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USAAVLABS TECHNICAL REPORT 70-6B
THEORY OF STRUCTURAL DYNAMIC TESTING
USING IMPEDANCE TECHNIQUES

VOLUME II
PROGRAM AND DOCUMENTATION

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June 1970

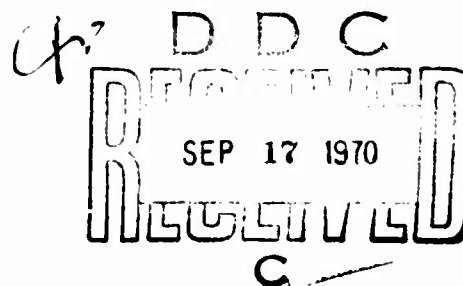
U. S. ARMY AVIATION MATERIEL LABORATORIES
FORT EUSTIS, VIRGINIA

CONTRACT DAAJ02-68-C-0106

KAMAN AEROSPACE CORPORATION

BLOOMFIELD, CONNECTICUT

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DEPARTMENT OF THE ARMY
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FORT EUSTIS, VIRGINIA 23604

Conventional methods of structural dynamic analysis are intuitive in nature. Equations of motion are obtained from an assumed model that, at best, has only a reasonable comparison to the actual structure. Because of their intuitive foundation, conventional analyses leave much to be desired with regard to the adequacy of proposed "fixes" or the dynamic effects of modifications such as gun pods, radar units, and external stores.

This contract was initiated to develop a theory of structural dynamic testing which could be used to determine, directly from measurable test data, the equations of motion, eigenfunctions, and natural frequencies of a complex structure such as a helicopter. Within the framework of the idealized assumptions, the following major goals have been achieved:

- Theory derived and proven - an exact method for identifying the parameters in n equations of motion of an n -degree-of-freedom linear structure was developed and shown to be theoretically correct.
- Theory shown to be numerically sound - the method of implementing the theory was designed to eliminate ill-behaved matrices and excessive sensitivity to experimental or measurement error.
- Theory found to be experimentally practical - precisely controlled statistical computer experiments demonstrated that the theory is operable using measured input data of the type common to helicopter structural testing and with errors in excess of the accuracy of available testing equipment.

A second contract has been awarded with the principal objectives of determining the adequacy of the chosen n degrees of freedom and the applicability of the theory of nonsymmetrical, three-dimensional structures.

**Task 1F162204A13904
Contract DAAJ02-68-C-0106
USAAVLABS Technical Report 70-68
June 1970**

**THEORY OF STRUCTURAL DYNAMIC TESTING
USING IMPEDANCE TECHNIQUES**

Final Report

**Volume II
Program and Documentation**

Kaman Report No. R-823-1

By

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**U. S. ARMY AVIATION MATERIEL LABORATORIES
FORT EUSTIS, VIRGINIA**

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ABSTRACT

This volume contains a description of the computer program used to numerically test the system identification theory of Volume I. A sample computer run of an identification case which was discussed in Volume I is shown. The variables used in the program are defined and operating instructions for the program are presented in detail.

TABLE OF CONTENTS

	<u>PAGE</u>
ABSTRACT.	iii
DESCRIPTION OF COMPUTER PROGRAM	1
OPERATING INSTRUCTIONS.	5
DESCRIPTION OF INPUT CARDS	6
LIST OF OUTPUT VARIABLES.	9
LIST OF INTERNAL VARIABLES.	10
LIST OF FORTRAN SUBROUTINES	11
COMPILATION AND SAMPLE RUN.	12
DISTRIBUTION.	123

DESCRIPTION OF COMPUTER PROGRAM

This complex computer program is designed to test and evaluate the methods derived in USAAVLABS Technical Report 70-6, Volume I. The program is written in FORTRAN IV (E Level) for the IBM system 360. It has been run on a model 40 using the Disk Operating System Version 3, Level 1 (release 17). It can be run without change on any IBM 360 having 128,000 bytes of storage. It may be run on any computer having a FORTRAN IV compiler with only minor changes, providing sufficient storage is available. The program consists of a main program plus 13 FORTRAN subprograms.

The program performs the following functions: (1) it simulates a sinusoidal frequency sweep test with errors from which are obtained the natural frequencies by iterating on the mobilities; (2) it simulates tests, as above, at the previously determined natural frequencies and carries out the identification of the parameters in the equations of motion; (3) it runs the above tests a number of times to determine the mean values and standard deviations in each of the identified parameters in order to evaluate the sensitivity of the identified parameters to measurement error; (4) after an identification has been performed, the frequency response of the identified system is calculated to assess the validity of the identified analytical model.

For details of the input, logic, and output, see flow chart (Figures 1, 2, and 3), program listing, and sample computer runs.

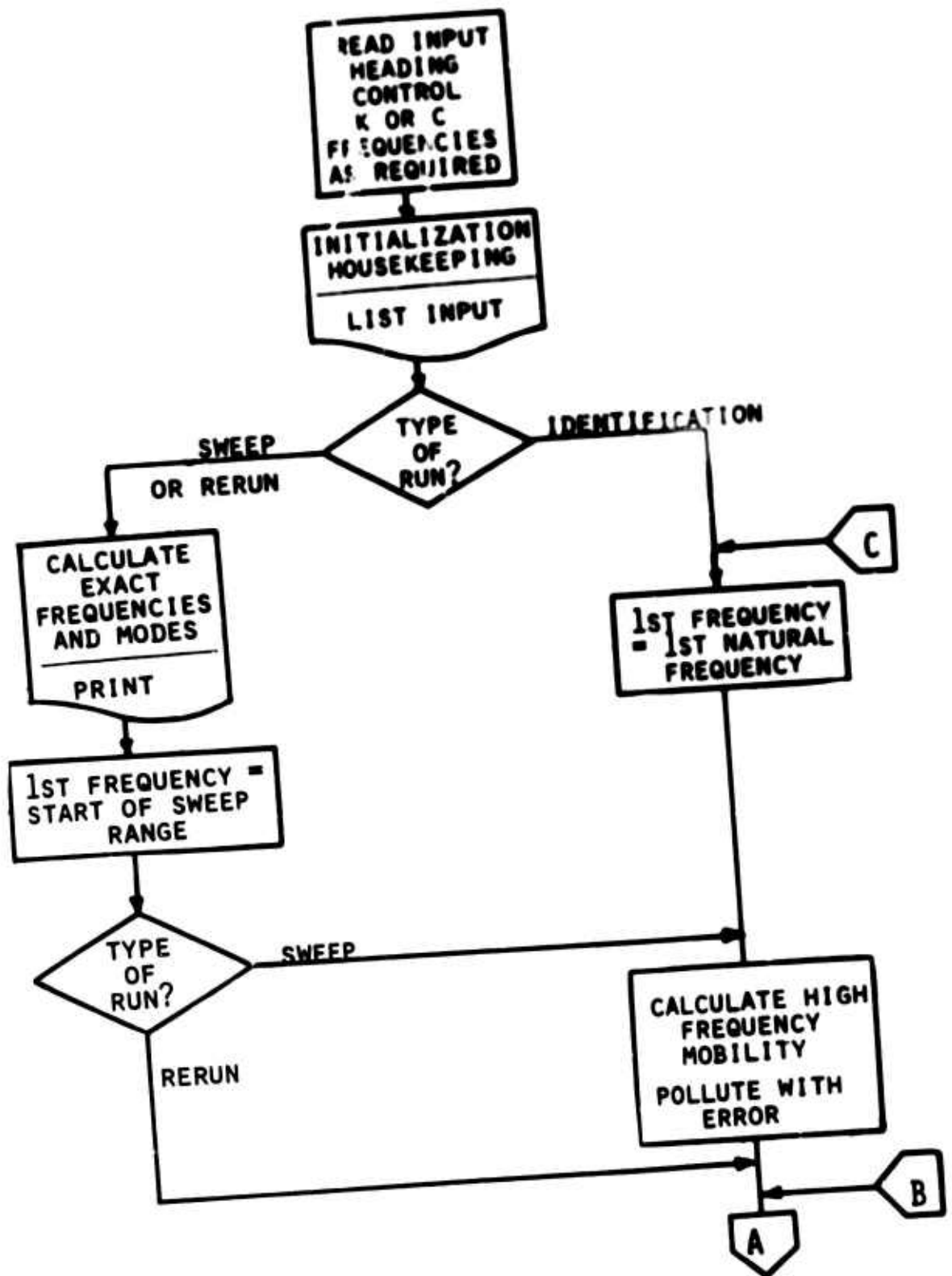


Figure 1. Flow Chart of Computer Program.

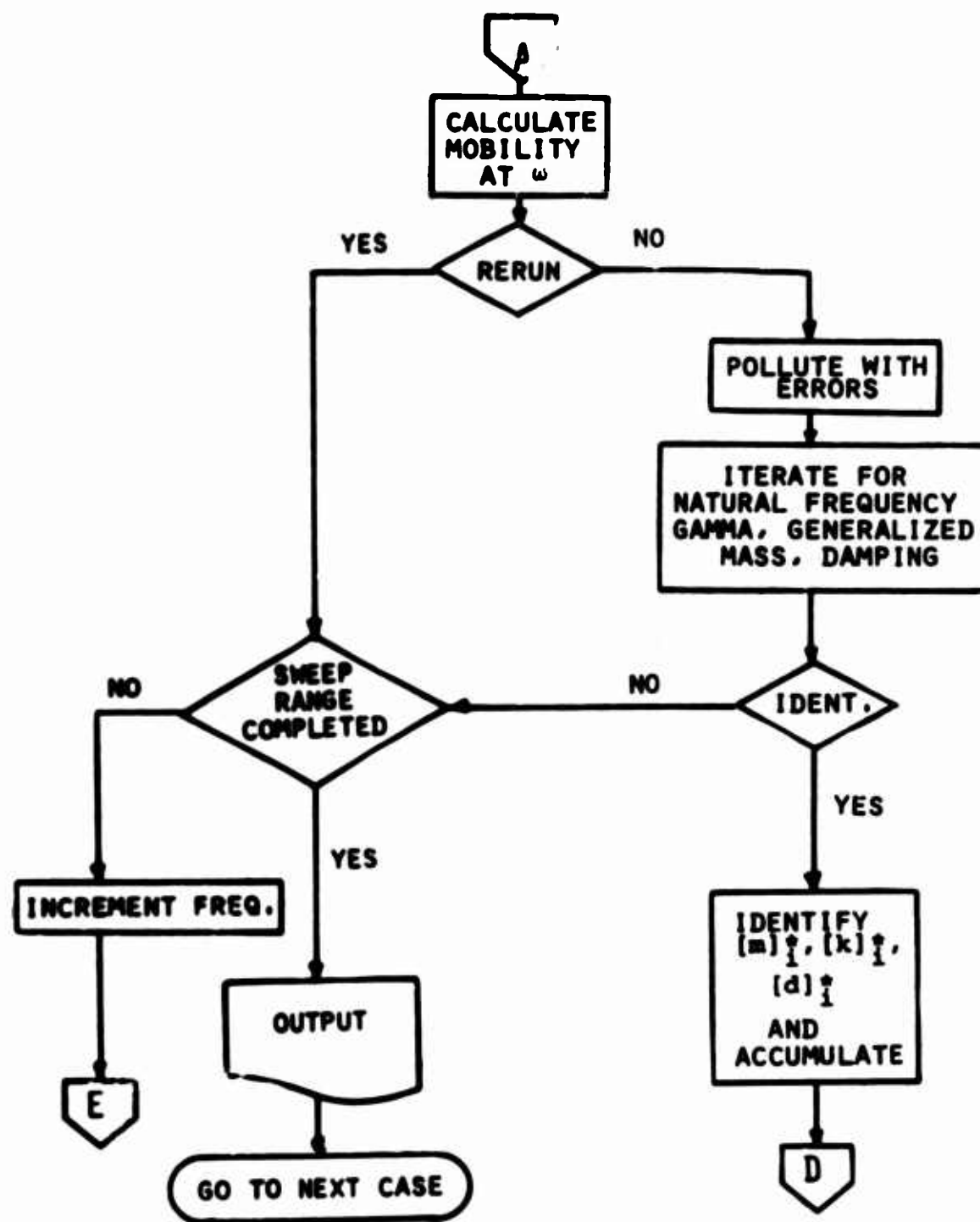


Figure 2. Flow Chart of Computer Program.

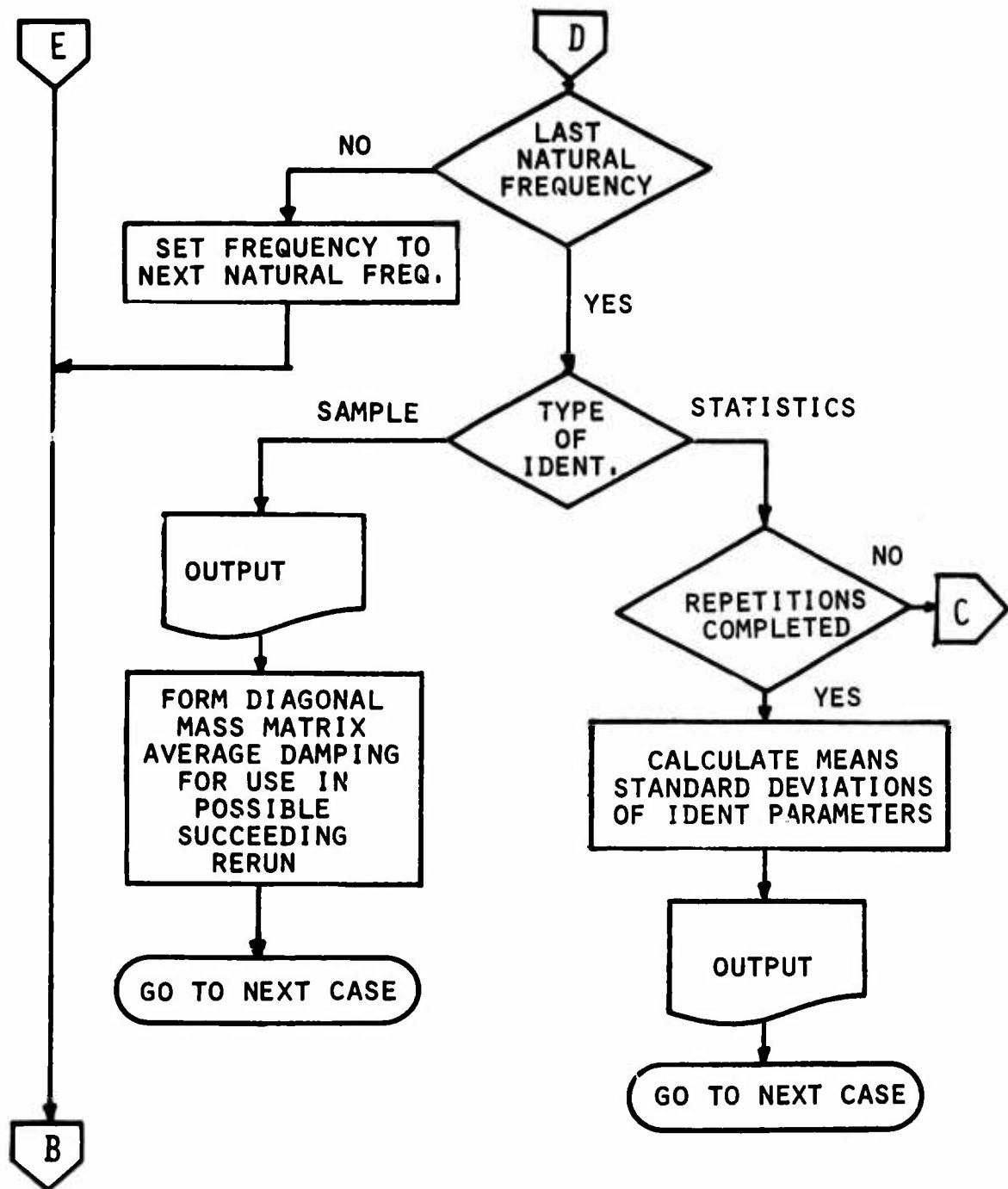


Figure 3. Flow Chart of Computer Program.

OPERATING INSTRUCTIONS

All input data must be in the following units.

Mass - lb-sec²/in.
Stiffness - lb/in.
Frequencies - hz.

The type of run is controlled by a constant (IC) in the first column of the heading card. This control constant has the following functions.

<u>IC</u>	<u>DESCRIPTION OF RUN</u>	<u>INPUT</u>	<u>OUTPUT</u>
0	Frequency sweep Iteration for Ω , γ	Control card Mass, Stiffness	Exact natural frequencies and modes Driving point mobility Row of mobility matrix Iterated Ω , γ
1	End of run (last card of deck)		
2	Same as 0	Control card Mass, Influence Coef matrix from tape	Same as 0
3	Same as 0	Control card only (Other data same as pre- vious case)	Same as 0 except no exact frequencies and modes
4	Identification - statistical based on repeated tests	Control card discrete forcing fre- quency (Other data same as pre- vious case)	Mean and standard deviation parameters of equations of motion

<u>IC</u>	<u>DESCRIPTION OF RUN</u>	<u>INPUT</u>	<u>OUTPUT</u>
5	Identification - single test	Same as 4	Iterated Ω , γ Accumulated parameters of equations of motion
6	Rerun responses following IC = 4 or 5 using identified K, diagonal M and average g	Control card only	Driving point mobility Row of mobility matrix

Each case starts with a heading card, one case following another. The last card of the deck has a '1' in column 1. The first case of any run must have IC = 0 or 2.

DESCRIPTION OF INPUT CARDS

Heading Card (every case)

Column 1	IC	Control constant (see above)
2	IRI	= 0 Iterates for Ω , γ during frequency sweep = 1 Omits iteration
3	NAMP	= 0 Response in complex velocity mobility = 1 Response in acceleration units, amplitude in g's and phase
4-80	Head	Arbitrary heading

Control Card (every case)

Column 1-2	ND	No. of degrees of freedom
6-10	G	Scalar structural damping Not used for IC = 6
11-15	NROW	Row of mobility printed for IC = 0,2,3,6 If NROW = 0, omit printing For IC = 4, NROW = no. of repetitions Not used for IC = 5
16-20	NINC	No. of sweep frequency increments (99 max) for IC = 0,2,3,6 If NINC = 0, no sweep For IC = 4,5, NINC = no. of discrete frequencies

Control Card (every case) - Continued

Column 21-25	OMO	Used for IC = 0,2,3,6 only. OMO = first sweep frequency. If OMO = 0, .5 of the lowest natural frequency is used
26-30	DOM	Used for IC = 0,2,3,6 only. DOM = sweep frequency increment. If DOM = 0, it is set equal to $(1.25 * \text{highest natural frequency} - \text{OMO}) / (\text{NINC} - 1)$
31-40	OH	High frequency used in iterating If OH = 0, then $1.25 * \text{highest natural frequency}$ is used. Not used for IC = 6
41-50	PCT	Random error on amplitude, error is uniformly distributed between $-/+ \text{PCT} * \text{each element of mobility}$. Not used for IC = 6
51-60	PCTB	Bias error on amplitude = $\text{PCTB} * \text{element}$. Not used for IC = 6
61-70	PHE	Random phase error in degrees, distributed uniformly between $-/+ \text{PHE degrees}$. Not used for IC = 6
71-80	IX	Seed for random number generator controlling measurement errors. Not used for IC = 6

Mass Cards (for IC = 0,2)

M	Diagonal masses only. 8 per card (8F10.0) Use as many cards as necessary
---	--

Stiffness Cards (for IC = 0)

K	Stiffness matrix. Lower triangle input only. Start each row on new card and end with diagonal element. 8 per card (8E10.0) Matrix will be symmetrized after input
---	---

C Matrix from tape (for IC = 2)

Unformatted record contains heading (20 words, first character blank); NX (order of matrix);
 $((C(I,J), I = 1, NX), J = 1, NX)$

Discrete Frequency Cards (for IC = 4,5)

Should contain NINC frequencies, each of
which should converge on a different mode
during iteration.
8 per card (8F10.0)

LIST OF OUTPUT VARIABLES

B(20,21)	Identified influence coefficient matrix
BF(20,21)	Mean identified influence coefficient matrix
BS(20,21)	Standard deviation of identified influence coefficient matrix
C(20,21)	Exact influence coefficient matrix
DUM(20)	Iterated gamma (also other temporary uses)
DPI(100,20)	Driving point mobility (imaginary or phase angle)
DPR(100,20)	Driving point mobility (real or amplitude in g's)
FRE(20)	Calculated natural frequencies from influence coefficient matrix
FREK(20)	Calculated natural frequencies from stiffness matrix
G1	Average identified damping coefficient
GKS(20)	Standard deviation of sums of columns of stiffness matrix
GM(20)	Exact generalized mass from influence coefficient matrix
GMK(20)	Exact generalized mass from stiffness matrix
GMS(20)	Standard deviation of sums of columns of mass matrix
IT(100)	Number of iterations
ITN	Number of iterations
K(20,21)	Exact stiffness matrix
L	Dummy index, also number of increment
MF(20)	Mean the sums of the columns of mass matrix
OM	Forcing frequency
PHI(20,21)	Mode shapes from influence coefficient matrix
PHIK(20,21)	Mode shapes from stiffness matrix
SD(20,21)	Identified damping matrix
SG(20,21)	Identified damping coefficient matrix
SGF(20,21)	Mean damping coefficient matrix
SGS(20,21)	Standard deviation of damping coefficient matrix
SK(20,21)	Mean stiffness matrix or identified stiffness matrix
SKS(20,21)	Standard deviation of stiffness matrix
SM(20,21)	Mean mass matrix or identified mass matrix
SMS(20,21)	Standard deviation of mass matrix
STAR(10)	Generalized parameter from gamma iteration
TI(100,20)	Row of mobility matrix from sweep (imaginary or phase)
TR(100,20)	Row of mobility matrix from sweep (real or amplitude in g's)

LIST OF INTERNAL VARIABLES

A(20,21)	Dummy matrix used for CM, $M^{-1}K$
AREP	= NREP
AREP1	= AREP-1
ARG	Dummy variable
CK	Generalized stiffness
CON	Dummy
GAM(100,20)	Iterated gamma vectors (output through DUM)
I	Dummy index
I1	Dummy index
IC1	= IC + 1
IC2	No. of input matrices read from tape (controls initial rewind)
ID	Dummy index
IREP	Count of repetitions (1 to NREP)
J	Dummy index
KF(20)	Mean sum of columns of stiffness matrix
IZ	Dummy seed for random numbers
MSQ(20,21)	Square form of mass matrix
ND1	Dummy variable
NDE	Dummy variable
NR	Dummy variable
NR1	Dummy variable
NREP	No. of repetitions
OJS	Forcing frequency squared
OMIT	Not used
OML	Last forcing frequency
PMAX	Maximum amplitude of modal elements
S1,S2...S6	Same as STAR(1), STAR(16) for second dominant mode
VAL	Eigenvalue of gamma iteration (not used)
YI(20,21)	Simulated measured mobility matrix (imaginary) at forcing frequency
YIH(20,21)	Simulated measured mobility matrix (imaginary) at high frequency
YR(20,21)	Simulated measured mobility matrix (real) at forcing frequency
YRH(20,21)	Simulated measured mobility matrix (real) at high frequency
ZI(20,21)	Exact impedance (imaginary) at forcing frequency
ZR(20,21)	Exact impedance (real) at forcing frequency

LIST OF FORTRAN SUBROUTINES

AMP	Converts mobility from velocity units to acceleration as amplitude (in g's) and phase angle (in degrees)
CINV	Complex inverse of complex matrix
ERR	Incorporates measurement errors into simulated measurements
GEN	Generalized function of form $f^T A f$ where f is a vector and A is a square matrix
INVR	Inverse of a matrix
ITER	Matrix iteration for eigenvalues and eigenvectors
MITER	More general iteration on product of two matrices. Used for gamma iteration
MMPX	Matrix multiplication
MOB	Calculates complex impedance and mobility
MOUT	Special output for square matrix
RANDU	Random number generator
RED	Removes rows and columns from matrix
YOUT	Special matrix output

COMPILATION AND SAMPLE RUN

The "measured" mobility matrices $[Y_\omega]$ are generated, over a range of frequencies ω , from exact $[m]$, $[k]$, and $[d]$. They are then polluted with known error, and values of $[m]$, $[k]$ and $[d]$ are identified, using the theory described herein, from the polluted mobilities. The cycle is completed by generating a third set of mobilities from the identified parameters.

The sample run below refers to 8 percent random error and 8 percent bias error in the mobility amplitude and 2° random error in the mobility phase. All three phases, generation of polluted $[Y_\omega]$ identification of parameters and rerun of identified model to regenerate $[Y_\omega]$, are included and are signified, respectively, by IC = 2,5,6. The complete driving point response Y_{ii} , and the third row, corresponding to the pilot seat of the transfer point response, Y_{ij} , are both presented over a frequency range from 1 Hz to 1400 Hz.

```

DISK OPERATING SYSTEM/160 FORTRAN 360M-ED-451 31
***** IDENT *****
C
C
C LINEAR DYNAMIC STRUCTURE - IMPEDANCE - MOBILITY - SIMULATED TEST
C PARAMETER IDENTIFICATION
C TEST FORCE ANALYSIS
C
C DIAGONAL MASSES, SYMMETRIC STIFFNESSES, SCALAR STRUCT DAMPING
C UP TO 20 DEGREES OF FREEDOM, 90 INCREMENTS IN SPEED FORCING FREQ
C
C INPUT CARD 1 COL 1 = IC, COL 2 = TRI, COL 3 = NAMP, 4-90 = WEARING
C -----
C TRI = BLANK, ITERATES DURING FREQ SWEEP
C TRI = 1, EMITS ITERATION
C NAMP = BLANK, DESP IN COMPLEX VEL MOBILITY
C NAMP = 1, DESP IN ACCEL IN G, AMP AND PHAS
C
C IC = 0 - FREQ SWEEP
C READS CONTROL CARD, MASS CARDS, K CARDS
C
C IC = 1
C END OF RUN, OTHERWISE ONE CASE AFTER ANOTHER
C
C IC = 2 - FREQ SWEEP
C READS CONTROL CARD, MASS CARDS, C MATRIX FROM TAPE 9
C
C IC = 3 - FREQ SWEEP
C READS CONTROL CARD ONLY, OTHER DATA SAME AS PREVIOUS CASE
C
C IC = 4 - IDENTIFY EQ OF MOTION - STATISTICS
C READS CONTROL CARD, DISCRETE FORCING FREQUENCIES
C
C IC = 5 - IDENTIFY EQ OF MOTION - DETAILED SAMPLE
C READS CONTROL CARD, DISCRETE FORCING FREQUENCIES
C
C IC = 6 - RUN RESPONSES
C READS CONTROL CARD, USES IDENTIFIED MASS DIAG, K, AVE G
C PREVIOUS CASE MUST HAVE IC = 4 OR 5
C
C FIRST CASE MUST HAVE IC = 0 OR 2
C MASS IN LB-SEC**2/IN
C K IN LB/IN
C ALL FREQUENCIES IN HZ
C
C CONTROL CARD
C -----
C COL 1,2 NO, NO OF DEGREES OF FREEDOM (20 MAX)
C IC = 6 NOT USED
C 6,10 G, SCALAR STRUCTURAL DAMPING COEFFICIENT
C IC = 5 NOT USED
C 11,15 N/DM, IC = 0,2,3,6 FOR CE MOR DISPLAYED (0 = OMIT)
C IC = 4 NO CE DEFINITIONS
C IC = 5 NOT USED

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FOOTRAIN

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C      16,70  NINC  IC = 0.2,3,6  NUMBER OF SWEEP FREQ INCREMENTS
C      (99 MAX)
C      IF 0, NO SWEEP
C      IC = 4.5  NO OF DISCRETE FREQS. (IF 0, =NR)
C      21,75  QMD,  IC = 0.2,3,6 ONLY, FIRST SWEEP FREQ
C      IF 0, USES .5 LOWEST NAT FREQ
C      26,80  QDM  IC = 0.2,3,6 ONLY, SWEEP FREQ INCREMENT
C      IF 0, = (1.25*HIGH NAT FREQ-QMD)/(NINC-1)
C      31,40  QH   HIGH FREQ USED IN ITERATING
C      IF 0, NOT USED
C      IC = 6
C      41,50  PCT  RANDOM ERROR ON AMPLITUDE, ERROR UNIFORMLY
C      DISTRIBUTED BETWEEN -7* PCT*ELEMENT
C      IF 0, NOT USED
C      IC = 6
C      51,60  PCTR  BIAS ERROR ON AMPLITUDE = PCTR*ELEMENT
C      IF 0, NOT USED
C      IC = 6
C      61,70  PMF  RANDOM PHASE ERROR, DISTRIBUTED AS PCT
C      71,80  TX   SEED FOR RANDOM NUMBER GENERATOR
C      IF 0, NOT USED
C      IC = 6
C
C-----
C      MASS CARDS  DIAGONAL MASSES (BF10,0), AS MANY CARDS AS NECESSARY
C-----
C      K  CARDS  STIFFNESS MATRIX (BF10,0), AS MANY CARDS AS NECESSARY
C      LOWER TRIANGLE INPUT ONLY, MATRIX WILL BE SYMMETRIZED
C      START EACH ROW ON NEW CARD, END ON DIAGONAL ELEMENT
C-----
C      C MATRIX FROM TAPE  RECORD CONTAINS HEADING (20 WDS, FIRST CHAR BLANK)
C      NX (ORDER OF MATRIX),
C      (IC(1,J),I=1,NX),J=1,NX)
C      RECORD IS UNFORMATTED
C-----
C      DISCRETE FREQ CARDS  CONTAINS NINC FREQ, (BF10,0), EACH OF WHICH SHOULD
C      CONVERGE ON A DIFFERENT MODE
C-----
C      INTEGER HEAD(20),IT(100),HEAD1(20),CHT(10)
C      REAL W(20),K(20,21),C(20,21),  PM(20,21),A(20,21),
C      1 FRE(20),GM(20),PHIK(20,21),FREK(20),GMK(20),DUM(20)
C      REAL  MSQ(20,21),GAM(100,20),SKS(20,21),SMS(20,21),RS(20,21),
C      1 GMS(20),GKS(20),SGS(20,21),SKF(20,21),SMF(20,21),RF(20,21),
C      1 GMF(20),GKF(20),SGF(20,21),WF(20),KF(20)
C      COMMON ZR(20,21),ZT(20,21),YR(20,21),YT(20,21)
C      COMMON DPR(100,20),DPI(100,20),TP(100,20),TI(100,20),OMH(100)
C      COMMON SG(20,21),  VRH(20,21),VTH(20,21),MSC,GAM,PHIK
C      COMMON STAP(10),A,R(20,21),SM(20,21),SK(20,21),SD(20,21)
C      EQUIVALENCE (SKS(1,1),DPR(1,1)),(SMS(1,1),DPI(1,1)),
C      1 (RS(1,1),TRI(1,1)),(SGS(1,1),TI(1,1)),(SKF(1,1),DPR(100,51)),
C      2 (SMF(1,1),DPI(100,51)),(RF(1,1),TP(100,51)),(SGF(1,1),TI(100,51))
C      IC2=0
C      100 READ (1,110) IC,TRI,NAMP,HEAD
C      110 FORMAT (3I1,A1,19A4)
C      IC1=IC+1
C      GO TO (230,190,210,230,230,230,160,120), IC1
C      120 ND=NR

```

ZDT 91
 ZDT 92
 ZDT 93
 ZDT 94
 ZDT 95
 ZDT 96
 ZDT 97
 ZDT 98
 ZDT 99
 ZDT 100
 ZDT 101
 ZDT 102
 ZDT 103
 ZDT 104
 ZDT 105
 ZDT 106
 ZDT 107
 ZDT 108
 ZDT 109

01/27/70 FORTMAIN

```

NR1=0
DO 140 I=1,NR
  K(I,1)=0
DO 140 J=1,NR
  IF(I-J) 130,140,130
130 K(I,1)=K(I,1)-K(I,J)
140 CONTINUE
  WRITE (3,150)
150 FORMAT ('1.0//T40.0FREE BODY RESPONSES//')
  GO TO 510
160 DO 170 I=1,NR
  M(I)=SM(I,1)
DO 170 J=1,NR
  170 K(I,J)=SK(I,J)
  G=GL
  ND=NR
  NR1=0
  PCT=0
  PCTB=0
  PME=0
  READ (1,180) NR0W,NINC,OM0,ODM
180 FORMAT (T11,2F5.2)
  GO TO 370
190 WRITE (3,200)
200 FORMAT (//T10.0END OF RUN*)
  CALL EXIT
210 IC2=IC2+1
  IF (IC2-1) 220,220,230
220 REMIND 9
230 READ (1,240) ND,NR,G,NROW,NINC,OM0,ODM,OH,PCT,PCTB,PME,IZ
240 FORMAT (I2,I3,F5.0,2F5.0,4F10.0,I10)
  IX=IZ+2+1
  IREP=1
  NREP=MAX0 (1,NROW)
  IF (NR) 250,250,260
250 NR=ND
  NR1=0
  GO TO 290
260 IF (NR-ND) 270,290,250
270 NR1=ND-NR
  READ (1,280) (OMIT(I),I=1,NR1)
280 FORMAT (I10)
290 GO TO (350,350,350,300,300), 1C1
300 IF (NINC) 310,310,320
310 NINC=NR
320 READ (1,360) (OMH(I),I=1,NINC)
  DO 330 I=1,ND
  DO 330 J=1,ND
    SM(I,J)=0
  SK(I,J)=0
  SMS(I,J)=0
  RS(I,J)=0
  SGS(I,J)=0
  SMFI(I,J)=0

```

```

ZDT 110
ZDT 111
ZDT 112
ZDT 113
ZDT 114
ZDT 115
ZDT 116
ZDT 117
ZDT 118
ZDT 119
ZDT 120
ZDT 121
ZDT 122
ZDT 123
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ZDT 162
ZDT 163
ZDT 164

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0004

01/27/79 FNGTMAIN

```

340 K(1,21)=0
350 READ (1,360) (M(1),I=1,MN)
360 FORMAT (AEL,5)
370 DO 390 I=1,MN
    DO 380 J=1,MN
380 MSQ(I,J)=0
390 MSQ(I,1)=M(1)
    MD=MN-1
    IF (IC-6) 420,400,400
400 WRITE (3,410)
410 FORMAT (10, T40, 'PERMUT OF IDENTIFIED MODEL RESPONSES')
    GO TO 510
420 IF (IC) 480,480,430
430 READ (9) HEADLINE, (C(I,J),I=1,MN), J=1,NX
    IF (MD-NX) 440,460,440
440 WRITE (3,450) HEADLINE
450 FORMAT (//T5, 'C MATRIX ON TAPE WRONG SIZE', T5, 'TAPE HEADING', I0X, I4,
    1, A3, I9A4, I4, I4)
    GO TO 100
C
460 DO 470 I=1,MN1
    I1=I+1
    DO 470 J=1,MN
        C(I,J)=(C(I,J)+C(J,I))/2.0
470 C(J,I)=C(I,J)
        CALL INVS (C,ND,K)
    GO TO 510
480 DO 490 I=1,MN
490 READ (1,360) (K(I,J),J=1,I)
    DO 500 I=1,MN1
        I1=I+1
        DO 500 J=1,MN
            K(I,J)=K(J,I)
500 K(I,J)=K(J,I)
        WRITE (3,1370)
510 WRITE (3,520) IC, IPT, HEADLINE, I=1, MN1
520 FORMAT (1, T50, 'COMPLETE IMPEDANCE MODEL', //T25, T12, A1, I9A4, //
    1, T5, 'DIAGONAL MASSSES', //T10, I0F12.5)
        ID=MIV0(MN, I0)
        IF (IC-2) 550, 530, 550
530 WRITE (3,540) HEADLINE
540 FORMAT (//T10, 'C MATRIX FROM TAPE', T10, 'TAPE HEADING', I0X, I4, A3,
    1, I9A4, I4, I4)
550 WRITE (3,560) (I, I=1, I0)
560 FORMAT (//T5, 'K MATRIX', //T5, I0I12)

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FORMAT

01/27/70

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570 WRITE (3,580) I,(K(I,J),J=1,I)
580 FORMAT (15,5X,1P12.4)
IF(10-ND) 500,620,620
590 WRITE (3,600) (I,I=1,ND)
600 FORMAT ('1//T5,*K MATRIX (CONT)/T5,1P12)
DO 610 I=1,ND
610 WRITE (3,580) I,(K(I,J),J=1,I)
620 DO 630 I=1,ND
      K(I,21)=0
DO 630 J=1,ND
630 K(I,21)=K(I,21)+K(I,J)
WRITE (3,640) (K(I,21),I=1,ND)
640 FORMAT ('//T5,*SPRINGS TO GOALW//10X,1P12.4)
WRITE (3,650) 6
650 FORMAT ('//T10,1P12.4)
GO TO (660,660,670,870,870,870,870,870,870,870, 101
      INVERT K TO GET C
660 CALL INVER (K,ND,C)
670 WRITE (3,680)
680 FORMAT ('1//T5,*C MATRIX//)
CALL WOUT (C,ND)
      CALCULATE ERFG + WRCES USING C
690 DO 700 I=1,ND
DO 700 J=1,ND
700 A(I,J)=C(I,J)*M(J)
DO 710 J=1,ND
      CALL ITP (A,PHI,ERF,CW,W,J,ND,ITN,PMAX)
      IT(J)=ITN
      CON=PMAX/GM(J)
DO 710 I=1,ND
DO 710 L=1,ND
710 A(I,L)=A(I,L)-PHI(I,J)*PMI(L,J)*CON*W(L)
      WRITE (3,720)
720 FORMAT ('1//T50,1P12.4) WRCES ERFG C MATRIX//)
CALL WOUT (PMI,ND)
WRITE (3,730) (IT(I),I=1,ND)
730 FORMAT ('//T5,1P12)
DO 740 I=1,ND
740 DUM(I)=ERF(I)/6.283185
WRITE (3,750) (DUM(I),I=1,ND)
750 FORMAT ('//T5,*FREQUENCIES - HERTZ//10X,1P12.4)
WRITE (3,760) (GM(I),I=1,ND)
760 FORMAT ('//T5,*GENERALIZED MASS//10X,1P12.4)
      CALCULATE GAMMA AND NORMALIZE
CALL INVER (PMI,ND,PHI)
DO 780 I=1,ND
      PMAX=0
DO 770 J=1, ND
      PMAX=MAX(PMAX,ABS(PHI(I,J)))
DO 780 J=1,ND
      PHI(J,I)=PHI(I,J)/PMAX
WRITE (3,790)
790 FORMAT ('1//T50,*GAMMA//)
CALL WOUT (PMI,ND)

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01/27/70

FORTMAIN

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NDE=ND
GO TO 820

      C      NDE=N)-1
      DO 810 I=1,ND
      810 PHIK(I,ND)=1.0
      DUM(ND)=0
      DO 820 J=1,ND
      820 DO 830 I=1,ND
      830 A(I,J)=K(I,J)/M(I)
      DO 840 J=1,NDE
      CALL ITER (A,PHIK,FREK,CWK,M,J,ND,ITN,PMAX)
      IT(J)=ITN
      CN=PMAX/CWK(J)
      DO 840 I=1,ND
      DO 840 L=1,ND
      840 A(I,L)=A(I,L)- PHIK(I,J)*PHIK(L,J)*CN*M(L)
      850 FORMAT ('1',/T50,'NORMAL MODES FROM K MATRIX//')
      CALL MOUT (PHIK,ND)
      WRITE (3,730) (IT(I),I=1,NDE)
      DO 860 I=1,NDE
      FREK(I)=1.0/FREK(I)
      860 DUM(I)=FREK(I)/6.283185
      WRITE (3,750) (DUM(I),I=1,ND)
      WRITE (3,760) (CWK(I),I=1,NDE)

      C      CALCULATE MOBILITIES

      IF(INC) 100,100,870
      870 IF(OM) 880,880,890
      880 OM=FRE(1)/2.0/6.283185
      890 IF(OM) 900,900,910
      900 OM=FREK(1)*1.25/6.283185
      OMW=(OM-OM0)/(INC-1)
      910 OM=OM

      IF(IC-6) 920,1100,1100
      920 IF(OM) 930,930,940
      930 OM=FREK(1)*1.25/6.283185
      940 WRITE (3,950) IC,IRI,MEAN
      950 FORMAT ('1',T25,212,A1,19A4/)
      IF(NR1) 980,980,960
      960 WRITE (3,970) (OM(I),I=1,NR1)
      970 FORMAT (/T10,'STATIONS OMITTED',N15)
      980 IF (IC1-5) 1040,950,1020
      990 WRITE (3,1000) NEFP
      1000 FORMAT (T30,ND OF REPTIONS,15/)
      WRITE (3,1010) (OMH(I),I=1,NR)
      1010 FORMAT (/T10,'FREQUENCIES USED',/T10,10F12.6)
      1020 WRITE (3,1030) OM,G,PCT,PCTR,PHE,17
      1030 FORMAT (/T30,'HIGH FREQUENCY =F12.5%', TRUE DAMPING =F6.4/
      1 T10,'MAX RANDOM ERROR =F8.5%', BIAS ERROR =F8.3', OF ELEM,
      2 MAX RAND PHASE ERROR =F5.2', DEG./T10,'SEED',15/)
      GO TO 1090
      1040 IF(IRI) 1050,1050,1070
      1050 WRITE (3,1060) OM,G,PCT,PCTR,PHE,12
      1060 FORMAT (/T30,'HIGH FREQUENCY =F12.5%', TRUE DAMPING =F6.4/

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01/27/70

FORTMAIN

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1 T10, 'MAX RANDOM ERROR =F8.5,' BIAS ERROR =F8.3,' OF ELEM, ZOT 330
2 MAX RAND PHASE ERROR =F5.2,' DFG,'/T10,'SEED'115//T15, *1'/ ZOT 331
3 *R *I ZOT 332
4 T14,'Y (OM) Y (OM) Y (OMH) Y (OMH) Y (OMH) ZOT 333
5 Z (OMH) NAT FREQ GEN MASS G NAT FR 2'// ZOT 334
GO TO 1090 ZOT 335
1070 WRITE (3,1080) PCT,PCTB,PMF,IZ ZOT 336
1080 FORMAT ( ZOT 337
1 T10, 'MAX RANDOM ERROR =F8.5,' BIAS ERROR =F8.3,' OF ELEM, ZOT 338
2 MAX RAND PHASE ERROR =F5.2,' DEG,'/T10,'SEED'115// ZOT 339
1090 CALL MOR (MSO,K,G,ND,OM ,ZB,ZI,YR,YI) ZOT 340
CALL RED (YR,YI,ND,NR1,OMIT) ZOT 341
CALL ERR (YR,YI,ND,PCT,PCTB,PMF,NR,IX) ZOT 342
CALL INVR (YI,NR,A) ZOT 343
1100 DO 1390 L=1,NINC 1ZOT 344
GO TO (1120,1120,1120,1120,1110,1110,1120,1120), ICI 1ZOT 345
1110 OM=OMH(L) 1ZOT 346
GO TO 1130 1ZOT 347
1120 OMH(L)=OM 1ZOT 348
1130 CALL MOR (MSO,K,G,ND,OM ,ZB,ZI,YR,YI) 1ZOT 349
CALL RED (YR ,YI ,ND,NR1,OMIT) 1ZOT 350
IF (IC-6) 1140,1170,1170 1ZOT 351
1140 CALL ERR (YR ,YI ,PCT,PCTB,PMF,NR,IX) 1ZOT 352
CALL MITER (A,YR,NR, .0001,25 ,DUM,VAL,ITN) 1ZOT 353
1150 IF (IC1-5) 1160,1230,1230 1ZOT 354
1160 IT(L)=ITN 1ZOT 355
1170 DO 1210 J=1,NR 2ZOT 356
DPR(L,J)=YR(J,J) 2ZOT 357
DPI(L,J)=YI(J,J) 2ZOT 358
IF (IC-6) 1180,1190,1190 2ZOT 359
1180 GAM(L,J)=DUM(J) 2ZOT 360
1190 IF (NR3) 1210,1210,1200 2ZOT 361
1200 TR(L,J)=YR(NR0M,J) 2ZOT 362
YI(L,J)=YI(NR0M,J) 2ZOT 363
1210 CONTINUE 2ZOT 364
IF (IR1) 1380,1220,1380 1ZOT 365
1220 IF (IC-6) 1230,1380,1380 1ZOT 366
STAR(7) = NAT FREQ, 8 = GEN MASS, 9 = DAMPING COFF 1ZOT 367
STAR(10) = SECOND DOMINANT FREQ 1ZOT 368
1230 STAR(1) =GEN(DUM,YR,NR) 1ZOT 369
STAR(2) =GEN(DUM,YI,NR) 1ZOT 370
STAR(3) =GEN(DUM,YR,NR) 1ZOT 371
STAR(4) =GEN(DUM,YI,NR) 1ZOT 372
STAR(5) =-STAR(2) / (STAR(1) **2+STAR(2) **2) 1ZOT 373
STAR(6) =-STAR(4) / (STAR(3) **2+STAR(4) **2) 1ZOT 374
NJ5= OM*OM *(OM+STAR(6) -OM *STAR(5) ) / (OM *STAR(6) 1ZOT 375
1 -OM*STAR(5) ) 1ZOT 376
IF (NJ5) 1240,1250,1250 1ZOT 377
1240 STAR(7)=0 1ZOT 378
STAR(8)=0 1ZOT 379
STAR(9)=0 1ZOT 380
STAR(10)=0 1ZOT 381
GO TO 1300 1ZOT 382
1250 STAR(7) =SORT(NJ5) 1ZOT 383
STAR(8) =OM *STAR(6) / (OM *OM -NJ5) 1ZOT 384

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01/27/70

FORTMAIN

0009

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1420 FORMAT (//T50,'COMPLETE M, K, N'//)
      CALL MOUT (SM,NR)
      WRITE (3,1360) (MSQ(I,21),J=1,NP)
      WRITE (3,1370)
      CALL MOUT (SK,NR)
      WRITE (3,1360) ( K(I,21),I=1,NP)
      WRITE (3,1370)
      CALL MOUT (SD,NP)
      CALL INVR (SK,NR,R)
      WRITE (3,1430)
1430 FORMAT (//T50,'INFLUENCE COFF MATRIX'//)
      CALL MOUT (R,NP)
      CALL MPPY (SD,R,NR,NP,SG)
      WRITE (3,1440)
1440 FORMAT (//T50,'DAMPING COFF MATRIX'//)
      CALL MOUT (SG,NP)
1450 G1=0
      DO 1460 I=1,NP
1460 G1=G1+SG(I,I)
      G1=G1/NP
      WRITE (3,1470) G1
1470 FORMAT (//T10,'AVF C'F10.6)
      GO TO 100
1480 CALL INVR (SK,NP,R)
      DO 1490 I=1,NP
      DO 1490 J=1,NP
        SM(I,J)=SM(I,J)+SK(I,J)
        SK(I,J)=SK(I,J)+SK(I,J)
        SG(I,J)=SG(I,J)+SG(I,J)
        BF(I,J)=BF(I,J)+R(I,J)
        SMS(I,J)=SMS(I,J)+SM(I,J)+SM(I,J)
        SKS(I,J)=SKS(I,J)+SK(I,J)+SK(I,J)
        SGS(I,J)=SGS(I,J)+SG(I,J)+SG(I,J)
1490  RS(I,J)=RS(I,J)+4(I,J)*R(I,J)
      DO 1500 I=1,NP
        MF(I)=MF(I)+MSQ(I,21)
        KF(I)=KF(I)+K(I,21)
        GMS(I)=GMS(I)+MSQ(I,21)+MSQ(I,21)
1500  GKS(I)=GKS(I)+ K(I,21)* K(I,21)
        IREP=IREP+1
      IF (IREP-NREP) 1510,1510,1540
1510 DO 1520 I=1,NP
      DO 1520 J=1,NP
        SM(I,J)=0
        SK(I,J)=0
1520  SD(I,J)=0
      DO 1530 I=1,NP
        MSQ(I,21)=0
1530  K(I,21)=0
      GO TO 1000
1540 AREP=AREP+1
      AREP1=AREP-1.0
      DO 1670 I=1,NP
      DO 1670 J=1,NP

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0012

01/27/70 FORTWAIN

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      SM(I,J) = SMF(I,J)/ARFP
      SK(I,J) = SKF(I,J)/ARFP
      RF(I,J) = RF(I,J)/ARFP
      SG(I,J) = SGF(I,J)/ARFP
      ARG = (SM(I,J) - SM(I,J) * CMF(I,J)) / ARFP
      IF (ARG) 1550,1560,1560
1550 SM(I,J) = SQR(T(-ARG))
      GO TO 1570
1560 SM(I,J) = SQR(T(ARG))
1570 ARG = (SK(I,J) - SK(I,J) * CMF(I,J)) / ARFP
      IF (ARG) 1580,1590,1590
1580 SK(I,J) = SQR(T(-ARG))
      GO TO 1600
1590 SK(I,J) = SQR(T(ARG))
1600 ARG = (SG(I,J) - ARFP * SGF(I,J) * CMF(I,J)) / ARFP
      IF (ARG) 1610,1620,1620
1610 SG(I,J) = SQR(T(-ARG))
      GO TO 1630
1620 SG(I,J) = SQR(T(ARG))
1630 ARG = (RS(I,J) - AREP * RF(I,J) * CMF(I,J)) / ARFP
      IF (ARG) 1640,1650,1650
1640 RS(I,J) = SQR(T(-ARG))
      GO TO 1660
1650 RS(I,J) = SQR(T(ARG))
1660 CONTINUE
1670 CONTINUE
      DO 1680 I=1,NP
      RF(I) = RF(I) / ARFP
      CMF(I) = SQR(T(CMS(I) - AREP * CMF(I) * CMF(I))) / ARFP
      GKS(I) = SQR(T(GKS(I) - AREP * GKS(I) * CMF(I))) / ARFP
1680 CONTINUE
      WRITE (3,1690)
1690 FORMAT('1/T30, MEAN MASS MATRIX AND STANDARD DEVIATION')
      CALL MOUT(SM,NP)
      WRITE (3,1360) (MF(I),I=1,NP)
      WRITE (3,1370)
      CALL MOUT(SMS,NP)
      WRITE (3,1360) (GMS(I),I=1,NP)
      WRITE (3,1700)
1700 FORMAT('1/T30, MEAN STIF MATRIX AND STANDARD DEVIATION')
      CALL MOUT(SK,NP)
      WRITE (3,1360) (KF(I),I=1,NP)
      WRITE (3,1370)
      CALL MOUT(SKS,NP)
      WRITE (3,1360) (GKS(I),I=1,NP)
      WRITE (3,1710)
1710 FORMAT('1/T30, MEAN C MATRIX AND STANDARD DEVIATION')
      CALL MOUT(CF,NP)
      WRITE (3,1370)
      CALL MOUT(CMS,NP)
      WRITE (3,1720)
1720 FORMAT('1/T30, MEAN G MATRIX AND STANDARD DEVIATION')
      CALL MOUT(SGF,NP)
      WRITE (3,1370)

```

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2207 494
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0011

01/27/70

FORTMAIN

```

CALL MOUT(SGS,NR)
GO TO 1450
C
1730 IF(IC-6) 1740,1770,1770
1740 IF(1R1) 1770,1750,1770
1750 WRITE (3,1760)
1760 FORMAT ('1'//T50,'ITERATED GAMMA'//)
      CALL YOUT (OMH,GAM,NINC,NP,0)
      WRITE (3,730) (IT(1),I=1,NINC)
1770 IF(NAMP) 1800,1800,1780
1780 CALL AMP(OMH,DPR,DPI,NINC,NP)
      WRITE (3,1790)
1790 FORMAT ('1'//T50,'DRIVING POINT RESPONSE - AMP IN G'S'//)
      GO TO 1820
1800 WRITE (3,1810)
1810 FORMAT ('1'//T50,'DRIVING POINT MOBILITIES - REAL'//)
1820 CALL YOUT (OMH,DPR,NINC,NP,0)
      IF(NAMP) 1850,1850,1830
1830 WRITE (3,1840)
1840 FORMAT ('1'//T50,'DRIVING POINT RESPONSE - PHASE IN DEGREES'//)
      GO TO 1870
1850 WRITE (3,1860)
1860 FORMAT ('1'//T50,'DRIVING POINT MOBILITIES - IMAG'//)
1870 CALL YOUT (OMH,DPI,NINC,NP,NAMP)
      IF(NROW) 190,100,1880
1880 IF (NAMP) 1910,1910,1890
1890 CALL AMP (OMH,TR,TT,NINC,NR)
      WRITE (3,1900) NROW
1900 FORMAT ('1'//T50,'TRANSFER RESPONSE - AMP IN G'S - ROW'14'//)
      GO TO 1930
1910 WRITE (3,1920)NROW
1920 FORMAT ('1'//T50,'TRANSFER MOBILITIES - REAL- ROW'14'//)
1930 CALL YOUT (OMH,TR ,NINC,NP,0)
      IF(NAMP) 1960,1960,1940
1940 WRITE (3,1950) NROW
1950 FORMAT ('1'//T50,'TRANSFER RESPONSE - PHASE IN DEGREES - ROW'14'//)
      GO TO 1980
1960 WRITE (3,1970) NROW
1970 FORMAT ('1'//T50,'TRANSFER MOBILITIES - IMAG - ROW'14'//)
1980 CALL YOUT (OMH,TT ,NINC,NP,NAMP)
      GO TO 100
END

```

ZDT 550
 ZDT 551
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 ZDT 590
 ZDT 591

```

C
SUBROUTINE INVR5 (B,N,A)
A = INVERSE OF B
DIMENSION A(20,21),D(20,21),IROW(21),ICOL(21)
DIMENSION A(20,21)
DO 100 I=1,N
DO 100 J=1,N
100 A(I,J)=B(I,J)
M=N+1
DO 110 I=1,N
IROW(I)=I
110 ICOL(I)=I
DO 260 K=1,N
AMAX= A(K,K)
DO 130 I=K,N
DO 130 J=K,N
IF(ABS( A(I,J)-ARS(AMAX))) 130,120,120
120 AMAX= A(I,J)
IC=I
JC=J
130 CONTINUE
KI=ICOL(K)
ICOL(K)=ICOL(JC)
ICOL(JC)=KI
KI=IROW(K)
IROW(K)=IROW(JC)
IROW(JC)=KI
IF(AMAX) 160,140,160
140 WRITE (3,150)
150 FORMAT(' SOLUTION OF EXISTING MATRIX NOT POSSIBLE')
GO TO 330
160 DO 170 J=1,N
E=A(K,J)
A(K,J)=A(JC,J)
A(JC,J)=E
170 A(IC,J)=F
DO 180 I=1,N
E=A(I,K)
A(I,K)=A(I,JC)
A(I,JC)=E
180 A(I,JC)=F
DO 210 I=1,N
IF(I-K) 200,190,200
190 A(I,N)=1,
GO TO 210
200 A(I,N)=0,
210 CONTINUE
PVT=A(K,K)
DO 220 J=1,N
220 A(K,J)=A(K,J)/PVT
DO 250 I=1,N
IF(I-K) 230,250,230
230 AMULT=A(I,K)
DO 240 J=1,N
240 A(I,J)=A(I,J)-AMULT*A(K,J)
250 CONTINUE
DO 260 I=1,N

```

1 INV
2 INV
3 INV
4 INV
5 1INV
6 2INV
7 2INV
8 1INV
9 1INV
10 1INV
11 1INV
12 1INV
13 1INV
14 2INV
15 3INV
16 3INV
17 3INV
18 3INV
19 3INV
20 3INV
21 1INV
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35 2INV
36 2INV
37 2INV
38 2INV
39 2INV
40 2INV
41 2INV
42 2INV
43 2INV
44 2INV
45 1INV
46 2INV
47 2INV
48 2INV
49 2INV
50 2INV
51 3INV
52 3INV
53 2INV
54 2INV

0002

```

      01/27/70      INVP5
      260  A(I,K)=A(I,M)
      DO 290 I=1,N
      DO 270 L=1,N
      IF(I RJW(I)-L) 270,280,270
      270 CONTINUE
      280 DO 290 J=1,N
      290 0(L,J)=A(I,J)
      DO 320 J=1,N
      DO 300 L=1,N
      IF(ICLL(J)-L) 300,310,300
      300 CONTINUE
      310 DO 320 I=1,N
      320 A(I,L)=0(I,J)
      330 RETURN
      END

```

```

2INV 55
1INV 56
2INV 57
2INV 58
2INV 59
2INV 60
2INV 61
2INV 62
1INV 63
2INV 64
2INV 65
2INV 66
2INV 67
1NV 68
1NV 69

```

```

SUBROUTINE CINV (A,N,C,N)
C
C      C+100 = INVERSE OF A+100      I=SQRT(-1)
C
C      A ASSUMED NON SINGULAR
C
      REAL A(20,21),R(20,21),C(20,21),D(20,21),F(20,21)
      CALL INVS(C,N,C)
      CALL MPV(C,A,N,N,N,E)
      CALL MPV(A,F,N,N,N,C)
      DO 100 I=1,N
      DO 100 J=1,N
      100 C(I,J)=C(I,J)+R(I,J)
      CALL INVS(C,N,C)
      CALL MPV(E,D,N,N,N,C)
      DO 110 I=1,N
      DO 110 J=1,N
      110 D(I,J)=D(I,J)
      RETURN
      END
CIN 1
CIN 2
CIN 3
CIN 4
CIN 5
CIN 6
CIN 7
CIN 8
CIN 9
CIN 10
CIN 11
CIN 12
CIN 13
CIN 14
CIN 15
CIN 16
CIN 17
CIN 18
CIN 19
CIN 20

```

```

DISK OPERATING SYSTEM/360 FORTRAN 360M-FR-451 31
SUBROUTINE MNPV (A,B,M1,M2,M3,C)
C
C      C = A * B
C      A (M1 X M2)  B (M2 X M3)  C (M1 X M3)
C
      REAL A(20,21),B(20,21),C(20,21)
      DO 100 I=1,M1
      DO 100 J=1,M3
      C(I,J)=0.
      DO 100 K=1,M2
      C(I,J)=C(I,J)+A(I,K)*B(K,J)
      100 CONTINUE
      RETURN
      END

```

```

MNPV 1
MNPV 2
MNPV 3
MNPV 4
MNPV 5
MNPV 6
MNPV 7
MNPV 8
MNPV 9
MNPV 10
MNPV 11
MNPV 12
MNPV 13

```

```

      015K OPERATING SYSTEM/360  ENDTBAK  360N-EN-451 31

      FUNCTION GEN (FIN,A,N)
      GEN = FIN(TPANK) * A * FUN

      DIMENSION A(20,21),FIN(20)
      GEN=0
      DO 110 I=1,M
      GEN=0
      DO 100 J=1,N
      100 SUM=SUM+A(I,J)*FIN(J)
      110 GEN=GEN+SUM*FIN(I)
      RETURN
      END

```

```

      GEN 1
      GEN 2
      GEN 3
      GEN 4
      GEN 5
      GEN 6
      1GEN 7
      1GEN 8
      2GEN 9
      2GEN 10
      1GEN 11
      GEN 12
      GEN 13

```

```

SURJUTINF ITD (A,PHI,FRF,GM,W,J,N,ITN,PWAX)
REAL A(20,21),PHI(20,21),FRF(20),GM(20),W(20),DIM(20)
K=ND-J+1
AN=3.14159*(ND-1)
AN=3.14159*J/(ND-1)
DO 100 I=1,N
  ANG=AN*(I-1)
  ANGK=ANG*(I-1)
  PHI(I,J)=(SIN(ANG)+SIN(ANGK)+.01)/3.0
  ITN=0
  PWG=100.
110 DO 120 I=1,N
  DIM(I)=0.
  DO 120 L=1,N
  DIM(I)=DIM(I)+A(I,I)*PHI(L,J)
  PWAX=0.
  DO 130 I=1,N
  PWAX=MAX(PWAX,ABS(DIM(I)))
  DO 140 I=1,N
  PHI(I,J)=DIM(I)/PWAX
  IF(ABS(PWAX/PWG-1.0)-.000001) 160,160,150
150 ITN=ITN+1
  PWG=PWAX
  IF(ITN-100) 110,110,160
160 FRF(J)=1.0/SORT(PWAX)
  GM(J)=0.
  DO 170 I=1,N
  GM(I)=GM(J)+W(I)*PHI(I,J)*PHI(I,J)
170 GM(J)=GM(J)+W(I)*PHI(I,J)*PHI(I,J)
  RETURN
END

```

```

C
C SUBROUTINE WITFR (A,B,N,TOL,ITMAX,FUN,VAL,IT)
C
C   ITERATES ON A,B FOR DOMINANT EIGENFUNCTION (FUN)
C     AND EIGENVALUE (VAL).
C   N IS ORDER
C   TOL IS DECIMAL (.01 PERCENT) TOLERANCE ON VAL.
C   ITMAX IS MAX NO OF ITERATIONS.
C   IT IS NUMBER OF ITERATIONS PERFORMED.
C
C   A,B ARE SQUARE OF ORDER N (DIMENSIONED (20,21)).
C
      JSFS MNPY (A,B,M1,M2,M3,C)
      REAL A(20,21),B(20,21),C(20,21),NUM(20),FUN(20)
      CALL MNPY (A,B,M,N,M,C)
      VAL=100.
      IT=1
      DO 100 I=1,N
        FUN(I)=1.0
        110 CALL MNPY (C,FUN,M,N,I,NUM)
          VAL=DUM(I)
          DO 130 I=2,N
            IF(ABS(VAL-I-ARS(NUM(I))) 120,130,130)
              120 VAL=DUM(I)
              130 CONTINUE
          DO 140 I=1,N
            FUN(I)=DUM(I)/VAL
            IF(ABS(VAL/VAL(I)-1.0)-TOL) 160,160,150
              150 IT=IT+1
          VAL=VAL
          IF(IT-ITMAX) 110,110,160
        160 RETURN
      END

```

```

SUBROUTINE REF (A,B,ND,NR1,NM1)
  INTEGER NM1(10)
  REAL A(20,21),B(20,21)
  IF(NR1) 160,160,100
100 IR=0
  ICR=1
  DO 150 I=1,ND
    IF(1-J4IT(I,IR)) 120,110,120
  110 IOW=MAXO(NR1,IOW+1)
    GO TO 150
  120 IR=IR+1
  130 IC=0
  140 IC=1
  DO 150 J=1,ND
    IF(1-J4IT(I,IC)) 140,130,140
  130 IOC=MAXO(NR1,IOCI+1)
    GO TO 150
  140 IC=IC+1
    A(I,IC)=A(I,J)
    B(I,IC)=B(I,J)
  150 CONTINUE
  160 RETURN
      END
REF 1
REF 2
REF 3
REF 4
REF 5
REF 6
REF 7
REF 8
REF 9
REF 10
REF 11
REF 12
REF 13
REF 14
REF 15
REF 16
REF 17
REF 18
REF 19
REF 20
REF 21
REF 22
REF 23

```

```

SUBROUTINE FPR (A,R,PCT,PCTR,PMF,N,IX)
C
C   EACH ELEMENT OF A COMPLEX MATRIX, A + I*P, IS MODIFIED TO
C   INCLUDE A SMALL PHASE ERROR, PMF (DEG). A BIAS ERROR,
C   PCTR (RATIO) ON AMPLITUDE, AND A UNIFORM RANDOM ERROR
C   HAVING A +/- MAXIMUM OF PCT (RATIO) ON AMPLITUDE.
C   THE PHASE ERROR IS ALSO RANDOMLY DISTRIBUTED
C
C   THE RESULTING MATRIX IS SYMMETRIZED
C
C   USES RANDU
C
C   DIMENSION A(20,21),R(20,21)
C   IF(PCT ) 120,100,120
C   100 IF(PCTR) 120,110,120
C   110 IF(PMF) 120,150,120
C   120 P=PMF/57.296
C   DO 130 I=1,N
C   DO 130 J=1,N
C   CALL RANDU (IX,IV,VFL)
C   IX=IV
C   E=2.0*P*(VFL-0.5)
C   A(I,J)=A(I,J)-E*P(I,J)
C   B(I,J)=B(I,J)+E*P(I,J)
C   CALL RANDU (IX,IV,VFL)
C   IX=IV
C   A(I,J)=A(I,J)*(1.0+2.0*PCT*(VFL-0.5)+PCTR)
C   CALL RANDU (IX,IV,VFL)
C   IX=IV
C   B(I,J)=B(I,J)*(1.0+2.0*PCT*(VFL-0.5)+PCTR)
C   NI=N-1
C   DO 140 I=1,NI
C   JI=I+1
C   DO 140 J=JI,N
C   A(I,J)=(A(I,J)+A(J,I))/2.0
C   B(I,J)=(B(I,J)+B(J,I))/2.0
C   R(I,J)=R(I,J)
C   140 A(J,I)=A(I,J)
C   150 RETURN
C   END

```

```

SUBROUTINE WOUT (A,N)
  REAL A(20,21)
  IO=MINO(N,10)
  WRITE (3,100) (I,I=1,IO)
100 FORMAT (T5,10I12)
  WRITE (3,100)
  DO 110 I=1,N
110 WRITE (3,120) I,(A(I,J),J=1,IO)
120 FORMAT (I5,5X,1P10F12.4)
  IF (IO=N) 130,150,150
130 WRITE (3,100)
  WRITE (3,100) (I,I=11,N)
  WRITE (3,100)
  DO 140 I=1,N
140 WRITE (3,120) I,(A(I,J),J=11,N)
150 RETURN
  END

```

```

WUT 1
WUT 2
WUT 3
WUT 4
WUT 5
WUT 6
WUT 7
WUT 8
WUT 9
WUT 10
WUT 11
WUT 12
WUT 13
WUT 14
WUT 15
WUT 16
WUT 17

```

```

SUBROUTINE YOUT (NM,A,NINC,MD,NAMP)
  REAL DM(100),A(100,20)
  J1=1
  ID=MINO(MD,10)
  IL=MINO(NINC,50)
  I1=1
  100 WRITE (3,120) (I,I=J1,10)
  120 FORMAT (15,'HEX72',16,9I12)
  WRITE (3,130)
  130 FORMAT ( )
  IF(NAMP) 140,140,170
  140 DO 150 I=1,IL
  150 WRITE (3,160) DM(I),(A(I,J),J=J1,10)
  160 FORMAT (1X,F9.3,1P10F12.4)
  GO TO 200
  170 DO 180 I=1,IL
  180 WRITE (3,190) DM(I),(A(I,J),J=J1,10)
  190 FORMAT (1X,F9.3,10F12.2)
  200 IF(IL-NINC) 210,230,230
  210 WRITE (3,220)
  220 FORMAT ('1'//)
  I1=51
  IL=NINC
  GO TO 110
  230 IF(ID-ND) 240,250,250
  240 J1=11
  ID=ND
  WRITE (3,190)
  GO TO 100
  250 RETURN
  END

```

YUT 1
YUT 2
YUT 3
YUT 4
YUT 5
YUT 6
YUT 7
YUT 8
YUT 9
YUT 10
YUT 11
YUT 12
YUT 13
YUT 14
YUT 15
YUT 16
YUT 17
YUT 18
YUT 19
YUT 20
YUT 21
YUT 22
YUT 23
YUT 24
YUT 25
YUT 26
YUT 27
YUT 28
YUT 29
YUT 30
YUT 31

```

DISK OPERATING SYSTEM/360 FORTRAN 360M-F0-451 31

SUBROUTINE RANDU (IX,IY,YFL)
  THIS SUBROUTINE IS FROM SSP VERS. II
  IY=IX*65539
  IF(IY) 100,110,110
100 IY=IY+2147483647+1
110 YFL=IY
  YFL=YFL*.4656613F-9
  RETURN
END

RND 1
RND 2
RND 3
RND 4
RND 5
RND 6
RND 7
RND 8
RND 9

```



```

SUBROUTINE AMP (MMH,A,B,NINC,MR)
C
C      CONVERTS A + 10R IN VELOCITY UNITS TO
C      AMP (IN A) IN G'S AND PHASE (IN B) IN DEG
C
      DIMENSION MMH(100),A(100,20),B(100,20)
      DO 210 I=1,NINC
      MM=MMH(I)*0.01626
      DO 210 J=1,MR
      R=A(I,J)
      C=B(I,J)
      A(I,J)=SQRT(R**2+C**2)*0.707
      IF(C) 140,100,140
      100 IF(R) 110,120,130
      110 R(I,J)=270.
      GO TO 210
      120 R(I,J)=0
      GO TO 210
      130 R(I,J)=90.
      GO TO 210
      140 P=ATAN(A**5/C**5)*57.2358
      IF(C) 150,150,180
      150 IF(R) 160,160,170
      160 R(I,J)=180.+P
      GO TO 210
      170 R(I,J)=180.-P
      GO TO 210
      180 IF(R) 190,190,200
      190 R(I,J)=360.-P
      GO TO 210
      200 R(I,J)=P
      210 CONTINUE
      RETURN
      END

```

COMPLETE IMPEDANCE MODEL

RPCT RANC, 91AS 2DEC PWE FWE0 SWEEP 1-3CMZ

CASH SA

U U

DIALOG NAL MASSES

0.02900 7.033700 0.054000 5.17300 3.12900 0.52700 0.17000 0.11500 0.23000 0.29000

K MATRIX

1	2	3	4	5	6	7	8	9	10
2.7520E 04	-6.3274E 04	7.0423E 04	-5.3736E 04	1.6278E 04	-3.9210E 03	8.4576E 02	-1.4303E 02	7.4610E 00	0.0
-6.3274E 04	1.9927E 05	-3.7423E 05	3.1472E 05	-5.5227E 04	2.2893E 04	-4.5040E 03	8.7054E 02	-6.4040E 01	4.9400E 00
7.0423E 04	-3.7423E 05	2.22257E 04	-3.07125E 04	2.2320E 06	-5.3302E 05	1.1505E 05	-2.1590E 04	2.2222E 03	-2.0003E 02
-5.3736E 04	3.1472E 05	-3.7125E 04	4.5290E 04	-7.5567E 06	3.0712E 06	-6.0476E 05	1.2404E 05	-1.3203E 04	1.7047E 03
1.6278E 04	-5.5227E 04	2.22320E 06	-7.5567E 06	1.0517E 07	-7.0792E 06	2.4175E 06	-4.5305E 05	4.8519E 04	-6.4040E 03
-3.9210E 03	2.2893E 04	-5.3302E 05	3.0712E 06	-7.0792E 06	8.1123E 06	-4.5037E 06	1.4478E 06	-1.5451E 05	2.0705E 04
8.4576E 02	-4.5040E 03	1.1505E 05	-6.0476E 05	2.4175E 06	-4.5037E 06	5.1810E 06	-2.5490E 06	4.7122E 05	-6.2907E 04
-1.4303E 02	7.4610E 00	-6.4040E 01	4.9400E 00	-4.5305E 05	1.4478E 06	-2.5490E 06	1.9854E 06	-6.5606E 05	1.2203E 05
7.0423E 04	-3.7423E 05	2.22257E 04	-3.07125E 04	2.2320E 06	-5.3302E 05	1.1505E 05	-2.1590E 04	2.2222E 03	-2.0003E 02
0.0	4.9400E 00	-6.4040E 01	4.9400E 00	-4.5305E 05	1.4478E 06	-2.5490E 06	1.9854E 06	-6.5606E 05	1.2203E 05

SPRINGS TO GROUND

-2.0004E-01 4.0398E 00 1.0000E 04 -3.4300E 01 5.9360E 02 1.4600E 02 4.4000E 01 6.3000E 01 1.0001E 04 -3.0250E 00

DAMPING COEFFICIENT 0.0500

C MATRIX

	1	2	3	4	5	6	7	8	9	10
1	4.3354E-04	2.7814E-04	1.5065E-04	1.0947E-04	7.2175E-05	3.7929E-05	1.0747E-06	-2.0284E-05	-5.5310E-05	-8.8184E-05
2	2.7814E-04	2.0780E-04	1.2763E-04	9.7496E-05	6.9612E-05	4.3502E-05	1.5371E-05	-2.7194E-06	-3.2340E-05	-6.0701E-05
3	1.5065E-04	1.2763E-04	5.6888E-05	8.1523E-05	6.6193E-05	5.0931E-05	3.5762E-05	2.0697E-05	-1.7152E-06	-2.4059E-05
4	1.0948E-04	9.7496E-05	8.1523E-05	7.3312E-05	6.4301E-05	5.4504E-05	4.3859E-05	3.2347E-05	1.3600E-05	-5.6734E-06
5	7.2175E-05	6.9612E-05	6.6193E-05	6.4301E-05	6.1605E-05	5.7460E-05	5.1522E-05	4.2744E-05	2.8937E-05	1.3004E-05
6	3.7929E-05	4.3502E-05	5.0931E-05	5.4504E-05	5.7460E-05	5.9112E-05	5.8268E-05	5.4614E-05	4.4314E-05	3.2295E-05
7	7.0740E-06	1.9370E-05	3.5762E-05	4.3859E-05	5.1521E-05	5.8268E-05	6.3002E-05	6.4302E-05	5.9755E-05	5.2808E-05
8	-2.0285E-05	-2.7202E-06	2.0696E-05	3.2346E-05	4.2746E-05	5.4613E-05	6.4302E-05	7.1640E-05	7.5271E-05	7.5979E-05
9	-5.5311E-05	-3.2341E-05	-1.7163E-06	1.3555E-05	2.8936E-05	4.4314E-05	5.5755E-05	7.5271E-05	5.8690E-05	1.2217E-04
10	-8.8186E-05	-6.0703E-05	-2.4051E-05	-5.6749E-06	1.3003E-05	3.2293E-05	5.2807E-05	7.5978E-05	1.2217E-04	1.9274E-04

NORMAL MODES FROM C MATRIX

	1	2	3	4	5	6	7	8	9	10
1	1.000E 00	-1.000E CC	2.9638E-01	1.000E CC	7.8190E-01	-1.000E 00	-1.000E CC	-2.0045E-01	-1.9126E-02	1.6346E-03
2	7.8997E-01	-4.1637E-01	7.5865E-02	9.6984E-02	4.6709E-03	8.7976E-03	1.3125E-02	4.1565E-03	1.1157E-03	-6.4476E-04
3	5.4244E-01	2.1464E-01	-7.7085E-02	-3.0484E-01	-1.0901E-01	-3.1828E-03	-7.7162E-02	-4.5835E-02	-8.2445E-03	1.5074E-03
4	4.4173E-01	4.2319E-01	-5.4466E-02	-6.8021E-03	1.0993E-01	-1.3610E-02	1.4029E-01	1.6408E-01	4.2058E-02	-7.8194E-03
5	3.4522E-01	5.9674E-01	-5.2935E-03	3.2489E-01	1.2907E-01	1.4548E-02	-3.6647E-02	-2.3826E-01	-1.1816E-01	3.4517E-02
6	2.5152E-01	7.3559E-01	6.6470E-02	5.9146E-01	-1.1143E-01	3.5207E-02	-3.5496E-01	7.9316E-02	5.1355E-01	-3.2571E-01
7	1.6084E-01	8.3347E-01	1.6454E-01	7.2581E-01	-5.4104E-01	2.2402E-02	-3.5917E-01	8.6742E-01	5.9739E-02	1.0000E 00
8	7.3244E-02	8.8896E-01	2.9525E-01	6.7867E-01	-9.7550E-01	-2.2184E-02	-5.3374E-02	1.0000E 00	-1.0000E 00	-7.4038E-01
9	-5.2971E-02	9.0465E-01	5.8022E-01	1.2968E-01	-1.0000E CC	-7.9747E-02	5.7619E-01	-6.3145E-01	2.3721E-01	8.4575E-02
10	-1.7776E-01	9.1461E-01	1.000E CC	-9.9202E-01	5.3848E-01	2.8276E-02	-1.7435E-01	1.3586E-01	-3.5621E-02	-1.0409E-02

FREQUENCIES - HERTZ

5.184330 9.212831 20.796521 41.154724 101.363522 154.898071 190.119705 309.362305 562.245605 1145.063965

GENERALIZED MASS

7.963986 4.585380 0.494541 1.662250 0.705210 0.033805 0.350658 0.685616 0.325729 0.256950

GAPPA

	1	2	3	4	5	6	7	8	9	10
1	4.9977E-03	-9.4978E-03	1.5453E-02	1.4553E-02	3.1812E-02	-4.1159E-01	-3.9939E-02	-6.8591E-03	-1.5636E-03	3.7519E-04
2	1.0000E 00	-1.0000E 00	1.0000E 00	3.5689E-01	4.8080E-02	9.1747E-01	1.3181E-01	3.2704E-02	8.5656E-03	-2.1875E-03
3	6.1283E-01	4.5922E-01	-9.0570E-01	-1.0000E 00	-1.0000E 00	-2.9458E-01	-6.5483E-01	-3.8472E-01	-1.4842E-01	4.6555E-02
4	3.9328E-01	7.1820E-01	-5.0755E-01	1.8079E-02	7.9848E-01	-1.0000E 00	1.0000E 00	1.0000E 00	5.8496E-01	-2.3599E-01
5	1.8803E-01	6.1011E-01	-2.9355E-02	5.1033E-01	5.6709E-01	6.4623E-01	-1.5735E-01	-8.7825E-01	-1.0000E 00	6.1662E-01
6	2.2066E-02	1.2787E-01	6.2760E-02	1.5622E-01	-8.2610E-02	2.6368E-01	-2.4372E-01	4.8896E-02	7.3148E-01	-1.0000E 00
7	4.6601E-03	4.5808E-02	5.0466E-02	6.1917E-02	-1.2906E-01	5.3765E-02	-9.3152E-02	1.7394E-01	2.6046E-02	9.8828E-01
8	1.7230E-03	3.4820E-02	6.3086E-02	4.0532E-02	-1.6346E-01	-3.7358E-02	-1.5397E-02	1.4009E-01	-3.2174E-01	-5.1297E-01
9	-2.2847E-03	7.0443E-02	2.4815E-01	1.5475E-02	-3.3393E-01	-2.6943E-01	1.8886E-01	-1.7702E-01	1.5276E-01	1.1775E-01
10	-9.1234E-03	8.9218E-02	5.3546E-01	-1.4830E-01	2.2514E-01	1.1959E-01	-7.1558E-02	4.9115E-02	-3.1607E-02	-1.9283E-02

NORMAL PCCES FPCP K MATRIX

	1	2	3	4	5	6	7	8	9	10
1	2.2385E-03	1.9922E-02	-2.0080E-01	-1.0000E-01	-1.0000E-01	7.8196E-01	1.0000E-00	2.9644E-01	-1.0000E-00	1.0000E-00
2	-5.1018E-05	-4.3130E-04	3.7839E-03	1.3045E-02	8.8106E-03	4.6706E-03	9.6972E-02	7.5858E-02	-4.1654E-01	7.9738E-01
3	1.2207E-03	8.3899E-03	-4.9935E-02	-7.7155E-02	-3.1736E-03	-1.0900E-01	-3.0486E-01	-7.7094E-02	2.1465E-01	5.4766E-01
4	-7.7921E-03	-4.1781E-02	1.6395E-01	1.4025E-01	-1.3606E-02	1.0995E-01	-6.8056E-03	-5.4477E-02	4.2339E-01	4.4555E-01
5	3.3870E-02	1.1827E-01	-2.3841E-01	-3.6691E-02	1.4557E-02	1.2907E-01	3.2488E-01	-5.3304E-03	5.5665E-01	3.4536E-01
6	-3.2633E-01	-5.1393E-01	7.9504E-02	-3.3487E-01	3.5212E-02	-1.1143E-01	5.9159E-01	6.6611E-02	7.3742E-01	2.4509E-01
7	1.0000E-00	-5.5800E-02	8.6750E-01	-3.9905E-01	2.2402E-02	-5.4100E-01	7.2552E-01	1.8475E-01	8.2601E-01	1.4358E-01
8	-7.4157E-01	1.0000E-00	1.0000E-00	-9.3352E-02	-2.2193E-02	-9.7950E-01	6.7906E-01	2.5532E-01	8.9923E-01	1.1507E-01
9	8.5124E-02	-2.3749E-01	-6.3157E-01	5.7599E-01	-7.9764E-02	-1.0000E-00	1.2965E-01	5.8018E-01	5.0354E-01	-5.7385E-02
10	-1.1134E-02	3.9247E-02	1.3996E-01	-1.7471E-01	2.8278E-02	5.3847E-01	-9.9206E-01	1.0000E-00	9.1515E-01	-1.7856E-01

9 11 12 31 14 8 5 8 5

FREQUENCIES - HERTZ

1145.089355 562.264893 305.340576 190.118927 154.895477 101.363998 41.154694 20.746600 9.212446 3.184110

GENERALIZED MASS

0.297238 0.325892 0.685677 0.350475 0.033807 0.705208 1.662407 0.454544 4.588619 8.113606

DRIVING POINT RESPONSE - AMP IN G'S

HERTZ	1	2	3	4	5	6	7	8	9	10
40.000	2.5499E-02	2.7927E-04	1.8659E-03	1.9865E-04	2.0419E-03	7.4862E-03	1.1418E-02	9.7106E-03	1.9460E-03	1.6312E-02
50.000	4.4507E-03	4.3153E-04	6.2334E-04	1.7450E-04	7.6948E-04	1.9784E-03	2.6520E-03	2.2158E-03	1.4140E-03	1.2401E-02
60.000	1.1217E-02	4.1684E-04	4.4909E-04	1.6048E-04	5.8844E-04	1.4153E-03	1.4672E-03	3.0675E-04	2.6047E-04	9.2551E-03
70.000	1.9524E-02	3.7278E-04	3.7620E-04	1.2919E-04	4.3339E-04	1.0067E-03	5.0147E-04	1.0622E-03	1.5710E-03	8.6434E-03
80.000	3.2083E-02	3.8601E-04	2.8693E-04	7.5975E-05	3.5199E-04	8.1398E-04	7.0463E-04	4.8361E-03	4.5456E-03	7.0765E-03
90.000	5.2499E-02	3.8719E-04	1.9237E-04	5.5031E-05	2.3610E-04	5.7275E-04	3.1818E-03	1.2952E-02	1.3407E-02	4.7332E-03
100.000	8.8177E-02	3.4887E-04	6.9368E-04	7.6730E-04	1.0004E-03	7.8461E-04	3.1818E-03	6.2733E-02	6.3603E-02	1.7618E-02
110.000	6.8050E-02	3.6815E-04	6.0303E-04	7.6856E-04	8.5508E-04	7.7501E-04	8.3137E-03	2.4561E-02	2.7180E-02	1.6283E-02
120.000	1.1019E-01	3.5194E-04	4.7001E-04	2.2216E-04	6.4099E-04	3.7503E-04	4.1104E-03	1.4105E-02	1.3547E-02	1.1541E-02
130.000	1.9483E-01	3.6803E-04	4.3685E-04	1.3248E-04	5.2739E-04	1.3776E-04	2.7118E-03	9.8677E-03	9.2778E-03	1.1259E-02
140.000	3.5029E-01	3.5275E-04	3.5174E-04	1.1557E-05	4.6982E-04	5.6064E-04	1.7229E-03	7.6442E-03	5.0721E-03	1.0488E-02
150.000	9.4939E-01	3.4056E-04	3.3252E-04	2.0121E-04	3.6980E-04	1.7384E-03	7.5128E-04	6.5450E-03	4.8031E-03	9.4212E-03
160.000	1.0593E 00	4.3664E-04	2.9818E-04	1.7451E-04	6.1994E-04	1.1627E-03	1.0519E-03	5.5694E-03	9.0480E-03	5.3426E-03
170.000	4.5121E-01	3.9151E-04	2.4708E-04	3.3989E-04	5.0157E-04	2.2862E-03	3.0513E-03	4.6311E-03	3.5277E-03	8.6774E-03
180.000	2.6680E-01	3.9294E-04	1.6684E-04	9.7030E-04	3.9136E-04	6.1740E-03	8.5293E-03	3.8278E-03	1.2976E-02	8.7266E-03
190.000	3.1986E-01	3.8425E-04	1.0167E-03	3.0853E-03	4.7558E-04	1.7856E-02	2.4054E-02	3.8495E-03	5.2880E-02	1.1034E-02
200.000	2.9830E-01	4.0146E-04	8.4867E-04	1.6893E-03	4.6212E-04	9.2827E-03	1.3016E-02	3.5077E-03	3.4515E-02	1.2565E-02
210.000	2.3915E-01	4.0156E-04	6.7919E-04	1.0128E-03	3.8513E-04	5.4147E-03	6.8770E-03	2.2905E-03	2.1488E-02	1.0758E-02
220.000	1.9773E-01	3.7869E-04	5.2576E-04	7.3496E-04	3.3232E-04	4.2837E-03	4.8900E-03	1.2755E-03	1.7851E-02	1.0168E-02
230.000	1.7647E-01	3.6294E-04	5.4413E-04	6.4043E-04	2.9208E-04	3.5369E-03	2.6648E-03	7.9570E-04	1.5379E-02	9.8859E-03
240.000	1.6130E-01	3.9673E-04	5.2085E-04	5.5337E-04	2.0090E-04	2.9406E-03	1.6204E-03	1.7501E-03	1.1981E-02	1.0023E-02
250.000	1.6311E-01	3.9283E-04	4.8043E-04	4.5002E-04	1.3402E-04	2.7336E-03	1.0913E-03	3.6711E-03	1.0816E-02	9.1747E-03
260.000	1.4985E-01	4.0422E-04	4.9244E-04	3.6606E-04	9.0910E-05	2.3055E-03	2.3722E-03	6.1765E-03	5.8310E-03	1.0019E-02
270.000	1.3414E-01	3.7315E-04	4.7337E-04	2.5336E-04	2.4171E-04	2.2870E-03	5.0596E-03	8.7740E-03	8.2549E-03	9.2435E-03
280.000	1.3524E-01	3.9410E-04	4.4621E-04	1.6597E-04	5.0217E-04	1.9764E-03	8.5757E-03	1.4867E-02	6.1459E-03	9.4173E-03
290.000	1.4256E-01	3.8778E-04	4.0275E-04	3.3144E-04	1.0213E-04	1.8159E-03	1.5687E-02	2.6274E-02	4.5149E-03	9.2536E-03
300.000	1.2905E-01	3.8403E-04	3.7011E-04	9.5365E-04	2.5135E-03	1.4442E-03	3.3710E-02	4.6235E-02	1.2690E-02	8.3545E-03
310.000	1.3569E-01	3.7757E-04	5.3460E-04	2.3723E-03	4.8537E-03	1.6325E-03	6.4571E-02	6.5231E-02	3.4537E-02	1.0525E-02
320.000	1.2046E-01	3.7352E-04	5.4029E-04	1.8983E-03	3.1899E-03	1.6438E-03	4.2259E-02	5.2437E-02	3.0039E-02	1.1154E-02
330.000	1.1678E-01	3.9411E-04	5.1709E-04	1.3747E-03	2.2301E-03	1.3529E-03	2.6875E-02	3.3761E-02	2.4779E-02	1.0669E-02
340.000	1.2872E-01	3.8014E-04	4.9130E-04	1.1621E-03	1.7547E-03	1.1420E-03	2.0180E-02	2.3533E-02	2.1159E-02	9.7547E-03
350.000	1.2618E-01	3.7208E-04	4.8987E-04	1.0089E-03	1.5391E-03	1.0110E-03	1.4289E-02	1.7747E-02	1.7302E-02	9.8950E-03
360.000	1.1631E-01	4.0451E-04	4.5248E-04	9.4441E-04	1.3522E-03	8.2849E-04	1.5059E-02	1.5647E-02	1.7569E-02	1.0266E-02
370.000	1.1285E-01	3.8533E-04	4.9641E-04	8.0402E-04	1.1480E-03	6.4064E-04	1.3684E-02	1.2015E-02	1.0981E-02	9.3533E-03
380.000	1.1200E-01	4.0906E-04	4.6295E-04	7.3580E-04	1.0610E-03	4.7213E-04	1.2366E-02	1.0988E-02	1.4552E-02	9.3081E-03
390.000	1.1789E-01	3.6062E-04	4.8602E-04	7.3984E-04	1.0636E-03	3.0940E-04	1.1260E-02	8.3548E-03	1.5661E-02	9.8320E-03
400.000	1.0710E-01	3.9087E-04	4.5400E-04	6.9877E-04	9.4490E-04	2.7630E-04	1.0047E-02	6.8640E-03	1.1763E-02	9.0124E-03

DRIVING POINT RESPONSE - PHASE IN DEGREES

HEIGHT	1	2	3	4	5	6	7	8	9	10
40.000	35.37	149.70	43.75	174.08	46.10	46.65	45.45	43.67	169.71	64.31
50.000	14.70	180.72	175.20	179.05	176.88	174.83	170.82	171.81	176.34	177.88
60.000	6.15	181.06	176.96	174.44	179.76	178.45	174.54	171.64	175.74	177.26
70.000	6.22	178.42	175.80	177.44	176.76	176.25	172.08	172.30	173.04	180.32
80.000	3.76	180.38	177.20	169.23	177.77	176.90	173.75	172.02	177.33	177.33
90.000	5.47	181.37	167.26	48.70	167.23	171.57	19.62	15.65	12.78	168.51
100.000	29.65	177.65	87.76	69.30	43.59	103.94	65.51	62.39	63.29	87.87
110.000	11.25	179.33	165.38	166.22	172.34	168.09	160.53	165.75	164.73	172.84
120.000	7.30	177.76	175.60	170.35	177.71	164.30	172.38	171.31	171.74	176.68
130.000	10.01	178.23	176.01	167.00	175.81	86.51	172.61	176.17	171.73	177.58
140.000	13.64	178.78	177.73	175.46	175.46	25.37	164.20	176.57	162.47	178.10
150.000	35.07	172.25	178.20	48.16	157.06	37.05	93.36	173.61	52.97	177.62
160.000	146.63	171.98	175.37	55.81	166.92	79.05	66.35	172.22	141.00	173.56
170.000	166.51	177.30	168.92	30.13	172.51	24.64	28.31	173.42	104.90	175.60
180.000	163.25	178.36	112.12	36.75	170.49	26.89	32.10	165.24	46.60	175.12
190.000	143.77	173.94	114.02	52.35	152.25	92.84	52.55	152.54	57.77	157.26
200.000	171.26	177.42	167.85	159.32	173.00	156.13	158.24	169.34	159.97	174.23
210.000	175.00	180.63	174.00	169.25	176.54	168.15	165.78	165.21	168.67	176.64
220.000	174.45	181.83	177.25	173.65	172.74	174.52	161.42	151.15	175.42	177.10
230.000	177.71	178.21	177.32	175.28	170.79	174.74	163.28	60.11	174.81	178.89
240.000	177.63	180.72	177.59	172.88	164.61	173.13	146.05	22.86	176.05	179.01
250.000	177.54	178.10	178.50	173.15	147.56	174.41	81.16	21.27	174.89	180.81
260.000	180.01	180.21	180.47	171.15	88.67	176.32	36.92	17.43	173.18	181.13
270.000	180.26	179.07	178.83	160.55	41.43	176.54	24.76	15.15	171.42	180.11
280.000	177.83	180.93	175.41	125.72	31.21	176.94	24.86	20.05	160.76	178.45
290.000	179.76	180.63	173.74	64.49	31.57	173.48	28.89	24.33	114.32	179.35
300.000	180.26	180.63	168.56	57.27	51.57	167.62	46.87	44.90	77.79	177.70
310.000	176.87	177.83	156.16	108.58	99.46	155.87	56.67	57.61	115.41	170.08
320.000	180.01	180.24	171.74	155.62	149.05	168.10	149.20	140.95	157.63	178.30
330.000	179.36	181.10	177.57	165.51	163.85	172.11	165.12	162.01	167.58	179.61
340.000	179.85	180.51	176.23	173.38	168.96	172.55	168.91	162.54	172.71	179.05
350.000	179.06	180.28	177.34	176.44	173.53	170.47	171.80	168.15	175.10	180.93
360.000	179.15	180.37	175.58	175.33	174.12	169.05	172.06	172.08	176.52	180.26
370.000	178.20	181.24	181.15	174.55	174.00	162.36	175.16	168.40	177.46	180.50
380.000	179.88	178.18	180.01	177.24	177.67	153.98	177.04	168.87	176.77	180.22
390.000	181.01	180.13	179.56	176.06	175.34	124.18	175.85	167.60	177.33	180.01
400.000	179.02	181.15	180.85	179.60	177.73	74.74	176.59	167.10	178.10	180.70

TRANSFER RESCENSE - AMP IN C'S - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
40.000	6.3786E-03	6.9507E-04	1.8659E-03	1.4757E-04	2.1603E-03	3.7640E-03	4.8154E-03	4.2333E-03	6.3744E-04	6.8751E-03
50.000	1.6307E-03	9.9044E-05	1.2334E-04	1.9607E-04	3.4698E-04	8.3235E-04	1.1956E-03	1.2193E-03	5.1030E-04	1.2652E-03
60.000	1.0086E-03	3.2254E-05	4.4990E-04	2.0889E-04	1.4191E-04	4.8828E-04	7.5124E-04	9.1111E-04	5.0326E-04	4.4767E-04
70.000	7.1704E-04	1.3917E-05	3.7650E-04	2.2172E-04	6.5260E-05	4.2655E-04	7.4956E-04	9.4956E-04	6.1009E-04	5.6473E-04
80.000	4.6646E-04	2.5240E-06	2.8693E-04	2.6752E-04	1.6027E-05	4.2245E-04	8.3918E-04	1.1594E-03	9.0975E-04	6.9444E-04
90.000	2.9710E-04	9.3436E-06	1.9237E-04	3.4450E-04	1.2791E-04	4.5822E-04	1.3308E-03	1.5685E-03	1.7035E-03	1.0341E-03
100.000	5.2449E-03	3.7995E-05	6.9388E-04	9.4628E-04	8.5290E-04	1.0418E-03	4.2253E-03	7.7208E-03	7.3840E-03	4.2178E-03
110.000	3.2151E-03	5.0241E-06	6.0303E-04	1.1254E-04	4.1039E-04	9.5626E-05	1.5833E-03	2.3375E-03	2.7634E-03	1.2643E-03
120.000	2.7824E-03	7.8532E-06	6.7347E-05	6.8347E-05	2.6059E-04	1.8434E-04	3.2975E-04	1.0503E-03	1.4887E-03	6.5154E-04
130.000	2.5908E-03	1.3624E-05	4.3685E-04	1.2196E-04	1.5285E-04	2.5411E-04	1.0150E-04	6.5810E-03	1.1437E-03	4.6576E-04
140.000	3.1454E-03	2.2782E-05	3.5174E-04	1.6258E-04	1.7376E-04	3.0050E-04	8.2026E-05	4.7775E-04	9.5624E-04	3.6374E-04
150.000	5.1138E-03	4.4858E-05	3.3252E-04	1.9313E-04	1.5933E-04	3.5886E-04	1.9035E-04	3.2505E-04	9.4152E-04	3.3747E-04
160.000	2.1517E-03	2.0688E-05	2.9818E-04	3.4158E-04	2.3234E-04	7.1148E-04	5.3450E-04	3.2244E-04	1.5934E-03	5.1384E-04
170.000	2.1510E-03	2.6655E-05	2.4708E-04	4.8826E-04	2.4567E-04	9.4692E-04	8.8311E-03	2.0014E-04	1.8575E-03	5.5561E-04
180.000	4.8911E-03	6.1422E-05	1.6684E-04	7.7896E-04	3.0224E-04	1.7723E-03	1.8683E-03	2.1783E-04	3.1089E-03	9.8780E-04
190.000	1.2749E-02	1.5111E-04	1.0167E-03	1.6815E-03	4.5570E-04	4.0788E-03	5.0355E-03	1.2046E-03	6.9950E-03	2.1455E-03
200.000	5.3102E-03	7.0405E-05	8.4867E-04	6.8658E-04	5.9849E-05	1.7382E-03	2.3441E-03	9.0223E-04	3.0752E-03	8.9436E-04
210.000	2.8317E-03	3.5793E-05	6.7919E-05	3.3086E-04	4.2446E-05	1.0235E-03	1.5210E-03	6.5766E-04	1.6204E-03	4.5873E-04
220.000	1.8042E-03	2.5447E-05	5.2576E-04	1.8717E-04	7.1538E-05	6.6819E-05	1.1094E-03	6.0401E-04	1.1215E-03	2.9503E-04
230.000	1.3491E-03	2.0043E-05	5.4413E-04	1.2085E-04	9.2578E-05	5.4222E-04	9.1347E-04	5.8620E-04	9.1979E-04	2.5216E-04
240.000	9.8607E-04	1.5531E-05	5.2089E-04	7.1075E-05	1.1715E-04	4.1820E-04	8.7675E-04	6.0464E-04	7.7909E-04	2.0475E-04
250.000	7.9551E-04	1.2312E-05	4.8045E-04	3.3366E-05	1.3850E-04	3.7994E-04	8.9225E-04	6.4324E-04	7.4427E-04	1.8929E-04
260.000	6.4012E-04	9.4958E-06	4.9244E-04	2.6558E-05	1.7046E-04	3.3281E-04	9.0249E-04	7.0663E-04	6.9862E-04	1.7373E-04
270.000	5.1105E-04	7.7354E-06	4.7337E-04	5.8181E-05	2.0286E-04	3.0601E-04	9.5259E-04	9.0222E-04	7.4648E-04	1.8973E-04
280.000	3.7940E-04	5.7828E-06	4.621E-04	1.1336E-04	2.5489E-04	3.1893E-04	1.1970E-03	1.1489E-03	8.6746E-04	2.0302E-04
290.000	2.5513E-04	3.8662E-06	4.0275E-04	1.9657E-04	3.6501E-04	3.1647E-04	1.6301E-03	1.5114E-03	1.1685E-03	2.6552E-04
300.000	3.6363E-04	6.4708E-06	3.7011E-04	3.7593E-04	6.5209E-04	3.8316E-04	2.4885E-03	2.6563E-03	1.7930E-03	4.0532E-04
310.000	1.0068E-03	1.7706E-05	5.3460E-04	6.3852E-04	9.7244E-04	3.6399E-04	3.4138E-03	3.5645E-03	2.5744E-03	5.8241E-04
320.000	8.0983E-04	1.4836E-05	5.4029E-04	4.1121E-04	5.7184E-04	1.1284E-04	1.5728E-03	2.2671E-03	1.4180E-03	3.0508E-04
330.000	5.9460E-04	1.0842E-05	5.1705E-04	2.6772E-04	3.2254E-04	6.3766E-05	1.0989E-03	1.3767E-03	8.0944E-04	1.6746E-04
340.000	5.0226E-04	8.9735E-06	4.9140E-04	1.8537E-04	2.0528E-04	8.4194E-05	7.0638E-04	9.5444E-04	5.0285E-04	1.1103E-04
350.000	4.2189E-04	7.5865E-06	4.9887E-04	1.4615E-04	1.6007E-04	8.9295E-05	5.2888E-04	7.4185E-04	3.5428E-04	7.5413E-05
360.000	3.7216E-04	6.6678E-06	4.5248E-04	1.1709E-04	1.2185E-04	9.8712E-05	3.7291E-04	6.2884E-04	2.9142E-04	6.1249E-05
370.000	3.2914E-04	6.0886E-06	4.9641E-04	1.0942E-04	9.9363E-05	1.0552E-04	3.0876E-04	5.5507E-04	2.4450E-04	4.5029E-05
380.000	3.1093E-04	5.3679E-06	4.6295E-04	9.1084E-05	8.2650E-05	1.1214E-04	2.6164E-04	4.5705E-04	1.8879E-04	3.7557E-05
390.000	2.8134E-04	4.9568E-06	4.8602E-04	7.9982E-05	6.2908E-05	1.0900E-04	2.1701E-04	4.0614E-04	1.7154E-04	3.4455E-05
400.000	2.4387E-04	4.5465E-06	4.5400E-04	6.3807E-05	5.3767E-05	1.0979E-04	1.8603E-04	3.5766E-04	1.5702E-04	3.0034E-05

TRANSFER RESPONSE - PHASE IN DEGREES - ROW 3

Hz	1	2	3	4	5	6	7	8	9	10
40,000	225.26	219.80	43.75	166.57	219.92	222.64	223.25	226.10	234.14	41.10
50,000	354.36	351.71	175.20	180.03	350.69	352.75	353.30	354.36	357.21	173.62
60,000	356.50	351.12	176.96	180.32	353.90	358.34	358.31	358.31	2.28	186.15
70,000	355.49	350.61	175.80	182.31	348.84	358.94	2.97	1.30	2.18	181.15
80,000	352.50	310.91	177.20	182.47	253.81	1.86	7.74	3.12	4.26	182.57
90,000	240.38	157.20	167.26	186.84	201.38	3.60	7.74	10.17	11.65	159.63
100,000	233.03	233.61	87.76	231.72	244.62	44.32	55.07	61.26	65.57	239.50
110,000	349.98	298.70	165.38	231.47	246.45	70.30	158.10	162.65	165.33	340.62
120,000	357.46	196.09	175.60	200.58	355.08	8.94	161.37	165.22	173.32	352.39
130,000	1.68	189.54	176.01	167.10	356.30	3.87	143.55	173.37	177.02	356.14
140,000	6.20	189.81	177.73	185.82	356.62	2.88	34.92	172.48	178.59	356.89
150,000	23.60	203.56	178.20	180.12	350.79	357.10	7.04	172.96	172.96	350.08
160,000	90.68	266.17	175.37	181.55	354.27	2.03	5.56	183.72	177.97	356.55
170,000	25.69	205.14	168.92	151.20	2.81	11.22	14.92	183.21	184.49	6.74
180,000	24.22	204.51	112.12	159.91	14.35	23.22	26.17	155.56	201.92	20.49
190,000	88.27	267.59	114.08	263.50	68.59	85.57	69.15	166.43	264.35	83.78
200,000	150.76	334.40	167.85	330.77	116.76	151.93	157.82	164.33	333.42	152.97
210,000	164.30	345.95	174.00	340.10	45.84	165.11	170.15	155.18	345.82	164.46
220,000	168.24	349.74	177.25	342.54	14.55	170.51	174.37	178.17	350.46	169.31
230,000	171.58	350.66	177.32	345.18	8.08	172.53	175.85	181.06	354.13	172.03
240,000	172.50	352.31	177.59	338.10	5.12	174.33	178.15	182.84	356.38	176.72
250,000	172.60	351.52	178.50	318.58	7.20	176.23	180.54	184.38	0.13	176.20
260,000	169.71	350.63	186.47	246.77	7.78	176.73	183.01	185.06	0.87	179.00
270,000	171.27	347.91	178.83	209.85	9.75	178.63	185.83	188.30	2.17	182.43
280,000	164.24	342.75	175.41	206.54	13.29	181.40	188.23	191.62	8.42	187.48
290,000	143.39	318.45	173.74	207.54	18.32	186.14	195.44	201.17	14.88	194.26
300,000	94.69	266.28	168.56	223.81	36.21	199.64	213.74	216.22	34.67	214.34
310,000	116.85	255.82	156.16	277.43	91.41	244.37	270.25	273.28	87.52	268.63
320,000	157.42	335.55	171.74	326.58	140.99	260.50	321.83	321.25	138.07	313.60
330,000	167.63	347.98	171.57	340.05	156.97	214.54	337.65	336.66	158.12	334.40
340,000	171.18	350.13	176.23	344.22	162.39	189.87	340.27	343.60	161.87	342.55
350,000	173.82	351.32	177.34	348.87	164.17	186.27	345.35	348.57	165.69	344.68
360,000	172.32	353.05	175.58	349.82	167.70	183.37	346.80	351.23	168.53	348.92
370,000	174.22	353.84	181.19	351.84	181.63	181.63	349.98	352.58	168.39	348.36
380,000	176.03	355.26	180.01	352.17	170.38	182.62	349.28	352.56	168.53	351.32
390,000	175.17	355.32	179.56	353.17	168.90	181.54	351.57	354.01	170.95	353.11
400,000	175.03	355.68	180.85	352.73	165.46	179.96	352.05	354.75	173.74	351.72

450-140CHZ

CASE 5A

3 0

MAX RANDOM ERROR = 1500, CCO30, TRUE DAMPING = 0.0500
 MAX RANDOM ERROR = 0.0800, BIAS ERROR = 0.080 CF ELEM, MAX RAND PHASE ERROR = 2.00 DEG.
 SEED

*R Y	(OM)	*I Y	(OM)	*R Y	(CMH)	*I Y	(CMH)	*I Z	(CM)	Z	(OMH)	NAT FREQ	GEN MASS	G	NAT FR 2
450.000	1.9569E-04	1.3612E-03	-1.0956E-06	-2.6488E-04	-7.1975E	02	3.7752E	03	5.5971E	02	4.6335E-01	5.0833E-02	3.138E	02	3.138E
500.000	8.2793E-04	3.3012E-03	-1.0582E-06	-3.4875E-04	-2.8499E	02	2.8670E	03	5.6049E	02	3.5356E-01	5.1210E-02	2.6797E	02	2.6797E
550.000	8.6856E-03	7.6373E-03	-1.0235E-06	-3.2732E-04	-5.7093E	01	3.0553E	03	5.6192E	02	3.771CE-01	4.7734E-02	0.0	0.0	0.0
600.000	2.1362E-03	-5.7897E-03	-1.3263E-06	-3.5955E-04	1.5202E	02	2.7890E	03	5.6380E	02	3.446CE-01	4.8858E-02	1.4566E	02	1.4566E
650.000	4.5769E-04	-3.1074E-03	-1.7766E-06	-3.8635E-04	3.1494E	02	2.5883E	03	5.6637E	02	3.2025E-01	4.6704E-02	2.4571E	02	2.4571E
700.000	2.2997E-04	-2.3993E-03	-2.1576E-06	-4.5512E-04	4.1299E	02	2.1972E	03	5.6637E	02	2.7185E-01	5.0566E-02	1.8718E	02	1.8718E
750.000	7.4359E-05	-1.1457E-03	1.0995E-06	-2.9064E-04	8.6919E	02	3.4406E	03	5.644CE	02	4.2527E-01	4.9709E-02	0.0	0.0	0.0
800.000	7.4233E-05	-1.2054E-03	3.1595E-06	-3.6545E-04	8.2643E	02	2.7361E	03	5.7519E	02	3.4034E-01	5.7546E-02	1.3675E	03	1.3675E
850.000	1.3395E-04	-2.5871E-03	2.7118E-05	-1.1928E-03	3.8551E	02	8.3796E	02	4.2879E	02	9.6622E-02	1.5168E-01	4.7422E	03	4.7422E
900.000	1.2022E-04	4.9074E-04	4.8635E-05	-8.3252E-04	-1.5224E	03	1.1971E	03	1.2315E	03	3.8968E-01	1.1414E-01	4.0579E	02	4.0579E
950.000	5.6400E-04	3.6075E-03	1.8656E-04	-2.4545E-03	-2.7059E	02	4.0500E	02	1.1416E	03	1.0211E-01	4.8067E-02	5.9525E	02	5.9525E
1000.000	1.2048E-03	5.4914E-03	2.235CE-04	-3.0287E-03	-1.7374E	02	3.2839E	02	1.1515E	03	8.4335E-02	5.3931E-02	5.2568E	02	5.2568E
1050.000	2.1633E-03	7.1327E-03	1.7628E-04	-2.3965E-03	1.2839E	02	4.1502E	02	1.1431E	03	1.0504E-01	4.7407E-02	4.5798E	02	4.5798E
1100.000	7.6078E-03	1.1592E-02	1.7731E-04	-2.3957E-03	-6.0295E	01	4.1515E	02	1.1446E	03	1.0545E-01	5.0148E-02	6.7887E	02	6.7887E
1150.000	3.0835E-02	-5.3125E-03	2.0735E-04	-2.7955E-03	5.4264E	00	3.5525E	02	1.1452E	03	9.0365E-02	4.8639E-02	0.0	0.0	0.0
1200.000	4.9511E-03	-4.5930E-03	1.5268E-04	-2.1255E-03	8.2316E	01	4.6806E	02	1.1434E	03	1.1854E-01	5.2355E-02	5.6108E	02	5.6108E
1250.000	1.4249E-03	-5.6675E-03	1.3495E-04	-1.8884E-03	1.6647E	02	5.2686E	02	1.1475E	03	1.3477E-01	4.7085E-02	8.3151E	02	8.3151E
1300.000	7.9330E-04	-4.7149E-03	1.6335E-04	-2.2341E-03	2.0626E	02	4.4523E	02	1.1464E	03	1.136CE-01	4.9090E-02	5.0254E	02	5.0254E
1350.000	4.8675E-04	-3.2197E-03	1.5679E-04	-2.0074E-03	3.0365E	02	4.9514E	02	1.1384E	03	1.2385E-01	6.1432E-02	9.4442E	02	9.4442E
1400.000	3.5180E-04	-3.5667E-03	1.8157E-04	-2.6574E-03	2.7767E	02	3.7457E	02	1.1440E	03	9.5002E-02	4.9083E-02	8.6486E	02	8.6486E

ITERATED GAMMA

HERTZ	1	2	3	4	5	6	7	8	9	10
450.000	1.7567E-03	-7.1640E-03	1.7767E-01	-5.2153E-01	1.0000E 00	-6.8904E-01	-1.4818E-02	2.8459E-01	-1.5674E-01	2.7223E-C2
500.000	1.5060E-03	-7.6592E-03	1.3598E-01	-5.9668E-01	1.0000E 00	-7.9967E-01	-2.3202E-02	3.5315E-01	-1.4944E-01	3.1566E-C2
550.000	1.7305E-03	-8.2742E-03	1.5673E-01	-5.3885E-01	1.0000E 00	-7.6524E-01	-2.0618E-02	3.3885E-01	-1.5546E-01	2.9846E-C2
600.000	1.6714E-03	-8.7441E-03	1.6022E-01	-5.3929E-01	1.0000E 00	-8.1759E-01	-2.2287E-02	3.5066E-01	-1.6969E-01	3.1317E-C2
650.000	1.9113E-03	-8.5841E-03	1.5947E-01	-5.4665E-01	1.0000E 00	-8.6885E-01	-3.6345E-02	3.5653E-01	-1.8569E-01	3.2422E-C2
700.000	1.6739E-03	-7.6687E-03	1.6865E-01	-6.5910E-01	1.0000E 00	-9.6009E-01	-5.0128E-02	3.8295E-01	-1.9451E-01	3.1558E-C2
750.000	1.8637E-03	-1.0618E-02	1.2031E-01	-5.6652E-01	1.0000E 00	-5.6482E-01	9.7338E-03	3.8655E-01	-1.3222E-01	2.2286E-C2
800.000	-1.0181E-03	5.5240E-03	-1.6518E-01	4.9653E-01	-5.8103E-01	1.0000E 00	5.4833E-02	2.9597E-01	1.2082E-01	-2.2523E-C2
850.000	3.3012E-03	-1.9254E-02	3.1402E-01	-7.8815E-01	6.8253E-01	-3.4634E-01	2.1320E-01	1.0000E 00	-2.4237E-01	6.3753E-C2
900.000	5.6445E-04	-4.6465E-03	1.2064E-01	-3.0731E-01	1.0000E 00	-9.7745E-01	4.5189E-01	-4.8787E-02	1.2209E-02	5.3438E-C3
950.000	3.5252E-04	-2.1240E-03	4.0435E-02	-1.6914E-01	5.1303E-01	-7.9899E-01	1.0000E 00	-4.7223E-01	1.2467E-01	-1.9349E-C2
1000.000	5.7335E-04	-2.1914E-03	4.4363E-02	-1.9382E-01	6.6934E-01	-7.0736E-01	1.0000E 00	-7.3044E-01	1.0757E-01	-1.5777E-C2
1050.000	-2.9485E-04	2.1371E-03	-6.0402E-02	2.3091E-01	-5.2326E-01	1.0000E 00	-9.1159E-01	4.7862E-01	-1.2736E-01	1.8951E-C2
1100.000	-3.2945E-04	2.0625E-03	-6.2736E-02	1.9216E-01	-5.2336E-01	1.0000E 00	-9.5332E-01	4.4493E-01	-1.1834E-01	1.8900E-C2
1150.000	-6.0125E-04	2.1199E-03	-6.9365E-02	2.0138E-01	-6.4447E-01	1.0000E 00	-9.79907E-01	5.4684E-01	-1.1865E-01	1.6733E-C2
1200.000	-3.7994E-04	1.7708E-03	-6.5657E-02	1.9611E-01	-5.3459E-01	1.0000E 00	-7.6007E-01	5.0229E-01	-1.1235E-01	1.6831E-C2
1250.000	-2.9995E-04	1.8089E-03	-3.5531E-02	1.7501E-01	-4.6636E-01	1.0000E 00	-8.7153E-01	4.5695E-01	-1.2384E-01	1.9737E-C2
1300.000	-3.9770E-04	1.5847E-03	-6.6502E-02	1.6957E-01	-5.4536E-01	1.0000E 00	-5.4583E-01	3.6295E-01	8.1000E-02	-1.1432E-C2
1350.000	2.9813E-04	-1.5145E-03	2.6045E-02	-1.3750E-01	4.0145E-01	-5.4583E-01	1.0000E 00	7.6113E-01	-1.6545E-01	1.6627E-C2
1400.000	-3.7035E-04	2.2001E-03	-5.9883E-02	1.6957E-01	-8.6791E-01	1.0000E 00	-7.4478E-01			
	13	6	5	5	6	6	9	12	26	23
	8	10	7	7	7	7	10	7	10	10

DRIVING POINT RESPONSE - AMP IN G'S

HERTZ	1	2	3	4	5	6	7	8	9	10
450.000	1.0892E-01	4.0110E-04	4.5634E-04	6.7267E-04	7.6539E-04	2.0007E-03	9.4449E-03	3.4672E-03	1.2435E-02	9.4565E-03
500.000	1.0836E-01	3.5609E-04	4.3342E-04	5.8212E-04	4.8695E-04	6.1506E-03	6.5216E-03	2.2115E-02	1.1780E-02	9.7467E-03
550.000	9.7167E-02	4.0472E-04	4.5055E-04	5.2007E-04	1.2554E-03	3.3044E-02	5.5798E-03	1.1736E-01	9.5551E-03	9.2535E-03
600.000	9.8020E-02	3.6972E-04	4.0616E-04	7.3344E-04	1.6723E-03	1.8794E-02	4.7284E-03	7.5115E-02	1.5132E-02	1.0135E-02
650.000	1.0268E-01	3.8757E-04	4.2925E-04	6.5257E-04	1.6238E-03	1.0465E-02	3.7856E-03	4.3446E-02	1.4276E-02	9.7525E-03
700.000	1.0776E-01	3.9236E-04	4.4520E-04	5.5331E-04	1.2202E-03	7.7863E-03	2.3719E-03	3.2874E-02	1.3630E-02	9.5281E-03
750.000	9.8345E-02	3.5667E-04	4.4100E-04	5.9447E-04	1.0739E-03	6.0666E-03	1.0301E-03	2.4454E-02	1.2472E-02	9.7452E-03
800.000	9.7276E-02	3.7832E-04	4.2287E-04	5.6074E-04	1.0763E-03	6.0266E-03	1.5150E-03	2.2355E-02	1.3442E-02	1.0071E-02
850.000	9.3850E-02	3.6583E-04	4.3144E-04	5.9106E-04	1.0516E-03	5.1134E-03	4.0268E-03	1.9505E-02	1.2500E-02	9.4586E-03
900.000	1.0113E-01	3.8427E-04	4.5628E-04	6.1059E-04	9.5115E-04	4.4849E-03	8.0375E-03	1.6111E-02	1.3071E-02	9.5254E-03
950.000	9.7364E-02	3.8662E-04	4.0584E-04	5.3055E-04	1.0156E-03	3.3715E-03	1.3292E-02	1.2151E-02	1.1511E-02	9.5385E-03
1000.000	9.8072E-02	4.0874E-04	4.2905E-04	5.3157E-04	8.5103E-04	2.3161E-03	2.1527E-02	8.1232E-03	1.2753E-02	9.6657E-03
1050.000	1.0214E-01	3.7774E-04	4.2004E-04	5.3885E-04	8.7667E-04	1.6203E-03	4.1466E-02	8.3625E-03	1.1142E-02	8.7208E-03
1100.000	9.8122E-02	3.6780E-04	4.0101E-04	5.6869E-04	8.6440E-04	6.4950E-03	8.7596E-02	3.4217E-02	1.1333E-02	8.8354E-03
1150.000	9.5559E-02	3.8446E-04	4.0173E-04	5.2038E-04	9.6260E-04	2.0403E-02	1.8843E-01	1.1372E-01	1.1578E-02	9.5537E-03
1200.000	1.0255E-01	3.7155E-04	4.5787E-04	5.8472E-04	1.0072E-03	1.3645E-02	9.5128E-02	6.9830E-02	1.2814E-02	9.6161E-03
1250.000	1.0325E-01	3.8060E-04	4.4975E-04	5.6344E-04	9.2543E-04	1.0815E-02	6.4147E-02	5.4581E-02	1.2592E-02	1.0101E-02
1300.000	1.0172E-01	3.8646E-04	4.5940E-04	5.3923E-04	9.1189E-04	8.7670E-03	4.7677E-02	4.3723E-02	1.2218E-02	9.3658E-03
1350.000	9.6120E-02	3.8055E-04	4.0143E-04	5.1404E-04	9.1742E-04	9.3779E-03	2.5041E-02	4.5455E-02	1.2722E-02	9.2052E-03
1400.000	9.4527E-02	3.562E-04	4.4712E-04	5.5415E-04	9.7273E-04	7.8123E-03	3.4112E-02	3.6130E-02	1.2337E-02	9.1765E-03

DRIVING POINT RESPONSE - PHASE IN DEGREES

HERTZ	1	2	3	4	5	6	7	8	9	10
450.000	173.34	181.07	178.65	177.53	176.42	19.51	177.83	46.90	178.20	181.29
500.000	178.59	181.47	179.85	177.91	188.08	20.85	175.02	22.22	179.08	180.82
550.000	179.76	181.29	178.07	181.40	178.70	51.83	174.38	51.27	145.66	177.75
600.000	180.89	178.58	181.24	177.13	167.47	159.68	174.82	163.34	172.49	181.35
650.000	178.65	180.45	175.85	178.62	177.63	172.16	172.20	178.39	175.15	179.73
700.000	179.60	181.49	180.23	177.97	179.41	174.63	168.75	175.84	178.34	180.31
750.000	178.86	178.00	181.41	178.57	178.57	177.11	133.25	174.54	181.05	181.22
800.000	180.91	179.51	177.99	180.16	180.04	175.43	31.88	177.91	178.63	179.66
850.000	178.55	178.01	178.71	178.24	180.36	175.57	20.26	174.68	180.00	179.17
900.000	180.73	178.66	177.98	179.69	177.85	174.17	13.74	175.57	179.31	179.37
950.000	178.78	180.10	179.78	180.12	179.12	173.05	14.69	170.58	179.39	179.40
1000.000	178.13	180.13	181.77	181.23	180.20	161.74	18.56	151.69	181.02	181.48
1050.000	181.56	178.54	181.02	179.12	179.82	106.28	19.24	70.72	177.97	177.90
1100.000	181.57	178.82	179.86	178.44	173.92	56.79	36.81	52.56	178.23	178.23
1150.000	179.98	179.47	181.08	178.48	166.17	114.51	100.82	168.53	171.48	180.70
1200.000	179.97	178.41	181.21	178.58	178.40	161.76	156.92	160.42	178.42	181.61
1250.000	179.82	178.41	180.73	180.97	179.66	171.09	163.14	172.51	177.72	178.71
1300.000	180.09	181.01	178.86	180.81	180.93	175.05	171.93	175.12	178.10	178.39
1350.000	178.08	182.06	180.27	181.62	178.18	178.60	171.62	175.22	181.17	178.12
1400.000	180.69	178.36	179.13	181.28	178.28	177.74	176.36	176.07	178.95	179.59

TRANSFER RESPONSE - AMP IN G'S - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
450.000	1.6991E-04	3.3915E-06	4.5634E-04	3.9303E-05	1.9781E-05	1.2800E-04	1.0009E-04	3.1802E-04	1.1148E-04	1.5576E-05
500.000	1.3105E-04	2.4740E-06	4.3342E-04	2.2729E-05	1.3802E-05	1.9551E-04	5.8473E-05	4.1905E-04	1.1551E-04	2.1516E-05
550.000	9.8912E-05	1.6896E-06	4.5055E-04	3.4759E-05	1.1804E-04	5.7260E-04	5.2665E-05	1.1157E-03	2.7486E-04	4.5859E-05
600.000	9.7469E-05	1.9538E-06	4.6616E-04	4.1252E-05	7.7285E-05	2.3408E-04	7.4355E-05	4.5900E-04	9.6002E-05	1.5257E-05
650.000	7.9314E-05	1.4302E-06	4.2925E-04	2.7453E-05	3.8798E-05	5.1103E-05	5.2127E-05	1.3400E-04	3.6212E-05	5.7576E-06
700.000	6.6038E-05	1.3145E-06	4.4520E-04	1.9873E-05	2.5305E-05	4.5927E-05	4.6664E-05	1.0700E-04	1.5462E-05	2.8613E-06
750.000	5.3718E-05	1.1123E-06	4.4100E-04	1.7314E-05	1.9241E-05	3.2515E-05	4.2620E-05	7.3515E-05	1.3000E-05	1.9256E-06
800.000	4.6382E-05	9.4021E-07	4.2267E-04	1.3880E-05	1.5773E-05	1.9792E-05	3.5898E-05	6.1632E-05	9.9862E-06	1.3460E-06
850.000	4.5290E-05	8.5472E-07	4.3144E-04	1.2186E-05	1.3451E-05	1.2740E-05	3.8513E-05	5.1546E-05	8.0356E-06	1.1158E-06
900.000	3.6743E-05	6.9179E-07	4.5628E-04	1.0614E-05	1.0366E-05	7.1429E-06	4.1676E-05	4.6503E-05	7.0850E-06	9.7577E-07
950.000	3.3118E-05	6.3720E-07	4.0584E-04	9.2859E-06	8.9019E-06	2.8881E-06	4.6461E-05	4.6365E-05	6.6170E-06	8.6034E-07
1000.000	3.0317E-05	6.0188E-07	4.2905E-04	7.9877E-06	7.6036E-06	5.1580E-06	5.4925E-05	5.2975E-05	6.9114E-06	9.2088E-07
1050.000	2.5799E-05	5.5500E-07	4.2004E-04	7.1765E-06	5.6722E-06	1.3896E-05	7.5127E-05	6.2552E-05	8.5438E-06	1.0711E-06
1100.000	2.3570E-05	4.6961E-07	4.6101E-04	5.9705E-06	4.2237E-06	3.3664E-05	1.3117E-04	1.0457E-04	1.2228E-05	1.5852E-06
1150.000	2.2290E-05	4.3527E-07	4.0173E-04	6.7053E-06	1.0235E-05	7.5214E-05	2.3089E-04	1.7583E-04	1.8573E-05	2.4084E-06
1200.000	2.0019E-05	3.7452E-07	4.5787E-04	6.7260E-06	8.7686E-06	3.9861E-05	9.5749E-05	6.8045E-05	7.5251E-06	5.4499E-07
1250.000	1.8669E-05	3.5181E-07	4.4975E-04	5.6984E-06	7.0690E-06	2.3543E-05	5.0935E-05	3.5525E-05	3.7614E-06	4.8073E-07
1300.000	1.7399E-05	3.3685E-07	4.5980E-04	5.1145E-06	6.2099E-06	1.8650E-05	3.5885E-05	2.0896E-05	2.1974E-06	2.7526E-07
1350.000	1.5652E-05	2.9504E-07	4.0143E-04	4.5159E-06	5.5231E-06	1.4047E-05	2.4626E-05	1.4613E-05	1.4576E-06	1.7853E-07
1400.000	1.5007E-05	2.9093E-07	4.4712E-04	4.3910E-06	4.8341E-06	1.2252E-05	1.8118E-05	1.0644E-05	1.0656E-06	1.3775E-07

TRANSFER RESPONSE - PHASE IN DEGREES - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
450,000	175.15	356.11	178.65	351.67	162.63	183.72	352.05	1.34	179.11	359.03
500,000	175.99	356.88	179.85	346.71	47.31	188.27	349.46	6.06	186.08	4.69
550,000	166.70	343.90	178.07	264.70	55.22	226.83	287.26	43.71	223.01	42.02
600,000	173.69	355.96	181.24	347.26	160.75	335.28	350.10	155.43	336.37	154.35
650,000	177.59	356.93	179.89	353.94	171.46	348.75	356.00	167.01	345.72	165.81
700,000	177.88	355.47	180.23	355.55	173.59	348.28	356.66	171.74	349.76	167.27
750,000	176.72	358.12	181.41	356.40	173.98	351.63	358.43	173.33	352.70	170.80
800,000	176.39	357.41	177.99	357.38	174.58	349.37	0.63	176.13	352.70	172.42
850,000	175.79	357.40	178.71	355.71	175.87	349.08	0.89	176.43	355.87	175.82
900,000	176.64	356.52	177.98	355.98	174.49	341.41	1.97	176.59	358.03	178.07
950,000	176.73	355.93	175.78	357.46	174.06	303.39	3.88	180.94	0.06	179.47
1000,000	177.65	356.62	181.77	357.35	174.53	221.66	7.50	183.36	2.59	181.64
1050,000	176.70	356.83	181.02	355.62	168.59	208.51	11.43	150.22	7.58	188.64
1100,000	176.71	356.03	175.86	352.62	143.83	218.48	27.70	206.05	25.48	204.11
1150,000	174.55	354.50	181.08	341.16	133.13	283.05	94.28	272.09	92.34	272.00
1200,000	177.69	356.09	181.21	354.08	165.61	333.87	147.38	326.75	144.47	322.30
1250,000	175.21	357.66	180.73	355.85	173.80	344.73	162.65	338.67	158.78	338.83
1300,000	177.24	357.36	178.88	355.35	176.49	349.37	167.34	344.67	163.08	342.47
1350,000	177.01	357.70	180.27	356.04	177.02	352.21	169.63	346.72	165.21	344.82
1400,000	178.15	356.91	179.13	358.38	175.62	352.95	169.17	345.18	167.70	346.26

END OF RUN

5 0 CASE 98 SAMPLE IDENT 8(RANDCP,BIAS 2DEG PHASE ERROR

HIGH FREQUENCY = 1500.00000, TRUE DAMPING =0.0500
 MAX RANDOM ERROR = 0.08000, BIAS ERROR = 0.080 CF ELEM, MAX RAND PHASE ERROR = 2.00 DEG.
 SEED 523

INCCPLETE M, K, D

NAT FREQ = 3.18774 GEN MASS = 3.77649 DAPP COEF = 0.05129 NO ITER = 5
 FREQ NC 1 = 3.0000

GAMMA	1	2	3	4	5	6	7	8	9	10
1	8.8660E-05	1.8298E-02	1.1242E-02	7.7269E-03	3.4229E-03	4.0279E-04	9.4320E-05	3.5303E-05	-4.1369E-05	-1.7748E-04
2	1.8298E-02	3.7765E 00	2.3202E 00	1.5947E 00	7.0644E-01	8.3130E-02	1.9466E-02	7.2860E-03	-8.5380E-03	-3.6670E-02
3	1.1242E-02	2.3202E 00	1.4255E 00	9.7976E-01	4.3402E-01	5.1073E-02	1.1960E-02	4.4764E-03	-5.2456E-03	-2.2529E-02
4	7.7269E-03	1.5947E 00	9.7976E-01	6.7341E-01	2.9831E-01	3.5104E-02	8.2201E-03	3.0767E-03	-3.6054E-03	-1.5489E-02
5	3.4229E-03	7.0644E-01	4.3402E-01	2.9831E-01	1.3215E-01	1.5550E-02	3.6414E-03	1.3625E-03	-1.5971E-03	-6.8595E-03
6	4.0279E-04	8.3130E-02	5.1073E-02	3.5104E-02	1.5550E-02	1.8299E-03	4.2850E-04	1.6038E-04	-1.8794E-04	-8.0720E-04
7	9.4320E-05	1.9466E-02	1.1960E-02	8.2201E-03	3.6414E-03	4.2850E-04	1.0034E-04	3.7557E-05	-4.4010E-05	-1.8902E-04
8	3.5303E-05	7.2860E-03	4.4764E-03	3.0767E-03	1.3625E-03	1.6038E-04	3.7557E-05	1.4057E-05	-1.6473E-05	-7.0748E-05
9	-4.1369E-05	-8.5380E-03	-5.2456E-03	-3.6054E-03	-1.5971E-03	-1.8794E-04	-4.4010E-05	-1.6473E-05	1.9303E-05	8.2904E-05
10	-1.7768E-04	-3.6670E-02	-2.2529E-02	-1.5489E-02	-6.8595E-03	-8.0720E-04	-1.8902E-04	-7.0748E-05	8.2904E-05	3.5607E-04
	4.1092E-02	8.4808E 00	5.2104E 00	3.5812E 00	1.5864E 00	1.8668E-01	4.3715E-02	1.6362E-02	-1.9174E-02	-8.2349E-02

	1	2	3	4	5	6	7	8	9	10
1	3.5568E-02	7.3406E 00	4.5099E 00	3.0998E 00	1.3732E 00	1.6159E-01	3.7838E-02	1.4162E-02	-1.6596E-02	-7.1278E-02
2	7.3406E 00	1.5150E 03	9.3079E 02	6.3975E 02	2.8340E 02	3.3349E 01	7.8092E 00	2.9229E 00	-3.4252E 00	-1.4711E 01
3	4.5099E 00	9.3079E 02	5.7186E 02	3.9305E 02	1.7411E 02	2.0489E 01	4.7978E 01	1.7958E 00	-2.1044E 00	-9.0380E 00
4	3.0998E 00	6.3975E 02	3.9305E 02	2.7015E 02	1.1967E 02	1.4082E 01	3.2976E 00	1.2343E 00	-1.4464E 00	-6.2120E 00
5	1.3732E 00	2.8340E 02	1.7411E 02	1.1967E 02	5.3013E 01	6.2383E 00	1.4608E 00	5.4677E-01	-6.4072E-01	-2.7518E 00
6	1.6159E-01	3.3349E 01	2.0489E 01	1.4082E 01	6.2383E 00	7.3410E-01	1.7190E-01	6.4341E-02	-1.7655E-02	-3.2382E-01
7	3.7838E-02	7.8092E 00	4.7978E 00	3.2976E 00	1.4608E 00	1.7190E-01	4.0253E-02	1.5066E-02	-1.7655E-02	-7.5828E-02
8	1.4162E-02	2.9229E 00	1.7958E 00	1.2343E 00	5.4677E-01	6.4341E-02	1.5066E-02	5.392E-03	-6.6082E-03	-2.8382E-02
9	-1.6596E-02	-3.4252E 00	-2.1044E 00	-1.4464E 00	-6.4072E-01	-7.5397E-02	-1.7655E-02	-6.6082E-03	7.7437E-03	3.3258E-02
10	-7.1278E-02	-1.4711E 01	-9.0380E 00	-6.2120E 00	-2.7518E 00	-3.2382E-01	-7.5828E-02	-2.8382E-02	3.3258E-02	1.4284E-01
	1.6485E 01	3.4022E 03	2.0903E 03	1.4367E 03	6.3642E 02	7.4891E 01	1.7537E 01	6.5640E 00	-7.6918E 00	-3.3036E 01

1	2	3	4	5	6	7	8	9	10
1-8244E-03	3-7653E-01	2-3133E-01	1-5900E-01	7-0435E-02	8-2884E-03	1-9409E-03	7-2645E-04	-8-5128E-04	-3-6561E-03
3-7653E-01	7-7711E 01	4-7744E 01	3-2815E 01	1-4537E 01	1-7106E 00	4-0057E-01	1-4993E-01	-1-7569E-01	-7-5457E-01
2-3133E-01	4-7744E 01	2-9333E 01	2-0161E 01	8-9310E 00	1-0510E 00	2-4610E-01	9-2113E-02	-1-0794E-01	-4-6359E-01
1-5900E-01	3-2815E 01	2-0161E 01	1-3857E 01	6-1385E 00	7-2235E-01	1-6915E-01	6-3311E-02	-7-4190E-02	-3-1864E-01
7-0435E-02	1-4537E 01	8-9310E 00	6-1385E 00	2-7193E 00	3-1999E-01	7-4931E-02	2-8046E-02	-3-2865E-02	-1-4115E-01
8-2884E-03	1-7106E 00	1-0510E 00	7-2235E-01	3-1999E-01	3-7655E-02	8-8175E-03	3-3003E-03	-3-8674E-03	-1-6610E-02
1-9409E-03	4-0057E-01	2-4610E-01	1-6915E-01	7-4931E-02	8-8175E-03	2-0648E-03	7-7282E-04	-9-0562E-04	-3-8895E-03
7-2645E-04	1-4993E-01	9-2113E-02	6-3311E-02	2-8046E-02	3-3003E-03	7-7282E-04	2-8928E-04	-3-3896E-04	-1-4559E-03
-8-5128E-04	-1-7569E-01	-1-0794E-01	-7-4190E-02	-3-2865E-02	-3-8674E-03	-9-0562E-04	-3-3896E-04	3-9721E-04	1-7060E-03
-3-6561E-03	-7-5457E-01	-4-6359E-01	-2-1864E-01	-1-4115E-01	-1-6610E-02	-3-8895E-03	-1-4559E-03	1-7060E-03	7-3269E-03

INCOMPLETE P, K, D

NAT FREQ = 9.21323 GEN MASS = 1.76397 DAPP CDEF = 0.04997 NO ITER = 5
 FREQ NO 2 = 9.0000
 GAMMA 9.2661E-03 1.0000E 00 -4.7214E-01 -7.8894E-01 -6.0910E-01 -1.2984E-01 -5.2863E-02 -4.0804E-02 -7.4837E-02 -9.4321E-02
 1 2 3 4 5 6 7 8 9 10
 2.4012E-04 3.4643E-02 3.5249E-03 -5.1684E-03 -6.5328E-03 -1.7194E-03 -7.6974E-04 -6.3165E-04 -1.2646E-03 -1.7194E-03
 3.4643E-02 5.5405E 00 1.4874E 00 2.0305E-01 -3.6799E-01 -1.4590E-01 -7.3783E-02 -6.4691E-02 -1.4055E-01 -2.0305E-01
 3.5249E-03 1.4874E 00 1.8187E 00 1.6368E 00 9.4130E-01 1.5921E-01 5.5987E-02 3.8460E-02 5.7082E-02 5.6025E-02
 -5.1684E-03 2.0305E-01 1.6368E 00 1.7713E 00 1.1460E 00 2.1578E-01 8.1788E-02 5.9862E-02 1.0054E-01 1.1578E-01
 -1.7194E-03 -1.4590E-01 1.5921E-01 1.1460E 00 7.8657E-01 1.5505E-01 3.1566E-02 1.2536E-02 1.6952E-02 2.0795E-02
 -7.6974E-04 -7.3783E-02 5.5987E-02 8.1788E-02 6.0439E-02 1.2536E-02 5.0298E-03 3.8425E-03 6.9345E-03 8.6063E-03
 -6.3165E-04 -6.4691E-02 3.8460E-02 5.9862E-02 4.5204E-02 9.5057E-03 3.8425E-03 2.9510E-03 5.3701E-03 6.7182E-03
 -1.2646E-03 -1.4055E-01 5.7082E-02 1.0054E-01 7.8657E-01 1.6952E-02 6.9345E-03 5.3701E-03 9.8986E-03 1.2534E-02
 -1.7194E-03 -2.0305E-01 5.6025E-02 1.1578E-01 9.4481E-02 2.0795E-02 8.6063E-03 6.7182E-03 1.2534E-02 1.6049E-02
 2.0602E-02 6.2696E 00 6.2544E 00 5.3258E 00 2.9333E 00 4.7379E-01 1.6061E-01 1.0659E-01 1.4631E-01 1.2622E-01

	1	2	3	4	5	6	7	8	9	10
1	5.4311E-01	6.2114E	-2.1351E	01 -4.0113E	01 -3.1989E	01 -6.9500E	00 -2.8577E	00 -2.2208E	00 -4.1157E	00 -5.2376E
2	6.2114E	7.4262E	03 -1.3601E	03 -4.0238E	03 -3.3171E	03 -7.3414E	02 -3.0468E	02 -2.3828E	02 -4.4580E	02 -5.7226E
3	-2.1351E	01 -1.8601E	03 1.8896E	03 2.5949E	03 1.8740E	03 3.8285E	02 1.5233E	02 1.1568E	02 2.0676E	02 2.5420E
4	-4.0113E	01 -4.0238E	03 2.5949E	03 3.9494E	03 2.9602E	03 6.1958E	02 2.4983E	02 1.9153E	02 3.4756E	02 4.3366E
5	-3.1989E	01 -3.3171E	03 1.8740E	03 2.9602E	03 2.7460E	03 4.7371E	02 1.9179E	02 1.4746E	02 2.6881E	02 3.3685E
6	-6.9500E	00 -7.3414E	02 3.8285E	02 6.1958E	02 4.7371E	02 1.0038E	02 4.0744E	01 3.1381E	01 5.7361E	01 7.2066E
7	-2.8577E	00 -3.0468E	02 1.5233E	02 2.4983E	02 1.9179E	02 4.0744E	01 1.6559E	01 1.2766E	01 2.3368E	01 2.9398E
8	-2.2208E	00 -2.3828E	02 1.1568E	02 1.9153E	02 1.4746E	01 3.1381E	01 1.2766E	01 9.8477E	00 1.8044E	01 2.2722E
9	-4.1157E	00 -4.4580E	02 2.0676E	02 3.4756E	02 2.6881E	02 5.7361E	01 2.3368E	01 3.3114E	01 4.1758E	01 4.7158E
10	-5.2376E	00 -5.7226E	02 2.5420E	02 4.3366E	02 3.3685E	02 7.2066E	01 2.9398E	01 2.2722E	01 4.1758E	01 5.2731E
	-5.2178E	01 -4.0079E	03 5.5888E	03 7.2827E	03 5.1499E	03 1.0370E	03 4.0926E	02 3.0893E	02 5.4686E	02 6.6589E

	1	2	3	4	5	6	7	8	9	10
1	2.7184E-02	3.1133E	00 -1.0638E	00 -2.0001E	00 -1.5965E	00 -3.4704E-01	-1.4273E-01	-1.1095E-01	-2.0566E-01	-2.6179E-01
2	3.1133E	00 3.7306E	02 -9.1704E	01 -2.0020E	02 -1.6536E	02 -3.6637E	01 -1.5213E	01 -1.1902E	01 -2.2279E	01 -2.8612E
3	-1.0608E	00 -9.1704E	01 9.5172E	01 1.3018E	02 9.3868E	01 1.9156E	01 7.6178E	00 5.7822E	00 1.0328E	01 1.2699E
4	-2.0001E	00 -2.0020E	02 1.3018E	02 1.9769E	02 1.4807E	02 3.0976E	01 1.2487E	01 9.5713E	00 1.7364E	01 2.1659E
5	-1.5965E	00 -1.6536E	02 9.3868E	01 1.6807E	02 1.1229E	02 2.3677E	01 9.5850E	00 7.3686E	00 1.3430E	01 1.6827E
6	-3.4704E-01	-3.6637E	01 1.9156E	01 3.0976E	01 2.3677E	01 5.0166E	00 2.0360E	00 1.5886E	00 2.8660E	00 3.6004E
7	-1.4273E-01	-1.5213E	01 7.6178E	00 1.2487E	01 9.5850E	00 2.0360E	00 8.2744E-01	6.3786E-01	1.1676E	00 1.4688E
8	-1.1095E-01	-1.1902E	01 5.7822E	00 9.5713E	00 7.3686E	00 1.5680E	00 6.3786E-01	4.9205E-01	9.0157E-01	1.1353E
9	-2.0566E-01	-2.2279E	01 1.0328E	01 1.7364E	01 1.3430E	01 2.8660E	00 1.1676E	00 9.0157E-01	1.4545E	00 2.0865E
10	-2.6179E-01	-2.8612E	01 1.2699E	01 2.1659E	01 1.6827E	01 3.6004E	00 1.4688E	00 1.1353E	00 2.0865E	00 2.6349E

00

HIGH FREQUENCY = 1500.00000, TRUE DAMPING = 0.0500
 MAX RANDOM ERROR = 0.08000, BIAS ERROR = 0.080 CF ELEM, MAX RAND PHASE ERROR = 2.00 DEG.
 131
 SSEC

	Y (DM)	Y (DM)	Y (CPH)	Z (CM)	Z (OMH)	NAT FREQ	GEN MASS	G	NAT FR 2
1.000	2.9073E-04	6.6554E-03	7.1737E-07	-4.3566E-05	-1.4997E 02	2.2947E 04	3.22868E 00	2.4348E 00	3.9639E-02 1.2766E 01
2.000	1.1980E-03	5.1752E-07	-2.5221E-05	-8.4461E 01	-8.4461E 01	3.9633E 04	3.22239E 00	4.2052E 00	1.43339E 01
3.000	4.1418E-02	9.3305E-02	2.8888E-05	-8.9533E 01	3.6604E 04	3.6604E 04	3.1881E 00	5.0849E-02	3.1825E 00
4.000	2.6649E-03	-2.6530E-02	5.6034E-07	-2.7114E-05	7.7317E 01	3.6865E 01	3.1508E 00	6.1599E-02	9.0512E 00
5.000	3.3937E-04	-7.5029E-03	4.0967E-07	-1.9620E-05	1.3292E 02	5.0945E 04	2.33308E 00	1.8871E-01	1.5034E 01
6.000	1.3591E-03	1.2547E-06	9.5192E-05	-1.6041E-02	1.6041E-02	1.0503E 04	4.94347E 00	1.1144E 00	5.1756E-02 0.0
7.000	1.8740E-03	1.4366E-02	8.1121E-07	5.1741E-05	-6.1872E 01	1.9322E 04	5.22574E 00	5.0596E-02 0.0	2.7013E 00
8.000	6.6258E-03	3.2426E-03	8.4661E-07	5.990CE-05	-2.9472E 01	1.6691E 04	4.92297E 00	1.7711E 00	4.9748E-02 0.0
9.000	1.0181E-01	9.2412E-02	8.2231E-07	-5.9172E-05	-4.8883E 00	1.6897E 04	9.2144E 00	1.7925E 00	5.0675E-02 0.0
10.000	1.6274E-02	5.6855E-02	8.5548E-07	-6.3619E-05	1.6257E 01	1.5716E 04	9.1915E 00	1.6675E 00	5.2569E-02 0.0
11.000	3.0106E-03	-2.3633E-02	8.5387E-07	-6.4515E-05	1.4082E 01	1.8361E 04	9.1697E 00	1.9482E 00	5.5161E-02 0.0
12.000	1.4950E-03	-2.1222E-02	7.8664E-07	-7.1251E-05	4.6888E 01	1.4023E 04	9.1075E 00	1.4893E 00	5.0523E-02 0.0
13.000	8.1655E-04	-1.7039E-02	7.9694E-07	-7.8884E-05	5.5939E 01	1.2676E 04	9.1075E 00	1.345CE 00	4.7487E-02 2.0679E 01
14.000	1.9104E-03	1.7680E-01	6.4313E-06	-2.0106E-04	-5.5909E 01	4.9733E 03	2.0783E 01	5.9036E-02	8.5047E 00
15.000	6.6612E-04	6.9819E-03	6.5552E-07	-7.1919E-05	-1.4115E 02	1.3904E 04	2.1293E 01	1.4755E 00	6.1045E-02 7.4188E 00
16.000	5.4441E-03	4.0746E-02	1.1361E-06	3.0183E-04	-2.4112E 01	3.3129E 03	2.0752E 01	3.5157E 01	5.4185E-02 8.0338E 00
17.000	4.9810E-03	3.3470E-02	9.2472E-07	-1.8883E-04	-2.9503E 01	5.2958E 03	2.0763E 01	5.6201E-01	4.9317E-02 4.5072E 00
18.000	1.1248E-02	6.5990E-02	9.0384E-07	-2.7210E-04	-1.4510E 01	3.6750E 03	2.0750E 01	3.9001E-01	5.3768E-02 4.50314E 00
19.000	2.2051E-02	7.1083E-02	9.145CE-07	-1.9119E-04	-1.2833E 01	5.2305E 03	2.0759E 01	5.506E-01	5.033CE-02 5.1390E 01
20.000	9.0057E-02	1.4214E-01	8.9368E-07	-2.1506E-04	-7.6688E 00	4.6497E 03	2.0754E 01	4.9344E-01	4.9246E-02 3.86571E 01
21.000	2.7035E-01	-1.0866E-01	8.1745E-07	-2.1015E-04	1.2645E 00	4.7585E 03	2.0800E 01	5.0495E-01	4.8941E-02 2.3424E 01
22.000	4.6272E-02	-1.1168E-01	8.5717E-07	-2.0074E-04	7.6421E 00	4.9815E 03	2.0818E 01	5.2864E-01	4.8388E-02 5.5863E 01
23.000	2.2259E-02	-8.5871E-02	1.0928E-06	-2.2008E-04	1.1031E 01	4.1308E 03	2.0902E 01	4.383CE-01	4.9742E-02 0.0
24.000	6.7957E-03	5.0635E-02	9.6547E-07	-2.0614E-04	1.2626E 01	4.8510E 03	2.0811E 01	5.1481E-01	5.2312E-02 5.4559E 01
25.000	6.2941E-03	-5.1283E-02	1.1592E-06	-2.6176E-04	1.9210E 01	3.8202E 03	2.0892E 01	4.0541E-01	5.3616E-02 4.5217E 01
26.000	3.0481E-03	-3.0726E-02	6.181CE-07	-1.8891E-04	3.2229E 01	5.2935E 03	2.0943E 01	5.174CE-01	4.1646E 01
27.000	9.9270E-04	-1.5259E-02	4.8429E-07	-1.1860E-04	6.5229E 01	8.4314E 03	2.0386E 01	8.9476E-01	4.9064E-02 4.3564E 01
28.000	1.9943E-03	3.0489E-02	1.1392E-06	-2.5474E-04	3.2659E 01	3.9254E 03	2.0848E 01	4.1656E-01	5.2579E-02 4.2436E 01
29.000	1.8545E-03	-4.4488E-03	1.3447E-06	-2.8359E-04	1.6150E 02	3.5252E 03	0.0	0.0	0.0
30.000	1.1975E-03	8.0336E-04	7.6474E-07	-1.8407E-04	-3.8634E 02	5.3326E 03	6.39987E 01	5.7747E-01	1.63CE 00 0.0

ITERATED GAMMA

HEIGHT	1	2	3	4	5	6	7	8	9	10
1.000	7.1197E-03	1.0000E 00	9.7524E-01	5.5518E-01	2.7934E-01	4.6184E-02	9.5151E-03	3.0015E-03	-1.7879E-03	-1.3093E-02
2.000	4.6063E-03	1.0000E 00	5.4353E-01	3.4256E-01	1.5299E-01	2.0785E-02	4.5185E-03	1.2575E-03	-2.0118E-03	-7.0883E-03
3.000	5.2576E-03	1.0000E 00	6.2244E-01	4.4062E-01	1.7861E-01	2.4723E-02	5.3608E-03	1.4182E-03	-2.2825E-03	-9.4829E-03
4.000	4.9883E-03	1.0000E 00	5.8116E-01	4.0555E-01	1.6579E-01	2.0375E-02	4.3085E-03	1.3234E-03	-2.0791E-03	-6.6673E-03
5.000	4.0015E-03	1.0000E 00	4.0717E-01	2.5666E-02	4.7493E-02	9.3886E-03	8.0306E-04	-3.5028E-03	-6.5659E-03	-1.3474E-02
6.000	1.3177E-02	1.0000E 00	7.9332E-01	9.4074E-01	-8.7295E-01	1.6665E-01	-6.1004E-02	-4.4836E-02	-9.2587E-02	-1.2281E-01
7.000	8.7778E-03	1.0000E 00	3.2027E-01	7.1777E-01	-5.6146E-01	-1.1802E-01	-4.3579E-02	-3.1974E-02	-6.6180E-02	-8.7254E-02
8.000	1.1079E-02	1.0000E 00	4.2619E-01	8.0906E-01	-5.6710E-01	-1.4006E-01	-5.2671E-02	-3.5644E-02	-7.4054E-02	-9.4371E-02
9.000	9.8803E-03	1.0000E 00	4.7167E-01	7.6898E-01	-5.8389E-01	-1.3620E-01	-5.0420E-02	-3.5634E-02	-7.3014E-02	-9.7545E-02
10.000	1.0564E-02	1.0000E 00	4.8213E-01	7.9027E-01	-6.3470E-01	-1.4051E-01	-5.1327E-02	-3.5683E-02	-8.1040E-02	-9.8158E-02
11.000	9.6208E-03	1.0000E 00	4.2426E-01	7.5002E-01	-5.7925E-01	-1.2527E-01	-4.2731E-02	-2.9076E-02	-6.3201E-02	-7.9692E-02
12.000	1.1873E-02	1.0000E 00	4.8299E-01	8.2429E-01	-7.0292E-01	1.6251E-01	-6.1845E-02	-3.7946E-02	-8.8057E-02	-9.6773E-02
13.000	-1.3380E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
14.000	1.7702E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
15.000	1.1733E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
16.000	1.7436E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
17.000	1.6991E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
18.000	-1.7376E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
19.000	1.5724E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
20.000	1.7185E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
21.000	1.7641E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
22.000	1.7762E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
23.000	1.6284E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
24.000	1.4293E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
25.000	1.6857E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
26.000	1.2779E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
27.000	1.6181E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
28.000	1.5396E-02	1.0000E 00	8.2501E-01	8.4404E-01	-1.7287E-02	6.8507E-02	7.3135E-02	4.3265E-02	7.2568E-02	1.1411E-01
29.000	7.2526E-03	1.2435E-02	1.0000E 00	2.3392E-01	7.7779E-01	-2.0494E-01	-6.0853E-02	-2.6547E-02	5.9123E-02	7.8277E-01
30.000	-1.6037E-02	-1.9348E-01	1.0000E 00	-2.3777E-01	-6.8325E-01	-1.9052E-01	-5.6971E-02	-3.2038E-02	4.8752E-02	5.9503E-01

CRIVING FCINT RESPONSE - AMP IN G'S

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	4.8709E-05	2.5744E-05	1.1805E-05	8.5137E-06	7.6698E-06	6.3143E-06	7.2958E-06	7.8574E-06	1.1003E-05	2.1579E-05
2.000	2.7880E-04	1.4395E-04	6.9461E-05	4.8114E-05	3.6051E-05	3.2074E-05	3.2363E-05	3.1877E-05	4.3642E-05	9.2730E-05
3.000	2.6592E-03	1.6034E-03	7.7180E-04	5.3477E-04	3.2066E-04	1.9019E-04	1.2354E-04	6.4666E-05	1.1021E-04	2.5286E-04
4.000	7.2217E-04	5.3783E-04	2.8671E-04	1.5777E-04	6.7169E-05	2.4838E-05	8.5254E-05	1.3541E-04	1.5618E-04	3.2258E-04
5.000	1.9693E-04	3.1791E-04	1.5792E-04	6.6979E-05	2.2854E-05	1.0497E-04	1.7960E-04	2.3975E-04	3.4853E-04	5.8053E-04
6.000	1.8472E-04	2.2999E-04	1.2167E-04	1.5283E-05	9.9555E-05	2.1856E-04	3.4131E-04	4.5122E-04	5.6759E-04	9.5459E-04
7.000	6.650E-04	1.3775E-04	8.0927E-05	6.3873E-05	2.4383E-04	4.1810E-04	6.2792E-04	7.2706E-04	9.1789E-04	1.4338E-03
8.000	1.9087E-03	8.6771E-05	3.4281E-05	2.4689E-04	5.7264E-04	9.9449E-04	1.2721E-03	1.5366E-03	1.9781E-03	2.6654E-03
9.000	8.887E-03	1.3610E-03	3.4882E-04	1.4633E-03	3.0994E-03	4.7866E-03	5.9118E-03	7.255CE-03	7.4274E-03	8.2322E-03
10.000	3.7847E-03	8.8306E-04	2.6329E-04	7.1932E-04	1.3995E-03	1.9858E-03	2.4881E-03	2.6765E-03	2.4956E-03	1.6185E-03
11.000	1.5691E-03	5.8367E-04	1.7220E-04	4.1763E-04	7.6289E-04	1.0384E-03	1.2113E-03	1.3312E-03	8.3885E-04	1.4182E-04
12.000	8.848E-04	4.9218E-04	1.4908E-04	3.2013E-04	5.4565E-04	7.6381E-04	8.6591E-04	7.7788E-04	2.5054E-04	1.6781E-03
13.000	4.5976E-04	3.9341E-04	1.2437E-04	2.9982E-04	4.7473E-04	6.3944E-04	5.5744E-04	5.238CE-04	3.373CE-04	2.9820E-03
14.000	1.4532E-04	3.9323E-04	1.1156E-04	2.3598E-04	4.2463E-04	6.6777E-04	4.5452E-04	2.6256E-04	7.163E-04	4.2213E-03
15.000	3.5542E-04	3.4014E-04	9.8364E-05	2.2197E-04	3.5009E-04	3.9868E-04	3.3560E-04	5.9684E-05	1.3677E-03	5.3524E-03
16.000	7.7425E-04	3.3659E-04	7.3893E-04	2.0295E-04	3.5470E-04	3.8445E-04	2.3041E-04	2.5474E-04	2.1752E-03	8.1576E-03
17.000	1.3363E-03	3.2155E-04	5.067CE-05	1.8549E-04	2.9891E-04	3.2074E-04	9.3543E-05	5.5635E-04	3.3439E-03	1.0637E-02
18.000	1.8704E-03	2.5729E-04	2.3898E-05	1.6998E-04	3.0064E-04	2.6005E-04	1.6823E-04	1.1754E-03	5.7708E-03	1.6123E-02
19.000	3.0363E-03	2.1584E-04	7.4464E-05	1.8322E-04	2.7112E-04	1.8269E-04	1.5109E-03	2.1704E-03	8.5989E-03	2.7234E-02
20.000	5.7600E-03	2.1539E-04	2.6771E-04	1.1624E-04	2.5599E-04	1.5779E-04	1.5109E-03	4.660CE-03	1.5914E-02	6.1190E-02
21.000	9.6995E-03	7.6799E-04	7.0405E-04	4.0721E-04	2.4919E-04	5.7360E-04	2.5907E-03	9.4244E-03	3.6278E-02	1.0515E-01
22.000	3.1367E-03	6.5533E-04	3.4863E-04	3.1465E-04	2.4564E-04	4.0604E-04	1.4083E-03	4.1413E-03	1.7553E-02	4.5525E-02
23.000	1.1099E-03	5.0759E-04	2.3028E-04	2.8047E-04	2.0991E-04	2.8034E-04	8.0798E-04	2.4415E-03	1.0649E-02	3.2137E-02
24.000	4.840E-04	4.3219E-04	1.8011E-04	2.4476E-04	2.0167E-04	1.9794E-04	5.7906E-04	1.5927E-03	7.7955E-03	2.1849E-02
25.000	9.2933E-04	4.3370E-04	1.5891E-04	2.581CE-04	1.7651E-04	1.3096E-04	3.5826E-04	1.4728E-03	6.2043E-03	1.8327E-02
26.000	1.4762E-03	4.3755E-04	1.2873E-04	2.4248E-04	1.7667E-04	6.7714E-05	2.2873E-04	1.0307E-03	5.5646E-03	1.5548E-02
27.000	2.0173E-03	3.8080E-04	1.0201E-04	2.1955E-04	1.5592E-04	4.8344E-05	1.1384E-04	8.3577E-04	5.0609E-03	1.2173E-02
28.000	2.5235E-03	3.8305E-04	7.5866E-05	2.3507E-04	1.3284E-04	1.1056E-04	1.3164E-04	6.4428E-04	4.5125E-03	1.2489E-02
29.000	3.1123E-03	3.6279E-04	4.9664E-05	2.1018E-04	1.1073E-04	1.8045E-04	2.5645E-04	3.9548E-04	3.5552E-03	1.0006E-02
30.000	3.7709E-03	3.7491E-04	2.7724E-05	2.2329E-04	8.1391E-05	2.8148E-04	3.5322E-04	2.4452E-04	3.9548E-03	9.4509E-03

DRIVING POINT RESPONSE - PHASE IN DEGREES

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	1.90	1.22	2.43	1.32	1.73	4.93	4.02	3.67	1.42	4.67
2.000	3.48	6.95	6.70	4.97	4.83	4.08	1.31	4.04	4.83	3.70
3.000	21.12	24.34	25.41	22.58	21.29	21.16	13.27	7.29	4.44	8.24
4.000	170.74	172.82	175.15	173.91	168.06	24.20	5.83	1.92	1.67	5.44
5.000	167.56	175.80	176.81	173.33	20.27	4.77	4.90	2.94	4.22	3.47
6.000	20.04	178.14	178.25	147.05	9.75	5.38	6.65	6.10	3.09	3.71
7.000	10.24	169.39	177.03	18.25	10.45	7.81	6.72	6.56	6.22	5.44
8.000	12.19	48.30	145.82	16.46	10.56	11.34	10.86	11.27	9.89	7.21
9.000	47.97	58.22	61.75	50.89	48.17	44.68	48.51	44.18	46.15	37.79
10.000	163.49	169.44	167.56	166.67	162.39	161.45	161.57	163.53	158.91	136.97
11.000	170.37	174.33	175.97	172.01	172.53	174.52	172.66	171.13	163.21	29.22
12.000	168.76	178.43	177.28	178.29	176.74	173.65	173.06	172.84	134.36	11.51
13.000	165.22	180.02	177.61	176.88	178.80	176.54	173.05	172.67	26.17	5.50
14.000	108.77	180.16	175.73	177.40	176.90	175.31	173.73	162.30	12.85	7.85
15.000	25.17	176.30	176.91	178.60	178.60	177.21	173.84	162.37	12.17	6.16
16.000	15.87	178.41	172.19	176.44	177.04	178.13	166.44	25.27	8.61	9.32
17.000	9.53	177.86	165.58	176.70	177.39	176.71	133.39	17.62	11.09	9.59
18.000	13.75	176.00	114.91	175.07	177.61	172.00	44.05	14.72	13.96	13.16
19.000	14.44	167.22	40.09	169.71	176.47	162.55	26.70	15.49	18.29	18.27
20.000	30.07	112.76	43.44	125.46	176.59	103.42	40.45	37.44	34.05	34.59
21.000	103.03	133.93	114.51	137.53	176.99	128.49	113.89	112.29	113.67	111.87
22.000	143.92	171.15	158.49	168.13	178.10	164.95	156.19	155.43	157.83	157.71
23.000	135.71	173.44	168.34	175.47	177.60	168.83	165.46	166.01	166.41	165.82
24.000	75.61	175.81	171.34	177.16	175.47	167.76	167.05	168.08	170.61	169.62
25.000	27.40	178.66	174.06	180.05	174.94	161.67	161.62	165.41	173.01	171.85
26.000	11.81	178.31	176.75	180.37	175.11	142.99	154.97	165.99	172.79	174.37
27.000	9.19	179.86	168.78	179.38	176.15	72.18	119.52	170.00	176.93	176.68
28.000	7.51	179.38	165.47	180.42	174.11	29.36	53.77	165.79	177.77	175.23
29.000	5.13	180.47	157.15	179.55	169.10	21.26	25.71	158.14	175.09	174.18
30.000	6.57	180.95	131.93	180.86	164.58	14.99	20.09	141.29	175.76	173.77

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	1.8523E-05	1.5443E-05	1.1805E-05	9.7944E-06	7.5886E-06	6.1448E-06	4.1686E-06	2.4234E-06	2.8456E-07	2.9446E-06
2.000	1.1644E-04	9.6832E-05	6.9461E-05	5.7350E-05	4.4866E-05	3.5238E-05	2.4381E-05	1.2725E-05	3.0934E-06	1.9004E-05
3.000	1.3513E-03	1.0850E-03	7.718CE-04	6.2003E-04	4.7446E-04	3.6375E-04	2.4257E-04	1.1728E-04	6.5228E-05	2.3792E-04
4.000	5.3743E-04	4.2593E-04	2.8671E-04	2.2567E-04	1.5915E-04	1.0810E-04	6.4696E-05	1.9005E-05	4.3951E-05	1.0402E-04
5.000	4.1055E-04	2.6610E-04	1.5792E-04	1.2192E-04	8.1154E-05	4.7536E-05	1.6433E-05	1.4108E-05	4.9757E-05	9.1151E-05
6.000	3.8596E-04	2.5578E-04	1.2167E-04	7.4608E-05	3.8105E-05	8.6278E-06	2.4743E-05	4.8371E-05	7.7155E-05	1.0507E-04
7.000	4.3747E-04	2.8077E-04	8.0927E-05	3.0304E-05	2.2124E-05	5.9985E-05	9.4111E-05	1.1282E-04	1.3846E-04	1.5786E-04
8.000	6.7176E-04	3.6366E-04	3.4281E-05	7.2339E-05	1.4833E-04	2.3012E-04	2.6598E-04	2.9424E-04	3.2337E-04	3.6230E-04
9.000	2.0910E-03	8.7792E-04	3.4882E-04	7.2896E-04	1.0445E-03	1.3155E-03	1.4814E-03	1.5717E-03	1.6167E-03	1.6480E-03
10.000	5.4253E-04	1.7445E-04	2.6325E-04	4.2257E-04	5.8425E-04	6.5612E-04	7.6632E-04	8.2658E-04	8.3457E-04	8.3457E-04
11.000	1.3798E-04	2.0290E-05	1.7220E-04	2.7206E-04	3.5524E-04	3.9375E-04	4.6119E-04	4.5137E-04	4.8106E-04	4.8529E-04
12.000	2.8973E-05	5.4575E-05	1.4908E-04	2.0723E-04	2.8850E-04	3.2940E-04	3.7059E-04	3.5028E-04	4.0769E-04	4.1553E-04
13.000	8.7856E-05	8.2691E-05	1.2437E-04	1.8705E-04	2.3581E-04	3.0654E-04	3.3850E-04	3.4845E-04	4.1188E-04	4.3054E-04
14.000	1.4308E-04	9.2601E-04	1.1.96E-04	1.7253E-04	2.2902E-04	2.7698E-04	3.341E-04	3.6675E-04	3.8506E-04	4.5355E-04
15.000	2.0556E-04	1.1422E-04	9.8104E-05	1.5650E-04	2.0794E-04	2.7509E-04	3.2603E-04	3.8607E-04	4.5336E-04	5.5217E-04
16.000	2.9021E-04	1.2625E-04	7.3853E-05	1.3708E-04	1.9724E-04	2.8459E-04	3.4645E-04	4.0695E-04	5.4228E-04	6.9509E-04
17.000	3.9250E-04	1.5446E-04	5.0670E-05	1.2148E-04	2.1197E-04	2.8623E-04	3.8438E-04	4.8330E-04	6.7550E-04	9.1307E-04
18.000	5.1977E-04	1.8445E-04	2.3898E-05	9.1961E-05	1.5752E-04	3.4224E-04	4.4690E-04	6.0757E-04	8.7254E-04	1.2534E-03
19.000	8.0957E-04	2.6366E-04	7.4464E-05	5.9501E-05	1.5914E-04	3.9356E-04	5.5017E-04	8.5615E-04	1.3736E-03	2.1688E-03
20.000	1.4395E-03	4.3047E-04	2.6771E-04	1.21.2E-04	1.5822E-04	5.5511E-04	5.8186E-04	1.5434E-03	2.7572E-03	4.3732E-03
21.000	2.3599E-03	5.8768E-04	7.0405E-04	5.0493E-04	2.4411E-04	5.2867E-04	1.2783E-03	2.3880E-03	4.8530E-03	8.2852E-03
22.000	3.9644E-04	1.6988E-04	1.4863E-04	3.4418E-04	2.3316E-04	1.1070E-04	3.7624E-04	8.8967E-04	2.0415E-03	3.8858E-03
23.000	4.2191E-04	7.3631E-05	2.3028E-04	2.9887E-04	2.4563E-04	1.5710E-04	1.1278E-04	4.0888E-04	1.2205E-03	2.4252E-03
24.000	2.1928E-04	2.6939E-05	1.8011E-04	2.4420E-04	2.5892E-04	2.0671E-04	1.4032E-05	2.2630E-04	8.9436E-04	1.8428E-03
25.000	1.0162E-04	1.9156E-05	1.5851E-04	2.3396E-04	2.6216E-04	2.4011E-04	1.3298E-04	1.0894E-04	6.4525E-04	1.5585E-03
26.000	6.7805E-05	3.3542E-05	1.2873E-04	2.2751E-04	2.7752E-04	2.9031E-04	1.5578E-04	5.1421E-05	5.5553E-04	1.4034E-03
27.000	1.3702E-04	4.9057E-05	1.0201E-04	2.1062E-04	2.8176E-04	3.0254E-04	2.4959E-04	7.3557E-05	5.0078E-04	1.2549E-03
28.000	2.0824E-04	6.2283E-05	7.5806E-05	2.1623E-04	3.0325E-04	3.4607E-04	2.7932E-04	1.2834E-04	4.0644E-04	1.3227E-03
29.000	2.8409E-04	7.4270E-05	4.9604E-05	1.9014E-04	3.2005E-04	4.0430E-04	3.4925E-04	1.8691E-04	3.5701E-04	1.2765E-03
30.000	3.7591E-04	8.3658E-05	2.7724E-05	1.9820E-04	3.5297E-04	4.2674E-04	3.9337E-04	2.5345E-04	3.2214E-04	1.2519E-03

TRANSFER RESCANE - PHASE IN DEGREES - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	3.81	3.32	2.43	3.27	4.07	4.10	2.83	3.53	184.73	183.22
2.000	5.71	4.94	6.70	4.22	4.65	3.90	3.87	4.19	184.95	184.95
3.000	23.09	22.57	25.41	23.07	22.99	22.23	22.32	22.04	205.28	203.71
4.000	176.34	174.98	175.19	173.24	172.84	174.60	171.38	165.72	358.62	356.94
5.000	174.25	178.32	176.81	178.77	175.54	173.00	163.39	13.72	3.37	0.38
6.000	180.85	180.85	178.25	176.79	171.00	124.44	16.97	8.55	4.93	2.41
7.000	181.85	180.35	177.03	160.56	37.60	14.59	10.01	8.44	6.97	4.92
8.000	188.60	183.15	145.82	26.17	18.14	15.00	13.30	13.80	11.53	10.37
9.000	220.02	220.54	61.75	52.77	51.17	50.83	48.74	50.41	49.30	49.48
10.000	335.96	329.17	161.56	167.88	165.74	166.69	165.96	166.42	165.84	165.26
11.000	334.50	267.22	175.97	174.34	176.22	172.78	173.93	176.20	175.20	175.75
12.000	269.93	190.52	177.28	178.01	177.09	177.54	178.87	177.62	178.07	179.81
13.000	194.82	185.30	177.61	177.65	177.10	179.72	180.73	179.05	179.89	180.52
14.000	187.72	183.86	175.73	178.50	178.62	178.61	179.55	178.43	181.41	182.76
15.000	186.76	182.78	176.91	178.06	179.62	179.11	181.78	181.24	184.10	182.91
16.000	185.76	183.52	172.19	177.50	178.85	182.35	181.53	183.53	183.28	185.39
17.000	187.52	184.72	165.58	175.56	180.39	182.19	183.14	185.10	185.92	187.83
18.000	189.80	186.01	114.91	171.91	178.84	182.84	184.87	187.03	150.62	150.38
19.000	193.68	191.34	42.09	144.26	179.93	186.03	150.47	153.37	194.51	196.97
20.000	210.51	206.07	43.44	71.32	177.54	199.07	204.41	205.32	211.30	214.31
21.000	286.69	281.24	114.51	127.89	170.19	262.70	279.27	283.65	288.09	290.78
22.000	329.15	322.75	158.49	167.26	175.50	242.23	316.32	321.33	334.29	338.28
23.000	337.00	323.33	168.34	174.79	180.63	195.39	303.61	328.19	346.18	347.87
24.000	333.63	303.76	171.34	176.64	180.75	187.49	228.57	326.95	350.18	351.83
25.000	314.15	228.61	174.06	179.07	180.72	185.91	159.15	328.08	352.19	354.26
26.000	242.76	198.00	176.75	179.14	182.37	184.36	179.05	352.58	356.49	356.49
27.000	203.99	190.56	168.78	177.68	181.49	183.84	188.21	214.95	355.09	358.07
28.000	196.01	168.59	165.47	179.56	183.13	184.36	188.82	200.54	354.94	359.35
29.000	192.94	187.13	157.15	179.57	182.56	184.01	187.75	153.82	354.02	0.98
30.000	192.44	188.17	131.93	179.62	182.90	184.22	186.95	150.78	355.28	0.85

ITERATED GAMMA

HERTZ	1	2	3	4	5	6	7	8	9	10
40.000	-1.5303E-02	-3.4209E-01	1.0000E 00	1.8598E-02	-4.8371E-01	-1.6206E-01	-6.6192E-02	-4.5436E-02	-1.6211E-02	1.4263E-01
50.000	-1.5665E-02	-2.8954E-01	1.0000E 00	9.6788E-03	-4.2666E-01	-1.5739E-01	-6.6558E-02	-4.5194E-02	-1.8733E-02	1.2159E-01
60.000	-1.2537E-01	-2.0932E-01	1.0000E 00	1.1615E-02	-3.4605E-01	-1.0653E-01	-4.5265E-02	-2.6666E-02	1.7209E-02	1.5610E-01
70.000	-4.8788E-02	-3.2162E-02	1.0000E 00	-8.1484E-01	-8.5659E-01	7.1384E-02	1.9303E-01	2.0203E-01	3.7107E-01	-1.9118E-01
80.000	-3.5998E-02	-4.7395E-02	1.0000E 00	-9.1978E-01	-5.8776E-01	1.2654E-01	1.6427E-01	2.0884E-01	3.5783E-01	-2.5459E-01
90.000	-3.4026E-02	-4.5099E-02	1.0000E 00	-7.0792E-01	-5.3883E-01	8.5875E-02	1.6174E-01	1.8586E-01	3.3207E-01	-2.1578E-01
100.000	-3.3345E-02	-4.4820E-02	1.0000E 00	-7.3163E-01	-5.4389E-01	8.8332E-02	1.3712E-01	1.7523E-01	3.3451E-01	-2.1469E-01
110.000	-3.3136E-02	-4.2735E-02	1.0000E 00	-7.0341E-01	-5.3575E-01	8.5509E-02	1.3566E-01	1.7077E-01	3.3524E-01	-2.0071E-01
120.000	-2.8558E-02	-5.8670E-02	1.0000E 00	-6.4265E-01	-4.6203E-01	8.8867E-02	1.3133E-01	1.6428E-01	3.6876E-01	-1.9681E-01
130.000	-4.4928E-01	1.0000E 00	-3.2161E-01	-9.0520E-01	6.7603E-01	2.5094E-01	4.3481E-02	-4.3827E-02	-2.6182E-01	1.2156E-01
140.000	3.9610E-01	-9.2497E-01	3.0007E-01	1.0000E 00	-6.5241E-01	-2.8348E-01	-5.5514E-02	3.5594E-02	2.6476E-01	-1.0538E-01
150.000	4.4246E-01	-9.9496E-01	3.2923E-01	1.0000E 00	-6.8895E-01	-2.9837E-01	-6.3152E-02	4.3387E-02	3.1061E-01	-1.2774E-01
160.000	-4.3676E-01	1.0000E 00	-3.0955E-01	-9.4061E-01	6.4454E-01	2.7142E-01	5.8703E-02	-4.1255E-02	-2.9839E-01	1.2265E-01
170.000	3.5729E-01	-8.0529E-01	1.6874E-01	1.0000E 00	-5.7651E-01	-2.8490E-01	-7.0535E-02	3.1825E-02	2.9057E-01	-1.2134E-01
180.000	-4.6592E-02	1.3621E-01	1.0000E 00	1.0000E 00	-1.7246E-01	-2.6892E-01	-1.6686E-01	-2.1026E-02	2.0726E-01	-7.3481E-02
190.000	-4.7583E-02	1.3787E-01	1.0000E 00	1.0000E 00	-1.6886E-01	-2.6890E-01	-1.0754E-01	-2.1026E-02	2.1056E-01	-7.4654E-02
200.000	-4.6100E-02	1.3989E-01	1.0000E 00	1.0000E 00	-1.5999E-01	-2.7049E-01	-1.0974E-01	-2.1264E-02	2.1359E-01	-7.6203E-02
210.000	-4.8532E-02	1.3590E-01	1.0000E 00	1.0000E 00	-1.8349E-01	-2.8175E-01	-1.0974E-01	-2.1264E-02	2.2813E-01	-8.1118E-02
220.000	-5.8314E-02	1.4472E-01	-8.0105E-01	1.0000E 00	-1.8107E-01	-2.7841E-01	-1.1458E-01	-2.3363E-02	2.0025E-01	-8.8440E-02
230.000	-4.9739E-02	1.5605E-01	-8.9982E-01	1.0000E 00	-1.8629E-01	-3.1195E-01	-1.2030E-01	-1.5532E-02	2.6510E-01	-8.8862E-02
240.000	-3.4892E-02	1.0546E-01	-6.9777E-01	1.0000E 00	-2.6434E-01	-2.2982E-01	-6.4096E-02	-6.7333E-04	1.6629E-01	-6.2135E-02
250.000	3.1756E-03	-1.1901E-02	4.6103E-01	-8.3106E-01	1.0000E 00	-1.5719E-01	-2.5909E-01	-2.0802E-01	2.8944E-01	-8.4305E-02
260.000	-5.1636E-03	3.2888E-02	-4.0118E-01	1.0000E 00	-5.6154E-01	7.2761E-02	2.1804E-01	1.8362E-01	-2.2389E-01	5.0372E-02
270.000	-6.6704E-03	3.5924E-02	-4.2302E-01	1.0000E 00	-9.4928E-01	6.6373E-02	2.0616E-01	1.7674E-01	-1.9528E-01	5.3428E-02
280.000	-7.3835E-03	3.3644E-02	-4.1884E-01	1.0000E 00	-8.8777E-01	5.7988E-02	1.9354E-01	1.6143E-01	-1.9658E-01	4.8575E-02
290.000	-7.5319E-03	3.2787E-02	-4.1044E-01	1.0000E 00	-8.8777E-01	5.7988E-02	1.9354E-01	1.6143E-01	-1.9658E-01	4.8575E-02
300.000	-7.8997E-03	3.3349E-02	-4.3372E-01	1.0000E 00	-8.8319E-01	5.8835E-02	2.081E-01	1.6115E-01	-1.8866E-01	4.6276E-02
310.000	-7.9503E-03	3.4378E-02	-4.1673E-01	1.0000E 00	-9.4370E-01	6.2094E-02	1.9795E-01	1.6565E-01	-1.9458E-01	4.9459E-02
320.000	-7.8114E-03	3.3569E-02	-4.1667E-01	1.0000E 00	-9.2042E-01	6.0927E-02	1.9919E-01	1.6967E-01	-1.9415E-01	4.9781E-02
330.000	-7.4480E-03	3.2792E-02	-3.9258E-01	1.0000E 00	-8.7872E-01	5.9893E-02	1.8675E-01	1.5395E-01	-1.9613E-01	4.7019E-02
340.000	-8.1399E-03	3.3613E-02	-4.5235E-01	1.0000E 00	-9.5008E-01	6.7420E-02	2.0501E-01	1.7102E-01	-2.1555E-01	5.3744E-02
350.000	-8.4357E-03	3.4908E-02	-4.4705E-01	1.0000E 00	-9.4450E-01	5.9554E-02	2.1042E-01	1.7454E-01	-2.1178E-01	5.0729E-02
360.000	-7.5008E-03	3.3845E-02	-4.0057E-01	1.0000E 00	-5.3338E-01	7.1012E-02	2.0086E-01	1.5364E-01	-1.9949E-01	4.7652E-02
370.000	-7.7129E-03	2.9202E-02	-3.3817E-01	1.0000E 00	-8.1628E-01	4.0624E-02	1.6911E-01	1.4055E-01	-1.6552E-01	4.0228E-02
380.000	-7.5869E-03	4.0247E-02	-4.2744E-01	1.0000E 00	-8.4463E-01	6.8936E-02	2.1880E-01	2.0387E-01	-1.9386E-01	4.7711E-02
390.000	-5.8555E-03	3.0163E-02	-3.7742E-01	1.0000E 00	-9.3844E-01	4.4694E-02	1.8362E-01	1.5422E-01	-1.8181E-01	4.1131E-02
400.000	1.0380E-02	-3.8061E-02	4.8505E-01	-9.8710E-01	1.0000E 00	-4.1881E-02	-2.3762E-01	-2.1642E-01	2.5576E-01	-6.0892E-02

INCCPPLETE P, K, C

NAT FREQ = 20.79758		GEN MASS =		FREQ NG 3 = 20.0000		DAMP COEF =		NO ITER = 4			
GAMMA		1.0000E 00 -8.7818E-01		-5.4035E-01 -3.0515E-02		6.4389E-02		5.9313E-02		7.0356E-02	
		2.4595E-01		5.1738E-01							
1	2	3	4	5	6	7	8	9	10		
3.6954E-04	4.3546E-02	-4.2934E-03	-9.9791E-03	-6.8045E-03	-1.1462E-03	-2.4168E-04	-5.2724E-06	9.2511E-04	2.8868E-03		
4.3546E-02	6.1529E 00	9.4953E-01	-1.2788E-01	-3.8668E-01	-1.0644E-01	-3.7458E-02	-2.1602E-02	1.0083E-02	1.1382E-01		
-4.2934E-03	9.4953E-01	2.2910E 00	1.9274E 00	9.5771E-01	1.2458E-01	2.4086E-02	6.2004E-04	-7.5200E-02	-2.2224E-01		
-9.9791E-03	-1.2788E-01	1.9274E 00	1.9502E 00	1.1561E 00	1.9448E-01	6.2159E-02	3.6575E-02	1.9148E-02	-5.5440E-02		
-6.8045E-03	-3.8668E-01	9.5771E-01	1.1561E 00	7.8714E-01	1.5385E-01	5.9331E-02	4.3885E-02	7.4213E-02	8.4812E-02		
-1.1462E-03	-1.0644E-01	1.2458E-01	1.9448E-01	1.5385E-01	3.4105E-02	1.4875E-02	1.2280E-02	2.6651E-02	4.1197E-02		
-2.4168E-04	-3.7458E-02	2.4086E-02	6.2159E-02	5.9331E-02	1.4875E-02	7.1844E-03	6.3982E-03	1.5869E-02	2.7400E-02		
-5.2724E-06	-2.1602E-02	6.2004E-04	3.6575E-02	4.3885E-02	1.2280E-02	6.3982E-03	5.9826E-03	1.5968E-02	2.9012E-02		
9.2511E-04	1.0083E-02	-7.5200E-02	1.9148E-02	7.4213E-02	2.6651E-02	1.5869E-02	1.5968E-02	4.6947E-02	9.0468E-02		
2.8868E-03	1.1382E-01	-2.2224E-01	-5.5440E-01	8.4812E-02	4.1197E-02	2.7400E-02	2.9012E-02	9.0468E-02	1.7599E-01		
2.5258E-02	6.5898E 00	5.9732E 00	5.1527E 00	2.9235E 00	4.9440E-01	1.7960E-01	1.2912E-01	2.2507E-01	2.9190E-01		

	1	2	3	4	5	6	7	8	9	10
1	2.7531E 00	2.1414E 02	-1.5486E 02	-1.2226E 02	-3.6628E 01	2.8387E 00	6.1594E 00	8.4751E 00	3.3276E 01	7.3417E 01
2	2.1414E 02	1.7884E 04	-1.1044E 04	-9.6748E 03	-3.6362E 03	-6.0761E 01	3.1561E 02	4.9751E 02	2.1264E 03	4.8385E 03
3	-1.5486E 02	1.1044E 04	9.9547E 03	7.5575E 03	2.1543E 03	-2.0850E 02	-3.9239E 02	-5.3047E 02	-2.0521E 03	-4.6574E 03
4	-1.2226E 02	-9.6748E 03	7.5575E 03	7.0029E 03	3.1327E 03	2.5572E 02	-8.5346E 01	-2.0606E 02	-1.0423E 03	-2.4901E 03
5	-3.6628E 01	-3.6362E 03	2.1543E 03	3.1327E 03	2.2558E 03	4.5316E 02	1.7287E 02	1.2501E 02	1.9032E 02	1.7174E 02
6	2.8387E 00	-6.0761E 01	-2.0850E 02	2.5572E 02	4.5316E 02	1.4374E 02	8.0684E 01	7.8758E 01	2.2298E 02	4.2046E 02
7	6.1594E 00	3.1561E 02	-3.9239E 02	-8.5346E 01	1.7287E 02	8.0684E 01	5.3350E 01	5.6407E 01	1.7593E 02	3.5032E 02
8	8.4751E 00	4.9751E 02	-5.3047E 02	-2.0606E 02	1.2501E 02	7.8758E 01	5.6407E 01	6.1615E 01	1.9901E 02	4.0340E 02
9	3.3276E 01	2.1264E 03	-2.0521E 03	-1.0423E 03	1.9032E 02	2.2298E 02	1.7593E 02	1.9901E 02	6.6575E 02	1.3726E 03
10	7.3417E 01	4.8385E 03	-4.4974E 03	-2.4901E 03	1.7174E 02	4.2046E 02	3.5032E 02	4.0340E 02	1.3726E 03	2.8522E 03
	2.7314E 01	1.4604E 03	7.8667E 02	4.3279E 03	4.9830E 03	1.3891E 03	7.3360E 02	6.9365E 02	1.8918E 03	3.4951E 03

	1	2	3	4	5	6	7	8	9	10
1	1.3220E-01	1.0343E	01 -7.4097E	00 -5.9066E	00 -1.8171E	00 1.1846E-01	2.8607E-01	3.9770E-01	1.5725E	00 3.4787E
2	1.0343E	01 8.7039E	02 -5.2845E	02 -4.6893E	02 -1.8054E	02 -4.6144E	01 1.4285E	01 2.3089E	01 1.0004E	02 2.2870E
3	-7.4097E	00 -5.2845E	02 4.7871E	02 3.6617E	02 1.0720E	02 -8.9652E	01 -1.8287E	01 -2.4946E	01 -9.7091E	01 -2.1327E
4	-5.9066E	00 -4.6893E	02 3.6617E	02 3.4290E	02 1.5627E	02 1.3673E	01 -3.4522E	00 -9.3357E	00 -4.8732E	01 -1.1730E
5	-1.8171E	00 -1.8054E	02 1.0720E	02 1.5627E	02 1.1276E	02 2.2700E	01 8.6848E	00 4.3009E	00 9.6976E	00 8.9751E
6	1.1846E-01	-4.6144E	00 -8.9652E	00 1.3673E	01 2.2700E	01 7.0785E	00 3.9353E	00 3.821CE	00 1.0742E	01 2.0168E
7	2.8607E-01	1.4285E	01 -1.8287E	01 -3.4522E	00 8.6848E	00 3.9353E	00 2.5770E	00 2.7132E	00 8.4227E	01 1.6730E
8	3.9770E-01	2.3089E	01 -2.4946E	01 -9.3357E	00 6.3009E	00 3.8210E	00 2.7132E	00 2.9538E	00 9.5076E	00 1.9239E
9	1.5725E	00 1.0004E	02 -9.7091E	01 -4.8732E	01 9.6976E	00 1.0742E	01 8.4227E	00 9.5076E	00 3.1740E	01 6.5373E
10	3.4787E	00 2.2870E	02 -2.1327E	02 -1.1730E	02 8.9751E	00 2.0168E	01 1.6730E	01 1.9239E	01 6.5373E	01 1.3376E

INCCMPLETE P. K. O

NAT FREQ = 41.17151 GEN MASS = 2.07891 DAPP CDEF = 0.05048 NO ITER = 5
 GAMMA -1.4446E-02 -3.5679E-01 1.0000E 00 1.5310E-02 -5.0854E-01 -1.6092E-01 -7.3223E-02 -4.9898E-02 -1.6671E-02 1.5655E-01

	1	2	3	4	5	6	7	8	9	10
1	8.0336E-04	5.4261E-02	-3.4325E-02	-1.0559E-02	8.4677E-03	3.6866E-03	1.9573E-03	1.4932E-03	1.4258E-03	-1.8146E-03
2	5.4261E-02	6.4175E 00	2.0779E-01	-1.4220E-01	-9.4721E-03	1.2900E-02	1.6855E-02	1.5409E-02	2.2449E-02	-2.3047E-03
3	-3.4325E-02	2.0779E-01	4.3695E 00	1.9676E 00	-9.9497E-02	-2.0997E-01	-1.2814E-01	-1.0311E-01	-1.0986E-01	1.0322E-01
4	-1.0559E-02	-1.4220E-01	1.9676E 00	1.9509E 00	1.1356E 00	1.8802E-01	5.9220E-02	3.4516E-02	1.8479E-02	-4.9156E-02
5	8.4677E-03	-9.4721E-03	-9.9497E-02	1.1356E 00	1.3248E 00	3.2398E-01	1.3674E-01	9.6642E-02	9.1830E-02	-8.0695E-02
6	3.6866E-03	1.2900E-02	-2.0997E-01	1.8802E-01	3.2398E-01	8.7942E-02	3.9371E-02	2.8973E-02	3.2228E-02	-1.1176E-02
7	1.9573E-03	1.6855E-02	-1.2814E-01	5.9220E-02	1.3674E-01	3.9371E-02	1.8331E-02	1.3994E-02	1.8407E-02	3.5696E-03
8	1.4932E-03	1.5409E-02	-1.0311E-01	3.4516E-02	9.6642E-02	2.8973E-02	1.3994E-02	1.1159E-02	1.7697E-02	1.2772E-02
9	1.4258E-03	2.2449E-02	-1.0986E-01	1.8479E-02	9.1830E-02	3.2228E-02	1.8407E-02	1.7697E-02	4.7525E-02	8.5042E-02
10	-1.8146E-03	-2.3047E-03	1.0322E-01	-4.9156E-02	-8.0695E-02	-1.1176E-02	3.5696E-03	1.2772E-02	8.5042E-02	2.3094E-01
	2.5397E-02	6.5932E 00	5.9636E 00	5.1525E 00	2.9284E 00	4.9596E-01	1.8031E-01	1.2960E-01	2.2523E-01	2.9039E-01

	1	2	3	4	5	6	7	8	9	10
1	3.1784E 01	9.3118E 02	-2.1645E 03	-1.6107E 02	9.8538E 02	3.2625E 02	1.5332E 02	1.0875E 02	6.6779E 01	-2.4120E 02
2	9.3118E 02	3.5594E 04	-6.0681E 04	-1.0633E 04	2.1606E 04	7.9270E 03	3.9502E 03	2.9743E 03	2.9539E 03	-2.9322E 03
3	-2.1645E 03	-6.0681E 04	1.4907E 05	1.0244E 04	-6.8594E 04	-2.2596E 04	-1.0579E 04	-7.4723E 03	-4.3714E 03	1.7282E 04
4	-1.6107E 02	-1.0633E 04	1.0244E 04	7.0548E 03	1.7665E 03	-1.7658E 02	-2.8205E 02	-3.4010E 02	-1.0871E 03	-2.0695E 03
5	9.8538E 02	2.1606E 04	-6.8594E 04	1.7665E 03	3.8234E 04	1.1838E 04	5.3533E 03	3.6552E 03	1.3698E 03	-1.0504E 04
6	3.2625E 02	7.9270E 03	-2.2596E 04	-1.7658E 02	1.1838E 04	3.7465E 03	1.7200E 03	1.1959E 03	5.9621E 02	-3.0844E 03
7	1.5332E 02	3.9502E 03	-1.0579E 04	-2.8205E 02	5.3533E 03	1.7200E 03	7.9926E 02	5.6471E 02	3.4576E 02	-1.2444E 03
8	1.0875E 02	2.9743E 03	-7.4723E 03	-3.4010E 02	3.6552E 03	1.1959E 03	5.6471E 02	4.0800E 02	3.1474E 02	-6.8334E 02
9	6.6779E 01	2.9539E 03	-4.3714E 03	-1.0871E 03	1.3698E 03	5.9621E 02	3.4576E 02	3.1474E 02	7.0442E 02	1.0095E 03
10	-2.4120E 02	-2.9322E 03	1.7282E 04	-2.0695E 03	-1.0904E 04	-3.0844E 03	-1.2444E 03	-6.8334E 02	1.0095E 03	6.2617E 03
	3.6630E 01	1.6905E 03	1.4162E 02	4.3155E 03	5.3110E 03	1.4929E 03	7.8082E 02	7.2584E 02	1.9026E 03	3.3541E 03

	1	2	3	4	5	6	7	8	9	10
1	1.5978E 00	4.6540E 01	-1.0886E 02	-7.8657E 00	4.9775E 01	1.6445E 01	7.7147E 00	5.4600E 00	3.4638E 00	-1.2404E 01
2	4.6540E 01	1.7644E 03	-3.0342E 03	-5.1732E 02	1.0937E 03	3.9862E 02	1.9776E 02	1.4812E 02	1.4181E 02	-1.6350E 02
3	-1.0886E 02	-3.0342E 03	7.5017E 03	5.0178E 02	-3.4643E 03	-1.1391E 03	-5.3253E 02	-3.7518E 02	-2.1417E 02	8.8618E 02
4	-7.8657E 00	-5.1732E 02	5.0178E 02	3.4552E 02	8.7303E 01	-8.1506E 00	-1.3382E 01	-1.6103E 01	-5.0993E 01	-9.8148E 01
5	4.9775E 01	1.0937E 03	-3.4643E 03	8.7303E 01	1.9290E 03	5.9744E 02	2.7020E 02	1.8451E 02	6.9230E 01	-5.5014E 02
6	1.6445E 01	3.9862E 02	-1.1391E 03	-8.1506E 00	5.9744E 02	1.8895E 02	8.6690E 01	6.0214E 01	2.9583E 01	-1.5676E 02
7	7.7147E 00	1.9776E 02	-5.3253E 02	-1.3382E 01	2.7020E 02	8.6690E 01	4.0232E 01	2.8373E 01	1.6996E 01	-6.3775E 01
8	5.4600E 00	1.4812E 02	-3.7518E 02	-1.6103E 01	1.8451E 02	6.0214E 01	2.8373E 01	2.0440E 01	1.5350E 01	-3.5627E 01
9	3.2638E 00	1.4181E 02	-2.1417E 02	-5.0993E 01	6.9230E 01	2.9583E 01	1.6996E 01	1.5350E 01	3.1642E 01	4.7043E 01
10	-1.2404E 01	-1.6350E 02	8.8618E 02	-9.8148E 01	-5.5014E 02	-1.5676E 02	-6.3775E 01	-3.5627E 01	4.7043E 01	1.3789E 02

INCOMPLETE P, K, D

NAT FREQ = 101.32893 GEN MASS = 0.62217 DAMP COEF = 0.04870 NO ITER = 5
 GAMMA -3.1227E-02 -4.7643E-02 1.0000E 00 -8.5912E-01 -5.6817E-01 8.7765E-02 1.5269E-01 1.8622E-01 3.3874E-01 -2.4067E-01

	1	2	3	4	5	6	7	8	9	10
1	1.4100E-03	5.5187E-02	-5.3753E-02	6.1322E-03	1.9506E-02	1.9815E-03	-1.0092E-03	-2.1247E-03	-5.1553E-03	2.8611E-03
2	5.5187E-02	6.4190E 00	1.7815E-01	-1.1673E-01	7.3696E-03	1.0299E-02	1.2329E-02	9.8885E-03	1.2408E-02	4.8292E-03
3	-5.3753E-02	1.7815E-01	4.9921E 00	1.4331E 00	-4.5300E-01	-1.5537E-01	-3.3139E-02	1.2748E-02	1.0089E-01	-4.6520E-02
4	6.1322E-03	-1.1673E-01	1.4331E 00	2.4101E 00	1.4393E 00	1.4111E-01	-2.2395E-02	-6.4963E-02	-1.6258E-01	7.9485E-02
5	1.9506E-02	7.3696E-03	-4.5300E-01	1.4393E 00	1.5256E 00	2.9295E-01	8.2768E-02	3.0813E-02	-2.7905E-02	4.3806E-03
6	1.9815E-03	1.0299E-02	-1.5537E-01	1.4111E-01	2.9295E-01	9.2734E-02	4.7709E-02	3.9142E-02	5.0725E-02	-2.4318E-02
7	-1.0092E-03	1.2329E-02	-3.3139E-02	-2.2395E-02	8.2768E-02	4.7709E-02	3.2836E-02	3.1685E-02	5.0586E-02	-1.9293E-02
8	-2.1247E-03	9.8885E-03	1.2748E-02	-6.4963E-02	3.0813E-02	3.9142E-02	3.1685E-02	3.2735E-02	5.6944E-02	-1.5112E-02
9	-5.1553E-03	1.2408E-02	1.0089E-01	-1.6258E-01	-2.7905E-02	5.0725E-02	5.0586E-02	5.6944E-02	1.1891E-01	3.4321E-02
10	2.8611E-03	4.8292E-03	-4.6520E-02	7.9485E-02	4.3806E-03	-2.4318E-02	-1.9293E-02	-1.5112E-02	3.4321E-02	2.6697E-01
	2.5036E-02	6.5927E 00	5.9751E 00	5.1426E 00	2.9218E 00	4.9697E-01	1.8207E-01	1.3175E-01	2.2915E-01	2.8761E-01

	1	2	3	4	5	6	7	8	9	10
1	2.7770E 02	1.3064E 03	-1.0040E 04	6.6046E 03	5.4598E 03	-3.6492E 02	-1.0491E 03	-1.3578E 03	-2.4008E 03	1.6541E 03
2	1.3064E 03	5.6167E 04	-7.2696E 04	-3.1073E 02	2.8433E 04	6.8725E 03	2.1114E 03	7.3679E 02	-1.1161E 03	-4.0507E 01
3	-1.0040E 04	-7.2696E 04	4.0127E 05	-2.0642E 05	-2.1188E 05	-4.6241E 02	2.7928E 04	3.9492E 04	8.1054E 04	-4.3413E 04
4	6.6046E 03	-3.1073E 02	-2.0642E 05	1.9322E 05	1.2487E 05	-1.9192E 04	-3.3364E 04	-4.0688E 04	-7.4479E 04	5.0075E 04
5	5.4598E 03	2.8433E 04	-2.1188E 05	1.2487E 05	1.1965E 05	-7.3755E 02	-1.6525E 04	-2.3028E 04	-4.7168E 04	2.3581E 04
6	-3.6492E 02	6.8725E 03	-4.6241E 02	-1.9192E 04	-7.3755E 02	5.6890E 03	5.0996E 03	5.3176E 03	8.0937E 03	-8.4112E 03
7	-1.0491E 03	2.1114E 03	2.7928E 04	-3.3364E 04	-1.6525E 04	5.0996E 03	6.6789E 03	7.7356E 03	1.3390E 04	-1.0512E 04
8	-1.3578E 04	7.3679E 02	3.9492E 04	-4.0688E 04	-2.3028E 04	5.3176E 03	7.7356E 03	9.1537E 03	1.6223E 04	-1.1986E 04
9	-2.6008E 03	-1.1161E 03	8.1054E 04	-7.4479E 04	-4.7168E 04	8.0937E 03	1.3390E 04	1.6223E 04	2.9642E 04	-1.9550E 04
10	1.6541E 03	-4.0507E 01	-4.3413E 04	5.0075E 04	2.3581E 04	-8.4112E 03	-1.0512E 04	-1.1986E 04	-1.9550E 04	2.0869E 04
	-1.0974E 02	1.4672E 03	4.8285E 03	2.8848E 02	2.6478E 03	1.9043E 03	1.4965E 03	1.5987E 03	3.4903E 03	2.2660E 03

1	2	3	4	5	6	7	8	9	10
1.3573E 01	6.4812E 01	-4.9237E 02	3.2161E 02	2.6767E 02	-1.7214E 01	-5.0842E 01	-6.5957E 01	-1.2564E 02	7.9894E 01
6.4812E 01	1.7923E 02	-3.6193E 03	-1.4630E 01	1.4262E 03	3.4727E 02	1.0842E 02	3.9159E 01	-5.6387E 01	-2.2761E 01
-4.9237E 02	-3.6193E 03	1.9783E 04	-1.0049E 04	-1.0442E 04	-6.1259E 01	1.3427E 03	1.9117E 03	3.9460E 03	-2.0695E 03
3.2161E 02	-1.4630E 01	-1.0049E 04	9.4102E 03	6.0822E 03	-9.3417E 02	-1.6244E 03	-1.9810E 03	-3.6251E 03	2.4432E 03
2.6767E 02	1.4262E 03	-1.0442E 04	6.0822E 03	5.8936E 03	-1.4980E 01	-7.9525E 02	-1.1149E 03	-2.2944E 03	1.1292E 03
-1.7214E 01	3.4727E 02	-6.1259E 01	-9.3417E 02	-1.4980E 01	2.8355E 02	2.5127E 02	2.6094E 02	3.9470E 02	-4.1617E 02
-5.0842E 01	1.0842E 02	1.3427E 03	-1.6244E 03	-7.9525E 02	2.5127E 02	3.2656E 02	3.7758E 02	6.5220E 02	-5.1508E 02
-6.5957E 01	3.9159E 01	1.9117E 03	-1.9810E 03	-1.1149E 03	2.6094E 02	3.7758E 02	4.4634E 02	7.9006E 02	-5.8604E 02
-1.2564E 02	-5.6387E 01	3.9460E 03	-3.6251E 03	-2.2944E 03	3.9470E 02	6.5220E 02	7.9006E 02	1.4429E 03	-9.5417E 02
7.9894E 01	-2.2761E 01	-2.0695E 03	2.4432E 03	1.1292E 03	-4.1617E 02	-5.1508E 02	-5.8604E 02	-9.5417E 02	1.0192E 03

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INCCPLETE P, K, D

FREQ NC 6 = 150.0000
0.16921 DAPP COEF = 0.05016 NO ITER = 5

NAT FREQ = 155.05182 GEN MASS =

GAMMA 3.5702E-01 -7.8698E-01 2.5180E-01 1.0000E 00 -5.5746E-01 -2.4227E-01 -5.4869E-02 3.2584E-02 2.5444E-01 -1.1074E-01

	1	2	3	4	5	6	7	8	9	10
1	2.2978E-02	7.6437E-03	-3.8541E-02	6.6545E-02	-1.6588E-02	-1.2655E-02	-4.3240E-03	-1.5622E-04	1.0216E-02	-3.8292E-03
2	7.6437E-03	6.5238E 00	1.4461E-01	-2.4990E-01	8.6932E-02	4.2562E-02	1.9636E-02	5.5497E-03	-2.1475E-02	1.9577E-02
3	-3.8541E-02	1.4461E-01	5.0028E 00	1.4757E 00	-4.7845E-01	-1.6569E-01	-3.5477E-02	1.4134E-02	1.1174E-01	-5.1239E-02
4	6.6545E-02	-2.4990E-01	1.4757E 00	2.5794E 00	1.3382E 00	1.0012E-01	-3.1679E-02	-5.3449E-02	-1.1953E-01	6.0745E-02
5	-1.6588E-02	8.6932E-02	-4.7845E-01	1.3382E 00	1.5860E 00	3.1745E-01	8.8315E-02	2.7518E-02	-5.3628E-02	1.5577E-02
6	-1.2655E-02	4.2562E-02	-1.6569E-01	1.0012E-01	3.1745E-01	1.0267E-01	4.9958E-02	3.7806E-02	4.0294E-02	-1.9777E-02
7	-4.3240E-03	1.9636E-02	-3.5477E-02	-3.1679E-02	8.8315E-02	4.9958E-02	3.3345E-02	3.1382E-02	4.8224E-02	-1.8265E-02
8	-1.5622E-04	5.5497E-03	1.4134E-02	-5.3449E-02	2.7518E-02	3.7806E-02	3.1382E-02	3.2914E-02	5.8347E-02	-1.5723E-02
9	1.0216E-02	-2.1475E-02	1.1174E-01	-1.1953E-01	-5.3628E-02	4.0294E-02	4.8224E-02	5.8347E-02	1.2987E-01	2.9553E-02
10	-3.8292E-03	1.9577E-02	-5.1239E-02	6.0745E-02	1.5577E-02	-1.9777E-02	-1.8265E-02	-1.5723E-02	2.9553E-02	2.6905E-01
	3.1289E-02	6.5789E 00	5.9795E 00	5.1601E 00	2.9114E 00	4.9273E-01	1.8111E-01	1.3232E-01	2.3361E-01	2.8567E-01

	1	2	3	4	5	6	7	8	9	10
1	2.0748E 04	-4.3817E 04	4.3977E 03	6.3942E 04	-2.8797E 04	-1.4256E 04	-4.1952E 03	5.1054E 02	1.1988E 04	-4.6957E 03
2	-4.3817E 04	1.3563E 05	-1.0452E 05	-1.2670E 05	1.0395E 05	3.7494E 04	9.0505E 03	-3.3816E 03	-3.3275E 04	1.3956E 04
3	4.3977E 03	-1.0452E 05	4.1145E 05	-1.6598E 05	-2.3604E 05	-1.0260E 04	2.5709E 04	4.0805E 04	9.1345E 04	-4.7891E 04
4	6.3942E 04	-1.2670E 05	-1.6598E 05	3.5380E 05	2.8916E 04	-5.8102E 04	-4.2176E 04	-3.5455E 04	-3.3616E 04	3.2289E 04
5	-2.8797E 04	1.0395E 05	-2.3604E 05	2.8916E 04	1.7697E 05	2.2509E 04	-1.1261E 04	-2.6155E 04	-7.1582E 04	3.4207E 04
6	-1.4256E 04	3.7494E 04	-1.0260E 04	-5.8102E 04	2.2509E 04	1.5116E 04	7.2345E 03	4.0498E 03	-1.8064E 03	-4.1022E 03
7	-4.1952E 03	9.0505E 03	2.5709E 04	-4.2176E 04	-1.1261E 04	7.2345E 03	7.1624E 03	7.4484E 03	1.1147E 04	-9.5359E 03
8	5.1054E 02	-3.3816E 03	4.0805E 04	-3.5455E 04	-2.6155E 04	4.0498E 03	7.4484E 03	9.3242E 03	1.7555E 04	-1.2566E 04
9	1.1968E 04	-3.3275E 04	9.1345E 04	-3.3616E 04	-7.1582E 04	-1.8064E 03	1.1147E 04	1.7555E 04	4.0039E 04	-2.4076E 04
10	-4.6957E 03	1.3956E 04	-4.7891E 04	3.2289E 04	3.4207E 04	-4.1022E 03	-9.5359E 03	-1.2566E 04	-2.4076E 04	2.2839E 04
	5.8255E 03	-1.1616E 04	9.0150E 03	1.6913E 04	-7.2847E 03	-2.1235E 03	5.8434E 02	2.1404E 03	7.7202E 03	4.2494E 02

1	2	3	4	5	6	7	8	9	10
1.0405E 03	-2.1988E 03	2.3188E 03	3.1979E 03	-1.4508E 03	-7.1407E 02	-2.0866E 02	2.7766E 01	6.0520E 02	-2.3854E 02
-2.1988E 03	6.7820E 03	-5.2158E 03	-6.3549E 03	5.2142E 03	1.8834E 03	4.5631E 02	-1.6744E 02	-1.6696E 03	6.7939E 02
2.3188E 02	-5.2158E 03	2.0294E 04	-8.0208E 03	-1.1654E 04	-5.5274E 02	1.2314E 03	1.9778E 03	4.4621E 03	-2.2942E 03
3.1979E 03	-6.3549E 03	-8.0208E 03	1.7467E 04	1.2687E 03	-2.8861E 03	-2.0665E 03	-1.7184E 03	-1.5752E 03	1.5510E 03
-1.4508E 03	5.2142E 03	-1.1654E 04	1.2687E 03	8.7695E 03	1.1512E 03	-5.3114E 02	-1.2718E 03	-3.5192E 03	1.6423E 03
-7.1407E 02	1.8834E 03	-5.5274E 02	-2.8861E 03	1.1512E 03	7.5644E 02	3.5837E 02	1.9734E 02	-1.0194E 02	-2.0001E 02
-2.0866E 02	4.5631E 02	1.2314E 03	-2.0665E 03	1.1512E 03	3.5837E 02	3.5081E 02	3.6318E 02	5.3973E 02	-4.6612E 02
2.7766E 01	-1.6744E 02	1.9778E 03	-1.7184E 03	-5.3114E 02	1.9734E 02	3.6318E 02	4.5489E 02	8.5685E 02	-6.1511E 02
6.0520E 02	-1.6696E 03	4.4621E 03	-1.5752E 03	-3.5192E 03	-1.0194E 02	5.3973E 02	8.5685E 02	1.9645E 03	-1.1812E 03
-2.3864E 02	6.7939E 02	-2.2942E 03	1.5510E 03	1.6623E 03	-2.0001E 02	-4.6612E 02	-6.1511E 02	-1.1812E 03	1.1180E 03

INCOMPLETE P, K, D

NAT FREQ = 190.07089 GEN MASS = 1.60699 DAPF CCEF = 0.04782 NO ITER = 5

GAMMA	1	2	3	4	5	6	7	8	9	10
	-3.4313E-02	1.1372E-01	-6.1054E-01	1.0000E 00	-1.3270E-01	-2.1770E-01	-9.3592E-02	-1.9586E-02	1.7875E-01	-6.5457E-02
1	2.4870E-02	1.3733E-03	-4.8759E-03	1.1404E-02	-9.2704E-03	-6.5060E-04	8.3673E-04	9.2374E-04	3.5972E-04	-2.1987E-04
2	1.3733E-03	6.5445E 00	3.3043E-02	-6.7161E-02	6.2682E-02	2.7785E-03	2.5325E-03	1.9705E-03	1.1189E-02	7.6151E-03
3	-4.8759E-03	3.3043E-02	5.6018E 00	4.9453E-01	-3.4825E-01	4.7908E-02	5.6349E-02	3.3353E-02	-6.3640E-02	1.2583E-02
4	1.1404E-02	-6.7161E-02	4.9453E-01	4.1863E-01	1.1250E 00	-2.4973E-01	-1.8208E-01	-9.0923E-02	1.6772E-01	-4.4443E-02
5	-9.2704E-03	6.2682E-02	-3.4825E-01	1.1250E 00	1.6143E 00	3.6387E-01	1.0827E-01	3.1695E-02	-9.1746E-02	2.9535E-02
6	-6.5060E-04	2.7785E-03	4.7908E-02	-2.4973E-01	3.6387E-01	1.7883E-01	8.2701E-02	4.4658E-02	-2.2241E-02	3.1224E-03
7	8.3673E-04	2.5325E-03	5.6349E-02	-1.8208E-01	1.0827E-01	8.2701E-02	4.7422E-02	3.4328E-02	2.1340E-02	-8.4204E-03
8	9.2374E-04	1.9705E-03	3.3353E-02	-9.0923E-02	3.1695E-02	4.4658E-02	3.4328E-02	3.3531E-02	5.2721E-02	-1.3662E-02
9	3.5972E-04	1.1189E-02	-6.3640E-02	1.6772E-01	-9.1746E-02	-2.2241E-02	2.1340E-02	5.2721E-02	1.8121E-01	1.0751E-02
10	-2.1987E-04	7.6151E-03	1.2983E-02	-4.4443E-02	2.9535E-02	3.1224E-03	-8.4204E-03	-1.3662E-02	1.0751E-02	2.7594E-01
	2.4751E-02	6.6005E 00	5.8632E 00	5.3506E 00	2.8861E 00	4.5124E-01	1.6328E-01	1.2859E-01	2.6767E-01	2.7320E-01

1	2.3447E 04	-5.2760E 04	5.2413E 04	-1.4701E 04	-1.3393E 05	1.3393E 05	-1.8361E 04	2.8646E 03	3.1651E 03	2.0508E 03	-2.0692E 03	4.5202E 02
2	-5.2760E 04	1.6527E 05	-2.8365E 05	1.3393E 05	1.3393E 05	1.3393E 05	6.9359E 04	-1.9247E 04	-1.5342E 04	-8.4863E 03	1.3313E 04	-3.1036E 03
3	5.2413E 04	-2.8365E 05	1.2658E 06	-1.5653E 06	-5.0351E 04	2.9438E 05	5.0351E 04	2.9438E 05	1.5667E 05	6.8217E 04	-1.5878E 05	4.3704E 04
4	-1.4701E 04	1.3393E 05	-1.5653E 06	2.6457E 06	-2.7523E 05	-5.0707E 05	-2.7523E 05	-5.0707E 05	-2.5668E 05	-8.0345E 04	3.7606E 05	-1.1773E 05
5	-1.8361E 04	6.9359E 04	-5.0351E 04	-2.7523E 05	2.1734E 05	8.8723E 04	2.1734E 05	8.8723E 04	1.7205E 04	-2.0198E 04	-1.2595E 05	5.4116E 04
6	2.8646E 03	-1.9247E 04	2.9438E 05	-5.0707E 05	8.8723E 04	1.2374E 05	1.7205E 04	1.2374E 05	5.3933E 04	1.3822E 04	-9.0995E 04	2.8558E 04
7	3.1651E 03	-1.5342E 04	1.5667E 05	-2.5668E 05	1.7205E 04	5.3933E 04	1.7205E 04	5.3933E 04	2.7238E 04	1.1650E 04	-2.7195E 04	4.5050E 03
8	2.0508E 03	-8.4863E 03	6.8217E 04	-8.0345E 04	-2.0198E 04	1.3822E 04	-2.0198E 04	1.3822E 04	2.7195E 04	9.5307E 03	1.1327E 05	-5.0892E 04
9	-2.0692E 03	1.3313E 04	-1.5878E 05	3.7606E 05	-1.2595E 05	-9.0995E 04	-1.2595E 05	-9.0995E 04	-2.7195E 04	9.5307E 03	1.1327E 05	-5.0892E 04
10	4.5202E 02	-3.1036E 03	4.3704E 04	-1.1773E 05	5.4116E 04	2.8558E 04	5.4116E 04	2.8558E 04	4.5050E 03	-9.6272E 03	-5.0892E 04	3.2659E 04
	-3.4992E 03	1.9287E 04	-1.5690E 05	2.8867E 05	-4.3347E 04	-6.1286E 04	-4.3347E 04	-6.1286E 04	-2.4850E 04	-3.1822E 03	5.6296E 04	-1.7363E 04

1	1	1.1695E 03	-2.6265E C3	2.5281E 03	-5.6297E 02	-9.5173E 02	1.0459E 02	1.4332E 02	1.0143E 02	-6.7050E 01	7.5344E 00
2	2	-2.6265E 03	8.1993E 03	-1.2624E 04	6.1091E 03	3.5602E 03	-8.3010E 02	-7.1022E 02	-4.1154E 02	5.5831E 02	-1.3644E 02
3	3	2.5281E 03	-1.2624E 04	6.1151E 04	-7.4940E 04	-2.7739E 03	1.4016E 04	7.4944E 03	3.2885E 03	-7.4995E 03	2.0861E 03
4	4	-5.6297E 02	6.1091E 03	-7.4940E 04	1.2707E 05	-1.3276E 04	-2.6748E 04	-1.2325E 04	-3.8652E 03	1.8717E 04	-5.6233E 03
5	5	-5.5173E 02	3.5602E 03	-2.7739E 03	-1.3276E 04	1.0700E 04	4.3177E 03	8.3014E 02	-9.8690E 02	-6.1190E 03	2.6143E 03
6	6	1.0459E 02	-8.3010E 02	1.4016E 04	-2.6748E 04	4.3177E 03	5.9512E 03	2.5916E 03	6.6465E 02	-6.3671E 03	1.3619E 03
7	7	1.4332E 02	-7.1022E 02	7.4944E 03	-1.2325E 04	8.3014E 02	2.5916E 03	1.3104E 03	5.6405E 02	-1.2939E 03	2.0534E 02
8	8	1.0143E 02	-4.1154E 02	3.2885E 03	-3.8652E 03	-5.8690E 02	6.6465E 02	5.6405E 02	4.9694E 02	4.7313E 02	-4.7459E 02
9	9	-6.7050E 01	5.5831E 02	-7.4995E 03	1.8717E 04	-6.1190E 03	-4.3671E 03	-1.2939E 03	4.7313E 02	5.4665E 03	-2.4636E 03
10	10	7.5344E 00	-1.3644E 02	2.0861E 03	-5.6233E 03	2.6143E 03	1.3619E 03	2.0534E 02	-4.7459E 02	-2.4636E 03	1.5876E 03

INCCMPLETE P, K, D

NAT FREQ = 309.39404 GEN MASS = 1.07392 DAPP CCEF = 0.04663 NO ITER = 4
 FREQ NO 8 = 310.0000

GAMMA -5.8373E-03 2.9010E-02 -3.4520E-01 1.0000E 00 -7.8803E-01 4.8658E-02 1.8181E-01 1.4738E-01 -1.6764E-01 4.6678E-02

	1	2	3	4	5	6	7	8	9	10
1	2.4907E-02	1.1914E-03	-2.7115E-03	5.1354E-03	-4.3304E-03	-9.5562E-04	-3.0302E-04	-1.2643E-07	1.4106E-03	-5.1248E-04
2	1.1914E-03	6.5454E 00	2.2288E-02	-3.6007E-02	3.8131E-02	4.2943E-03	8.1967E-03	6.5620E-03	5.9667E-03	9.0693E-03
3	-2.7115E-03	2.2288E-02	5.7298E 00	1.2381E-01	-5.6119E-01	2.59870E-02	-1.1052E-02	-2.1283E-02	-1.4929E-03	-4.3210E-03
4	5.1354E-03	-3.6007E-02	1.2381E-01	5.2603E 00	2.7871E-01	-1.9748E-01	1.3172E-02	6.7350E-02	-1.2314E-02	5.6850E-03
5	-4.3304E-03	3.8131E-02	-5.6115E-02	2.7871E-01	2.2812E 00	3.2269E-01	-4.5591E-02	-9.3029E-02	5.0123E-02	-9.9670E-03
6	-9.5562E-04	4.2943E-03	2.9870E-02	-1.9748E-01	3.2269E-01	1.8137E-01	9.2202E-02	5.2359E-02	-3.1001E-02	5.5615E-03
7	-3.0302E-04	8.1967E-03	-1.1052E-02	1.3172E-02	-4.5591E-02	9.2202E-02	8.2921E-02	6.3104E-02	-1.1393E-02	6.9350E-04
8	-1.2643E-07	6.5620E-03	-2.1283E-02	6.7350E-02	-9.3029E-02	5.2359E-02	6.3104E-02	5.6857E-02	2.6188E-02	-6.2746E-03
9	1.4106E-03	5.9667E-03	-1.4929E-03	-1.2314E-02	5.0123E-02	-3.1001E-02	-1.1393E-02	2.6188E-02	2.1139E-01	2.3474E-03
10	-5.1248E-04	9.0693E-03	-4.3210E-03	5.6850E-03	-9.9670E-03	5.5615E-03	6.9350E-04	-6.2746E-03	2.3474E-03	2.7828E-01

2.3831E-02 6.6051E 00 5.8088E 00 5.5083E 00 2.7618E 00 4.5892E-01 1.9195E-01 1.5183E-01 2.4123E-01 2.8056E-01

	1	2	3	4	5	6	7	8	9	10
1	2.3585E 04	-5.3447E 04	6.0590E 04	-3.8391E 04	3.0761E 02	1.7119E 03	-1.1420E 03	-1.4406E 03	1.9022E 03	-6.5378E 02
2	-5.3447E 04	1.6869E 05	-3.0429E 05	2.5166E 05	-2.3418E 04	-1.3518E 04	6.0630E 03	8.8651E 03	-6.4243E 03	2.3919E 03
3	6.0590E 04	-3.0429E 05	1.7494E 06	-2.9663E 06	1.0336E 06	2.2621E 05	-9.8037E 04	-1.3826E 05	7.6078E 04	-2.1690E 04
4	-3.8391E 04	2.5166E 05	-2.9663E 06	6.7041E 06	-3.4734E 06	-3.5959E 05	4.8119E 05	5.1778E 05	-3.0429E 05	7.1702E 04
5	3.0761E 02	-2.3418E 04	1.0536E 06	-3.4734E 06	2.7376E 06	-6.6892E 04	-5.6426E 05	-4.9154E 05	4.1020E 05	-9.5166E 04
6	1.7119E 03	-1.3518E 04	2.2621E 05	-3.5959E 05	-6.6892E 04	1.3335E 05	8.9837E 04	4.2926E 04	-1.2410E 05	3.7776E 04
7	-1.1420E 03	6.0630E 03	-9.8037E 04	4.8119E 05	-5.6426E 05	8.9837E 04	1.6139E 05	1.2040E 05	-1.5089E 05	3.8947E 04
8	-1.4406E 03	8.8651E 03	-1.3826E 05	5.1778E 05	-4.9154E 05	4.2926E 04	1.2040E 05	9.8354E 04	-9.0740E 04	1.8292E 04
9	1.9022E 03	-6.4243E 03	7.6078E 04	-3.0429E 05	4.1020E 05	-1.2410E 05	-1.5089E 05	-9.0740E 04	2.2732E 05	-8.2649E 04
10	-6.5378E 02	2.3919E 03	-2.1690E 04	7.1702E 04	-9.5166E 04	3.7776E 04	3.8947E 04	1.3292E 04	-8.2649E 04	4.1501E 04
	-6.9776E 03	3.6574E 04	-3.6266E 05	8.8456E 05	-5.1293E 05	-3.2291E 04	8.3491E 04	8.4639E 04	-4.3600E 04	1.0451E 04

	1	2	3	4	5	6	7	8	9	10
1	1.1760E 03	-2.6585E 03	2.9094E 03	-1.6677E 03	-8.1147E 01	5.0935E 01	-5.7534E 01	-6.1391E 01	1.1815E 02	-4.4C33E 01
2	-2.6585E 03	3.3586E 03	-1.4721E 04	1.1599E 04	-7.6630E 02	-5.6295E 02	2.8800E 02	3.9760E 02	-3.6210E 02	1.1981E 02
3	2.9094E 03	-1.4721E 04	8.3703E 04	-1.4027E 05	4.8709E 04	1.0837E 04	-4.3837E 03	-6.3401E 03	3.4528E 03	-9.6344E 02
4	-1.6677E 03	1.1599E 04	-1.4027E 05	3.1633E 05	-1.6242E 05	-1.7539E 04	2.2085E 04	2.4027E 04	-1.3711E 04	3.2106E 03
5	-8.1147E 01	-7.6630E 02	4.8703E 04	-1.6242E 05	1.2823E 05	-2.9392E 03	-2.6286E 04	-2.2967E 04	1.6883E 04	-4.3472E 03
6	5.0935E 01	-5.6295E 02	1.0837E 04	-1.7539E 04	-2.9392E 03	6.3993E 03	4.2659E 03	2.0219E 03	-5.91C9E 03	1.7917E 03
7	-5.7534E 01	2.8800E 02	-4.3837E 03	2.2085E 04	-2.6286E 04	4.2659E 03	7.5670E 03	5.6353E 03	-7.0624E 03	1.8115E 03
8	-6.1391E 01	3.9760E 02	-6.3401E 03	2.4027E 04	-2.2967E 04	2.0219E 03	5.6353E 03	4.6077E 03	-4.2028E 03	8.2737E 02
9	1.1815E 02	-3.6210E 02	3.4528E 03	-1.3711E 04	1.6883E 04	-5.9109E 03	-7.0624E 03	-4.2028E 03	1.0785E 04	-3.9446E 03
10	-4.4035E 01	1.1981E 02	-9.6344E 02	3.2106E 03	-4.3472E 03	1.7917E 03	1.8115E 03	8.2737E 02	-3.9446E 03	2.3CC0E 03

INCCMPLETE P, A, C

NAT FREQ = 562.24341		GEN MASS =		FREQ NC 9 = 560.0000		CAPF COEF =		NO ITER = 5			
1.5528E-03 - 8.3610E-03		1.4797E-01 - 6.5012E-01		1.0000E 00 - 7.3201E-01		-1.0328E-02		3.4377E-01 - 1.5456E-01		3.3612E-02	
GAMMA	1	2	3	4	5	6	7	8	9	10	
1	2.4908E-02	1.1806E-03	-2.6268E-03	4.7613E-03	-3.7549E-03	-1.3768E-03	-3.0896E-04	1.9769E-04	1.3217E-03	-4.9314E-04	
2	1.1866E-03	6.5455E 00	2.1829E-02	-3.3988E-02	3.5025E-02	6.5678E-03	8.2288E-03	5.4943E-03	6.4468E-03	8.9649E-03	
3	-2.6268E-03	2.1829E-02	5.7379E 00	8.8167E-02	-1.2855E-03	-1.0268E-02	-1.1618E-02	-2.4327E-03	-9.9687E-03	-2.4780E-03	
4	4.7613E-03	-3.3988E-02	8.8167E-02	5.4169E 00	3.7797E-02	-2.1127E-02	1.5660E-02	-1.5471E-02	2.4926E-02	-2.4127E-03	
5	-3.7549E-03	3.5025E-02	-1.2855E-03	3.7797E-02	2.6518E 00	5.1432E-02	-4.9418E-02	3.4365E-02	-7.1560E-03	2.4887E-03	
6	-1.3768E-03	6.5678E-03	-1.0268E-02	-2.1127E-02	5.1432E-02	3.7994E-01	9.5003E-02	-4.0893E-02	1.0929E-02	-3.5561E-03	
7	-3.0896E-04	8.2288E-03	-1.1618E-02	1.5660E-02	-4.9418E-02	9.5003E-02	8.2960E-02	6.1788E-02	-1.0801E-02	5.6486E-04	
8	1.9769E-04	5.4943E-03	-2.4327E-03	-1.5471E-02	3.4365E-02	-4.0893E-02	6.1788E-02	1.0065E-01	6.4957E-03	-1.9926E-03	
9	1.3217E-03	6.4468E-03	-9.9687E-03	2.4926E-02	-7.1560E-03	1.0929E-02	-1.0801E-02	6.4957E-03	2.2025E-01	4.2207E-04	
10	-4.9314E-04	8.9649E-03	-2.4780E-03	2.4887E-03	-3.5561E-03	5.6486E-04	-1.9926E-03	4.2207E-04	2.7869E-01	2.7869E-01	
	2.3614E-02	6.6052E 00	5.8072E 00	5.5152E 00	2.7513E 00	4.6665E-01	1.9206E-01	1.4820E-01	2.4286E-01	2.8020E-01	

	1	2	3	4	5	6	7	8	9	10
1	2.3596E 04	-5.3507E 04	6.1653E 04	-4.3060E 04	7.4889E 03	-3.5449E 03	-1.2162E 03	1.0282E 03	7.9215E 02	-4.1240E 02
2	-5.3507E 04	1.6901E 05	-3.1002E 05	2.7686E 05	-6.2178E 04	1.4854E 04	6.4633E 03	-4.354E 03	-4.3303E 02	1.0891E 03
3	6.1653E 04	-3.1002E 05	1.8507E 06	-3.4111E 06	1.7380E 06	-2.7470E 05	-1.0510E 05	9.6991E 04	-2.9699E 04	1.3114E 03
4	-4.3060E 04	2.7686E 05	-3.4111E 06	8.6588E 06	-6.4800E 06	1.8412E 06	5.1224E 05	-5.1581E 05	1.6045E 05	-2.9355E 04
5	7.4889E 03	-6.2178E 04	1.7380E 06	-6.4800E 06	7.3623E 06	-3.4522E 06	-6.1202E 05	1.0983E 06	3.0467E 05	6.0279E 04
6	-3.5449E 03	1.4854E 04	-2.7470E 05	1.8412E 06	-3.4522E 06	2.6114E 06	1.2480E 05	-1.1209E 05	3.9918E 05	-7.6011E 04
7	-1.2162E 03	6.4633E 03	-1.0510E 05	5.1224E 05	-6.1202E 05	1.2480E 05	1.8189E 05	1.0398E 05	-1.4351E 05	3.7342E 04
8	1.0282E 03	-4.4594E 03	9.6991E 04	-5.1581E 05	1.0983E 06	-1.1209E 06	1.0398E 05	6.4490E 05	-3.3649E 05	7.1730E 04
9	7.9215E 02	-4.3303E 02	-2.9699E 04	1.6045E 05	-3.0467E 05	3.9918E 05	-1.4351E 05	-3.3649E 05	3.3782E 05	-1.0668E 05
10	-4.1240E 02	1.0891E 03	1.3114E 03	-2.9355E 04	6.0279E 04	-7.6011E 04	3.7342E 04	7.1730E 04	-1.0668E 05	4.6726E 04
	-7.1822E 03	3.7678E 04	-3.8210E 05	9.7024E 05	-6.4472E 05	6.4186E 04	8.4852E 04	3.9331E 04	-2.3227E 04	6.0214E 03

	1	2	3	4	5	6	7	8	9	10
1	1.1765E 03	-2.6615E 03	2.9633E 03	-1.9033E 03	2.8116E 02	-2.1428E 02	-6.1276E 01	6.3162E 01	6.2148E 01	-3.1855E 01
2	-2.6615E 03	8.3750E 03	-1.5010E 04	1.2871E 04	-2.7218E 03	6.6847E 02	3.0819E 02	-2.7464E 02	-5.9831E 01	5.4C86E 01
3	2.9630E 03	-1.5010E 04	6.8812E 04	-1.6272E 05	8.3234E 04	-1.4435E 04	-4.7402E 04	5.5285E 03	-1.8838E 03	1.9699E 02
4	-1.9033E 03	1.2871E 04	-1.6272E 05	4.1494E 05	-3.1410E 05	9.3497E 04	2.3651E 04	-2.8119E 04	9.7362E 03	-1.8879E 03
5	2.8116E 02	-2.7218E 03	8.3234E 04	-3.1410E 05	3.6155E 05	-1.7373E 05	-2.8695E 04	5.7243E 04	-1.7183E 04	3.4952E 03
6	-2.1428E 02	6.6847E 02	-1.4435E 04	9.3497E 04	-1.7373E 05	1.3142E 05	6.0298E 03	-5.6692E 04	2.0489E 04	-3.9490E 03
7	-6.1276E 01	3.0819E 02	-4.7402E 04	2.3651E 04	-2.8695E 04	6.0298E 03	7.5919E 03	4.8070E 03	-6.6899E 03	1.7305E 03
8	6.3162E 01	-2.7464E 02	5.5285E 03	-2.8119E 04	5.7243E 04	-5.6692E 04	4.8070E 03	3.2102E 04	-1.6601E 04	3.5234E 03
9	6.2148E 01	-5.9831E 01	-1.8838E 03	9.7362E 03	-1.7183E 04	2.0489E 04	-6.6899E 03	-1.6601E 04	1.6360E 04	-5.1568E 03
10	-3.1855E 01	5.4086E 01	1.9699E 02	-1.8879E 03	3.4952E 03	-3.9490E 03	1.7305E 03	3.5234E 03	-5.1568E 03	2.2636E 03

INCOMPLETE P, K, D

NAT FREQ = 1145.06592 GEN MASS = 0.09045 DAPF CCEF = 0.05000 NO ITER = 7
 GAMMA 4.0536E-04 -2.1881E-03 4.6041E-02 -2.6088E-01 5.8568E-01 -9.4365E-01 1.0000E 00 -5.6598E-01 1.1942E-01 -1.8378E-02

	1	2	3	4	5	6	7	8	9	10
1	2.4908E-02	1.1865E-03	-2.6251E-03	4.7517E-03	-3.7335E-03	-1.4114E-03	-2.7229E-04	1.7694E-04	1.3261E-03	-4.9381E-04
2	1.1865E-03	6.5455E 00	2.1820E-02	-3.3936E-02	3.4910E-02	6.7546E-03	8.0309E-03	5.6063E-03	6.4232E-03	8.9685E-03
3	-2.6251E-03	2.1820E-02	5.7381E 00	8.7080E-02	1.1535E-03	-1.4198E-02	-7.4539E-03	-4.7897E-03	-9.4714E-03	-2.5545E-03
4	4.7517E-03	-3.3936E-02	8.7080E-02	5.4230E 00	2.3976E-02	1.1409E-03	-7.9371E-03	-2.1152E-03	2.2108E-02	-1.9790E-03
5	-3.7335E-03	3.4910E-02	1.1535E-03	2.3976E-02	2.6828E 00	1.4411E-03	3.5574E-03	4.3814E-03	-8.2983E-04	1.5151E-03
6	-1.4114E-03	6.7546E-03	-1.4198E-02	1.1409E-03	1.4411E-03	4.6048E-01	9.6483E-03	7.4160E-03	7.3666E-04	-1.9875E-03
7	-2.7229E-04	8.0309E-03	-7.4539E-03	-7.9371E-03	3.5574E-03	9.6483E-03	1.7341E-01	1.0594E-02	3.1665E-07	-1.0974E-03
8	1.7694E-04	5.6063E-03	-4.7897E-03	-2.1152E-03	4.3814E-03	7.4160E-03	1.0594E-02	1.2963E-01	3.8231E-04	-1.0518E-03
9	1.3261E-03	6.4232E-03	-9.4714E-03	2.2108E-02	-8.2983E-04	7.3666E-04	3.1665E-07	3.8231E-04	2.2154E-01	2.2356E-04
10	-4.9381E-04	8.9685E-03	-2.5545E-03	-1.9790E-03	1.5151E-03	-1.9875E-03	-1.0974E-03	-1.0518E-03	2.2356E-04	2.7872E-01

2.3813E-02 6.6052E 00 5.8070E 00 5.5161E 00 2.7492E 00 4.7002E-01 1.8848E-01 1.5022E-01 2.4244E-01 2.8027E-01

	1	2	3	4	5	6	7	8	9	10
1	2.3597E 04	-5.3512E 04	6.1740E 04	-4.3555E 04	8.6005E 03	-5.3359E 03	6.8170E 02	-4.5992E 01	1.0188E 03	-4.4728E 02
2	-5.3512E 04	1.6303E 05	-3.1050E 05	2.7954E 05	-6.8178E 04	2.4521E 04	-3.7814E 03	1.3389E 03	-1.6564E 03	1.2774E 03
3	6.1740E 04	-3.1050E 05	1.8606E 06	-3.4674E 06	1.8642E 06	-4.7813E 05	1.1046E 05	-2.5016E 04	-3.9569E 03	-2.6502E 03
4	-4.3555E 04	2.7954E 05	-3.4674E 06	8.9774E 06	-7.1953E 06	2.9939E 06	-7.0922E 05	1.7551E 05	1.4589E 04	-6.9077E 03
5	8.6005E 03	-6.8178E 04	1.8642E 06	-7.1953E 06	8.9683E 06	-6.0399E 06	2.1302E 06	-4.5372E 05	2.2795E 04	9.8840E 03
6	-5.3359E 03	2.4521E 04	-4.7813E 05	2.9939E 06	-6.0399E 06	6.7807E 06	-4.2934E 06	1.3798E 06	-1.2843E 05	5.1860E 03
7	6.8170E 02	-3.7814E 03	1.1046E 05	-7.0922E 05	2.1302E 06	-4.2934E 06	4.8439E 06	-2.5460E 06	4.1560E 05	-4.8703E 04
8	-4.5992E 01	1.3389E 03	-2.5016E 04	1.7551E 05	-4.5372E 05	1.3798E 06	-2.5460E 06	2.1447E 06	-6.5294E 05	1.2043E 05
9	1.0188E 03	-1.6564E 03	3.9569E 03	1.4589E 04	2.2795E 04	-1.2843E 05	4.1560E 05	-6.5294E 05	4.0459E 05	-1.1695E 05
10	-4.4728E 02	1.2774E 03	-2.6502E 03	-6.9077E 03	9.8840E 03	5.1860E 03	-4.8703E 04	1.2043E 05	-1.1695E 05	4.8707E 04
	-7.2574E 03	3.8083E 04	-3.9063E 05	1.0185E 06	-7.5314E 05	2.3887E 05	-1.0026E 05	1.4410E 05	-4.5332E 04	9.4233E 03

	1	2	3	4	5	6	7	8	9	10
1	1.1766E 03	-2.6617E 03	2.9674E 03	-1.9280E 03	3.3675E 02	-3.0383E 02	3.3628E 01	9.4479E 00	7.3481E 01	-3.3599E 01
2	-2.6617E 03	8.3761E 03	-1.5034E 03	1.3004E 04	-3.0218E 03	1.3519E 03	-2.0409E 02	1.5303E 01	-1.2101E 02	6.3500E 01
3	2.9674E 03	-1.5034E 04	8.9308E 04	-1.6553E 05	8.9547E 04	-2.4607E 04	6.0392E 03	-5.7248E 02	-5.9652E 02	-1.1114E 00
4	-1.9280E 03	1.3004E 04	-1.6553E 05	4.3088E 05	-3.4988E 05	1.5113E 05	-3.7427E 04	6.4509E 03	2.4424E 03	-7.6539E 02
5	3.3675E 02	-3.0218E 03	8.9547E 04	-3.4988E 05	4.4184E 05	-3.0313E 05	1.0843E 05	-2.0364E 04	-8.0800E 02	9.7523E 02
6	-3.0383E 02	1.3519E 03	-2.4607E 04	1.5113E 05	-3.0313E 05	3.3990E 05	-2.1490E 05	6.8351E 04	-5.8934E 03	1.1126E 02
7	3.3628E 01	-2.0409E 02	6.0392E 03	-3.7427E 04	1.0843E 05	-2.1490E 05	2.4172E 05	-1.2770E 05	2.1268E 04	-2.5721E 03
8	9.4479E 00	1.5303E 01	-5.7248E 02	6.4509E 03	-2.0364E 04	6.8351E 04	-1.0710E 05	1.0710E 05	-3.2425E 04	5.9586E 03
9	7.3481E 01	-1.2101E 02	-5.9652E 02	2.4424E 03	-8.0800E 02	-5.8934E 03	2.1268E 04	-3.2425E 04	1.9699E 04	-5.6706E 03
10	-3.3599E 01	6.3500E 01	-1.1114E 00	-7.6539E 02	9.7523E 02	1.1126E 02	-2.5721E 03	5.9586E 03	-5.6706E 03	2.3427E 03

COMPLETE M, K, C

1	2	3	4	5	6	7	8	9	10
2.4908E-02	1.1865E-03	-2.6251E-03	4.7517E-03	-3.7335E-03	-1.4114E-03	-2.7229E-04	1.7694E-04	1.3261E-03	-4.9381E-04
1.1865E-03	6.5452E 00	2.1820E-02	-3.3936E-02	3.4910E-02	6.7546E-03	8.0309E-03	5.6063E-03	6.4232E-03	8.9685E-03
-2.6251E-03	2.1820E-02	5.7381E 00	8.7080E-02	1.1535E-03	-1.4198E-02	-7.4539E-03	-4.7897E-03	-9.4714E-03	-2.5545E-03
4.7517E-03	-3.3936E-02	8.7080E-02	5.4230E 00	2.3976E-02	1.1409E-03	-7.9371E-03	-2.1152E-03	2.2108E-02	-1.9790E-03
-3.7335E-03	3.4910E-02	1.1535E-03	2.3976E-02	2.6828E 00	1.4411E-03	3.5574E-03	4.3814E-03	-8.2983E-04	1.5151E-03
-1.4114E-03	6.7546E-03	-1.4198E-02	1.1409E-03	1.4411E-03	4.6048E-01	9.6483E-03	7.4160E-03	7.3666E-04	-1.9875E-03
-2.7229E-04	8.0309E-03	-7.4539E-03	-7.9371E-03	3.5574E-03	9.6483E-03	1.7341E-01	1.0594E-02	3.1665E-07	-1.0974E-03
1.7694E-04	5.6063E-03	-4.7897E-03	-2.1152E-03	4.3814E-03	7.4160E-03	1.0594E-02	1.2962E-01	3.8231E-04	-1.0518E-03
1.3261E-03	6.4232E-03	-9.4714E-03	2.2108E-02	-8.2983E-04	7.3666E-04	3.1665E-07	3.8231E-04	2.2154E-01	2.2356E-04
-4.9381E-04	8.9685E-03	-2.5545E-03	-1.9790E-03	1.5151E-03	-1.9875E-03	-1.0974E-03	-1.0518E-03	2.2356E-04	2.7872E-01
2.3813E-02	6.6052E 00	5.8070E 00	5.5161E 00	2.7492E 00	4.7002E 00	1.8848E-01	1.5022E-01	2.4244E-01	2.8C27E-01

	1	2	3	4	5	6	7	8	9	10
1	2.3597E 04	-5.3512E 04	6.1740E 04	-4.3555E 04	8.6005E 03	-5.3359E 03	6.8170E 02	-4.5992E 01	1.0180E 03	-4.4728E 02
2	-5.3512E 04	1.6903E 05	-3.1050E 05	2.7954E 05	-6.8178E 04	2.4521E 04	-3.7814E 03	1.3386E 03	-1.0564E 03	1.2774E 03
3	6.1740E 04	-3.1050E 05	1.8609E 06	-3.4674E 06	1.8642E 06	-4.7913E 05	1.1046E 05	-2.5014E 04	-1.9565E 03	-2.6502E 03
4	-4.3555E 04	2.7954E 05	-3.4674E 06	8.4774E 06	-7.1953E 06	2.9939E 06	-7.0922E 05	1.7551E 05	1.4589E 04	-6.4077E 03
5	8.6005E 03	-6.8178E 04	1.8642E 06	-7.1953E 06	8.4774E 06	-6.0399E 06	2.1302E 06	-4.5372E 05	2.2755E 04	9.1840E 03
6	-5.3359E 03	2.4521E 04	-4.7813E 05	2.9939E 06	-6.0399E 06	6.7807E 06	-4.2934E 06	1.3798E 06	-1.2843E 05	5.1860E 04
7	6.8170E 02	-3.7814E 03	1.1046E 05	-7.0922E 05	4.1302E 06	-4.2534E 06	4.8439E 06	-2.5460E 06	4.1560E 05	-4.0703E 04
8	-4.5992E 01	1.3386E 03	-2.5014E 04	1.7551E 05	-4.5372E 05	1.3798E 06	-2.5460E 06	2.1447E 06	-6.5254E 05	1.2043E 05
9	1.0180E 03	-1.0564E 03	-3.9565E 03	1.4589E 04	2.2795E 04	-1.2843E 05	4.1560E 05	-6.5254E 05	4.0459E 05	-1.1695E 05
10	-4.4728E 02	1.2774E 03	-2.6502E 03	-6.4077E 03	5.8840E 03	5.1960E 03	-4.8703E 04	1.2043E 05	-1.1695E 05	4.0307E 04
	-7.2573E 03	3.8083E 04	-3.4063E 05	1.0185E 06	-7.5314E 05	2.3887E 05	-1.0024E 05	1.4410E 05	-4.5332E 04	9.4233E 03

	1	2	3	4	5	6	7	8	9	10
1	1.1760E 03	-2.6617E 03	2.9674E 03	-1.9280E 03	3.3675E 02	-3.0383E 02	3.3628E 01	9.4475E 00	7.3481E 01	-3.3599E 01
2	-2.6617E 03	8.3761E 03	-1.5034E 04	1.3004E 04	-3.0218E 03	1.3519E 03	-2.0409E 02	1.5303E 01	-1.2101E 02	6.3500E 01
3	2.9674E 03	-1.5034E 04	8.9308E 04	-1.6553E 05	8.9547E 04	-2.4607E 04	6.0392E 03	-5.7248E 02	-5.7652E 02	-1.1114E 00
4	-1.9280E 03	1.3004E 04	-1.6553E 05	4.3088E 05	-3.4988E 05	1.5113E 05	-3.7427E 04	6.4509E 03	2.4424E 03	-7.6539E 02
5	9.3675E 02	-3.0218E 03	9.9547E 04	-3.4988E 05	4.4186E 05	-3.0313E 05	1.0843E 05	-2.0364E 04	-8.0800E 02	9.7523E 02
6	-3.0383E 02	1.3519E 03	-2.4607E 04	1.5113E 05	-3.0313E 05	3.3990E 05	-2.1490E 05	6.9351E 04	-5.8934E 03	1.1126E 02
7	3.3628E 01	-2.0409E 02	6.0392E 03	-3.7427E 04	1.0843E 05	-2.1490E 05	2.4172E 05	-1.2770E 05	2.1268E 04	-2.5721E 03
8	9.4475E 00	1.5303E 01	-5.7248E 02	6.4509E 03	-2.0364E 04	6.8351E 04	-1.2770E 05	1.0718E 05	-3.2425E 04	5.9586E 03
9	7.3481E 01	-1.2101E 02	-5.7652E 02	2.4424E 03	-8.0800E 02	-5.8934E 03	2.1268E 04	-3.2425E 04	1.9699E 04	-5.6706E 03
10	-3.3599E 01	6.3500E 01	-1.1114E 00	-7.6539E 02	9.7523E 02	1.1126E 02	-2.5721E 03	5.9586E 03	-5.6706E 03	2.3427E 03

INFLUENCE CCEF MATRIX

	1	2	3	4	5	6	7	8	9	10
1	4.9100E-04	3.1437E-04	1.7455E-04	1.1512E-04	8.7071E-05	4.7687E-05	8.4755E-06	-2.6264E-05	-7.3452E-05	-1.0447E-04
2	3.1437E-04	2.3218E-04	1.4353E-04	8.7982E-05	7.8206E-05	4.7951E-05	1.6603E-05	-1.1640E-05	-4.8271E-05	-7.3599E-05
3	1.7455E-04	1.4353E-04	1.1013E-04	8.2829E-05	7.5581E-05	5.7495E-05	3.5315E-05	1.3925E-05	-1.0095E-05	-2.9481E-05
4	1.1512E-04	8.7982E-05	8.2830E-05	6.6455E-05	6.5482E-05	5.4745E-05	3.9061E-05	2.3049E-05	7.0184E-06	-7.8399E-06
5	8.7071E-05	7.8206E-05	7.5583E-05	6.5483E-05	7.0681E-05	6.5105E-05	5.2497E-05	3.8318E-05	2.6950E-05	1.3539E-05
6	4.7687E-05	4.7951E-05	5.7497E-05	5.4746E-05	6.5106E-05	6.6800E-05	5.9048E-05	4.9253E-05	4.5146E-05	3.5784E-05
7	8.4755E-06	1.6603E-05	3.5318E-05	3.9063E-05	5.2498E-05	5.9049E-05	5.8761E-05	5.4981E-05	5.9210E-05	5.5623E-05
8	-2.6264E-05	-1.1640E-05	1.3928E-05	2.3051E-05	3.8320E-05	4.9254E-05	5.4982E-05	5.8120E-05	7.2139E-05	7.6183E-05
9	-7.3447E-05	-4.8267E-05	-1.0092E-05	7.0212E-06	2.6992E-05	4.5148E-05	5.9219E-05	7.2139E-05	1.1022E-04	1.3737E-04
10	-1.0447E-04	-7.3595E-05	-2.9477E-05	-7.8370E-06	1.3542E-05	3.5787E-05	5.5625E-05	7.6185E-05	1.3737E-04	2.1108E-04

DAMPING CCEF MATRIX

	1	2	3	4	5	6	7	8	9	10
1	4.9921E-02	2.2757E-06	-6.096CE-06	2.7698E-05	-1.5041E-05	-5.3160E-05	-2.3264E-05	4.4182E-05	1.0522E-04	-9.9905E-05
2	5.7815E-04	5.0525E-02	7.3514E-04	4.2973E-04	4.7825E-04	3.7867E-04	-3.5521E-05	-6.3990E-04	-1.8973E-03	-3.0861E-03
3	-1.6286E-03	6.7604E-04	4.9838E-02	8.6473E-04	-3.1281E-04	-1.1104E-03	-3.9022E-04	4.7575E-04	7.7370E-04	3.2720E-03
4	6.5757E-03	3.2478E-04	8.1839E-04	4.8604E-02	1.1682E-03	1.8355E-03	-1.0093E-03	-2.5095E-03	2.0580E-03	9.9534E-04
5	-1.7571E-03	2.3371E-04	-1.0026E-04	6.2209E-04	4.9252E-02	2.2296E-05	3.1731E-03	4.2654E-03	-1.2075E-03	-2.1160E-04
6	-1.0822E-03	-5.4426E-06	-1.1996E-04	1.0564E-04	9.2690E-06	4.9840E-02	-6.0087E-04	-7.1378E-04	5.8828E-04	-4.5808E-04
7	-1.6296E-04	1.0192E-05	-3.0994E-06	-2.2940E-05	2.3172E-04	-1.8525E-04	4.9099E-02	-9.1428E-04	4.9490E-04	-2.8962E-04
8	2.2393E-04	-1.5199E-05	4.4703E-06	-6.4481E-05	2.1893E-04	-1.8394E-04	-7.0572E-04	4.9336E-04	8.2314E-05	-2.0C27E-04
9	1.0477E-03	-6.1691E-05	3.2008E-05	8.6386E-05	-9.4414E-05	2.9129E-04	5.9927E-04	7.3373E-05	4.8222E-02	-2.0313E-04
10	-1.1393E-03	-1.2738E-04	1.5700E-04	5.0027E-05	-2.3678E-05	-2.5159E-04	-4.2236E-04	-3.6418E-04	-2.5481E-04	4.8401E-02

AVE G 0.049304

AERUN OF IDENTIFIED MODEL RESPONSES
COMPLETE IMPEDANCE MODEL

DIAGONAL MASSES		6 0		AERUN 1-30 HZ					
0.02491	6.54546	5.73811	5.42305	2.68282	0.46049	0.17341	0.12963	0.22154	0.27872

K MATRIX									
1	2	3	4	5	6	7	8	9	10
2.3597E 04	-5.3512E 04	6.1740E 04	-4.3555E 04	8.5005E 03	-5.3359E 03	6.8170E 02	-4.5992E 01	1.0188E 03	-4.4728E 02
-5.3512E 04	1.6903E 05	-3.1050E 05	2.7954E 05	-6.8178E 04	2.4521E 04	-3.7814E 03	1.3385E 03	-1.6564E 03	1.2774E 03
6.1740E 04	-3.1050E 05	1.8606E 06	-3.4674E 06	1.8642E 06	-4.7813E 05	1.1046E 05	-2.5016E 04	-3.9569E 03	-2.6502E 03
-4.3555E 04	2.7954E 05	-3.4674E 06	8.9774E 06	-7.1953E 06	2.9939E 06	-7.0922E 05	1.7551E 05	1.4589E 04	-6.9077E 03
8.6005E 03	-6.8178E 04	1.8642E 06	-7.1953E 06	8.9683E 06	-6.0399E 05	2.1302E 06	-4.5372E 05	2.2795E 04	9.3840E 03
-5.3359E 03	2.4521E 04	-4.7813E 05	2.9939E 06	-6.0399E 06	6.7807E 06	-4.2934E 06	1.3798E 06	-1.2843E 05	5.1860E 03
6.8170E 02	-3.7814E 03	1.1046E 05	-7.0922E 05	2.1302E 06	-4.2934E 06	4.8439E 06	-2.5460E 06	4.1560E 05	-4.8703E 04
-4.5992E 01	1.3385E 03	-2.5016E 04	1.7551E 05	-4.5372E 05	1.3798E 06	-2.5460E 06	2.1447E 06	-6.5254E 05	1.2043E 05
1.0188E 03	-1.6564E 03	-3.9569E 03	1.4589E 04	2.2795E 04	-1.2843E 05	4.1560E 05	-6.5294E 05	4.0459E 05	-1.1695E 05
-4.4728E 02	1.2774E 03	-2.6502E 03	-6.9077E 03	9.3840E 03	5.1860E 03	-4.8703E 04	1.2043E 05	-1.1695E 05	4.8307E 04

SPRINGS TO GROUND

-7.2573E 03	3.8083E 04	-3.9063E 05	1.0185E 06	-7.5314E 05	2.3887E 05	-1.0026E 05	1.4410E 05	-4.5332E 04	9.4234E 03
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DAMPING COEFFICIENT 0.0493

C MATRIX

	1	2	3	4	5	6	7	8	9	10
1	4.9100E-04	3.1437E-04	1.7455E-04	1.1512E-04	8.7071E-05	4.7687E-05	8.4755E-06	-2.6264E-05	-7.3452E-05	-1.0447E-04
2	3.1437E-04	2.3218E-04	1.4353E-04	9.7982E-05	7.8206E-05	4.7951E-05	1.6603E-05	-1.1640E-05	-4.8271E-05	-7.3599E-05
3	1.7455E-04	1.4353E-04	1.1013E-04	8.2829E-05	7.5581E-05	5.7492E-05	3.5315E-05	1.3925E-05	-1.0055E-05	-2.9481E-05
4	1.1512E-04	9.7984E-05	8.2830E-05	6.6455E-05	6.5482E-05	5.4745E-05	3.9011E-05	2.3049E-05	7.0184E-06	-7.8399E-06
5	8.7071E-05	7.8206E-05	7.5581E-05	6.5483E-05	7.0681E-05	6.5105E-05	5.2497E-05	3.8318E-05	2.6990E-05	1.3539E-05
6	4.7687E-05	4.7951E-05	5.7492E-05	5.4746E-05	6.5106E-05	6.6080E-05	5.9048E-05	4.9253E-05	4.5146E-05	3.5784E-05
7	8.4755E-06	1.6603E-05	3.5318E-05	3.9063E-05	5.2498E-05	5.9049E-05	5.8761E-05	5.4981E-05	5.9218E-05	5.5623E-05
8	-2.6259E-05	-1.1637E-05	1.3928E-05	2.3051E-05	3.8320E-05	4.9254E-05	5.4982E-05	5.8120E-05	7.2139E-05	7.0136E-05
9	-7.3447E-05	-4.8267E-05	-1.0092E-05	7.0212E-06	2.6992E-05	4.5148E-05	5.9219E-05	7.2139E-05	1.1022E-04	1.3117E-04
10	-1.0447E-04	-7.3599E-05	-2.9477E-05	-7.8370E-06	1.3542E-05	3.5787E-05	5.5625E-05	7.6185E-05	1.3737E-04	2.1106E-04

NORMAL MODES FROM C MATRIX

	1	2	3	4	5	6	7	8	9	10
1	1.000E 00	-9.8009E-01	3.0076E-01	1.0000E 00	8.3155E-01	-1.0000E 00	-1.0000E 00	-1.8951E-01	-2.3298E-02	2.2368E-03
2	7.7290E-01	-4.3957E-01	8.0225E-02	8.9047E-02	3.7758E-03	8.4979E-03	1.3654E-02	3.4770E-03	1.7952E-04	-1.2555E-04
3	5.3412E-01	2.4362E-01	-7.8151E-02	-2.8956E-01	-1.0769E-01	-5.0085E-03	-9.6568E-02	-5.0980E-02	-9.8839E-03	2.8962E-03
4	3.8409E-01	4.1256E-01	-5.3308E-02	-1.0169E-03	1.0139E-01	-9.0393E-03	1.7346E-01	1.5875E-01	4.4082E-02	-6.9787E-03
5	3.3941E-01	6.5523E-01	-7.8583E-03	3.1914E-01	1.2363E-01	1.3959E-02	-5.3866E-02	-2.5861E-01	-1.3661E-01	4.1536E-02
6	2.4295E-01	7.9486E-01	6.6791E-02	5.5331E-01	-1.0850E-01	2.8358E-02	-4.3941E-01	1.0190E-01	5.7444E-01	-3.5511E-01
7	1.3203E-01	8.2651E-01	1.5894E-01	6.1742E-01	-5.0975E-01	1.2753E-02	-4.6311E-01	9.4181E-01	4.9310E-02	1.0000E 00
8	2.7462E-02	8.1342E-01	2.7206E-01	5.3075E-01	-8.7590E-01	-2.1636E-02	-7.4168E-02	1.0000E 00	-1.0000E 00	-7.4583E-01
9	-9.7380E-02	9.5811E-01	5.9283E-01	1.2383E-01	-1.0070E 00	-6.4304E-02	7.0444E-01	-6.7526E-01	2.6138E-01	9.4883E-02
10	-1.9347E-01	1.0000E 00	1.0000E 00	-8.8503E-01	5.5622E-01	2.3142E-02	-2.0660E-01	1.4904E-01	-4.5662E-02	-7.2610E-03

FREQUENCIES - HERTZ

3.201189 9.244175 20.906799 41.686905 101.491837 156.440079 189.916595 310.335693 556.301758 1105.577393

GENERALIZED MASS

6.740597 4.681289 0.467616 1.296500 0.638310 0.028015 0.499242 0.727381 0.358896 0.310536

GAMMA

	1	2	3	4	5	6	7	8	9	10
1	4.9117E-03	-8.4800E-03	1.4268E-02	1.4997E-02	3.3512E-02	-4.4747E-01	-2.6491E-02	-5.3601E-03	-1.5602E-03	4.2989E-04
2	1.0040E 00	-1.0000E 00	1.0000E 00	3.5112E-01	3.9601E-02	1.0000E 00	9.5171E-02	2.7470E-02	8.5279E-03	-2.3229E-03
3	6.0544E-01	4.8596E-01	-8.5366E-01	-1.0000E 00	-1.0000E 00	-5.1592E-01	-5.8937E-01	-3.3827E-01	-1.5063E-01	4.8322E-02
4	4.1695E-01	7.7844E-01	-5.5018E-01	-3.3147E-03	8.8910E-01	-8.8026E-01	1.0000E 00	1.0000E 00	6.5557E-01	-2.7066E-01
5	1.7851E-01	6.0911E-01	-4.0622E-02	5.1552E-01	5.3668E-01	6.7277E-01	-1.5366E-01	-8.0509E-01	-1.0000E 00	6.0038E-01
6	2.3694E-02	1.3017E-01	5.9354E-02	1.5354E-01	-8.0856E-02	2.3487E-01	-2.1553E-01	5.4306E-02	7.2352E-01	-9.5417E-01
7	3.5081E-03	4.7055E-02	5.1855E-02	6.4301E-02	-1.4312E-01	3.9533E-02	-8.5272E-02	1.8977E-01	2.3743E-02	1.0000E 00
8	1.2108E-03	3.8182E-02	6.7364E-02	4.1494E-02	-1.8367E-01	-5.0324E-02	-1.0300E-02	1.5049E-01	-3.5456E-01	-5.6167E-01
9	-4.3413E-03	7.3438E-02	2.5007E-01	1.6500E-02	-3.5847E-01	-2.5595E-01	1.6598E-01	-1.7370E-01	1.5855E-01	1.1764E-01
10	-1.0653E-02	9.6940E-02	5.3069E-01	-1.4850E-01	2.5084E-01	1.1585E-01	-6.1274E-02	4.8199E-02	-3.4524E-02	-1.8021E-02

NORMAL PCES FROM K MATRIX

	1	2	3	4	5	6	7	8	9	1C
1	2.9784E-03	-2.2860E-02	-1.8535E-01	-1.0000E-02	-1.0000E-00	8.3149E-01	1.0000E-00	3.0076E-01	-9.7934E-01	1.0000E-00
2	-6.1127E-05	4.7538E-04	3.6142E-03	1.3670E-02	8.5040E-03	3.7398E-03	8.9105E-02	8.0239E-02	-4.3951E-01	7.7580E-01
3	1.4554E-03	-9.5088E-03	-5.0776E-02	-9.6567E-02	-5.0040E-03	-1.0772E-01	-2.8950E-01	-7.8134E-02	2.436CE-01	5.3926E-01
4	-8.6398E-03	4.4185E-02	1.5886E-01	1.7340E-01	-9.0373E-03	1.0136E-01	-9.6656E-04	-5.3288E-02	4.1256E-01	3.9112E-01
5	3.8776E-02	-1.3631E-01	-2.5862E-01	-5.3979E-02	1.9644E-02	1.2358E-01	3.1917E-01	-7.8613E-03	6.5511E-01	3.4397E-01
6	-3.5923E-01	5.7491E-01	1.0228E-01	-4.3939E-01	2.8362E-02	-1.0855E-01	5.5337E-01	6.6920E-02	7.9460E-01	2.3460E-01
7	1.0000E-00	4.9229E-02	5.4205E-01	-4.6305E-01	1.2753E-02	-5.0974E-01	6.1707E-01	1.5867E-01	8.1680E-01	1.1687E-01
8	-7.5150E-01	-1.0000E-00	1.0000E-00	-7.4187E-02	-2.1639E-02	-8.7592E-01	5.3116E-01	2.7226E-01	8.2528E-01	6.3973E-02
9	9.2118E-02	2.6176E-01	-6.7540E-01	7.0422E-01	-6.4314E-02	-1.0000E-00	1.2378E-01	5.9280E-01	9.5635E-01	-1.0366E-01
10	-1.1218E-02	-4.5312E-02	1.4896E-01	-2.0665E-01	2.3139E-02	5.5619E-01	-8.8497E-01	1.0000E-00	1.0000E-00	-1.9414E-01

FREQUENCIES - HERTZ

1109.492920 556.234375 310.306396 189.911240 156.438065 101.491089 41.686905 20.906647 9.243723 3.200274

GENERALIZED MASS

0.312408 0.358978 0.727630 C.499074 0.028016 0.638289 1.296370 0.467603 4.579464 6.861915

DRIVING POINT RESPONSE - AMP IN G'S

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	5.4227E-05	2.6127E-05	1.2401E-05	7.4064E-06	7.7145E-06	7.0331E-06	6.1216E-06	5.9878E-06	1.1366E-05	2.1795E-05
2.000	2.9707E-04	1.5203E-04	7.2275E-05	4.1731E-05	4.0407E-05	3.3427E-05	2.6542E-05	2.4679E-05	4.7221E-05	9.1456E-05
3.000	2.6856E-03	1.5484E-03	7.3869E-04	3.9815E-04	3.2386E-04	1.9506E-04	9.6366E-05	5.9682E-05	1.2841E-04	2.8313E-04
4.000	8.3616E-04	6.0864E-04	2.9269E-04	1.3791E-04	6.6911E-05	2.7186E-05	8.3692E-05	1.0999E-04	1.8884E-04	3.1447E-04
5.000	2.7132E-04	3.4230E-04	1.6743E-04	5.8281E-05	2.7744E-05	1.1750E-04	1.6842E-04	1.9264E-04	3.3397E-04	5.6155E-04
6.000	1.0055E-04	2.4040E-04	1.2268E-04	1.3349E-04	1.541E-04	2.3831E-04	2.9911E-04	3.2638E-04	5.5532E-04	9.1392E-04
7.000	5.5425E-04	1.4497E-04	8.5846E-05	5.6341E-05	2.6792E-04	4.6083E-04	5.4384E-04	5.7383E-04	9.4311E-04	1.4686E-03
8.000	1.5317E-03	7.4760E-05	3.1189E-05	2.1161E-04	6.5129E-04	1.0255E-03	1.1609E-03	1.1940E-03	1.8438E-03	2.6103E-03
9.000	7.0897E-03	1.2348E-03	3.6222E-04	1.1951E-03	3.0961E-03	4.6080E-03	5.0282E-03	4.9296E-03	7.0530E-03	8.3300E-03
10.000	3.2618E-03	9.4152E-04	3.1524E-04	6.7734E-04	1.5998E-03	2.2813E-03	2.3986E-03	2.2318E-03	2.7675E-03	2.1002E-03
11.000	1.3764E-03	5.9568E-04	2.0418E-04	3.7361E-04	8.3348E-04	1.1450E-03	1.1540E-03	9.9751E-04	9.3778E-04	5.2424E-04
12.000	6.9429E-04	4.8985E-04	1.6603E-04	2.8410E-04	6.1024E-04	8.0858E-04	7.7343E-04	5.9729E-04	2.7414E-04	1.5244E-04
13.000	2.7165E-04	4.3573E-04	1.4279E-04	2.4017E-04	5.0286E-04	6.4153E-04	5.7257E-04	3.6409E-04	3.1872E-04	2.5494E-04
14.000	1.8676E-04	4.0037E-04	1.2416E-04	2.1317E-04	4.3919E-04	5.3703E-04	4.3423E-04	1.8372E-04	7.9022E-04	3.7211E-03
15.000	5.3478E-04	3.7255E-04	1.0611E-04	1.9349E-04	3.9977E-04	4.6037E-04	3.1886E-04	7.0930E-05	1.3609E-03	5.2611E-03
16.000	9.4485E-04	3.4677E-04	8.6262E-05	1.7708E-04	3.6416E-04	3.9717E-04	2.0794E-04	2.3377E-04	2.1104E-03	7.2364E-03
17.000	1.4461E-03	3.1829E-04	6.1812E-05	1.6080E-04	3.3850E-04	3.3850E-04	9.5824E-05	5.0300E-04	3.1966E-03	1.0248E-02
18.000	2.1299E-03	2.8047E-04	3.2034E-05	1.4125E-04	3.1734E-04	2.7698E-04	1.3719E-04	9.1787E-04	4.9683E-03	1.5224E-02
19.000	3.2493E-03	2.2029E-04	5.9813E-05	1.1229E-04	2.9816E-04	2.0236E-04	4.2386E-04	1.6896E-03	8.4275E-03	2.5000E-02
20.000	5.8177E-03	1.8687E-04	2.3542E-05	8.9629E-05	2.7986E-04	1.5055E-04	1.1581E-03	3.7068E-03	1.7770E-02	5.1447E-02
21.000	1.0072E-02	8.6090E-04	7.0728E-04	3.8723E-04	2.6784E-04	6.0052E-04	2.8697E-03	8.2933E-03	3.9261E-02	1.1151E-01
22.000	3.2552E-03	6.7628E-04	3.9679E-04	3.0898E-04	2.5333E-04	4.1815E-04	1.4018E-03	3.8919E-03	1.8569E-02	1.9245E-02
23.000	1.0317E-03	5.5062E-04	2.6357E-04	2.5262E-04	2.3615E-04	2.8984E-04	8.2167E-04	2.2920E-03	1.1217E-02	3.0951E-02
24.000	6.6302E-04	4.9576E-04	2.0262E-04	2.2755E-04	2.1903E-04	2.1018E-04	5.5192E-04	1.6158E-03	8.2535E-03	2.2503E-02
25.000	1.2257E-03	4.6504E-04	1.6416E-04	2.1327E-04	2.0123E-04	1.4490E-04	3.7776E-04	1.2282E-03	6.6746E-03	1.7994E-02
26.000	1.8138E-03	4.4501E-04	1.3461E-04	2.0384E-04	1.8225E-04	8.5850E-05	2.4276E-04	9.6165E-04	5.6914E-03	1.5170E-02
27.000	2.3775E-03	4.3056E-04	1.0878E-04	1.9700E-04	1.6162E-04	4.6811E-05	1.3188E-04	7.5445E-04	5.0161E-03	1.3210E-02
28.000	2.9377E-03	4.1933E-04	8.4219E-05	1.9172E-04	1.3887E-04	8.2243E-05	8.7158E-05	5.7857E-04	4.5197E-03	1.1743E-02
29.000	3.5135E-03	4.1007E-04	5.9757E-05	1.8743E-04	1.1352E-04	1.5572E-04	1.7133E-04	4.1952E-04	4.1358E-03	1.0576E-02
30.000	4.1212E-03	4.0201E-04	3.6154E-05	1.8384E-04	8.5280E-05	2.4507E-04	2.9860E-04	2.7174E-04	3.8268E-03	9.5955E-03

DRIVING POINT RESPONSE - PHASE IN DEGREES

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	3.06	3.11	3.12	3.08	3.02	2.95	2.88	2.85	2.85	2.86
2.000	4.32	4.56	4.57	4.44	4.13	3.68	3.21	2.94	2.99	3.06
3.000	21.24	21.91	21.93	21.54	20.41	17.76	11.81	3.69	6.58	9.35
4.000	172.77	174.62	176.69	173.61	167.83	23.20	5.24	3.39	3.68	4.15
5.000	170.30	177.24	177.42	173.98	20.10	5.82	4.23	3.77	3.70	3.60
6.000	33.27	176.89	177.49	146.00	7.99	5.52	4.83	4.52	4.29	3.94
7.000	10.84	171.91	175.10	15.97	8.03	6.86	6.39	6.06	5.64	4.93
8.000	12.27	139.15	139.15	14.74	11.93	11.17	10.74	10.33	9.58	8.14
9.000	42.90	51.52	55.47	45.39	43.85	43.24	42.78	42.20	40.83	37.48
10.000	161.94	167.87	168.66	165.20	164.20	163.64	163.09	162.23	159.51	147.69
11.000	169.15	175.71	175.74	174.14	173.43	172.87	172.14	170.74	164.20	44.97
12.000	167.38	177.53	177.14	176.48	175.95	175.33	174.32	171.86	143.49	11.52
13.000	151.99	178.22	177.41	177.46	177.08	176.35	174.85	169.83	28.90	7.78
14.000	42.78	178.49	177.14	177.92	177.69	176.78	174.36	160.33	13.14	6.92
15.000	15.65	178.51	176.25	178.07	178.05	176.85	172.49	83.23	10.08	6.97
16.000	10.82	178.26	174.14	177.95	178.25	176.57	166.93	23.16	9.50	7.59
17.000	9.56	177.54	168.22	177.37	178.36	175.76	140.08	15.78	10.15	8.84
18.000	10.10	175.51	138.60	175.62	178.39	173.66	44.49	15.06	12.15	11.18
19.000	13.22	167.67	49.78	178.32	178.32	166.14	27.71	18.39	16.82	16.07
20.000	25.21	115.04	43.57	122.62	178.00	116.95	35.92	31.62	30.91	30.31
21.000	91.65	124.65	107.66	126.05	176.78	121.99	102.69	100.87	100.82	100.31
22.000	139.29	167.92	156.75	168.23	177.73	163.57	155.72	155.21	155.73	155.29
23.000	127.10	175.05	165.28	175.12	177.64	168.93	165.08	165.96	167.07	166.67
24.000	51.36	177.20	172.08	177.19	177.29	168.31	166.95	169.55	171.33	170.94
25.000	19.83	178.12	172.82	178.08	176.75	163.90	165.50	170.90	173.50	173.10
26.000	12.14	178.60	172.46	178.56	175.97	150.82	159.85	171.08	174.79	174.36
27.000	9.15	178.87	171.03	178.84	174.80	100.38	141.74	170.31	175.63	175.14
28.000	7.70	179.04	167.98	179.02	172.96	39.58	78.10	168.31	176.20	175.61
29.000	6.92	179.14	161.30	179.14	169.82	23.11	33.05	164.07	176.60	175.87
30.000	6.50	179.19	142.91	179.23	163.64	17.27	20.83	153.97	176.89	175.94

TRANSFER RESPONSE - AMP IN G'S - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	1.9958E-05	1.6312E-05	1.2401E-05	9.3016E-06	8.4613E-06	6.4093E-06	3.9061E-06	1.4963E-06	1.2231E-06	3.4C95E-06
2.000	1.2192E-04	9.7855E-05	7.2275E-05	5.3738E-05	4.8374E-05	3.6115E-05	2.1413E-05	7.3421E-06	8.7936E-06	2.1605E-05
3.000	1.3531E-03	1.0538E-03	7.3869E-04	5.3956E-04	4.7510E-04	3.4357E-04	1.9090E-04	4.6542E-05	1.2446E-04	2.5687E-04
4.000	6.0758E-04	4.5374E-04	2.9269E-04	2.0682E-04	1.7420E-04	1.1745E-04	5.5172E-05	3.8394E-05	7.4876E-05	1.2850E-04
5.000	4.1785E-04	2.9560E-04	1.6743E-04	1.1079E-04	8.4324E-05	4.6770E-05	3.2788E-05	2.5067E-05	7.1257E-05	1.0334E-04
6.000	4.0590E-04	2.6848E-04	1.2268E-04	6.9450E-05	3.7892E-05	7.5873E-06	3.0676E-05	5.5375E-05	9.8176E-05	1.2423E-04
7.000	4.6792E-04	2.8486E-04	8.5846E-05	2.6272E-05	2.7977E-05	6.8677E-05	9.7186E-05	1.1742E-04	1.6478E-04	1.8900E-04
8.000	6.7168E-04	3.6798E-04	3.1189E-05	7.5655E-05	1.7136E-04	2.3927E-04	2.7088E-04	2.8488E-04	3.5694E-04	3.8499E-04
9.000	1.9619E-03	9.2782E-04	3.6226E-04	6.7225E-04	1.0997E-03	1.3532E-03	1.4203E-03	1.4085E-03	1.6706E-03	1.7486E-03
10.000	5.8718E-04	2.1432E-04	3.1524E-04	4.4644E-04	6.6706E-04	7.8524E-04	8.0059E-04	7.7562E-04	9.0196E-04	9.3893E-04
11.000	1.3809E-05	2.5240E-05	2.0418E-04	2.6634E-04	3.8663E-04	4.4909E-04	4.5454E-04	4.3868E-04	5.1176E-04	5.3951E-04
12.000	3.2839E-05	4.8692E-05	1.6603E-04	2.1172E-04	3.0699E-04	3.5767E-04	3.6402E-04	3.5434E-04	4.2130E-04	4.5558E-04
13.000	9.8572E-05	7.6991E-05	1.4279E-04	1.8365E-04	2.7071E-04	3.1992E-04	3.3043E-04	3.2740E-04	4.0139E-04	4.4920E-04
14.000	1.6279E-04	9.7245E-05	1.2416E-04	1.6515E-04	2.5124E-04	3.0402E-04	3.2115E-04	3.2634E-04	4.1638E-04	4.8523E-04
15.000	2.2657E-04	1.1512E-04	1.0611E-04	1.5020E-04	2.3979E-04	3.0008E-04	3.2676E-04	3.4299E-04	4.5912E-04	5.5964E-04
16.000	2.9885E-04	1.3392E-04	8.6262E-05	1.3593E-04	2.3303E-04	3.0528E-04	3.4579E-04	3.7777E-04	5.3456E-04	6.8381E-04
17.000	3.9223E-04	1.5742E-04	6.1812E-04	1.1951E-04	2.2887E-04	3.1959E-04	3.8114E-04	4.3738E-04	6.5961E-04	8.8798E-04
18.000	5.3093E-04	1.9219E-04	3.2034E-05	9.6996E-05	2.2586E-04	3.4683E-04	4.4355E-04	5.4117E-04	8.7787E-04	1.2468E-03
19.000	7.8083E-04	2.5556E-04	5.9813E-05	6.3302E-05	2.2211E-04	4.0012E-04	5.6597E-04	7.4713E-04	1.3183E-03	1.9804E-03
20.000	1.4092E-03	4.1640E-04	2.3542E-04	1.1313E-04	2.1343E-04	5.2922E-04	8.8144E-04	1.2941E-03	2.5202E-03	4.0144E-03
21.000	2.6013E-03	6.8957E-04	7.0728E-04	5.1463E-04	2.6518E-04	6.0635E-04	1.3680E-03	2.3436E-03	5.1369E-03	8.7016E-03
22.000	9.8694E-04	2.3108E-04	3.9679E-04	3.5999E-04	2.8039E-04	1.3087E-04	4.0687E-04	8.9527E-04	2.2713E-03	4.1C51E-03
23.000	4.4507E-04	8.8753E-05	2.6357E-04	2.7830E-04	2.7744E-04	1.6124E-04	1.2173E-04	4.2298E-04	1.2958E-03	2.5080E-03
24.000	2.1298E-04	3.3307E-05	2.0262E-04	2.4387E-04	2.8181E-04	2.1317E-04	6.7455E-05	2.2875E-04	9.0749E-04	1.8893E-03
25.000	8.8221E-05	1.7498E-05	1.6416E-04	2.2527E-04	2.9002E-04	2.5306E-04	1.1954E-04	1.2028E-04	7.0268E-04	1.5814E-03
26.000	8.7501E-05	3.1035E-05	1.3461E-04	2.1368E-04	3.0109E-04	2.8827E-04	1.7239E-04	5.3544E-05	5.7615E-04	1.1022E-03
27.000	1.6428E-04	4.5907E-05	1.0878E-04	2.0580E-04	3.1485E-04	3.2285E-04	2.2102E-04	4.7574E-05	4.8964E-04	1.3127E-03
28.000	2.4896E-04	5.9120E-05	8.4219E-05	2.0013E-04	3.3149E-04	3.9222E-04	2.6887E-04	9.0333E-05	4.2593E-04	1.2615E-03
29.000	3.3787E-04	7.1346E-05	5.9757E-05	1.9587E-04	3.5143E-04	3.9924E-04	3.1883E-04	1.3986E-04	3.7611E-04	1.2437E-03
30.000	4.3422E-04	8.3307E-05	3.6154E-05	1.9259E-04	3.7534E-04	4.4473E-04	3.7351E-04	1.9273E-04	3.3499E-04	1.2529E-03

TRANSFER RESPONSE - PHASE IN DEGREES - ROM 3

HERTZ	1	2	3	4	5	6	7	8	9	10
1.000	3.16	3.14	3.12	3.11	3.10	3.09	3.06	2.98	183.32	183.19
2.000	4.75	4.68	4.57	4.54	4.49	4.43	4.32	3.81	185.34	184.90
3.000	22.37	22.21	21.93	21.83	21.70	21.51	21.10	18.44	203.51	202.73
4.000	175.54	175.27	174.69	174.43	174.07	173.47	171.85	41.62	357.29	356.28
5.000	179.00	178.58	177.42	176.75	175.62	173.07	153.65	6.69	1.39	0.30
6.000	180.53	179.90	177.45	175.29	169.12	99.22	13.05	6.22	3.59	2.59
7.000	182.28	181.36	175.10	157.69	31.02	13.97	9.81	7.68	6.14	5.36
8.000	186.37	184.99	139.15	25.37	17.02	14.52	13.17	12.19	11.30	10.79
9.000	217.49	215.14	55.47	48.45	46.49	45.58	45.00	44.52	44.08	43.87
10.000	335.37	329.67	168.66	166.71	165.99	165.63	165.41	165.24	165.14	165.21
11.000	335.58	289.21	175.74	175.04	174.85	174.78	174.78	174.83	175.02	175.33
12.000	245.62	193.40	177.14	177.05	177.19	177.35	177.53	177.75	178.18	178.70
13.000	193.31	185.62	177.41	177.81	178.25	178.60	178.94	179.34	179.99	180.69
14.000	187.69	183.78	177.14	178.07	178.65	179.41	179.93	180.50	181.37	182.22
15.000	186.25	183.30	176.25	177.98	179.23	180.06	180.80	181.56	182.66	183.65
16.000	186.11	183.48	174.14	177.48	179.49	180.71	181.73	182.73	184.08	185.20
17.000	186.81	184.26	168.22	176.12	179.64	181.51	182.95	184.27	185.90	187.16
18.000	188.60	186.02	138.60	172.00	179.65	182.78	184.91	186.68	188.67	190.07
19.000	192.84	190.13	49.78	151.95	179.23	185.55	189.00	191.46	193.90	195.44
20.000	206.20	203.24	43.57	74.19	176.28	195.24	201.72	205.36	208.41	210.11
21.000	274.92	271.49	107.66	117.28	165.96	252.33	268.82	274.73	278.64	280.51
22.000	327.81	323.41	159.75	165.39	178.05	246.22	317.25	328.63	333.81	335.88
23.000	335.35	328.40	169.28	173.81	180.08	196.31	307.24	338.11	345.35	347.65
24.000	330.77	313.55	172.08	176.49	180.76	187.64	233.65	338.78	349.77	352.32
25.000	301.77	283.78	172.82	177.70	181.17	185.28	199.19	332.68	352.05	354.91
26.000	226.56	202.33	172.46	178.36	181.51	184.45	191.28	306.34	353.41	356.62
27.000	201.46	192.39	171.03	178.76	181.84	184.19	188.44	232.83	354.26	357.90
28.000	194.31	188.70	167.98	179.03	182.18	184.20	187.23	203.83	354.80	358.95
29.000	191.38	187.01	161.30	179.22	182.55	184.37	185.72	195.67	355.09	359.87
30.000	190.02	186.21	142.91	179.36	182.97	184.67	186.61	192.40	355.15	0.74

RERUN CF IDENTIFIED MCDL RESPONSES

COMPLETE IMPEDANCE MODEL

DIAGONAL MASSES	6 0	PERUN 4C-400 P2
0.02491	6.54546	5.73E11
		5.42305
		2.68282
		0.46048
		0.17341
		0.12963
		0.22154
		0.27872

K MATRIX

1	2.597E 04	-5.3512E 04	5.1740E 04	-4.3555E 04	8.6005E 03	-5.3359E 03	6.8170E 02	-4.5992E 01	1.0188E 03	-4.4728E 02
2	-5.3512E 04	1.6903E 05	-3.1C5CE 05	2.7954E 05	-6.8178E 04	2.4521E 04	-3.7814E 03	1.3385E 03	-1.6564E 03	1.2774E 03
3	5.1740E 04	-3.1050E 05	1.8606E 06	-3.4674E 06	1.8642E 06	-4.7813E 05	1.1046E 05	-2.5016E 04	-3.9569E 03	-2.6502E 03
4	-4.3555E 04	2.7954E 05	-3.4674E 06	8.9774E 06	-7.1953E 06	2.9939E 06	-7.0922E 05	1.7551E 05	1.4589E 04	-6.9C77E 03
5	8.6005E 03	-6.8178E 04	1.8642E 06	-7.1953E 06	8.9683E 06	-6.0399E 06	2.1302E 06	-4.5372E 05	2.2795E 04	9.8840E 03
6	-5.3359E 03	2.4521E 04	-4.7813E 05	2.9939E 06	-6.0399E 06	6.7807E 06	-4.2934E 06	1.3798E 06	-1.2843E 05	5.1860E 03
7	6.8170E 02	-3.7814E 03	1.1046E 05	-7.0922E 05	2.1302E 06	-4.2934E 06	4.8439E 06	-2.5460E 06	4.1560E 05	-4.8703E 04
8	-4.5992E 01	1.3385E 03	-2.5016E 04	1.7551E 05	-4.5372E 05	1.3798E 06	-2.5460E 06	2.1447E 06	-6.5254E 05	1.2C43E 05
9	1.0188E 03	-1.6564E 03	-3.9569E 03	1.4589E 04	2.2795E 04	-1.2843E 05	4.1560E 05	-6.5294E 05	4.0459E 05	-1.1693E 05
10	-4.4728E 02	1.2774E 03	-2.6502E 03	-6.9077E 03	5.9840E 03	5.1860E 03	-4.8703E 04	1.2043E 05	-1.1693E 05	4.89C7E 04

SPRINGS TJ GROUND

-7.2573E 03	3.8033E 04	-3.9063E 05	1.0185E 06	-7.5314E 05	2.1887E 05	-1.0026E 05	1.441CE 05	-4.5332E 04	9.4234E 03
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DAMPING COEFFICIENT 0.0493

C MATRIX

	1	2	3	4	5	6	7	8	9	10
1	4.4100E-04	3.1437E-04	1.7455E-04	1.1512E-04	8.7071E-05	4.7687E-05	8.4755E-06	-2.6264E-05	-7.3452E-05	-1.0447E-04
2	3.1437E-04	2.3218E-04	1.4353E-04	5.7982E-05	7.8206E-05	4.7951E-05	1.8803E-05	-1.1640E-05	-4.8271E-05	-7.3599E-05
3	1.7455E-04	1.4353E-04	1.1013E-04	8.2829E-05	7.5581E-05	5.7495E-05	3.5315E-05	1.3929E-05	-1.0099E-05	-2.9481E-05
4	1.1512E-04	9.7984E-05	8.2830E-05	6.6455E-05	6.5482E-05	5.4745E-05	3.9061E-05	2.3049E-05	7.0194E-06	-7.8399E-06
5	8.7075E-05	7.8209E-05	7.5583E-05	6.5483E-05	7.0681E-05	6.5105E-05	5.2497E-05	3.8318E-05	2.6990E-05	1.3539E-05
6	4.7687E-05	4.7955E-05	5.7497E-05	5.4748E-05	6.5106E-05	6.6080E-05	5.9048E-05	4.9253E-05	4.5146E-05	3.5784E-05
7	8.4803E-06	1.6607E-05	3.5318E-05	3.9063E-05	5.2498E-05	5.9049E-05	5.4981E-05	5.4981E-05	5.9210E-05	5.5623E-05
8	-2.6259E-05	-1.1637E-05	1.3928E-05	2.3051E-05	3.8320E-05	4.9254E-05	5.4982E-05	5.8120E-05	7.2139E-05	7.6183E-05
9	-7.3447E-05	-4.8267E-05	-1.0092E-05	7.0212E-06	2.6992E-05	4.5148E-05	5.9219E-05	7.2139E-05	1.1022E-04	1.3737E-04
10	-1.0447E-04	-7.3595E-05	-2.9477E-05	-7.8370E-06	1.3542E-05	3.5787E-05	5.5625E-05	7.6185E-05	1.3737E-04	2.1106E-04

NORMAL MODES FROM C MATRIX

1	2	3	4	5	6	7	8	9	10
1.000E-00	-9.8005E-01	3.0076E-01	1.0000E-00	8.3155E-01	-1.0000E-00	-1.0000E-00	-1.3551E-01	-2.3298E-02	2.2368E-03
7.7290E-01	-4.3957E-01	8.0225E-02	8.9047E-02	3.7758E-03	8.4979E-03	1.3654E-02	3.4770E-03	1.7952E-04	-1.2555E-04
5.3412E-01	2.4362E-01	-7.8151E-02	-2.8956E-01	-1.0769E-01	-5.0085E-03	-9.6568E-02	-5.0980E-02	-9.8839E-03	2.8562E-03
3.8809E-01	4.1256E-01	-5.3308E-02	-1.0169E-03	1.0139E-01	-9.0393E-03	1.7346E-01	1.5875E-01	4.4082E-02	-6.9787E-03
3.3941E-01	6.5523E-01	-7.8583E-03	3.1914E-01	1.2363E-01	1.3959E-02	-5.3866E-02	-2.5861E-01	-1.3661E-01	4.1536E-02
2.4295E-01	7.9486E-01	6.6791E-02	5.5311E-01	-1.0850E-01	2.8358E-02	-4.3941E-01	1.0190E-01	5.7444E-01	-3.5511E-01
1.3203E-01	8.2651E-01	1.5894E-01	6.1742E-01	-5.0975E-01	1.2753E-02	-4.6311E-01	9.4181E-01	4.9310E-02	1.0000E-00
2.7462E-02	8.1342E-01	2.7206E-01	5.3075E-01	-8.7590E-01	-2.1636E-02	-7.4168E-02	1.0000E-00	-1.0000E-00	-7.4583E-01
-9.7380E-02	9.5811E-01	5.9283E-01	1.2383E-01	-1.0000E-00	-6.4304E-02	7.0444E-01	-6.7526E-01	2.6138E-01	9.4883E-02
-1.9347E-01	1.0000E-00	1.0000E-00	-8.8503E-01	5.5622E-01	2.3142E-02	-2.0660E-01	1.4904E-01	-4.5662E-02	-7.2610E-03
8	9	10	8	15	18	13	12	9	7

FREQUENCIES - HERTZ

3.201189 9.244175 20.906799 41.686905 101.491837 156.440079 189.916595 310.335693 556.301758 1105.577393

GENERALIZED MASS

6.740597 4.681289 0.467616 1.296500 0.639310 0.028015 0.499242 0.727381 0.358896 C.310536

GAMMA

1	2	3	4	5	6	7	8	9	10
4.5117E-03	-4.4800E-03	1.4268E-02	1.4997E-02	3.3512E-02	-4.4747E-01	-2.6491E-02	-5.3601E-03	-1.5602E-03	4.2589E-04
1.0000E-00	-1.0000E-00	1.0000E-00	3.5112E-01	3.9601E-02	1.0000E-00	9.5171E-02	2.7470E-02	8.5279E-03	-2.3229E-03
6.0544E-01	4.8596E-01	-8.5366E-01	-1.0000E-00	-1.0000E-00	-5.1592E-01	-5.8937E-01	-3.4827E-01	-1.5063E-01	4.8322E-02
4.1656E-01	7.7844E-01	-5.5019E-01	-3.3147E-03	8.8910E-01	-8.4026E-01	1.0000E-00	1.0000E-00	6.5557E-01	-2.7066E-01
1.7851E-01	6.0911E-01	-4.0622E-02	5.1552E-01	5.3668E-01	6.7277E-01	-1.5366E-01	-8.0305E-01	-1.0000E-00	6.0000E-01
2.3694E-02	1.3017E-01	5.9354E-02	1.5354E-01	-8.0856E-02	2.3487E-01	-2.1553E-01	5.4304E-02	7.2352E-01	-9.5417E-01
3.5081E-03	4.7055E-02	5.1855E-02	6.4301E-02	-1.4312E-01	3.9533E-02	-8.5272E-02	1.9977E-01	2.3743E-02	1.0000E-00
1.2108E-03	3.8182E-02	6.7364E-02	4.1494E-02	-1.8367E-01	-5.0324E-02	-1.7300E-02	1.5049E-01	-3.5456E-01	-5.6167E-01
-4.3413E-03	7.3438E-02	2.5007E-01	1.6500E-01	-3.5847E-01	-2.5595E-01	1.6598E-01	-1.7370E-01	1.5855E-01	1.1764E-01
-1.0653E-02	9.6940E-02	5.3069E-01	-1.4850E-01	2.5084E-01	1.1585E-01	-6.1274E-02	4.8195E-02	-3.4524E-02	-1.4021E-02

NORMAL MODES FROM K MATRIX

	1	2	3	4	5	6	7	8	9	10
1	2.9784E-03	-2.2800E-02	-1.8535E-01	-1.0000E-01	-1.0000E-00	8.3149E-01	1.0000E-00	3.0076E-01	-9.7954E-01	1.0000E-00
2	-6.1127E-05	4.7538E-04	3.6142E-03	1.3670E-02	8.5040E-03	3.7398E-03	8.9105E-02	8.0235E-02	-4.3951E-01	7.7980E-01
3	1.4554E-03	-9.5468E-03	-5.0776E-02	-9.6567E-02	-5.0040E-03	-1.0772E-01	-2.8950E-01	-7.8134E-02	2.4360E-01	5.3526E-01
4	-8.6348E-03	4.4185E-02	1.5886E-01	1.7340E-01	-9.0373E-03	1.0136E-01	-9.6506E-04	-5.3288E-02	4.1256E-01	3.9112E-01
5	3.8776E-02	-1.3631E-01	-7.5862E-01	-5.3979E-02	1.3964E-02	1.2358E-01	3.1917E-01	-7.8613E-03	6.5511E-01	3.4397E-01
6	-3.5923E-01	5.7491E-01	1.0228E-01	-4.3939E-01	2.8362E-02	-1.0855E-01	5.5337E-01	6.6920E-02	7.9460E-01	2.3460E-01
7	1.0000E-00	4.9224E-02	5.4204E-01	-4.6305E-01	1.2753E-02	-5.0974E-01	6.1707E-01	1.5967E-01	8.1680E-01	1.1687E-01
8	-7.5150E-01	-1.0000E-00	1.0000E-00	-7.4187E-02	-2.1639E-02	-8.7592E-01	5.3116E-01	2.7224E-01	8.2628E-01	6.3573E-02
9	9.2118E-04	2.6176E-01	-6.7540E-01	7.0422E-01	-6.4314E-02	-1.0000E-00	1.2378E-01	5.9280E-01	9.5635E-01	-1.0366E-01
10	-1.1218E-02	-4.5312E-02	1.4896E-01	-2.0665E-01	2.3139E-02	5.5619E-01	-8.8497E-01	1.0000E-00	1.0000E-00	-1.9414E-01

FREQUENCIES - HERTZ

1179.492920 556.234375 310.306396 189.911240 156.438065 101.491089 41.686905 20.906647 9.243723 3.200274

GENERALIZED MASS

0.312406 0.556978 0.727630 0.499074 0.028016 0.638289 1.296370 0.467603 4.679464 6.861915

DRIVING POINT RESPONSE - AMP IN G'S

Hertz	1	2	3	4	5	6	7	8	9	10
40.000	2.4757E-02	2.7261E-04	1.5007E-03	1.5225E-04	1.7766E-03	5.7348E-03	7.2727E-03	5.3434E-03	2.0567E-03	7.555E-03
50.000	4.3017E-03	4.3437E-04	7.1044E-04	1.4633E-04	5.2206E-04	2.2850E-03	2.5297E-03	1.5603E-03	1.4161E-03	1.951E-02
60.000	1.2666E-02	4.0923E-04	4.7373E-04	1.2788E-04	2.3187E-04	1.4076E-03	1.1923E-03	1.9284E-04	2.4884E-04	9.1922E-03
70.000	2.1885E-02	4.0030E-04	3.8851E-04	1.0232E-04	5.2390E-04	1.0896E-03	4.2019E-04	1.4766E-03	1.5851E-03	7.8970E-03
80.000	3.4134E-02	3.9528E-04	3.2137E-04	6.1183E-05	4.3545E-04	8.6614E-04	6.8372E-04	3.9481E-03	4.7946E-03	6.5735E-03
90.000	5.3074E-02	3.9163E-04	2.1524E-04	4.9957E-05	2.9368E-04	6.1767E-04	2.9892E-03	1.0254E-02	1.3045E-02	4.0746E-03
100.000	9.7428E-02	3.8828E-04	6.9146E-04	6.8795E-05	9.1307E-04	7.6671E-04	1.7620E-02	5.2382E-02	6.8231E-02	1.8535E-02
110.000	7.2223E-02	3.8595E-04	6.4403E-04	3.5907E-04	8.4693E-04	7.3727E-04	7.1407E-03	2.0665E-02	2.6904E-02	1.5937E-02
120.000	1.2144E-01	3.8184E-04	4.9426E-04	1.5509E-04	6.4607E-04	3.7241E-04	3.6764E-03	1.1170E-02	1.4172E-02	1.2178E-02
130.000	1.9758E-01	3.7581E-04	4.3447E-04	1.0499E-04	5.5723E-04	1.2876E-04	2.2970E-03	8.0105E-03	9.4834E-03	1.0872E-02
140.000	1.5762E-01	3.6426E-04	3.9178E-04	3.8813E-05	4.8143E-04	5.2365E-04	1.3181E-03	6.2944E-03	8.2474E-03	1.0115E-02
150.000	8.9919E-01	3.3498E-04	3.4505E-04	1.2612E-04	3.7532E-04	1.4518E-03	5.2640E-04	5.0175E-03	3.5273E-03	9.4287E-03
160.000	1.310E 00	4.6460E-04	3.4469E-04	1.780E-04	6.9694E-04	1.4506E-03	1.0338E-03	5.0113E-03	8.6755E-03	9.9671E-03
170.000	5.7172E-01	4.2672E-04	2.5954E-04	3.952E-04	5.3450E-04	2.7399E-03	2.9713E-03	4.0131E-03	3.3406E-03	9.2297E-03
180.000	3.4751E-01	4.0923E-04	1.8981E-04	1.0575E-03	4.2297E-04	7.0330E-03	7.9384E-03	3.1733E-03	1.3187E-02	8.2841E-03
190.000	3.2259E-01	4.1063E-04	1.0774E-03	3.1820E-03	5.8405E-04	2.0408E-02	2.2789E-02	2.8074E-03	5.3320E-02	1.0766E-02
200.000	2.9003E-01	4.1438E-04	8.4348E-04	1.8114E-03	5.6944E-04	1.0097E-02	1.0646E-02	2.258E-03	3.1120E-02	1.1460E-02
210.000	2.4169E-01	4.0894E-04	6.6508E-04	9.9569E-04	4.7402E-04	6.1536E-03	5.8055E-03	1.3957E-03	2.0918E-02	1.0627E-02
220.000	2.1360E-01	4.0600E-04	5.9178E-04	7.4929E-04	4.0468E-04	4.6080E-03	3.5906E-03	6.6962E-04	1.6682E-02	1.0238E-02
230.000	1.9473E-01	4.0410E-04	5.5158E-04	6.1056E-04	3.3766E-04	3.7740E-03	2.0935E-03	8.5707E-04	1.4228E-02	1.0005E-02
240.000	1.8102E-01	4.0275E-04	5.2530E-04	5.1366E-04	2.6359E-04	3.2355E-03	1.0032E-03	1.9623E-03	1.2475E-02	9.8391E-03
250.000	1.7057E-01	4.0173E-04	5.0577E-04	4.3348E-04	1.7 1E-04	2.841E-03	1.3995E-03	3.4699E-03	1.1001E-02	9.7064E-03
260.000	1.6232E-01	4.0093E-04	4.8947E-04	3.5630E-04	1.0455E-04	2.5325E-03	3.0950E-03	5.4881E-03	9.5664E-03	9.5881E-03
270.000	1.5562E-01	4.0026E-04	4.7359E-04	2.7180E-04	2.0155E-04	2.2641E-03	5.6169E-03	8.3914E-03	7.9667E-03	9.4687E-03
280.000	1.5004E-01	3.9969E-04	4.5684E-04	1.8054E-04	4.8300E-04	2.0137E-03	9.5815E-03	1.2923E-02	6.0114E-03	9.3295E-03
290.000	1.4525E-01	3.9917E-04	4.3415E-04	2.481E-04	1.0295E-03	1.7580E-03	1.6809E-02	2.1114E-02	4.5934E-03	9.1375E-03
300.000	1.4102E-01	3.9865E-04	4.0544E-04	7.1267E-04	2.3033E-03	1.4993E-03	3.3235E-02	3.9461E-02	1.1775E-02	8.991E-03
310.000	1.3676E-01	3.9872E-04	3.8823E-04	1.8645E-03	4.8267E-03	1.8147E-03	6.3901E-02	7.2171E-02	3.4482E-02	9.6112E-03
320.000	1.3723E-01	3.9897E-04	5.7709E-04	1.5778E-03	3.5916E-03	1.8850E-03	4.4602E-02	4.7995E-02	3.1172E-02	1.0356E-02
330.000	1.3436E-01	3.9859E-04	5.4325E-04	1.1578E-03	2.4722E-03	1.5735E-03	2.8683E-02	2.9368E-02	2.3789E-02	1.0085E-02
340.000	1.3191E-01	3.9829E-04	5.2255E-04	9.5681E-04	1.8939E-03	1.3212E-03	2.1512E-02	2.0669E-02	2.0167E-02	9.9088E-03
350.000	1.2963E-01	3.9805E-04	5.0900E-04	8.4420E-04	1.6008E-03	1.0967E-03	1.7606E-02	1.6075E-02	1.8113E-02	9.8001E-03
360.000	1.2800E-01	3.9765E-04	5.0132E-04	7.7226E-04	1.4152E-03	8.8071E-04	1.5160E-02	1.2902E-02	1.6786E-02	9.7257E-03
370.000	1.2639E-01	3.9768E-04	4.9503E-04	7.2202E-04	1.2856E-03	6.6593E-04	1.3477E-02	1.0948E-02	1.5849E-02	9.6708E-03
380.000	1.2494E-01	3.9752E-04	4.9017E-04	6.8465E-04	1.1884E-03	4.5600E-04	1.2242E-02	8.6453E-03	1.5142E-02	9.6278E-03
390.000	1.2365E-01	3.9739E-04	4.8626E-04	6.5551E-04	1.1111E-03	2.9272E-04	1.1290E-02	7.0023E-03	1.4582E-02	9.5928E-03
400.000	1.2247E-01	3.9727E-04	4.8302E-04	6.3191E-04	1.0466E-03	3.2800E-04	1.0527E-02	5.5094E-03	1.4120E-02	9.5634E-03

DRIVING POINT RESPONSE - PHASE IN DEGREES

HERTZ	1	2	3	4	5	6	7	8	9	10
40.000	25.84	162.09	35.56	179.42	36.65	33.77	33.22	33.87	172.66	58.28
50.000	20.30	179.14	174.94	179.20	175.25	174.22	172.94	169.52	174.50	176.80
60.000	5.64	179.73	177.89	178.59	178.03	177.34	173.93	95.22	135.83	178.53
70.000	4.69	179.00	178.27	176.94	178.34	177.77	160.15	11.99	14.20	178.52
80.000	4.84	178.00	177.33	169.24	177.37	177.13	23.26	10.11	10.93	177.13
90.000	6.21	179.00	168.76	48.29	169.04	173.11	17.58	14.40	14.82	164.90
100.000	28.40	179.00	86.14	66.55	86.58	105.33	61.14	60.12	60.26	81.63
110.000	11.07	179.61	172.28	166.26	172.20	169.04	164.30	164.50	164.31	171.51
120.000	8.09	179.79	177.14	171.12	176.91	164.57	171.28	172.78	172.04	177.77
130.000	9.62	179.61	178.00	166.42	177.49	92.19	171.17	174.98	172.97	178.42
140.000	14.19	178.97	177.84	121.27	176.27	24.32	165.19	175.53	169.11	178.67
150.000	31.53	174.13	175.57	37.43	163.66	24.81	117.31	173.47	126.49	177.52
160.000	132.87	170.56	171.78	60.51	161.53	60.69	47.83	170.78	134.51	177.79
170.000	163.96	178.38	168.38	24.90	174.06	23.36	24.35	174.49	100.74	177.79
180.000	167.66	178.95	115.27	31.36	169.66	30.22	30.55	172.42	45.20	174.10
190.000	155.31	176.95	114.00	94.58	145.97	93.79	92.86	161.14	100.05	154.97
200.000	172.42	179.29	167.19	158.02	172.08	157.51	155.14	167.79	161.09	175.52
210.000	175.54	179.70	174.97	169.03	175.03	168.76	164.32	161.19	171.09	178.38
220.000	176.69	179.82	177.18	172.57	174.79	172.57	164.36	129.77	174.15	179.09
230.000	177.34	179.87	178.10	173.94	173.08	174.33	150.98	47.09	175.34	179.37
240.000	177.77	179.90	178.55	174.24	169.00	175.24	122.17	24.13	175.67	179.49
250.000	178.04	179.92	178.76	173.55	157.84	175.70	46.67	18.06	175.33	179.55
260.000	178.32	179.93	178.81	171.30	113.03	175.82	25.27	16.15	174.03	179.55
270.000	178.50	179.94	178.68	165.00	48.17	175.62	21.55	16.29	170.65	179.48
280.000	178.64	179.95	178.15	142.24	33.13	174.91	21.79	18.37	160.35	179.27
290.000	178.71	179.94	176.68	78.61	32.99	172.85	26.42	23.81	119.26	178.66
300.000	178.58	179.92	176.58	61.61	45.49	165.08	41.04	38.78	74.69	176.32
310.000	178.01	179.83	158.27	102.23	94.20	150.88	90.91	88.76	107.07	170.31
320.000	178.70	179.92	172.34	152.19	147.34	166.58	144.77	142.55	154.68	176.34
330.000	179.04	179.95	177.01	166.91	163.62	170.93	161.54	159.12	168.44	178.61
340.000	179.17	179.97	178.38	172.15	169.73	171.15	168.00	165.24	173.20	179.26
350.000	179.26	179.97	178.95	174.62	172.70	169.78	171.26	167.99	175.38	179.53
360.000	179.32	179.98	179.24	175.99	174.38	166.88	173.16	169.20	176.57	179.66
370.000	179.37	179.98	179.41	176.83	175.41	161.31	174.39	169.44	177.29	179.73
380.000	179.41	179.98	179.52	177.39	176.07	149.22	175.23	168.86	177.75	179.78
390.000	179.45	179.98	179.59	177.78	176.48	117.41	175.83	167.31	178.07	179.81
400.000	179.46	179.98	179.65	178.06	176.73	63.55	176.27	164.26	178.28	179.84

TRANSFER RESPONSE - AMP IN GVS - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
40.000	5.6155E-03	5.5153E-04	1.5007E-03	1.7815E-04	1.9708E-03	3.2435E-03	3.5195E-03	2.9307E-03	4.7695E-04	5.4258E-03
50.000	1.9468E-03	1.1119E-04	7.1044E-04	1.8808E-04	4.2292E-04	9.8602E-04	1.1863E-03	1.1435E-03	5.4892E-04	1.3158E-03
60.000	1.1361E-03	3.8528E-05	4.7373E-04	1.9773E-04	1.6772E-04	5.3691E-04	7.6244E-04	8.1178E-04	5.2167E-04	7.1458E-04
70.000	8.3664E-04	1.5924E-05	3.8451E-04	2.1648E-04	7.9941E-05	4.4022E-04	7.1352E-04	8.3093E-04	6.3283E-04	6.2079E-04
80.000	5.5309E-04	4.1330E-06	3.2137E-04	2.5247E-04	1.8619E-05	4.2839E-04	8.1932E-04	1.0503E-03	9.1422E-04	7.1088E-04
90.000	2.9226E-04	6.8231E-06	2.1528E-04	3.4335E-04	1.1665E-04	5.0067E-04	1.2264E-03	1.7624E-03	1.7362E-03	1.1326E-03
100.000	5.5831E-03	3.1887E-05	6.9146E-04	8.6702E-04	8.8145E-04	1.0132E-03	4.0088E-03	6.6020E-03	7.4690E-03	4.2344E-03
110.000	3.7484E-03	4.0806E-06	6.4403E-04	1.0803E-04	4.1504E-04	9.7389E-05	1.0300E-03	2.1217E-03	2.7194E-03	1.3721E-03
120.000	2.9636E-03	9.4884E-06	4.9426E-04	6.7527E-05	2.5304E-04	1.9534E-04	3.3383E-04	9.7273E-04	1.4557E-03	6.6474E-04
130.000	3.0831E-03	1.6798E-05	4.3447E-04	1.2103E-04	2.0150E-04	2.6624E-04	1.0069E-04	6.1207E-04	1.0994E-03	6.6011E-04
140.000	3.8341E-03	2.7283E-05	3.9178E-04	1.6093E-04	1.7416E-04	3.2570E-04	7.6672E-05	4.2592E-04	9.5965E-04	3.7124E-04
150.000	6.4078E-03	5.3574E-05	3.4505E-04	1.9388E-04	1.4631E-04	3.7294E-04	1.8812E-04	2.8601E-04	8.7430E-04	3.1440E-04
160.000	5.9267E-03	5.1372E-05	3.4469E-04	3.4679E-04	2.8419E-04	7.8961E-04	4.9517E-04	4.0915E-04	1.6275E-03	5.5518E-04
170.000	1.2692E-03	1.6031E-05	2.5954E-04	4.6492E-04	2.8158E-04	1.0586E-03	8.3627E-04	2.6097E-04	1.9389E-03	6.2752E-04
180.000	3.5713E-03	4.8602E-05	1.8981E-04	8.0555E-04	3.6729E-04	1.9086E-03	1.7699E-03	1.6699E-04	3.2225E-03	9.9022E-04
190.000	1.0308E-02	1.4056E-04	1.0774E-03	1.7658E-03	5.6602E-04	4.4609E-03	4.7042E-03	8.3660E-04	7.1346E-03	2.0933E-03
200.000	4.8823E-03	6.5218E-05	8.4348E-04	6.8822E-04	1.2650E-04	1.8950E-03	2.2381E-03	6.6288E-04	2.9362E-03	8.2653E-04
210.000	2.5732E-03	3.6682E-05	6.6508E-04	3.3525E-04	3.5781E-05	1.0322E-03	1.3559E-03	5.3462E-04	1.5805E-03	4.2868E-04
220.000	1.7347E-03	2.5258E-05	5.9178E-04	1.9989E-04	5.8793E-05	7.1178E-04	1.0381E-03	4.9580E-04	1.0971E-03	2.8784E-04
230.000	1.2830E-03	1.9021E-05	5.5158E-04	1.2703E-04	8.3602E-05	5.5048E-04	8.9332E-04	4.9238E-04	8.6969E-04	2.2152E-04
240.000	9.7710E-04	1.4999E-05	5.2530E-04	7.9387E-05	1.0536E-04	4.5618E-04	8.2829E-04	5.1227E-04	7.5263E-04	1.8672E-04
250.000	7.9637E-04	1.2107E-05	5.0577E-04	4.4189E-05	1.2792E-04	3.9694E-04	8.1378E-04	5.5490E-04	6.5780E-04	1.6912E-04
260.000	6.4341E-04	9.8372E-06	4.8947E-04	2.2374E-05	1.5500E-04	3.5945E-04	8.4320E-04	6.2662E-04	6.8881E-04	1.6353E-04
270.000	5.1706E-04	7.8922E-06	4.7399E-04	3.9036E-05	1.9187E-04	3.3817E-04	9.2511E-04	7.4345E-04	7.2599E-04	1.6523E-04
280.000	4.0230E-04	6.0508E-06	4.5684E-04	8.1562E-05	2.4875E-04	3.3259E-04	1.0904E-03	9.4254E-04	8.2823E-04	1.8995E-04
290.000	2.9045E-04	4.2507E-06	4.3615E-04	1.5392E-04	3.5134E-04	3.4872E-04	1.4272E-03	1.3222E-03	1.0646E-03	2.3882E-04
300.000	2.4681E-04	5.1052E-06	4.0544E-04	3.0845E-04	5.7910E-04	4.0616E-04	2.2130E-03	2.1921E-03	1.6065E-03	3.5856E-04
310.000	7.8518E-04	1.4758E-05	5.0823E-04	5.8418E-04	9.4951E-04	4.2717E-04	3.4547E-03	3.6558E-03	2.4756E-03	5.4619E-04
320.000	7.4238E-04	1.3586E-05	5.7709E-04	3.9572E-04	5.7414E-04	1.4267E-04	2.0126E-03	2.2711E-03	1.4301E-03	3.1223E-04
330.000	5.6354E-04	1.0182E-05	5.4325E-04	2.4494E-04	3.2347E-04	6.7820E-05	1.1022E-03	1.3271E-03	7.8133E-04	1.6896E-04
340.000	4.6380E-04	8.3342E-06	5.2255E-04	1.7598E-04	2.1422E-04	8.0765E-05	7.1589E-04	9.2017E-04	5.0896E-04	1.0508E-04
350.000	3.9989E-04	7.1723E-06	5.0990E-04	1.3759E-04	1.5568E-04	9.4090E-05	5.1449E-04	7.0670E-04	3.6881E-04	7.8380E-05
360.000	3.5389E-04	6.3468E-06	5.0132E-04	1.1298E-04	1.1943E-04	1.0269E-04	3.9359E-04	5.7861E-04	2.8600E-04	6.0290E-05
370.000	3.1831E-04	5.7136E-06	4.9503E-04	9.5699E-05	9.4742E-05	1.0853E-04	3.1402E-04	4.9507E-04	2.3256E-04	4.8639E-05
380.000	2.8949E-04	5.2034E-06	4.9017E-04	8.2763E-05	7.6754E-05	1.1299E-04	2.5821E-04	4.3766E-04	1.9600E-04	4.0872E-05
390.000	2.6540E-04	4.7762E-06	4.8626E-04	7.2630E-05	6.2965E-05	1.1684E-04	2.1721E-04	3.9702E-04	1.6957E-04	3.4996E-05
400.000	2.4483E-04	4.4154E-06	4.8302E-04	6.4440E-05	5.1953E-05	1.2057E-04	1.8598E-04	3.6792E-04	1.5097E-04	3.0838E-05

TRANSFER RESPONSE - PHASE IN DEGREES - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
40.000	212.46	209.21	35.56	179.03	209.17	210.88	211.84	212.99	231.78	29.24
50.000	353.66	349.98	174.94	180.20	350.76	353.03	353.94	354.73	357.80	172.30
60.000	357.00	352.49	177.89	180.59	353.77	357.29	358.34	359.12	-0.87	177.37
70.000	356.98	350.45	178.27	181.15	351.42	358.99	0.41	1.31	2.75	180.05
80.000	352.31	331.26	177.33	182.33	303.47	0.57	2.78	3.95	5.37	183.12
90.000	251.48	202.36	168.76	186.22	203.29	4.14	8.27	9.91	11.48	189.50
100.000	250.56	231.57	86.14	228.35	243.51	43.09	54.11	56.57	58.41	236.62
110.000	351.08	269.37	172.28	311.59	346.65	63.20	157.48	161.59	163.84	342.17
120.000	358.94	193.44	177.14	200.10	354.64	8.02	162.13	170.33	173.16	351.58
130.000	2.35	189.00	178.00	186.92	356.83	4.35	146.28	172.75	176.45	354.94
140.000	5.79	190.72	177.84	184.49	357.04	3.34	35.81	172.76	177.94	356.45
150.000	21.93	204.04	175.57	180.38	347.78	357.25	9.71	163.06	172.72	350.95
160.000	113.92	291.96	171.78	178.49	346.84	355.72	3.90	159.36	172.20	350.54
170.000	74.18	235.79	168.38	189.61	2.72	10.11	14.68	166.34	187.75	6.42
180.000	34.17	212.90	115.27	201.96	14.08	23.31	26.91	122.71	201.61	20.37
190.000	92.32	272.70	114.00	286.93	75.02	88.95	92.17	114.95	267.82	86.65
200.000	154.78	335.42	167.19	331.03	125.43	153.82	156.90	167.67	333.22	152.11
210.000	165.65	346.31	174.97	342.10	65.80	165.90	169.01	175.92	345.83	164.79
220.000	159.35	349.86	177.18	345.13	17.63	170.41	173.69	178.81	350.91	169.93
230.000	171.06	351.61	178.10	345.11	9.31	172.86	176.41	180.57	353.97	173.07
240.000	171.98	352.39	178.55	341.98	7.13	174.51	178.46	182.05	356.32	175.48
250.000	172.29	352.58	178.76	331.05	6.78	175.82	180.35	183.57	358.47	177.70
260.000	172.08	352.14	178.81	284.39	7.44	177.08	182.38	185.39	0.76	180.05
270.000	170.98	350.60	1.8.68	221.80	9.05	178.56	184.95	187.83	3.57	182.91
280.000	167.58	346.10	1.8.19	267.94	12.11	180.74	188.73	191.54	7.58	186.98
290.000	155.55	329.50	176.68	208.25	18.27	184.97	195.47	198.26	14.55	193.99
300.000	111.79	279.18	176.58	221.02	31.82	196.66	211.51	214.31	30.82	210.30
310.000	115.67	292.11	158.27	269.93	84.29	238.56	262.41	265.26	81.95	261.47
320.000	156.23	335.07	172.34	323.24	138.55	268.20	317.06	319.99	136.83	316.38
330.000	167.75	347.28	177.01	339.66	155.57	223.24	334.46	337.49	154.48	334.04
340.000	171.55	351.36	178.38	345.88	162.17	194.77	341.44	344.60	161.71	341.29
350.000	173.25	353.20	178.95	348.96	165.46	186.75	345.13	348.45	165.67	345.26
360.000	174.18	354.19	178.24	350.73	167.32	183.84	347.41	350.92	168.25	347.84
370.000	174.74	354.80	179.41	351.84	168.41	182.58	348.97	352.69	170.11	349.70
380.000	175.12	355.20	179.52	352.58	169.00	182.02	350.10	354.07	171.58	351.16
390.000	175.38	355.47	179.59	353.08	169.21	181.82	350.96	355.22	172.82	352.38
400.000	175.58	355.68	179.65	353.41	169.07	181.83	351.62	356.23	173.90	353.44

RECUR OF IDENTIFIED MODEL RESPONSES

COMPLETE IMPEDANCE MODEL

6 0 RERUN 450-1400 HZ

DIAGONAL MASSES

0.02491 6.54546 5.73811 5.42305 2.68282 0.46048 0.17341 0.12963 0.22154 0.27872

K MATRIX

	1	2	3	4	5	6	7	8	9	10
1	2.3547E 04	-5.3512E 04	6.1740E 04	-4.3555E 04	8.6005E 03	-5.3359E 03	6.8170E 02	-4.5992E 01	1.0188E 03	-4.4728E 02
2	-5.3512E 04	1.6903E 05	-3.1050E 05	2.7954E 05	-6.8178E 04	2.4521E 04	-3.7814E 03	1.3389E 03	-1.6564E 03	1.2774E 03
3	6.1740E 04	-3.1050E 05	1.8606E 06	-3.4674E 06	1.8642E 06	-4.7813E 05	1.1046E 05	-2.5016E 04	3.9569E 03	-2.6502E 03
4	-4.3555E 04	2.7954E 05	-3.4674E 06	8.9774E 06	-7.1953E 06	2.9939E 06	-7.0922E 05	1.7551E 05	1.4589E 04	-6.9077E 03
5	8.6005E 03	-6.8178E 04	1.8642E 06	-7.1953E 06	8.9683E 06	-6.0399E 06	2.1302E 06	-4.5372E 05	2.2795E 05	9.8840E 03
6	-5.3359E 03	2.4521E 04	-4.7813E 05	2.9939E 06	-6.0399E 06	6.7807E 06	-4.2934E 06	1.3798E 06	-1.2843E 06	5.1860E 03
7	6.8170E 02	-3.7814E 03	1.1046E 05	-7.0922E 05	2.1302E 06	-4.2934E 06	4.8439E 06	-2.5460E 06	4.1540E 05	-4.8703E 04
8	-4.5992E 01	1.3389E 03	-2.5016E 04	1.7551E 05	-4.5372E 05	1.3798E 06	-2.5460E 06	2.1447E 06	-6.5294E 05	1.2083E 05
9	1.0188E 03	-1.6564E 03	3.9569E 03	1.4589E 04	2.2795E 04	-1.2843E 05	4.1560E 05	-6.5294E 05	4.0459E 05	-1.1695E 05
10	-4.4728E 02	1.2774E 03	-2.6502E 03	-6.9077E 03	9.8840E 03	5.1860E 03	-4.8703E 04	1.2043E 05	-1.1695E 05	4.8307E 04

SPRINGS TO GROUND

-7.2573E 03 3.4083E 04 -3.9063E 05 1.0188E 06 -7.5314E 05 2.3887E 05 -1.0026E 05 1.4410E 05 -4.5332E 04 9.4234E 03

DAMPING COEFFICIENT 0.0493

C MATRIX

	1	2	3	4	5	6	7	8	9	10
1	4.9100E-04	3.1437E-04	1.7455E-04	1.1512E-04	8.7071E-05	4.7687E-05	8.4755E-06	-2.6264E-05	-7.3452E-05	-1.0447E-04
2	3.1437E-04	2.3218E-04	1.4353E-04	9.7982E-05	7.8206E-05	4.7951E-05	1.6603E-05	-1.1640E-05	-4.9271E-05	-7.3599E-05
3	1.7455E-04	1.4353E-04	1.1013E-04	8.2829E-05	7.5581E-05	5.7495E-05	3.5315E-05	1.3925E-05	-1.0095E-05	-2.9481E-05
4	1.1512E-04	9.7984E-05	8.2830E-05	6.6455E-05	6.5482E-05	5.4745E-05	3.9061E-05	2.3049E-05	7.0184E-06	-7.8399E-06
5	8.7075E-05	7.8209E-05	7.5583E-05	6.5483E-05	7.0681E-05	6.5105E-05	5.2497E-05	3.8318E-05	2.6990E-05	1.3539E-05
6	4.7692E-05	4.7955E-05	5.7497E-05	5.4746E-05	6.5106E-05	6.6080E-05	5.9048E-05	4.9253E-05	4.5146E-05	3.5784E-05
7	8.4803E-06	1.6607E-05	3.5318E-05	3.9063E-05	5.2498E-05	5.9049E-05	5.8761E-05	5.4981E-05	5.9218E-05	5.5623E-05
8	-2.6259E-05	-1.1637E-05	1.3928E-05	2.3051E-05	3.8320E-05	4.9254E-05	5.4982E-05	5.8120E-05	7.2139E-05	7.6183E-05
9	-7.3447E-05	-4.8267E-05	-1.0092E-05	7.0212E-06	2.6992E-05	4.5148E-05	5.9219E-05	7.2139E-05	1.1022E-04	1.3737E-04
10	-1.0447E-04	-7.3595E-05	-2.9477E-05	-7.8370E-06	1.3542E-05	3.5787E-05	5.5625E-05	7.6185E-05	1.3737E-04	2.1106E-04

NORMAL MODES FROM C MATRIX

	1	2	3	4	5	6	7	8	9	10
1	1.0000E 00	-9.8005E-01	3.0076E-01	1.0000E 00	8.3155E-01	-1.0000E 00	-1.0000E 00	-1.9551E-01	-2.3298E-02	2.2368E-03
2	7.7290E-01	-4.3957E-01	8.0225E-02	8.9047E-02	3.7758E-03	8.4979E-03	1.3654E-02	3.4770E-03	1.7952E-04	-1.2555E-04
3	5.3412E-01	2.4362E-01	-7.8151E-02	-2.8956E-01	-1.0769E-01	-5.0085E-03	-9.6568E-02	-5.0980E-02	-9.8839E-03	2.8962E-03
4	3.8809E-01	4.1256E-01	-5.3308E-02	-1.0169E-03	1.0139E-01	-9.0393E-03	1.7346E-01	1.5875E-01	4.4082E-02	-6.9787E-03
5	3.3941E-01	6.5523E-01	-7.8583E-03	3.1914E-01	1.2363E-01	1.3959E-02	-5.3866E-02	-2.5861E-01	-1.3661E-01	4.1536E-02
6	2.4295E-01	7.9486E-01	6.6791E-02	5.5331E-01	-1.0850E-01	2.8358E-02	-4.3941E-01	1.0190E-01	5.7444E-01	-3.5511E-01
7	1.3203E-01	8.2651E-01	1.5894E-01	6.1742E-01	-5.0975E-01	1.2753E-02	-4.6311E-01	9.4181E-01	4.9310E-02	1.0000E 00
8	2.7462E-02	8.1342E-01	2.7206E-01	5.3075E-01	-8.7590E-01	-2.1636E-02	-7.4168E-02	1.0000E 00	-1.0000E 00	-7.4503E-01
9	-9.7380E-02	9.5811E-01	5.9283E-01	1.2383E-01	-1.0000E 00	-6.4304E-02	7.0444E-01	-6.7526E-01	2.6138E-01	9.4883E-02
10	-1.9347E-01	1.0000E 00	1.0000E 00	-8.8503E-01	5.5622E-01	2.3142E-02	-2.0660E-01	1.4904E-01	-4.5662E-02	-7.2610E-03

FREQUENCIES - HERTZ

3.201189	9.244175	20.906799	41.686905	101.491837	156.440079	189.916595	310.335693	556.301758	1109.577393
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GENERALIZED MASS

6.740597	4.681289	0.467616	1.296500	0.638310	0.028015	0.499242	0.727381	0.358896	C.310536
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GAMMA

	1	2	3	4	5	6	7	8	9	10
1	4.9117E-03	-8.4800E-03	1.4268E-02	1.4997E-02	3.3512E-02	-4.4747E-01	-2.6491E-02	-5.3601E-03	-1.5602E-03	4.2989E-04
2	1.2000E 00	-1.0000E 00	1.0000E 00	3.5112E-01	3.9601E-02	1.0000E 00	9.5171E-02	2.7470E-02	8.5279E-03	-2.3222E-03
3	6.0544E-01	4.8594E-01	-8.5366E-01	-1.0000E 00	-1.0000E 00	-5.1592E-01	-5.8937E-01	-3.3827E-01	-1.5063E-01	4.8322E-02
4	4.1695E-01	7.7844E-01	-5.5018E-01	-3.3147E-03	8.8910E-01	-8.8026E-01	1.0000E 00	1.0000E 00	6.5557E-01	-2.7066E-01
5	1.7851E-01	6.0911E-01	-4.0622E-02	5.1552E-01	5.3688E-01	6.7277E-01	-1.5366E-01	-8.0509E-01	-1.0000E 00	6.0038E-01
6	2.3694E-02	1.3017E-01	5.9354E-02	1.5354E-01	-8.0856E-02	2.3487E-01	-2.1553E-01	5.4308E-02	7.2352E-01	-9.5417E-01
7	3.5081E-04	4.7055E-02	5.1855E-02	6.4301E-02	-1.4312E-01	3.9533E-02	-8.5272E-02	1.8977E-01	2.3743E-02	1.0000E 00
8	1.2108E-03	3.8182E-02	6.7364E-02	4.1494E-02	-1.8367E-01	-5.0324E-02	-1.0300E-02	1.5049E-01	-3.5456E-01	-5.8167E-01
9	-4.3413E-03	7.3438E-02	2.5007E-02	1.6500E-02	-3.5847E-01	-2.5595E-01	1.6598E-01	-1.7370E-01	1.5855E-01	1.1764E-01
10	-1.0053E-02	9.6940E-02	5.3069E-01	-1.4850E-01	2.5084E-01	1.1585E-01	-6.1274E-02	4.8199E-02	-3.4524E-02	-1.8021E-02

NORPAL MCOES FROM K MATRIX

	1	2	3	4	5	6	7	8	9	10
1	2.9784E-03	-2.2860E-02	-1.4535E-01	-1.0000E-00	-1.0000E-00	8.3149E-01	1.0000E-00	3.0074E-01	-9.7954E-01	1.0000E-00
2	-6.1127E-03	4.7538E-04	3.6142E-03	1.3677E-02	8.5040E-03	3.7398E-03	8.9105E-02	8.0239E-02	-4.3951E-01	7.7980E-01
3	1.4554E-03	-9.5888E-03	-5.0776E-02	-9.6567E-02	-5.0040E-03	-1.0772E-01	-2.8950E-01	-7.8134E-02	2.4360E-01	5.3928E-01
4	-8.6398E-03	4.4185E-02	1.5886E-01	1.7340E-01	-9.0373E-03	1.0136E-01	-9.6856E-04	-5.3288E-02	4.1256E-01	3.9112E-01
5	3.8776E-02	-1.3631E-01	-2.5862E-01	-5.3979E-02	1.3964E-02	1.2358E-01	3.1917E-01	-7.8613E-03	6.5511E-01	3.4397E-01
6	-3.5923E-01	5.7491E-01	1.0228E-01	-4.3939E-01	2.8342E-02	-1.0855E-01	5.5337E-01	6.6920E-02	7.9460E-01	2.3460E-01
7	1.0000E-00	4.9229E-02	9.4205E-01	-4.6305E-01	1.2753E-02	-5.0974E-01	6.1707E-01	1.5867E-01	8.1680E-01	1.1687E-01
8	-7.5150E-01	-1.0000E-00	1.0000E-00	-7.4187E-02	-2.1639E-02	-8.7592E-01	5.3116E-01	2.7226E-01	8.2628E-01	6.3973E-02
9	9.2118E-02	2.6176E-01	-6.7540E-01	7.0422E-01	-6.4314E-02	-1.0000E-00	1.2378E-01	5.9280E-01	9.5635E-01	-1.0366E-01
10	-1.1218E-02	-4.5312E-02	1.4896E-01	-2.0665E-01	2.3139E-02	5.5619E-01	-8.8497E-01	1.0000E-00	1.0000E-00	-1.9414E-01

FREQUENCIES - HERTZ

1109.492920 556.234375 310.306396 189.911240 156.438065 101.491089 41.686905 20.906647 9.243723 3.200274

GENERALIZED MASS

0.312408 0.358978 0.727630 0.499074 0.028016 0.638289 1.296370 0.467603 4.675464 6.861915

DRIVING POINT RESPONSE - AMP IN G'S

HERTZ	1	2	3	4	5	6	7	8	9	10
450.000	1.1799E-01	3.9681E-04	4.7221E-04	5.5456E-04	7.9477E-04	2.2939E-03	8.1297E-03	3.6311E-03	1.2486E-02	9.4601E-03
500.000	1.1499E-01	3.9650E-04	4.6509E-04	4.9223E-04	4.5764E-04	7.7036E-03	6.6703E-03	2.0642E-02	1.0833E-02	9.3768E-03
550.000	1.1287E-01	3.9628E-04	4.5923E-04	4.8411E-04	2.2150E-03	4.2305E-02	5.5006E-03	1.2726E-01	1.1968E-02	9.2942E-03
600.000	1.1137E-01	3.9614E-04	4.6578E-04	6.0673E-04	1.7998E-03	1.8032E-02	4.6536E-03	5.6432E-02	1.5372E-02	9.4734E-03
650.000	1.1019E-01	3.9602E-04	4.6201E-04	5.5646E-04	1.3801E-03	1.0539E-02	3.4698E-03	3.3448E-02	1.3741E-02	9.4132E-03
700.000	1.0927E-01	3.9592E-04	4.5994E-04	5.3568E-04	1.2337E-03	8.0037E-03	2.1730E-02	2.5442E-02	1.3112E-02	9.3850E-03
750.000	1.0854E-01	3.9585E-04	4.5851E-04	5.2352E-04	1.1574E-03	6.6471E-03	8.3800E-04	2.0978E-02	1.2758E-02	9.3671E-03
800.000	1.0796E-01	3.9579E-04	4.5743E-04	5.1524E-04	1.1090E-03	5.7071E-03	1.8403E-03	1.7712E-02	1.2520E-02	9.3541E-03
850.000	1.0748E-01	3.9574E-04	4.5659E-04	5.0910E-04	1.0742E-03	4.9069E-03	4.6142E-03	1.4766E-02	1.2339E-02	9.3440E-03
900.000	1.0708E-01	3.9569E-04	4.5590E-04	5.0425E-04	1.0498E-03	4.0818E-03	8.7715E-03	1.1555E-02	1.2187E-02	9.3358E-03
950.000	1.0674E-01	3.9566E-04	4.5533E-04	5.0018E-04	1.0193E-03	3.0649E-03	1.5473E-02	7.5382E-03	1.2041E-02	9.3288E-03
1000.000	1.0646E-01	3.9563E-04	4.5485E-04	4.9640E-04	9.8918E-04	1.8040E-03	2.7943E-02	5.2312E-03	1.1870E-02	9.3222E-03
1050.000	1.0621E-01	3.9560E-04	4.5440E-04	4.9217E-04	9.4269E-04	4.1159E-03	5.8032E-02	2.1285E-02	1.1603E-02	9.3148E-03
1100.000	1.0600E-01	3.9558E-04	4.5408E-04	4.9082E-04	9.7038E-04	1.9130E-02	1.5397E-01	8.4181E-02	1.1681E-02	9.3120E-03
1150.000	1.0582E-01	3.9556E-04	4.5386E-04	4.8900E-04	1.1415E-03	1.7567E-02	1.0561E-01	7.1918E-02	1.2716E-02	9.3257E-03
1200.000	1.0566E-01	3.9555E-04	4.5376E-04	4.8923E-04	1.0867E-03	1.2192E-02	6.1471E-02	4.8066E-02	1.2412E-02	9.3191E-03
1250.000	1.0552E-01	3.9553E-04	4.5351E-04	4.9285E-04	1.0590E-03	1.0085E-02	4.5195E-02	3.9864E-02	1.2255E-02	9.3149E-03
1300.000	1.0540E-01	3.9552E-04	4.5330E-04	4.9116E-04	1.0428E-03	6.9951E-03	3.7054E-02	3.4145E-02	1.2161E-02	9.3118E-03
1350.000	1.0529E-01	3.9551E-04	4.5312E-04	4.8984E-04	1.0319E-03	8.3292E-03	3.2210E-02	3.1279E-02	1.2057E-02	9.3093E-03
1400.000	1.0519E-01	3.9550E-04	4.5296E-04	4.8875E-04	1.0238E-03	7.8783E-03	2.9010E-02	2.9351E-02	1.2050E-02	9.3073E-03

DRIVING POINT RESPONSE - PHASE IN DEGREES

Hertz	1	2	3	4	5	6	7	8	9	10
450.000	174.61	179.99	175.78	178.60	175.93	16.74	177.27	38.82	178.54	179.89
500.000	174.69	179.99	179.78	177.62	161.49	18.51	177.25	21.51	176.72	179.85
550.000	179.72	179.99	178.54	150.82	88.32	68.14	173.94	65.14	136.64	178.45
600.000	179.79	179.99	175.76	177.08	171.38	164.82	175.59	165.22	176.13	179.79
650.000	179.83	179.99	175.89	179.02	177.03	173.31	173.41	173.44	178.76	179.93
700.000	174.85	180.00	175.93	179.43	178.38	175.67	166.61	175.61	178.31	179.95
750.000	179.87	180.00	175.94	179.60	178.51	176.52	126.46	176.27	179.53	179.97
800.000	179.89	180.00	179.95	179.69	179.18	176.65	31.08	176.13	179.63	179.97
850.000	179.90	180.00	179.96	179.74	179.31	176.08	17.89	175.02	179.68	179.98
900.000	179.91	180.00	175.97	179.78	179.35	174.22	15.06	171.76	179.69	179.98
950.000	179.92	180.00	179.97	179.79	179.27	168.32	15.33	159.79	179.65	179.98
1000.000	179.93	180.00	175.97	179.77	178.90	137.62	18.44	89.77	179.68	179.98
1050.000	179.94	180.00	175.97	179.63	177.19	61.25	29.26	47.60	178.71	179.97
1100.000	179.94	180.00	179.94	178.60	166.53	86.48	73.39	82.70	173.72	179.87
1150.000	179.95	180.00	179.97	179.42	175.65	155.94	148.52	154.20	177.79	179.95
1200.000	179.95	180.00	179.98	179.77	178.62	170.49	165.59	169.49	175.31	179.98
1250.000	179.96	180.00	179.98	179.86	179.28	174.71	171.18	174.05	179.64	179.99
1300.000	179.96	180.00	175.98	179.89	179.53	176.53	173.84	176.06	179.77	179.99
1350.000	179.96	180.00	179.95	179.91	179.65	177.49	175.37	177.14	178.83	179.99
1400.000	179.96	180.00	175.99	179.92	179.72	178.07	176.34	177.79	178.86	179.99

3

10

TRANSFER RESPONSE - PHASE IN DEGREES - ROW 3

HERTZ	1	2	3	4	5	6	7	8	9	10
450.000	176.01	356.09	179.78	353.22	156.71	183.64	353.28	0.77	178.76	358.15
500.000	175.58	355.55	179.78	343.74	33.95	189.85	351.14	8.36	186.58	5.78
550.000	161.09	339.11	178.54	270.37	69.61	241.07	296.74	60.59	238.98	57.98
600.000	175.22	355.12	179.76	349.08	163.95	338.51	352.52	158.97	337.46	156.28
650.000	176.43	356.45	179.89	354.30	171.71	347.37	355.64	168.82	347.39	166.08
700.000	176.70	356.73	179.93	355.53	173.83	349.77	358.07	172.44	351.04	169.68
750.000	176.82	356.85	179.94	356.02	174.71	350.28	359.12	174.65	353.24	171.92
800.000	176.88	356.92	179.95	356.27	175.11	349.30	0.16	176.41	354.98	173.79
850.000	176.92	356.96	179.96	356.38	175.21	345.47	1.38	178.13	356.64	175.69
900.000	176.95	356.98	179.97	356.39	174.97	329.69	3.01	180.12	358.56	177.94
950.000	176.96	356.98	179.97	356.26	174.09	243.67	5.46	182.86	1.21	181.01
1000.000	176.93	356.95	179.97	355.73	171.06	209.28	9.88	187.50	5.75	186.04
1050.000	176.75	356.75	179.97	353.35	154.94	211.68	20.59	158.40	16.53	197.36
1100.000	175.51	355.40	179.94	338.94	114.02	254.08	66.37	244.33	62.34	243.72
1150.000	176.50	356.47	179.97	351.58	162.00	327.90	142.00	320.10	137.96	319.90
1200.000	176.92	356.92	179.98	355.28	171.87	344.23	159.46	337.68	155.39	337.87
1250.000	177.01	357.02	179.98	356.24	174.37	349.37	165.37	343.69	161.24	344.22
1300.000	177.05	357.06	179.98	356.57	175.36	351.74	168.30	346.72	164.07	347.53
1350.000	177.07	357.08	179.99	356.73	175.86	353.07	170.05	348.55	165.71	349.61
1400.000	177.09	357.10	179.99	356.82	176.16	353.90	171.22	349.80	166.74	351.05

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	ROLE	WT	ROLE	WT	ROLE	WT
FORTTRAN IV IBM System 360 Sinusoidal Frequency Sweep Test Natural Frequency Frequency Response						