

Report 10372A
8 February 1996

**Earth Observing System (EOS)/
Advanced Microwave Sounding Unit-A (AMSU-A)
Structural Math Model - A1**

Contract No: NAS 5-32314
CDRL: 102

Submitted to:

**National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771**

Submitted by:

**Aerojet
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Section 1**INTRODUCTION**

This Structural Math Model for the Earth Observing System (EOS) Advanced Microwave Sounding Unit-A (AMSU-A), A1 module, provides the description for the NASTRAN finite element model that is separately forwarded on computer disk. This is a description of the model following the EOS AMSU-A1 Mechanical/Structural Subsystem Critical Design Review (CDR), held 7 December 1995. The report has been prepared in accordance with Section 11.1 of GSFC 422-11-12-01, General Interface Requirements Document (GIRD) for EOS Common Spacecraft/Instruments, EOS PM Project.

1.1 Identification

This is the Structural Math Model for the Earth Observing System (EOS)/Advanced Microwave Sounding Unit-A (AMSU-A), module A1. This report is submitted to fulfill the requirements of Contract NAS 5-32314 CDRL 102, Structural Math Model, for the EOS AMSU-A1 module. The Structural Math Model for the A2 module has been submitted under separate cover.

1.2 Purpose and Objectives

The purpose of this report is to document the NASTRAN bulk data deck, transmitted under separate cover. The Structural Math Model is to be used by the Spacecraft Contractor for dynamic loads analysis.

1.3 Document Status and Schedule

This is the submittal of the Structural Math Model for the A1 unit following the EOS AMSU-A1 Mechanical/Structural Subsystem Critical Design Review (CDR), held 7 December 1995.

Section 2

REFERENCE DOCUMENTS

The following documents were used in the preparation of this report:

SPECIFICATIONS

422-11-12-01 Rev. A January 1994	General Interface Requirements Document (GIRD) for EOS Common Spacecraft/Instruments EOS PM Project
420-05-01 Rev. A 2 Aug. 1991	Earth Observing System (EOS) Performance Assurance Requirements for EOS General Instruments
422-12-12-04 March 1993	Contract Documentation Requirements List for the Advanced Microwave Sounding Unit-A (AMSU-A) EOS PM Project

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Report 10381 June 1995	Earth Observing System/(EOS) Advanced Microwave Sounding Unit-A (AMSU-A) Stress Analysis Report, A1-Module
Report 10381 February 1996	Addendum 1 to the Earth Observing System/(EOS) Advanced Microwave Sounding Unit-A (AMSU-A) Stress Analysis Report, A1-Module

Section 3

MODEL DESCRIPTION

3.1 Supporting Analysis

The first natural frequency of the A1 Module has been determined to be 109 Hz as part of the structural analysis summarized in the Addendum 1 to the Stress Analysis Report (Aerojet Report 10381). If the lowest natural frequency is above 100 Hz, then the test-verified structural model requirements of Section 3.4.3 of GSFC 420-05-01, Performance Assurance Requirements for EOS General Instruments do not apply. Section 11.1 of GSFC 422-11-12-01, General Interface Requirements Document (GIRD) for EOS Common Spacecraft/Instruments, EOS PM Project allows for the delivery of a rigid mass NASTRAN model if the fixed-base frequencies are greater than 100 Hz.

The A1 Structural Math Model described herein is a rigid, lumped mass NASTRAN finite element model.

3.2 Finite Element Model

The NASTRAN bulk data deck contains twenty three GRID cards. Twenty-two of the GRIDs are at the interface attachment locations with the spacecraft. The twenty-third location is at the A1 module center of gravity that was determined in the stress analysis. All model identification (ID) numbers are in the range of 335001 through 335023. GRID 335023 is at the A1-Module center of gravity. GRIDs 335001 through 335017, 335019, 335020, and 335022 represent spacecraft mounting screw locations. GRIDs 335018 and 335021 are at shear pin locations.

Twenty-two bar elements with large cross-sectional areas connect the GRID at the center of gravity (c.g.) with each of the twenty-two mounting grids. CBAR element numbers 335101 through 335122 are used. A CONM2 point element (335123) is placed at the c.g.

Figure 1 shows the rigid mass model and the basic coordinate system used in the model. In addition, a local coordinate system, CORD2R No. 1, referenced to the noted lower baseplate bottom corner, is provided. Figures 2 and 3 identify GRIDs (in the local coordinate system), CBARs, and the CONM2 element. A listing of the GRID point locations in the local coordinate system is provided in Table 1 in SI units (meters).

The total mass of the model is 49.4 Kg (109.0 pounds), with c.g. and mass moments of inertia, relative to CORD2R No. 1 of:

Mass	49.4447 kg
X	0.40709 m
Y	0.16133
Z	0.24544
Ixx	1.88857 kg-m ²
Ixy	-0.00132
Ixz	0.50277
Iyy	3.48592
Iyz	0.02740
Izz	2.36331

The lumped mass model is run without the NASTRAN AUTOSPC feature for a Free-Free Eigenvalue analysis. In addition, a NASTRAN DMAP is included to verify the results of a stiffness equilibrium test performed. Appendix A contains the NASTRAN output showing the first six modes to be

rigid-body modes; a floppy disk which contains the input deck and output listing for the model is included with this report to fulfill contract requirements. Figures 4 through 9 show the rigid body modes, all at 0 Hz. The NASTRAN solution demonstrates compliance of the lumped mass model to the DMAP stiffness equilibrium check (no terms exist in the KFFRN matrix).

3.3 Boundary Conditions

The model is submitted with no constraints. GRIDs 335001 through 335022 would be constrained for static analysis.

Table 1 Grid Points Per Local System 1 (SI Units)

GRID	COORD SYSTEM	X (m)	Y (m)	Z (m)
335001	1	0.68661	0.01026	0.01349
335002	1	0.58999	0.01026	0.01349
335003	1	0.49337	0.01026	0.01349
335004	1	0.39675	0.01026	0.01349
335005	1	0.30013	0.01026	0.01349
335006	1	0.20351	0.01026	0.01349
335007	1	0.10688	0.01026	0.01349
335008	1	0.01026	0.01026	0.01349
335009	1	0.68661	0.32629	0.01349
335010	1	0.58999	0.32629	0.01349
335011	1	0.49337	0.32629	0.01349
335012	1	0.39675	0.32629	0.01349
335013	1	0.30013	0.32629	0.01349
335014	1	0.20351	0.32629	0.01349
335015	1	0.10688	0.31201	0.01349
335016	1	0.01026	0.31201	0.01349
335017	1	0.68661	0.08926	0.01349
335018	1	0.68661	0.16825	0.01349
335019	1	0.68661	0.24772	0.01349
335020	1	0.01026	0.08570	0.01349
335021	1	0.01026	0.16114	0.01349
335022	1	0.01026	0.23658	0.01349
335023	1	0.40709	0.16133	0.24544

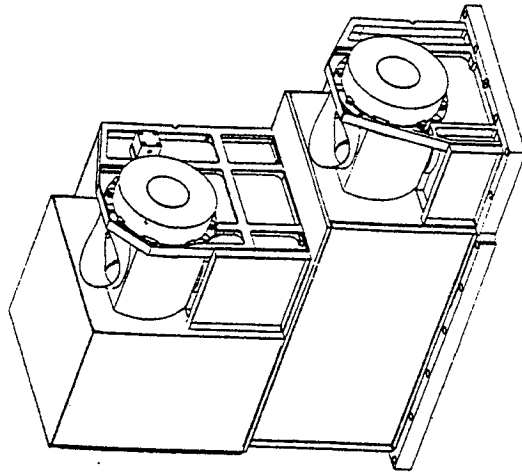
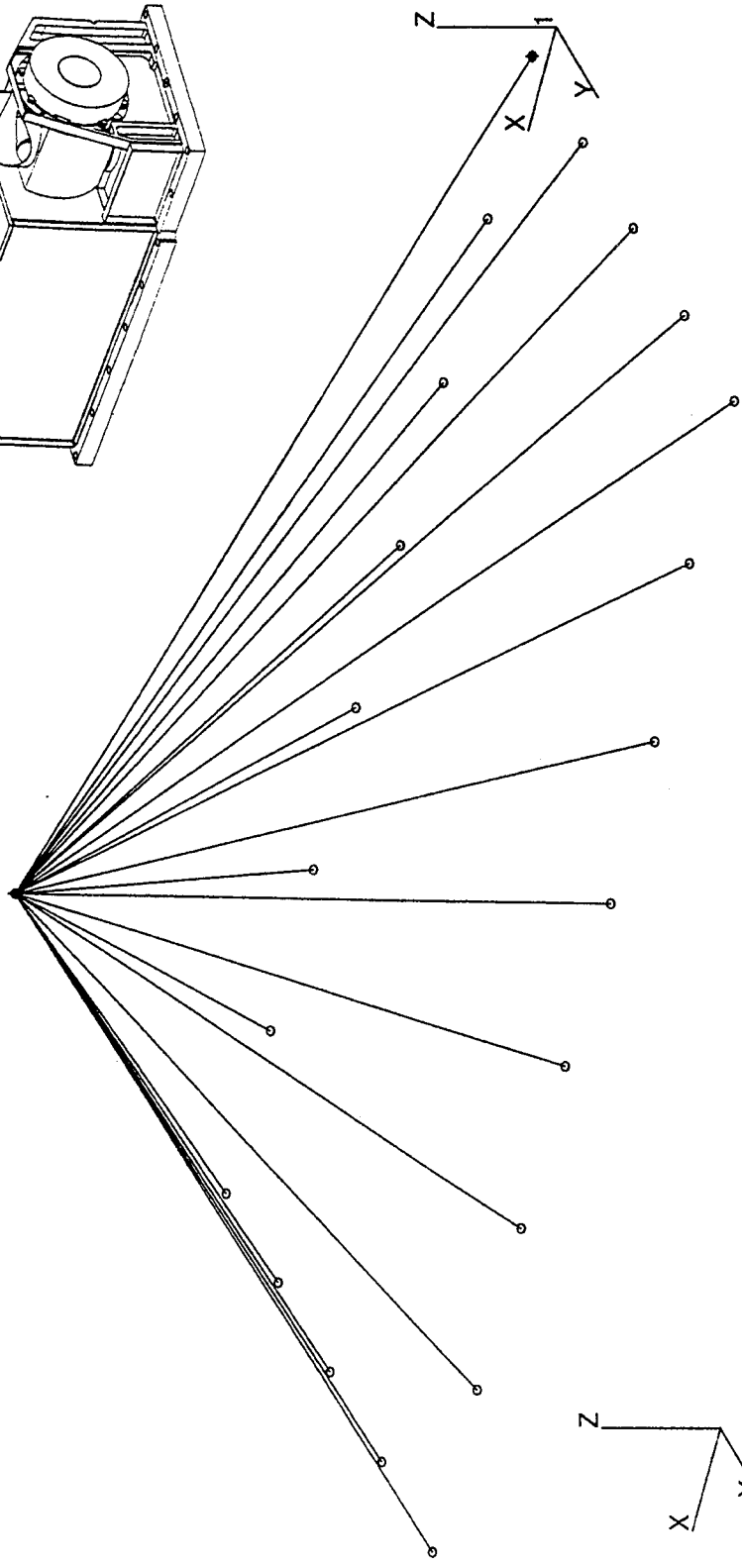
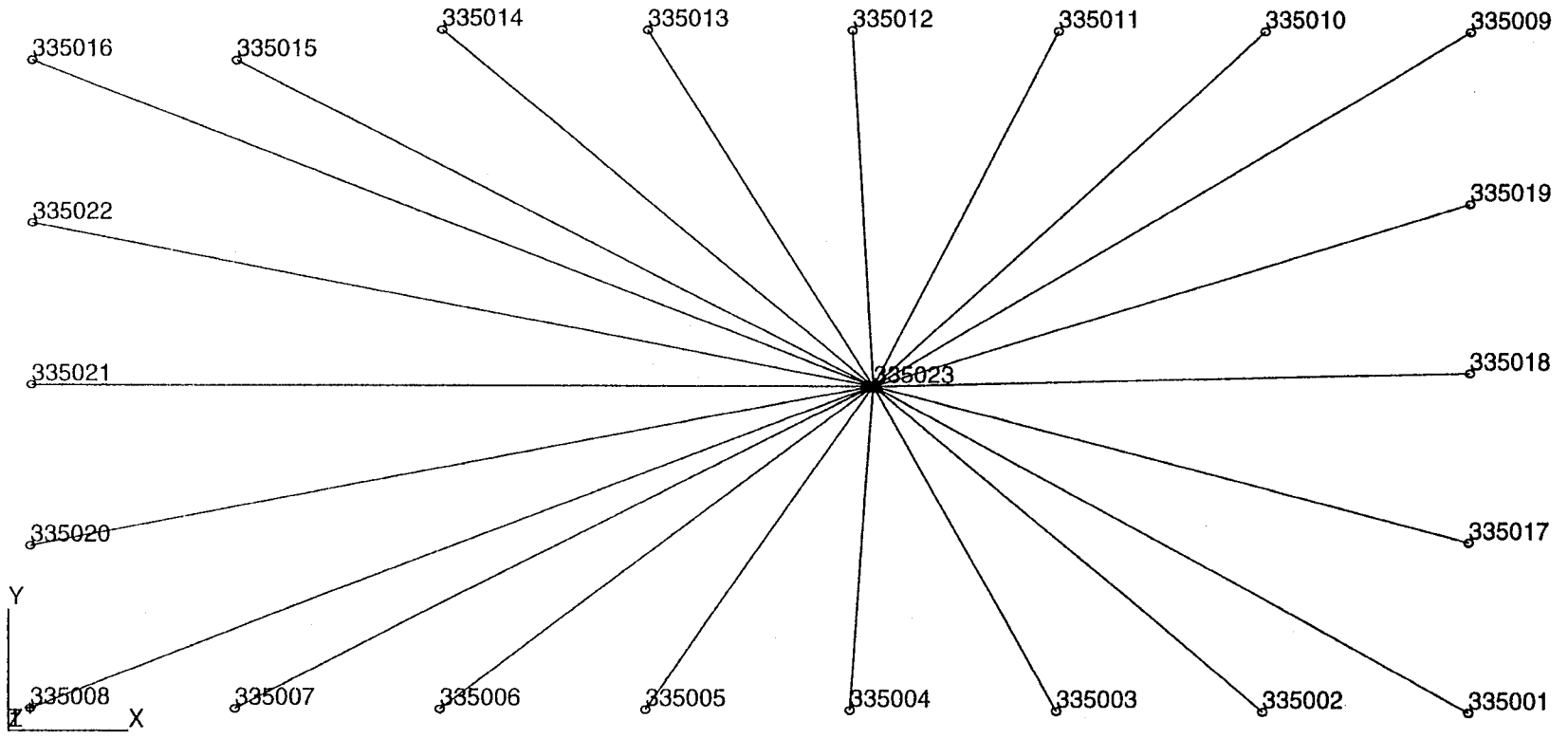


FIGURE 1 NASTRAN LUMPED MASS MODEL



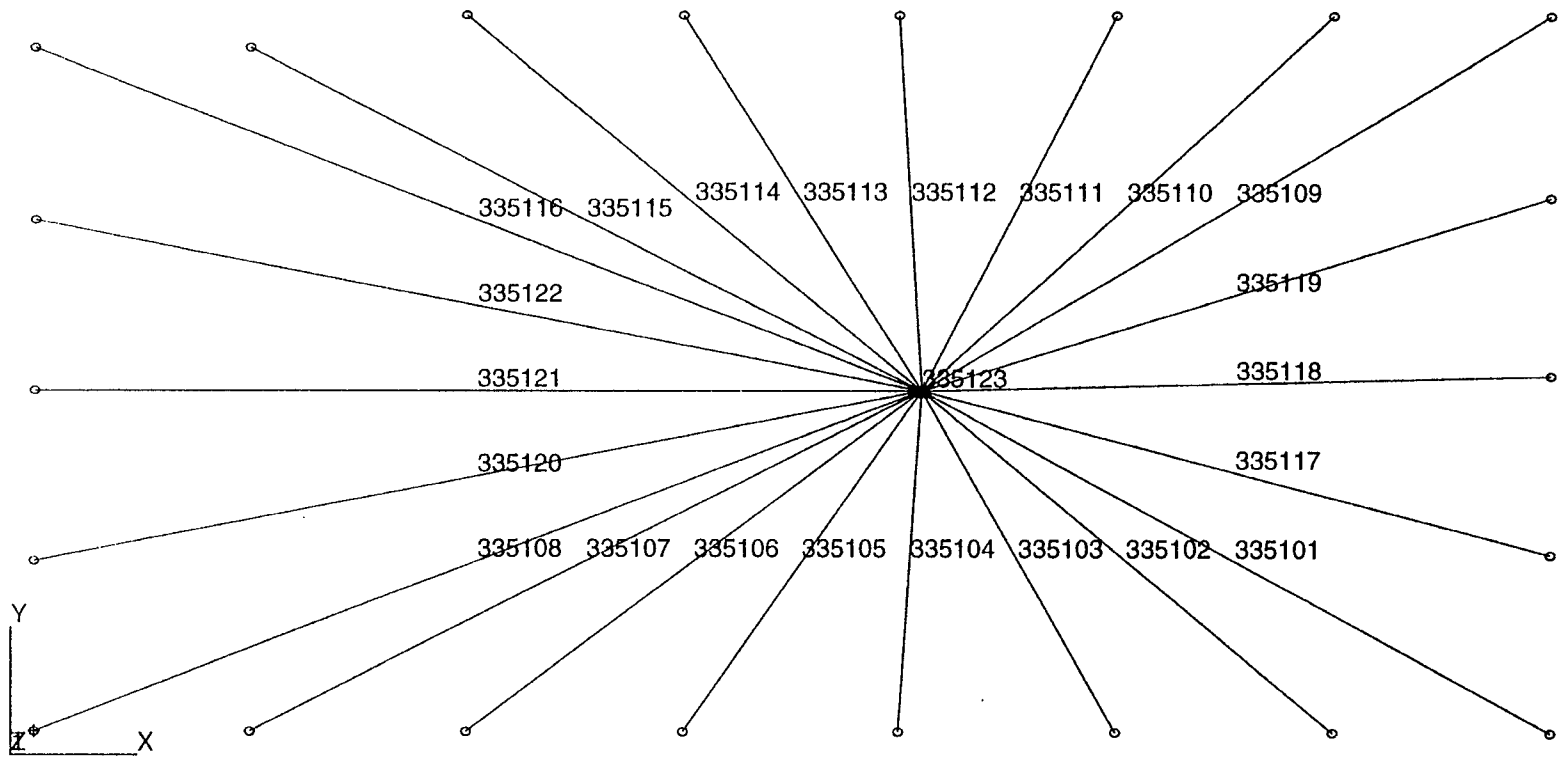
LOCAL COORDINATE SYSTEM 1

FIGURE 2 NASTRAN LUMPED MASS MODEL - GRID POINTS



LOCAL COORDINATE SYSTEM 1

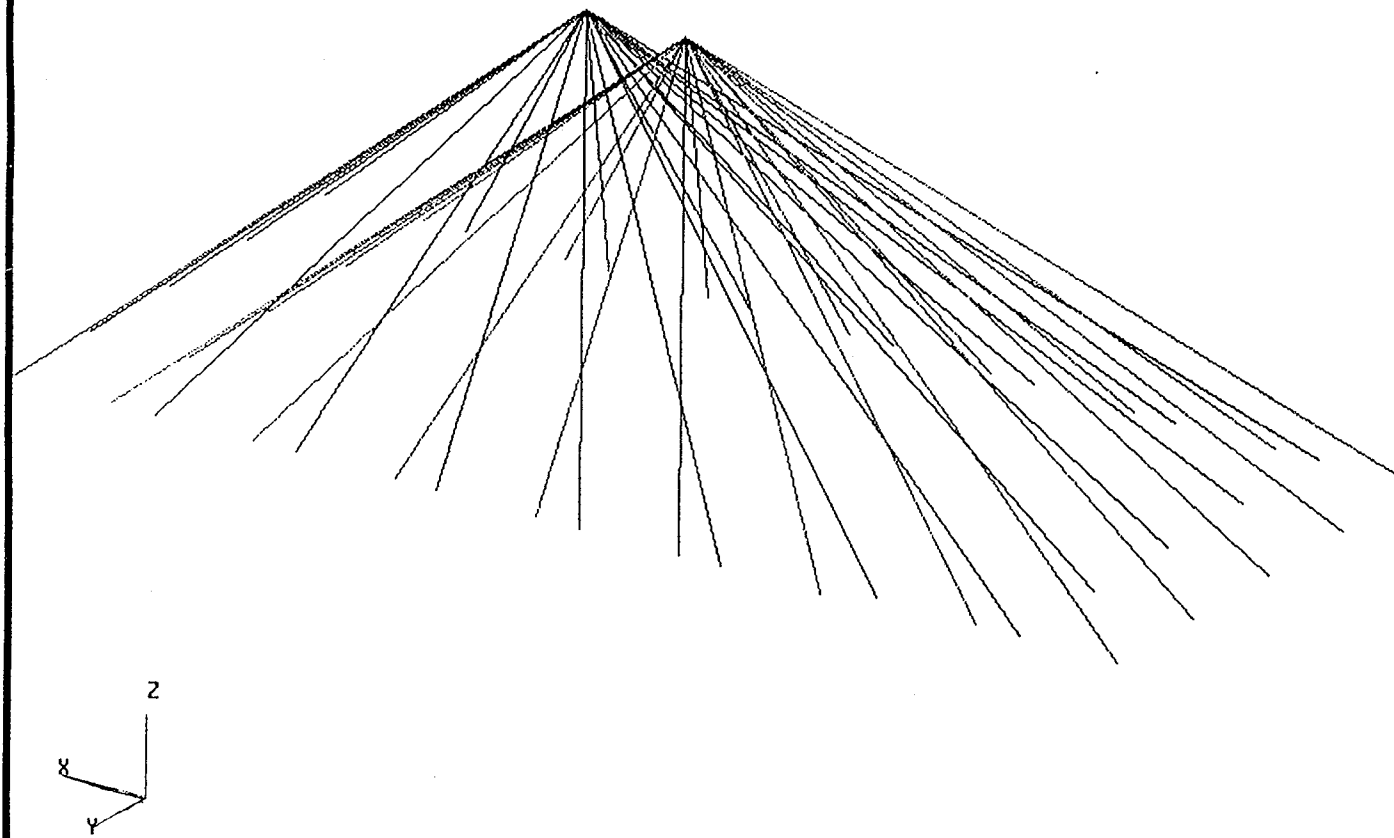
FIGURE 3 NASTRAN LUMPED MASS MODEL - CBAR'S AND CONM2'S



LOCAL COORDINATE SYSTEM 1

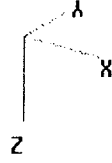
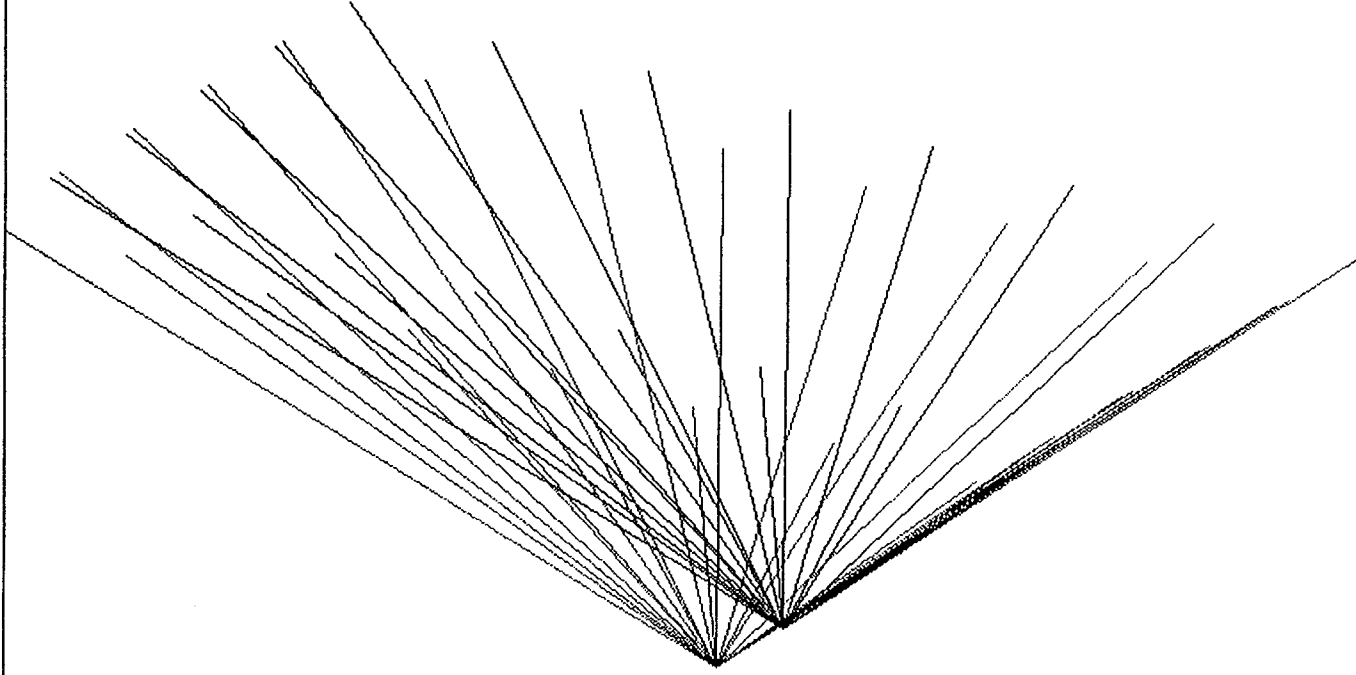
FIGURE 4 1ST RIGID MODE (UX)

Time: 12:59:11
Date: 01/31/96
Eigenvectors
Translational
FREE-FREE
Mode 1 : Frequency = 0.
Max. Deformation =
1.881982E+00
@Node 335001



Time: 13:02:39
Date: 01/31/96
Eigenvectors
Translational
FREE-FREE
Mode 2 : Frequency = 0.
Max. Deformation =
1.881982E+00
@Node 335001

FIGURE 5 2ND RIGID MODE (UY)



Time: 13:04:13
Date: 01/31/96
Eigenvectors
Translational
FREE-FREE
Mode 3 : Frequency = 0.
Max. Deformation =
1.801902E+00
@Node 335001

FIGURE 6 3RD RIGID MODE (UZ)

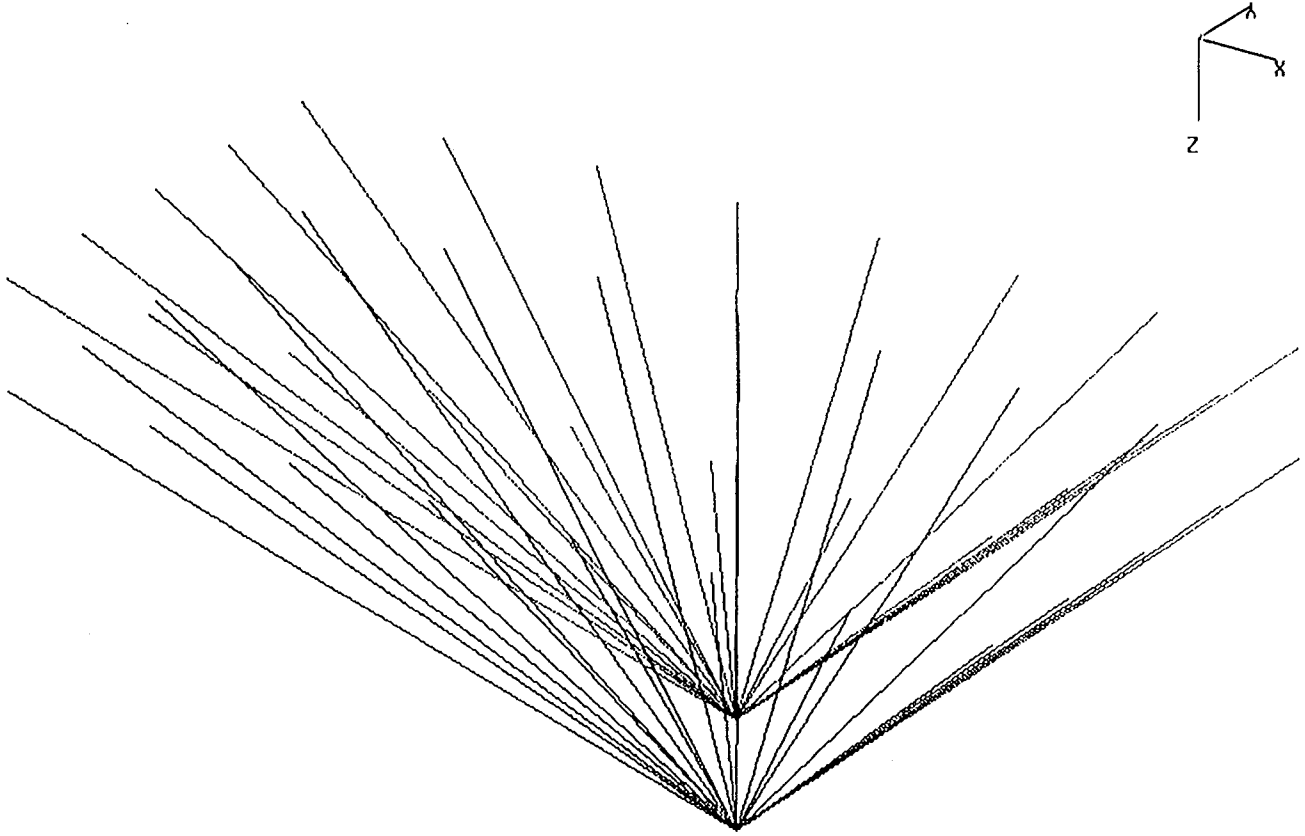
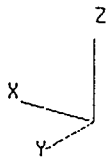
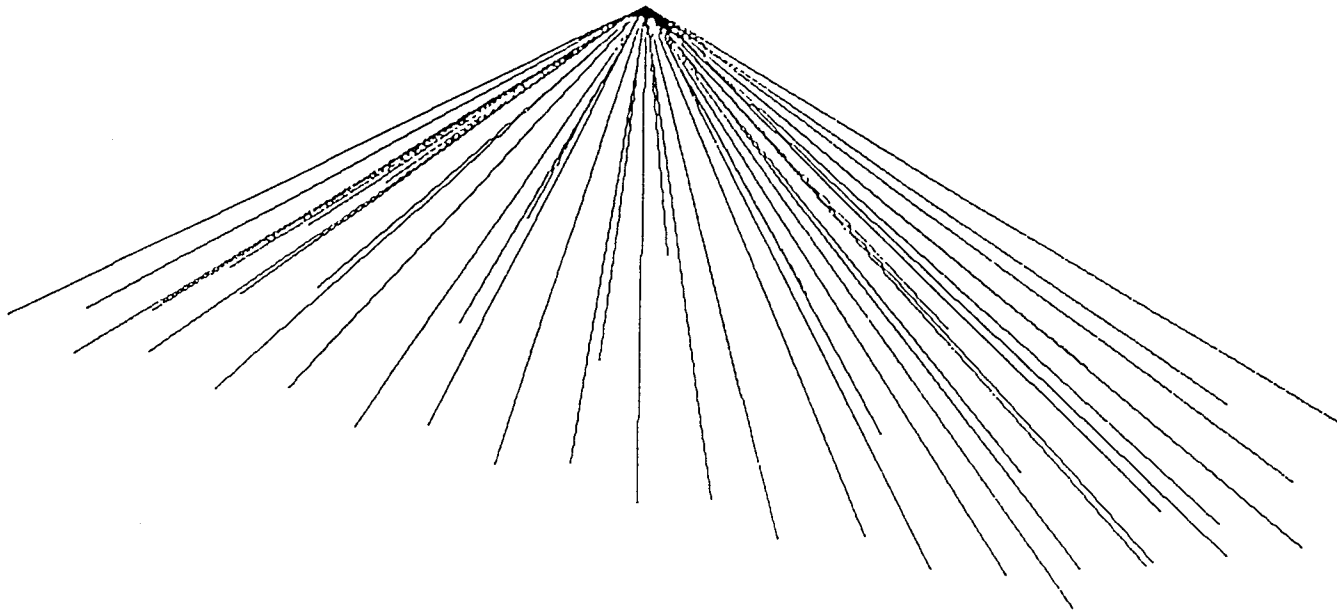
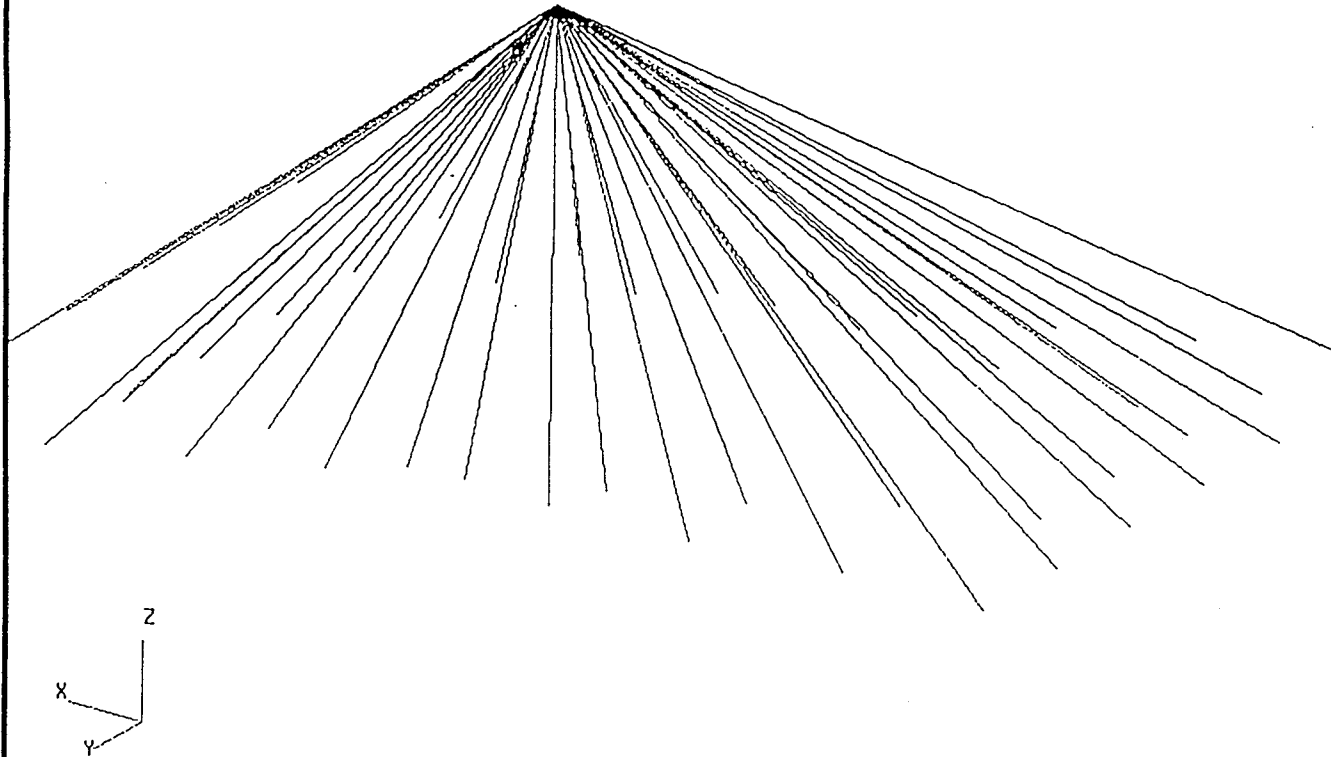


FIGURE 7 4TH RIGID MODE (ROTX)



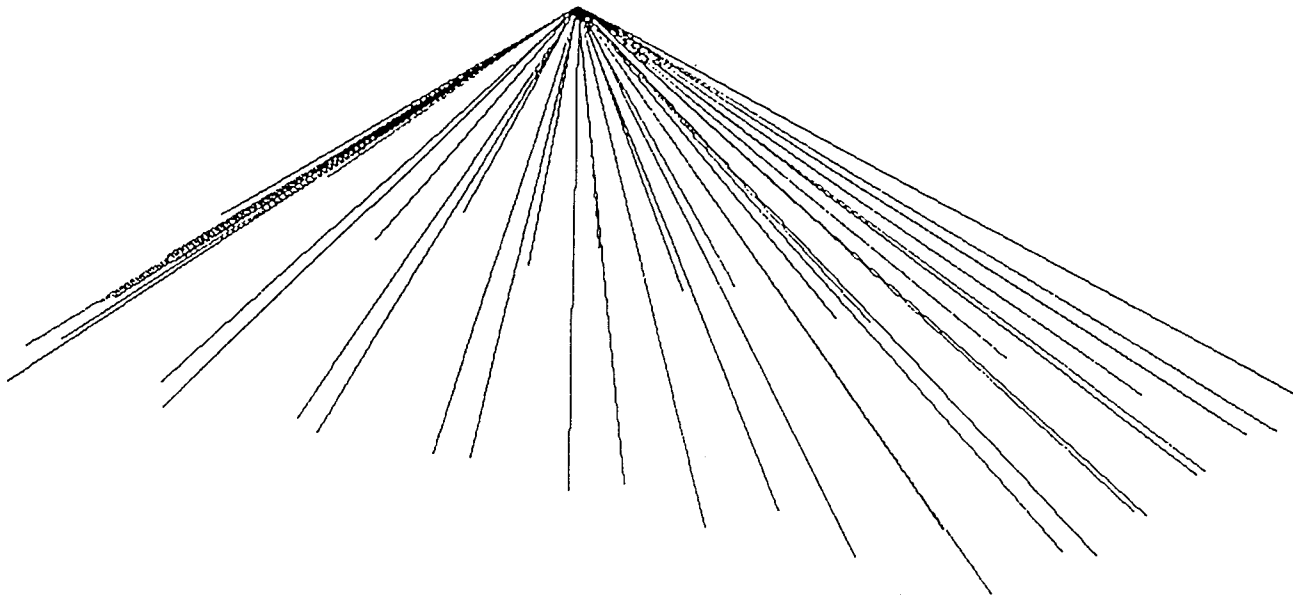
Time: 13:04:50
Date: 01/31/96
Eigenvectors
Translational
FREE-FREE
Mode 4 : Frequency = 0.
Max. Deformation =
2.740986E+00
@Node 335009

FIGURE 8 5TH RIGID MODE (ROTY)



Time: 13:06:28
Date: 01/31/96
Eigenvectors
Translational
FREE-FREE
Mode 5 : Frequency = 0.
Max. Deformation =
3.258638E+00
@Node 335008

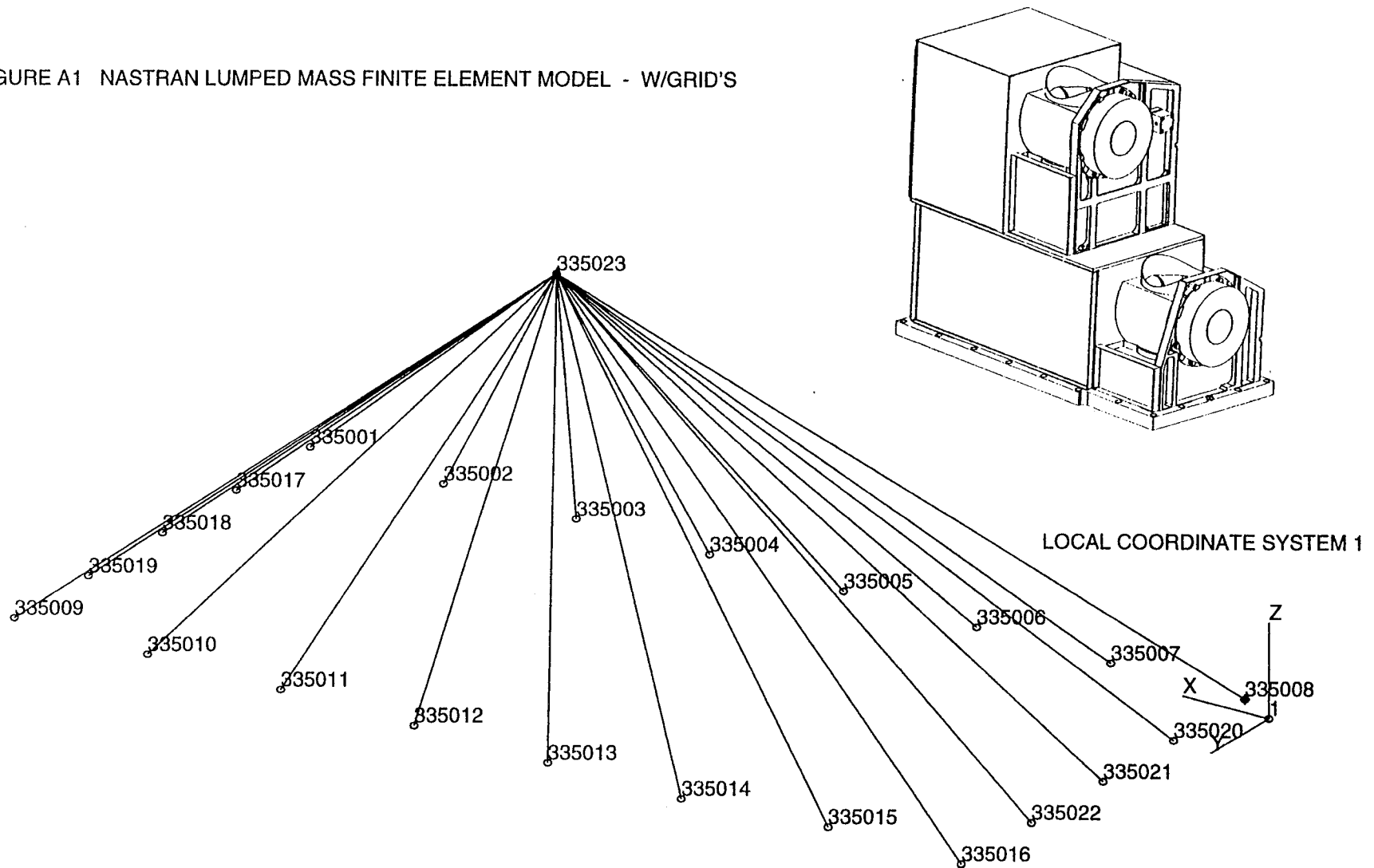
FIGURE 9 6TH RIGID MODE (ROTZ)



Time: 13:06:56
Date: 01/31/96
Eigenvectors
Translational
FREE-FREE
Mode 6 : Frequency = 0.
Max. Deformation =
3.386999E+00
@Node 335009

Appendix A
NASTRAN DMAP SOLUTION
Free-Free Eigenvalue Analysis

FIGURE A1 NASTRAN LUMPED MASS FINITE ELEMENT MODEL - W/GRID'S



A-1

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Welcome to MSC/NASTRAN Version 68

MSC/NASTRAN Version 68 adds the following major new capabilities:

- * Completely rewritten documentation, including online delivery
- * Shape optimization
- * Dynamic and acoustic optimization
- * Superelement optimization
- * Aeroelastic optimization
- * P-version elements and adaptivity
- * 3D slideline contact
- * Additional hyperelastic elements
- * Improved differential stiffness
- * Substantially enhanced heat transfer
- * Multiple boundary conditions in SOLs 101, 103, and 200
- * Performance enhancements (sparse solver in many SOLs)
- * ... and other enhancements

See the "Version 68 Release Notes" for a complete description of the Version 68 capabilities.

The following changes have been made relative to previous versions:

- * The basic coordinate system is now the default for solid element stress output.
- * The sparse solver is now the default solver; you do not need NASTRAN SPARSE=25 in your input file anymore.
- * The QUAD4 element formulation has been improved to give better accuracy for element offsets.

See the "Version 68 Release Notes" for a description of other changes.

This "news" information can be turned off by changing news=yes to news=no in the system runtime configuration (rc) file. Once turned off in the system rc file, it can be turned on by setting news=yes in the MSC/NASTRAN command line or local rc file.

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\$ NASTRAN INPUT FILE CREATED BY THE PDA MSC/NASTRAN INPUT FILE
\$ TRANSLATOR (PAT3/MSC-NASTRAN RELEASE 1.4-2) ON JANUARY 31, 1996 AT
\$ 13:26:14.

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NASTRAN FILE MANAGEMENT SECTION ECHO

ASSIGN OUTPUT2 = 'rb-jan96-siunits-sh.op2', UNIT = 12, FORM = FORMATTED
\$ NORMAL MODES ANALYSIS, DATABASE

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NASTRAN EXECUTIVE CONTROL DECK ECHO

```
TIME 6
SOL 3
$
DIAG 64
$
COMPILE SOL3,SOUIN=MSCSOU
ALTER 126
VECPLOT, ,BGPDT,EQEXIN,CSTM,,,,/RBGLOBAL/GRDPNT=0//4 $
VEC USET/V1/'G'/'F'/'COMP' $
PARTN RBGLOBAL,V1,/RBFF,,,/0 $
TRNSP RBFF/RBFFT $
MPYAD KFF,RBFFT,/KFFR/ $
MATGPR GPL,USET,SIL,KFFR/'F'///1.E-2 $
DIAGONAL KFF/KFFD/OPT='SQUARE'/POWER=-1. $
MPYAD KFFD,KFFR,/KFFRN/ $
MATGPR GPL,USET,SIL,KFFRN/'F'///SMALL=1.E-5 $
ENDALTER
$
CEND
```

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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3

DMAP-DMAP INSTRUCTION

```

( *I* = INSERTED, *D* = DELETED )
OLD NO. NEW NO.
1 1 SUBDMAP SOL3 GEOM1,EPT,MPT,EDT,DIT,DYNAMICS,
    GEOM2,GEOM3,GEOM4,MATPOOL,AXIC,
    PVT,DMI,DMINDX,DTI,DTINDX,
    CASECC,PCDB,XYCDB,POSTCDB,FORCE// $
2 2 $BEGIN NO. 3 NORMAL MODES ANALYSIS / 25/MAY/94 $
2 2 $ ++++++ GEN 20-MAY-1994 ++++++
2 2 NOOP() $
3 3 SETVAL //S,N,CARDNO/0 $
4 4 SETVAL //S,N,NOKGGX/1 $
5 5 SETVAL //S,N,NOMGGX/1 $
6 6 SETVAL //S,N,NOBGGX/1 $
7 7 PARAML CASECC//DTI' /-1/35//S,N,SPCREQ $
8 8 PARAML CASECC//DTI' /-1/170//S,N,ESE $
9 9 PARAML CASECC//DTI' /-1/167//S,N,GPFC $
10 10 PARAML XYCDB//PRES' ///S,N,NOXYCDB $
11 11 PARAML PCDB//PRES' ///S,N,JUMPPLOT $
12 12 PARAM //NOT'/S,N,SPCREQ/V,N,SPCREQ/V,Y,NOGPF=1 $
13 13 PARAM //NOT'/S,N,GPFO/GPFC $
14 14 PARAM //NOT'/S,N,ESE/ESE $
15 15 PARAM //AND'/S,N,NOSPC/GPFO/SPCREQ $
16 16 PARAM //AND'/S,N,GPFDR/ESE/GPFO $
17 17 PARAM //NOP'/S,Y,ASING=0/V,Y,CURVPLOT=-1/V,Y,CURV=-1 $
18 18 SETVAL //S,N,PLTFLG/1/S,N,PFILE/0 $
19 19 PURGE QG/NOSPC/PLTPAR/JUMPPLOT/GPSETS/JUMPPLOT/ELSETS/JUMPPLOT $
20 20 EQUIV GEOM1,GEOM1Q/NEWSEQ $
21 21 COND NOSEQ,NEWSEQ $
22 22 SEQP GEOM1,GEOM2,GEOM4,EPT/GEOM1Q,MATPARM/V,Y,SEQOUT=0/
    V,Y,NEWSEQ=3//V,Y,SUPER=0/V,Y,FACTOR=10000/
    V,Y,MPCX=0/V,Y,START=0 $
23 23 LABEL NOSEQ $
24 24 GP1 GEOM1Q,GEOM2,,,/GPL,EQEXIN,GPDT,CSTM,BGPDT,SIL,/
    S,N,LUSET/0/S,N,NOGPDT $
25 25 COND LNOGP,NOGPDT $
26 26 GP2 GEOM2,EQEXIN,EPT/ECT $
27 27 COND NOELT,PROUT $
28 28 ELTPRT ECT,,,,//V,Y,PROUT=-1 $
29 29 LABEL NOELT $
30 30 COND P1,JUMPPLOT $
31 31 NOOP() $
32 32 PLTHBDY GEOM2,ECT,EPT,SIL,EQEXIN,BGPDT,CSTM/
    PECT,PSIL,PEQIN,PBGPDT/S,N,NHBDY/V,Y,MESH='NO' $
33 33 EQUIV EQEXIN,PEQIN/NHBDY/ECT,PECT/NHBDY/BGPDT,PBGPDT/NHBDY/
    SIL,PSIL/NHBDY $
34 34 PLTSET PCDB,PEQIN,PECT/PLTSETX,PLTPAR,GPSETS,ELSETS/S,N,NSIL/
    S,N,JUMPPLOT $
35 35 NOOP() $
36 36 PRTMSG PLTSETX// $
37 37 COND P1,JUMPPLOT $
38 38 PLOT PLTPAR,GPSETS,ELSETS,CASECC,PBGPDT,PEQIN,PSIL,,ECT,,/PLOTX1/
    
```

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N SUBDMAP = SOL3

DMAP-DMAP INSTRUCTION
 OLD NO. NEW NO. (*I* = INSERTED, *D* = DELETED)

39	39	PRTMSG	NSIL/LUSET/S,N,JUMPPLOT/S,N,PLTFLG/S,N,PFILE \$
40	40	LABEL	PLOTX1// \$
41	41	NOOP()	\$
42	42	GP3	GEOM3,EQEXIN,GEOM2/SLT,ETT/0/V,N,NOGRAV/0 \$
43	43	TA1,	,ECT,EPT,BGPDT,SIL,ETT,CSTM,/EST,,GEI,GPECT,/V,N,LUSET/-1/ S,N,NOSIMP/1/S,N,NOGENL/S,N,GENEL \$
44	44	COND	LSKPEMG,NOSIMP \$
45	45	PARAM	///'NOP'/S,Y,GPECT=-1 \$
46	46	COND	NOGPCT,GPECT \$
47	47	ELTPRT	,,GPECT,SIL,GPL,,// \$
48	48	LABEL	NOGPCT \$
49	49	COND	NOEST,EST \$
50	50	ELTPRT	,,,,EST,CSTM/VELEM/V,Y,EST=2 \$
51	51	LABEL	NOEST \$
52	52	EMG	EST,CSTM,MPT,DIT,,,,,/KELM,KDICT,MELM,MDICT,,/ S,N,NOKGGX/S,N,NOMGGX/0/S,N,NOK4GG//V,Y,COUPMASS/ //////////V,Y,K6ROT-0.0 \$
53	53	COND	LEMAK,NOKGGX \$
54	54	EMA	GPECT,KDICT,KELM,BGPDT,SIL,CSTM,,/KGGX, \$
55	55	LABEL	LEMAK \$
56	56	COND	LEMAM,NOMGGX \$
57	57	EMA	GPECT,MDICT,MELM,BGPDT,SIL,CSTM,,/MGGX,-1/V,Y,WTMASS-1. \$
58	58	LABEL	LEMAM \$
59	59	EMG	EST,CSTM,MPT,DIT,,,,,/,,,BELM,BDICT/0/0/S,N,NOBGGX \$
60	60	COND	LEMAB,NOBGGX \$
61	61	EMA	GPECT,BDICT,BELM,BGPDT,SIL,CSTM,,/BGGX, \$
62	62	LABEL	LEMAB \$
63	63	COND	LSKPEMG,NOK4GG \$
64	64	EMA	GPECT,KDICT,KELM,BGPDT,SIL,CSTM,,/K4GG,/V,N,NOK4GG \$
65	65	LABEL	LSKPEMG \$
66	66	MTRXIN	CASECC,MATPOOL,EQEXIN,SIL,/K2GG,M2GG,B2GG/LUSET/S,N,NOK2GG/ S,N,NOM2GG/S,N,NOB2GG/1 \$
67	67	EQUIV	MGGX,MGG/NOM2GG \$
68	68	COND	LBLNOMX,NOM2GG \$
69	69	ADD	MGGX,M2GG/MGG/V,Y,CM1=(1.0,0.0)/V,Y,CM2=(1.0,0.0) \$
70	70	LABEL	LBLNOMX \$
71	71	PARAM	///'AND'/S,N,NOMGG=-1/NOMGGX/NOM2GG \$
72	72	COND	LGPWG,GRDPNT \$
73	73	GPWG	BGPDT,CSTM,EQEXIN,MGG,,/OGPWG/V,Y,GRDPNT=-1/V,Y,WTMASS \$
74	74	OFF	OGPWG // \$
75	75	LABEL	LGPWG \$
76	76	PARAM	///'AND'/S,N,NOKGG=-1/NOKGGX/NOK2GG \$
77	77	PARAM	///'AND'/S,N,NOKGG/NOKGG/NOGENL \$
78	78	PARAM	///'AND'/S,N,NOBGG=-1/NOBGGX/NOB2GG \$
79	79	EQUIV	KGGX,KGGY/NOK2GG \$
80	80	COND	LBLNOKX,NOK2GG \$
81	81	ADD	KGGX,K2GG/KGGY/V,Y,CK1=(1.0,0.0)/V,Y,CK2=(1.0,0.0) \$
82	82	LABEL	LBLNOKX \$
83	83	EQUIV	KGGY,KGG/NOGENL \$

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NASTRAN SOURCE PROGRAM COMPILATION SUEBMAP = SOL3

```

DMAP-DMAP INSTRUCTION
OLD NO. NEW NO. ( *I* = INSERTED, *D* = DELETED )
84 84 COND LBL11,NOGENL $
85 85 SMA3 GEI,/KGGZ/LUSET/NOGENL/-1 $
86 86 ADD KGGY,KGGZ/KGG//V,Y,CK3=(1.0,0.0) $
87 87 LABEL LBL11 $
88 88 EQUIV BGGX,BGG/NOB2GG $
89 89 COND LBLNOBX,NOB2GG $
90 90 ADD BGGX,B2GG/BGG/V,Y,CB1=(1.0,0.0)/V,Y,CB2=(1.0,0.0) $
91 91 LABEL LBLNOBX $
92 92 $ ++++++ KCON 1-APR-1994 ++++++
92 92 SETVAL //S,N,NSKIP/0 $
93 93 JUMP LOOPTOP $
94 94 LABEL LOOPTOP $
95 95 GP4 CASECC,GEOM4,EQEXIN,SIL,GPDT,BGPDT,CSTM,,/
RG,YSB,USETB,ASET/
LUSET/S,N,MPCF1/S,N,MPCF2/S,N,SINGLE/S,N,OMIT/S,N,REACT/
S,N,NSKIP/S,N,REPEAT/S,N,NOSET/S,N,NOL/S,N,NOA/V,Y,SUBID $
96 96 PURGE GM/MPCF1 $
97 97 COND LBL2,MPCF2 $
98 98 MCE1 USETB,GM/GM $
99 99 LABEL LBL2 $
100 100 EQUIV KGG,KNN/MPCF1 $
101 101 COND LBL2K,MPCF2 $
102 102 MCE2 USETB,GM,KGG,./KNN,./ $
103 103 LABEL LBL2K $
104 104 GPSP KNN, USETB,SIL,GPL,YSB,GEOM4,EQEXIN/USSET,YS/
S,N,SINGLE/V,Y,AUTOSPC='NO'/V,Y,PRGPST='YES'/V,Y,SPCGEN=0/
V,Y,EPZERO=1.E-8/0/S,N,SING/V,Y,EPPRT=1.E-8/
S,N,NOSET/S,N,NGERR $
105 105 PARAML USET//USET'/////A'/S,N,NOASET/
'B'/S,N,NOBSET/
'C'/S,N,NOCSET/
'G'/S,N,NOGSET/
'L'/S,N,NOLSET/
'O'/S,N,OMIT/
'S'/S,N,SINGLE/
'T'/S,N,NOTSET/
'Q'/S,N,NOQSET/
'R'/S,N,REACT/
'V'/S,N,NOVSET $
106 106 PARAM //'EQ'/S,N,NOA/NOGSET/NOASET $
107 107 PARAM //'AND'/S,N,NOSET/NOA/REACT $
108 108 COND NOPRUST,USETPRT $
109 109 TABPRT USET,EQEXIN//USET'/V,Y,USETPRT--1/V,Y,USETSEL $
110 110 LABEL NOPRUST $
111 111 COND RFERR,NGERR $
112 112 PARAML CASECC//DTI'/-1/150//S,N,DYNRED $
113 113 PARAM //'NOT'/S,N,NODYNRED/DYNRED $
114 114 COND DNOQSET,NOQSET $
115 115 SETVAL //S,N,ERRNO/4401 $
116 116 COND ERMSG,OMIT $

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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3
 DMAP-DMAP INSTRUCTION

OLD NO. NEW NO. (*I* = INSERTED, *D* = DELETED)

117	117	JUMP	DNOLSET \$
118	118	LABEL	DNOQSET \$
119	119	SETVAL	//S,N,ERRNO/4402 \$
120	120	COND	ERMSG,NOLSET \$
121	121	SETVAL	//S,N,ERRNO/4419 \$
122	122	COND	ERMSG,DYNRED \$
123	123	LABEL	DNOLSET \$
124	124	EQUIV	KNN,KFF/SINGLE \$
125	125	COND	LBL3,SINGLE \$
126	126	SCE1	USET,KNN,,,/KFF,KFS,KSS,,, \$
I	127	VECPLOT,	,BGPD,EQEXIN,CSTM,,,,/RBGLOBAL/GRDPNT=0//4 \$

*** USER WARNING MESSAGE 42,

POSSIBLE ERROR IN DMAP INSTRUCTION VECPLOT INSTRUCTION NO. 127

PARAMETER NAMED GRDPNT ALREADY HAD VALUE ASSIGNED PREVIOUSLY

I	128	VEC USET/V1/'G'/'F'/'COMP' \$
I	129	PARTN RBGLOBAL,V1,/RBFF,,,/0 \$
I	130	TRNSP RBFF/RBFFT \$
I	131	MPYAD KFF,RBFFT,/KFFR/ \$
I	132	MATGPR GPL,USET,SIL,KFFR/'F'///1.E-2 \$
I	133	DIAGONAL KFF/KFFD/OPT='SQUARE'/POWER=-1. \$
I	134	MPYAD KFFD,KFFR,/KFFRN/ \$
I	135	MATGPR GPL,USET,SIL,KFFRN/'F'///SMALL=1.E-5 \$
127	136	LABEL LBL3 \$
128	137	EQUIV KFF,KTT/OMIT \$
129	138	COND LBL5,OMIT \$
130	139	UPARTN USET,KFF/KOO,,KCA,KAAB/'F'/'O'/'A' \$
131	140	EQUIV KOA,KOT/NOQSET /KAAB,KTT1/NOQSET \$
132	141	COND LNOTSET,NOQSET \$
133	142	COND LNOTSET,NOTSET \$
134	143	VEC USET/VAQT/'A'/'Q'/'T' \$
135	144	PARTN KOA,VAQT,,,KOT,/1 \$
136	145	UPARTN USET,KAAB,,,KTT1/'A'/'Q'/'T' \$
137	146	LABEL LNOTSET \$
138	147	PARAML KOA/'NULL'///S,N,NP \$
139	148	EQUIV KTT1,KTT/NP \$
140	149	COND LBL5,NP \$
141	150	DECOMP KOO/LOO,/1/0/S,N,MIND/S,N,DETER/S,N,POW/ S,N,SING/S,N,NERCH/S,N,MAXRAT \$
142	151	COND NULLCO,SING \$
143	152	PARAM //'GT'/S,N,NP/NBRCE/0 \$
144	153	COND PRTMECHO,NP \$
145	154	PARAMR //'LE'/'V,N,MAXRAT/V,Y,MAXRATIO=1.E7///S,N,NP \$
146	155	COND GOON,NP \$
147	156	LABEL PRTMECHO \$
148	157	DIAGONAL KOO/KDIAG \$
149	158	DIAGONAL LOO/LDIAG \$
150	159	ADD KDIAG,LDIAG/MECH///2 \$
151	160	PRTPARM //4420/'DMAP' \$
152	161	MATGPR GPL,USET,SIL,MECH/'H'/'O'/'V,Y,MAXRATIO/1.0E-20 \$

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3

DMAP-DMAP INSTRUCTION

OLD NO. NEW NO. (*I* = INSERTED, *D* = DELETED)

153	162	PARAM	///NOP'/S,Y,BAILOUT=-1 \$
154	163	COND	GOON,BAILOUT \$
155	164	JUMP	RFERR \$
156	165	LABEL	NULLCO \$
157	166	MATMOD	KOO,,,,/NULLO,/12/S,N,NP \$
158	167	COND	GOON,NP \$
159	168	MATGPR	GPL,USET,SIL,NULLO///H'/'O' \$
160	169	JUMP	RFERR \$
161	170	LABEL	GOON \$
162	171	FBS	LOO,,KOT/GO/1/-1 \$
163	172	MPYAD	KOT,GO,KTT1/KTT1////6 \$
164	173	LABEL	LBL5 \$
165	174	EQUIV	KTT,KA/NOQSET \$
166	175	EQUIV	KTT,KLL/REACT \$
167	176	PURGE	DM/REACT \$
168	177	COND	LBL6,NOLSET \$
169	178	COND	LBL6X,REACT \$
170	179	UPARTN	USET,KTT/KLL,,KLR,KRR/'T'/'L'/'R' \$
171	180	JUMP	LBL6Y \$
172	181	LABEL	LBL6X \$
173	182	COND	LBL6,MODACC \$
174	183	LABEL	LBL6Y \$
175	184	DECOMP	KLL/LLL,/1/0/S,N,MIND/S,N,DETER/S,N,POW/S,N,SING/ S,N,NBRCH/S,N,MAXRAT/48 \$
176	185	COND	NULLL,SING \$
177	186	PARAM	///NE'/S,N,NP/SING/1 \$
178	187	COND	NOLLIST,NP \$
179	188	TABPRT	USET,EQEXIN,///USET'/0/256 \$
180	189	JUMP	PRTMECHL \$
181	190	LABEL	NOLLIST \$
182	191	PARAM	///GT'/S,N,NP/NBRCH/0 \$
183	192	COND	PRTMECHL,NP \$
184	193	PARAMR	///LE'//V,N,MAXRAT/V,Y,MAXRATIO///S,N,NP \$
185	194	COND	GCONL,NP \$
186	195	LABEL	PRTMECHL \$
187	196	DIAGONAL	KLL/KDIAGL \$
188	197	DIAGONAL	LLL/LDIAGL \$
189	198	ADD	KDIAGL,LDIAGL/MECHL///2 \$
190	199	PRTPARM	//4420/'DMAP' \$
191	200	MATGPR	GPL,USET,SIL,MECHL///H'/'L'//V,Y,MAXRATIO /1.0E-20 \$
192	201	COND	GOONL,BAILOUT \$
193	202	JUMP	RFERR \$
194	203	LABEL	NULLL \$
195	204	MATMOD	KLL,,,,/NULLL,/12/S,N,NP \$
196	205	COND	RFERR,NP \$
197	206	MATGPR	GPL,USET,SIL,NULLL///H'/'L' \$
198	207	JUMP	RFERR \$
199	208	LABEL	GOONL \$
200	209	COND	LBL6,REACT \$
201	210	RBMG3	LLL,,KLR,KRR/DM \$

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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3
 DMAP-DMAP INSTRUCTION

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OLD NO.  NEW NO.  ( *I* = INSERTED,  *D* = DELETED )
202      211      LABEL      LBL6 $
203      212      $ +++++ MCON.DP      1-APR-1986 +++++
203      212      EQUIV      MGG,MNN/MPCF1 $
204      213      COND      LBL2M,MPCF2 $
205      214      MCE2      USET,GM,MGG,,,/MNN,,, $
206      215      LABEL      LBL2M $
207      216      EQUIV      MNN,MFF/SINGLE $
208      217      COND      LBL3M,SINGLE $
209      218      SCE1      USET,MNN,,,/MFF,,,,, $
210      219      LABEL      LBL3M $
211      220      EQUIV      MFF,MTT/OMIT $
212      221      COND      LBL4M,OMIT $
213      222      UPARTN     USET,MFF/MOO,,MOA,MAA1/'F'/'O'/'A' $
214      223      EQUIV      MOA,MOT1/NOQSET/MAA1,MTT1/NOQSET $
215      224      COND      MIKE1,NOQSET
216      225      EQUIV      MAA1,MOQ1/NOTSET/MOA,MOQ1/NOTSET $
217      226      SETVAL     //S,N,QNOTNULL/0 $
218      227      COND      MNOTSET,NOTSET $
219      228      UPARTN     USET,MAA1/MOQ1,,MOT1,MTT1/'A'/'Q'/'T' $
220      229      PARTN      MOA,VAQT,/MOQ1,,MOT1,/1 $
221      230      PARAML     MOT1/' TRAILER' /5/S,N,QNOTNULL//S,N,NM $
222      231      LABEL      MNOTSET $
223      232      PARAM      //'ADD' /S,N,NP/QNOTNULL/C $
224      233      PARAML     MOQ1/' TRAILER' /5/S,N,QNOTNULL//S,N,NM $
225      234      PARAM      //'ADD' /S,N,NP/NP/QNOTNULL $
226      235      PARAML     MOQ1/' TRAILER' /5/S,N,QNOTNULL//S,N,NM $
227      236      PARAM      //'ADD' /S,N,QNOTNULL/QNOTNULL/NP $
228      237      PARAM      //'GT' /S,N,QNOTNULL/QNOTNULL/0 $
229      238      SETVAL     //S,N,ERRNO/4404 $
230      239      COND      RFERR,QNOTNULL $
231      240      LABEL      MIKE1 $
232      241      MPYAD      MOO,GO,MOT1/MOT $
233      242      MPYAD      MOT1,GO,MTT1/MTT2/1 $
234      243      MPYAD      GO,MOT,MTT2/MTT1///6 $
235      244      LABEL      LBL4M $
236      245      COND      M8NORSET,REACT $
237      246      EQUIV      MTT,MR/NOLSET $
238      247      COND      M8NORSET,NOLSET $
239      248      UPARTN     USET,MTT/MLL,,MLR,MRR/'T'/'L'/'R' $
240      249      RBMG4      DM,MLL,MLR,MRR/MR $
241      250      LABEL      M8NORSET $
242      251      EQUIV      MTT,MAA/NOQSET
243      252      $ +++++ DRED      14-MAR-1991 +++++ BEGIN
243      252      EQUIV      GO,GOA/NOQSET $
244      253      COND      LBL5M,NOQSET $
245      254      COND      NOGOQ,NODYNRED $
246      255      IF ( REACT>-1 ) MESSAGE //' DMAP WARNING MESSAGE 9001 (DRED) -'/
          ' GENERALIZED DYNAMIC REDUCTION'/
          ' HAS BEEN REQUESTED IN THE PRESENCE OF SUPPORTED (SEE'/
          ' SUPORT ENTRY) DEGREES OF FREEDOM. IN SOME CASES SOME'/
  
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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3

DMAP-DMAP INSTRUCTION

OLD NO. NEW NO. (*I* = INSERTED, *D* = DELETED)
 ' FLEXIBLE MODES MAY BE DISCARDED OR THOSE IN HIGH FREQUENCY' /
 ' CLUSTERS MAY BE SKIPPED.' \$

247	256	PARAM	///AND'/S,N,NP/REACT/NOCSET \$
248	257	EQUIV	MOO,MVV/NP \$
249	258	COND	MIK30,NP \$
250	259	EQUIVX	MTT1/MCOMP/NOBSET \$
251	260	EQUIVX	MCT1/MOCOMP/NOBSET \$
252	261	COND	M8NOBSET,NOBSET \$
253	262	VEC	USET/VTBCOMP/'T'/'B'/'COMP' \$
254	263	PARTN	MTT1,VTBCOMP/,,,,MCOMP \$
255	264	PARTN	MOT1,VTBCOMP/,,,,MOCOMP,/1 \$
256	265	LABEL	M8NOBSET \$
257	266	TRNSP	MOCOMP/MCOMPO \$
258	267	VEC	USET/VVOCOMP/'V'/'O'/'COMP' \$
259	268	MERGE	MOO,MCOMPO,MOCOMP,MCOMP,VVOCOMP,/MVV \$
260	269	LABEL	MIK30 \$
261	270	EQUIV	KOO,KVV/NP \$
262	271	COND	MIK31,NP \$
263	272	EQUIV	KTT1,KCOMP/NOBSET/KOT,KOCOMP/NOBSET \$
264	273	COND	M8NOBK,NOBSET \$
265	274	PARTN	KTT1,VTBCOMP/,,,,KCOMP \$
266	275	PARTN	KOT,VTBCOMP/,,,,KOCOMP,/1 \$
267	276	LABEL	M8NOBK \$
268	277	TRNSP	KOCOMP/KCOMPO \$
269	278	MERGE	KOO,KCOMPO,KOCOMP,KCOMP,VVOCOMP,/KVV \$
270	279	LABEL	MIK31 \$
271	280	DYCNTRL	CASECC,DYNAMICS,KVV,MVV//S,N,DETER/S,N,NOYSET/ V,Y,EPSMALC=1.E-8/'MODAL'/REACT/NOQSET \$
272	281	COND	NOGOQ,NOYSET \$
273	282	ADD	MVV,KVV/AVV/V,N,DETER \$
274	283	DECOMP	AVV/LVV,/1/0/S,N,MIND/S,N,DETER/S,N,POW/S,N,SING/ S,N,NBRCH/S,N,MAXRAT \$
275	284	COND	GNULLV,SING \$
276	285	PARAM	///GT'/S,N,NP/NBRCE/0 \$
277	286	COND	PRTMECHV,NP \$
278	287	PARAMR	///LE'//V,N,MAXRAT/V,Y,MAXRATIO////S,N,NP \$
279	288	COND	GGOON,NP \$
280	289	LABEL	PRTMECHV \$
281	290	DIAGONAL	AVV/AVDIAG \$
282	291	DIAGONAL	LVV/LVDIAG \$
283	292	ADD	AVDIAG,LVDIAG/MECHV///2 \$
284	293	MATGPR	GPL,USET,SIL,MECHV/'H'/'V'//V,Y,MAXRATIO \$
285	294	COND	GGOON,BAILOUT \$
286	295	JUMP	RFERR \$
287	296	LABEL	GNULLV \$
288	297	MATMOD	AVV,,,,/NULLV,/12/S,N,NP \$
289	298	COND	GGOON,NP \$
290	299	MATGPR	GPL,USET,SIL,NULLV/'H'/'V' \$
291	300	JUMP	RFERR \$
292	301	LABEL	GGOON \$

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

SUBDMAP = SOL3

DMAP-DMAP INSTRUCTION

OLD NO.	NEW NO.	(*I* = INSERTED, *D* = DELETED)
293	302	DYNREDU LVV,MVV,CASECC,DYNAMICS/PHIVZ,MYV/NOYSET/NOYSET/ V,Y,EPSMALU=1.E-10/V,Y,EPSBIG/0/REACT \$
294	303	MATGPR GPL,USET,SIL,PHIVZ/'H'/'V'/'V,Y,PRPHIVZ=1.+37 \$
295	304	PARAM /'ADD'/S,N,NOZSET/NOYSET/0 \$
296	305	PARAM /'AND'/S,N,NP/REACT/NOCSET \$
297	306	MATGEN ,/NULLAZ/7/NOASET/NOZSET \$
298	307	EQUIV PHIVZ,GOZ/NP/PHIVZ,PHIOZ/NP/NULLAZ,PHIAZ/NP \$
299	308	COND MIK45,NP \$
300	309	VEC USET /VVOC/'V'/'O'/'COMP' \$
301	310	PARTN PHIVZ,,VVOC/PHIOZ,PHICOMPZ,,/ 1 \$
302	311	UMERGE USET,,PHICOMPZ/PHITZ/'T'/'B'/'C' \$
303	312	UMERGE USET,PHITZ,/PHIAZ/'A'/'T'/'Q' \$
304	313	EQUIV PHIOZ,PHIOZ1/REACT/PHICOMPZ,PHCOMPZ1/REACT \$
305	314	COND M8EIG,REACT \$
306	315	MATGEN ,/VECZR/6/NOZSET/REACT/NOZSET \$
307	316	PARTN PHIOZ,VECZR,,PHIOZ1,/1 \$
308	317	PARTN PHICOMPZ,VECZR,,PHCOMPZ1,/ 1 \$
309	318	LABEL M8EIG \$
310	319	EQUIV GO,GOCOMP/NOBSET \$
311	320	IF (NOBSET>-1) PARTN GO,VTBCOMP,,GOCOMP,/1 \$
312	321	MPYAD GOCOMP,PHCOMPZ1,PHIOZ1/GOZ// -1 \$
313	322	LABEL MIK45 \$
314	323	MATGEN ,/NULLOQ/7/OMIT/NOQSET \$
315	324	ADD NULLOQ,GOZ/GOQ \$
316	325	SMPYAD GOQ,KOO,GOQ,,/KQQ/3///1///6 \$
317	326	DIAGONAL KQQ/KQDIAG/'COLUMN'/.5 \$
318	327	ADD KQDIAG,/FAPPROX/.15915 \$
319	328	MATGPR GPL,USET,SIL,FAPPROX/'H'/'Q'/'V,Y,PRPHIVZ \$
320	329	MPYAD GOQ,MOT,/MQT/1 \$
321	330	TRNSP MQT/MTQ \$
322	331	SMPYAD GOQ,MOO,GOQ,,/MQQ/3///1///6 \$
323	332	LABEL NOGOQ \$
324	333	EQUIV KQQ,KAA/NOTSET/MQQ,MAA/NOTSET/GOQ,GOA/NOTSET \$
325	334	COND LBL5M,NOTSET \$
326	335	MERGE KQQ,,/KTT,VAQT,/KAA \$
327	336	MERGE MQQ,MTQ,MQT,MTT,VAQT,/MAA \$
328	337	MERGE GOQ,,GO,,VAQT,/GOA/1 \$
329	338	LABEL LBL5M \$
330	339	MGEN CASECC,MATPOOL,EST,CSTM/MCHI,MLAM,GEG,MAR,,/LUSET/S,N,NOMGEN/ /WTMASS \$
331	340	EQUIV MAA,MMAA /NOMGEN \$
332	341	COND NOMGEN,NOMGEN \$
333	342	EQUIV GEG,GTEA/NOA \$
334	343	COND NOVRED,NOA \$
335	344	SSG2 USET,GM,,GOA,,GEG/,GEO,GES,GTEA,/ \$
336	345	LABEL NOVRED \$
337	346	TRNSP GTEA/GEA \$
338	347	DECOMP MCHI/LCHI,UCHI/0 \$
339	348	FBS LCHI,UCHI,GEA/BMAT/0 \$
340	349	MPYAD MLAM,BMAT,/MEA \$

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N A S T R A N   S O U R C E   P R O G R A M   C O M P I L A T I O N
DMAP-DMAP INSTRUCTION                                SUBDMAP = SOL3
OLD NO.  NEW NO.  ( *I* = INSERTED, *D* = DELETED )
341      350      MPYAD      GTEA,MEA,/VMAT/////6 $
342      351      TRNSP      VMAT/VMATT $
343      352      ADD5       VMAT,VMATT,MAA  ,,/MAAA/(0.5,0.0)/(0.5,0.0) $
344      353      LABEL      NOMGEN $
345      354      $ ++++++ DRED          ++++++ END
345      354      $ ++++++ SLOAD    17-AUG-1993 ++++++
345      354      LCGEN      CASECC,SLT,ETT/CASESX/0/1 $
346      355      SSG1       SLT,BGPD,CSTM,SIL,EST,MPT,ETT,EDT,MGG,CASESX,DIT,,,/
                                PGSX,,/LUSET/1 $
347      356      MTRXIN     CASECC,MATPOOL,EQEXIN,SIL,/P2G,,/LUSET/S,N,NP//2 $
348      357      EQUIV      PGSX,PGS/NP $
349      358      COND       NOP2G,NP $
350      359      ADD        PGSX,P2G/PGS/V,N,CP1/V,N,CP2 $
351      360      LABEL      NOP2G $
352      361      $ ++++++ DPDD.DP    05 JUNE 1980 ++++++
352      361      LABEL      LNOGP $
353      362      DPD        DYNAMICS,GPL,SIL,USET,SLT,PGS/
                                GPLD,SILD,USETD,TFPOOL,DLT,PSDL,FRL,NLFT,TRL,EED,EQDYN/
                                LUSET/S,N,LUSETD/S,N,NOTFL/S,N,NODLT/
                                S,N,NOPSDL/S,N,NOFRL/S,N,NONLFT/S,N,NOTRL/S,N,NOEED/0/
                                S,N,NOUE $
354      363      PARAML     MMAA//PRES'////S,N,NOMGG $
355      364      $ ++++++ READ          2-MAR-1994 ++++++
355      364      SETVAL     ///////////S,N,FORM/'MODAL' $
356      365      SETVAL     ///////////S,N,SETOUT/'HSET' $
357      366      SETVAL     //S,N,ERRNO/4418 $
358      367      COND       ERMSG,NOEED $
359      368      COND       LBLNODM,REACT $
360      369      DIAGONAL   MR/MRDIAG/ $
361      370      SETVAL     //S,N,NOCSET/0 $
362      371      PARAML     MRDIAG//TRAILER'/6/S,N,NP//S,N,NOCSET $
363      372      PARAM      //'NE'/S,N,NP/NP/10000 $
364      373      SETVAL     //S,N,ERRNO/4407 $
365      374      COND       ERMSG,NP $
366      375      VEC        USET/VACOMPR/'A'/'COMP'/'R' $
367      376      COND       LBLNODM,NOLSET $
368      377      VEC        USET/VALCOMP/'A'/'L'/'COMP' $
369      378      PARTN     VALCOMP,,VACOMPR/VLQ,,,/1 $
370      379      MERGE      DM,,,,VLQ/DMLQ/1 $
371      380      LABEL      LBLNODM $
372      381      SETVAL     //S,N,NOARED/-1 $
373      382      MATMOD     CASECC,DYNAMICS,,,,,/23/S,N,NP
374      383      PARAM      //'EQ'/S,N,INVPOW/NP/1 $
375      384      PARAM      //'EQ'/S,N,NP/NP/0 $
376      385      PARAM      //'ADD'/S,N,NP/2/NP $
377      386      MATMOD     MMAA,KA,,,/VAXW1,MATAA/12/S,N,NOARED/NP $
378      387      COND       NOARED1,NOARED $
379      388      EQUIV      VAXW1,VAXW/REACT $
380      389      COND       NOARED1,REACT $
381      390      PARTN     VAXW1,,VACOMPR/VLQXW,,,/1 $

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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3
 DMAP-DMAP INSTRUCTION

OLD NO.	NEW NO.	(*I* = INSERTED, *D* = DELETED)
382	391	MERGE VLQXW,,,,,VACOMPR/VAXW/1 \$
383	392	PARAML VAXW/'NULL'////S,N,NOARED \$
384	393	LABEL NOARED1 \$
385	394	EQUIV KAA,KXX/NOARED/MMAA,MXX/NOARED/DMLQ,DMX/NOARED/ USET,VXCOMPR/NOARED \$
386	395	COND LBLNORED,NOARED \$
387	396	MATGPR GPL,USET,SIL,VAXW/'H'/'A' \$
388	397	COND RFERR,ASING \$
389	398	PARTN MMAA,VAXW,/MXX,,,/-1 \$
390	399	PARTN KAA,VAXW,/KXXBAR,KWX,,KWW1/-1 \$
391	400	EQUIV KXXBAR,KXX/INVPOW \$
392	401	COND KINV2,INVPOW \$
393	402	PARAML KWX/'NULL'////S,N,NOAMIT \$
394	403	EQUIV KXXBAR,KXX/NOAMIT \$
395	404	COND KINV2,NOAMIT \$
396	405	DECOMP KWW1/LWW1,/1/////////58 \$
397	406	FBS LWW1,,KWX/GWX1/1/-1/0/0 \$
398	407	MPYAD GWX1,KWX,KXXBAR/KXX/1////6 \$
399	408	LABEL KINV2 \$
400	409	COND LBLNORED,REACT \$
401	410	PARTN VACOMPR,,VAXW/VXCOMPR,,,/1 \$
402	411	PARTN DMLQ,,VLQXW/DMX,,,/1 \$
403	412	LABEL LBLNORED \$
404	413	SETVAL //S,N,NEIGV/-1 \$
405	414	READ KXX,MXX,MR,DMX,EED,VXCOMPR,CASECC,VAXW/ LAMA,PHIX,MI,OEIGS/'MODES'/S,N,NEIGV \$
406	415	OFF LAMA,OEIGS// \$
407	416	SETVAL //S,N,ERRNO/4405 \$
408	417	COND ERMSG,NEIGV \$
409	418	EQUIV PHIX,PHIA/NOARED \$
410	419	COND LBLNOEXP,NOARED \$
411	420	COND KINV3,INVPOW \$
412	421	MPYAD GWX1,PHIX,/PHIW \$
413	422	LABEL KINV3 \$
414	423	MERGE PHIX,PHIW,,,VAXW/PHIA/0 \$
415	424	LABEL LBLNOEXP \$
416	425	PARAM //'DIAGOFF'//47 \$
417	426	VDR CASECC,EQEXIN,USET,PHIA,LAMA,,/OPHIA,/'REIG'/'DIRECT'/0/ S,N,NP/S,N,NOPREQ/1 \$
418	427	COND LBLSKPH,NP
419	428	OFF OPHIA//S,N,CARDNO \$
420	429	LABEL LBLSKPH \$
421	430	PARAM //'DIAGON'//47 \$
422	431	\$ ++++++ MODE 20-OCT-1993 ++++++
422	431	JUMP LBLGO \$
423	432	PARAM //'NOP'/S,Y,MODACC=-1 \$
424	433	PARAM //'NOP'/S,Y,NOSORT1=1 \$
425	434	MATGEN ,/PG/3/1 \$
426	435	MATGEN ,/PG1/3/1 \$
427	436	LABEL LBLGO \$

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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3
 DMAP-DMAP INSTRUCTION

```

    OLD NO.  NEW NO.  ( *I* = INSERTED, *D* = DELETED )
428  437  SETVAL  ////////////S,N,SOLTYPE/'REIG' $
429  438  PARAM  //'NOT'/S,N,NODDRMM/-1 $
430  439  CASE   CASECC,/CASEXX/'CEIG'/-1 $
431  440  COND   NOMDATA,NOMGEN $
432  441  MDATA  CASECC,XYCDB,MAR,MEA,PHIA,LAMA/OEP/SOLTYPE $
433  442  OFF    OEP//S,N,CARDNO $
434  443  LABEL  NOMDATA $
435  444  PARAM  //'AND'/S,N,PJUMP/NOPREQ/JUMPPLOT $
436  445  COND   P2,PJUMP $
437  446  SDR1   USET,,PHIA,,,GOA,GM,,KFS,,/UGV,,QG/1/'REIG'/NOSPC $
438  447  PARAM  //'DIAGOFF'//47 $
439  448  SDR2   CASECC,CSTM,MPT,DIT,EQEXIN,,ETT,,BGPDT,LAMA,QG,UGV,EST,
        XYCDB,,,/OPG1,OQG1,OUGV1,OES1,OEF1,PUGV/SOLTYPE/S,N,NOSORT2 $

440  449  JUMP   LSORT1 $
441  450  $ ***** DR1          14-FEB-1991 *****
441  450  LABEL  LSORT1 $
442  451  OFF    OUGV1,OPG1,OQG1,OEF1,OES1//S,N,CARDNO $
443  452  COND   LS1,S1 $
444  453  STRSORT OES1,/OES1X1/V,Y,NUMOUT=-2/V,Y,BIGER=0.0/V,Y,SRTOPT=0/
        V,Y,SRTELTYP=0 $
445  454  OFF    OES1X1//S,N,CARDNO $
446  455  LABEL  LS1 $
447  456  COND   LS1G,CURV $
448  457  PARAM  //'NOP'/S,Y,S1=-1/V,Y,S1M=-1/V,Y,S1G=-1 $
449  458  CURV   OES1,MPT,CSTM,EST,SIL,GPL/OES1M,OES1G/V,Y,OUTOPT/
        V,Y,OG/V,Y,NINTPTS=10 $

450  459  COND   LS1M,S1M $
451  460  STRSORT OES1M,/OES1M1/NUMOUT/BIGER/SRTOPT/SRTELTYP $
452  461  OFF    OES1M1//S,N,CARDNO $
453  462  LABEL  LS1M $
454  463  STRSORT OES1G,/OES1G1/NUMOUT/BIGER/SRTOPT/SRTELTYP $
455  464  OFF    OES1G1//S,N,CARDNO $
456  465  LABEL  LS1G $
457  466  COND   NOXYPL,NOXYCDB $
458  467  COND   NOXYPL,CURVPLOT $
459  468  CURVPLOT EQEXIN,BGPDT,EDT,XYCDB,OPG1,OQG1,OUGV1,OES1G,/
        OPG2X,OQG2X,OUG2X,OES2X,/V,Y,DOPT=0 $
460  469  XYTRAN XYCDB,OPG2X,OQG2X,OUG2X,OES2X,/XYPLTS/'SET1'/'PSET'/
        S,N,PFILE/S,N,CARDNO/S,N,NP $

461  470  COND   NOXYPL,NP $
462  471  XYPLOT XYPLTS// $
463  472  LABEL  NOXYPL $
464  473  COND   P2,NODDRMM $
465  474  COND   LNOEDR,GPFDR $
466  475  GPFDR  CASEXX,OGV,KELM,KDICT,ECT,EQEXIN,GPECT,PG1,QG,BGPDT,SIL,CSTM,
        VELEM,/ONRGY1,OGPFB1/SOLTYPE/V,Y,TINY $

467  476  COND   LNOESE,ESE $
468  477  OFF    ONRGY1//S,N,CARDNO $
469  478  LABEL  LNOESE $
470  479  COND   LNOGPF,GPFO $
    
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      N A S T R A N   S O U R C E   P R O G R A M   C O M P I L A T I O N
DMAP-DMAP INSTRUCTION
      OLD NO.  NEW NO.  ( *I* = INSERTED,  *D* = DELETED )
471    480    COND    LNOGPF,NOGPF $
472    481    OFP     OGPFB1 // $
473    482    LABEL   LNOGPF $
474    483    PARAM   //' AND' /S,N,SKPEDR/V,Y,NOELOF=-1/V,Y,NOELOP=-1 $
475    484    COND    LNOEDR,SKPEDR $
476    485    ELFDR   OGPFB1,GPECT,CSTM,SIL,GPL,BGPD/OELOF1,OELOP1/
      V,Y,NOELOF/V,Y,NOELOP$
477    486    COND    LNOELF,NOELOF $
478    487    OFP     OELOF1 // $
479    488    LABEL   LNOELF $
480    489    COND    LNOEDR,NOELOP $
481    490    OFP     OELOF1 // $
482    491    LABEL   LNOEDR $
483    492    COND    P2,JUMPPLOT $
484    493    PLTSET  PCDB,EQEXIN,ECT/PSMES,PLTPAP,GPSETP,ELSETP/S,N,DSIL/V,N,DJ $
485    494    PRTMSG  PSMES// $
486    495    PLOT    PLTPAP,GPSETP,ELSETP,CASEXX,BGPD,EQEXIN,SIL,PUGV,PUGV,GPECT,
      OES1/PLOTX2/DSIL/LUSET/JUMPPLOT/PLTFLG/S,N,PFILE $
487    496    PRTMSG  PLOTX2// $
488    497    LABEL   P2 $
489    498    $ ***** ERROUT.DP 19 JUNE 1980 *****
489    498    JUMP    FINIS $
490    499    LABEL   RFERR $
491    500    PRTPARM  ///1 $
492    501    JUMP    FINIS $
493    502    LABEL   ERMSG $
494    503    PRTPARM  //ERRNO/'DMAP' $
495    504    LABEL   FINIS $
496    505    END     $

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N								SUBDMAP = SOL3	
INTERPRETED FROM THE		OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION			*** DMAP CROSS - REFERENCE ***				
MODULE	NAMES								
ADD	69	81	86	90	159	198	282	292	324
	327	359							
ADD5	352								
CASE	439								
CURV	458								
CURVPLOT	468								
DECOMP	150	184	283	347	405				
DIAGONAL	133	157	158	196	197	290	291	326	369
DPD	362								
DYCNTRL	280								
DYNREDU	302								
ELFDR	485								
ELTPRT	28	47	50						
EMA	54	57	61	64					
EMG	52	59							
FBS	171	348	406						
GP1	24								
GP2	26								
GP3	42								
GP4	95								
GPFDR	475								
GPSP	104								
GPWG	73								
LCGEN	354								
MATGEN	306	315	323	434	435				
MATGPR	132	135	161	168	200	206	293	299	303
	328	396							
MATMOD	166	204	297	382	386				
MCE1	98								
MCE2	102	214							
MDATA	441								
MERGE	268	278	335	336	337	379	391	423	
MGEN	339								
MPYAD	131	134	172	241	242	243	321	329	349
	350	407	421						
MTRXIN	66	356							
OPF	74	415	428	442	451	454	461	464	477
	481	487	490						
PARAM	12	13	14	15	16	17	45	71	76
	77	78	106	107	113	152	162	186	191
	232	234	236	237	256	285	304	305	372
	383	384	385	425	430	432	433	438	444
	447	457	483						
PARAML	7	8	9	10	11	105	112	147	230
	233	235	363	371	392	402			
PARAMR	154	193	287						
PARTN	129	144	229	263	264	274	275	310	316
	317	320-1	378	390	398	399	410	411	
PLOT	38	495							
PLTHBDY	32								
PLTSET	34	493							
PRTMSG	36	39	494	496					
PRTPARM	160	199	500	503					
RBMG3	210								
RBMG4	249								
READ	414								
SCE1	126	218							
SDR1	446								

SDR2	448								
SEQP	22								
SETVAL	3	4	5	6	18	92	115	119	121
	226	238	364	365	366	370	373	381	413
	416	437							
SMA3	85								
SMPYAD	325	331							
SSG1	355								
SSG2	344								
STRSORT	453	460	463						
SUBDMAP	1								
TA1	43								
TABPRT	109	188							
TRNSP	130	266	277	330	346	351			
UMERGE	311	312							
UPARTN	139	145	179	222	228	248			
VDR	426								
VEC	128	143	262	267	309	375	377		
VECPLLOT	127								
XEQUIV	20	33	33-1	33-2	33-3	67	79	83	88
	100	124	137	140	140-1	148	174	175	212
	216	220	223	223-1	225	225-1	246	251	252
	257	259	260	270	272	272-1	307	307-1	307-2
	313	313-1	319	333	333-1	333-2	340	342	357
	388	394	394-1	394-2	394-3	400	403	418	
XPURGE	19	19-1	19-2	19-3	96	176			
XYPLOT	471								
XYTRAN	469								

TOTAL NAME COUNT = 69

NASTRAN SOURCE PROGRAM COMPI LATION SUBDMAP = SOL3
 EXECUTIVE NAMES *** DMAP CROSS - REFERENCE ***
 INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION
 COND 21 25 60 108 141 178 213 254 294 368 409 459 484 505
 56 60 111 142 182 217 258 298 374 417 466 486 505
 101 108 141 178 213 254 294 368 409 459 484 505
 111 114 151 187 224 271 314 387 420 470 492
 63 68 114 151 187 224 271 314 387 420 470 492
 72 72 116 153 192 227 273 334 389 427 473
 80 80 120 155 194 239 281 341 395 440 474
 44 44 80 120 155 194 239 281 341 395 440 474
 46 46 84 122 163 201 245 284 343 397 445 476
 84 84 122 163 201 245 284 343 397 445 476
 49 49 89 125 167 205 247 288 358 401 452 479
 89 89 125 167 205 247 288 358 401 452 479
 97 97 138 177 209 253 288 367 404 456 480
 97 97 138 177 209 253 288 367 404 456 480
 295 295 207 207 202 202 189 189 180 180 501 501
 207 207 202 202 189 189 180 180 501 501
 202 202 189 189 180 180 501 501
 189 189 180 180 501 501
 180 180 501 501
 501 501

TOTAL NAME COUNT = 5

N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3
 * * * D M A P C R O S S - R E F E R E N C E * * *
 INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION

LABEL	NAMES									
DNOLSET	117		123	L						
DNOQSET	114		118	L						
ERMSG	116		120		122	367	374	417	493	L
FINIS	495	L	498		501					
GGOON	288		292	L	294	298				
GNULLV	284		287	L						
GOON	155		161	L	163	167				
GOONL	194		199	L	201					
KINV2	399	L	401		404					
KINV3	413	L	420							
LBL11	84		87	L						
LBL2	97		99	L						
LBL2K	101		103	L						
LBL2M	206	L	213							
LBL3	125		127	L						
LBL3M	210	L	217							
LBL4M	221		235	L						
LBL5	138		149		164	L				
LBL5M	253		329	L	334					
LBL6	177		182		202	L	209			
LBL6X	172	L	178							
LBL6Y	174	L	180							
LBLGO	427	L	431							
LBLNOBX	89		91	L						
LBLNODM	368		371	L	376					
LBLNOEXP	415	L	419							
LBLNOKX	80		82	L						
LBLNOMX	68		70	L						
LBLNORED	395		403	L	409					
LBLSKPH	420	L	427							
LEMAB	60		62	L						
LEMAK	53		55	L						
LEMAM	56		58	L						
LGPWG	72		75	L						
LNOEDR	474		482	L	484	489				
LNOELF	479	L	486							
LNOESE	469	L	476							
LNOGP	25		352	L	358					
LNOGPF	473	L	479		480					
LNOTSET	137	L	141		142					
LOOPTOP	93		94	L						
LS1	446	L	452							
LS1G	456	L	456							
LS1M	453	L	459							
LSKPEMG	44		63		65	L				
LSORT1	441	L	449							
M8EIG	309	L	314							
M8NOBK	267	L	273							
M8NOBSET	256	L	261							
M8NORSET	241	L	245		247					

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N										
L A B E L		N A M E S		* * * D M A P C R O S S - R E F E R E N C E * * *						
I N T E R P R E T E D F R O M T H E O S C A R . N E G A T I V E D M A P I N D I C A T E S A N O N E X E C U T A B L E I N S T R U C T I O N										
MIK30	258		260	L						
MIK31	270	L	271							
MIK45	308		313	L						
MIKE1	224		231	L						
MNOTSET	222	L	227							
NOARED1	384	L	387		389					
NOELT	27		29	L						
NOEST	49		51	L						
NOGOQ	254		281		323	L				
NOGPCT	46		48	L						
NOLLIST	181	L	187							
NOMDATA	434	L	440							
NOMGEN	341		344	L						
NOP2G	351	L								
NOPRUST	108		110	L						
NOSEQP	21		23	L						
NOVMRED	336	L	343							
NOXYPL	463	L	466		467		470			
NULLCO	151		156	L						
NULLL	185		194	L						
P1	30		37		40	L				
P2	445		473		488	L	492			
PRTMECHL	186	L	189		192					
PRTMECHO	147	L	153							
PRTMECHV	280	L	286							
RFERR	111		164		169		202	205	207	
	397		490	L			239	295	300	
TOTAL NAME COUNT =					76					

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3										
D A T A B L O C K		N A M E S		* * * D M A P C R O S S - R E F E R E N C E * * *						
I N T E R P R E T E D F R O M T H E O S C A R . N E G A T I V E D M A P I N D I C A T E S A N O N E X E C U T A B L E I N S T R U C T I O N										
ASET	95	0								
AVDIAG	290	0	292							
AVV	282	0	283	290	297					
AXIC	1									
B2GG	66	0	90							
BDICT	59	0	61							
BELM	59	0	61							
BGG	88	0	90	0						
BGGX	61	0	88	90						
BGPD	24	0	32	33-2	43	54	57	61	64	73
	95		127	355	448	468	475	485	495	
BMAT	348	0	349							
CASECC	1		7	8	9	38	66	95	112	280
	302		339	354	356	382	414	426	439	441
	448									
CASESX	354	0	355							
CASEXX	439	0	475	495						
CSTM	24	0	32	43	50	52	54	57	59	61
	64		73	95	127	339	355	448	458	475
	485									
DIT	1		52	59	355	448				
DLT	362	0								
DM	176	0	210	0	249	379				
DMI	1									
DMINDX	1									
DMLQ	379	0	394-2	411						
DMX	394-2	0	411	0	414					
DTI	1									
DTINDX	1									
DYNAMICS	1		280	302	362	382				
ECT	26	0	28	32	33-1	38	43	475	493	
EDT	1		355	468						
EED	362	0	414							
ELSETP	493	0	495							
ELSETS	19-3	0	34	0	38					
EPT	1		22	26	32	43				
EQDYN	362	0								
EQEXIN	24	0	26	32	33	42	66	73	95	104
	109		127	188	356	426	448	468	475	493
	495									
EST	43	0	50	52	59	339	355	448	458	
ETT	42	0	43	354	355	448				
FAPPROX	327	0	328							
FORCE	1									
FRL	362	0								
GEA	346	0	348							
GEG	339	0	342	344						
GEI	43	0	85							
GEO	344	0								
GEOM1	1		20	22						

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3									
D A T A B L O C K		N A M E S		* * * D M A P C R O S S - R E F E R E N C E * * *					
I N T E R P R E T E D F R O M T H E O S C A R . N E G A T I V E D M A P I N D I C A T E S A N O N E X E C U T A B L E I N S T R U C T I O N									
GEOM1Q	20	0	22	0	24				
GEOM2	1		22		24	26	32	42	
GEOM3	1		42						
GEOM4	1		22		95	104			
GES	344	0							
GM	96	0	98	0	102	214	344	446	
GO	171	0	172		241	242	243	252	319
GOA	252	0	333-2	0	337	0	344	446	320-1
GOCOMP	319	0	320-1	0	321				337
GOQ	324	0	325		325	329	331	331	333-2
GOZ	307	0	321	0	324				
GPDT	24	0	95						
GPECT	43	0	47		54	57	61	64	475
GPI	24	0	47		104	132	135	161	168
	293		299		303	328	362	396	458
GPLD	362	0							485
GPSETP	493	0	495						485
GPSETS	19-2	0	34	0	38				
GTEA	342	0	344	0	346	350			
GWX1	406	0	407		421				
K2GG	66	0	81						
K4GG	64	0							
KAAB	174	0	333	0	335	0	386	394	399
KAA	139	0	140-1		145				
KCOMP	272	0	274	0	278				
KCOMPO	277	0	278						
KDIAG	157	0	159						
KDIAGL	196	0	198						
KDICT	52	0	54		64	475			
KELM	52	0	54		64	475			
KFF	124	0	126	0	131	133	137	139	
KFFD	133	0	134						
KFFR	131	0	132		134				
KFFRN	134	0	135						
KFS	126	0	446						
KGG	83	0	86	0	100	102			
KGGX	54	0	79		81				
KGGY	79	0	81	0	83	86			
KGGZ	85	0	86						
KLL	175	0	179	0	184	196	204		
KLR	179	0	210						
KNN	100	0	102	0	104	124	126		
KOA	139	0	140		144	147			
KOCOMP	272-1	0	275	0	277	278			
KOO	139	0	150		157	166	270	278	325
KOT	140	0	144	0	171	172	272-1	275	
KQDIAG	326	0	327						
KQQ	325	0	326		333	335			
KRR	179	0	210						
KSS	126	0							

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N										SUBDMAP = SOL3
DATABLOCK		NAMES		* * * D M A P C R O S S - R E F E R E N C E * * *						
INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION										
KTT	137	0	148	0	172	0	174	175	179	335
KTT1	140-1	0	145	0	148		172	272	274	
KVV	270	0	278	0	280		282			
KWW1	399	0	405							
KWX	399	0	402		406		407			
KXX	394	0	400	0	403	0	407	0	414	
KXXBAR	399	0	400		403		407			
LAMA	414	0	415		426		441		448	
LCHI	347	0	348							
LDIAG	158	0	159							
LDIAGL	197	0	198							
LLL	184	0	197		210					
LOO	150	0	158		171					
LVDIAG	291	0	292							
LVV	283	0	291		302					
LWW1	405	0	406							
M2GG	66	0	69							
MAA	251	0	333-1	0	336	0	340		352	
MAA1	222	0	223-1		225		228			
MAR	339	0	441							
MATAA	386	0								
MATPARM	22	0								
MATPOOL	1		66		339		356			
MCHI	339	0	347							
MCOMP	259	0	263	0	268					
MCOMPO	266	0	268							
MDICT	52	0	57							
MEA	349	0	350		441					
MECH	159	0	161							
MECHL	198	0	200							
MECHV	292	0	293							
MELM	52	0	57							
MFF	216	0	218	0	220		222			
MGG	67	0	69	0	73		212		214	355
MGGX	57	0	67		69					
MI	414	0								
MLAM	339	0	349							
MIL	248	0	249							
MLR	248	0	249							
MMAA	340	0	352	0	363		386		394-1	398
MNN	212	0	214	0	216		218			
MOA	222	0	223		225-1		229			
MOCOMP	260	0	264	0	266		268			
MOO	222	0	241		257		268		331	
MOQ1	225-1	0	229	0	235					
MOT	241	0	243		329					
MOT1	223	0	229	0	241		242		260	264
MPT	1		52		59		355		448	458
MQQ	331	0	333-1		336					
MQQ1	225	0	228	0	233					

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3
 D A T A B L O C K N A M E S * * * D M A P C R O S S - R E F E R E N C E * * *
 INTERPRETED FROM THE OSCAR, NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION

MQT	329	0	330		336				
MQT1	228	0	230						
MR	246	0	249	0	369	414			
MRDIAG	369	0	371						
MRR	248	0	249						
MTQ	330	0	336						
MTT	220	0	243	0	246	248	251	336	
MTT1	223-1	0	228	0	242	259	263		
MTT2	242	0	243						
MVV	257	0	268	0	280	282	302		
MXX	394-1	0	398	0	414				
MYX	302	0							
NLFT	362	0							
NULLAZ	306	0	307-2						
NULLL	204	0	206						
NULLO	166	0	168						
NULLOQ	323	0	324						
NULLV	297	0	299						
OEF1	448	0	451						
OEIGS	414	0	415						
OELOF1	485	0	487						
OELOP1	485	0	490						
OEP	441	0	442						
OES1	448	0	451		453	458	495		
OES1G	458	0	463		468				
OES1G1	463	0	464						
OES1M	458	0	460						
OES1M1	460	0	461						
OES1X1	453	0	454						
OES2X	468	0	469						
OGPFB1	475	0	481		485				
OGPWG	73	0	74						
ONRGY1	475	0	477						
OPG1	448	0	451		468				
OPG2X	468	0	469						
OPHIA	426	0	428						
OQG1	448	0	451		468				
OQG2X	468	0	469						
OUG2X	468	0	469						
OUGV1	443	0	451		468				
P2G	356	0	359						
PBGPDT	32	0	33-2	0	38				
PCDB	1		11		34	493			
PECT	32	0	33-1	0	34				
PEQIN	32	0	33	0	34	38			
PG	434	0							
PG1	435	0	475						
PGS	357	0	359	0	362				
PGSX	355	0	357		359				
PHCOMPZ1	313-1	0	317	0	321				

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3
 D A T A B L O C K N A M E S * * * D M A P C R O S S - R E F E R E N C E * * *
 I N T E R P R E T E D F R O M T H E O S C A R . N E G A T I V E D M A P I N D I C A T E S A N O N E X E C U T A B L E I N S T R U C T I O N

PHIA	418	0	423	0	426	441	446				
PHIAZ	307-2	0	312	0							
PHICOMPZ	310	0	311		313-1	317					
PHIOZ	307-1	0	310	0	313	316					
PHIOZ1	313	0	316	0	321						
PHITZ	311	0	312								
PHIVZ	302	0	303		307	307-1	310				
PHIW	421	0	423								
PHIX	414	0	418		421	423					
PLOTX1	38	0	39								
PLOTX2	495	0	496								
PLTPAP	493	0	495								
PLTPAR	19-1	0	34	0	38						
PLTSETX	34	0	36								
POSTCDB	1										
PSDL	362	0									
PSIL	32	0	33-3	0	38						
PSMES	493	0	494								
PUGV	448	0	495		495						
PVT	1										
QG	19	0	446	0	448	475					
RBFF	129	0	130								
RBFFT	130	0	131								
RBGLOBAL	127	0	129								
RG	95	0	98								
SIL	24	0	32		33-3	43	47	54	57	61	64
	66		95		104	132	135	161	168	200	206
	293		299		303	328	355	356	362	396	458
	475		485		495						
SILD	362	0									
SLT	42	0	354		355	362					
TFPOOL	362	0									
TRL	362	0									
UCHI	347	0	348								
UGV	446	0	448		475						
USET	104	0	105		109	126	128	132	135	139	143
	145		161		168	179	188	200	206	214	218
	222		228		248	262	267	293	299	303	309
	311		312		328	344	362	375	377	394-3	396
	426		446								
USETB	95	0	98		102	104					
USETD	362	0									
V1	128	0	129								
VACOMPR	375	0	378		390	391	410				
VALCOMP	377	0	378								
VAQT	143	0	144		229	335	336	337			
VAXW	388	0	391	0	392	396	398	399	410	414	423
VAXW1	386	0	388		390						
VECZR	315	0	316		317						
VELEM	50	0	475								
VLQ	378	0	379								

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      N A S T R A N   S O U R C E   P R O G R A M   C O M P I L A T I O N           S U B D M A P   =   S O L 3
      D A T A B L O C K   N A M E S           * * *   D M A P   C R O S S - R E F E R E N C E   * * *
      I N T E R P R E T E D   F R O M   T H E   O S C A R .   N E G A T I V E   D M A P   I N D I C A T E S   A   N O N   E X E C U T A B L E   I N S T R U C T I O N
      V L Q X W           3 9 0   0   3 9 1           4 1 1
      V M A T             3 5 0   0   3 5 1           3 5 2
      V M A T T          3 5 1   0   3 5 2
      V T B C O M P      2 6 2   0   2 6 3           2 6 4           2 7 4           2 7 5           3 2 0 - 1
      V V O C            3 0 9   0   3 1 0
      V V O C O M P      2 6 7   0   2 6 8           2 7 8
      V X C O M P R      3 9 4 - 3   0   4 1 0   0   4 1 4
      X Y C D B           1           1 0           4 4 1           4 4 8           4 6 8           4 6 9
      X Y P L T S        4 6 9   0   4 7 1
      Y S                1 0 4   0
      Y S B              9 5   0   1 0 4

      T O T A L   N A M E   C O U N T   =           2 4 7
  
```



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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3
PARAMETER NAMES *** DMAP CROSS-REFERENCE ***
INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION
ASING I 17 S 397
AUTOSPC BCD 104
BAILOUT I 162 S 163 201 294
BIGER RS 453 460 463
CARDNO I 3 S 428 S 442 S 451 S 454 S 461 S 464 S 469 S 477 S
CB1 CS 90
CB2 CS 90
CK1 CS 81
CK2 CS 81
CK3 CS 86
CM1 CS 69
CM2 CS 69
COUPMASS I 52
CP1 CS 359
CP2 CS 359
CURV I 17 456
CURVPLOT I 17 467
DETER CS 150 S 184 S 280 S 282 283 S
DJ I 493
DOPT I 468
DSIL I 493 S 495
DYNRED I 112 S 113 122
EPPRT RS 104
EPSBIG RS 302
EPSMALC RS 280
EPSMALU RS 302
EPZERO RS 104
ERRNO I 115 S 119 S 121 S 238 S 366 S 373 S 416 S 503
ESE I 8 S 14 S 14 16 476
EST I 49 50
FACTOR I 22
FORM BCD 364 S
GENEL I 43 S
GPECT I 45 S 46
GPFDR I 16 S 474
GPFO I 9 S 13 13 S 15 16 479
GRDPNT I 72 73 127
INVPOW I 383 S 400 401 420
JUMPPLOT I 11 S 19-1 19-2 19-3 30 34 S 37 38 S 444
492 495
K6ROT RS 52
LUSET I 24 S 38 43 66 85 95 339 355 356
362 495
LUSETD I 362 S
MAXRAT RS 150 S 154 184 S 193 283 S 287
MAXRATIO RS 154 161 193 200 287 293
MESH BCD 32
MIND RD 150 S 184 S 283 S
MODACC I 182 432 S
MPCF1 I 95 S 96 100 212
    
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NASTRAN SOURCE PROGRAM COMPI LATION SUBDMAP = SOL3
 INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION
 PARAMETER NAMES *** DMAP CROSS-REFERENCE ***
 MPCF2 I 95 S 97 101 213
 MPCX I 22 S 152 184 S 191 283 S 285
 NBRCH I 150 S 414 S 21 22
 NEIGV I 413 S 111 33-1 33-2 33-3
 NEWSEQ I 20 S 233 S 235 S 342 S 343
 NGERR I 104 S 106 S 403 S 404
 NHBDY I 32 S 381 S 386 S 387 392 S 394 394-1 394-2 394-3 395
 NINTPTS I 458 S 418 S 419 S 306 88 89
 NM I 230 S 105 S 106 S 78 S 59 S 78 S 259 260 261 272 273 272-1 319
 NOA I 95 S 105 S 256 S 305 S 370 S 371 S
 NOAOMIT I 402 S 438 S 473
 NOARED I 381 S 362 S 77 S 83 S 84 S 85
 NOASET I 105 S 106 S 78 S 59 S 78 S 259 260 261 272 273 272-1 319
 NOB2GG I 66 S 113 S 362 S 367 S 483 S 485 S 489
 NOBGG I 78 S 362 S 483 S 485 S 489
 NOBGGX I 6 S 362 S 483 S 485 S 489
 NOBSET I 105 S 362 S 483 S 485 S 489
 NOCSET I 105 S 362 S 483 S 485 S 489
 NODDRMM I 438 S 362 S 483 S 485 S 489
 NODLT I 362 S 362 S 483 S 485 S 489
 NODYNRED I 113 S 362 S 483 S 485 S 489
 NOEED I 362 S 362 S 483 S 485 S 489
 NOELOF I 483 S 362 S 483 S 485 S 489
 NOELOP I 483 S 362 S 483 S 485 S 489
 NOFRL I 362 S 362 S 483 S 485 S 489
 NOGENL I 43 S 362 S 483 S 485 S 489
 NOGPD I 24 S 362 S 483 S 485 S 489
 NOGPD I 24 S 362 S 483 S 485 S 489
 NOGPF I 12 S 362 S 483 S 485 S 489
 NOGRAV I 42 S 362 S 483 S 485 S 489
 NOGSET I 105 S 362 S 483 S 485 S 489
 NOK2GG I 66 S 362 S 483 S 485 S 489
 NOK4GG I 52 S 362 S 483 S 485 S 489
 NOKGG I 76 S 362 S 483 S 485 S 489
 NOKGGX I 4 S 362 S 483 S 485 S 489
 NOL I 95 S 362 S 483 S 485 S 489
 NOLSET I 105 S 362 S 483 S 485 S 489
 NOM2GG I 66 S 362 S 483 S 485 S 489
 NOMGEN I 339 S 362 S 483 S 485 S 489
 NOMGG I 71 S 362 S 483 S 485 S 489
 NOMGGX I 5 S 362 S 483 S 485 S 489
 NONL I 95 S 362 S 483 S 485 S 489
 NONLFT I 362 S 362 S 483 S 485 S 489
 NOPREQ I 426 S 362 S 483 S 485 S 489
 NOPSDL I 362 S 362 S 483 S 485 S 489
 NOQSET I 105 S 114 140 140-1 141 174 223 223-1 224
 251 252 253 280 280 323
 NOSET I 95 S 104 S 107 S
 NOSIMP I 43 S 44
 NOSORT1 I 433 S
 NOSORT2 I 448 S

N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3
PARAMETER N A M E S * * * D M A P C R O S S - R E F E R E N C E * * *
INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION

NOSPC	I	15	S	19	446																
NOTFL	I	362	S																		
NOTRL	I	362	S																		
NOTSET	I	105	S	142	225	225-1	227	333	333-1	333-2	334										
NOUE	I	362	S																		
NOVSET	I	105	S																		
NOXYCDB	I	10	S	466																	
NOYSET	I	280	S	281	302	302	304														
NOZSET	I	304	S	306	315	315															
NP	I	147	S	148	149	152	S	153	154	S	155	166	S	167							
		186	S	187	191	S	192	S	193	S	194	204	S	205	232	S					
		234		234	S	236	S	256	S	257	258	270		271	285	S					
		286		287	S	288	S	297	S	298	305	S	307	307-1	307-2						
		308		356	S	357	S	358	S	371	S	372	S	372	382	S					
		383		384		384	S	385	S	385	S	386	426	S	427	469	S				
		470																			
NSIL	I	34	S	38																	
NSKIP	I	92	S	95	S																
NUMOUT	I	453		460	463																
OG	I	458																			
OMIT	I	95	S	105	S	116	137	138	220	221	323										
OPT	BCD	133																			
OUTOPT	I	458																			
PFILE	I	18	S	38	S	469	S	495	S												
PJUMP	I	444	S	445																	
PLTFLG	I	18	S	38	S	495															
POW	I	150	S	184	S	283	S														
POWER	RS	133																			
PRGPST	BCD	104																			
PROUT	I	27		28																	
PRPHIVZ	RS	303		328																	
QNOTNULL	I	226	S	230	S	232	233	S	234	235	S	236	S	236	237						
		237	S	239																	
REACT	I	95	S	105	S	107	175	176	178	209	245	256									
		280		302		305	313	313-1	314	315	368	388									
		389		409																	
REPEAT	I	95	S																		
S1	I	452		457	S																
S1G	I	457																			
S1M	I	457		459																	
SEQOUT	I	22																			
SETOUT	BCD	365	S																		
SING	I	104	S	150	S	151	184	S	185	186	283	S	284								
SINGLE	I	95	S	104	S	105	S	124	125	216	217										
SKPEDR	I	483	S	484																	
SMALL	RS	135																			
SOLTYPE	BCD	437	S	441	448	475															
SPCGEN	I	104																			
SPCREQ	I	7	S	12	12	S	15														
SRTELTYP	I	453		460	463																
SRTOPT	I	453		460	463																

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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3
PARAMETER NAMES *** DMAP CROSS-REFERENCE ***
INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION

START	I	22			
SUBID	I	95			
SUPER	I	22			
TINY	RS	475			
USETPRT	I	108	109		
USETSEL	I	109			
WTMASS	RS	57	73	339	

TOTAL NAME COUNT = 145

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N A S T R A N S O U R C E P R O G R A M C O M P I L A T I O N S U B D M A P = S O L 3
 B C D C O N S T A N T V A L U E S * * * D M A P C R O S S - R E F E R E N C E * * *
 I N T E R P R E T E D F R O M T H E O S C A R . N E G A T I V E D M A P I N D I C A T E S A N O N E X E C U T A B L E I N S T R U C T I O N

A	105	139	143	145	222	228	312	375	377
	396								
ADD	232	234	236	304	385				
ALL	132	135	161	168	200	206	293	299	303
	328	396							
AND	15	16	71	76	77	78	107	256	305
	444	483							
B	105	262	311						
C	105	311							
CEIG	439								
COLUMN	157	158	196	197	290	291	326	369	
COMP	128	262	267	309	375	377			
DIAGOFF	425	447							
DIAGON	430								
DIRECT	426								
DMAP	160	199	503						
DTI	7	8	9	112					
EQ	106	383	384						
F	128	132	135	139	222				
G	22	105	128						
GT	152	191	237	285					
H	161	168	200	206	293	299	303	328	396
HSET	365								
L	105	179	200	206	248	377			
LE	154	193	287						
MODAL	280	364							
MODES	414								
NE	186	372							
NOP	17	45	162	432	433	457			
NOT	12	13	14	113	438				
NULL	147	392	402						
O	105	139	161	168	222	267	309		
PEAK	448								
PRES	10	11	363						
PSET	469								
Q	105	143	145	228	312	328			
R	105	179	248	375					
REIG	426	437	446						
RESULTAN	127								
S	105								
SET1	469								
STATICS	355								
T	105	127	143	145	179	228	248	262	311
	312								
TRAILER	230	233	235	371					
USET	105	109	188						
V	105	267	293	299	303	309			
VECTOR	127								
X	132	135							
XXXXXXXX	500								

TOTAL NAME COUNT = 46

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NASTRAN SOURCE PROGRAM COMPILATION SUBDMAP = SOL3
BCD CONSTANT VALUES *** DMAP CROSS-REFERENCE ***
INTERPRETED FROM THE OSCAR. NEGATIVE DMAP INDICATES A NON EXECUTABLE INSTRUCTION

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+-----+
+ KEY TO FLAGS IN DMAP CROSS REFERENCE LISTING +
+ +
+ * - SIGNIFIES THAT A VARIABLE IS DB-STORED +
+ L - REPRESENTS THE LABEL STATEMENT DMAP NUMBER +
+ O - SIGNIFIES THAT THE A DATABLOCK IS AN OUTPUT +
+ S - SIGNIFIES THAT THE PARAMETER IS SAVED +
+-----+

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C A S E C O N T R O L D E C K E C H O

CARD
COUNT
1 SEALL = ALL
2 SUPER = ALL
3 TITLE = FREE-FREE EIGENVALUE SOLUTION 1ST 7 MODES MODIFIED GIVENS
4 ECHO = SORT
5 MAXLINES = 999999999
6 SUBCASE 1
7 \$ SUBCASE NAME : FREE-FREE
8 SUBTITLE=FREE-FREE
9 METHOD = 1
10 VECTOR(SORT1,REAL)=ALL
11 SPCFORCES(SORT1,REAL)=ALL
12 BEGIN BULK

INPUT BULK DATA CARD COUNT = 75

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S O R T E D B U L K D A T A E C H O

CARD COUNT	1	2	3	4	5	6	7	8	9	10
1-	CBAR	335101	1000	335023	335001	0.	0.	1.		
2-	CBAR	335102	1000	335023	335002	0.	0.	1.		
3-	CBAR	335103	1000	335023	335003	0.	0.	1.		
4-	CBAR	335104	1000	335023	335004	0.	0.	1.		
5-	CBAR	335105	1000	335023	335005	0.	0.	1.		
6-	CBAR	335106	1000	335023	335006	0.	0.	1.		
7-	CBAR	335107	1000	335023	335007	0.	0.	1.		
8-	CBAR	335108	1000	335023	335008	0.	0.	1.		
9-	CBAR	335109	1000	335023	335009	0.	0.	1.		
10-	CBAR	335110	1000	335023	335010	0.	0.	1.		
11-	CBAR	335111	1000	335023	335011	0.	0.	1.		
12-	CBAR	335112	1000	335023	335012	0.	0.	1.		
13-	CBAR	335113	1000	335023	335013	0.	0.	1.		
14-	CBAR	335114	1000	335023	335014	0.	0.	1.		
15-	CBAR	335115	1000	335023	335015	0.	0.	1.		
16-	CBAR	335116	1000	335023	335016	0.	0.	1.		
17-	CBAR	335117	1000	335023	335017	0.	0.	1.		
18-	CBAR	335118	1000	335023	335018	0.	0.	1.		
19-	CBAR	335119	1000	335023	335019	0.	0.	1.		
20-	CBAR	335120	1000	335023	335020	0.	0.	1.		
21-	CBAR	335121	1000	335023	335021	0.	0.	1.		
22-	CBAR	335122	1000	335023	335022	0.	0.	1.		
23-	CONM2	335123	335023		49.4468					
24-	*	C1.888563		-.001325		3.485918		.502773		+ C
25-	*	D.0274		2.363304						* D
26-	CORD2R	1		-.010262	-.010262	-.013487	-.010262	-.010262	.986513	+ G
27-	+	G.989738	-.010262	-.013487						
28-	EIGR	1	MGIV				7			
29-	GRID	1		-.010262	-.010262	-.013487				
30-	GRID	335001	1	.686613	.010262	.013487				
31-	GRID	335002	1	.589992	.010262	.013487				
32-	GRID	335003	1	.49337	.010262	.013487				
33-	GRID	335004	1	.396748	.010262	.013487				
34-	GRID	335005	1	.300127	.010262	.013487				
35-	GRID	335006	1	.203505	.010262	.013487				
36-	GRID	335007	1	.106884	.010262	.013487				
37-	GRID	335008	1	.010262	.010262	.013487				
38-	GRID	335009	1	.686613	.326289	.013487				
39-	GRID	335010	1	.589992	.326289	.013487				
40-	GRID	335011	1	.49337	.326289	.013487				
41-	GRID	335012	1	.396748	.326289	.013487				
42-	GRID	335013	1	.300127	.326289	.013487				
43-	GRID	335014	1	.203505	.326289	.013487				
44-	GRID	335015	1	.106884	.312014	.013487				
45-	GRID	335016	1	.010262	.312014	.013487				
46-	GRID	335017	1	.686613	.089256	.013487				
47-	GRID	335018	1	.686613	.16825	.013487				
48-	GRID	335019	1	.686613	.247244	.013487				
49-	GRID	335020	1	.010262	.0857	.013487				
50-	GRID	335021	1	.010262	.161138	.013487				

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CARD	COUNT	1	2	3	4	5	6	7	8	9	10
51-	GRID	335022	1	.010262	.236576	.013487					
52-	GRID	335023	1	.407087	.161325	.245444					
53-	MAT1	*30		6.894757+23	2.65183+23		.3		*	E	
54-	*	E2.77-4							*	F	
55-	+	F									
56-	PARAM	AUTOSPC	NO								
57-	PARAM	COUPMASS0									
58-	PARAM	GRDPNT	1								
59-	PARAM	K6ROT	0.								
60-	PARAM	NOCOMPS	-1								
61-	PARAM	PATVER	3.								
62-	PARAM	POST	-1								
63-	PBAR	*1000		30	.032258		2.081-5		*	A	
64-	*	A2.081-5		2.081-5					*	B	
65-	+	B.254	.254								
66-	SUPPORT	335023	123456								
	ENDDATA										
TOTAL COUNT=		67									

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SEQUENCE PROCESSOR OUTPUT

THERE ARE 24 POINTS DIVIDED INTO 1 GROUP(S).

CONNECTION DATA

ELEMENT TYPE	NUMBER	ASSEMBLY TIME(SEC)
BAR	22	0.02

TOTAL MATRIX ASSEMBLY TIME FOR 22 ELEMENTS IS 0.02 SECONDS.

ORIGINAL PERFORMANCE DATA

SUPER(GROUP) ID	NO. GRIDS	AV. CONNECTIVITY	C-AVERAGE	C-RMS	C-MAXIMUM	P-GROUPS	P-AVERAGE	DECOMP TIME(SEC) (6.0 DOF/GRID)
0	24	2.83	1.92	1.94	2	2	1.00	0.000

RESEQUENCED PERFORMANCE DATA

SUPER(GROUP) ID	NO. GRIDS	AV. CONNECTIVITY	C-AVERAGE	C-RMS	C-MAXIMUM	P-GROUPS	P-AVERAGE	DECOMP TIME(SEC) (6.0 DOF/GRID)	METHOD
0	24	2.83	10.67	12.58	22	0	0.00	0.057	ACTIVE
0 -- AS THE ORIGINAL SEQUENCE FOR THE ABOVE GROUP IS BETTER, IT WILL BE RETAINED AND USED. --								0.000	ORIGINAL

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OUTPUT FROM GRID POINT WEIGHT GENERATOR

REFERENCE POINT = 1
M O

```
* 4.944687E+01 0.000000E+00 0.000000E+00 0.000000E+00 1.213643E+01 -7.977016E+00 *
* 0.000000E+00 4.944687E+01 0.000000E+00 -1.213643E+01 0.000000E+00 2.012918E+01 *
* 0.000000E+00 0.000000E+00 4.944687E+01 7.977016E+00 -2.012918E+01 0.000000E+00 *
* 0.000000E+00 -1.213643E+01 7.977016E+00 6.154270E+00 -3.246014E+00 -5.443356E+00 *
* 1.213643E+01 0.000000E+00 -2.012918E+01 -3.246014E+00 1.465906E+01 -1.985309E+00 *
* -7.977016E+00 2.012918E+01 0.000000E+00 -5.443356E+00 -1.985309E+00 1.184452E+01 *
```

S

```
* 1.000000E+00 0.000000E+00 0.000000E+00 *
* 0.000000E+00 1.000000E+00 0.000000E+00 *
* 0.000000E+00 0.000000E+00 1.000000E+00 *
```

DIRECTION	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	4.944687E+01	0.000000E+00	1.613250E-01	2.454438E-01
Y	4.944687E+01	4.070870E-01	0.000000E+00	2.454438E-01
Z	4.944687E+01	4.070870E-01	1.613250E-01	0.000000E+00

I (S)

```
* 1.888566E+00 -1.324892E-03 5.027733E-01 *
* -1.324892E-03 3.485922E+00 2.740014E-02 *
* 5.027733E-01 2.740014E-02 2.363307E+00 *
```

I (Q)

```
* 1.569849E+00 *
* 3.486725E+00 *
* 2.681220E+00 *
```

Q

```
* -8.445669E-01 9.892425E-03 5.353584E-01 *
* -7.072242E-03 9.995360E-01 -2.962654E-02 *
* -5.354031E-01 -2.880778E-02 -8.441050E-01 *
```

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GRID POINT SINGULARITY TABLE

POINT ID	TYPE	FAILED DIRECTION	STIFFNESS RATIO	OLD USET		NEW USET	
				EXCLUSIVE	UNION	EXCLUSIVE	UNION
1	G	1	0.00E+00	B	L	B	L
1	G	2	0.00E+00	B	L	B	L
1	G	3	0.00E+00	B	L	B	L
1	G	4	0.00E+00	B	L	B	L
1	G	5	0.00E+00	B	L	B	L
1	G	6	0.00E+00	B	L	B	L

*** USER INFORMATION MESSAGE 3035 FOR DATA BLOCK KLR

SUPPORT PT.NO.	EPSILON	STRAIN	ENERGY	EPSILONS LARGER THAN 0.001 ARE FLAGGED WITH ASTERISKS
1	2.2270931E-16	0.0000000E+00		
2	2.2270931E-16	-3.3554432E+07		
3	2.2270931E-16	-6.7108864E+07		
4	2.2270931E-16	-6.5536000E+05		
5	2.2270931E-16	1.3107200E+06		
6	2.2270931E-16	3.9321600E+05		

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COLUMN	POINT	VAXW VALUE	POINT	VALUE	POINT	VALUE	POINT	VALUE	POINT	VALUE	
1	T1	1.00000E+00	1	T2	1.00000E+00	1	T3	1.00000E+00	1	R1	1.00000E+00
	1	R3	1.00000E+00	335001	R1	1.00000E+00	335001	R2	1.00000E+00	335001	R3
	335002	R2	1.00000E+00	335002	R3	1.00000E+00	335003	R1	1.00000E+00	335003	R2
	335004	R1	1.00000E+00	335004	R2	1.00000E+00	335004	R3	1.00000E+00	335005	R1
	335005	R3	1.00000E+00	335006	R1	1.00000E+00	335006	R2	1.00000E+00	335006	R3
	335007	R2	1.00000E+00	335007	R3	1.00000E+00	335008	R1	1.00000E+00	335008	R2
	335009	R1	1.00000E+00	335009	R2	1.00000E+00	335009	R3	1.00000E+00	335010	R1
	335010	R3	1.00000E+00	335011	R1	1.00000E+00	335011	R2	1.00000E+00	335011	R3
	335012	R2	1.00000E+00	335012	R3	1.00000E+00	335013	R1	1.00000E+00	335013	R2
	335014	R1	1.00000E+00	335014	R2	1.00000E+00	335014	R3	1.00000E+00	335015	R1
	335015	R3	1.00000E+00	335016	R1	1.00000E+00	335016	R2	1.00000E+00	335016	R3
	335017	R2	1.00000E+00	335017	R3	1.00000E+00	335018	R1	1.00000E+00	335018	R2
	335019	R1	1.00000E+00	335019	R2	1.00000E+00	335019	R3	1.00000E+00	335020	R1
	335020	R3	1.00000E+00	335021	R1	1.00000E+00	335021	R2	1.00000E+00	335021	R3
	335022	R2	1.00000E+00	335022	R3	1.00000E+00				335022	R1

*** USER INFORMATION MESSAGE 5458, MODIFIED GIVENS METHOD IS FORCED BY USER .

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MODE NO.	EXTRACTION ORDER	EIGENVALUE	REAL EIGENVALUES		GENERALIZED MASS	GENERALIZED STIFFNESS
			RADIANS	CYCLES		
1	7	0.0	0.0	0.0	1.000000E+00	0.0
2	8	0.0	0.0	0.0	1.000000E+00	0.0
3	5	0.0	0.0	0.0	1.000000E+00	0.0
4	1	0.0	0.0	0.0	1.000000E+00	0.0
5	4	0.0	0.0	0.0	1.000000E+00	0.0
6	6	0.0	0.0	0.0	1.000000E+00	0.0
7	9	1.759102E+26	1.325934E+13	2.110290E+12	1.000000E+00	1.758102E+26
8	11	1.758102E+26	1.325934E+13	2.110290E+12	0.0	0.0
9	12	1.759798E+26	1.326574E+13	2.111308E+12	0.0	0.0
10	13	1.759798E+26	1.326574E+13	2.111308E+12	0.0	0.0
11	15	2.046127E+26	1.430429E+13	2.276598E+12	0.0	0.0
12	17	2.046127E+26	1.430429E+13	2.276598E+12	0.0	0.0
13	16	2.047192E+26	1.430801E+13	2.277190E+12	0.0	0.0
14	18	2.047192E+26	1.430801E+13	2.277191E+12	0.0	0.0
15	10	2.158402E+26	1.469150E+13	2.338225E+12	0.0	0.0
16	14	2.158402E+26	1.469150E+13	2.338225E+12	0.0	0.0
17	23	3.465092E+26	1.861476E+13	2.962631E+12	0.0	0.0
18	24	3.465092E+26	1.861476E+13	2.962631E+12	0.0	0.0
19	25	3.469786E+26	1.862736E+13	2.964637E+12	0.0	0.0
20	20	3.469787E+26	1.862736E+13	2.964637E+12	0.0	0.0
21	22	3.803655E+26	1.950296E+13	3.103992E+12	0.0	0.0
22	21	3.803655E+26	1.950296E+13	3.103992E+12	0.0	0.0
23	3	4.022666E+26	2.005659E+13	3.192105E+12	0.0	0.0
24	19	4.022666E+26	2.005659E+13	3.192105E+12	0.0	0.0
25	27	4.963550E+26	2.227903E+13	3.545817E+12	0.0	0.0
26	28	4.963550E+26	2.227903E+13	3.545817E+12	0.0	0.0
27	26	5.123214E+26	2.263452E+13	3.602395E+12	0.0	0.0
28	30	5.123214E+26	2.263452E+13	3.602395E+12	0.0	0.0
29	31	5.530495E+26	2.351701E+13	3.742847E+12	0.0	0.0
30	32	5.530496E+26	2.351701E+13	3.742847E+12	0.0	0.0
31	29	6.424166E+26	2.534594E+13	4.033931E+12	0.0	0.0
32	33	6.424166E+26	2.534594E+13	4.033931E+12	0.0	0.0
33	34	6.911115E+26	2.628900E+13	4.184024E+12	0.0	0.0
34	35	6.911115E+26	2.628900E+13	4.184024E+12	0.0	0.0
35	37	7.352432E+26	2.711537E+13	4.315545E+12	0.0	0.0
36	36	7.352433E+26	2.711537E+13	4.315545E+12	0.0	0.0
37	38	7.950996E+26	2.819751E+13	4.487773E+12	0.0	0.0
38	39	7.950996E+26	2.819751E+13	4.487773E+12	0.0	0.0
39	41	1.127041E+27	3.357143E+13	5.343059E+12	0.0	0.0
40	40	1.127041E+27	3.357143E+13	5.343059E+12	0.0	0.0
41	50	1.231154E+27	3.508780E+13	5.584396E+12	0.0	0.0
42	49	1.231154E+27	3.508780E+13	5.584396E+12	0.0	0.0
43	51	1.242290E+27	3.524614E+13	5.609597E+12	0.0	0.0
44	48	1.242290E+27	3.524614E+13	5.609597E+12	0.0	0.0
45	45	1.363186E+27	3.692134E+13	5.876214E+12	0.0	0.0
46	47	1.363186E+27	3.692134E+13	5.876214E+12	0.0	0.0
47	46	1.463948E+27	3.826157E+13	6.089519E+12	0.0	0.0
48	42	1.463948E+27	3.826157E+13	6.089519E+12	0.0	0.0
49	44	1.636378E+27	4.045217E+13	6.438163E+12	0.0	0.0
50	43	1.636378E+27	4.045217E+13	6.438163E+12	0.0	0.0

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MODE NO.	EXTRACTION ORDER	EIGENVALUE	R E A L E I G E N V A L U E S		GENERALIZED MASS	GENERALIZED STIFFNESS
			RADIANS	CYCLES		
51	53	2.126729E+28	1.458331E+14	2.321006E+13	0.0	0.0
52	52	2.127427E+28	1.458570E+14	2.321386E+13	0.0	0.0
53	56	2.294258E+28	1.514681E+14	2.410689E+13	0.0	0.0
54	55	2.294651E+28	1.514810E+14	2.410896E+13	0.0	0.0
55	54	2.356258E+28	1.535011E+14	2.443045E+13	0.0	0.0
56	60	2.985479E+28	1.727854E+14	2.749965E+13	0.0	0.0
57	58	2.987501E+28	1.728439E+14	2.750896E+13	0.0	0.0
58	57	3.127931E+28	1.768596E+14	2.814807E+13	0.0	0.0
59	2	3.216723E+28	1.793522E+14	2.854480E+13	0.0	0.0
60	61	3.573163E+28	1.890281E+14	3.008476E+13	0.0	0.0
61	62	3.630178E+28	1.905303E+14	3.032383E+13	0.0	0.0
62	63	3.771713E+28	1.942090E+14	3.090932E+13	0.0	0.0
63	68	4.065042E+28	2.016195E+14	3.208874E+13	0.0	0.0
64	69	4.216292E+28	2.053361E+14	3.268026E+13	0.0	0.0
65	67	4.348827E+28	2.085384E+14	3.318992E+13	0.0	0.0
66	66	4.522384E+28	2.126590E+14	3.384573E+13	0.0	0.0
67	72	5.384266E+28	2.320402E+14	3.693035E+13	0.0	0.0
68	71	5.627465E+28	2.372228E+14	3.775517E+13	0.0	0.0
69	70	5.652860E+28	2.377574E+14	3.784027E+13	0.0	0.0
70	65	5.921533E+28	2.433420E+14	3.872908E+13	0.0	0.0
71	64	6.136482E+28	2.477192E+14	3.942574E+13	0.0	0.0
72	59	6.487815E+28	2.547119E+14	4.053866E+13	0.0	0.0

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SUBCASE 1

EIGENVALUE = 0.000000E+00
 CYCLES = 0.000000E+00

REAL EIGENVECTOR NO. 1

POINT ID.	TYPE	T1	T2	T3	R1	R2	R3
1	G	0.0	0.0	0.0	0.0	0.0	0.0
335001	G	1.422101E-01	3.529928E-16	-7.163178E-17	8.984951E-16	-1.665335E-16	1.165734E-15
335002	G	1.422101E-01	1.457700E-16	-2.549355E-16	9.855304E-16	1.221245E-15	0.0
335003	G	1.422101E-01	-1.577588E-32	8.125166E-18	-2.190012E-17	-2.220446E-16	5.551115E-17
335004	G	1.422101E-01	1.307172E-17	-7.729280E-18	8.209888E-17	1.110223E-16	-1.110223E-16
335005	G	1.422101E-01	-1.117809E-17	-3.029100E-18	-3.636965E-17	-1.110223E-16	5.551115E-17
335006	G	1.422101E-01	0.0	0.0	0.0	0.0	0.0
335007	G	1.422101E-01	-4.002652E-16	7.307222E-17	-9.345012E-16	-1.665335E-16	1.304512E-15
335008	G	1.422101E-01	1.119379E-16	-6.029113E-16	7.499697E-16	-1.998401E-15	2.775558E-17
335009	G	1.422101E-01	1.227013E-32	-1.810872E-17	-2.815504E-17	1.110223E-16	2.775558E-17
335010	G	1.422101E-01	2.056304E-16	6.808516E-17	7.721886E-16	1.665335E-16	7.216450E-16
335011	G	1.422101E-01	7.712875E-17	6.551236E-17	4.866116E-16	-2.220446E-16	0.0
335012	G	1.422101E-01	9.213899E-18	7.055919E-18	6.103985E-17	0.0	0.0
335013	G	1.422101E-01	-1.145350E-17	-8.145542E-18	-6.490176E-17	0.0	0.0
335014	G	1.422101E-01	2.319905E-16	9.131220E-17	8.436243E-16	0.0	-7.216450E-16
335015	G	1.422101E-01	-7.688075E-18	-4.994496E-18	-2.282787E-17	0.0	2.775558E-17
335016	G	1.422101E-01	-1.161772E-16	-6.053550E-16	-7.575506E-16	-1.970646E-15	0.0
335017	G	1.422101E-01	0.0	0.0	2.465190E-32	5.551115E-17	-2.775558E-17
335018	G	1.422101E-01	7.968115E-18	3.975712E-16	5.229433E-17	-2.109424E-15	1.734723E-18
335019	G	1.422101E-01	-1.016501E-16	-4.461875E-16	-6.666025E-16	2.220446E-15	2.775558E-17
335020	G	1.422101E-01	0.0	0.0	0.0	0.0	0.0
335021	G	1.422101E-01	-8.453961E-21	2.961978E-17	-5.324619E-20	1.110223E-16	-2.710505E-20
335022	G	1.422101E-01	-2.315242E-16	1.057385E-15	1.788467E-16	3.969047E-15	9.853229E-16
335023	G	1.422101E-01	0.0	0.0	0.0	0.0	0.0

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SUBCASE 1

EIGENVALUE = 0.000000E+00
 CYCLES = 0.000000E+00

REAL EIGENVECTOR NO. 2

POINT ID.	TYPE	T1	T2	T3	R1	R2	R3
1	G	0.0	0.0	0.0	0.0	0.0	0.0
335001	G	-1.578851E-17	1.422101E-01	8.656414E-18	-5.551115E-17	1.204351E-17	-5.551115E-17
335002	G	1.105195E-16	1.422101E-01	1.454612E-16	-4.996004E-16	-7.118752E-16	0.0
335003	G	-1.304032E-23	1.422101E-01	3.164413E-17	-3.330669E-16	-4.871634E-17	-8.326673E-17
335004	G	-1.304032E-23	1.422101E-01	-2.718085E-17	2.220446E-16	-5.493659E-18	-6.938894E-18
335005	G	-1.263080E-16	1.422101E-01	1.217465E-16	-7.771561E-16	7.208356E-16	-1.110223E-16
335006	G	1.420965E-16	1.422101E-01	-1.803696E-16	6.106227E-16	-8.852432E-16	5.551115E-17
335007	G	-1.894620E-16	1.422101E-01	3.062732E-16	-5.551115E-16	1.222439E-15	-5.551115E-17
335008	G	1.499907E-16	1.422101E-01	-3.029393E-16	3.885781E-16	-9.932240E-16	0.0
335009	G	-1.304032E-23	1.422101E-01	-2.671743E-18	0.0	7.038760E-18	0.0
335010	G	2.684044E-16	1.422101E-01	1.954274E-16	3.330669E-16	-1.284202E-15	-6.106227E-16
335011	G	2.210390E-16	1.422101E-01	4.599265E-17	-1.110223E-16	-9.366729E-16	-6.661338E-16
335012	G	-1.578851E-17	1.422101E-01	1.131338E-16	9.992007E-16	8.934357E-17	1.734723E-17
335013	G	3.157698E-17	1.422101E-01	-3.213540E-17	-2.220446E-16	-1.745942E-16	-2.775558E-17
335014	G	1.105195E-16	1.422101E-01	-1.953255E-16	-7.771561E-16	-8.010659E-16	1.110223E-16
335015	G	7.894236E-18	1.422101E-01	-1.119380E-17	0.0	-4.673328E-17	0.0
335016	G	-2.210390E-16	1.422101E-01	2.902817E-16	1.110223E-16	1.067153E-15	4.996004E-16
335017	G	-1.026252E-16	1.422101E-01	-1.094723E-16	5.551115E-17	5.950984E-16	-1.110223E-16
335018	G	-4.934036E-19	1.422101E-01	-5.153438E-19	0.0	2.937764E-18	0.0
335019	G	-1.304032E-23	1.422101E-01	-1.058937E-18	0.0	3.186890E-18	0.0
335020	G	-1.304032E-23	1.422101E-01	4.467334E-18	-5.551115E-17	1.225441E-17	5.551115E-17
335021	G	7.696187E-21	1.422101E-01	-1.221293E-20	0.0	-4.710425E-20	0.0
335022	G	-1.304032E-23	1.422101E-01	-4.689702E-19	0.0	-1.286774E-18	0.0
335023	G	-1.304032E-23	1.422101E-01	0.0	0.0	0.0	0.0

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SUBCASE 1

EIGENVALUE = 0.000000E+00
 CYCLES = 0.000000E+00

REAL EIGENVECTOR NO. 3

POINT ID.	TYPE	T1	T2	T3	R1	R2	R3
1	G	0.0	0.0	0.0	0.0	0.0	0.0
335001	G	-3.473470E-16	-2.605102E-16	1.422101E-01	-2.220446E-16	1.443290E-15	-1.214379E-15
335002	G	-4.307414E-23	3.157699E-17	1.422101E-01	1.665335E-16	1.110223E-16	7.870201E-17
335003	G	4.105009E-16	-4.736550E-17	1.422101E-01	-7.216450E-16	-1.999401E-15	1.033522E-15
335004	G	3.157695E-17	-6.151722E-24	1.422101E-01	0.0	-1.422473E-16	9.325013E-17
335005	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	0.0
335006	G	4.894434E-16	-2.210390E-16	1.422101E-01	-1.110223E-16	-2.164935E-15	1.511010E-15
335007	G	7.894244E-17	-4.105009E-16	1.422101E-01	-1.082467E-15	2.775558E-16	1.215852E-15
335008	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	3.081488E-33
335009	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	0.0
335010	G	-1.578850E-16	3.789239E-16	1.422101E-01	1.498801E-15	1.110223E-16	1.249470E-15
335011	G	-2.210390E-16	1.420965E-16	1.422101E-01	5.551115E-16	2.604228E-16	8.261856E-16
335012	G	1.578845E-17	-2.210390E-16	1.422101E-01	-1.443290E-15	-1.006140E-16	-5.902321E-18
335013	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	0.0
335014	G	-4.307414E-23	-2.368275E-17	1.422101E-01	-1.110223E-16	-1.110223E-16	5.905525E-17
335015	G	4.578664E-16	-2.052505E-16	1.422101E-01	-1.387779E-15	-2.886580E-15	-6.642111E-17
335016	G	7.894244E-17	3.591883E-16	1.422101E-01	6.661338E-16	2.775558E-16	-9.900193E-16
335017	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	0.0
335018	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	0.0
335019	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	-2.465190E-32
335020	G	-3.157704E-17	1.598585E-16	1.422101E-01	2.498002E-16	5.551115E-17	-4.550178E-16
335021	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	0.0
335022	G	6.631168E-16	3.947124E-17	1.422101E-01	-5.273559E-16	-4.163336E-15	-4.533352E-16
335023	G	-4.307414E-23	-6.151722E-24	1.422101E-01	0.0	0.0	0.0

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SUBCASE 1

EIGENVALUE = 0.000000E+00
 CYCLES = 0.000000E+00

REAL EIGENVECTOR NO. 4

POINT ID.	TYPE	T1	T2	T3	R1	R2	R3
1	G	0.0	0.0	0.0	0.0	0.0	0.0
335001	G	2.912768E-16	1.687878E-01	-1.099239E-01	7.276691E-01	-1.054712E-15	9.992007E-16
335002	G	1.609438E-16	1.687878E-01	-1.099239E-01	7.276691E-01	-1.054712E-15	0.0
335003	G	-1.388535E-16	1.687878E-01	-1.099239E-01	7.276691E-01	5.551115E-16	-5.551115E-16
335004	G	3.786903E-19	1.687878E-01	-1.099239E-01	7.276691E-01	-1.387779E-16	-1.526557E-16
335005	G	-1.237058E-16	1.687878E-01	-1.099239E-01	7.276691E-01	1.110223E-15	1.665335E-16
335006	G	-2.511988E-16	1.687878E-01	-1.099239E-01	7.276691E-01	1.665335E-15	-5.551115E-17
335007	G	2.855966E-16	1.687878E-01	-1.099239E-01	7.276691E-01	-1.054712E-15	1.498801E-15
335008	G	-1.771962E-16	1.687878E-01	-1.099239E-01	7.276691E-01	2.220446E-16	-1.221245E-15
335009	G	-1.432716E-16	1.687878E-01	1.200392E-01	7.276691E-01	-1.665335E-16	1.554312E-15
335010	G	1.685174E-16	1.687878E-01	1.200392E-01	7.276691E-01	-9.992007E-16	-3.885781E-16
335011	G	-9.845997E-17	1.687878E-01	1.200392E-01	7.276691E-01	5.551115E-17	8.326673E-16
335012	G	5.049222E-18	1.687878E-01	1.200392E-01	7.276691E-01	-7.632783E-17	6.938894E-17
335013	G	-1.009848E-17	1.687878E-01	1.200392E-01	7.276691E-01	8.604228E-16	-8.326673E-16
335014	G	-3.345118E-17	1.687878E-01	1.200392E-01	7.276691E-01	-7.771561E-16	1.720846E-15
335015	G	-1.293865E-17	1.687878E-01	1.096517E-01	7.276691E-01	-1.110223E-16	3.885781E-16
335016	G	-3.302503E-16	1.687878E-01	1.096517E-01	7.276691E-01	1.665335E-15	5.551115E-16
335017	G	-9.435720E-17	1.687878E-01	-5.244238E-02	7.276691E-01	6.106227E-16	-1.110223E-16
335018	G	4.279992E-18	1.687878E-01	5.039108E-03	7.276691E-01	-4.163336E-17	-2.220446E-16
335019	G	-1.623640E-16	1.687878E-01	6.252061E-02	7.276691E-01	1.137979E-15	-5.551115E-16
335020	G	-1.251260E-16	1.687878E-01	-5.502998E-02	7.276691E-01	4.440892E-16	-8.326673E-16
335021	G	-4.266855E-19	1.687878E-01	-1.360729E-04	7.276691E-01	2.385245E-18	-4.996004E-16
335022	G	3.028742E-16	1.687878E-01	5.475784E-02	7.276691E-01	-1.665335E-15	-7.771561E-16
335023	G	-1.048829E-23	-1.248764E-07	-2.688779E-09	7.276691E-01	0.0	0.0

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SUBCASE 1

EIGENVALUE = 0.000000E+00
 CYCLES = 0.000000E+00

REAL EIGENVECTOR NO. 5

POINT ID.	TYPE	T1	T2	T3	R1	R2	R3
1	G	0.0	0.0	0.0	0.0	0.0	0.0
335001	G	-1.242362E-01	-8.716184E-05	-1.496576E-01	-3.757675E-04	5.356007E-01	-1.665335E-15
335002	G	-1.242362E-01	-8.716184E-05	-9.790731E-02	-3.757675E-04	5.356007E-01	2.220446E-16
335003	G	-1.242362E-01	-8.716184E-05	-4.615651E-02	-3.757675E-04	5.356007E-01	0.0
335004	G	-1.242362E-01	-8.716184E-05	5.594303E-03	-3.757675E-04	5.356007E-01	-2.775558E-16
335005	G	-1.242362E-01	-8.716184E-05	5.734459E-02	-3.757675E-04	5.356007E-01	-4.996004E-16
335006	G	-1.242362E-01	-8.716184E-05	1.090954E-01	-3.757675E-04	5.356007E-01	1.665335E-15
335007	G	-1.242362E-01	-8.716184E-05	1.608457E-01	-3.757675E-04	5.356007E-01	1.193490E-15
335008	G	-1.242362E-01	-8.716184E-05	2.125965E-01	-3.757675E-04	5.356007E-01	4.996004E-16
335009	G	-1.242362E-01	-8.716184E-05	-1.497764E-01	-3.757675E-04	5.356007E-01	5.828671E-16
335010	G	-1.242362E-01	-8.716184E-05	-9.802607E-02	-3.757675E-04	5.356007E-01	-2.442491E-15
335011	G	-1.242362E-01	-8.716184E-05	-4.627526E-02	-3.757675E-04	5.356007E-01	-4.440892E-16
335012	G	-1.242362E-01	-8.716184E-05	5.475550E-03	-3.757675E-04	5.356007E-01	-2.775558E-16
335013	G	-1.242362E-01	-8.716184E-05	5.722583E-02	-3.757675E-04	5.356007E-01	-1.110223E-16
335014	G	-1.242362E-01	-8.716184E-05	1.089766E-01	-3.757675E-04	5.356007E-01	-2.775558E-16
335015	G	-1.242362E-01	-8.716184E-05	1.607323E-01	-3.757675E-04	5.356007E-01	-2.581269E-15
335016	G	-1.242362E-01	-8.716184E-05	2.124831E-01	-3.757675E-04	5.356007E-01	-1.582068E-15
335017	G	-1.242362E-01	-8.716184E-05	-1.496873E-01	-3.757675E-04	5.356007E-01	2.220446E-16
335018	G	-1.242362E-01	-8.716184E-05	-1.497170E-01	-3.757675E-04	5.356007E-01	1.249001E-16
335019	G	-1.242362E-01	-8.716184E-05	-1.497467E-01	-3.757675E-04	5.356007E-01	-5.551115E-16
335020	G	-1.242362E-01	-8.716184E-05	2.125681E-01	-3.757675E-04	5.356007E-01	-6.245005E-16
335021	G	-1.242362E-01	-8.716184E-05	2.125398E-01	-3.757675E-04	5.356007E-01	-1.084202E-19
335022	G	-1.242362E-01	-8.716184E-05	2.125115E-01	-3.757675E-04	5.356007E-01	-1.817990E-15
335023	G	9.191527E-08	6.448604E-11	-3.330808E-08	-3.757675E-04	5.356007E-01	0.0

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SUBCASE 1

EIGENVALUE = 0.000000E+00
 CYCLES = 0.000000E+00

REAL EIGENVECTOR NO. 6

POINT ID.	TYPE	T1	T2	T3	R1	R2	R3
1	G	0.0	0.0	0.0	0.0	0.0	0.0
335001	G	9.997089E-C2	2.285740E-01	-2.838720E-02	1.783004E-01	5.196676E-03	6.697623E-01
335002	G	9.997089E-02	1.638609E-01	-2.788509E-02	1.783004E-01	5.196676E-03	6.697623E-01
335003	G	9.997089E-02	9.914713E-02	-2.738298E-02	1.783004E-01	5.196676E-03	6.697623E-01
335004	G	9.997089E-C2	3.443336E-02	-2.688086E-02	1.783004E-01	5.196676E-03	6.697623E-01
335005	G	9.997089E-02	-3.027974E-02	-2.637875E-02	1.783004E-01	5.196676E-03	6.697623E-01
335006	G	9.997089E-02	-9.499350E-02	-2.587664E-02	1.783004E-01	5.196676E-03	6.697623E-01
335007	G	9.997089E-02	-1.597066E-01	-2.537453E-02	1.783004E-01	5.196676E-03	6.697623E-01
335008	G	9.997089E-02	-2.244204E-01	-2.487242E-02	1.783004E-01	5.196676E-03	6.697623E-01
335009	G	-1.116921E-01	2.285740E-01	2.796054E-02	1.783004E-01	5.196676E-03	6.697623E-01
335010	G	-1.116921E-01	1.638609E-01	2.846264E-02	1.783004E-01	5.196676E-03	6.697623E-01
335011	G	-1.116921E-01	9.914713E-02	2.896476E-02	1.783004E-01	5.196676E-03	6.697623E-01
335012	G	-1.116921E-01	3.443336E-02	2.946687E-02	1.783004E-01	5.196676E-03	6.697623E-01
335013	G	-1.116921E-01	-3.027974E-02	2.996898E-02	1.783004E-01	5.196676E-03	6.697623E-01
335014	G	-1.116921E-01	-9.499350E-02	3.047109E-02	1.783004E-01	5.196676E-03	6.697623E-01
335015	G	-1.021312E-01	-1.597066E-01	2.842796E-02	1.783004E-01	5.196676E-03	6.697623E-01
335016	G	-1.021312E-01	-2.244204E-01	2.893008E-C2	1.783004E-01	5.196676E-03	6.697623E-01
335017	G	4.706369E-02	2.285740E-01	-1.430253E-C2	1.783004E-01	5.196676E-03	6.697623E-01
335018	G	-5.843507E-03	2.285740E-01	-2.178768E-04	1.783004E-01	5.196676E-03	6.697623E-01
335019	G	-5.875071E-02	2.285740E-01	1.386678E-02	1.783004E-01	5.196676E-03	6.697623E-01
335020	G	4.944537E-02	-2.244204E-01	-1.142180E-02	1.783004E-01	5.196676E-03	6.697623E-01
335021	G	-1.080160E-03	-2.244204E-01	2.028829E-03	1.783004E-01	5.196676E-03	6.697623E-01
335022	G	-5.160569E-02	-2.244204E-01	1.547945E-02	1.783004E-01	5.196676E-03	6.697623E-01
335023	G	3.366619E-09	1.105468E-08	-9.820157E-10	1.783004E-01	5.196676E-03	6.697623E-01

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SUBCASE 1

EIGENVALUE = 1.758102E+26
 CYCLES = 2.110290E+12

REAL EIGENVECTOR NO. 7

POINT ID.	TYPE	T1	T2	T3	R1	R2	R3
1	G	0.0	0.0	0.0	0.0	0.0	0.0
335001	G	1.126439E-04	9.280787E-05	3.081671E-05	1.891907E-04	-3.404109E-04	2.578408E-04
335002	G	8.767227E-05	5.549303E-05	-5.035525E-06	1.587926E-04	-2.518730E-04	1.464417E-04
335003	G	8.090916E-05	4.003232E-05	-2.766054E-05	1.485088E-04	-2.308285E-04	1.118043E-04
335004	G	8.004072E-05	3.045804E-05	-4.874695E-05	1.484132E-04	-2.328462E-04	1.002996E-04
335005	G	8.415792E-05	2.280852E-05	-7.266668E-05	1.567105E-04	-2.591849E-04	1.008437E-04
335006	G	9.757531E-05	1.630397E-05	-1.069245E-04	1.829902E-04	-3.380762E-04	1.129177E-04
335007	G	1.477010E-04	9.409911E-06	-2.036201E-04	2.681612E-04	-6.285059E-04	1.646455E-04
335008	G	-3.471391E+02	1.404136E+01	5.847305E+02	-5.451278E+02	2.002765E+03	-3.717212E+02
335009	G	7.330244E-05	8.034927E-05	1.017313E-04	2.723935E-04	-3.915703E-04	1.212076E-04
335010	G	5.815346E-05	4.951026E-05	4.383183E-05	1.765124E-04	-2.607332E-04	7.422498E-05
335011	G	5.425606E-05	3.656127E-05	1.532276E-05	1.441807E-04	-2.268931E-04	6.177693E-05
335012	G	5.408305E-05	2.784628E-05	-7.122005E-06	1.291263E-04	-2.213634E-04	5.536051E-05
335013	G	5.714255E-05	2.064416E-05	-2.985238E-05	1.173482E-04	-2.348845E-04	4.642657E-05
335014	G	6.706936E-05	1.412046E-05	-6.067942E-05	9.517149E-05	-2.868009E-04	2.912535E-05
335015	G	1.008075E-04	6.801400E-06	-1.316047E-04	3.452560E-05	-4.800760E-04	-2.792512E-06
335016	G	4.998197E-02	-3.194699E-03	-8.758223E-02	-8.915343E-02	-2.970355E-01	-4.004293E-02
335017	G	8.879579E-05	7.559373E-05	3.927454E-05	1.727697E-04	-3.114527E-04	1.789343E-04
335018	G	7.719648E-05	6.988394E-05	5.108755E-05	1.773906E-04	-3.092684E-04	1.443091E-04
335019	G	7.173403E-05	7.067813E-05	6.879656E-05	2.025664E-04	-3.297947E-04	1.275298E-04
335020	G	4.667128E-04	-2.434718E-05	-7.903000E-04	4.392035E-04	-2.699189E-03	3.429126E-04
335021	G	3.230818E-04	-1.848909E-05	-5.523027E-04	9.349691E-05	-1.894407E-03	1.186922E-04
335022	G	3.831801E-04	-2.387803E-05	-6.626773E-04	-2.113119E-04	-2.282787E-03	-3.910919E-05
335023	G	1.517338E-05	-6.137174E-07	-2.555837E-05	1.177252E-04	-1.932370E-04	7.587176E-05

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* * * END OF JOB * * *

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