TERPSICHORE PARAMETER DESCRIPTION

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- PARAMETERS OF TPR_MODULES_AP.f

Parameter	Description
NI	Number of radial intervals in plasma ($= NS - 1$ of VMEC)
NJ	Number of poloidal angle grid points
NK	Number of toroidal angle grid points
MLMNV	Number of VMEC Fourier mode pairs ($\geq$ value used in VMEC)
MLMNB	Number of Boozer coordinate Fourier mode pairs
MLMNS	Number of mode pairs for stability calculation
IVAC	Number of vacuum pseudo-magnetic contours (typically $= NI/4$)
LSSL	$\geq$ number of possible permutations of mode combinations in Boozer table If value too low, code stops and prints suggested value in output file (units $6, 16$)
LSSD	$\geq$ number of possible permutations of mode combinations in stability table If value too low, code stops and prints suggested value in output file (units $6, 16$)
MMAXDF	Dimension of internal array. Must be $\geq 2\times$ maximum poloidal mode number used
NMAXDF	Dimension of internal array. Must exceed $\max(\lvert 2n_{max}\rvert,\lvert 2n_{min}\rvert)/N_{periods}$

- TERPSICHORE INPUT PARAMETERS

Parameter	Description
HSXR-c2	An 8 character label for the run chosen by the user
MM	Maximum m-value in the range of active mode pairs in the Boozer table activated in code
NMIN	Minimum value of n in Boozer table. Must be equal to the first value under column N of table
NMAX	Maximum value of n in Boozer table. Must be equal to the last value under column N of table
MMS	Maximum m-value in the range of active mode pairs in the Stability table activated in code
NSMIN	Minimum value of n in Stability table. Must be equal to the first value under column N of table
NSMAX	Maximum value of n in Stability table. Must be equal to the last value under column N of table
NPROCS	Number of processors (not used). Keep at default value 1
INSOL	Internal Solov'ev equilibrium (not operational). Keep at default value 0
BOOZER MODE TABLE	Mode table. Each column corresponds to a value of poloidal mode number m; each row to a value of toroidal mode number n per period. A value of 1 means that the m, n pair is active. If it is 0 it is not considered in VMEC/Boozer reconstruction. m values go from 0 to 36, n values go from NMIN to NMAX. First row must have $n =$NMIN. Last row $n =$NMAX. In Fig. 1, NMIN$= -3$, NMAX$= 5$.
LLAMPR	Prints in unit 16 the flux surface index i, mode pair index ℓ, m, n and $\lambda_{mn}(s)$ when $= 1$ (default 0)
LVMTPR	Prints in unit 16 the VMEC toroidal angle Boozer Fourier amplitudes on inner 4, outer 5 surfaces and the Boozer Jacobian amplitudes from 2 alternative reconstructions when $= 1$ (default 0)
LMETPR	Prints the Boozer Fourier amplitudes of R, Z and VMEC toroidal angle when $= 1$ (default 0)
LFOUPR	Not used
LLHSPR	Prints in unit 16 the submatrix blocks of the left-hand side stability matrix and the double Fourier flux tube integrals when $= 9$ (default 0)
LRHSPR	Prints in unit 16 the submatrix blocks of the right-hand side stability matrix when $= 9$ (default 0)
LEIGPR	Not used
LEFCPR	Not used
LXYZPR	Not used

- TERPSICHORE INPUT PARAMETERS

Parameter	Description
LIOTPL	Not used
LDW2PL	Not used
LEFCPL	Prints Fourier components ξ^s_{mn}, η_{mn} of displacement vector in unit 16 when = 1 (default 1)
LCURRF	Reconstructs from charge conservation/MHD force balance parallel current density for LCURRF= 1. Uses VMEC $j_{\|\|}$ for LCURRF= 2 and construction from metric elements for LCURRF= 9 (Default 1).
LMESHP	Not used
LMESHV	radial mesh accumulation in vacuum domain. Linear= 1, quadratic= 2, cubic=3 (recommend 3).
LITERS	Not used
LXYZPL	Not used
LEFPLS	Not used
LEQVPL	Not used
LPRESS	Default = 0. Otherwise = 2 uses VMEC pressure gradient, = 9 skips Mercier criterion evaluation
PVAC QVAC	Parameters that control the transition of the pseudosurface shape from the plasma-vacuum interface to the wall. Choose same value for both. Minimum 1.0001. If code stops with message: '*pseudo-surfaces intersect at surface= #*', if this number is small with respect to IVAC increase the value of PVAC/QVAC, otherwise decrease the value
PARFAC	Choose PARFAC= 0 for periodicity-breaking modes. For stellarator symmetry-breaking modes (mode number n divisible by number of periods), two mode parities exist PARFAC= 0 and PARFAC= 0.5
QONAX	q_{axis} for Solov'ev equilibrium (not currently functional)
QN	Set to 0 due to VMEC flux zoning also applied in TERPSICHORE
DSVAC	Difference between the radial variable s at the wall and the plasma-vacuum interface (PVI) (set to 1).
NOWALL	Label that identifies the model conducting wall that is constructed. = 1 Conducting wall specified by GWALL, AWALL, EWALL, DWALL, DRWAL, DZWAL, NPWALL = −1 Conducting wall obtained multiplying $m \neq 0$ Fourier components of PVI R and Z by AWALL = −2 Determine normal at each point of the PVI and rescale by AWALL to obtain conducting wall
AWALL	Minor radius of conducting wall.
EWALL	Elongation of conducting wall (for NOWALL= 1 model).
DWALL	Quadrangularity of conducting wall (for NOWALL= 1 model).
GWALL	Major radius of conducting wall (for NOWALL= 1 model).
DRWAL	Horizontal toroidal modulation of conducting wall (for NOWALL= 1 model).
DZWAL	Vertical toroidal modulation of conducting wall (for NOWALL= 1 model).
NPWALL	Number of toroidal periods of conducting wall (for NOWALL= 1 model).
RPLMIN	Minimum absolute value of R, Z to reprint the active Boozer mode table in units = $6, 16$ ($\simeq 10^{-5}$).
XPLO	Minimum absolute value of ξ^s, η to reprint the active stability mode table in units = $6, 16$ ($\simeq 10^{-6}$).
DJP	Resonance detuning parameter to resolve parallel current density singularities ($\simeq 0.0001 - 0.04$)
WCT	Controls toroidal modulation of conducting wall for NOWALL= −1 model. Must be between 0 and 1.
CURFAC	Factor to multiply averaged parallel current density in noniteracting fast particle stability model (1.0)
MODELK	= 0: Noninteracting anisotropic fast particle stability model with reduced kinetic energy = 1: Kruskal-Oberman anisotropic energy principle model with reduced kinetic energy (recommended) = 2: Noninteracting anisotropic fast particle stability model with physical kinetic energy = 3: Kruskal-Oberman anisotropic energy principle model with physical kinetic energy
NSTA	Number of equilibrium periods per stability period (usually = number of equilibrium periods)

- TERPSICHORE INPUT PARAMETERS

Parameter	Description
STABILITY MODE TABLE	Each column corresponds to a value of poloidal mode number m; each row to a value of toroidal mode number n. A value of 1 means that the m, n pair is active. If it is 0 it is not considered in the stability computation. m values can go from 0 to MMS, n values go from NSMIN to NSMAX. First row must have n =NSMIN. Last row n =NSMAX. In Fig. 1, MMS= 43, NSMIN= -1, NSMAX= 21. Maximum MMS= 55 allowed.
NEV	Number of eigenvalue computations (usually 1, when > 1 it resets AL0 to 95% of previous guess).
NITMAX	Number of iterations to converge eigenvalue to that closest to AL0.
AL0	Initial guess of the eigenvalue.
EPSPAM	Relative error for eigenvalue convergence.
IGREEN	Intended for Green's functiuon solution of vacuum. Not currently implemented.
MPINIT	The stability mode table is shifted in m values by MPINIT. The table usually goes from 0 up to 55. With MPINIT= 20 it goes from 20 to 75

TERPSICHORE OUTPUT

- First prints out columns read in from VMEC for ι, plasma mass, differential volume and pressure in units 6, 16.
- Next prints a line: LMNV 98 LMNL 195 LMNB196. LMNV must be $\leq$ MLMNV, LMNL=LMNB-1 and LMNB $\equiv$ MLMNB. Otherwise the code will crash here.
- Next prints in unit 6 *Number of Modes in the Lambda Reconstruction Table:*1345. This number must be $\leq$ LSSL. If it is larger, code will stop here and suggest the value for LSSL in tpr_modules_ap.f
- The following columns are printed in unit 6, 16:
  ***** LGIKVM, RECONSTRUCTED EQUILIBRIUM ****

I	VVP(I)	PVP(I)	PVPI(I)	PARPVI(I)	CJVP(I)	CIVP(I)	EQUI
1	3.7650174E+00	-1.3585E-02	-1.4263E-03	-0.0000E+00	1.0775E-02	1.1597E-01	-6.5231E-01
2	3.7662075E+00	-5.6106E-03	-4.1349E-03	-0.0000E+00	5.4253E-03	4.9114E-02	-1.2760E-01
3	3.7663861E+00	-7.5051E-03	-6.9763E-03	-0.0000E+00	6.3749E-03	6.4562E-02	-3.1832E-02
4	3.7660030E+00	-1.0146E-02	-9.9397E-03	-0.0000E+00	7.4381E-03	8.5757E-02	-9.1323E-03
5	3.7652842E+00	-1.3108E-02	-1.3014E-02	-0.0000E+00	8.4772E-03	1.0932E-01	-3.2573E-03
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
46	3.5781798E+00	-2.6251E-02	-2.6126E-02	-0.0000E+00	8.5111E-03	1.9724E-01	-2.2646E-03
47	3.5757228E+00	-1.5580E-02	-1.5503E-02	-0.0000E+00	3.6192E-03	1.1542E-01	-2.4021E-03
48	3.5740134E+00	0.0000E+00	0.0000E+00	-0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

- The column VVP (the reconstructed differential volume) must match the column VP printed before which is the differential volume read in from VMEC. If it is not, there is either a dimensioning error or the Boozer table was inadequately too small. The last column is the averaged MHD force balance. It

should be small (except at first $2-3$ radial grid points and last few grid points. Boozer mode table must be increased if column numbers $> |10^{-2}|$.

- In unit 16, columns are printed for Fourier amplitudes of R, $R^{'}$, Z, $Z^{'}$, vmec toroidal angle v, $v^{'}$ at the PVI.
- In unit 6, 16, the next line printed is
  PLASMA-VACUUM INTERFACE AND WALL MIDPLANE POSITIONS

INTERIOR WALL	INTERIOR PVI	EXTERIOR PVI	EXTERIOR WALL	WALL / PVI
4.62500E+00	7.08182E+00	9.01523E+00	1.13750E+01	3.49123E+00

- Here the vacuum construction can often fail because the conducting wall has not been sufficiently well built. The code stops and prints a message like:
  VACUUM PSEUDO-SURFACES INTERSECT: BJACMX $= 6.6085E-03$ON SURFACE= 10
- For NOWALL= 1, make sure that the value of GWALL selected in the input file lies between the INTERIOR and EXTERIOR PVI values.
- For quasihelically symmetric devices, the NOWALL= 1 model is recommended. For quasiaxisymmetric system, preferably consider the NOWALL= -2 option. For W7X systems, the NOWALL= -1 seems to work best.
- If the pseudo-surfaces intersect on surfaces $\sim 1-3$, increasing the values of PVAC, QVAC can often resolve the problem. If the intersection occurs for values closed to IVAC, decrease PVAC, QVAC.
- Next in unit 16 columns are printed containing the vacuum surface number, V-PRIME (differential volume), the maximum of the Jacobian and the minimum value of R.
- Subsequently there are columns for $V^{'}$ (differential volume) from 2 different ways of computing the Jacobian.
- The Boozer coordinate mode table is reconstructed identifying the mode pair components that exceed RPLMIN by unity.
- The stability matrix construction and eigenvalue computation represents the next step. In units 6, 16 the statements printed are
  #### TERPSICHORE #### STABIN #### TERPSICHORE ####

  NSTA MMS NSMIN NSMAX MODEL

  4 55 12 72 0

  TABLE OF R AND Z COEFFICIENTS FOR STABILITY

  M= 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 ...N
  followed by the mode stability table.

- The next text printed is
  NEV NITMAX AL0 EPSPAM IGREEN MPINIT
  1 500 -4.500E-04 1.000E-04 0 0

  FULLY INTERACTING FLUID KRUSKAL-OBERMAN MODEL WITH REDUCED KINETIC ENERGY: modelk = 1

  Number of Modes in the Stability Table: 140 555

- The number 140 must be equal to MLMNS and the number 555 must not exceed LSSD in tpr_modules_ap.f.

- The next information printed is:
  EIGENVALUE SHIFT $= -4.50000E-04$

  RAYLEIGH QUOTIENT $= -9.66810E-05$

  EIGENVALUE FROM NORMALIZATION $= -9.66812E-05$

  MAX. NUMBER OF ITERATIONS = 500

  ITERATIONS DONE = 49

  NUMBER OF NEGATIVE EIGENVALUES = 0

  NUMBER OF NEGATIVE X - PIVOTS = 0

  NUMBER OF NEGATIVE Y - PIVOTS = 0

  NUMBER OF NON CONVERGED X COMPONENTS = 0

  NUMBER OF NON CONVERGED Y COMPONENTS = 0
  The eigenvalue shift is AL0, the Rayleigh quotient and eigenvalue from normalization are two forms to calculate the eigenvalue. The number of negative eigenvalues is relative to AL0 (if we had set AL0 $= -0.9668 \times 10^{-5}$ we would likely recover the same eigenvalue, but the number of negative eigenvalues would have been 1. Usually we search for the most unstable eigenvalue. The sum of the number of pivots of the matrix indicates the number of unstable eigenvalues. When the maximum number of iterations is reached, the number of non-converged components (X and/or Y) are listed.

- Next are columns that contain the flux surface printed (from the magnetic axis to the conducting wall, the q-profile, the perturbed potential energy (the vacuum energy from the PVI to the conducting wall) and the Mercier criterion (in the plasma domain) from the two anisotropic pressure stability models using two different normalizations.

- In unit 6, we print for all components that exceed XPLO in maximum absolute magnitude the mode pair index, the poloidal mode number, the toroidal mode number, the maximum value of the radial ξ^s and the binormal η Fourier components. Typically we have
  PARVEC: LC, MS(LC), NS(LC), XIMAX, ETAMAX
  58 2 1 8.995E-02 2.891E-02

- In unit 16, this information is also printed and then the radial profiles of ξ^s_{mn} and η_{mn} from the magnetic axis to the conducting wall. Typically

0.000E+00	1.677E-18	-3.130E-17	-6.668E-17	-2.123E-16	-2.211E-16	-4.515E-16
-9.421E-18	5.523E-17	3.095E-15	-1.739E-15	2.877E-14	1.632E-14	1.389E-13
-1.358E-13	-2.340E-12	-7.048E-12	-2.355E-11	-6.602E-11	-9.527E-11	1.441E-10
1.308E-09	4.292E-09	9.281E-09	1.363E-08	9.098E-09	-2.062E-08	-1.010E-07
-2.655E-07	-5.525E-07	-1.006E-06	-1.676E-06	-2.625E-06	-3.948E-06	-5.799E-06
-8.337E-06	-1.165E-05	-1.583E-05	-2.125E-05	-2.946E-05	-3.231E-05	-6.493E-05
-1.802E-04	8.506E-05	1.426E-04	3.516E-05	-1.354E-05	-3.484E-06	8.016E-07
1.500E-06	1.084E-06	7.278E-07	-9.020E-08	-8.895E-08	1.199E-07	-1.003E-07
6.719E-08	-3.563E-08	1.142E-08	2.136E-09	0.000E+00		
6.942E-19	-1.365E-17	-1.465E-17	-6.029E-17	-3.672E-18	-9.539E-17	1.829E-16
2.678E-17	1.258E-15	-2.001E-15	1.262E-14	-5.165E-15	5.064E-14	-1.138E-13
-9.122E-13	-1.949E-12	-6.832E-12	-1.759E-11	-1.219E-11	9.863E-11	4.804E-10
1.232E-09	2.059E-09	1.795E-09	-1.874E-09	-1.226E-08	-3.315E-08	-6.786E-08
-1.183E-07	-1.868E-07	-2.758E-07	-3.907E-07	-5.444E-07	-7.612E-07	-1.044E-06
-1.363E-06	-1.718E-06	-2.232E-06	-3.384E-06	-1.168E-06	-1.346E-05	-4.772E-05
1.100E-04	2.368E-05	-4.481E-05	-2.008E-05	4.164E-06	1.773E-06	8.573E-07
-1.662E-07	-8.826E-08	-1.448E-07	1.132E-10	2.360E-08	-2.105E-08	1.387E-08
-7.494E-09	3.032E-09	-4.876E-10	-1.271E-10			

- The ξ^s components, on the upper half of the table, are on the full mesh, the η components, on the lower half, are on the half-mesh radial grid.

- In unit 6, the table of stability modes is reconstructed where Fourier components of ξ^s, η whose maximum absolute value exceed exceed XPLO are identified with unity.

```
              LHD-n=1
C
C        MM  NMIN  NMAX   MMS NSMIN NSMAX NPROCS INSOL
         30    -3     5    36    -1    21     1     0
c
C     TABLE OF FOURIER COEFFIENTS FOR BOOZER COORDINATES
C     EQUILIBRIUM SETTINGS ARE COMPUTED FROM FIT/VMEC
C
C M=  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6  N
      0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 -3
      0 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 -2
      0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 -1
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0  0
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0  1
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0  2
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0  3
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0  4
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0  5
C
      LLAMPR      LVMTPR      LMETPR      LFOUPR
           0           0           0           0
      LLHSPR      LRHSPR      LEIGPR      LPRESS
           0           0           1           1
      LXYZPR      LIOTPL      LDW2PL      LEFCPL
           0           1           1           1
      LCURRF      LMESHP      LMESHV      LITERS
           1           1           3           1
      LXYZPL      LEFPLS      LEQVPL      LPRESS
           1           1           0           2
C
C    PVAC         PARFAC      QONAX         QN          DSVAC       QVAC    NOWALL
  1.0001e-00  0.0000e-00  0.6500e-00  0.0000e-00  1.0000e-00  1.0001e-00       1
C
C    AWALL        EWALL       DWALL       GWALL       DRWAL       DZWAL   NPWALL
  3.0000e-00  2.0000e-00 -9.0000e-01  3.9000e-00  0.0000e-01  0.0000e-00       0
C
C    RPLMIN       XPLO        DJP         WCT         CURFAC
  1.0000e-05  1.0000e-06  1.0000e-02  0.0000e-02  1.0000e-00
C
C     ANISOTROPIC PRESSURE MODEL APPLIED :                    MODELK =      1
!
C     NUMBER OF EQUILIBRIUM FIELD PERIODS PER STABILITY PERIOD: NSTA =     10
C
C     TABLE OF FOURIER COEFFIENTS FOR STABILITY DISPLACEMENTS
C
C M=  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3  N
      0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 -1
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  0
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  2
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  3
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  4
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  5
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  6
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  7
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  8
      1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  9
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 10
      1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 11
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 12
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 13
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 14
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 15
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 16
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 17
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 18
      1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 19
      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 20
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 21
C
C   NEV NITMAX         AL0     EPSPAM IGREEN MPINIT
      1    500  -4.50 E-04  1.0  E-04      0       0
```

Figure 1: A TERPSICHORE input file. The stability mode table has been limited here to $m = 43$ for display purposes. Actual calculations require the table to reach $m = 55$.