.01334	-0.00874	-0.00516	-0.00244	-6.81E-04
2.58	-0.05463	-0.04873	-0.04315	-0.0368	-0.03054	-0.02452	-0.01884	-0.01387	-0.00891	-0.00539	-0.00254	-6.78E-04
2.59	-0.05471	-0.04887	-0.04331	-0.03707	-0.0309	-0.02492	-0.01926	-0.01407	-0.00948	-0.00565	-0.00269	-7.07E-04
2.6	-0.05438	-0.04886	-0.04318	-0.03711	-0.03111	-0.02527	-0.01969	-0.01452	-0.00989	-0.00586	-0.00289	-7.69E-04
2.61	-0.05377	-0.04821	-0.04283	-0.03711	-0.03121	-0.02554	-0.02008	-0.01485	-0.01003	-0.00655	-0.00309	-8.42E-04
2.62	-0.05298	-0.0476	-0.04233	-0.03677	-0.03121	-0.02577	-0.02052	-0.01549	-0.01082	-0.0067	-0.00335	-8.01E-04
2.63	-0.05211	-0.0469	-0.04175	-0.03645	-0.03111	-0.02569	-0.02052	-0.01551	-0.01085	-0.00672	-0.00336	-8.01E-04
2.64	-0.05126	-0.04619	-0.04113	-0.03607	-0.03091	-0.02569	-0.02052	-0.01551	-0.01085	-0.00672	-0.00336	-8.01E-04
2.65	-0.0505	-0.04553	-0.04055	-0.03565	-0.03061	-0.02569	-0.02052	-0.01551	-0.01085	-0.00672	-0.00336	-8.01E-04
2.66	-0.04984	-0.04484	-0.04002	-0.03519	-0.03002	-0.02569	-0.02052	-0.01551	-0.01085	-0.00672	-0.00336	-8.01E-04
2.67	-0.04927	-0.04438	-0.03952	-0.03465	-0.02966	-0.0246	-0.01957	-0.01472	-0.01022	-0.00628	-0.00321	-9.71E-04
2.68	-0.04869	-0.0438	-0.03899	-0.03402	-0.02907	-0.02392	-0.01895	-0.01421	-0.00984	-0.00603	-0.0031	-9.35E-04
2.69	-0.04802	-0.04311	-0.03835	-0.03323	-0.02812	-0.02308	-0.0182	-0.01358	-0.00938	-0.00573	-0.00283	-8.98E-04
2.7	-0.04709	-0.04219	-0.0375	-0.03227	-0.02711	-0.0221	-0.01731	-0.01285	-0.00882	-0.00537	-0.00263	-7.86E-04
2.71	-0.04679	-0.04094	-0.03686	-0.03109	-0.02593	-0.02069	-0.01632	-0.01202	-0.00819	-0.00494	-0.0024	-7.06E-04
2.72	-0.04403	-0.03946	-0.03486	-0.02966	-0.02459	-0.01976	-0.01524	-0.01112	-0.0075	-0.00447	-0.00214	-6.15E-04
2.73	-0.04176	-0.03722	-0.03297	-0.02795	-0.02307	-0.01842	-0.0141	-0.0102	-0.0068	-0.004	-0.00188	-5.26E-04

2.74	-0.03897	-0.03469	-0.03069	-0.02597	-0.02137	-0.017	-0.01294	-0.00929	-0.00614	-0.00357	-0.00186	-4.50E-04	0
2.75	-0.03596	-0.03173	-0.02804	-0.02372	-0.01951	-0.01551	-0.01178	-0.00844	-0.00556	-0.00322	-0.00148	-3.96E-04	0
2.76	-0.03189	-0.02839	-0.02507	-0.02125	-0.01752	-0.01395	-0.01063	-0.00763	-0.00504	-0.00283	-0.00135	-3.64E-04	0
2.77	-0.02774	-0.02472	-0.02184	-0.0188	-0.01541	-0.01235	-0.00947	-0.00686	-0.00452	-0.00269	-0.00126	-3.49E-04	0
2.78	-0.02383	-0.02083	-0.01843	-0.01581	-0.01322	-0.0107	-0.00834	-0.00609	-0.00412	-0.00247	-0.00118	-3.39E-04	0
2.79	-0.01972	-0.01681	-0.01462	-0.01294	-0.01096	-0.0087	-0.00654	-0.00445	-0.00314	-0.00223	-0.0011	-3.28E-04	0
2.8	-0.01411	-0.01138	-0.00927	-0.00717	-0.00548	-0.00406	-0.00286	-0.00199	-0.00134	-0.00096	-0.00054	-3.08E-04	0
2.81	-0.00981	-0.00879	-0.0079	-0.00717	-0.00636	-0.00548	-0.00453	-0.00354	-0.00256	-0.00164	-0.00096	-2.76E-04	0
2.82	-0.00529	-0.00486	-0.00453	-0.00434	-0.00406	-0.00386	-0.00366	-0.00354	-0.00334	-0.00314	-0.00294	-2.76E-04	0
2.83	-0.00124	-0.00134	-0.00132	-0.0016	-0.00178	-0.00182	-0.00178	-0.00152	-0.00121	-8.50E-04	-6.82E-04	-2.31E-04	0
2.84	0.00254	0.00206	0.00171	0.00104	4.73E-04	3.80E-05	-2.61E-04	-4.22E-04	-4.9E-04	-3.91E-04	-4.82E-04	-1.75E-04	0
2.85	0.00605	0.00625	0.00645	0.00566	0.00479	0.00389	0.00283	0.00185	0.00115	9.70E-05	-1.85E-05	3.76E-05	0
2.86	0.00933	0.00922	0.00919	0.00824	0.00682	0.00545	0.00416	0.00298	0.00195	6.04E-04	2.37E-04	4.10E-05	0
2.87	0.01239	0.01101	0.00969	0.00824	0.00682	0.00545	0.00416	0.00298	0.00195	6.04E-04	2.37E-04	4.10E-05	0
2.88	0.01529	0.01366	0.01205	0.01041	0.00875	0.00711	0.00553	0.00406	0.00273	0.00161	7.54E-04	2.06E-04	0
2.89	0.01804	0.01617	0.01451	0.01246	0.01057	0.00888	0.00682	0.00506	0.00345	0.00207	9.81E-04	2.82E-04	0
2.9	0.02068	0.01858	0.01646	0.0144	0.01227	0.01012	0.008	0.00597	0.0041	0.00248	0.0012	3.51E-04	0
2.91	0.02324	0.02089	0.01857	0.01623	0.01384	0.01143	0.00906	0.00678	0.00468	0.00285	0.00139	4.12E-04	0
2.92	0.0257	0.02311	0.02057	0.01794	0.01527	0.01261	0.00999	0.00748	0.00488	0.00285	0.00139	4.12E-04	0
2.93	0.02806	0.02521	0.02246	0.01982	0.01656	0.01364	0.00999	0.00748	0.00488	0.00285	0.00139	4.12E-04	0
2.94	0.03028	0.02718	0.0242	0.02095	0.01771	0.01453	0.01078	0.00807	0.00558	0.00341	0.00168	5.04E-04	0
2.95	0.03232	0.02897	0.02577	0.02223	0.01872	0.01529	0.01145	0.00854	0.0059	0.0036	0.00177	5.31E-04	0
2.96	0.03413	0.03055	0.02714	0.02333	0.01956	0.01593	0.012	0.00892	0.00613	0.00373	0.00183	5.44E-04	0
2.97	0.03567	0.03189	0.0283	0.02428	0.02031	0.01647	0.01282	0.00944	0.00642	0.00387	0.00186	5.47E-04	0
2.98	0.03689	0.03297	0.02923	0.02505	0.02092	0.01692	0.01313	0.00964	0.00663	0.00391	0.00187	5.46E-04	0
2.99	0.03779	0.03376	0.02962	0.02563	0.02139	0.01729	0.01339	0.0096	0.00662	0.00394	0.00188	5.40E-04	0
3	0.03834	0.03426	0.03035	0.02601	0.02172	0.01795	0.01359	0.00964	0.00662	0.00394	0.00188	5.40E-04	0
3.01	0.03856	0.03446	0.03052	0.02617	0.02187	0.01789	0.01359	0.00964	0.00662	0.00394	0.00188	5.40E-04	0
3.02	0.03845	0.03437	0.03043	0.02612	0.02186	0.01777	0.01375	0.01004	0.00677	0.00403	0.00189	5.33E-04	0
3.03	0.03801	0.03399	0.0301	0.02588	0.02168	0.01759	0.01369	0.01007	0.00682	0.00407	0.00191	5.41E-04	0
3.04	0.03726	0.03334	0.02965	0.02545	0.02136	0.01737	0.01354	0.00998	0.00683	0.00409	0.00196	5.82E-04	0
3.05	0.03624	0.03247	0.02868	0.02484	0.02089	0.01702	0.01331	0.00962	0.0067	0.00404	0.00195	5.68E-04	0
3.06	0.035	0.03138	0.02786	0.02407	0.02029	0.01657	0.01296	0.00962	0.00658	0.00388	0.00193	5.66E-04	0
3.07	0.03356	0.03011	0.02677	0.02316	0.01955	0.016	0.01257	0.00934	0.00641	0.00339	0.00199	5.65E-04	0
3.08	0.03196	0.0287	0.02555	0.02213	0.01871	0.01534	0.01207	0.009	0.0062	0.00379	0.00187	5.80E-04	0
3.09	0.03023	0.02716	0.0242	0.02087	0.01775	0.01458	0.0115	0.0086	0.00595	0.00365	0.00181	5.47E-04	0
3.1	0.02838	0.02551	0.02274	0.01972	0.01671	0.01458	0.0115	0.0086	0.00595	0.00365	0.00181	5.47E-04	0
3.11	0.02644	0.02377	0.02119	0.01839	0.01559	0.01284	0.01086	0.00814	0.00586	0.00347	0.00173	5.27E-04	0
3.12	0.02444	0.02188	0.01959	0.01701	0.01444	0.01189	0.01016	0.00762	0.0053	0.00327	0.00163	5.00E-04	0
3.13	0.02239	0.02015	0.01796	0.01561	0.01328	0.01092	0.00865	0.00685	0.00452	0.00304	0.00152	4.88E-04	0
3.14	0.02033	0.01829	0.01631	0.01419	0.01206	0.00965	0.00788	0.0065	0.00452	0.0028	0.0014	4.31E-04	0
3.15	0.01826	0.01644	0.01465	0.01276	0.01065	0.00896	0.00768	0.0065	0.00452	0.0028	0.0014	4.31E-04	0
3.16	0.0162	0.01458	0.01298	0.01131	0.00963	0.00795	0.00683	0.00592	0.00412	0.00254	0.00127	3.89E-04	0
3.17	0.01415	0.01273	0.01132	0.00986	0.00839	0.00795	0.00683	0.00592	0.00412	0.00254	0.00127	3.89E-04	0
3.18	0.0121	0.01088	0.00965	0.00841	0.00714	0.00682	0.00548	0.00441	0.00285	0.00176	0.00113	3.44E-04	0
3.19	0.01004	0.00902	0.00799	0.00696	0.0059	0.00485	0.00383	0.00286	0.00198	0.00121	7.39E-04	2.24E-04	0
3.2	0.00795	0.00715	0.00634	0.00551	0.00466	0.00382	0.00323	0.00266	0.00198	0.00121	7.39E-04	2.24E-04	0
3.21	0.00584	0.00525	0.00467	0.00404	0.00341	0.00287	0.00217	0.0016	0.00108	0.00074	3.12E-04	9.08E-05	0
3.22	0.00372	0.00335	0.00299	0.00257	0.00215	0.00174	0.00135	9.86E-04	6.87E-04	4.02E-04	1.96E-04	5.88E-05	0
3.23	0.00161	0.00145	0.00131	0.0011	9.04E-04	7.19E-04	5.33E-04	4.11E-04	2.92E-04	1.92E-04	1.07E-04	3.91E-05	0
3.24	-4.85E-04	-4.21E-04	-3.31E-04	-2.80E-04	-2.90E-04	-2.42E-04	-1.79E-04	-1.06E-04	-3.67E-05	1.32E-05	3.33E-05	2.40E-05	0
3.25	-0.00254	-0.00224	-0.00192	-0.00167	-0.0014	-0.00112	-8.32E-04	-5.60E-04	-3.23E-04	-1.42E-04	-3.10E-05	1.05E-05	0
3.26	-0.00451	-0.00397	-0.00343	-0.00283	-0.00241	-0.00208	-0.00168	-0.00128	-7.99E-04	-2.74E-04	-6.59E-05	-1.14E-05	0
3.27	-0.00632	-0.00556	-0.00483	-0.00407	-0.00331	-0.00258	-0.00186	-0.00128	-7.99E-04	-2.74E-04	-6.59E-05	-1.14E-05	0
3.28	-0.00793	-0.00689	-0.0061	-0.00509	-0.00411	-0.00318	-0.00221	-0.00157	-9.51E-04	-4.85E-04	-1.79E-04	-2.44E-05	0
3.29	-0.00933	-0.00823	-0.00721	-0.00598	-0.00441	-0.00337	-0.00231	-0.00164	-9.51E-04	-4.85E-04	-1.79E-04	-2.44E-05	0
3.3	-0.01048	-0.00925	-0.00813	-0.00673	-0.00539	-0.00416	-0.00308	-0.00211	-9.51E-04	-4.85E-04	-1.79E-04	-2.44E-05	0
3.31	-0.01136	-0.01004	-0.00887	-0.00735	-0.00591	-0.00459	-0.00341	-0.00239	-9.51E-04	-4.85E-04	-1.79E-04	-2.44E-05	0
3.32	-0.012	-0.01065	-0.00944	-0.00786	-0.00636	-0.00499	-0.00375	-0.00267	-9.51E-04	-4.85E-04	-1.79E-04	-2.44E-05	0

3.33	-0.01243	-0.01107	-0.00983	-0.00828	-0.00676	-0.00537	-0.00441	-0.00296	-0.00198	-0.00117	-5.60E-04	-1.60E-04	0
3.34	-0.01271	-0.01135	-0.01009	-0.00858	-0.00713	-0.00574	-0.00445	-0.00327	-0.00222	-0.00134	-6.54E-04	-1.83E-04	0
3.35	-0.0129	-0.01156	-0.01029	-0.00888	-0.00748	-0.00611	-0.00481	-0.00359	-0.00248	-0.00153	-7.60E-04	-2.32E-04	0
3.36	-0.01309	-0.01179	-0.0105	-0.00919	-0.00788	-0.00651	-0.00519	-0.00393	-0.00276	-0.00173	-8.76E-04	-2.74E-04	0
3.37	-0.01335	-0.01208	-0.01079	-0.00956	-0.00828	-0.00696	-0.00568	-0.00448	-0.00335	-0.00194	-9.92E-04	-3.15E-04	0
3.38	-0.01374	-0.01248	-0.01118	-0.01	-0.00874	-0.00742	-0.00606	-0.00488	-0.00355	-0.00212	-3.46E-04	-3.68E-04	0
3.39	-0.01432	-0.01303	-0.01168	-0.0105	-0.00823	-0.00787	-0.00645	-0.005	-0.00359	-0.00227	-0.00116	-3.68E-04	0
3.4	-0.01509	-0.01373	-0.01229	-0.01104	-0.0097	-0.00828	-0.00677	-0.00524	-0.00375	-0.00237	-0.00121	-3.83E-04	0
3.41	-0.01603	-0.01454	-0.01298	-0.01159	-0.01012	-0.00857	-0.00709	-0.0054	-0.00382	-0.00241	-0.00122	-3.84E-04	0
3.42	-0.01706	-0.01541	-0.01372	-0.01214	-0.0105	-0.0088	-0.00709	-0.0054	-0.0038	-0.00237	-0.00119	-3.67E-04	0
3.43	-0.0181	-0.01628	-0.01446	-0.01266	-0.01082	-0.00895	-0.00711	-0.00533	-0.00369	-0.00226	-0.00111	-3.33E-04	0
3.44	-0.01904	-0.01707	-0.01514	-0.0131	-0.00902	-0.00802	-0.00704	-0.00519	-0.00352	-0.00211	-0.00101	-2.90E-04	0
3.45	-0.01979	-0.01768	-0.01566	-0.01339	-0.01115	-0.00897	-0.0069	-0.005	-0.00333	-0.00195	-9.08E-04	-2.47E-04	0
3.46	-0.02028	-0.01805	-0.01597	-0.0135	-0.0111	-0.00881	-0.00686	-0.00478	-0.00314	-0.00181	-8.31E-04	-2.22E-04	0
3.47	-0.02042	-0.01813	-0.01603	-0.01343	-0.01092	-0.00859	-0.00646	-0.00458	-0.00299	-0.00172	-7.93E-04	-2.13E-04	0
3.48	-0.02018	-0.01789	-0.01582	-0.01318	-0.01066	-0.00833	-0.00624	-0.00442	-0.00289	-0.00167	-7.76E-04	-2.12E-04	0
3.49	-0.01954	-0.01733	-0.01534	-0.01277	-0.01033	-0.00809	-0.00607	-0.00431	-0.00284	-0.00165	-7.73E-04	-2.15E-04	0
3.5	-0.01853	-0.01648	-0.01461	-0.01222	-0.00965	-0.00785	-0.00584	-0.00426	-0.00282	-0.00166	-7.86E-04	-2.23E-04	0
3.51	-0.01728	-0.01542	-0.01369	-0.01157	-0.00953	-0.00761	-0.00564	-0.00424	-0.00286	-0.00171	-8.22E-04	-2.39E-04	0
3.52	-0.01588	-0.01423	-0.01285	-0.01086	-0.0091	-0.00739	-0.00577	-0.00428	-0.00294	-0.00179	-8.87E-04	-2.68E-04	0
3.53	-0.01446	-0.01303	-0.01161	-0.01016	-0.00869	-0.00721	-0.00575	-0.00435	-0.00306	-0.00191	-9.67E-04	-3.03E-04	0
3.54	-0.01312	-0.01191	-0.01065	-0.00953	-0.00834	-0.00707	-0.00576	-0.00445	-0.00318	-0.00202	-0.00104	-3.31E-04	0
3.55	-0.01196	-0.01096	-0.00983	-0.00899	-0.00803	-0.00684	-0.00576	-0.00452	-0.00327	-0.00209	-0.00108	-3.49E-04	0
3.56	-0.01102	-0.0102	-0.00918	-0.00852	-0.00773	-0.00676	-0.00569	-0.00451	-0.00329	-0.00212	-0.0011	-3.59E-04	0
3.57	-0.01047	-0.00967	-0.00871	-0.00813	-0.00741	-0.00653	-0.00551	-0.00439	-0.00322	-0.00209	-0.00109	-3.58E-04	0
3.58	-0.01014	-0.00934	-0.0084	-0.00779	-0.00707	-0.0062	-0.00522	-0.00415	-0.00304	-0.00197	-0.00104	-3.40E-04	0
3.59	-0.01	-0.00916	-0.00822	-0.00752	-0.00671	-0.00581	-0.00462	-0.00379	-0.00275	-0.00177	-9.22E-04	-3.01E-04	0
3.6	-0.00987	-0.00906	-0.00812	-0.00726	-0.00634	-0.00536	-0.00435	-0.00334	-0.00237	-0.00149	-7.63E-04	-2.42E-04	0
3.61	-0.00988	-0.00898	-0.00802	-0.00697	-0.00591	-0.00486	-0.00383	-0.00285	-0.00196	-0.0012	-5.89E-04	-1.77E-04	0
3.62	-0.0089	-0.00882	-0.00785	-0.00681	-0.00542	-0.00431	-0.00328	-0.00235	-0.00156	-9.13E-04	-4.30E-04	-1.21E-04	0
3.63	-0.00983	-0.00985	-0.00754	-0.00617	-0.00489	-0.00374	-0.00273	-0.00188	-0.00119	-8.67E-04	-2.99E-04	-1.79E-05	0
3.64	-0.0091	-0.00798	-0.00704	-0.00562	-0.00431	-0.00318	-0.00222	-0.00146	-0.00086	-4.61E-04	-1.92E-04	-4.31E-05	0
3.65	-0.00926	-0.00721	-0.00634	-0.00486	-0.00372	-0.00266	-0.00179	-0.00112	-6.29E-04	-2.98E-04	-1.05E-04	-1.36E-05	0
3.66	-0.00712	-0.00619	-0.00542	-0.00421	-0.00312	-0.00219	-0.00144	-8.60E-04	-4.51E-04	-1.90E-04	-4.81E-05	5.36E-06	0
3.67	-0.00572	-0.00497	-0.00434	-0.00338	-0.00251	-0.00177	-0.00116	-6.88E-04	-3.59E-04	-1.43E-04	-3.09E-05	8.47E-06	0
3.68	-0.00414	-0.00362	-0.00315	-0.0025	-0.0019	-0.00138	-9.36E-04	-5.85E-04	-3.25E-04	-1.48E-04	-4.56E-05	-1.66E-05	0
3.69	-0.00247	-0.00219	-0.00191	-0.00161	-0.00132	-0.00103	-7.65E-04	-5.31E-04	-3.7E-04	-1.85E-04	-7.78E-05	-1.86E-05	0
3.7	-8.20E-04	-7.84E-04	-6.85E-04	-7.40E-04	-7.02E-04	-7.02E-04	-6.15E-04	-4.97E-04	-3.62E-04	-2.28E-04	-1.14E-04	-3.40E-05	0
3.71	7.15E-04	5.25E-04	4.53E-04	9.27E-05	-1.88E-04	-3.64E-04	-4.48E-04	-4.44E-04	-3.73E-04	-2.63E-04	-1.45E-04	-4.93E-05	0
3.72	0.00206	0.00169	0.00147	8.69E-04	3.75E-04	1.11E-05	-2.24E-04	-3.33E-04	-2.66E-04	-2.68E-04	-1.61E-04	-6.06E-05	0
3.73	0.0032	0.00269	0.00233	0.00158	9.37E-04	4.37E-04	7.91E-05	-1.36E-04	-2.24E-04	-2.15E-04	-1.47E-04	-6.25E-05	0
3.74	0.00409	0.0035	0.00304	0.00221	0.0015	9.09E-04	4.56E-04	-1.50E-04	-3.01E-05	-1.02E-04	-9.64E-05	-4.98E-05	0
3.75	0.00477	0.00413	0.0036	0.00278	0.00205	0.00142	9.02E-04	5.10E-04	7.21E-05	-5.84E-06	-2.08E-05	-2.08E-05	0
3.76	0.00528	0.00464	0.00405	0.0033	0.00259	0.00195	9.29E-04	9.81E-04	2.91E-04	0.00123	8.28E-04	1.98E-04	0
3.77	0.00569	0.00506	0.00444	0.00378	0.00313	0.00251	0.00192	0.00138	9.16E-04	0.00136	7.18E-04	2.30E-04	0
3.78	0.00608	0.00546	0.00481	0.00426	0.00368	0.00307	0.00245	0.00184	7.80E-04	0.00128	3.61E-04	1.12E-04	0
3.79	0.00647	0.00589	0.00523	0.00476	0.00422	0.00361	0.00296	0.00229	0.00162	0.00102	5.10E-04	1.57E-04	0
3.8	0.00689	0.00641	0.00573	0.00528	0.00472	0.00412	0.00343	0.00268	0.00193	0.00123	6.28E-04	1.99E-04	0
3.81	0.00764	0.00703	0.00631	0.00583	0.00525	0.00458	0.00382	0.003	0.00218	0.00136	7.18E-04	2.30E-04	0
3.82	0.00844	0.00774	0.00696	0.00638	0.00571	0.00485	0.00412	0.00323	0.00234	0.0015	7.75E-04	2.55E-04	0
3.83	0.00934	0.00853	0.00767	0.00692	0.00612	0.00524	0.00432	0.00336	0.00242	0.00154	7.94E-04	2.59E-04	0
3.84	0.01031	0.00935	0.00839	0.00744	0.00647	0.00545	0.00442	0.0034	0.00242	0.00153	7.83E-04	2.50E-04	0
3.85	0.01127	0.01016	0.00909	0.00793	0.00676	0.00556	0.00446	0.00337	0.00236	0.00147	7.48E-04	2.36E-04	0
3.86	0.01216	0.01091	0.00974	0.00836	0.00701	0.00571	0.00447	0.00332	0.00229	0.0014	7.00E-04	2.19E-04	0
3.87	0.01293	0.01155	0.0103	0.00874	0.00723	0.00581	0.00448	0.00327	0.00222	0.00134	6.56E-04	1.96E-04	0
3.88	0.01354	0.01207	0.01074	0.00905	0.00743	0.00591	0.00451	0.00326	0.00219	0.00131	6.32E-04	1.85E-04	0
3.89	0.01368	0.01245	0.01106	0.0093	0.00761	0.00603	0.00459	0.00332	0.00222	0.00132	6.36E-04	1.86E-04	0
3.9	0.01426	0.0127	0.01127	0.00949	0.00779	0.0062	0.00474	0.00344	0.00232	0.00139	6.77E-04	2.00E-04	0
3.91	0.01441	0.01286	0.01141	0.00968	0.00801	0.00643	0.00496	0.00364	0.00248	0.00151	7.43E-04	2.24E-04	0

3.92	0.01447	0.01296	0.0115	0.00987	0.00827	0.00673	0.00526	0.00391	0.00269	0.00165	8.19E-04	2.49E-04	0
3.93	0.01451	0.01305	0.01159	0.01009	0.00858	0.00707	0.00556	0.00421	0.00293	0.00181	8.98E-04	2.73E-04	0
3.94	0.01459	0.01318	0.01173	0.01034	0.00891	0.00744	0.00596	0.00452	0.00317	0.00196	9.82E-04	3.01E-04	0
3.95	0.01479	0.0134	0.01193	0.01063	0.00925	0.0078	0.0063	0.00481	0.0034	0.00212	0.00107	3.30E-04	0
3.96	0.01513	0.01373	0.01224	0.01097	0.00959	0.00813	0.0066	0.00507	0.0036	0.00226	0.00114	3.57E-04	0
3.97	0.01581	0.01417	0.01265	0.00983	0.00842	0.00735	0.00685	0.00527	0.00375	0.00236	0.0012	3.77E-04	0
3.98	0.01621	0.01471	0.01315	0.01173	0.01023	0.00865	0.00702	0.00559	0.00383	0.00241	0.00122	3.84E-04	0
3.99	0.01689	0.01553	0.01369	0.01211	0.01048	0.0088	0.0071	0.00542	0.00382	0.00239	0.00121	3.77E-04	0
4	0.0176	0.01588	0.01419	0.01242	0.01063	0.00883	0.00705	0.00534	0.00373	0.00231	0.00118	3.56E-04	0
4.01	0.01821	0.01636	0.01459	0.01263	0.01067	0.00875	0.00689	0.00515	0.00356	0.00218	0.00107	3.25E-04	0
4.02	0.01867	0.0167	0.01486	0.01271	0.0106	0.00858	0.00668	0.0049	0.00333	0.00201	9.76E-04	2.88E-04	0
4.03	0.01889	0.01684	0.01494	0.01288	0.01044	0.00833	0.00638	0.00462	0.00309	0.00183	8.72E-04	2.49E-04	0
4.04	0.01882	0.01673	0.01482	0.01246	0.01018	0.00805	0.00609	0.00436	0.00287	0.00167	7.99E-04	2.14E-04	0
4.05	0.01843	0.01636	0.01447	0.01211	0.00885	0.00775	0.00583	0.00413	0.0027	0.00155	7.13E-04	1.90E-04	0
4.06	0.01774	0.01574	0.01391	0.01163	0.00946	0.00743	0.00558	0.00386	0.00258	0.00148	6.78E-04	1.78E-04	0
4.07	0.01676	0.01488	0.01314	0.01102	0.00899	0.00709	0.00535	0.00381	0.0025	0.00144	6.63E-04	1.76E-04	0
4.08	0.01554	0.01362	0.0122	0.01031	0.00847	0.00674	0.00514	0.0037	0.00245	0.00143	6.64E-04	1.80E-04	0
4.09	0.01415	0.01252	0.01113	0.00951	0.00792	0.00637	0.00492	0.00358	0.00241	0.00142	6.70E-04	1.86E-04	0
4.1	0.01267	0.01134	0.01001	0.00868	0.00733	0.00589	0.00469	0.00346	0.00236	0.00141	6.74E-04	1.91E-04	0
4.11	0.01116	0.01004	0.00888	0.00782	0.00671	0.00567	0.00443	0.00332	0.00229	0.00139	6.73E-04	1.96E-04	0
4.12	0.0097	0.00877	0.00779	0.00697	0.00609	0.00513	0.00414	0.00315	0.0022	0.00136	6.71E-04	2.01E-04	0
4.13	0.00635	0.0076	0.00678	0.00615	0.00544	0.00465	0.00381	0.00284	0.00209	0.00131	6.64E-04	2.08E-04	0
4.14	0.00715	0.00654	0.00587	0.00537	0.0048	0.00415	0.00344	0.0027	0.00195	0.00125	6.47E-04	2.09E-04	0
4.15	0.00609	0.00559	0.00505	0.00463	0.00415	0.00382	0.00303	0.00241	0.00177	0.00115	6.09E-04	2.02E-04	0
4.16	0.00516	0.00474	0.00432	0.00383	0.00352	0.00307	0.00258	0.00206	0.00153	0.00101	5.43E-04	1.84E-04	0
4.17	0.00434	0.00388	0.00363	0.00326	0.00289	0.0025	0.0021	0.00168	0.00125	8.28E-04	4.48E-04	1.54E-04	0
4.18	0.0036	0.00327	0.00298	0.00262	0.00227	0.00183	0.00159	0.00128	9.33E-04	6.18E-04	3.36E-04	1.16E-04	0
4.19	0.00289	0.0026	0.00236	0.00201	0.00169	0.00139	0.00111	8.50E-04	6.77E-04	4.04E-04	2.19E-04	7.51E-05	0
4.2	0.00221	0.00196	0.00176	0.00144	0.00115	8.93E-04	6.69E-04	4.84E-04	3.95E-04	2.12E-04	1.12E-04	3.75E-05	0
4.21	0.00154	0.00134	0.00119	9.20E-04	6.81E-04	4.77E-04	3.14E-04	1.95E-04	1.17E-04	6.67E-05	3.21E-05	9.41E-06	0
4.22	9.03E-04	7.89E-04	6.90E-04	4.62E-04	2.99E-04	1.59E-04	6.15E-05	6.58E-06	-1.40E-05	-1.48E-05	8.97E-05	3.94E-05	0
4.23	2.47E-04	2.47E-04	2.00E-04	9.05E-05	6.48E-05	-4.92E-05	-7.32E-05	-5.14E-05	-2.60E-05	-9.24E-06	-4.35E-06	-4.35E-06	0
4.24	-1.66E-04	-1.63E-04	-1.60E-04	-1.68E-04	-1.55E-04	-1.30E-04	-9.28E-05	-4.60E-05	1.31E-06	2.63E-05	2.67E-05	1.52E-05	0
4.25	-5.08E-04	-4.33E-04	-3.86E-04	-2.78E-04	-1.73E-04	-7.59E-05	9.34E-06	7.79E-05	1.20E-04	1.23E-04	8.97E-05	3.94E-05	0
4.26	-8.98E-04	-5.26E-04	-4.48E-04	-2.38E-04	-1.69E-05	1.04E-04	2.82E-04	2.13E-04	2.82E-04	2.38E-04	1.54E-04	6.18E-05	0
4.27	-2.79E-04	-4.11E-04	-3.28E-04	-3.21E-05	2.13E-04	3.86E-04	4.86E-04	5.09E-04	4.62E-04	3.58E-04	2.14E-04	8.06E-05	0
4.28	-2.29E-04	-6.59E-05	-9.33E-06	3.23E-04	5.61E-04	7.37E-04	7.95E-04	6.43E-04	6.43E-04	4.89E-04	2.71E-04	9.85E-05	0
4.29	4.05E-04	5.14E-04	5.11E-04	8.15E-04	0.00103	0.00113	0.00112	0.00101	8.17E-04	5.77E-04	3.25E-04	1.15E-04	0
4.3	0.0013	0.00131	0.00122	0.00143	0.00154	0.00154	0.00144	0.00124	9.76E-04	6.72E-04	3.72E-04	1.30E-04	0
4.31	0.00242	0.0023	0.00211	0.00214	0.0021	0.00196	0.00174	0.00145	0.00111	7.46E-04	4.06E-04	1.39E-04	0
4.32	0.00369	0.00342	0.00311	0.00292	0.00268	0.00238	0.00203	0.00163	0.00121	7.91E-04	4.20E-04	1.40E-04	0
4.33	0.00506	0.0046	0.00416	0.00371	0.00324	0.00276	0.00228	0.00178	0.00126	6.04E-04	4.15E-04	1.33E-04	0
4.34	0.00643	0.00577	0.00518	0.00446	0.00376	0.00309	0.00244	0.00184	0.00128	4.87E-04	3.92E-04	1.20E-04	0
4.35	0.00771	0.00686	0.00611	0.00514	0.00421	0.00335	0.00257	0.00186	0.00125	7.42E-04	3.56E-04	1.02E-04	0
4.36	0.00892	0.0078	0.0069	0.00571	0.00459	0.00356	0.00285	0.00185	0.00119	6.78E-04	3.03E-04	7.70E-05	0
4.37	0.00968	0.00852	0.0075	0.00615	0.00488	0.00372	0.0027	0.00183	0.00113	6.00E-04	2.44E-04	4.91E-05	0
4.38	0.01025	0.009	0.00788	0.00644	0.00507	0.00383	0.00274	0.00181	0.00107	5.37E-04	1.93E-04	2.45E-05	0
4.39	0.01051	0.00922	0.00805	0.00657	0.00517	0.00389	0.00276	0.0018	0.00105	5.03E-04	1.65E-04	1.04E-05	0
4.4	0.01045	0.00916	0.00798	0.00654	0.00516	0.00389	0.00276	0.00181	0.00105	5.04E-04	1.64E-04	8.88E-06	0
4.41	0.01008	0.00885	0.00772	0.00635	0.00504	0.00383	0.00275	0.00183	0.00108	5.39E-04	1.89E-04	1.89E-05	0
4.42	0.00945	0.00833	0.00727	0.00603	0.00484	0.00373	0.0027	0.00185	0.00113	5.90E-04	2.27E-04	3.75E-05	0
4.43	0.00963	0.00763	0.00668	0.00561	0.00457	0.00359	0.00268	0.00187	0.00119	6.59E-04	6.24E-05	8.00E-05	0
4.44	0.00766	0.00682	0.006	0.00512	0.00425	0.00341	0.00261	0.00189	0.00125	7.28E-04	3.34E-04	8.78E-05	0
4.45	0.00663	0.00595	0.00527	0.00458	0.00389	0.0032	0.00252	0.00188	0.00129	7.84E-04	3.80E-04	1.11E-04	0
4.46	0.00558	0.00506	0.00453	0.00403	0.0035	0.00295	0.00239	0.00184	0.0013	8.15E-04	4.12E-04	1.28E-04	0
4.47	0.00459	0.00421	0.00368	0.00346	0.00309	0.00267	0.00222	0.00175	0.00127	8.13E-04	4.23E-04	1.37E-04	0
4.48	0.00367	0.00339	0.00309	0.00286	0.00263	0.00233	0.00198	0.00159	0.00117	7.82E-04	4.02E-04	1.33E-04	0
4.49	0.0028	0.00261	0.0024	0.00229	0.00214	0.00192	0.00168	0.00134	9.97E-04	6.52E-04	3.46E-04	1.15E-04	0
4.5	0.00197	0.00186	0.00172	0.00167	0.00157	0.00143	0.00124	0.001	7.42E-04	4.83E-04	8.50E-05	8.50E-05	0

4.51	0.00116	0.0011	0.00101	9.84E-04	9.30E-04	8.42E-04	7.22E-04	5.74E-04	4.14E-04	2.61E-04	1.33E-04	4.24E-05	0
4.52	3.03E-04	2.72E-04	2.44E-04	2.25E-04	1.95E-04	1.58E-04	1.15E-04	6.72E-05	2.38E-05	-5.34E-06	-1.45E-05	-9.44E-06	0
4.53	-8.67E-04	-6.52E-04	-6.07E-04	-6.24E-04	-6.28E-04	-6.08E-04	-5.67E-04	-5.02E-04	-4.13E-04	-3.01E-04	-1.77E-04	-6.56E-05	0
4.54	-0.0018	-0.00172	-0.00158	-0.00154	-0.00154	-0.00145	-0.00131	-0.00111	-8.78E-04	-6.14E-04	-3.47E-04	-1.25E-04	0
4.55	-0.00315	-0.00297	-0.00273	-0.00268	-0.00256	-0.00237	-0.00209	-0.00175	-0.00136	-9.33E-04	-5.21E-04	-1.84E-04	0
4.56	-0.00478	-0.00447	-0.00409	-0.00393	-0.0037	-0.00335	-0.00292	-0.00241	-0.00184	-0.00125	-8.88E-04	-2.40E-04	0
4.57	-0.0067	-0.00622	-0.00567	-0.00535	-0.00493	-0.0044	-0.00378	-0.00307	-0.00231	-0.00155	-8.42E-04	-2.99E-04	0
4.58	-0.0089	-0.00821	-0.00745	-0.00689	-0.00624	-0.00548	-0.00463	-0.00371	-0.00271	-0.00181	-9.23E-04	-3.23E-04	0
4.59	-0.01137	-0.0104	-0.00939	-0.00852	-0.00757	-0.00654	-0.00544	-0.00428	-0.00312	-0.00201	-0.00105	-3.43E-04	0
4.6	-0.01432	-0.01273	-0.01142	-0.01019	-0.0088	-0.00755	-0.00616	-0.00477	-0.00341	-0.00216	-0.00113	-3.51E-04	0
4.61	-0.01678	-0.01512	-0.01347	-0.01184	-0.01017	-0.00848	-0.00688	-0.00516	-0.00362	-0.00225	-0.00113	-3.46E-04	0
4.62	-0.01949	-0.01747	-0.0155	-0.01344	-0.01138	-0.00933	-0.00734	-0.00547	-0.00376	-0.00228	-0.00111	-3.28E-04	0
4.63	-0.02206	-0.01969	-0.01742	-0.01485	-0.01248	-0.0101	-0.00782	-0.00572	-0.00385	-0.00228	-0.00108	-3.03E-04	0
4.64	-0.02436	-0.02169	-0.01915	-0.0163	-0.01348	-0.01078	-0.00824	-0.00593	-0.00392	-0.00227	-0.00104	-2.75E-04	0
4.65	-0.02631	-0.02338	-0.02062	-0.01742	-0.01431	-0.01134	-0.00859	-0.00611	-0.00398	-0.00226	-0.00101	-2.54E-04	0
4.66	-0.0278	-0.02466	-0.02173	-0.01827	-0.01492	-0.01178	-0.00885	-0.00625	-0.00404	-0.00227	-0.001	-2.44E-04	0
4.67	-0.02876	-0.02549	-0.02245	-0.01882	-0.01532	-0.01203	-0.00902	-0.00636	-0.0041	-0.00223	-0.00101	-2.48E-04	0
4.68	-0.02918	-0.02585	-0.02277	-0.01908	-0.01552	-0.01219	-0.00914	-0.00645	-0.00417	-0.00236	-0.00105	-2.63E-04	0
4.69	-0.02908	-0.02578	-0.02272	-0.01908	-0.01557	-0.01227	-0.00924	-0.00656	-0.00428	-0.00246	-0.00112	-2.91E-04	0
4.7	-0.02851	-0.02533	-0.02236	-0.01888	-0.0155	-0.01231	-0.00935	-0.00671	-0.00444	-0.00259	-0.00112	-3.26E-04	0
4.71	-0.02757	-0.02458	-0.02177	-0.01853	-0.01536	-0.01233	-0.00949	-0.00681	-0.00464	-0.00275	-0.00131	-3.98E-04	0
4.72	-0.02638	-0.02363	-0.021	-0.01805	-0.01514	-0.01231	-0.00961	-0.00709	-0.00484	-0.00282	-0.00141	-4.10E-04	0
4.73	-0.02505	-0.02253	-0.02007	-0.01743	-0.0148	-0.01219	-0.00964	-0.00721	-0.00498	-0.00304	-0.00149	-4.44E-04	0
4.74	-0.02368	-0.02135	-0.01904	-0.0167	-0.01432	-0.01192	-0.00953	-0.00721	-0.00503	-0.00311	-0.00154	-4.88E-04	0
4.75	-0.02232	-0.02016	-0.01796	-0.01588	-0.01373	-0.01151	-0.00926	-0.00705	-0.00496	-0.00308	-0.00155	-4.75E-04	0
4.76	-0.021	-0.01888	-0.01689	-0.01501	-0.01303	-0.01095	-0.00984	-0.00774	-0.00474	-0.00296	-0.00148	-4.55E-04	0
4.77	-0.0197	-0.0178	-0.01584	-0.01409	-0.01222	-0.01026	-0.00928	-0.0074	-0.00439	-0.00272	-0.00135	-4.10E-04	0
4.78	-0.01842	-0.01662	-0.0148	-0.01308	-0.0113	-0.00943	-0.00754	-0.00568	-0.00393	-0.0024	-0.00117	-3.46E-04	0
4.79	-0.01711	-0.0154	-0.0137	-0.01188	-0.01023	-0.00844	-0.00666	-0.00496	-0.00338	-0.00203	-0.00103	-2.76E-04	0
4.8	-0.01571	-0.01406	-0.01247	-0.01072	-0.00898	-0.00728	-0.00565	-0.00413	-0.00278	-0.00162	-0.00074	-2.07E-04	0
4.81	-0.01408	-0.0125	-0.01105	-0.00927	-0.00757	-0.00586	-0.00451	-0.0032	-0.00208	-0.00119	-5.31E-04	-1.35E-04	0
4.82	-0.01212	-0.01065	-0.00935	-0.00782	-0.00601	-0.00455	-0.00328	-0.00221	-0.00135	-7.07E-04	-2.80E-04	-5.31E-05	0
4.83	-0.00972	-0.00843	-0.00733	-0.00574	-0.00429	-0.00303	-0.00199	-0.00117	-5.75E-04	-1.95E-04	-5.81E-06	3.96E-05	0
4.84	-0.00861	-0.00778	-0.00694	-0.00536	-0.00421	-0.00302	-0.00206	-0.00132	-8.53E-04	3.23E-04	2.72E-04	1.34E-04	0
4.85	-0.00339	-0.0027	-0.00219	-0.00122	-8.80E-04	2.86E-04	7.43E-04	9.42E-04	9.63E-04	8.03E-04	5.21E-04	2.15E-04	0
4.86	4.89E-04	7.65E-04	0.00138	0.00138	0.00177	0.00206	0.00193	0.00183	0.00163	0.0012	7.06E-04	2.66E-04	0
4.87	0.00476	0.00453	0.00419	0.00413	0.00389	0.00373	0.00333	0.0028	0.00217	0.00148	8.18E-04	2.88E-04	0
4.88	0.00928	0.00849	0.00764	0.00697	0.00622	0.0054	0.0045	0.00355	0.00259	0.00167	8.73E-04	2.84E-04	0
4.89	0.01381	0.01252	0.01114	0.00979	0.00841	0.00689	0.00558	0.0042	0.00292	0.0018	8.88E-04	2.67E-04	0
4.9	0.01846	0.01648	0.01457	0.01254	0.0105	0.00858	0.00658	0.00479	0.00321	0.00189	8.86E-04	2.44E-04	0
4.91	0.02275	0.02022	0.01784	0.01514	0.01248	0.00982	0.00753	0.00536	0.0035	0.00198	8.94E-04	2.26E-04	0
4.92	0.02664	0.02363	0.02082	0.01751	0.01428	0.01124	0.00842	0.00593	0.00414	0.00213	8.94E-04	2.26E-04	0
4.93	0.02998	0.02655	0.02339	0.01985	0.01585	0.0124	0.00925	0.00647	0.0044	0.00251	9.95E-04	2.34E-04	0
4.94	0.03296	0.0289	0.02546	0.02122	0.01717	0.01341	0.00969	0.007	0.00449	0.00275	0.0011	2.66E-04	0
4.95	0.03464	0.03066	0.02702	0.02253	0.01825	0.01427	0.01067	0.00751	0.00486	0.00275	0.00123	3.10E-04	0
4.96	0.03591	0.03183	0.02807	0.0235	0.01912	0.01503	0.01131	0.00802	0.00523	0.00289	0.00136	3.52E-04	0
4.97	0.03647	0.03244	0.02864	0.02415	0.01979	0.01569	0.01119	0.00851	0.00566	0.00323	0.00148	3.93E-04	0
4.98	0.03655	0.03257	0.02881	0.02448	0.02027	0.01622	0.01243	0.00938	0.00596	0.00348	0.00161	4.56E-04	0
4.99	0.03618	0.03233	0.02864	0.02467	0.02053	0.01661	0.01286	0.00939	0.00631	0.00373	0.00178	4.90E-04	0
5	0.03552	0.03182	0.02822	0.02442	0.0206	0.01682	0.01317	0.00974	0.00664	0.00399	0.00192	5.52E-04	0
5.01	0.03467	0.03114	0.02765	0.0241	0.0205	0.01689	0.01336	0.00968	0.00664	0.00399	0.00192	5.52E-04	0
5.02	0.03371	0.03035	0.02799	0.02366	0.02025	0.0168	0.01338	0.00968	0.00664	0.00399	0.00192	5.52E-04	0
5.03	0.0327	0.02948	0.02625	0.02308	0.01983	0.01652	0.01321	0.00968	0.00664	0.00399	0.00192	5.52E-04	0
5.04	0.03164	0.02854	0.02542	0.02235	0.0192	0.016	0.01279	0.00965	0.00672	0.00413	0.00213	6.42E-04	0
5.05	0.03054	0.0275	0.02447	0.02144	0.0182	0.01521	0.0121	0.00968	0.00672	0.00413	0.00213	6.42E-04	0
5.06	0.02931	0.02631	0.02336	0.02032	0.01724	0.01417	0.01116	0.0083	0.00629	0.00393	0.00188	5.96E-04	0
5.07	0.02784	0.02489	0.02205	0.01898	0.01592	0.01291	0.01003	0.00735	0.00495	0.00329	0.00139	3.86E-04	0
5.08	0.02602	0.02316	0.02047	0.0174	0.01436	0.01148	0.00876	0.00629	0.00414	0.00339	0.00109	2.87E-04	0
5.09	0.02377	0.02106	0.01856	0.01555	0.01263	0.00969	0.00739	0.00518	0.00331	0.00184	8.09E-04	1.90E-04	0

5.1	0.02102	0.01653	0.01628	0.01341	0.01068	0.00819	0.00587	0.00406	0.00251	0.00133	5.42E-04	1.69E-04	0
5.11	0.01552	0.01361	0.01361	0.01101	0.00958	0.00641	0.00452	0.00297	0.00175	8.77E-04	3.21E-04	4.51E-05	0
5.12	0.01385	0.01207	0.01055	0.00836	0.00634	0.00458	0.00311	0.00193	0.00105	4.84E-04	1.27E-04	8.05E-06	0
5.13	0.00949	0.00821	0.00714	0.00555	0.00401	0.00275	0.00173	9.50E-04	4.12E-04	9.31E-05	-4.44E-05	-5.48E-05	0
5.14	0.00474	0.00402	0.00345	0.00247	0.00162	9.21E-04	3.91E-04	2.87E-05	-1.71E-04	-2.31E-04	-1.86E-04	-9.04E-05	0
5.15	-2.58E-04	-3.79E-04	-4.26E-04	-6.53E-04	-8.19E-04	-9.06E-04	-9.12E-04	-8.40E-04	-6.98E-04	-5.07E-04	-2.97E-04	-1.11E-04	0
5.16	-0.00555	-0.00483	-0.00435	-0.0038	-0.00325	-0.00271	-0.00218	-0.00167	-0.00118	-7.44E-04	-3.61E-04	-1.21E-04	0
5.17	-0.01038	-0.00923	-0.00822	-0.00688	-0.00563	-0.00447	-0.00341	-0.00246	-0.00164	-9.67E-04	-4.57E-04	-1.28E-04	0
5.18	-0.0152	-0.01345	-0.01189	-0.00986	-0.00795	-0.0062	-0.00462	-0.00325	-0.00211	-0.00121	-5.48E-04	-1.44E-04	0
5.19	-0.01988	-0.01739	-0.01533	-0.0127	-0.102	-0.00761	-0.00586	-0.00409	-0.00263	-0.00149	-6.69E-04	-1.70E-04	0
5.2	-0.02373	-0.02088	-0.01849	-0.01537	-0.01239	-0.00964	-0.00717	-0.00502	-0.00324	-0.00183	-8.21E-04	-2.08E-04	0
5.21	-0.02733	-0.02422	-0.02136	-0.01788	-0.01453	-0.01141	-0.00856	-0.00605	-0.00394	-0.00225	-2.64E-04	-8.43E-05	0
5.22	-0.03052	-0.02713	-0.02396	-0.01961	-0.01661	-0.01319	-0.01002	-0.00716	-0.00474	-0.00276	-0.00127	-3.43E-04	0
5.23	-0.03334	-0.02974	-0.02631	-0.02242	-0.01861	-0.01495	-0.01151	-0.00838	-0.00563	-0.00334	-0.00158	-4.43E-04	0
5.24	-0.03589	-0.03211	-0.02846	-0.02448	-0.02052	-0.01668	-0.01301	-0.00986	-0.00655	-0.00395	-0.00222	-5.53E-04	0
5.25	-0.03825	-0.03432	-0.03047	-0.02641	-0.02235	-0.01834	-0.01446	-0.01078	-0.00743	-0.00453	-0.00222	-6.60E-04	0
5.26	-0.0405	-0.03642	-0.03238	-0.02825	-0.02408	-0.0199	-0.0158	-0.01187	-0.00824	-0.00506	-0.0025	-7.51E-04	0
5.27	-0.04272	-0.03847	-0.03422	-0.02999	-0.02588	-0.02132	-0.01699	-0.01281	-0.00892	-0.00549	-0.00272	-8.21E-04	0
5.28	-0.04483	-0.04048	-0.03603	-0.03163	-0.02712	-0.02255	-0.01787	-0.01376	-0.00946	-0.00613	-0.00298	-8.77E-04	0
5.29	-0.04715	-0.04246	-0.0378	-0.03315	-0.02839	-0.02357	-0.01878	-0.01415	-0.00984	-0.00605	-0.00289	-9.03E-04	0
5.3	-0.04932	-0.04438	-0.03949	-0.03453	-0.02947	-0.02438	-0.01935	-0.01453	-0.01007	-0.00617	-0.00304	-9.13E-04	0
5.31	-0.05137	-0.04615	-0.04105	-0.03571	-0.03033	-0.02496	-0.01972	-0.01473	-0.01016	-0.0062	-0.00304	-9.03E-04	0
5.32	-0.05318	-0.04769	-0.04238	-0.03665	-0.03094	-0.02531	-0.01987	-0.01476	-0.01012	-0.00613	-0.00298	-8.77E-04	0
5.33	-0.05482	-0.04888	-0.0434	-0.03731	-0.03128	-0.02542	-0.01983	-0.01462	-0.00996	-0.00599	-0.00289	-8.40E-04	0
5.34	-0.05558	-0.04965	-0.04403	-0.03764	-0.03137	-0.02533	-0.01962	-0.01438	-0.00972	-0.00581	-0.00279	-8.00E-04	0
5.35	-0.05587	-0.04982	-0.04422	-0.03785	-0.03122	-0.02508	-0.01932	-0.01407	-0.00946	-0.00562	-0.00267	-7.59E-04	0
5.36	-0.05573	-0.04986	-0.04396	-0.03733	-0.03086	-0.02472	-0.01897	-0.01376	-0.00921	-0.00544	-0.00257	-7.22E-04	0
5.37	-0.05485	-0.04867	-0.04325	-0.03673	-0.03036	-0.02429	-0.01862	-0.01349	-0.00901	-0.00532	-0.00251	-6.96E-04	0
5.38	-0.0534	-0.04761	-0.04214	-0.03585	-0.02969	-0.02381	-0.01829	-0.01328	-0.00889	-0.00526	-0.00249	-6.69E-04	0
5.39	-0.05146	-0.04583	-0.04068	-0.03473	-0.02889	-0.02327	-0.01798	-0.01313	-0.00865	-0.0052	-0.00241	-6.43E-04	0
5.4	-0.04912	-0.04392	-0.03893	-0.03341	-0.02797	-0.02288	-0.01765	-0.01299	-0.00844	-0.00531	-0.00236	-6.17E-04	0
5.41	-0.0485	-0.04167	-0.03697	-0.03195	-0.02694	-0.02202	-0.01727	-0.01283	-0.00828	-0.00533	-0.00226	-5.92E-04	0
5.42	-0.04372	-0.03927	-0.03486	-0.03036	-0.02579	-0.02125	-0.01688	-0.01257	-0.00808	-0.0053	-0.00226	-5.75E-04	0
5.43	-0.04087	-0.0368	-0.03271	-0.02866	-0.02452	-0.02033	-0.01618	-0.01217	-0.00845	-0.00519	-0.00236	-5.57E-04	0
5.44	-0.03804	-0.0343	-0.03052	-0.02807	-0.0231	-0.01924	-0.01538	-0.01161	-0.00809	-0.00518	-0.00247	-5.44E-04	0
5.45	-0.03524	-0.0318	-0.02832	-0.02499	-0.02152	-0.01786	-0.01438	-0.01068	-0.00759	-0.00468	-0.00232	-5.27E-04	0
5.46	-0.03248	-0.0293	-0.02611	-0.02301	-0.01979	-0.01649	-0.01316	-0.00966	-0.00694	-0.00427	-0.00212	-5.04E-04	0
5.47	-0.02968	-0.02675	-0.02384	-0.02089	-0.01787	-0.01482	-0.01179	-0.00886	-0.00614	-0.00376	-0.00212	-4.80E-04	0
5.48	-0.02679	-0.02407	-0.02144	-0.01866	-0.01576	-0.01295	-0.01021	-0.00761	-0.00523	-0.00318	-0.00218	-4.63E-04	0
5.49	-0.02371	-0.0212	-0.01885	-0.01614	-0.01347	-0.01081	-0.00848	-0.00624	-0.00424	-0.00255	-0.00123	-3.60E-04	0
5.5	-0.02033	-0.01808	-0.01503	-0.01349	-0.1105	-0.00877	-0.00667	-0.00448	-0.0032	-0.00188	-8.89E-04	-2.51E-04	0
5.51	-0.01657	-0.01464	-0.01284	-0.01086	-0.00851	-0.00657	-0.00484	-0.00336	-0.00215	-0.00121	-5.39E-04	-1.38E-04	0
5.52	-0.01241	-0.01067	-0.00866	-0.00766	-0.0058	-0.00435	-0.00303	-0.00196	-0.00114	-5.61E-04	-2.04E-04	-2.87E-05	0
5.53	-0.00787	-0.00679	-0.00591	-0.0045	-0.00323	-0.00215	-0.00129	-8.42E-04	1.34E-05	8.82E-05	6.33E-05	6.33E-05	0
5.54	-0.003	-0.00245	-0.00204	-0.00123	-5.30E-04	4.23E-06	3.66E-04	5.89E-04	5.89E-04	0.00172	8.20E-04	2.34E-04	0
5.55	0.00211	0.00208	0.00197	0.00215	0.00209	0.00209	0.00191	0.00163	0.00127	8.69E-04	4.79E-04	1.67E-04	0
5.56	0.00733	0.00688	0.00603	0.00541	0.00476	0.00407	0.00334	0.00259	0.00186	0.00118	6.05E-04	1.93E-04	0
5.57	0.01254	0.01124	0.01004	0.00865	0.00729	0.00595	0.00467	0.00347	0.00239	0.00145	7.15E-04	2.14E-04	0
5.58	0.0176	0.01567	0.01391	0.01179	0.00972	0.00777	0.00596	0.00432	0.0029	0.00172	8.20E-04	2.34E-04	0
5.59	0.02236	0.01866	0.01758	0.01477	0.01208	0.00955	0.00723	0.00518	0.00342	0.002	9.32E-04	2.56E-04	0
5.6	0.02673	0.02372	0.02097	0.01758	0.01483	0.01113	0.00853	0.00608	0.00421	0.00231	0.00106	2.85E-04	0
5.61	0.03066	0.02721	0.02404	0.02019	0.01649	0.01302	0.00965	0.00703	0.00462	0.00268	0.00123	3.29E-04	0
5.62	0.03413	0.03033	0.02679	0.0226	0.01854	0.01472	0.0112	0.00804	0.00533	0.00311	0.00145	3.93E-04	0
5.63	0.03717	0.03309	0.02925	0.02483	0.02052	0.01641	0.01258	0.00891	0.0061	0.0036	4.73E-04	1.38E-04	0
5.64	0.03985	0.03556	0.03146	0.02691	0.02242	0.01809	0.0143	0.01024	0.00692	0.00413	0.00197	5.62E-04	0
5.65	0.04226	0.03782	0.03351	0.02898	0.02427	0.01976	0.01543	0.0114	0.00777	0.00469	0.00228	6.58E-04	0
5.66	0.04452	0.03984	0.03544	0.03076	0.02606	0.02138	0.01684	0.01255	0.00863	0.00525	0.00256	7.56E-04	0
5.67	0.04673	0.04201	0.03734	0.03258	0.02777	0.02284	0.01819	0.01395	0.00958	0.00598	0.00286	8.58E-04	0
5.68	0.04895	0.04407	0.03921	0.03435	0.02938	0.02438	0.01942	0.01464	0.01021	0.0063	0.00313	9.46E-04	0

5.69	0.05121	0.04814	0.04109	0.03604	0.03089	0.02587	0.02048	0.01549	0.01082	0.00969	0.00333	0.00102	0
5.7	0.05349	0.0482	0.04294	0.03764	0.03224	0.02678	0.02137	0.01614	0.01126	0.00696	0.00346	0.00105	0
5.71	0.05576	0.0502	0.04472	0.0391	0.03339	0.02766	0.02201	0.01657	0.01153	0.0071	0.00352	0.00107	0
5.72	0.05793	0.05207	0.04635	0.04036	0.03432	0.0283	0.02241	0.01679	0.01162	0.00712	0.00351	0.00105	0
5.73	0.05985	0.05371	0.04776	0.04138	0.03499	0.02869	0.02253	0.01681	0.01156	0.00704	0.00345	0.00102	0
5.74	0.06141	0.055	0.04886	0.04211	0.0354	0.02863	0.02254	0.01686	0.01138	0.00687	0.00333	9.76E-04	0
5.75	0.06247	0.05585	0.04956	0.04249	0.03551	0.02875	0.02253	0.01689	0.01111	0.00665	0.00319	9.19E-04	0
5.76	0.06291	0.05616	0.04978	0.04249	0.03533	0.02846	0.02197	0.01603	0.01079	0.00641	0.00305	8.64E-04	0
5.77	0.06296	0.05587	0.04947	0.04209	0.03487	0.02797	0.0215	0.01582	0.01046	0.00619	0.00293	8.21E-04	0
5.78	0.06188	0.05486	0.04863	0.0413	0.03416	0.02734	0.02087	0.0152	0.01016	0.00589	0.00282	7.88E-04	0
5.79	0.05998	0.05344	0.04727	0.04016	0.03322	0.02659	0.0204	0.01478	0.00988	0.00563	0.00275	7.65E-04	0
5.8	0.0576	0.05136	0.04544	0.03869	0.03208	0.02575	0.0196	0.01439	0.00964	0.0057	0.00269	7.52E-04	0
5.81	0.05457	0.04881	0.0432	0.03683	0.03076	0.0248	0.01917	0.014	0.00942	0.0056	0.00266	7.50E-04	0
5.82	0.0513	0.04588	0.04064	0.03494	0.02927	0.02375	0.01846	0.01389	0.00922	0.00552	0.00265	7.58E-04	0
5.83	0.04762	0.04288	0.03786	0.03275	0.02763	0.02259	0.01771	0.01313	0.00898	0.00543	0.00264	7.70E-04	0
5.84	0.04377	0.03933	0.03493	0.03043	0.02586	0.0213	0.01684	0.01259	0.00869	0.0053	0.0026	7.76E-04	0
5.85	0.03966	0.0359	0.03195	0.028	0.02387	0.01988	0.01584	0.01193	0.0083	0.00511	0.00253	7.66E-04	0
5.86	0.03596	0.03247	0.02895	0.0255	0.02195	0.01832	0.01468	0.01113	0.00779	0.00483	0.00241	7.39E-04	0
5.87	0.03214	0.02906	0.02596	0.02293	0.0198	0.01659	0.01334	0.01016	0.00715	0.00445	0.00224	6.94E-04	0
5.88	0.02841	0.02537	0.02239	0.02031	0.01754	0.0147	0.01184	0.00903	0.00637	0.00388	0.00201	6.28E-04	0
5.89	0.02473	0.02236	0.02001	0.01761	0.01516	0.01267	0.01018	0.00775	0.00546	0.00341	0.00172	5.38E-04	0
5.9	0.02104	0.01888	0.01688	0.01484	0.01267	0.01052	0.00839	0.00634	0.00443	0.00275	0.00138	4.28E-04	0
5.91	0.01727	0.01551	0.01385	0.01196	0.01007	0.00824	0.00648	0.00483	0.00332	0.00203	0.001	3.02E-04	0
5.92	0.01334	0.01119	0.01058	0.00895	0.00738	0.00589	0.0045	0.00326	0.00218	0.00129	8.12E-04	1.75E-04	0
5.93	0.00982	0.00811	0.00715	0.00583	0.0046	0.00349	0.00251	0.00189	0.00104	5.61E-04	2.37E-04	5.42E-05	0
5.94	0.0048	0.0041	0.00354	0.00262	0.00179	0.0011	5.63E-04	1.89E-04	-3.02E-05	-1.19E-04	-1.12E-04	-5.74E-05	0
5.95	1.22E-04	-1.08E-04	-2.18E-04	-7.72E-04	-0.00123	-0.0013	-0.0013	-0.00122	-0.00102	-7.32E-04	-4.21E-04	-1.54E-04	0
5.96	-0.00478	-0.00449	-0.00411	-0.004	-0.0038	-0.00348	-0.00305	-0.0025	-0.00189	-0.00126	-8.81E-04	-2.31E-04	0
5.97	-0.00985	-0.00898	-0.00809	-0.00736	-0.00654	-0.00585	-0.00488	-0.00387	-0.00286	-0.00171	-8.87E-04	-2.87E-04	0
5.98	-0.01497	-0.01352	-0.01209	-0.01067	-0.00921	-0.00771	-0.00662	-0.00472	-0.00332	-0.00207	-0.00104	-3.22E-04	0
5.99	-0.02004	-0.01789	-0.01603	-0.0139	-0.01177	-0.00968	-0.00761	-0.00567	-0.00399	-0.00237	-0.00116	-3.43E-04	0
6	-0.02493	-0.02278	-0.01979	-0.01696	-0.01417	-0.01148	-0.00891	-0.00654	-0.00442	-0.00264	-0.00126	-3.60E-04	0
6.01	-0.02952	-0.02631	-0.0233	-0.01982	-0.01641	-0.01316	-0.01011	-0.00734	-0.00491	-0.00289	-0.00136	-3.78E-04	0
6.02	-0.0337	-0.02898	-0.0256	-0.02243	-0.01847	-0.01472	-0.01124	-0.0081	-0.00538	-0.00314	-0.00146	-3.99E-04	0
6.03	-0.03735	-0.0332	-0.02932	-0.02477	-0.02036	-0.01618	-0.01231	-0.00864	-0.00684	-0.00564	-0.00339	-4.20E-04	0
6.04	-0.04044	-0.03595	-0.03173	-0.02682	-0.02206	-0.01753	-0.01334	-0.00956	-0.00631	-0.00365	-0.00168	-4.46E-04	0
6.05	-0.04294	-0.0382	-0.03372	-0.02857	-0.02356	-0.01877	-0.01431	-0.01029	-0.0068	-0.00394	-0.00181	-4.62E-04	0
6.06	-0.04489	-0.03988	-0.03531	-0.03003	-0.02486	-0.01989	-0.01524	-0.011	-0.00731	-0.00427	-0.00214	-5.36E-04	0
6.07	-0.04633	-0.04133	-0.03653	-0.03121	-0.02597	-0.0209	-0.01611	-0.01172	-0.00785	-0.00463	-0.00218	-6.05E-04	0
6.08	-0.04734	-0.0423	-0.03745	-0.03216	-0.0269	-0.02179	-0.01692	-0.01241	-0.00839	-0.00501	-0.00239	-6.80E-04	0
6.09	-0.04799	-0.04397	-0.03811	-0.03288	-0.02767	-0.02256	-0.01784	-0.01304	-0.0089	-0.00537	-0.00259	-7.53E-04	0
6.1	-0.04837	-0.0434	-0.03856	-0.03342	-0.02827	-0.02318	-0.01824	-0.01358	-0.00934	-0.00568	-0.00277	-8.20E-04	0
6.11	-0.04896	-0.04364	-0.03862	-0.03376	-0.02857	-0.02342	-0.01868	-0.01389	-0.00967	-0.00592	-0.00292	-8.73E-04	0
6.12	-0.0486	-0.04371	-0.03892	-0.03392	-0.02868	-0.02366	-0.01893	-0.01421	-0.00987	-0.00606	-0.003	-9.05E-04	0
6.13	-0.0495	-0.04364	-0.03987	-0.03391	-0.02889	-0.02388	-0.01886	-0.01425	-0.00989	-0.00608	-0.00301	-9.11E-04	0
6.14	-0.04826	-0.04341	-0.03865	-0.03337	-0.02869	-0.02368	-0.01877	-0.01408	-0.00975	-0.00598	-0.00295	-9.10E-04	0
6.15	-0.04784	-0.04299	-0.03826	-0.03325	-0.02825	-0.02325	-0.01837	-0.01372	-0.00947	-0.00577	-0.00284	-8.46E-04	0
6.16	-0.04719	-0.04235	-0.03765	-0.03262	-0.02758	-0.02259	-0.01776	-0.0132	-0.00905	-0.00549	-0.00268	-7.89E-04	0
6.17	-0.04624	-0.04142	-0.03678	-0.03171	-0.02687	-0.02172	-0.01688	-0.01254	-0.00855	-0.00515	-0.00249	-7.28E-04	0
6.18	-0.04492	-0.04017	-0.03563	-0.03056	-0.02584	-0.02068	-0.01606	-0.01179	-0.00799	-0.00478	-0.00223	-6.62E-04	0
6.19	-0.04318	-0.03855	-0.03415	-0.02914	-0.02423	-0.01951	-0.01506	-0.01098	-0.00744	-0.00421	-0.0021	-5.96E-04	0
6.2	-0.04097	-0.03653	-0.03234	-0.02749	-0.02275	-0.01823	-0.01417	-0.01017	-0.00681	-0.00402	-0.0019	-5.34E-04	0
6.21	-0.0393	-0.03412	-0.03019	-0.0256	-0.02113	-0.01688	-0.01293	-0.00935	-0.00624	-0.00367	-0.00173	-4.80E-04	0
6.22	-0.03519	-0.03135	-0.02772	-0.02349	-0.01938	-0.01548	-0.01184	-0.00855	-0.00557	-0.00335	-0.00157	-4.34E-04	0
6.23	-0.03167	-0.02823	-0.02496	-0.0212	-0.01752	-0.01402	-0.01074	-0.00777	-0.00519	-0.00305	-0.00143	-3.86E-04	0
6.24	-0.02783	-0.02483	-0.02196	-0.01874	-0.01557	-0.01232	-0.00964	-0.00701	-0.0047	-0.00277	-0.00131	-3.66E-04	0
6.25	-0.02374	-0.02123	-0.01879	-0.01616	-0.01363	-0.01096	-0.00851	-0.00624	-0.00422	-0.00252	-0.0012	-3.42E-04	0
6.26	-0.01951	-0.01751	-0.01533	-0.01349	-0.01142	-0.00936	-0.00736	-0.00546	-0.00374	-0.00228	-0.0011	-3.22E-04	0
6.27	-0.01522	-0.01373	-0.01223	-0.01077	-0.00925	-0.0077	-0.00615	-0.00464	-0.00323	-0.00199	-9.87E-04	-3.00E-04	0

6.28	-0.01065	-0.00997	-0.00694	-0.00801	-0.00702	-0.00597	-0.00486	-0.00375	-0.00267	-0.00168	-8.56E-04	-2.71E-04	0
6.29	-0.00977	-0.00626	-0.00568	-0.00524	-0.00474	-0.00415	-0.00349	-0.00277	-0.00202	-0.00131	-6.91E-04	-2.29E-04	0
6.3	-0.00271	-0.00263	-0.00247	-0.00241	-0.00224	-0.00225	-0.00201	-0.00168	-0.00129	-8.78E-04	-1.71E-04	0	
6.31	0.00122	0.00100	0.00094	0.00094	-0.00084	-0.00084	-0.00084	-0.00084	-0.00084	-0.00084	-0.00084	-0.00084	0
6.32	0.00502	0.00437	0.00377	0.00306	0.00238	0.00177	0.00123	0.00069	0.00013	0.00013	0.00013	0.00013	0
6.33	0.00873	0.00775	0.00681	0.00578	0.00478	0.00382	0.00291	0.00209	0.00138	0.00069	0.00013	0.00013	0
6.34	0.01235	0.01105	0.00978	0.00846	0.00714	0.00583	0.00457	0.00339	0.00231	0.00138	0.00069	0.00013	0
6.35	0.01592	0.0143	0.01288	0.01107	0.00942	0.00778	0.00617	0.00462	0.00319	0.00194	0.00138	0.00069	0
6.36	0.01944	0.01748	0.01554	0.0136	0.01162	0.00963	0.00766	0.00576	0.00445	0.00245	0.00121	0.00069	0
6.37	0.02291	0.02061	0.01833	0.01605	0.01372	0.01137	0.00904	0.00688	0.00472	0.00229	0.00143	0.00069	0
6.38	0.02632	0.02367	0.02107	0.01841	0.0157	0.01289	0.01031	0.00774	0.00536	0.00328	0.00162	0.00069	0
6.39	0.02964	0.02663	0.02371	0.02065	0.01755	0.01448	0.01144	0.00856	0.00591	0.00361	0.00177	0.00069	0
6.4	0.03281	0.02945	0.02621	0.02272	0.01923	0.01578	0.01243	0.00926	0.00637	0.00387	0.00218	0.00069	0
6.41	0.03579	0.03208	0.02852	0.02461	0.02073	0.01693	0.01328	0.00985	0.00674	0.00408	0.00218	0.00069	0
6.42	0.03849	0.03445	0.03058	0.02629	0.02204	0.01792	0.01398	0.01032	0.00703	0.00424	0.00209	0.00069	0
6.43	0.04084	0.03665	0.03236	0.02773	0.02316	0.01875	0.01456	0.01069	0.00725	0.00434	0.00209	0.00069	0
6.44	0.04278	0.03819	0.03383	0.02892	0.02409	0.01943	0.01503	0.01089	0.00741	0.00441	0.00209	0.00069	0
6.45	0.04428	0.03985	0.03496	0.02985	0.02483	0.01986	0.01542	0.01124	0.00755	0.00447	0.00209	0.00069	0
6.46	0.0453	0.04042	0.03576	0.03053	0.02539	0.02043	0.01574	0.01145	0.00768	0.00453	0.00214	0.00069	0
6.47	0.04587	0.04094	0.03622	0.03096	0.02576	0.02075	0.016	0.01165	0.00782	0.00462	0.00218	0.00069	0
6.48	0.04601	0.04108	0.03636	0.03113	0.02596	0.02086	0.0162	0.01183	0.00797	0.00473	0.00224	0.00069	0
6.49	0.04574	0.04083	0.03621	0.03106	0.02597	0.02087	0.01623	0.01183	0.00797	0.00473	0.00224	0.00069	0
6.5	0.04151	0.03727	0.03313	0.02875	0.02434	0.01988	0.01575	0.01174	0.00808	0.00492	0.00241	0.00069	0
6.54	0.03988	0.03564	0.03149	0.02711	0.02261	0.01833	0.01426	0.01013	0.00821	0.00493	0.00236	0.00069	0
6.55	0.0381	0.03424	0.03048	0.02651	0.0225	0.01851	0.01462	0.01082	0.00754	0.0046	0.00226	0.00069	0
6.56	0.03614	0.03248	0.02892	0.02513	0.02131	0.01752	0.01383	0.01033	0.00712	0.00434	0.00213	0.00069	0
6.57	0.03402	0.03055	0.02719	0.02357	0.01995	0.01637	0.01289	0.00961	0.00662	0.00403	0.00213	0.00069	0
6.58	0.03168	0.02842	0.02527	0.02184	0.01842	0.01506	0.01182	0.00878	0.00603	0.00366	0.00213	0.00069	0
6.59	0.02911	0.02608	0.02317	0.01994	0.01673	0.01381	0.01063	0.00766	0.00536	0.00324	0.00157	0.00069	0
6.6	0.02629	0.02351	0.02086	0.01786	0.01491	0.01206	0.00936	0.00686	0.00465	0.00278	0.00134	0.00069	0
6.61	0.02319	0.02027	0.01764	0.01491	0.01239	0.01042	0.00802	0.00583	0.00399	0.00231	0.00109	0.00069	0
6.62	0.01982	0.01766	0.01562	0.01324	0.01092	0.00871	0.00664	0.00478	0.00317	0.00185	0.00069	0.00069	0
6.63	0.0162	0.01441	0.01272	0.01073	0.00879	0.00696	0.00526	0.00375	0.00246	0.00141	0.00069	0.00069	0
6.64	0.01236	0.01098	0.00967	0.00812	0.00681	0.0052	0.00389	0.00276	0.00179	0.00102	0.00069	0.00069	0
6.65	0.00835	0.00741	0.00652	0.00545	0.00442	0.00346	0.00257	0.00181	0.00117	0.00069	0.00069	0.00069	0
6.66	0.00422	0.00375	0.0033	0.00275	0.00222	0.00173	0.00128	0.00084	0.00046	0.00026	0.00013	0.00013	0
6.67	6.29E-05	7.37E-05	6.93E-05	5.28E-05	3.95E-05	3.09E-05	2.55E-05	2.05E-05	1.64E-05	1.24E-05	8.9E-06	6.4E-06	0
6.68	-0.00405	-0.00357	-0.00313	-0.00281	-0.00244	-0.00211	-0.00184	-0.00159	-0.00138	-0.00116	-9.20E-05	-7.20E-05	0
6.69	-0.00805	-0.0071	-0.00623	-0.00552	-0.00482	-0.00422	-0.00362	-0.00302	-0.00242	-0.00182	-0.00122	-9.20E-05	0
6.7	-0.01187	-0.01049	-0.00922	-0.00777	-0.00654	-0.00548	-0.00458	-0.00384	-0.00317	-0.00257	-0.00202	-0.00142	0
6.71	-0.01547	-0.01369	-0.01204	-0.0101	-0.00822	-0.00646	-0.00485	-0.00343	-0.00223	-0.00126	-0.00069	-0.00013	0
6.72	-0.01881	-0.01688	-0.0147	-0.01238	-0.01014	-0.00802	-0.00607	-0.00434	-0.00285	-0.00164	-0.00069	-0.00013	0
6.73	-0.02187	-0.01945	-0.01717	-0.01454	-0.01196	-0.00956	-0.0073	-0.00526	-0.00348	-0.00203	-0.00116	-0.00013	0
6.74	-0.02488	-0.02189	-0.01944	-0.01657	-0.01375	-0.0105	-0.0078	-0.00526	-0.00348	-0.00203	-0.00116	-0.00013	0
6.75	-0.02724	-0.02432	-0.02153	-0.01845	-0.01541	-0.01246	-0.00966	-0.00707	-0.00477	-0.00283	-0.00134	-0.00013	0
6.76	-0.02957	-0.02645	-0.02343	-0.02018	-0.01684	-0.01378	-0.01075	-0.00792	-0.00538	-0.00323	-0.00155	-0.00013	0
6.77	-0.0317	-0.02839	-0.02518	-0.02177	-0.01836	-0.015	-0.01175	-0.0087	-0.00595	-0.00359	-0.00174	-0.00013	0
6.78	-0.03364	-0.03017	-0.02678	-0.02322	-0.01964	-0.0161	-0.01266	-0.00941	-0.00646	-0.00392	-0.00191	-0.00013	0
6.79	-0.03541	-0.03178	-0.02825	-0.02452	-0.02078	-0.01706	-0.01345	-0.01002	-0.00689	-0.00419	-0.00204	-0.00013	0
6.8	-0.03702	-0.03324	-0.02956	-0.02566	-0.02175	-0.01787	-0.01409	-0.01051	-0.00724	-0.00444	-0.00215	-0.00013	0
6.81	-0.03845	-0.03452	-0.0307	-0.02683	-0.02254	-0.01851	-0.01459	-0.01088	-0.00749	-0.00456	-0.00223	-0.00013	0
6.82	-0.03968	-0.03566	-0.03169	-0.0274	-0.02315	-0.01927	-0.01511	-0.01111	-0.00764	-0.00468	-0.00227	-0.00013	0
6.83	-0.04067	-0.03646	-0.03239	-0.02797	-0.02357	-0.01926	-0.01511	-0.01121	-0.00768	-0.00468	-0.00227	-0.00013	0
6.84	-0.04137	-0.03704	-0.03289	-0.02833	-0.0238	-0.01939	-0.01515	-0.01119	-0.00764	-0.00468	-0.00223	-0.00013	0
6.85	-0.04173	-0.03729	-0.03311	-0.02845	-0.02384	-0.01954	-0.01505	-0.01107	-0.00751	-0.00457	-0.00216	-0.00013	0
6.86	-0.04173	-0.03729	-0.03304	-0.02833	-0.02386	-0.01914	-0.01484	-0.01087	-0.00734	-0.00437	-0.00208	-0.00013	0

6.87	-0.04131	-0.03689	-0.03287	-0.02795	-0.02333	-0.01879	-0.01453	-0.0106	-0.00713	-0.00423	-0.00201	-0.00193	-0.00193	0
6.88	-0.04047	-0.03612	-0.03198	-0.02733	-0.02274	-0.01831	-0.01413	-0.01029	-0.00691	-0.00409	-0.00201	-0.00193	-0.00193	0
6.89	-0.0392	-0.03489	-0.0307	-0.02645	-0.022	-0.01771	-0.01385	-0.00984	-0.00667	-0.00394	-0.00198	-0.00168	-0.00168	0
6.9	-0.03751	-0.03344	-0.02932	-0.02532	-0.02107	-0.01697	-0.01309	-0.00954	-0.00641	-0.00379	-0.00179	-0.00179	-0.00179	0
6.91	-0.03542	-0.03163	-0.02801	-0.02435	-0.02035	-0.01658	-0.01288	-0.00948	-0.00661	-0.00394	-0.00172	-0.00172	-0.00172	0
6.92	-0.03326	-0.02946	-0.0261	-0.02235	-0.01866	-0.01508	-0.01189	-0.00856	-0.00578	-0.00344	-0.00164	-0.00164	-0.00164	0
6.93	-0.03018	-0.02689	-0.02383	-0.02055	-0.0172	-0.01384	-0.01084	-0.00796	-0.00539	-0.00322	-0.00154	-0.00154	-0.00154	0
6.94	-0.02712	-0.02428	-0.02155	-0.01856	-0.01559	-0.01268	-0.00988	-0.00728	-0.00485	-0.00297	-0.00143	-0.00143	-0.00143	0
6.95	-0.02384	-0.02138	-0.019	-0.01642	-0.01384	-0.01133	-0.00885	-0.00655	-0.00447	-0.00269	-0.00131	-0.00131	-0.00131	0
6.96	-0.02041	-0.01834	-0.01632	-0.01415	-0.01198	-0.00982	-0.00773	-0.00575	-0.00385	-0.0024	-0.00117	-0.00117	-0.00117	0
6.97	-0.01688	-0.01519	-0.01355	-0.01179	-0.01002	-0.00826	-0.00653	-0.00489	-0.00339	-0.00208	-0.00103	-0.00103	-0.00103	0
6.98	-0.01328	-0.01196	-0.01071	-0.00936	-0.00789	-0.00662	-0.00527	-0.00398	-0.00278	-0.00173	-0.00088	-0.00088	-0.00088	0
6.99	-0.00968	-0.00874	-0.00784	-0.00688	-0.00599	-0.00492	-0.00396	-0.00302	-0.00213	-0.00134	-0.00064	-0.00064	-0.00064	0
7	-0.00604	-0.00555	-0.00486	-0.00438	-0.00379	-0.00332	-0.0028	-0.00201	-0.00145	-0.00094	-0.00048	-0.00048	-0.00048	0
7.01	-0.00246	-0.00228	-0.00209	-0.00189	-0.00168	-0.00148	-0.00123	-0.00094	-0.00068	-0.00048	-0.00024	-0.00024	-0.00024	0
7.02	0.00107	8.97E-04	7.48E-04	5.71E-04	4.08E-04	2.61E-04	1.41E-04	4.72E-05	-1.54E-05	-4.62E-05	-2.74E-05	-2.74E-05	-2.74E-05	0
7.03	0.00454	0.00401	0.00353	0.00299	0.00246	0.00196	0.00149	0.00107	7.05E-04	4.08E-04	1.83E-04	1.83E-04	1.83E-04	0
7.04	0.00793	0.00706	0.00625	0.00535	0.00447	0.00362	0.00281	0.00207	0.00141	3.49E-04	4.08E-04	4.08E-04	4.08E-04	0
7.05	0.01122	0.01003	0.00889	0.00765	0.00642	0.00523	0.00409	0.00303	0.00207	0.00125	6.07E-04	1.78E-04	1.78E-04	0
7.06	0.01441	0.0129	0.01146	0.00988	0.00832	0.00679	0.00532	0.00394	0.0027	0.00163	7.91E-04	2.30E-04	2.30E-04	0
7.07	0.0175	0.01567	0.01362	0.01202	0.01013	0.00827	0.00648	0.0048	0.00328	0.00198	9.59E-04	2.78E-04	2.78E-04	0
7.08	0.02047	0.01853	0.01627	0.01405	0.01184	0.00966	0.00757	0.0056	0.00382	0.0023	0.00111	3.20E-04	3.20E-04	0
7.09	0.02329	0.02084	0.01849	0.01596	0.01343	0.01095	0.00866	0.00633	0.00431	0.00259	0.00124	3.57E-04	3.57E-04	0
7.1	0.02592	0.02319	0.02055	0.01772	0.01489	0.01212	0.00946	0.00687	0.00473	0.00283	0.00136	3.86E-04	3.86E-04	0
7.11	0.02834	0.02534	0.02244	0.01931	0.0162	0.01316	0.01025	0.00753	0.0051	0.00304	0.00145	4.08E-04	4.08E-04	0
7.12	0.03051	0.02726	0.02413	0.02073	0.01736	0.01407	0.01093	0.00801	0.00541	0.00322	0.00153	4.30E-04	4.30E-04	0
7.13	0.0324	0.02894	0.02561	0.02197	0.01837	0.01486	0.01152	0.00844	0.00569	0.00338	0.00161	4.52E-04	4.52E-04	0
7.14	0.034	0.03036	0.02688	0.02303	0.01923	0.01554	0.01204	0.00881	0.00584	0.00353	0.00168	4.73E-04	4.73E-04	0
7.15	0.03527	0.0315	0.0279	0.02389	0.01984	0.01611	0.01248	0.00913	0.00618	0.00367	0.00174	4.95E-04	4.95E-04	0
7.16	0.03622	0.03236	0.02868	0.02456	0.0205	0.01657	0.01284	0.00941	0.00636	0.00379	0.00181	5.13E-04	5.13E-04	0
7.17	0.03685	0.03293	0.02919	0.02501	0.0209	0.01691	0.01313	0.00963	0.00652	0.00389	0.00186	5.39E-04	5.39E-04	0
7.18	0.03717	0.03323	0.02946	0.02527	0.02114	0.01714	0.01333	0.0098	0.00685	0.00399	0.00192	5.53E-04	5.53E-04	0
7.19	0.03717	0.03325	0.02949	0.02535	0.02124	0.01725	0.01344	0.00981	0.00674	0.00408	0.00196	5.70E-04	5.70E-04	0
7.2	0.03689	0.03303	0.02931	0.02525	0.02121	0.01727	0.01349	0.00986	0.0068	0.00401	0.00199	5.81E-04	5.81E-04	0
7.21	0.03638	0.0328	0.02895	0.02481	0.0205	0.01718	0.01345	0.00986	0.00681	0.00412	0.002	5.86E-04	5.86E-04	0
7.22	0.03565	0.03197	0.02841	0.02458	0.02075	0.01697	0.01332	0.00989	0.00678	0.00411	0.002	5.86E-04	5.86E-04	0
7.23	0.03473	0.03117	0.02771	0.02401	0.0203	0.01664	0.01309	0.00974	0.00669	0.00408	0.00198	5.87E-04	5.87E-04	0
7.24	0.03395	0.03021	0.02866	0.02329	0.0197	0.01617	0.01273	0.00949	0.00653	0.00397	0.00195	5.78E-04	5.78E-04	0
7.25	0.0324	0.02909	0.02586	0.02241	0.01896	0.01556	0.01225	0.00913	0.00629	0.00383	0.00188	5.59E-04	5.59E-04	0
7.26	0.02998	0.0278	0.0247	0.02139	0.01808	0.01482	0.01166	0.00867	0.00596	0.00362	0.00177	5.26E-04	5.26E-04	0
7.27	0.02908	0.02635	0.0234	0.02024	0.01707	0.01396	0.01095	0.00812	0.00556	0.00337	0.00164	4.82E-04	4.82E-04	0
7.28	0.02759	0.02473	0.02194	0.01884	0.01594	0.01289	0.01015	0.0075	0.00511	0.00308	0.00149	4.34E-04	4.34E-04	0
7.29	0.02561	0.02293	0.02034	0.01775	0.01468	0.01192	0.00928	0.00683	0.00463	0.00278	0.00134	3.87E-04	3.87E-04	0
7.3	0.02342	0.02095	0.01858	0.01594	0.01332	0.01078	0.00836	0.00613	0.00414	0.00247	0.00119	3.41E-04	3.41E-04	0
7.31	0.02101	0.01878	0.01666	0.01424	0.01186	0.00957	0.0074	0.00541	0.00365	0.00217	0.00104	2.97E-04	2.97E-04	0
7.32	0.0184	0.01644	0.01458	0.01243	0.01033	0.00831	0.00641	0.00488	0.00315	0.00187	8.96E-04	2.57E-04	2.57E-04	0
7.33	0.01559	0.01392	0.01235	0.0105	0.00871	0.00699	0.00539	0.00393	0.00264	0.00157	7.54E-04	2.17E-04	2.17E-04	0
7.34	0.0128	0.01125	0.00987	0.00846	0.00702	0.00564	0.00434	0.00317	0.00213	0.00127	6.13E-04	1.78E-04	1.78E-04	0
7.35	0.00946	0.00845	0.0075	0.00639	0.0053	0.00426	0.00329	0.0024	0.00162	9.74E-04	4.73E-04	1.40E-04	1.40E-04	0
7.36	0.00622	0.00558	0.00486	0.00426	0.00356	0.00289	0.00224	0.00164	0.00112	6.78E-04	3.33E-04	1.01E-04	1.01E-04	0
7.37	0.00294	0.00287	0.0024	0.00211	0.00181	0.0015	0.00119	8.96E-04	8.27E-04	3.96E-04	1.96E-04	6.42E-05	6.42E-05	0
7.38	-3.23E-04	-2.19E-04	-1.44E-04	-2.78E-05	6.44E-05	1.26E-04	1.58E-04	1.64E-04	1.47E-04	1.15E-04	7.36E-05	3.13E-05	3.13E-05	0
7.39	-0.00395	-0.00304	-0.00264	-0.00213	-0.00168	-0.00124	-8.70E-04	-5.84E-04	-3.24E-04	-1.51E-04	-4.44E-05	1.96E-06	1.96E-06	0
7.4	-0.00656	-0.00577	-0.00505	-0.00418	-0.00335	-0.00259	-0.00189	-0.00129	-7.95E-04	-4.18E-04	-2.71E-05	-2.71E-05	-2.71E-05	0
7.41	-0.00846	-0.00636	-0.00534	-0.00451	-0.00369	-0.00289	-0.0022	-0.00159	-0.00099	-0.00028	-6.98E-04	-6.16E-05	-6.16E-05	0
7.42	-0.01219	-0.01018	-0.00851	-0.00734	-0.00655	-0.00517	-0.00389	-0.00275	-0.00178	-0.001	-4.39E-04	-1.05E-04	-1.05E-04	0
7.43	-0.01472	-0.01307	-0.01153	-0.00976	-0.00803	-0.00639	-0.00486	-0.00348	-0.00229	-0.00132	-6.03E-04	-1.57E-04	-1.57E-04	0
7.44	-0.01704	-0.01517	-0.0134	-0.0114	-0.00944	-0.00756	-0.00581	-0.00421	-0.00281	-0.00165	-7.71E-04	-2.11E-04	-2.11E-04	0
7.45	-0.01916	-0.01709	-0.01513	-0.01293	-0.01078	-0.00868	-0.00672	-0.00491	-0.00331	-0.00197	-9.35E-04	-2.63E-04	-2.63E-04	0

7.46	-0.02109	-0.01885	-0.0167	-0.01434	-0.012	-0.00973	-0.00757	-0.00657	-0.00378	-0.00227	-0.00109	-3.10E-04	0
7.47	-0.02286	-0.02045	-0.01814	-0.01563	-0.01314	-0.0107	-0.00836	-0.00618	-0.00421	-0.00252	-0.00122	-3.52E-04	0
7.48	-0.02446	-0.02191	-0.01944	-0.0168	-0.01416	-0.01156	-0.00905	-0.00671	-0.00459	-0.00277	-0.00134	-3.87E-04	0
7.49	-0.02589	-0.02321	-0.0206	-0.01783	-0.01506	-0.01232	-0.00966	-0.00716	-0.0049	-0.00295	-0.00143	-4.14E-04	0
7.5	-0.02719	-0.02437	-0.02162	-0.01873	-0.01582	-0.01284	-0.01015	-0.00752	-0.00514	-0.00319	-0.00148	-4.32E-04	0
7.51	-0.02831	-0.02536	-0.0225	-0.01947	-0.01643	-0.01343	-0.01052	-0.00779	-0.00531	-0.00319	-0.00154	-4.43E-04	0
7.52	-0.02923	-0.02618	-0.02321	-0.02005	-0.01689	-0.01378	-0.01077	-0.00796	-0.00542	-0.00325	-0.00157	-4.51E-04	0
7.53	-0.02994	-0.02679	-0.02375	-0.02047	-0.01712	-0.01389	-0.01082	-0.00805	-0.00547	-0.00328	-0.00158	-4.56E-04	0
7.54	-0.03041	-0.02719	-0.02411	-0.02072	-0.01736	-0.01409	-0.01097	-0.00807	-0.00548	-0.00328	-0.00158	-4.53E-04	0
7.55	-0.0306	-0.02736	-0.02428	-0.0208	-0.01759	-0.01408	-0.01093	-0.00803	-0.00544	-0.00325	-0.00156	-4.46E-04	0
7.56	-0.03051	-0.02727	-0.02418	-0.0207	-0.01727	-0.01386	-0.01082	-0.00793	-0.00536	-0.00322	-0.00153	-4.37E-04	0
7.57	-0.03014	-0.02693	-0.02388	-0.02041	-0.01701	-0.01374	-0.01064	-0.00779	-0.00526	-0.00313	-0.0015	-4.27E-04	0
7.58	-0.02947	-0.02633	-0.02333	-0.01995	-0.01662	-0.01342	-0.01039	-0.00776	-0.00513	-0.00306	-0.00146	-4.19E-04	0
7.59	-0.02852	-0.02548	-0.02258	-0.01932	-0.01611	-0.01302	-0.01008	-0.00738	-0.00499	-0.00298	-0.00143	-4.11E-04	0
7.6	-0.02731	-0.02441	-0.02163	-0.01855	-0.0155	-0.01255	-0.00974	-0.00714	-0.00484	-0.0028	-0.00139	-4.00E-04	0
7.61	-0.02585	-0.02314	-0.02052	-0.01765	-0.01479	-0.01201	-0.00935	-0.00688	-0.00467	-0.0028	-0.00135	-3.86E-04	0
7.62	-0.02421	-0.0217	-0.01926	-0.01662	-0.01388	-0.01139	-0.0089	-0.00657	-0.00448	-0.0027	-0.0013	-3.79E-04	0
7.63	-0.02242	-0.02012	-0.01788	-0.01547	-0.01307	-0.01069	-0.00839	-0.00623	-0.00427	-0.00258	-0.00128	-3.71E-04	0
7.64	-0.02053	-0.01844	-0.01614	-0.01424	-0.01207	-0.00991	-0.00782	-0.00583	-0.00402	-0.00245	-0.0012	-3.60E-04	0
7.65	-0.01855	-0.01668	-0.01485	-0.01293	-0.01099	-0.00908	-0.00717	-0.00538	-0.00373	-0.00228	-0.00113	-3.43E-04	0
7.66	-0.0165	-0.01486	-0.01324	-0.01155	-0.00984	-0.00814	-0.00646	-0.00486	-0.00338	-0.00208	-0.00103	-3.15E-04	0
7.67	-0.01442	-0.01289	-0.01158	-0.01012	-0.00863	-0.00714	-0.00588	-0.00427	-0.00297	-0.00183	-9.11E-04	-2.78E-04	0
7.68	-0.01228	-0.01107	-0.00987	-0.00862	-0.00735	-0.00608	-0.00483	-0.00363	-0.00252	-0.00155	-7.70E-04	-2.35E-04	0
7.69	-0.01011	-0.0091	-0.00812	-0.00707	-0.00602	-0.00496	-0.00392	-0.00294	-0.00203	-0.00124	-6.18E-04	-1.87E-04	0
7.7	-0.00787	-0.00708	-0.00631	-0.00547	-0.00462	-0.00379	-0.00297	-0.00221	-0.00151	-9.20E-04	-4.53E-04	-1.37E-04	0
7.71	-0.00556	-0.00489	-0.00445	-0.00381	-0.00319	-0.00258	-0.002	-0.00146	-9.86E-04	-3.89E-04	-2.85E-04	-8.42E-05	0
7.72	-0.00317	-0.00283	-0.00252	-0.00211	-0.00171	-0.00134	-1.00E-03	-7.02E-04	-4.52E-04	-2.57E-04	-1.19E-04	-3.27E-05	0
7.73	-8.88E-04	-5.82E-04	-5.23E-04	-3.45E-04	-1.93E-04	-7.46E-05	9.52E-06	5.66E-05	7.81E-05	6.97E-05	4.37E-05	1.61E-05	0
7.74	0.00168	0.00172	0.00154	0.00146	0.00135	0.0012	0.00102	8.14E-04	5.97E-04	8.85E-04	1.97E-04	6.09E-05	0
7.75	0.00454	0.0041	0.00366	0.00329	0.00289	0.00248	0.00201	0.00155	0.0011	6.85E-04	3.42E-04	1.03E-04	0
7.76	0.00725	0.00652	0.0058	0.00512	0.00442	0.00389	0.00326	0.00225	0.00157	9.70E-04	4.79E-04	1.42E-04	0
7.77	0.00968	0.00896	0.00795	0.00694	0.00592	0.00489	0.00391	0.00291	0.00202	0.00123	6.05E-04	1.79E-04	0
7.78	0.0127	0.01137	0.01009	0.00874	0.00739	0.00605	0.00476	0.00355	0.00244	0.00148	7.24E-04	2.13E-04	0
7.79	0.01537	0.01374	0.01219	0.0105	0.00862	0.00719	0.00562	0.00416	0.00285	0.00172	8.38E-04	2.44E-04	0
7.8	0.01794	0.01604	0.01422	0.01221	0.01022	0.00829	0.00646	0.00476	0.00324	0.00195	9.39E-04	2.71E-04	0
7.81	0.02038	0.01821	0.01615	0.01384	0.01156	0.00936	0.00727	0.00534	0.00362	0.00217	0.00104	2.96E-04	0
7.82	0.02266	0.02024	0.01794	0.01536	0.01282	0.01037	0.00804	0.00569	0.00399	0.00238	0.00114	3.22E-04	0
7.83	0.02475	0.0221	0.01958	0.01677	0.01399	0.01131	0.00877	0.00643	0.00434	0.00259	0.00124	3.51E-04	0
7.84	0.02683	0.02378	0.02105	0.01804	0.01506	0.01218	0.00945	0.00693	0.00469	0.0028	0.00134	3.80E-04	0
7.85	0.02828	0.02526	0.02236	0.01919	0.01604	0.01299	0.01009	0.0074	0.00501	0.003	0.00143	4.09E-04	0
7.86	0.02969	0.02654	0.02351	0.0202	0.01692	0.01372	0.01067	0.00784	0.00552	0.00316	0.00152	4.35E-04	0
7.87	0.03087	0.02762	0.02448	0.02107	0.01786	0.01437	0.01119	0.00824	0.0056	0.00335	0.00161	4.60E-04	0
7.88	0.03183	0.0285	0.02527	0.02178	0.01831	0.01491	0.01164	0.00856	0.00584	0.00351	0.00169	4.85E-04	0
7.89	0.03259	0.02918	0.02589	0.02234	0.0188	0.01533	0.01199	0.00886	0.00605	0.00364	0.00176	5.10E-04	0
7.9	0.03313	0.02968	0.02634	0.02274	0.01915	0.01563	0.01224	0.00906	0.00619	0.00374	0.00181	5.30E-04	0
7.91	0.03345	0.02987	0.02661	0.02297	0.01935	0.0158	0.01238	0.00917	0.00628	0.00379	0.00184	5.40E-04	0
7.92	0.03355	0.03006	0.02669	0.02304	0.01941	0.01584	0.01241	0.00919	0.00628	0.00378	0.00184	5.39E-04	0
7.93	0.03341	0.02993	0.02657	0.02293	0.0193	0.01575	0.01232	0.00911	0.00622	0.00375	0.00182	5.29E-04	0
7.94	0.03303	0.02959	0.02626	0.02264	0.01904	0.01551	0.01212	0.00895	0.0061	0.00367	0.00177	5.14E-04	0
7.95	0.0324	0.029	0.02574	0.02216	0.01861	0.01513	0.0118	0.0087	0.00591	0.00355	0.00171	4.95E-04	0
7.96	0.03149	0.02818	0.025	0.0215	0.01802	0.01483	0.01139	0.00837	0.00568	0.0034	0.00164	4.72E-04	0
7.97	0.0303	0.0271	0.02404	0.02064	0.01727	0.014	0.01088	0.00799	0.00541	0.00323	0.00155	4.45E-04	0
7.98	0.02893	0.02578	0.02286	0.0196	0.01638	0.01325	0.01028	0.00754	0.0051	0.00305	0.00146	4.19E-04	0
7.99	0.02709	0.02422	0.02147	0.01639	0.01535	0.01241	0.00962	0.00705	0.00477	0.00285	0.00137	3.94E-04	0
8	0.02509	0.02243	0.01989	0.0162	0.0142	0.01148	0.0089	0.00653	0.00442	0.00265	0.00127	3.68E-04	0
8.01	0.02286	0.02044	0.01813	0.01553	0.01297	0.01095	0.00815	0.00598	0.00406	0.00243	0.00117	3.41E-04	0
8.02	0.02043	0.01829	0.01624	0.01394	0.01167	0.00946	0.00736	0.00542	0.00369	0.00222	0.00107	3.14E-04	0
8.03	0.01787	0.01602	0.01423	0.01226	0.0103	0.00839	0.00656	0.00485	0.00331	0.0022	9.74E-04	2.87E-04	0
8.04	0.0152	0.01366	0.01215	0.01051	0.00888	0.00728	0.00572	0.00426	0.00293	0.00178	8.74E-04	2.61E-04	0

8.05	0.01248	0.01124	0.00011	0.00872	0.00742	0.00612	0.00485	0.00364	0.00252	0.00155	7.69E-04	2.34E-04	0
8.06	0.00973	0.00879	0.00784	0.00689	0.00591	0.00492	0.00393	0.00298	0.00208	0.00129	6.50E-04	2.02E-04	0
8.07	0.00697	0.00633	0.00566	0.00503	0.00437	0.00388	0.00328	0.00278	0.00216	0.00161	5.13E-04	1.62E-04	0
8.08	0.00424	0.00388	0.00349	0.00316	0.00282	0.00254	0.00228	0.00204	0.00181	0.00159	3.60E-04	1.17E-04	0
8.09	0.00145	0.00133	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0
8.1	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	-0.00116	0
8.11	-0.00383	-0.00339	-0.00297	-0.00252	-0.00208	-0.00167	-0.00128	-0.00084	-0.00041	-0.00012	-3.59E-04	-1.02E-04	0
8.12	-0.00965	-0.00858	-0.00748	-0.00636	-0.00522	-0.00404	-0.00282	-0.00156	-0.00024	-0.00012	-5.43E-04	-1.58E-04	0
8.13	-0.00917	-0.00822	-0.00728	-0.00636	-0.00542	-0.00447	-0.00354	-0.00265	-0.00183	-0.00112	-5.43E-04	-1.58E-04	0
8.14	-0.01185	-0.01064	-0.00945	-0.00827	-0.00707	-0.00585	-0.00464	-0.00348	-0.00241	-0.00147	-7.21E-04	-2.12E-04	0
8.15	-0.01455	-0.01308	-0.01162	-0.01016	-0.00868	-0.00718	-0.00571	-0.00428	-0.00297	-0.00181	-8.89E-04	-2.63E-04	0
8.16	-0.01725	-0.01555	-0.01377	-0.01204	-0.01028	-0.00846	-0.00671	-0.00503	-0.00346	-0.00213	-0.00104	-3.10E-04	0
8.17	-0.01992	-0.01788	-0.01588	-0.01382	-0.01174	-0.00968	-0.00764	-0.00571	-0.00395	-0.00241	-0.00118	-3.50E-04	0
8.18	-0.02251	-0.02019	-0.01793	-0.01555	-0.01316	-0.01079	-0.00835	-0.00593	-0.00436	-0.00285	-0.00129	-3.82E-04	0
8.19	-0.025	-0.0224	-0.01989	-0.01718	-0.01449	-0.01184	-0.00928	-0.00668	-0.00472	-0.00295	-0.00139	-4.05E-04	0
8.2	-0.02733	-0.02446	-0.02171	-0.0187	-0.01571	-0.01279	-0.00989	-0.00738	-0.00503	-0.00303	-0.00148	-4.25E-04	0
8.21	-0.02946	-0.02634	-0.02337	-0.02007	-0.01681	-0.01384	-0.01082	-0.00782	-0.00531	-0.00319	-0.00153	-4.41E-04	0
8.22	-0.03134	-0.02801	-0.02483	-0.02129	-0.01779	-0.01444	-0.01118	-0.00792	-0.00556	-0.00333	-0.00168	-4.57E-04	0
8.23	-0.03295	-0.02943	-0.02589	-0.02234	-0.01884	-0.01507	-0.01169	-0.00856	-0.00579	-0.00346	-0.00185	-4.73E-04	0
8.24	-0.03425	-0.03059	-0.02711	-0.02321	-0.01936	-0.01565	-0.01213	-0.00868	-0.006	-0.00358	-0.00171	-4.88E-04	0
8.25	-0.03524	-0.03148	-0.0279	-0.0239	-0.01995	-0.01613	-0.01251	-0.00817	-0.0062	-0.0037	-0.00177	-5.05E-04	0
8.26	-0.03593	-0.03211	-0.02846	-0.0244	-0.0204	-0.01652	-0.01283	-0.00942	-0.00638	-0.00382	-0.00183	-5.24E-04	0
8.27	-0.03632	-0.03248	-0.02888	-0.02474	-0.02072	-0.01681	-0.01309	-0.00963	-0.00664	-0.00392	-0.00189	-5.44E-04	0
8.28	-0.03644	-0.03282	-0.02893	-0.02491	-0.02092	-0.01701	-0.01328	-0.0098	-0.00667	-0.00401	-0.00184	-5.62E-04	0
8.29	-0.03633	-0.03255	-0.02889	-0.02483	-0.02068	-0.01711	-0.01339	-0.00981	-0.00677	-0.00409	-0.00186	-5.78E-04	0
8.3	-0.03601	-0.03229	-0.02867	-0.02479	-0.02091	-0.01711	-0.01341	-0.00985	-0.00682	-0.00413	-0.00201	-5.90E-04	0
8.31	-0.03585	-0.03289	-0.02875	-0.02475	-0.02091	-0.01711	-0.01341	-0.00985	-0.00682	-0.00413	-0.00201	-5.90E-04	0
8.32	-0.0348	-0.03124	-0.02775	-0.02406	-0.02035	-0.01689	-0.01313	-0.00978	-0.00672	-0.00408	-0.002	-5.91E-04	0
8.33	-0.03393	-0.03046	-0.02707	-0.02347	-0.01985	-0.01628	-0.01281	-0.00954	-0.00656	-0.00386	-0.00195	-5.77E-04	0
8.34	-0.03288	-0.02951	-0.02622	-0.02272	-0.0192	-0.01573	-0.01237	-0.0092	-0.00631	-0.00383	-0.00187	-5.53E-04	0
8.35	-0.03163	-0.02837	-0.02521	-0.02181	-0.0184	-0.01505	-0.01181	-0.00876	-0.006	-0.00363	-0.00177	-5.21E-04	0
8.36	-0.03016	-0.02704	-0.02402	-0.02073	-0.01745	-0.01423	-0.01113	-0.00823	-0.00562	-0.00339	-0.00165	-4.83E-04	0
8.37	-0.02846	-0.02549	-0.02264	-0.01948	-0.01634	-0.01329	-0.01036	-0.00764	-0.0052	-0.00313	-0.00151	-4.41E-04	0
8.38	-0.02652	-0.02373	-0.02106	-0.01807	-0.0151	-0.01224	-0.00951	-0.00689	-0.00474	-0.00284	-0.00137	-3.97E-04	0
8.39	-0.02431	-0.02173	-0.01928	-0.01649	-0.01374	-0.01109	-0.00859	-0.00629	-0.00425	-0.00254	-0.00122	-3.52E-04	0
8.4	-0.02184	-0.01951	-0.0173	-0.01476	-0.01228	-0.00987	-0.00762	-0.00556	-0.00374	-0.00223	-0.00107	-3.08E-04	0
8.41	-0.01912	-0.01707	-0.01513	-0.01288	-0.01068	-0.00858	-0.0066	-0.0048	-0.00323	-0.00191	-9.11E-04	-2.60E-04	0
8.42	-0.01617	-0.01444	-0.01279	-0.01088	-0.00902	-0.00724	-0.00556	-0.00404	-0.00271	-0.0016	-7.60E-04	-2.16E-04	0
8.43	-0.01304	-0.01184	-0.01031	-0.00879	-0.00729	-0.00585	-0.00445	-0.00327	-0.00219	-0.0013	-6.18E-04	-1.75E-04	0
8.44	-0.00977	-0.00874	-0.00774	-0.00663	-0.00552	-0.00445	-0.00343	-0.0025	-0.00168	-0.001	-4.79E-04	-1.38E-04	0
8.45	-0.00641	-0.00576	-0.00512	-0.00442	-0.00372	-0.00303	-0.00236	-0.00174	-0.00119	-0.0007	-3.48E-04	-1.04E-04	0
8.46	-0.00303	-0.00276	-0.00247	-0.0022	-0.002	-0.0018	-0.00129	-0.00084	-0.00054	-0.00033	-2.21E-04	-7.09E-05	0
8.47	3.24E-04	2.16E-04	1.51E-04	1.69E-05	9.13E-05	-1.66E-04	-2.07E-04	-2.14E-04	-9.92E-04	-4.33E-04	-9.30E-05	-3.83E-05	0
8.48	0.00336	0.00313	0.00272	0.0022	0.00171	0.00127	8.84E-04	5.67E-04	3.21E-04	1.48E-04	4.15E-05	-3.28E-06	0
8.49	0.00677	0.00596	0.00522	0.00433	0.00348	0.00289	0.00208	0.00136	8.54E-04	4.60E-04	1.86E-04	3.68E-05	0
8.5	0.0098	0.00867	0.00762	0.0064	0.00522	0.0041	0.00308	0.00218	7.94E-04	3.36E-04	8.36E-05	0	
8.51	0.01287	0.01125	0.00991	0.00839	0.00691	0.00541	0.00418	0.003	5.23E-04	1.36E-04	5.23E-04	1.36E-04	0
8.52	0.01539	0.0137	0.0121	0.0103	0.00854	0.00685	0.00527	0.00383	0.00256	0.00151	7.04E-04	1.92E-04	0
8.53	0.01795	0.01602	0.01417	0.01213	0.01012	0.00816	0.00634	0.00464	0.00313	0.00186	8.83E-04	2.47E-04	0
8.54	0.02036	0.0182	0.01612	0.01386	0.01163	0.00945	0.00736	0.00542	0.00313	0.00186	8.83E-04	2.47E-04	0
8.55	0.02281	0.02024	0.01794	0.01548	0.01303	0.01063	0.00831	0.00614	0.00418	0.00251	0.00165	2.89E-04	0
8.56	0.02471	0.02214	0.01963	0.01698	0.01432	0.0117	0.00917	0.00678	0.00463	0.00278	0.00154	3.84E-04	0
8.57	0.02665	0.02387	0.02117	0.01832	0.01546	0.01284	0.0099	0.00733	0.005	0.00301	0.00145	4.17E-04	0
8.58	0.02839	0.02543	0.02255	0.0195	0.01645	0.01343	0.01052	0.00778	0.0055	0.00318	0.00153	4.40E-04	0
8.59	0.02961	0.02678	0.02375	0.0205	0.01726	0.01407	0.01089	0.00811	0.00552	0.00331	0.00159	4.85E-04	0
8.6	0.03116	0.02788	0.02472	0.02129	0.01788	0.01453	0.01133	0.00833	0.00565	0.00337	0.00161	4.59E-04	0
8.61	0.0321	0.0287	0.02544	0.02184	0.01828	0.01482	0.01151	0.00844	0.0057	0.00339	0.00161	4.55E-04	0
8.62	0.03288	0.02918	0.02586	0.02213	0.01846	0.01482	0.01153	0.00842	0.00566	0.00335	0.00158	4.43E-04	0
8.63	0.03285	0.02914	0.02595	0.02214	0.0184	0.0148	0.0114	0.00829	0.00555	0.00327	0.00154	4.25E-04	0

8.64	0.03258	0.02894	0.02589	0.02186	0.01811	0.01452	0.01114	0.00807	0.00538	0.00315	0.00147	4.05E-04	0
8.65	0.03186	0.02857	0.02509	0.02131	0.01762	0.01408	0.01078	0.00778	0.00517	0.00302	0.00141	3.83E-04	0
8.66	0.03086	0.02732	0.02415	0.0205	0.01683	0.01352	0.01033	0.00745	0.00464	0.00288	0.00134	3.68E-04	0
8.67	0.02907	0.02589	0.02229	0.01844	0.01506	0.01283	0.00982	0.00708	0.00447	0.00274	0.00127	3.47E-04	0
8.68	0.02708	0.02414	0.02136	0.01817	0.01504	0.01205	0.00924	0.00669	0.00445	0.00261	0.00122	3.36E-04	0
8.69	0.02477	0.02211	0.01958	0.01671	0.01386	0.01117	0.00861	0.00626	0.0042	0.00248	0.00117	3.29E-04	0
8.7	0.0222	0.01985	0.01759	0.01508	0.0126	0.0102	0.00782	0.00581	0.00393	0.00235	0.00112	3.21E-04	0
8.71	0.01945	0.01743	0.01547	0.01335	0.01123	0.00916	0.00717	0.00531	0.00363	0.00219	0.00108	3.13E-04	0
8.72	0.01659	0.01481	0.01326	0.01153	0.00979	0.00808	0.00637	0.00476	0.00329	0.00201	9.92E-04	2.98E-04	0
8.73	0.01366	0.01235	0.01101	0.00967	0.00829	0.00688	0.00551	0.00416	0.00291	0.0018	8.98E-04	2.78E-04	0
8.74	0.0106	0.00979	0.00876	0.00778	0.00676	0.00589	0.0046	0.00351	0.00248	0.00155	7.86E-04	2.46E-04	0
8.75	0.00787	0.00727	0.00654	0.00589	0.00518	0.00442	0.00363	0.00281	0.00201	0.00127	6.55E-04	2.10E-04	0
8.76	0.00522	0.00481	0.00436	0.00389	0.00341	0.00311	0.0026	0.00205	0.00149	9.63E-04	5.08E-04	1.68E-04	0
8.77	0.00256	0.00241	0.00222	0.00211	0.00196	0.00176	0.00152	0.00124	9.30E-04	6.21E-04	3.40E-04	1.19E-04	0
8.78	-0.01E-05	6.34E-05	1.29E-04	2.44E-04	3.39E-04	3.92E-04	3.91E-04	3.91E-04	3.35E-04	2.52E-04	1.55E-04	6.25E-05	0
8.79	-0.00256	-0.00224	-0.00193	-0.0016	-0.00128	-9.84E-04	-7.11E-04	-4.74E-04	-2.79E-04	-1.34E-04	-3.99E-05	1.77E-06	0
8.8	-0.00505	-0.0045	-0.00395	-0.00342	-0.00287	-0.00234	-0.00182	-0.00133	-8.68E-04	-5.13E-04	-2.31E-04	-5.73E-05	0
8.81	-0.0075	-0.00671	-0.00593	-0.00516	-0.00441	-0.00383	-0.00327	-0.00273	-0.00215	-8.64E-04	-4.08E-04	-1.10E-04	0
8.82	-0.00989	-0.00887	-0.00785	-0.00687	-0.00586	-0.00484	-0.00383	-0.00285	-0.00195	-5.54E-04	-1.55E-04	-4.08E-05	0
8.83	-0.01221	-0.01094	-0.00969	-0.00845	-0.00719	-0.00592	-0.00467	-0.00347	-0.00236	-0.00141	-6.68E-04	-1.68E-04	0
8.84	-0.01441	-0.0129	-0.01141	-0.0098	-0.00837	-0.00685	-0.00537	-0.00396	-0.00268	-0.00169	-7.45E-04	-2.05E-04	0
8.85	-0.01644	-0.01488	-0.01296	-0.01119	-0.00939	-0.00762	-0.00592	-0.00432	-0.00299	-0.00177	-7.89E-04	-2.13E-04	0
8.86	-0.01825	-0.01626	-0.01438	-0.01223	-0.01025	-0.00825	-0.00634	-0.00459	-0.00305	-0.00177	-8.18E-04	-2.17E-04	0
8.87	-0.01979	-0.01761	-0.01566	-0.01322	-0.01093	-0.00873	-0.00667	-0.00479	-0.00316	-0.00183	-8.38E-04	-2.20E-04	0
8.88	-0.02103	-0.01869	-0.01651	-0.01395	-0.01146	-0.00911	-0.00692	-0.00496	-0.00328	-0.00188	-8.61E-04	-2.26E-04	0
8.89	-0.02348	-0.01947	-0.01721	-0.01449	-0.01187	-0.0094	-0.00713	-0.0051	-0.00335	-0.00194	-8.90E-04	-2.36E-04	0
8.9	-0.02248	-0.01986	-0.01765	-0.01485	-0.01215	-0.00962	-0.0073	-0.00523	-0.00345	-0.00202	-9.24E-04	-2.48E-04	0
8.91	-0.0227	-0.02017	-0.01783	-0.01503	-0.00979	-0.00745	-0.00535	-0.00355	-0.00227	-0.0013	-9.62E-04	-2.61E-04	0
8.92	-0.02292	-0.02013	-0.01779	-0.01507	-0.01242	-0.00962	-0.00759	-0.00549	-0.00366	-0.00215	-0.00101	-2.78E-04	0
8.93	-0.02231	-0.01889	-0.01759	-0.015	-0.01246	-0.01003	-0.00773	-0.00584	-0.00398	-0.00226	-0.00107	-3.03E-04	0
8.94	-0.02185	-0.01953	-0.01729	-0.01488	-0.01248	-0.01014	-0.00789	-0.00582	-0.00396	-0.00236	-0.00115	-3.32E-04	0
8.95	-0.02132	-0.01813	-0.01697	-0.01474	-0.01249	-0.01025	-0.00807	-0.00602	-0.00414	-0.00252	-0.00123	-3.65E-04	0
8.96	-0.0208	-0.01672	-0.01665	-0.01459	-0.01249	-0.01036	-0.00825	-0.00621	-0.00432	-0.00266	-0.00131	-3.95E-04	0
8.97	-0.02034	-0.01637	-0.01637	-0.01445	-0.01248	-0.01042	-0.00837	-0.00636	-0.00446	-0.00277	-0.00138	-4.21E-04	0
8.98	-0.02	-0.01809	-0.01814	-0.01614	-0.0143	-0.01238	-0.00984	-0.00641	-0.00453	-0.00283	-0.00142	-4.40E-04	0
8.99	-0.01976	-0.01767	-0.01595	-0.01413	-0.01225	-0.0103	-0.00832	-0.00636	-0.00445	-0.00281	-0.00142	-4.42E-04	0
9	-0.01981	-0.01771	-0.0159	-0.01396	-0.01208	-0.0101	-0.00814	-0.0062	-0.00437	-0.00273	-0.00138	-4.29E-04	0
9.01	-0.01951	-0.01759	-0.01568	-0.01378	-0.01183	-0.00985	-0.00788	-0.00597	-0.00418	-0.0026	-0.00131	-4.03E-04	0
9.02	-0.01942	-0.01748	-0.01558	-0.01359	-0.01157	-0.00965	-0.00757	-0.00569	-0.00395	-0.00243	-0.00121	-3.86E-04	0
9.03	-0.01929	-0.01732	-0.01544	-0.01335	-0.01126	-0.00922	-0.00724	-0.00539	-0.00371	-0.00226	-0.00111	-3.33E-04	0
9.04	-0.01904	-0.01705	-0.01518	-0.01301	-0.01087	-0.00882	-0.00686	-0.00506	-0.00344	-0.00207	-0.001	-2.94E-04	0
9.05	-0.01859	-0.01668	-0.01474	-0.01252	-0.01037	-0.00833	-0.00642	-0.00487	-0.00314	-0.00186	-0.00104	-2.49E-04	0
9.06	-0.01784	-0.01588	-0.01405	-0.01184	-0.00972	-0.00772	-0.00587	-0.00421	-0.00278	-0.00161	-0.00104	-2.01E-04	0
9.07	-0.01674	-0.01464	-0.01307	-0.01094	-0.00889	-0.00698	-0.00523	-0.00368	-0.00237	-0.00133	-0.00104	-1.47E-04	0
9.08	-0.01525	-0.01347	-0.01181	-0.00983	-0.00792	-0.00614	-0.00452	-0.00311	-0.00195	-0.00106	-0.00106	-9.75E-05	0
9.09	-0.01337	-0.01178	-0.0103	-0.00854	-0.00683	-0.00524	-0.0038	-0.00256	-0.00158	-0.0009	-0.0009	-3.21E-04	0
9.1	-0.01114	-0.00982	-0.00859	-0.0071	-0.00566	-0.00431	-0.0031	-0.00206	-0.00123	-0.00078	-0.00078	-5.97E-05	0
9.11	-0.00863	-0.00763	-0.00667	-0.00553	-0.00441	-0.00336	-0.00242	-0.00161	-9.62E-04	-4.89E-04	-1.78E-04	-2.54E-05	0
9.12	-0.00593	-0.00527	-0.00467	-0.00385	-0.00308	-0.00238	-0.00174	-0.00119	-7.37E-04	-3.92E-04	-1.60E-04	-3.34E-05	0
9.13	-0.00313	-0.00281	-0.00252	-0.00209	-0.0017	-0.00135	-0.00104	-7.80E-04	-5.17E-04	-3.13E-04	-1.54E-04	-4.72E-05	0
9.14	-2.78E-04	-2.94E-04	-2.78E-04	-2.78E-04	-2.78E-04	-2.86E-04	-2.86E-04	-2.86E-04	-2.86E-04	-2.86E-04	-2.86E-04	-5.43E-05	0
9.15	0.00257	0.00222	0.00192	0.00152	0.00114	7.85E-04	4.84E-04	2.39E-04	8.53E-05	-3.29E-05	-6.33E-05	-4.23E-05	0
9.16	0.00533	0.00465	0.00407	0.00327	0.00253	0.00186	0.00129	6.19E-04	2.05E-04	4.87E-04	5.44E-05	-6.64E-06	0
9.17	0.00796	0.00697	0.00611	0.00495	0.00389	0.00284	0.00212	3.98E-04	4.87E-04	4.24E-05	2.03E-04	4.24E-05	0
9.18	0.01039	0.00914	0.00802	0.00658	0.00524	0.00404	0.00299	0.00209	0.00136	7.78E-04	3.51E-04	8.98E-05	0
9.19	0.01259	0.01113	0.00979	0.00814	0.00658	0.00515	0.00387	0.00276	0.00181	4.82E-04	4.82E-04	1.27E-04	0
9.2	0.01458	0.01294	0.0114	0.00961	0.00789	0.00627	0.00476	0.00342	0.00228	0.00131	5.98E-04	1.56E-04	0
9.21	0.01639	0.01458	0.01288	0.01138	0.00914	0.00734	0.00614	0.00407	0.0027	0.00157	7.17E-04	1.88E-04	0
9.22	0.01805	0.01612	0.01428	0.01228	0.0103	0.00835	0.00646	0.00471	0.00315	0.00185	8.58E-04	2.30E-04	0

9.23	0.01959	0.01754	0.01552	0.01346	0.01137	0.00928	0.00724	0.00533	0.00336	0.00214	0.00101	2.81E-04	0
9.24	0.02103	0.01885	0.01671	0.01454	0.01233	0.01011	0.00795	0.00569	0.00422	0.00242	0.00116	3.33E-04	0
9.25	0.02235	0.02006	0.01781	0.01549	0.01316	0.01083	0.00855	0.00638	0.00438	0.00266	0.00129	3.77E-04	0
9.26	0.02355	0.02114	0.01879	0.01632	0.01384	0.01139	0.00909	0.00673	0.00464	0.00282	0.00138	4.07E-04	0
9.27	0.0246	0.02206	0.01966	0.01706	0.01436	0.01178	0.00929	0.00692	0.00476	0.00289	0.00141	4.16E-04	0
9.28	0.02543	0.02278	0.02023	0.01745	0.01468	0.01198	0.0094	0.00696	0.00475	0.00287	0.00138	4.02E-04	0
9.29	0.0262	0.02327	0.02063	0.01772	0.01484	0.01203	0.00935	0.00686	0.00464	0.00276	0.00131	3.70E-04	0
9.3	0.02633	0.0235	0.02081	0.01779	0.01481	0.01193	0.00919	0.00667	0.00446	0.00262	0.00123	3.37E-04	0
9.31	0.02634	0.02346	0.02074	0.01766	0.01462	0.0117	0.00895	0.00645	0.00428	0.00249	0.00115	3.11E-04	0
9.32	0.02601	0.02314	0.02045	0.01734	0.01429	0.01139	0.00868	0.00624	0.00402	0.00224	0.00111	2.99E-04	0
9.33	0.02534	0.02254	0.01982	0.01686	0.01384	0.01104	0.00842	0.00605	0.00402	0.00236	0.00111	3.01E-04	0
9.34	0.02437	0.02169	0.01919	0.01624	0.01338	0.01068	0.00817	0.00592	0.00396	0.00234	0.00111	3.11E-04	0
9.35	0.02314	0.02064	0.01828	0.01552	0.01285	0.01031	0.00795	0.00568	0.00392	0.00234	0.00113	3.24E-04	0
9.36	0.02173	0.01842	0.01723	0.01473	0.01229	0.00995	0.00774	0.00571	0.00399	0.00237	0.00115	3.40E-04	0
9.37	0.02023	0.01814	0.01612	0.01332	0.01174	0.0096	0.00756	0.00564	0.00389	0.00239	0.00118	3.58E-04	0
9.38	0.01871	0.01685	0.01489	0.0131	0.01119	0.00926	0.00737	0.00556	0.00388	0.0024	0.0012	3.65E-04	0
9.39	0.01724	0.01558	0.01369	0.01229	0.01062	0.00889	0.00715	0.00543	0.00381	0.00236	0.00118	3.60E-04	0
9.4	0.01584	0.01437	0.01282	0.01146	0.01001	0.00845	0.00715	0.00523	0.00381	0.00228	0.00114	3.49E-04	0
9.41	0.01457	0.01323	0.0118	0.0106	0.0093	0.00809	0.00641	0.00523	0.00367	0.00228	0.00114	3.49E-04	0
9.42	0.01339	0.01215	0.01084	0.00973	0.00852	0.00789	0.00641	0.00541	0.00347	0.00216	0.00108	3.32E-04	0
9.43	0.01227	0.01111	0.00983	0.00884	0.00769	0.00648	0.00524	0.00401	0.00318	0.00198	0.00101	3.13E-04	0
9.44	0.01116	0.01009	0.00904	0.00795	0.00683	0.00599	0.00456	0.00347	0.00284	0.00178	9.08E-04	2.48E-04	0
9.45	0.01003	0.00904	0.00812	0.00701	0.00592	0.00486	0.00384	0.00288	0.00201	0.00153	7.78E-04	2.48E-04	0
9.46	0.00882	0.00791	0.0071	0.00599	0.00495	0.00398	0.00306	0.00227	0.00155	0.00124	6.24E-04	1.94E-04	0
9.47	0.00749	0.00667	0.00595	0.0049	0.00393	0.00309	0.0023	0.00164	0.00109	8.47E-04	3.14E-04	9.36E-05	0
9.48	0.00601	0.00528	0.00467	0.00373	0.00286	0.00215	0.00153	0.00103	6.93E-04	3.71E-04	1.74E-04	5.00E-05	0
9.49	0.00432	0.00375	0.00328	0.0025	0.00179	0.00129	8.29E-04	4.91E-04	2.84E-04	1.23E-04	4.61E-05	8.84E-06	0
9.5	0.00248	0.00211	0.00181	0.00132	8.79E-04	5.11E-04	2.30E-04	4.47E-05	-5.09E-05	-7.67E-05	-5.82E-06	-2.64E-05	0
9.51	5.27E-04	4.12E-04	3.18E-04	1.25E-04	-9.17E-04	-7.99E-04	-6.86E-04	-5.34E-04	-3.95E-04	-2.95E-04	-1.38E-04	-4.44E-05	0
9.52	-0.00144	-0.0013	-0.00117	-0.00104	-9.19E-04	-7.99E-04	-6.86E-04	-5.34E-04	-3.95E-04	-2.95E-04	-1.38E-04	-4.44E-05	0
9.53	-0.00338	-0.00295	-0.0026	-0.00216	-0.00174	-0.00136	-0.00101	-7.12E-04	-4.58E-04	-2.58E-04	-1.2E-04	-6.27E-05	0
9.54	-0.00514	-0.00449	-0.00384	-0.0032	-0.0025	-0.00188	-0.00133	-8.95E-04	-5.02E-04	-2.41E-04	-7.90E-05	-4.67E-06	0
9.55	-0.00674	-0.00598	-0.00514	-0.00414	-0.00321	-0.00236	-0.00163	-0.00103	-5.71E-04	-2.54E-04	-6.89E-05	6.43E-06	0
9.56	-0.00811	-0.00708	-0.0062	-0.00499	-0.00385	-0.00284	-0.00196	-0.00124	-3.20E-04	-9.42E-05	-1.75E-05	1.75E-06	0
9.57	-0.00924	-0.00809	-0.00708	-0.00573	-0.00448	-0.00332	-0.00234	-0.00153	-8.98E-04	-4.44E-04	-1.58E-04	-1.81E-05	0
9.58	-0.01013	-0.0089	-0.00781	-0.00637	-0.00503	-0.00382	-0.00276	-0.00187	-0.00116	-6.19E-04	-2.52E-04	-5.04E-05	0
9.59	-0.01082	-0.00965	-0.00854	-0.00694	-0.00558	-0.00434	-0.00323	-0.00227	-0.00146	-8.30E-04	-3.69E-04	-9.12E-05	0
9.6	-0.01136	-0.01008	-0.00887	-0.00748	-0.00614	-0.00489	-0.00372	-0.00269	-0.0018	-0.00108	-0.69E-04	-1.39E-04	0
9.61	-0.01191	-0.01054	-0.0093	-0.008	-0.0067	-0.00544	-0.00425	-0.00314	-0.00214	-0.0013	-6.26E-04	-1.80E-04	0
9.62	-0.01225	-0.011	-0.00974	-0.00852	-0.00728	-0.00602	-0.00478	-0.00358	-0.00248	-0.00152	-7.42E-04	-2.18E-04	0
9.63	-0.01275	-0.01151	-0.01022	-0.00907	-0.00786	-0.00659	-0.00529	-0.00401	-0.0028	-0.00172	-8.47E-04	-2.52E-04	0
9.64	-0.01335	-0.01209	-0.01077	-0.00964	-0.00841	-0.00711	-0.00575	-0.00439	-0.00308	-0.0019	-9.44E-04	-2.84E-04	0
9.65	-0.01409	-0.01277	-0.01139	-0.01022	-0.00892	-0.00765	-0.00613	-0.00469	-0.00331	-0.00206	-0.00103	-3.14E-04	0
9.66	-0.01493	-0.01343	-0.01206	-0.01075	-0.00938	-0.0079	-0.0064	-0.0049	-0.00346	-0.00216	-0.00109	-3.35E-04	0
9.67	-0.01583	-0.0143	-0.01276	-0.01127	-0.00973	-0.00815	-0.00657	-0.005	-0.00352	-0.0022	-0.00111	-3.47E-04	0
9.68	-0.01671	-0.01504	-0.01341	-0.01172	-0.01001	-0.0083	-0.00661	-0.00499	-0.00348	-0.00215	-0.00107	-3.26E-04	0
9.69	-0.01749	-0.01589	-0.01397	-0.01208	-0.01017	-0.00832	-0.00654	-0.00486	-0.00333	-0.00202	-9.87E-04	-2.92E-04	0
9.7	-0.01808	-0.01615	-0.01435	-0.01225	-0.01019	-0.00821	-0.00635	-0.00463	-0.00312	-0.00185	-8.77E-04	-2.48E-04	0
9.71	-0.0184	-0.01637	-0.0145	-0.01204	-0.01008	-0.00799	-0.00607	-0.00435	-0.00286	-0.00165	-7.60E-04	-2.03E-04	0
9.72	-0.01839	-0.0163	-0.01439	-0.01204	-0.00978	-0.00786	-0.00653	-0.00403	-0.0026	-0.00147	-6.54E-04	-1.84E-04	0
9.73	-0.01799	-0.01591	-0.01401	-0.01184	-0.00938	-0.00728	-0.00538	-0.00374	-0.00237	-0.00131	-5.70E-04	-1.36E-04	0
9.74	-0.01719	-0.01518	-0.01335	-0.01108	-0.00867	-0.00665	-0.00504	-0.00349	-0.00219	-0.0012	-5.14E-04	-1.18E-04	0
9.75	-0.01601	-0.01414	-0.01245	-0.0103	-0.00827	-0.00684	-0.00472	-0.00308	-0.00206	-0.00114	-4.88E-04	-1.13E-04	0
9.76	-0.01449	-0.01283	-0.01129	-0.00941	-0.0076	-0.00583	-0.00441	-0.00299	-0.00206	-0.00111	-4.86E-04	-1.19E-04	0
9.77	-0.01274	-0.01132	-0.00998	-0.00884	-0.00687	-0.00544	-0.0041	-0.00299	-0.00206	-0.00111	-5.07E-04	-1.33E-04	0
9.78	-0.01082	-0.00967	-0.00855	-0.00732	-0.0061	-0.00493	-0.00381	-0.00279	-0.00188	-0.00112	-5.32E-04	-1.50E-04	0
9.79	-0.00885	-0.00798	-0.00708	-0.00621	-0.00531	-0.0044	-0.0035	-0.00263	-0.00163	-0.00112	-5.55E-04	-1.67E-04	0
9.8	-0.00682	-0.00631	-0.00564	-0.00461	-0.00386	-0.00317	-0.00245	-0.00175	-0.00111	-0.00075	-0.567E-04	-1.79E-04	0
9.81	-0.0051	-0.00473	-0.00403	-0.00329	-0.00271	-0.00215	-0.00164	-0.00123	-0.00084	-0.00057	-0.62E-04	-1.85E-04	0

9.82	-0.00345	-0.00328	-0.00301	-0.00301	-0.0029	-0.00288	-0.00236	-0.00195	-0.00147	-9.83E-04	-5.32E-04	-1.82E-04	0
9.83	-0.00198	-0.00196	-0.00188	-0.00203	-0.00209	-0.00203	-0.00186	-0.00159	-0.00124	-8.50E-04	-4.74E-04	-1.89E-04	0
9.84	-7.05E-04	-3.26E-04	-8.84E-04	-0.0011	-0.00127	-0.00133	-0.00129	-0.00116	-9.39E-04	-3.69E-04	-3.86E-04	-1.45E-04	0
9.85	4.05E-04	2.01E-04	5.13E-05	-2.29E-04	-4.49E-04	-6.01E-04	-6.74E-04	-6.69E-04	-3.69E-04	-4.46E-04	-2.76E-04	-1.10E-04	0
9.86	0.00139	0.00113	3.91E-04	6.15E-04	3.69E-04	1.43E-04	-2.89E-05	-1.41E-04	-1.92E-04	-1.92E-04	-1.42E-04	-3.68E-05	0
9.87	0.0023	0.002	0.00169	0.00142	0.00115	3.77E-04	6.23E-04	3.97E-04	2.13E-04	7.98E-05	3.74E-06	-1.75E-05	0
9.88	0.0032	0.00285	0.00248	0.00222	0.00192	0.0016	0.00126	9.33E-04	6.27E-04	3.64E-04	1.62E-04	3.83E-05	0
9.89	0.00415	0.00375	0.00332	0.00303	0.00269	0.00231	0.00189	0.00146	0.00104	6.47E-04	3.22E-04	9.67E-05	0
9.9	0.00519	0.00473	0.00423	0.00388	0.00347	0.00301	0.0025	0.00196	0.00142	9.13E-04	4.71E-04	1.50E-04	0
9.91	0.00635	0.00581	0.00523	0.00477	0.00426	0.00389	0.00338	0.00243	0.00177	0.00114	5.97E-04	1.83E-04	0
9.92	0.00764	0.00698	0.0063	0.00569	0.00504	0.00464	0.00398	0.00283	0.00205	0.00132	6.86E-04	2.22E-04	0
9.93	0.00904	0.00822	0.0074	0.0066	0.00578	0.00492	0.00404	0.00314	0.00225	0.00143	7.36E-04	2.34E-04	0
9.94	0.0105	0.00949	0.00849	0.00748	0.00646	0.00542	0.00437	0.00335	0.00237	0.00148	7.48E-04	2.33E-04	0
9.95	0.01196	0.01073	0.00955	0.00832	0.00707	0.00584	0.00463	0.00347	0.00241	0.00148	7.30E-04	2.19E-04	0
9.96	0.01334	0.01191	0.01055	0.00909	0.00762	0.00619	0.00462	0.00354	0.0024	0.00144	6.89E-04	1.97E-04	0
9.97	0.01458	0.01298	0.01146	0.00978	0.00811	0.0065	0.00498	0.00359	0.00238	0.00139	6.42E-04	1.72E-04	0
9.98	0.01582	0.01388	0.01224	0.01036	0.00852	0.00676	0.00512	0.00364	0.00238	0.00136	6.11E-04	1.55E-04	0
9.99	0.01645	0.01459	0.01287	0.01082	0.00884	0.00697	0.00525	0.00372	0.00241	0.00137	6.06E-04	1.51E-04	0
10	0.01702	0.01509	0.0133	0.01115	0.00908	0.00715	0.00538	0.00381	0.00247	0.00141	6.29E-04	1.58E-04	0

Dept. Of Civil Engineering FTSP UII

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 X	FUNCTION Base Shear Y	FUNCTION Base Moment X	FUNCTION Base Moment Y
0	0	0	0	0
0.01	15,83143	13,90991	-70,46284	71,00581
0.02	31,25257	31,29935	-196,70639	189,74358
0.03	34,84368	35,06514	-295,59494	286,70938
0.04	35,32593	34,39394	-365,36084	359,63647
0.05	33,20597	33,82341	-419,88828	411,76434
0.06	40,00849	38,48804	-499,40094	492,39713
0.07	51,26546	50,57434	-624,62262	613,94267
0.08	66,70952	66,4723	-787,64679	781,00104
0.09	84,03515	79,20251	-975,16345	989,00031
0.1	100,13966	91,8409	-1207,6718	1235,49243
0.11	119,95322	112,1634	-1508,0521	1522,92334
0.12	127,75716	129,32451	-1812,6814	1782,21863
0.13	121,65092	133,90665	-2055,3098	1985,30603
0.14	110,78213	122,86652	-2207,3369	2151,40991
0.15	99,42609	99,54582	-2283,9824	2297,0496
0.16	90,1727	76,50278	-2334,3804	2424,79761
0.17	83,77195	65,95982	-2406,093	2532,6333
0.18	87,13604	73,89647	-2547,7263	2662,07129
0.19	94,60749	89,62353	-2750,5813	2824,18701
0.2	106,04478	108,90137	-3005,8076	3031,63452
0.21	124,63022	134,63092	-3320,722	3304,19775
0.22	149,90726	163,93391	-3692,314	3655,2605
0.23	178,71982	189,60675	-4096,604	4078,35571
0.24	199,51416	199,98599	-4458,841	4500,18408
0.25	215,32736	200,02002	-4759,009	4879,42285
0.26	221,46245	196,22975	-5004,761	5177,15771
0.27	221,86508	195,84406	-5215,949	5389,91162
0.28	231,92224	212,24156	-5447,26	5576,61182
0.29	236,99799	232,57169	-5663,134	5721,11865
0.3	230,06453	233,91766	-5767,847	5767,46338
0.31	207,41678	216,76344	-5739,11	5705,86035
0.32	177,27005	190,61302	-5608,744	5558,25146
0.33	147,795	162,60506	-5421,772	5366,78174
0.34	128,55267	143,89677	-5251,272	5206,81836
0.35	124,31205	134,34464	-5135,34	5134,75781
0.36	136,57617	131,68071	-5101,699	5178,81641
0.37	164,6918	145,87654	-5204,287	5345,88232
0.38	210,7262	187,23711	-5479,34	5626,97412
0.39	264,14066	248,34079	-5887,186	5971,71338
0.4	312,04855	310,96964	-6335,396	6325,74268
0.41	342,24384	349,73511	-6690,767	6622,34668
0.42	323,79401	327,27231	-6730,853	6676,375
0.43	270,79114	259,25159	-6418,846	6429,94482
0.44	190,75443	172,02249	-5806,419	5863,68994
0.45	100,12019	82,34229	-4965,953	5024,60205
0.46	43,13047	31,54768	-4140,307	4155,13232
0.47	2,02466	8,52966	-3410,127	3341,58179
0.48	-23,58818	-5,75396	-2781,8416	2638,95483
0.49	-37,79246	-7,50862	-2292,9231	2073,42383
0.5	-50,20121	-3,61127	-1906,8558	1607,20361
0.51	-43,39697	8,07689	-1615,1684	1276,70361
0.52	-8,23287	39,0103	-1477,6854	1171,08887
0.53	62,54502	81,70123	-1513,6956	1358,54651
0.54	165,69484	132,65137	-1754,3353	1846,30884
0.55	292,08871	211,84242	-2290,3955	2592,75781
0.56	437,42697	335,48459	-3174,477	3521,63965
0.57	556,49945	478,27304	-4269,593	4426,68506
0.58	593,58063	574,78778	-5188,914	4999,87598
0.59	561,97156	596,69037	-5660,901	5159,15283
0.6	471,54095	534,61853	-5582,194	4934,9292
0.61	354,82588	407,34738	-5042,56	4486,7417
0.62	252,64516	272,75653	-4337,846	3969,32373
0.63	160,08945	156,92923	-3684,272	3525,32471
0.64	75,85001	60,71774	-3190,196	3170,69507
0.65	-0,61613	-4,24953	-2851,2742	2941,91943
0.66	-52,35622	-22,67141	-3033,7976	2915,8645
0.67	-75,72279	-8,21925	-3370,038	3121,68579
0.68	-92,12399	-3,41314	-3732,75	3477,14866
0.69	-80,67225	-24,04761	-3980,217	3977,82524
0.7	-42,1073	-65,47439	-4103,971	4569,11572

0,71	6,64444	-102,50156	-4199,349	5129,36816
0,72	53,04407	-101,40623	-4361,553	5514,47166
0,73	76,72015	-58,39937	-4553,357	5577,85059
0,74	76,61719	4,053	-4650,248	5283,90283
0,75	31,94312	35,43088	-4404,433	4562,43994
0,76	-81,00655	-16,75812	-3491,149	3263,78564
0,77	-226,64015	135,83928	-1868,3466	1443,02783
0,78	-354,80136	-262,66617	158,59943	-609,013
0,79	-466,52548	-393,8638	2384,72192	-2723,9763
0,8	-555,26624	-518,75555	4631,20312	-4786,149
0,81	-625,23956	-609,89795	6711,04932	-6732,711
0,82	-682,41827	-668,07581	8565,30957	-8568,596
0,83	-710,21765	-686,43134	10163,082	-10215,931
0,84	-699,08228	-658,00909	11533,5518	-11682,985
0,85	-660,75922	-617,10242	12857,459	-13026,165
0,86	-629,73169	-614,40302	14348,0312	-14373,923
0,87	-609,20032	-654,22516	16032,4912	-15777,506
0,88	-589,46234	-699,64435	17758,5605	-17253,59
0,89	-598,78448	-725,56519	19412,7793	-18915,443
0,9	-670,35468	-749,83704	21112,3848	-20939,016
0,91	-799,3028	-800,25897	23048,6973	-23367,625
0,92	-977,71802	-905,15497	25379,0293	-26157,014
0,93	-1182,9115	-1068,5186	28134,9199	-29195,381
0,94	-1395,3447	-1268,7286	31229,3926	-32372,73
0,95	-1609,5042	-1469,1503	34555,238	-35623,09
0,96	-1823,6822	-1723,7196	38014,672	-38896,95
0,97	-2017,461	-1944,7865	41419,184	-42078,46
0,98	-2137,3159	-2090,0542	44401,004	-44870,31
0,99	-2190,321	-2149,2751	46780,922	-47156,23
1	-2184,2295	-2138,3755	48567,102	-48904,72
1,01	-2116,6404	-2077,6467	49855,848	-50114,25
1,02	-2002,4315	-1997,7676	50774,742	-50860,69
1,03	-1871,2589	-1915,3829	51407,727	-51296,63
1,04	-1761,4242	-1833,8484	51846,586	-51646,48
1,05	-1679,6003	-1753,0056	52182,25	-52037,58
1,06	-1637,9907	-1693,8179	52525,203	-52547,76
1,07	-1626,089	-1659,3583	52907,34	-53147,48
1,08	-1605,811	-1612,8678	53169,234	-53662,07
1,09	-1596,1639	-1557,6923	53258,383	-54053,69
1,1	-1608,2849	-1516,7493	53212,074	-54297,36
1,11	-1631,5652	-1498,4216	53030,582	-54296,81
1,12	-1648,6697	-1501,2679	52641,797	-53908,8
1,13	-1642,2454	-1509,0557	51867,461	-52972,15
1,14	-1594,6949	-1489,438	50553,984	-51317,34
1,15	-1477,5902	-1419,3956	48466,672	-48778,05
1,16	-1283,7334	-1295,1412	45527,047	-45286,61
1,17	-1022,4017	-1107,7296	41661,938	-40879,65
1,18	-704,77338	-844,49188	36840,906	-35664,14
1,19	-362,59509	-516,58923	31157,0176	-29823,992
1,2	-23,68687	-156,80426	24816,3848	-23531,682
1,21	273,2637	172,64513	18181,4082	-17020,016
1,22	443,26852	365,70413	11912,9404	-10822,08
1,23	514,14868	438,21786	6247,60156	-5137,808
1,24	502,7009	439,70267	1155,19714	-27,23353
1,25	423,60809	362,82068	-3389,563	4494,84717
1,26	290,62885	277,98932	-7312,61	8427,26074
1,27	106,00056	132,94643	-10650,637	11761,0303
1,28	-111,67867	-55,30265	-13365,257	14530,3281
1,29	-346,55246	-267,76517	-15519,13	16787,8848
1,3	-564,43646	-465,60239	-17208,697	18621,9082
1,31	-751,16358	-649,35522	-18393,043	20053,9199
1,32	-920,08539	-851,08179	-18936,902	21031,8418
1,33	-1006,9709	-1030,556	-19007,436	21741,9199
1,34	-885,62604	-1033,4216	-19414,631	22790,8223
1,35	-620,03827	-846,25104	-20509,705	24212,3691
1,36	-285,42444	-514,59247	-22193,094	25788,6892
1,37	99,99678	-106,81655	-24068,904	27131,8984
1,38	368,44131	296,30069	-25360,461	27632,248
1,39	542,32849	473,32245	-25811,691	27018,1172
1,4	617,05206	624,39728	-24653,234	25183,334
1,41	599,97028	660,39563	-22280,885	22109,0696
1,42	467,91766	532,6098	-18335,873	17766,7246
1,43	229,55177	265,46872	-12984,145	12249,9102
1,44	-64,47696	-59,5383	-6875,855	5767,79541
1,45	-438,76196	-382,89963	189,35156	-1806,5807
1,46	-883,89182	-686,75543	7446,24707	-9697,054
1,47	-1356,2131	-1019,4525	15202,7656	-18186,883
1,48	-1828,4983	-1450,4928	23589,6621	-26744,871
1,49	-2232,8665	-1951,2494	32334,619	-34953,73
1,5	-2520,8962	-2412,9124	40826,816	-42498,74
1,51	-2703,0688	-2760,2856	48586,68	-49351,24
1,52	-2843,0891	-3004,3484	55590,355	-55831,18
1,53	-2926,5562	-3119,71	61803,82	-62039,65

1,54	-2862,5835	-3022,7207	66814,766	-87561,1
1,55	-2721,5322	-2784,1321	70727,219	-72390,12
1,56	-2544,3005	-2491,7766	73818,833	-76626,87
1,57	-2349,8044	-2204,0579	76751,734	-80356,59
1,58	-2176,4284	-1998,4358	79513,312	-83691,59
1,59	-2046,2537	-1883,9648	82153,872	-86858,07
1,6	-1952,4093	-1779,5381	84302,359	-89129,29
1,61	-1869,7142	-1647,5823	85690,125	-90873,73
1,62	-1794,7203	-1526,0015	86263,32	-91650,61
1,63	-1681,3015	-1416,0958	85877,227	-91118,16
1,64	-1471,9159	-1268,4758	84230,867	-88979,41
1,65	-1196,9764	-1055,6171	81088,172	-85218,34
1,66	-890,539	-782,93787	76370	-79879,45
1,67	-577,1709	-506,00812	70241,922	-73039,3
1,68	-335,72685	-336,05322	63222,285	-65109,99
1,69	-112,38733	-218,92815	55279,273	-56127,17
1,7	134,66023	-49,70608	46089,469	-46011,07
1,71	427,99496	202,63406	35533,789	-34748,29
1,72	763,03442	528,83978	23730,5234	-22462,619
1,73	1108,37109	901,28491	10944,209	-9398,185
1,74	1445,42944	1277,57007	-2519,0125	4194,02197
1,75	1746,34106	1648,24866	-16466,531	18088,75
1,76	2027,80396	2038,53223	-30783,928	32218,598
1,77	2333,08032	2438,25366	-45276,93	46656,441
1,78	2701,6084	2825,79663	-59877,57	61630,012
1,79	3145,59961	3190,96387	-74827,34	77268,531
1,8	3684,90894	3590,38667	-89779,47	93603,852
1,81	4276,45898	4069,11377	-105469,48	110369,984
1,82	4811,08154	4556,5625	-121193,23	126843,242
1,83	5282,90527	5019,19775	-136437,61	142557,812
1,84	5679,57275	5425,84033	-150748,2	157198,375
1,85	5997,64502	5728,92285	-163709,73	170533,219
1,86	6234,75	5919,32959	-175087,11	182390,094
1,87	6394,11572	6019,28711	-184815,86	192613,844
1,88	6473,3501	6043,67871	-192690,67	201021,938
1,89	6436,53955	6013,62939	-199346,46	207362,328
1,9	6287,45186	5961,21045	-204211,34	211601,922
1,91	6042,6416	5878,61279	-207360,94	213707,125
1,92	5720,1001	5723,72559	-208557,28	213821,188
1,93	5383,40479	5475,96094	-207648,16	212195,016
1,94	5072,68213	5146,21826	-204651,09	208989,938
1,95	4780,24512	4768,59912	-199720,34	204170,859
1,96	4484,68066	4385,36475	-193036,16	197589,234
1,97	4159,85596	4012,95532	-184858,33	189056,641
1,98	3785,40694	3635,26857	-174491,38	178403,344
1,99	3342,97363	3227,30444	-162357,62	165495,031
2	2825,04858	2762,67432	-148047,03	150251,312
2,01	2228,4353	2205,79517	-131339,5	132614,656
2,02	1533,83435	1525,56812	-112062,52	112503,562
2,03	781,44283	765,94489	-90514,29	90104,992
2,04	107,48079	91,15307	-67678,24	66289,195
2,05	-550,99554	-505,35767	-44152,05	41457,833
2,06	-1201,1447	-1054,3708	-20220,986	15960,2949
2,07	-1815,2383	-1539,4114	3825,55811	-9778,365
2,08	-2371,9441	-1981,686	27798,0312	-35349,03
2,09	-2848,7966	-2399,8773	51511,277	-60381,83
2,1	-3247,917	-2773,2522	74722,516	-84596,74
2,11	-3566,056	-3117,5676	97299,977	-107772,65
2,12	-3845,293	-3486,596	119157,66	-129613,84
2,13	-4094,548	-3854,505	139934,578	-150562,42
2,14	-4285,189	-4134,917	159095,422	-169817,95
2,15	-4470,247	-4306,77	176358,297	-187580,08
2,16	-4692,767	-4424,825	191784,391	-203813,11
2,17	-4934,333	-4562,243	205537,984	-218270,48
2,18	-5170,319	-4758,715	217592,812	-230603,3
2,19	-5367,518	-4979,005	227570,5	-240407,84
2,2	-5491,742	-5142,907	234881,438	-247271,58
2,21	-5576,68	-5251,517	239277,969	-251062,73
2,22	-5771,701	-5457,225	241440,953	-252564,77
2,23	-5989,151	-5696,873	241468,484	-251769,59
2,24	-6164,326	-5871,282	239161,562	-248593,52
2,25	-6271,396	-5976,588	234553,188	-243007,73
2,26	-6298,398	-6015,754	227832,359	-235088,02
2,27	-6256,023	-6017,125	219320,25	-225030,27
2,28	-6158,093	-6041,29	209339,703	-213130,67
2,29	-6045,889	-6056,309	197873,688	-199732,59
2,3	-5894,811	-5948,286	184710,344	-185025,27
2,31	-5704,394	-5712,87	170042,141	-169223,31
2,32	-5511,8	-5459,086	154469,594	-152567,81
2,33	-5262,906	-5240,24	138438,766	-135080,47
2,34	-4912,99	-5018,525	122033,062	-116841,08
2,35	-4491,934	-4730,573	105207,602	-98210,01
2,36	-4047,351	-4347,693	88108,484	-79702,19

2,37	3631,128	-3919,803	71235,172	-81865,48
2,38	-3282,4	-3538,426	55254,254	-45173,95
2,39	-2839,9431	-3094,5085	39904,543	-29192,986
2,4	-1823,0396	-2104,9434	22583,7968	-11354,242
2,41	-392,0589	-664,65735	2404,36967	9169,08301
2,42	1345,98096	1014,01485	-20461,984	32470,32
2,43	3141,97021	2759,17236	-45303,83	57718,355
2,44	4457,07031	4049,19409	-69347,54	82065,352
2,45	5458,14404	4976,1167	-91718,32	104607,055
2,46	6217,36475	5812,69629	-112570,71	125179,305
2,47	6815,71875	6453,89893	-131209,14	143796,797
2,48	7198,44629	6687,58789	-146693,91	160193,953
2,49	7338,44238	6562,19043	-159072,2	174142,047
2,5	7344,04053	6292,12012	-169234	185525,562
2,51	7035,2207	6065,54541	-178012,17	199641,469
2,52	6388,31152	5954,40039	-185447,11	198266,219
2,53	5555,32471	5774,01953	-190669,27	200086,125
2,54	4757,72656	5358,45117	-193533,42	200946,234
2,55	4277,68965	4748,88721	-194984,33	202672,719
2,56	4357,1416	4303,97559	-197111,39	207297,438
2,57	4978,6543	4392,21387	-201928,75	214414,656
2,58	5985	5098,48535	-210122,41	223471,453
2,59	7164,21875	6267,5293	-221011,62	233318,994
2,6	8382,86035	7667,69629	-233258,66	242994,953
2,61	9520,11426	9122,8418	-245195,83	251628,766
2,62	10394,3027	10272,3164	-254724,31	258069,375
2,63	11046,9209	10988,5508	-260399,34	261749,936
2,64	11414,667	11200,9707	-261544,08	262026,375
2,65	11329,1553	10922,29	-268226,8	258113,562
2,66	10711,9941	10296,6289	-251144,88	249638,719
2,67	9615,70215	9492,3418	-241198,83	236996,625
2,68	8208,05957	8575,71484	-228999,96	221279,328
2,69	6701,77197	7549,08887	-214876,55	203909,5
2,7	5296,93115	6413,03711	-199117,16	186238
2,71	4101,59229	5182,43457	-182180,03	169193,516
2,72	3142,11426	3943,53101	-164898,86	153293,261
2,73	2477,75806	2871,22876	-148424,31	138902,297
2,74	2125,33032	2125,54639	-133770,48	126064,633
2,75	2010,73755	1780,59302	-121419,38	114530,786
2,76	2079,67896	1822,09627	-111176,82	103834,18
2,77	2323,64038	2154,20508	-102287,27	93622,523
2,78	2728,4751	2658,35107	-93905	83569,227
2,79	3115,80103	3137,80908	-84891,8	72793,711
2,8	3304,03711	3427,09668	-74198,26	60267,359
2,81	3157,41089	3428,86113	-61173,71	45334,789
2,82	2676,62354	3104,5022	-45669,2	27805,8301
2,83	1789,20459	2506,19482	-28067,898	8259,65645
2,84	777,42175	1733,46545	-9041	-12352,275
2,85	-279,55927	857,86584	10737,5957	-32996,53
2,86	-1289,5417	-84,70231	30657,623	-52762,03
2,87	-2162,1006	-1036,9446	50037,793	-70878,96
2,88	-2839,4985	-1917,098	88126,836	-86828,38
2,89	-3370,89	-2684,7537	84386,516	-100530,63
2,9	-3845,26	-3380,673	96838,531	-112305,42
2,91	-4192,753	-3966,065	111353,781	-122084,19
2,92	-4370,504	-4397,11	121751,688	-129781,18
2,93	-4379,074	-4653,71	129963,359	-135540,48
2,94	-4270,724	-4718,338	136097,094	-139822,03
2,95	-4153,229	-4634,116	140803,453	-143358,19
2,96	-4136,663	-4514,836	144234,297	-146918,19
2,97	-4257,311	-4419,833	147539,938	-150882,96
2,98	-4404,3	-4282,147	150370,812	-154774,66
2,99	-4606,901	-4180,694	152697,484	-158288,97
3	-4850,366	-4207,787	155343,172	-161036,8
3,01	-5037,263	-4341,603	157499,531	-162410,23
3,02	-5097,381	-4511,812	158806	-161893,56
3,03	-5049,884	-4650,466	158702,768	-159370,02
3,04	-5000,791	-4758,224	157231,875	-155330,19
3,05	-4898,592	-4806,411	154501,594	-149919,72
3,06	-4740,161	-4843,056	150742,125	-143244,41
3,07	-4512,322	-4864,681	146080,984	-135401,86
3,08	-4190,076	-4865,313	140408,438	-126575,42
3,09	-3650,675	-4756,128	133747,625	-117282,94
3,1	-3580,797	-4607,133	126390,047	-108120,3
3,11	-3420,406	-4453,57	118636,039	-99502,92
3,12	-3363,219	-4268,643	110676,609	-91619,23
3,13	-3368,973	-4064,202	102563,234	-84372,75
3,14	-3324,13	-3768,121	93967,508	-77075,64
3,15	-3185,913	-3398,763	84947,852	-69218
3,16	-2919,7771	-3038,3691	75653,078	-60523,09
3,17	-2544,6934	-2658,0754	65965,625	-50972,27
3,18	-2079,5481	-2211,2942	55680,391	-40646,02
3,19	-1539,1859	-1637,5355	44734,543	-29642,412

3,2	-936,51691	-1100,6932	33247,055	-18038,367
3,21	-319,04977	-546,59204	21734,7109	-6102,939
3,22	150,68518	-235,4012	11362,6582	5168,03809
3,23	498,49628	-131,51865	2473,0542	15257,9053
3,24	733,2688	-109,80518	-5121,811	23796,3984
3,25	801,64136	-148,95724	-11403,919	30317,2285
3,26	655,42841	-277,5455	-16127,411	34424,184
3,27	347,91864	-466,3765	-19334,781	36263,293
3,28	117,29174	-539,57318	-22115,422	37128,633
3,29	-39,62469	-463,7905	-25145,373	37783,773
3,3	-64,64205	-283,23099	-28783,771	38602,102
3,31	63,9833	67,96577	-33158,36	40532,719
3,32	309,37711	482,22934	-38135,5	43142,242
3,33	723,17877	940,16333	-43792,51	46948,227
3,34	1344,72388	1534,23804	-50496,34	52201,168
3,35	2166,04492	2298,80298	-58379,27	58887,656
3,36	3102,98633	3151,69189	-67130,45	66668,195
3,37	4012,375	3953,64722	-76043,45	74801,195
3,38	4659,23535	4485,82861	-83667,78	81678
3,39	4984,3667	4764,19462	-89296,2	86230,867
3,4	4928,43018	4815,90625	-92551,55	87860,906
3,41	4514,80908	4557,19141	-92948,27	86475,945
3,42	3794,41626	3948,84814	-90297,64	82332,961
3,43	2845,34619	3060,18579	-84980,68	75936,789
3,44	1778,15259	2010,75183	-77804,44	67926,742
3,45	733,99475	1023,96612	-70088,63	59184,652
3,46	0,882	444,8429	-63800,66	51376,395
3,47	-434,37943	250,08765	-58567,29	45300,004
3,48	-597,75861	262,28607	-57115,02	41365,781
3,49	-422,4903	446,59122	-56388,04	39982,918
3,5	129,16406	849,50049	-57622,3	41389,32
3,51	1030,27366	1516,90491	-60995,23	45350,062
3,52	2163,12427	2444,34717	-66283,38	51161,715
3,53	3307,66797	3446,40332	-72424,13	57579,523
3,54	4125,35498	4170,59961	-77429,26	62636,477
3,55	4567,04297	4587,95264	-80346,09	65314,707
3,56	4715,10791	4791,33301	-80915	65147,621
3,57	4449,89463	4727,1416	-78645,62	61723,152
3,58	3750,92456	4286,63721	-72928	54893,953
3,59	2709,26123	3433,96631	-63662,77	45177,559
3,6	1542,70154	2300,56812	-51968,13	33937,973
3,61	346,78262	1092,58411	-39511,51	22400,0293
3,62	-706,83545	79,26477	-27998,125	11814,3145
3,63	-1497,3174	-629,00751	-18402,084	3186,12939
3,64	-1987,1339	-1114,8616	-10923,411	-2810,6243
3,65	-2074,1331	-1391,4055	-5797,381	-5574,922
3,66	-1700,3247	-1347,7684	-3504,033	-4887,089
3,67	-964,01569	-953,28705	-4072,921	-1323,1743
3,68	-107,88374	-366,08453	-6495,383	3659,93994
3,69	745,98859	285,79318	-9607,999	8785,76953
3,7	1479,50562	888,95996	-12344,054	12823,0381
3,71	1933,39551	1344,71155	-13793,203	14727,3125
3,72	2023,00684	1810,32422	-13247,059	13785,8662
3,73	1779,26746	1639,62927	-10151,122	9834,14551
3,74	1304,09204	1405,39355	-4488,561	3528,74658
3,75	598,05017	870,44391	3508,29126	-4608,394
3,76	-251,2841	125,46436	13063,6113	-13813,822
3,77	-1151,2383	-686,33295	23238,6289	-23208,62
3,78	-2014,1268	-1485,5151	33082,602	-31890,74
3,79	-2662,5645	-2184,8804	41811,121	-38779,16
3,8	-2973,906	-2692,6299	46884,043	-43047
3,81	-2919,6333	-2951,396	53169,387	-44371,39
3,82	-2537,8127	-2928,4409	54981,231	-42886,59
3,83	-1910,6885	-2643,8835	54263,031	-39172,23
3,84	-1213,043	-2230,7183	51911,977	-34505,96
3,85	-585,85059	-1758,9495	48802,93	-30135,518
3,86	-149,98331	-1295,8644	45792,82	-27068,354
3,87	34,43171	-963,24359	43832,844	-25963,576
3,88	-64,6443	-659,2287	43708,113	-27186,24
3,89	-439,86108	-1017,2449	45844,555	-30833,367
3,9	-1068,6864	-1440,1777	50341,434	-36834,862
3,91	-1893,6436	-2049,0127	56777,695	-44789,21
3,92	-2716,9973	-2633,5198	63937,359	-53474,3
3,93	-3482,482	-3162,581	71097,981	-61933,86
3,94	-4115,333	-3669,614	77884,219	-69322,01
3,95	-4510,162	-4104,115	83746,945	-74820,72
3,96	-4588,618	-4384,135	89008,883	-77826,4
3,97	-4314,795	-4431,435	90060,648	-78088,12
3,98	-3730,42	-4188,628	89560,336	-75800,12
3,99	-2919,707	-3682,743	86631,602	-71497,37
4	-2010,5732	-3011,6296	81750,688	-65936,72
4,01	-1141,4509	-2266,574	75544,711	-59996,79
4,02	-483,48483	-1566,1243	69041,781	-54846,61

4.03	-40,48019	-967,71838	63122,516	-51324,95
4.04	55,6422	-563,45386	58629,441	-49989,81
4.05	-159,16583	-444,1597	56168,605	-50893,47
4.06	-580,54138	-568,58044	55542,125	-53424,8
4.07	-1165,9014	-882,3255	56247,531	-56937,11
4.08	-1821,12	-1308,6139	57611,715	-60655,97
4.09	-2446,1289	-1744,272	58863,602	-63753,32
4.1	-2929,2014	-2110,5654	59329,086	-65413,95
4.11	-3218,838	-2391,9468	58638,008	-65115,36
4.12	-3346,856	-2630,2581	56871,391	-62866,16
4.13	-3236,123	-2777,5952	53911,965	-58560,99
4.14	-2881,0486	-2782,7754	49575,031	-52364,22
4.15	-2337,6025	-2617,1738	43796,301	-44766,93
4.16	-1681,5535	-2262,1956	36717,816	-36514,01
4.17	-1057,6172	-1765,9395	28840,4258	-28586,355
4.18	-579,78186	-1232,2391	20942,9961	-21869,486
4.19	-312,98175	-754,39099	13832,8496	-16984,654
4.2	-276,45685	-403,95386	8229,38965	-14268,79
4.21	-479,37125	-258,00446	4753,08838	-13860,595
4.22	-924,54919	-374,21819	3790,69189	-15669,42
4.23	-1537,5067	-743,82769	5316,22949	-19352,232
4.24	-2230,001	-1294,7795	8899,5332	-24307,195
4.25	-2896,9431	-1883,4844	13708,3467	-29858,303
4.26	-3356,886	-2303,3713	18484,0273	-34874,1
4.27	-3596,955	-2543,9587	22653,5391	-38746,1
4.28	-3605,661	-2659,9114	26101,9766	-41169,85
4.29	-3376,085	-2651,3379	28708,8652	-42039,46
4.3	-2936,4529	-2514,9927	30357,5176	-41485,88
4.31	-2336,4858	-2250,3975	30974,8066	-38830,95
4.32	-1856,6019	-1849,1976	30570,9766	-37534,33
4.33	-960,72833	-1347,0127	29369,707	-35058,65
4.34	-331,59009	-822,17261	27738,3848	-32880,8
4.35	171,80069	-303,31589	25911,3809	-31358,021
4.36	539,18097	222,15511	24029,9043	-30674,943
4.37	724,42151	706,21179	22437,5547	-30998,953
4.38	697,01141	1043,51709	21644,5332	-32334,94
4.39	491,83411	1153,96814	21976,7148	-34352,46
4.4	178,93315	1036,96875	23292,2598	-36458,6
4.41	-192,74925	737,47186	25163,6055	-38099,62
4.42	-649,72394	253,57138	27490,1348	-39236,78
4.43	-1062,6165	-291,47244	29779,5059	-39478,74
4.44	-1359,629	-792,70135	31472,502	-38487,43
4.45	-1518,4847	-1212,0764	32224,457	-36144,4
4.46	-1529,3093	-1504,8448	31825,137	-32512,75
4.47	-1370,8259	-1613,3997	30066,7324	-27654,197
4.48	-953,94238	-1447,9548	28382,8066	-21212,795
4.49	-386,61377	-1066,2948	20729,7988	-13409,23
4.5	271,83121	-516,99792	13310,1748	-4607,304
4.51	952,48883	171,47916	4400,55127	4787,08789
4.52	1582,50659	923,17474	-5590,253	14454,7598
4.53	2191,2312	1690,58472	-16330,977	24395,0918
4.54	2796,90308	2473,56909	-27615,816	34655,852
4.55	3385,10376	3241,47998	-39167,39	45192,926
4.56	3917,09326	3924,95044	-50638,38	55904,176
4.57	4318,94873	4433,48047	-61559,81	66496
4.58	4441,63965	4604,51514	-70865,18	75987,789
4.59	4339,56494	4502,96045	-78255,25	84025,492
4.6	4049,50098	4206,85889	-83788,96	90598,836
4.61	3640,72607	3705,31836	-87465,6	95919,422
4.62	3177,98315	3037,23877	-89501,7	100249,93
4.63	2710,80225	2300,17871	-90376,55	103784,391
4.64	2276,64062	1575,84888	-90619,43	106574,102
4.65	1854,4635	958,61536	-90743,91	108473,383
4.66	1486,12341	544,24516	-91049,24	109368,422
4.67	1214,33423	394,42981	-91709,52	109537,5
4.68	1348,97058	667,50336	-93789,61	110477,016
4.69	1804,39807	1235,0752	-97446,48	112773,359
4.7	2553,70728	2006,47668	-102555,6	116535,43
4.71	3436,01855	2938,55151	-108767,27	121119,547
4.72	4107,13867	3740,21899	-114382,55	124649,492
4.73	4567,35693	4354,72849	-118318,57	126162,188
4.74	4786,72949	4810,7749	-119959,91	125169,219
4.75	4772,20312	4987,03906	-118463,85	121472,164
4.76	4493,10889	4748,51221	-113131,96	114947,133
4.77	3970,76294	4119,91895	-104002,73	105673,102
4.78	3284,40308	3225,46045	-91732,63	93809,18
4.79	2342,1582	2192,14917	-77133,3	79185,984
4.8	1146,7804	1118,31763	-60819,91	61954,949
4.81	-219,02922	-24,19852	-42959,95	42716,277
4.82	-1667,0871	-1311,3914	-23667,527	22398,1367
4.83	-2957,3708	-2657,6655	-3677,102	2335,83306
4.84	-3915,598	-3854,789	15794,3535	-18462,93
4.85	-4452,842	-4663,055	33371,758	-33421,64

4.86	-4437,7	-4813,15	47390,027	-47694,2
4.87	-4079,231	-4413,633	57712,648	-59565,82
4.88	-3515,145	-3681,287	65135,988	-69602,96
4.89	-2852,5642	-2740,6968	70520,602	-78325,08
4.9	-2163,3281	-1729,4458	74799,961	-86085,96
4.91	-1458,7048	-814,9679	78940,297	-93069,17
4.92	-821,83789	-118,89032	83651,57	-99562,09
4.93	-390,33673	232,39175	89512,195	-106113,76
4.94	-435,25665	44,14867	97419,18	-113995,86
4.95	-888,82977	-511,01129	106917,141	-123375,78
4.96	-1608,8174	-1173,8618	116961,773	-133745,34
4.97	-2538,498	-1903,5195	127103,453	-144557,56
4.98	-3603,082	-2762,1733	137357,812	-155134,58
4.99	-4667,171	-3793,701	147640,781	-164840,3
5	-5669,055	-4957,265	157314,984	-172233,83
5.01	-6398,517	-5997,479	164830,156	-177000,98
5.02	-6856,19	-8516,438	167988,953	-177697,55
5.03	-6491,782	-6463,867	165904,594	-173961,89
5.04	-5981,448	-5980,494	158779,359	-165831,96
5.05	-5092,839	-5118,943	146933,203	-153276,64
5.06	-3811,59	-3892,494	130709,117	-136515,17
5.07	-2292,9658	-2394,0015	110947,734	-116543,99
5.08	-843,77283	-868,15442	89550,852	-95298,86
5.09	418,15283	474,09518	68414,281	-74265,85
5.1	1350,35217	1430,80859	49000,707	-54587,96
5.11	1901,35254	1966,87793	31846,846	-36844,7
5.12	2139,74146	2238,91504	16667,9941	-21058,484
5.13	2088,54565	2325,96338	3251,27783	-7133,099
5.14	1779,17896	2163,54883	-8282,008	5182,21533
5.15	1298,24133	1735,06873	-18047,561	16411,8621
5.16	781,87457	1153,36684	-26718,988	27283,8242
5.17	363,46811	600,85565	-35391,14	38623,016
5.18	210,40102	294,84219	-45483,44	51589,973
5.19	427,86938	295,13058	-57816,14	67033,125
5.2	1074,13086	605,43738	-72785,38	85315,758
5.21	2108,46021	1289,48242	-90727,12	106232,203
5.22	3463,15867	2406,29785	-111705,75	129187,359
5.23	4997,8501	3877,6189	-134990,25	153117,516
5.24	6472,03369	5452,01562	-158777,19	176370,953
5.25	7774,46436	6911,97266	-181196,38	197620,531
5.26	8778,37988	8069,35693	-200689,91	215779,016
5.27	9408,10156	8827,93848	-216351,97	230123,312
5.28	9659,66992	9221,91504	-227873,14	240333,734
5.29	9527,82129	9282,93945	-235207,88	246318,906
5.3	9034,11035	8985,45801	-238341,36	248244,312
5.31	8229,64062	8353,34473	-237587,17	248586,75
5.32	7247,6001	7506,30586	-233696,81	242218,016
5.33	6295,64551	6605,2959	-227735,8	236380,531
5.34	5614,10352	5847,28076	-221213,92	230727,859
5.35	5272,85498	5278,9043	-215151,67	228289,234
5.36	5309,0708	4943,53076	-210332,19	223569,578
5.37	5895,27861	4945,3667	-207519,92	222610,688
5.38	6377,28369	5349,65967	-207156,52	223134,016
5.39	7213,57275	6079,41064	-208829,3	224337,297
5.4	7917,91016	6859,87402	-210742,92	224486,734
5.41	8439,46084	7537,39941	-211265	222426,969
5.42	8672,33105	7967,23535	-209076,81	217233,859
5.43	8550,59082	8042,17969	-203268,45	208262,516
5.44	8055,82227	7776,37402	-193464,89	195132,062
5.45	7117,64453	7167,22705	-179446,3	177562,109
5.46	5734,12549	6152,30518	-161062,11	155679
5.47	4033,2937	4795,93896	-138841,14	130361,109
5.48	2328,78613	3368,00977	-114418,34	103537,25
5.49	750,02997	1958,46399	-89021,09	76740,977
5.5	-817,78241	571,8125	-63486,88	51158,387
5.51	-1632,4536	-701,5979	-38817,96	27870,7832
5.52	-2216,5535	-1735,5717	-16161,203	7544,72119
5.53	-2386,6189	-2387,8213	3407,08789	-9695,764
5.54	-2201,3132	-2544,7058	19267,3633	-24129,305
5.55	-1789,291	-2291,1394	31853,035	-36490,67
5.56	-1379,4539	-1917,1249	42708,949	-48103,26
5.57	-1053,4843	-1567,8677	53100,102	-59955,54
5.58	-883,47363	-1286,3652	63867,824	-72678,87
5.59	-1008,4432	-1169,7484	75638,789	-87743,17
5.6	-1542,0707	-1321,3542	89620,734	-105151,82
5.61	-2485,1311	-1841,3162	106411,656	-125145,38
5.62	-3802,205	-2780,6841	125713,742	-147233,36
5.63	-5357,994	-4045,618	147063,156	-170522,64
5.64	-6984,627	-5439,281	169318,625	-193790,91
5.65	-8516,431	-6847,885	191528,766	-215830,23
5.66	-9854,341	-8254,475	213034,906	-235680,31
5.67	-10854,194	-9557,286	232680,641	-252378,67
5.68	-11333,278	-10508,685	249414,141	-264797,31

5,69	-11333,874	-10992,559	261515,203	-272648,88
5,7	-10916,133	-10994,146	268775,312	-276142,19
5,71	-10154,497	-10549,943	271365,156	-275787,88
5,72	-9165,306	-9790,387	270058,031	-272376,62
5,73	-8085,689	-8335,194	285545,844	-266844
5,74	-7042,735	-7744,537	258871,953	-260086,52
5,75	-6156,771	-6856,269	250499,984	-252982,58
5,76	-5620	-5833,107	242615,859	-246649,97
5,77	-5447,374	-5360,488	235915,094	-241535,53
5,78	-5585,58	-5194,692	230545,297	-237556,34
5,79	-6000,412	-5296,809	226364,156	-234397,83
5,8	-6607,323	-5621,026	223088	-231436,2
5,81	-7255,421	-6118,027	220293,141	-227737,75
5,82	-7778,816	-6718,625	217224,031	-222209,28
5,83	-8091,149	-7308,163	212859,073	-214027,55
5,84	-8096,731	-7704,083	206032,828	-202564,27
5,85	-7744,250	-7785,612	195914,734	-187523,53
5,86	-7062,202	-7549,834	182253,062	-169043,77
5,87	-6065,605	-6996,089	165045,438	-147453,97
5,88	-4800,552	-6110,024	144446,016	-123341,04
5,89	-3349,397	-4897,902	120816,258	-97502,17
5,9	-1780,0281	-3377,976	94613,016	-70630,84
5,91	-266,14755	-1725,6077	69908	-43779,92
5,92	993,30951	-208,27481	39689,371	-18317,783
5,93	1924,76477	1071,05945	13916,5918	4894,92236
5,94	2522,4729	2094,20142	-9716,889	25590,7539
5,95	2832,93823	2818,2417	-30793,775	43914,809
5,96	2921,53418	3231,03589	-49145,88	60262,68
5,97	2861,7937	3345,22681	-64852,54	75135,492
5,98	2704,68774	3170,0874	-78157,8	88926,125
5,99	2544,62549	2641,29297	-88852,09	102146,68
6	2494,30078	2557,8728	-100962,01	115325,016
6,01	2598,37842	2408,97803	-112103,27	126725,672
6,02	2850,08179	2376,20215	-123410,38	142371,312
6,03	3268,02051	2449,89844	-134924,23	156220,109
6,04	3856,71777	2689,61475	-146795,86	170068,531
6,05	4598,62012	3121,4375	-159284,89	183563,047
6,06	5490,69873	3902,07104	-172882,91	196452,875
6,07	6388,3125	4909,06592	-186466,08	208052,469
6,08	7167,06738	5961,6377	-199624,86	217641,203
6,09	7762,78027	6944,20996	-211266,81	224753,047
6,1	8158,07959	7787,15479	-220737,61	229203,031
6,11	8326,35156	8408,18945	-227414,84	230865,172
6,12	8184,10693	8676,91016	-230412,95	229365,469
6,13	7795,04395	8562,49023	-229313,72	224812,812
6,14	7202,98826	8077,56396	-224217,84	217528,609
6,15	6472,0791	7309,9165	-215745,25	207999,906
6,16	5702,90869	6429,21143	-204849,59	196815,859
6,17	4967,54395	5562,77734	-192395,33	184529,547
6,18	4366,76074	4783,18262	-179215,97	171888,609
6,19	3899,17065	4086,30298	-165848,17	159309,281
6,2	3587,5686	3517,11523	-152822,19	147052,188
6,21	3403,52197	3121,57422	-140532,86	135097,609
6,22	3240,60571	2847,75	-128849,01	123013,461
6,23	3113,87695	2688,30347	-117635,89	110613,188
6,24	3004,93115	2645,36353	-106743,9	97699,398
6,25	2859,55151	2676,79932	-95843,09	83970,922
6,26	2622,54907	2723,72192	-84463,88	69115,133
6,27	2252,34614	2717,82666	-72054,95	52892,215
6,28	1733,51245	2572,16846	-58037,7	35170,691
6,29	1026,91504	2209,3877	-41949,36	15874,4014
6,3	137,35349	1594,36316	-23567,568	-4835,863
6,31	-857,96523	743,60815	-3154,3484	-26415,742
6,32	-1828,1206	-240,96297	18492,1719	-47844,09
6,33	-2691,582	-1278,7733	40392,598	-68216,64
6,34	-3375,472	-2271,7659	61548,102	-86835,43
6,35	-3888,682	-3128,3022	81095,562	-103406,88
6,36	-4300,396	-3843,774	98731,508	-118131,71
6,37	-4585,85	-4380,441	114238,039	-131073,19
6,38	-4754,103	-4724,364	127563,766	-142337,08
6,39	-4821,467	-4912,898	138878,297	-152074,16
6,4	-4805,742	-4968,245	148306,797	-160383,17
6,41	-4756,089	-4928,062	156045,969	-167479,58
6,42	-4705,679	-4825,018	162305,516	-173624,3
6,43	-4728,089	-4675	167296,859	-179161,75
6,44	-4867,68	-4517,517	171398,156	-184347,55
6,45	-5122,236	-4429,061	175114,375	-189188,27
6,46	-5474,577	-4491,934	178887	-193459,86
6,47	-5835,246	-4731,803	182835,234	-198673,92
6,48	-6131,062	-5109,615	186688,938	-198362,91
6,49	-6331,267	-5544,803	189898,859	-198235,06
6,5	-6418,204	-5945,589	191848,547	-196155,47
6,51	-6393,816	-6240,576	192023,656	-192104,47

6,52	-8254,236	-6391,64	190103,203	-186098,69
6,53	-5987,402	-6376,123	165913,156	-178148,22
6,54	-5568,427	-6168,031	179317,531	-168196,81
6,55	-5008,932	-5792,763	170424,562	-156363,73
6,56	-4349,557	-5294,282	159490,344	-142964,02
6,57	-3645,552	-4694,791	146756,797	-128420,93
6,58	-2950,4038	-4005,876	132450,953	-113166,07
6,59	-2309,9211	-3244,661	116848,898	-97555,11
6,6	-1739,4213	-2441,155	100325,031	-81777,71
6,61	-1241,0836	-1666,4821	83439,328	-65938,49
6,62	-843,55688	-1034,0374	66957,32	-50267,29
6,63	-512,53015	-572,92712	51306,84	-34809,22
6,64	-223,63007	-260,65576	36578,852	-19563,766
6,65	29,636	-73,02538	22711,0293	-4557,256
6,66	256,1904	25,35917	9538,25468	10203,4248
6,67	473,43506	75,22767	-3166,861	24761,7148
6,68	713,61298	115,92388	-15667,133	39208,391
6,69	1032,92224	226,20023	-28377,795	53731,598
6,7	1528,63074	534,86646	-41970,45	68751,883
6,71	2143,60962	1015,95679	-56519,11	84155,594
6,72	2766,36426	1552,13599	-71482,77	99353,352
6,73	3379,25586	2129,88574	-86556,81	113938,953
6,74	3961,41479	2756,19409	-101512,37	127801,016
6,75	4492,02197	3416,83643	-116111,4	140077,656
6,76	4954,30273	4099,31689	-130014,06	151157,203
6,77	5338,06689	4743,73438	-142699,38	160671,766
6,78	5624,3374	5256,89111	-153630,55	168481,344
6,79	5798,71729	5613,93896	-162562,23	174495,828
6,8	5885,11084	5862,12207	-169525,02	178724
6,81	5855,36844	5996,29834	-174432,17	181081,875
6,82	5664,12305	5939,41748	-176959,98	181457,328
6,83	5376,46094	5675,95166	-177053,92	180104,375
6,84	5063,12451	5260,5957	-175063,81	177402,734
6,85	4768,20703	4790,76367	-171601,7	173655,109
6,86	4515,46094	4369,59814	-167278,16	169029,891
6,87	4301,65674	4039,15088	-162423,66	163538,094
6,88	4104,84082	3779,65405	-157080,64	157071,656
6,89	3892,53662	3576,95288	-151212,38	149479,141
6,9	3657,49683	3437,41406	-144765,06	140673,219
6,91	3392,31934	3338,74609	-137547,62	130567,867
6,92	3076,29004	3225,03589	-129231,91	119153,547
6,93	2736,01855	3067,21313	-119614,28	108466,398
6,94	2429,56519	2905,36841	-108930,12	92888,859
6,95	2106,0188	2733,17969	-97345,45	78512,094
6,96	1747,18152	2549,36646	-84959,88	63421,598
6,97	1359,16895	2348,51245	-71799	47783,742
6,98	949,76678	2081,31665	-57779,02	31809,316
6,99	534,78717	1715,35706	-42912,12	15755,3516
7	133,6019	1274,12158	-27433,662	-91,37255
7,01	-253,45645	764,22198	-11570,227	-15561,683
7,02	-699,13928	134,19887	4719,05371	-30871,945
7,03	-1171,623	-549,88837	21099,3691	-45992,27
7,04	-1643,2979	-1191,7811	37064,445	-60825,18
7,05	-2136,458	-1760,7966	52316,711	-75372,73
7,06	-2657,9341	-2256,728	66781,297	-89593,9
7,07	-3158,6702	-2681,1116	80431,5	-103234,58
7,08	-3545,249	-3005,623	92945,633	-115712,98
7,09	-3848,789	-3252,263	104128,305	-126784,07
7,1	-4069,716	-3409,354	113800,492	-136285,05
7,11	-4240,125	-3493,213	121978,82	-144219,7
7,12	-4454,339	-3622,564	129175,922	-150937,97
7,13	-4647,602	-3793,4	135547,5	-156372,55
7,14	-4774,179	-3944,409	140961,109	-160377,44
7,15	-4830,256	-4073,519	145491,703	-162950,28
7,16	-4843,628	-4208,106	149221,156	-164236,11
7,17	-4836,768	-4366,171	152296,906	-164431,55
7,18	-4819,449	-4556,258	154756,641	-163742,3
7,19	-4849,839	-4757,172	156508	-162461,66
7,2	-4936,576	-4927,077	157426,562	-160706,19
7,21	-5030,612	-5059,411	157479,656	-158317,31
7,22	-5059,95	-5142,801	156430,031	-154815,11
7,23	-4986,945	-5174,336	154031,359	-149821,69
7,24	-4777,416	-5104,827	149936,406	-143121,73
7,25	-4445,398	-4870,27	143815,391	-134730,34
7,26	-4016,334	-4456,354	135596,125	-124781,39
7,27	-3526,913	-3918,721	125583,312	-113510,41
7,28	-3042,1919	-3367,788	114520,461	-101363,26
7,29	-2547,2205	-2842,6682	102884,992	-88554,84
7,3	-2027,9725	-2341,1992	90900,211	-75145,43
7,31	-1485,1639	-1881,573	78745,133	-61251,05
7,32	-934,67219	-1466,8057	66541,062	-47108,6
7,33	-446,75455	-1098,9598	54396,621	-33120,87
7,34	-79,32713	-805,40167	42502,309	-19691,381

7.35	172,0569	-575,92847	30910,5879	-6950,633
7.36	349,11792	-377,06857	19577,6582	5205,8999
7.37	500,92853	-208,14482	8535,90137	16962,8867
7.38	647,44971	-90,63419	-2146,6677	28450,9551
7.39	818,95959	-10,46739	-12582,059	39787,316
7.4	1039,48145	91,26739	-22995,932	51019,309
7.41	1313,88037	294,96297	-33807,05	62120,023
7.42	1667,72778	669,83557	-45289,54	73148,188
7.43	2070,30542	1178,93005	-57279,11	84000,008
7.44	2501,42529	1741,05969	-69330,95	94544,891
7.45	2964,54297	2303,66309	-81030,49	104685,078
7.46	3449,32153	2837,47583	-92072,59	114259,711
7.47	3903,57544	3307,93457	-102149,88	122919,891
7.48	4223,06006	3648,89062	-110741,97	130023,562
7.49	4393,9375	3851,86987	-117539,28	135206,203
7.5	4407,73877	3916,18262	-122406,35	138302,438
7.51	4301,01367	3873,32227	-125444,37	139420,969
7.52	4175,61523	3827,12402	-127140,17	139060,438
7.53	4023,72437	3774,46265	-127667,81	137455,469
7.54	3840,80591	3661,42578	-126989,81	134732,141
7.55	3633,10913	3492,65918	-125238,6	131031,977
7.56	3424,24365	3316,08789	-122733,92	126554,461
7.57	3236,71313	3174,2854	-119802,44	121514,375
7.58	3079,99097	3091,83423	-116661,42	116122,93
7.59	2986,82764	3057,63696	-113341,21	110590,758
7.6	2939,14746	3023,23071	-109673,99	104869,172
7.61	2927,47632	3005,92627	-105661,1	98841,5
7.62	2934,51001	3045,63745	-101344,3	92305,391
7.63	2893,89746	3113,50488	-96500,23	84911,695
7.64	2745,11304	3128,59595	-90678,49	76354,117
7.65	2488,80518	3014,01904	-83455,95	66525,484
7.66	2075,27588	2733,6814	-74663,25	55514,441
7.67	1588,45105	2311,67358	-64454,32	43526,723
7.68	1032,58142	1799,948	-53127,03	30778,2754
7.69	440,70435	1238,93433	-40963,35	17513,9844
7.7	-173,92978	640,28351	-28268,523	3949,18382
7.71	-792,60583	27,51658	-15268,026	-9679,24
7.72	-1378,5544	-551,47406	-2322,8245	-23090,617
7.73	-1889,5503	-1052,7209	10253,835	-35983,06
7.74	-2274,3596	-1442,9183	22157,7871	-47989,27
7.75	-2541,8106	-1747,0258	33317,582	-58970,63
7.76	-2709,6963	-1990,9038	43736,281	-68943,22
7.77	-2833,4956	-2190,1421	53456,328	-78122,23
7.78	-3007,4011	-2398,7527	62810,832	-87017,2
7.79	-3195,909	-2587,4917	71886,758	-95731,82
7.8	-3340,986	-2694,5813	80473,25	-104060,05
7.81	-3482,281	-2785,1226	88716,625	-111980,24
7.82	-3642,997	-2923,0806	96841,062	-119478,06
7.83	-3831,548	-3110,3486	104870,203	-126556,99
7.84	-4040,103	-3340,812	112695,695	-133148,48
7.85	-4271,271	-3583,552	120116,148	-139168,31
7.86	-4509,064	-3830,238	126910,25	-144444,81
7.87	-4724,398	-4059,568	132997,859	-148737,08
7.88	-4906,647	-4315,634	138324,078	-151794,19
7.89	-4992,075	-4559,156	142574,156	-153262,77
7.9	-4928,502	-4701,106	145271,484	-152909,17
7.91	-4745,276	-4694,554	146122,812	-150835,12
7.92	-4498,193	-4553,676	145155,797	-147280,38
7.93	-4212,998	-4329,991	142620,594	-142446,47
7.94	-3902,352	-4072,037	138781,172	-136463,44
7.95	-3568,016	-3788,761	133768,766	-129408,08
7.96	-3210,009	-3489,487	127648,062	-121336,98
7.97	-2851,8613	-3145,1885	120634,398	-112429,57
7.98	-2565,3716	-2897,9329	113207,586	-103122,28
7.99	-2347,2031	-2723,7195	105563,18	-93842,12
8	-2186,063	-2583,8977	97684,133	-84080,84
8.01	-2076,719	-2463,1755	89570,508	-74474,17
8.02	-1998,3524	-2355,8965	81284,102	-64777,87
8.03	-1895,1943	-2255,3276	72853,258	-54800,39
8.04	-1681,2701	-2121,501	63989,488	-44118,98
8.05	-1378,5226	-1943,3427	54438,406	-32625,82
8.06	-985,43774	-1676,54	43939,895	-20313,098
8.07	-507,01443	-1288,5826	32354,99	-7248,267
8.08	31,48482	-809,71686	19781,5	6447,71973
8.09	635,89697	-265,70624	6365,72998	20696,4258
8.1	1307,76782	351,77533	-7795,643	35401,633
8.11	2011,46692	1019,53821	-22456,82	50287,863
8.12	2656,57349	1651,72668	-37046,9	64775,609
8.13	3225,14233	2225,30664	-51162,25	78456,617
8.14	3701,4729	2739,67065	-64544,23	91010,383
8.15	4038,56421	3171,37842	-76931,02	102123,922
8.16	4221,82715	3503,13208	-88091,88	111659,656
8.17	4286,17627	3721,94189	-97864,16	119721,062

8,18	4282,37402	3822,69853	-106247,79	126569,281
8,19	4241,10303	3829,56543	-113421,35	132444,578
8,2	4199,95605	3802,84473	-119703,37	137567,25
8,21	4175,73047	3785,29126	-125369,87	142082,141
8,22	4173,19043	3788,73389	-130585,11	146094,156
8,23	4225,62256	3830,15137	-135486,53	149755,25
8,24	4361,17676	3935,52026	-140210,83	153174,328
8,25	4567,06494	4115,63477	-144802,05	156290,578
8,26	4616,69678	4363,98779	-149171,84	158926,297
8,27	5082,5415	4652,06885	-153096,17	160840,312
8,28	5323,59082	4935,94287	-156276,75	161728,672
8,29	5475,40283	5172,97559	-158395,12	161222,062
8,3	5473,16895	5313,65137	-159042,08	158917,891
8,31	5321,06836	5338,91992	-157934,17	154678,922
8,32	5027,54736	5230,81865	-154891,56	148526,766
8,33	4613,88672	4977,54834	-149845,59	140593,375
8,34	4106,79102	4594,18358	-142878,5	131067,047
8,35	3533,99268	4116,8999	-134235,59	120196,492
8,36	2953,85571	3607,00513	-124375,54	108415,484
8,37	2387,20581	3092,00757	-113669,55	96069,539
8,38	1861,69963	2589,25391	-102388,21	83442,133
8,39	1395,75842	2118,91187	-90765,57	70757,344
8,4	996,47443	1689,82605	-78987,73	58183,816
8,41	689,14685	1316,83472	-67236,38	45880,418
8,42	479,86459	1026,21582	-55703,86	33917,277
8,43	334,21655	817,00085	-44447,24	22182,0547
8,44	204,4861	663,2356	-33381,39	10463,9355
8,45	50,07563	537,78668	-22363,793	-1436,2205
8,46	-150,136	415,55249	-11232,335	-13646,358
8,47	-419,54599	264,26935	201,10199	-26248,449
8,48	-772,5105	47,50687	12123,3145	-39242,25
8,49	-1208,7655	-272,23532	24679,3164	-52539,35
8,5	-1731,2609	-723,17462	37930,578	-68033,44
8,51	-2303,1724	-1275,7941	51667,453	-79469,16
8,52	-2885,563	-1874,6584	65509,758	-92535,34
8,53	-3429,734	-2458,7869	78968,148	-104845,32
8,54	-3850,37	-2941,604	91440,789	-115784,02
8,55	-4139,78	-3315,243	102482,109	-124977,37
8,56	-4285,701	-3589,717	111893,453	-132195,81
8,57	-4287,573	-3745,849	119448,602	-137329,8
8,58	-4156,388	-3788,922	124977,172	-140373,64
8,59	-3908,124	-3664,649	128429,961	-141399,77
8,6	-3576,062	-3448,791	129884,329	-140551,7
8,61	-3181,677	-3147,5596	129415,727	-137973,78
8,62	-2755,3723	-2792,1638	127241,945	-133832,48
8,63	-2353,5769	-2421,1685	123588,555	-128419,8
8,64	-2071,9121	-2123,1082	119090,062	-122371,33
8,65	-1909,0093	-1908,4583	114156,078	-116023,2
8,66	-1668,7712	-1790,4512	109064,734	-109516,45
8,67	-1929,7181	-1802,8774	104030,414	-102811,49
8,68	-2051,2095	-1933,2334	99042,863	-95732,74
8,69	-2188,5342	-2133,9275	93885,289	-88049,29
8,7	-2294,3611	-2359,4338	88252,578	-79537,7
8,71	-2339,5967	-2549,6404	81781,133	-70044,98
8,72	-2285,5669	-2634,8318	74145,258	-59462,93
8,73	-2109,9072	-2581,925	65191,562	-47752,55
8,74	-1787,8474	-2377,2884	54814,152	-34801,02
8,75	-1314,6678	-2044,4133	43088,73	-20623,684
8,76	-697,39191	-1594,2675	30144,2441	-5404,697
8,77	20,06733	-1022,3384	16133,7412	10470,46
8,78	777,12317	-348,13342	1346,72156	26491,6875
8,79	1479,43311	353,72723	-13642,911	41992,539
8,8	1995,04834	949,10571	-27834,117	56042,129
8,81	2324,12427	1399,03125	-40516,01	68139,141
8,82	2462,1709	1680,07617	-51205,04	78010,492
8,83	2419,9043	1780,62427	-59547,27	85538,484
8,84	2220,91699	1648,69629	-65396,52	90707,398
8,85	1935,41919	1415,98084	-69010,01	93793,555
8,86	1747,5708	1238,87073	-71480,83	95835,75
8,87	1625,51477	1128,39172	-73493,87	97351,922
8,88	1602,4248	1111,01062	-75494,38	98759,008
8,89	1713,55005	1225,55127	-77825,93	100403,555
8,9	1958,55725	1442,91333	-80608,04	102506,578
8,91	2377,57788	1755,34399	-83974,58	105285,172
8,92	2968,92896	2213,85083	-88138,35	108763,211
8,93	3691,87476	2819,31396	-93089,44	112713,555
8,94	4448,54053	3498,78589	-98541,61	116676,523
8,95	5113,13086	4166,9126	-104008,98	119988,445
8,96	5518,76807	4682,19267	-108433,06	121483,711
8,97	5624,94971	5024,58057	-111097,08	120446,453
8,98	5396,43408	5150,78271	-111405,69	116553,938
8,99	4909,37939	4994,16748	-108952,09	110072,695
9	4322,02393	4627,43799	-104196,52	101959,445

9,01	3662,7334	4095,42236	-97766,44	92934,453
9,02	2996,28125	3462,40796	-90437,97	83658,062
9,03	2290,56104	2792,35229	-82653,53	74383,719
9,04	1410,29248	1989,75574	-74560,05	64461
9,05	498,99731	1132,97424	-65490,19	53953,93
9,06	-385,7139	281,19153	-55687,25	43065,141
9,07	-1073,4568	-518,41095	-45386,19	32381,988
9,08	1320,9139	-1018,8241	-35932,27	23139,3477
9,09	-1268,1237	-1210,3733	-27915,025	15333,6758
9,1	-1023,2112	-1173,2832	-21289,996	8388,30176
9,11	-769,83936	-912,88055	-15926,385	1430,54443
9,12	-594,71576	-464,19339	-11418,279	-6127,907
9,13	-524,21387	20,8047	-6882,052	-14532,377
9,14	-606,08832	362,56796	-1306,7812	-23772,373
9,15	-743,27869	431,59256	6022,20703	-33437,2
9,16	-854,42169	152,30876	15383,5391	-43477,14
9,17	-1229,1718	-326,62669	26088,3242	-53851,03
9,18	-1536,5588	-776,22021	37090,383	-64553,31
9,19	-1960,8903	-1122,6986	47874,648	-75767,91
9,2	-2487,1882	-1404,0807	58378,039	-87193,29
9,21	-3055,7705	-1743,1095	66898,148	-98228,84
9,22	-3563,404	-2214,5337	79519,859	-108103,5
9,23	-3889,883	-2755,3296	89742,336	-116098,99
9,24	-4029,713	-3238,973	98733,828	-121841,21
9,25	-3969,931	-3575,479	105742,352	-125292,93
9,26	-3780,955	-3713,457	110212,711	-126633,56
9,27	-3503,308	-3599,351	111746,984	-128010,16
9,28	-3125,9204	-3201,939	110227,195	-123434,84
9,29	-2699,5513	-2610,8049	108226,953	-119181,8
9,3	-2379,9373	-2085,9233	101391,539	-114254,38
9,31	-2163,7891	-1754,1846	97020,188	-109309,64
9,32	-2108,5229	-1684,0341	93884,773	-104922,34
9,33	-2262,1006	-1895,9958	92260,133	-101514,81
9,34	-2621,0425	-2300,158	91903,898	-99203,05
9,35	-3145,6106	-2802,5254	92446,953	-97826,41
9,36	-3757,712	-3382,964	93668,812	-97026,73
9,37	-4302,793	-3933,462	94958,945	-96036,33
9,38	-4456,974	-4147,315	94819,219	-93118,92
9,39	-4276,121	-4059,189	92036,68	-87664,92
9,4	-3837,106	-3806,692	87288,234	-79606,7
9,41	-3196,436	-3442,963	80486,023	-69132,62
9,42	-2527,1255	-3100,8193	72290,82	-57228,39
9,43	-1788,2794	-2680,6001	62673,293	-44373,37
9,44	-987,8067	-2035,1285	51468,266	-30842,611
9,45	-151,41119	-1240,9901	39294,031	-17412,699
9,46	614,73047	-493,20728	27257,7344	-4513,892
9,47	1215,03394	117,80357	16174,3711	7018,02246
9,48	1626,08545	593,45557	6458,5708	16585,9375
9,49	1718,43457	919,34094	-1530,3276	23506,834
9,5	1452,28149	1048,37244	-7323,431	27546,7656
9,51	934,64154	895,94641	-10498,901	29215,0352
9,52	337,18558	459,19653	-11412,802	29744,7949
9,53	-175,2659	-146,49075	-11125,308	30434,7129
9,54	-444,09933	-671,84937	-11183,597	32348,334
9,55	-413,54697	-910,07698	-12894,864	36004,281
9,56	-111,00586	-821,23987	-16793,717	41402,992
9,57	397,27362	-458,85754	-22798,471	48253,836
9,58	1087,34595	120,35513	-30563,576	56227,973
9,59	1862,34045	852,34583	-39601,59	64976,684
9,6	2724,00537	1659,04675	-49332,66	74079,312
9,61	3581,8894	2440,177	-59045,38	82940,884
9,62	4266,02148	3048,91772	-67726,71	90412,68
9,63	4674,95361	3471,32666	-74878,57	95569,906
9,64	4745,14795	3757,15479	-80337,62	97872,992
9,65	4479,20459	3890,71338	-83853,18	97228,273
9,66	3932,68335	3823,64209	-85071,16	93927,734
9,67	3184,04517	3501,17578	-83695,11	88503,383
9,68	2328,76976	2894,81836	-79722,4	81608,258
9,69	1451,48059	2071,91187	-73679,8	73893,297
9,7	643,18542	1190,26648	-66512,88	65976,289
9,71	-8,01806	405,51677	-59232,03	58439,254
9,72	-411,58264	-154,72221	-52854,7	51982,699
9,73	-555,06335	-464,84143	-47937,07	46984,785
9,74	-420,83572	-508,41571	-44738,27	43577,762
9,75	-32,18019	-272,17331	-43269,86	41568,539
9,76	530,79401	188,98869	-43149,39	40403,031
9,77	1145,47778	766,42456	-43674,35	39275,277
9,78	1677,46448	1350,38574	-44057,56	37341,5
9,79	2030,12585	1845,72656	-43598,75	33956,727
9,8	2144,33203	2185,55103	-41809,59	28774,1816
9,81	2012,27393	2343,979	-38425,17	21746,2695
9,82	1637,42249	2292,09302	-33174,62	12890,8406
9,83	1074,6969	2043,65417	-26043,215	2515,33838

9,84	419,3999	1651,33142	-17428,43	-8667,943
9,85	-284,36823	1115,77148	-7723,307	-19994,127
9,86	-964,67139	477,715	2518,15649	-30760,773
9,87	-1588,9333	-212,89819	12743,6494	-40462,7
9,88	-2210,658	-1005,8083	22953,6191	-49208,46
9,89	-2724,0649	-1795,5833	32704,965	-56776,58
9,9	-3073,1426	-2442,137	41385,211	-62995,7
9,91	-3209,803	-2871,8254	48564,512	-67766,16
9,92	-3066,3989	-2983,7058	53629,406	-70775,77
9,93	-2761,6338	-2830,3848	56599,129	-72314,73
9,94	-2367,8652	-2509,488	57882,633	-72890,76
9,95	-1995,3824	-2068,1587	57899,863	-73107,04
9,96	-1702,894	-1558,1006	57149,727	-73391,92
9,97	-1533,6631	-1097,6199	56363,629	-74029,05
9,98	-1560,2004	-832,37714	56403,402	-75272,75
9,99	-1681,3667	-788,3913	57587,109	-76809,02
10	-1607,9894	-699,27002	59557,52	-78105,61

LAMPIRAN 4

Program SAP2000 Nonlinear Version 7.42 File:Variasi IV.OUT

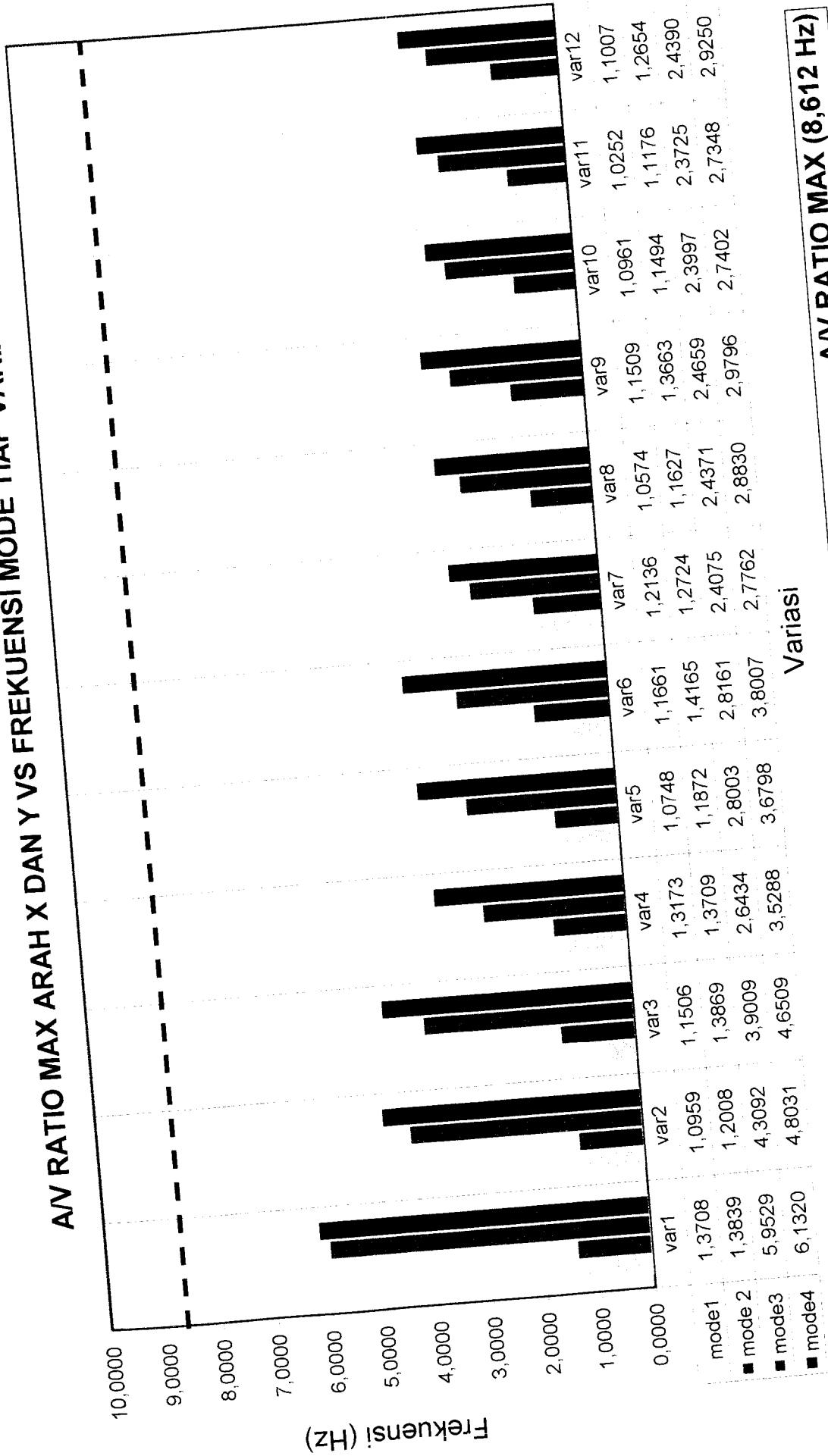
M O D A L P E R I O D S A N D F R E Q U E N C I E S

	var1	var2	var3	var4	var5	var6	var7	var8	var9	var10	var11	var12
mode1	1,3708	1,0959	1,1506	1,3173	1,0748	1,1661	1,2136	1,0574	1,1509	1,0961	1,0252	1,1007
mode2	1,3839	1,2008	1,3869	1,3709	1,1872	1,4165	1,2724	1,1627	1,3663	1,1494	1,1176	1,2654
mode3	5,9529	4,3092	3,9009	2,6434	2,8003	2,8161	2,4075	2,4371	2,4659	2,3997	2,3725	2,4390
mode4	6,1320	4,8031	4,6509	3,5288	3,6798	3,8007	2,7762	2,8830	2,9796	2,7402	2,7348	2,9250
a/v ratio max n-s	8,612	8,612	8,612	8,612	8,612	8,612	8,612	8,612	8,612	8,612	8,612	8,612

a/v ratio max n-s
8,612

a/v ratio max n-s 206,981
a max 20,633
v max

AV RATIO MAX ARAH X DAN Y VS FREKUENSI MODE TIAP VARIASI



mode1
 mode2
 mode3
 mode4
 AV RATIO MAX (8,612 Hz)