

# Index of MARCS Single Precision Reals

## CIAH2H

```
75      :: propac=1.e-30
```

## CIAH2H2

```
75      :: propac=1.e-30
```

## CIAH2HE

```
75      :: propac=1.e-30
```

## CIAHHE

```
75      :: propac=1.e-30
```

## ARCHIV

```
156      :: cc          print 215, k, log10(max(1.e-30, xmettryck(k,1))),  
186      :: C   10 PRESMP(I)=AMAX1(PRESMO(I), 1.E-298)  
187      :: 10 PRESMP(I)=MAX(PRESMO(I), 1.E-30)  
217      :: cc          EMU=(1.38*RO*T(K))/(1.67E-8*PG)  
218      :: EMU=(1.380658*RO*T(K))/(1.660540e-8*PG)
```

## BPL

```
13      :: cplank=1.e-15
```

## CHECKPART

```
33  :: if (abs(1.-(partition(nt)/sngl(qmol(index))))>.1.e-4) then
```

## DE TABS

```

179 :: rhokt=rho*1.38066e-16*t(ntp)
180 :: kt=1.38066e-16*t(ntp)
183 :: ***      hnh=presneutral(ntp,1)/(rho*1.38066e-16*t(ntp))
190 :: * in case you would wonder about this 1.e-18 factor for H-
191 :: fakt(1)=1.e-18*partryck(ntp,1)/rhokt
192 :: fakt(19)=pe(ntp)*presneutral(ntp,1)/rhokt*1.e-26
195 :: xfakh=2.0898e-26*presneutral(ntp,1)/(rhokt*part(1,1))
219 :: fakt(20)=(presneutral(ntp,1)/rhokt*1.e-25)*
220 :: &      (presneutral(ntp,1)/kt*1.e-25)
222 :: fakt(21)=(presneutral(ntp,1)/rhokt*1.e-20)*
223 :: &      (presion(ntp,1)/kt*1.e-20)
230 :: fakt(24)=(pe(ntp)/kt)*(presion(ntp,2)/rhokt)*1.e-20*1.e-20
232 :: fakt(25)=pe(ntp)*presneutral(ntp,2)/rhokt*1.e-26
238 :: fakt(28)=(pe(ntp)/kt)*(presion(ntp,6)/rhokt)*1.e-20*1.e-20
240 :: fakt(29)=(pe(ntp)/kt)*(presion2(ntp,6)/rhokt)*1.e-20*1.e-20
242 :: fakt(30)=pe(ntp)*presneutral(ntp,6)/rhokt*1.e-27
248 :: fakt(33)=pe(ntp)*presneutral(ntp,7)/rhokt*1.e-27
254 :: fakt(36)=pe(ntp)*presneutral(ntp,8)/rhokt*1.e-26
256 :: fakt(37)=pe(ntp)*partryck(ntp,7)/rhokt*1.e-26
258 :: fakt(38)=pe(ntp)*partryck(ntp,4)/rhokt*1.e-26
281 :: fakt(48)=partryck(ntp,6)*13.02/6.023e23/rhokt
283 :: fakt(49)=partryck(ntp,5)*17.01/6.023e23/rhokt
286 :: fakt(50)=(pe(ntp)/kt)*(presion(ntp,12)/rhokt)*1.e-20*1.e-20
288 :: fakt(51)=(pe(ntp)/kt)*(presion(ntp,14)/rhokt)*1.e-20*1.e-20
302 :: fakt(52)=(pe(ntp)/kt)*(presmetion/rhokt)*1.e-20*1.e-20
306 :: ELS(NTP)=4.8206E-9*PE(NTP)/(T(NTP)*RO)
311 :: cc      ph2=ph2*1.38e-16*0.987e-6*273.
313 :: c      phtva(ntp)=(partryck(ntp,2)*273./t(ntp)*0.987e-6)*
314 :: c      &      (partryck(ntp,2)*273./t(ntp)*0.987e-6)/rho
315 :: phtva(ntp)=(partryck(ntp,2)/t(ntp)*2.6945e-04)**2/rho
317 :: cc      PHEL(NTP)=PHEL(NTP)*1.38E-16*0.987E-6*273.
319 :: c      phel(ntp)=(presneutral(ntp,2)*273./t(ntp)*0.987e-6)*
320 :: c      &      (partryck(ntp,2)*273./t(ntp)*0.987e-6)/rho
321 :: phel(ntp)=(presneutral(ntp,2)/t(ntp)*2.6945e-04)*
322 :: ,      (partryck(ntp,2)/t(ntp)*2.6945e-04)/rho
323 :: ph2h(ntp)=(presneutral(ntp,1)/t(ntp)*2.6945e-04)*
324 :: ,      (partryck(ntp,2)/t(ntp)*2.6945e-04)/rho
325 :: phhe(ntp)=(presneutral(ntp,1)/t(ntp)*2.6945e-04)*
326 :: ,      (presneutral(ntp,2)/t(ntp)*2.6945e-04)/rho
453 :: OMEGA=1./XLA(JP)*1.E+8
502 :: RAYH=XRAY2*XRAY2*(5.799E-13+XRAY2*(1.422E-6+XRAY2*2.784))*
511 :: RAYHe=0.66520e-24*4.*(500./xla(jp))**4*heray(ntp)
514 :: RAYH2=XRAY2*XRAY2*(8.14E-13+XRAY2*(1.28E-6+XRAY2*1.61))*H2RAY(NTP)

```

## DIE\_PE

```

69      :: ECONST=4.342945E-1
72      :: cc          epsdie=1.e30
90      :: DHH=((0.1196952E-02*T-0.2125713E-01)*T+0.1545253E+00)*T
91      :: &          -0.5161452E+01)*T+0.1277356E+02
384     :: epsf=1.e-10
554     :: errx=1.e10
580     :: alamin=1.e-3

```

## DIEPELU

```

68      :: ECONST=4.342945E-1
71      :: cc          epsdie=1.e30
87      :: DHH=((0.1196952E-02*T-0.2125713E-01)*T+0.1545253E+00)*T
88      :: &          -0.5161452E+01)*T+0.1277356E+02
324     :: epsf=1.e-10
492     :: errx=1.e10
518     :: alamin=1.e-3

```

## EQMOL\_PE

```

99      :: real eh2,eh2p,ehm,ehj,eh2o,eoh,ech,eco,ecn,ec2,en2,eo2,eno,enh
131     :: ECONST=4.342945E-1
132     :: AVO=0.602217E+24
136     :: atmass(99)=5.4858e-4
141     :: eps=1.e-4
319     :: ndensity=pg/1.38066e-16/tem
320     :: molweight=(molweight+pe*atmass(99))/1.38066e-16/tem
493     :: rho=rho*1.2123e-8/tt
494     :: * 1.2123e-8 == mH/k = amu*1.00797/k
650     :: c          EH=EH2+EH2P+EHM+EHJ+EH2O+EOH+ECH+ECO+ECN+EC2+EN2+EO2+ENO+ENH

```

## EQMOLPELU

```

99      :: real eh2,eh2p,ehm,ehj,eh2o,eoh,ech,eco,ecn,ec2,en2,eo2,eno,enh
131     :: ECONST=4.342945E-1
132     :: AVO=0.602217E+24
136     :: atmass(99)=5.4858e-4
142     :: eps=1.e-4
322     :: ndensity=pg/1.38066e-16/tem
323     :: molweight=(molweight+pe*atmass(99))/1.38066e-16/tem
497     :: rho=rho*1.2123e-8/tt
498     :: * 1.2123e-8 == mH/k = amu*1.00797/k
653     :: c          EH=EH2+EH2P+EHM+EHJ+EH2O+EOH+ECH+ECO+ECN+EC2+EN2+EO2+ENO+ENH

```

## GAUSI

```

39      :: IF(ABS(FLK-FK)-1.E-7)2,1,1

```

## HLINOPBPZ

```

231     :: 1 0.000E+00, 4.696E+08, 9.980E+07, 3.017E+07, 1.155E+07, 5.189E+06,
232     :: 2 2.616E+06, 1.437E+06, 8.444E+05, 5.234E+05, 3.389E+05, 2.275E+05,
233     :: 3 1.575E+05, 1.120E+05, 8.142E+04, 6.040E+04, 4.560E+04, 3.496E+04,
234     :: 4 2.719E+04, 2.141E+04, 1.711E+04, 1.377E+04, 1.119E+04, 9.166E+03,
235     :: 5 7.572E+03, 6.341E+03, 5.338E+03, 4.523E+03, 3.854E+03, 3.302E+03,
236     :: 6 2.844E+03, 2.460E+03, 2.138E+03, 1.866E+03, 1.635E+03, 1.438E+03,
237     :: 7 1.269E+03, 1.124E+03, 9.983E+02, 8.894E+02, 7.947E+02, 7.120E+02,
238     :: 8 6.396E+02, 5.759E+02, 5.198E+02, 4.703E+02, 4.263E+02, 3.873E+02,
239     :: 9 3.526E+02, 3.215E+02, 2.938E+02, 2.689E+02, 2.465E+02, 2.264E+02,
240     :: A 2.082E+02, 1.918E+02, 1.769E+02, 1.634E+02, 1.512E+02, 1.400E+02,
241     :: 1 1.298E+02, 1.206E+02, 1.121E+02, 1.043E+02, 9.720E+01, 9.066E+01,
242     :: 2 8.465E+01, 7.912E+01, 7.403E+01, 6.933E+01, 6.498E+01, 6.097E+01,
243     :: 3 5.725E+01, 5.381E+01, 5.061E+01, 4.765E+01, 4.489E+01, 4.232E+01,
244     :: 4 3.994E+01, 3.771E+01, 3.563E+01, 3.369E+01, 3.188E+01, 3.019E+01,
245     :: 5 2.860E+01, 2.712E+01, 2.572E+01, 2.442E+01, 2.319E+01, 2.204E+01,
246     :: 6 2.096E+01, 1.994E+01, 1.898E+01, 1.808E+01, 1.722E+01, 1.642E+01,
247     :: 7 1.566E+01, 1.495E+01, 1.427E+01, 1.363E+01/
252     :: 1 0.000E+00, 6.265E+08, 1.897E+08, 8.126E+07, 4.203E+07, 2.450E+07,
253     :: 2 1.236E+07, 8.249E+06, 5.782E+06, 4.208E+06, 3.158E+06, 2.430E+06,
254     :: 3 1.910E+06, 1.567E+06, 1.274E+06, 1.050E+06, 8.752E+05, 7.373E+05,
255     :: 4 6.269E+05, 5.375E+05, 4.643E+05, 4.038E+05, 3.534E+05, 3.111E+05,
256     :: 5 2.752E+05, 2.447E+05, 2.185E+05, 1.959E+05, 1.763E+05, 1.593E+05,
257     :: 6 1.443E+05, 1.312E+05, 1.197E+05, 1.094E+05, 1.003E+05, 9.216E+04,
258     :: 7 8.489E+04, 7.836E+04, 7.249E+04, 6.719E+04, 6.239E+04, 5.804E+04,
259     :: 8 5.408E+04, 5.048E+04, 4.719E+04, 4.418E+04, 4.142E+04, 3.888E+04,
260     :: 9 3.655E+04, 3.440E+04, 3.242E+04, 3.058E+04, 2.888E+04, 2.731E+04,
261     :: A 2.585E+04, 2.449E+04, 2.322E+04, 2.204E+04, 2.094E+04, 1.991E+04,

```

```

262  :: 1 1.894E+04, 1.804E+04, 1.720E+04, 1.640E+04, 1.566E+04, 1.496E+04,
263  :: 2 1.430E+04, 1.368E+04, 1.309E+04, 1.254E+04, 1.201E+04, 1.152E+04,
264  :: 3 1.105E+04, 1.061E+04, 1.019E+04, 9.796E+03, 9.419E+03, 9.061E+03,
265  :: 4 8.721E+03, 8.398E+03, 8.091E+03, 7.799E+03, 7.520E+03, 7.255E+03,
266  :: 5 7.002E+03, 6.760E+03, 6.530E+03, 6.310E+03, 6.100E+03, 5.898E+03,
267  :: 6 5.706E+03, 5.522E+03, 5.346E+03, 5.177E+03, 5.015E+03, 4.860E+03,
268  :: 7 4.711E+03, 4.569E+03, 4.432E+03, 4.300E+03/
349  :: PARAMETER (CLIGHT = 2.99792458E18)
350  :: PARAMETER (CLIGHTCM = 2.99792458E10)
365  :: DATA SIGMA /3.304E-18, 6.497E-18, 1.178E-17/
373  :: FO = 1.25E-9*XNE**0.66667 ! Holtsmark normal field strength
428  :: RESONT = RESONT * 2.07E-24/GNM
429  :: VDW = 4.45E-26/GNM*(XM2*(7.*XM2+5.))**0.4
430  :: STARK = 1.6678E-18*FREQNM*XKNM
735  :: DATA Y1WTM/1.E18, 1.E17, 1.E16, 1.E14/
738  :: PARAMETER (CLIGHT = 2.9979258E18)
740  :: PARAMETER (H = 6.62618E-27) !Planck in cgs
741  :: PARAMETER (K = 1.38066E-16) !Boltzmann in cgs
758  :: FO = XNE16**4*1.25E-9 ! Holtsmark normal field strength
762  :: C2D = FO**2/5.96E-23/XNE
763  :: GCON1 = 0.2+0.09*SQRT(T4)/(1.+XNE/1.E13)
764  :: GCON2 = 0.2/(1.+XNE/1.E15)
810  :: Y1WHT = 1.E14
812  :: Y1WHT = 1.E13
837  :: IF ((Y2.LE.1.E-4).AND.(Y1.LE.1.E-5)) THEN
842  :: IF (GAM.LE.1.E-20) GAM = 0.

```

## HLINOPMODI

```

228  :: 1 0.000E+00, 4.696E+08, 9.980E+07, 3.017E+07, 1.155E+07, 5.189E+06,
229  :: 2 2.616E+06, 1.437E+06, 8.444E+05, 5.234E+05, 3.389E+05, 2.275E+05,
230  :: 3 1.575E+05, 1.120E+05, 8.142E+04, 6.040E+04, 4.560E+04, 3.496E+04,
231  :: 4 2.719E+04, 2.141E+04, 1.711E+04, 1.377E+04, 1.119E+04, 9.166E+03,
232  :: 5 7.572E+03, 6.341E+03, 5.338E+03, 4.523E+03, 3.854E+03, 3.302E+03,
233  :: 6 2.844E+03, 2.460E+03, 2.138E+03, 1.866E+03, 1.635E+03, 1.438E+03,
234  :: 7 1.269E+03, 1.124E+03, 9.983E+02, 8.894E+02, 7.947E+02, 7.120E+02,
235  :: 8 6.396E+02, 5.759E+02, 5.198E+02, 4.703E+02, 4.263E+02, 3.873E+02,
236  :: 9 3.526E+02, 3.215E+02, 2.938E+02, 2.689E+02, 2.465E+02, 2.264E+02,
237  :: A 2.082E+02, 1.918E+02, 1.769E+02, 1.634E+02, 1.512E+02, 1.400E+02,
238  :: 1 1.298E+02, 1.206E+02, 1.121E+02, 1.043E+02, 9.720E+01, 9.066E+01,
239  :: 2 8.465E+01, 7.912E+01, 7.403E+01, 6.933E+01, 6.498E+01, 6.097E+01,
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241  :: 4 3.994E+01, 3.771E+01, 3.563E+01, 3.369E+01, 3.188E+01, 3.019E+01,
242  :: 5 2.860E+01, 2.712E+01, 2.572E+01, 2.442E+01, 2.319E+01, 2.204E+01,
243  :: 6 2.096E+01, 1.994E+01, 1.898E+01, 1.808E+01, 1.722E+01, 1.642E+01,
244  :: 7 1.566E+01, 1.495E+01, 1.427E+01, 1.363E+01/

```

```

249  :: 1 0.000E+00, 6.265E+08, 1.897E+08, 8.126E+07, 4.203E+07, 2.450E+07,
250  :: 2 1.236E+07, 8.249E+06, 5.782E+06, 4.208E+06, 3.158E+06, 2.430E+06,
251  :: 3 1.910E+06, 1.567E+06, 1.274E+06, 1.050E+06, 8.752E+05, 7.373E+05,
252  :: 4 6.269E+05, 5.375E+05, 4.643E+05, 4.038E+05, 3.534E+05, 3.111E+05,
253  :: 5 2.752E+05, 2.447E+05, 2.185E+05, 1.959E+05, 1.763E+05, 1.593E+05,
254  :: 6 1.443E+05, 1.312E+05, 1.197E+05, 1.094E+05, 1.003E+05, 9.216E+04,
255  :: 7 8.489E+04, 7.836E+04, 7.249E+04, 6.719E+04, 6.239E+04, 5.804E+04,
256  :: 8 5.408E+04, 5.048E+04, 4.719E+04, 4.418E+04, 4.142E+04, 3.888E+04,
257  :: 9 3.655E+04, 3.440E+04, 3.242E+04, 3.058E+04, 2.888E+04, 2.731E+04,
258  :: A 2.585E+04, 2.449E+04, 2.322E+04, 2.204E+04, 2.094E+04, 1.991E+04,
259  :: 1 1.894E+04, 1.804E+04, 1.720E+04, 1.640E+04, 1.566E+04, 1.496E+04,
260  :: 2 1.430E+04, 1.368E+04, 1.309E+04, 1.254E+04, 1.201E+04, 1.152E+04,
261  :: 3 1.105E+04, 1.061E+04, 1.019E+04, 9.796E+03, 9.419E+03, 9.061E+03,
262  :: 4 8.721E+03, 8.398E+03, 8.091E+03, 7.799E+03, 7.520E+03, 7.255E+03,
263  :: 5 7.002E+03, 6.760E+03, 6.530E+03, 6.310E+03, 6.100E+03, 5.898E+03,
264  :: 6 5.706E+03, 5.522E+03, 5.346E+03, 5.177E+03, 5.015E+03, 4.860E+03,
265  :: 7 4.711E+03, 4.569E+03, 4.432E+03, 4.300E+03/
346  :: PARAMETER (CLIGHT = 2.9979258E18)
347  :: PARAMETER (CLIGHTCM = 2.99792458E10)
361  :: DATA SIGMA /3.304E-18, 6.497E-18, 1.178E-17/
369  :: FO = 1.25E-9*XNE**0.66667 ! Holtsmark normal field strength
424  :: RESONT = RESONT * 2.07E-24/GNM
425  :: VDW = 4.45E-26/GNM*(XM2*(7.*XM2+5.))**0.4
426  :: STARK = 1.6678E-18*FREQNM*XKNM
716  :: DATA Y1WTM/1.E18, 1.E17, 1.E16, 1.E14/
719  :: PARAMETER (CLIGHT = 2.9979258E18)
721  :: PARAMETER (H = 6.62618E-27) !Planck in cgs
722  :: PARAMETER (K = 1.38066E-16) !Boltzmann in cgs
731  :: FO = XNE16**4*1.25E-9 ! Holtsmark normal field strength
735  :: C2D = FO**2/5.96E-23/XNE
736  :: GCON1 = 0.2+0.09*SQR(T4)/(1.+XNE/1.E13)
737  :: GCON2 = 0.2/(1.+XNE/1.E15)
783  :: Y1WHT = 1.E14
785  :: Y1WHT = 1.E13
810  :: IF ((Y2.LE.1.E-4).AND.(Y1.LE.1.E-5)) THEN
815  :: IF (GAM.LE.1.E-20) GAM = 0.

```

## HYDROPACMODI

```

39  :: data  h1bfgc/1.0711223,  -3.0033216e-04,
40  :: ;                1.0648009,  -5.1846584e-05,
41  :: ;                1.0478152,  -1.7104666e-05,
42  :: ;                1.0443061,  -8.2075951e-06,
43  :: ;                1.0421281,  -4.6750806e-06,
44  :: ;                1.0402398,  -2.9468910e-06,
45  :: ;                1.0347312,  -1.9145532e-06,
46  :: ;                1.0335221,  -1.3661146e-06,
47  :: ;                1.0335879,  -1.0323393e-06,
48  :: ;                1.0282216,  -7.4292798e-07,
49  :: ;                1.0337342,  -6.4224310e-07,
50  :: ;                1.0325113,  -5.1576699e-07,
51  :: ;                1.0321166,  -4.2484186e-07,
52  :: ;                1.0324288,  -3.6090637e-07,
53  :: ;                1.0329178,  -3.0957602e-07/
80  :: ne(k)=pe(k)/(t(k)*1.38066e-16)
81  :: nh1(k)=presneutral(k,1)/(t(k)*1.38066e-16)
82  :: nhe1(k)=presneutral(k,2)/(t(k)*1.38066e-16)
85  :: hckt(k)=2.99792458e10*6.626075e-27/1.380658e-16*1.e8/t(k)
86  :: dopple(k)=sqrt( xit**2 * 1.e10 +
87  :: &                2.*1.380658e-16*t(k)/1.6738e-24) /
88  :: &                2.99792458e10
110 :: alpha = 1.044e-26 * h1bfg * xlb(l)**3 / (i**5)
119 :: if(contrib/osopx(k,l) .le. 1.e-4) goto 5
155 :: diffp=1.e30
225 :: if (contrib/osopx(k,l).le.1.e-4) goto 11
253 :: if (contrib/osopx(k,l).le.1.e-4) goto 12
285 :: data h/6.626e-27/, c/2.997925e10/, ionH/2.17991e-11/
289 :: x=1./(float(ni)**2) - h*c/(wave(ij)*1.e-8*ionH)
324 :: DATA IONH/2.17991E-11/
325 :: DATA A0  /5.29177E-9/
326 :: DATA E   /4.803207E-10/

```

## INABS

```

170  :: XKAP(JJ,K)=1.E-37
216  :: if (ABS(1.-DIFF/DELT(KOMP,J)).ge.1.E-4) then
447  :: ABKOF(LL)=1.E-37
520  :: *I3,' SET ',I2,' XTET NR ',I2,' ABKOF PUT=1.E-37   ***INABS***')

```

## INJON



```
408  :: EEV=1.602095E-12
409  :: XMH=1.67339E-24
410  :: XKBOL=1.38066e-16
```

## JON

```
76   :: data pep/-1.e10/
85   :: if ((abs((t-tp)/t).lt.1.e-8).and.(abs((pe-pep)/pe).lt.1.e-8))
100  :: IF(ABS((T-TP)/T).LT.1.E-8)GO TO 53
128  :: 53 DXI=4.98E-4*TETA*SQRT(PE)
291  :: cc      if ((abs((t-tp)/t).lt.3.e-2).and.(abs((pe-pep)/pe).lt.0.5))
293  :: if ((abs((t-tp)/t).lt.1.e-1).and.(abs(log10(pe/pep)).lt.1.0))
301  :: * if first call, pep=-1.e10, so this scaling of pgin will be skipped
```

## MOLFYS

```
13   :: DATA A1/12.739,-5.1172,1.2572E-1,-1.4149E-2,6.3021E-4/,
33   :: DEH2nodis=(B1(5)*TE(5)+DEH2)*8.617E-5*T
34   :: DEH2Pnodis=(B2(5)*TE(5)+DEH2P)*8.617E-5*T
```

## MOMEQCHECK

```
19   :: if ((abs((pgjon(k)-pgcheck(k))/pgcheck(k)).gt.1.e-3))
```

## OSLISTMO

```
225  :: PTIO(I)=AMAX1(PTIO(I),1.E-30)
508  :: +'flux (= sigma*Teff**4)',1PE11.3,'   erg/s/cm**2'/' Acceleration',
```

## OSMAINB

```

42  :: !DATA TSUN,GSUN,RSUN/5777.,4.44,6.9598E10/
75  :: c      HPLNCK=6.62608E-27
76  :: c      BOLTZK=1.38066e-16
77  :: c      CLIGHT=2.997925E10
78  :: c      ECHARG=4.80298E-10
80  :: c stefan changed 021106 (fron 5.675e-5 )
81  :: c      STEFAN=5.67040E-5
194 :: IF (XMAX .EQ. 0.) XMAX = 1.E10

```

## OSMET\_35

```

61  :: xiturb(1)=xiturb(1)*1.e-5
63  :: if (abs(xiturb(1)-xit).gt.1.e-6) then

```

## OSMETSEPARATE35

```

37  :: xiturb(1)=xiturb(1)*1.e-5
39  :: if (abs(xiturb(1)-xit).gt.1.e-6) then

```

## OSOPAC\_35

```

133  :: *      data epsilon/8.e-5/
266  :: c      hydroconst(k)=presneutral(k,1)/(rosav(k)*t(k)*1.38066e-16)
706  :: xiturb(nxi)=xiturb(nxi)*1.e-5
915  :: *      TEST GREY MODEL WITH KAPPA=1.e-2 cm2/g
921  :: ***      osopx(K,lambda)=1.e-2

```

## OSSOLVE

```

556  :: if (info) write(20,'(1x,i3,4(1pe12.3))')
653  :: if (info.and.j.eq.100.and.k.eq.1) write(20,'(1x,7(1pe10.2))')
677  :: if (info.and.j.eq.100) write(20,'(1x,7(1pe10.2))')
1096 :: x(k)=1.e-6
1116 :: x(k)=1.e-6
1136 :: x(k)=1.e-6
1380 :: PG1PE=0.
1750 :: if(abs((rr(k)-rrprev(k))/rr(k)).gt.3.e-4) then
2251 :: * F7.0,4F5.1,1PE10.3,2(0PF6.1),2I4,F6.3)
2263 :: & ' ERGS/CM**2/S ;nominal

```

# PEMAKE

```
9      :: c KE
10     :: DATA IT,N,EPS/0,20,1.E-2/
```

# SCALE

```
53     :: radius=6.9598e10 * 10.**(relrad)
```

# SETDIS

```
20     :: xlinup=1.e30
```

# STARTM

```
62     :: DT1=1.E10
80     :: PPE(1)=1.E-3
88     :: c????   if(teff.lt.4000.) ross(1)=1.e-2
```

# TRANFR

```
209    :: ysurf(i)=1.e-30
382    :: & /'0BPLAN=',10(/10E12.4)/'0RR=',10(/10E12.4)/'0RHO=',10(/10E12.4)
383    :: & /'0ROSS=',10(/10E12.4)/'0SOURCE=',10(/10E12.4)
384    :: & /'0YSURF,PFEAU='/(10E12.4))
```

# TRYCK

```
53     :: DATA EPS,RELT,RELPE,PEDEF/1.E-3,1.E-3,1.E-3,1./
225    :: DATA EPS,RELT,RELPE,PEDEF/1.E-3,1.E-3,1.E-3,1./
```