

Here is a listing that gives the variable names and brief descriptions for a typical input model to WDXDL. Input to WDEC# is slightly different. This model is 0.6Mo, has $M_{\text{He}} = 10^{-4}M^*$, and $M_{\text{H}} = 10^{-12}M^*$. I changed the relative spacing between inputs in order to center them under the appropriate variable name. In other words, don't try to run this file; get a real model file and go for it.

Paul Bradley

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c6600t1  <--- Name for summary output.
c6600t6  <--- Name for envelope parameter file.
c6600t9  <--- Name for model summaries (create new models from these).
c6600.out <--- Copy of screen output.
c6600.log <--- Log file with extra info that can tell you what's going on.
c6600t40 <--- Matt's output files for pretty pictures.
c6600t50 <--- Output models for pulsation. Cut into individual models and
          feed to prpwxdl (for example.)

thresh delg ixswch iprep idiffus
3      .15    3      1      1
aml mls
2.    1.
amhyhe amheca alfa(1) (2) (3) (4)
1.0e-12 1.e-4    5    -1.25  3. -3.
ip5 ip6 ip7 nmod nitel m md nu ip8 ip1 irdold ip40
-1 -1  1  7  15  1  1  1 -1 100  1  0
ams(i) corat(i) (up to 10 rows possible now)
  0.      1.      (row1)
  1.      1.      (row2)

      sm              rat1      c      xh      yh      yyh  khomo time
                                |<- homology transfrom info ->|
0.33076786e 02      0.7d 01  0.100 0.01773  0.0  0.2  0  0.00
  ce  cif      sin  sout  smd  grid1  grid2
  2.0 21.145  -0.1 0.001 0.05  0.2  3.0
dg      g      sg      stpms  f  tmax1  tmax2  modnr  g3
13.700 15.126625 0.3575266E+09-0.200E-03 0.70 0.10E-03 0.10E-02 27 -1.158688
      speak      rpeak1  vpeak1      rlast  vexp1      egrav1
-0.10000000E+01 8.326231-0.91686321E-10 8.919780-0.73915832E-09-0.99831874E+50
      bgrav      w      g1
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-1.919    0.000 15.093963
      ks      ls      ms      kstart
|<- triangle fitting values + start cond ->|
      -1      -1      1      0
      rm      bm
8.939605 -2.317450
      u(1,j)      v(1,j)      ww(1,j)      u(2,j)      v(2,j)      ww(2,j)
0.1885262D+020.7043882D+010.1885300D+020.7052449D+010.1882853D+020.7042913D+01
-.2325000D+010.8918291D+01-.2300000D+010.8918176D+01-.2325000D+010.8924330D+01
-.2325000D+010.8938000D+01-.2300000D+010.8938000D+01-.2325000D+010.8944000D+01
      jb
      165

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EXPLANATION of VARIABLE NAMES: (stellar model follows)

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thresh      - If below this temperature, print out a warning flag when off the
              EOS table.
deldg       - If model doesn't converge after nitel tries, increase time step by
              this amount. (Shows up during crystallization and at hot end when
              trying to relax a starter model.)
ixswch      -
iprep       - If 1, print out models to tape 50. If 0, don't.
idiffus     - If 1, use diffusion exponents (see alfa). If 0, use discontinuity.
aml         - Mixing-length pressure scale height ratio.
mls         - Mixing length theory version. 0 is Bohm-Vitense. 1 is Bohm&Cassinelli
              The latter is more efficient.
amhyhe      - Mass of hydrogen layer in stellar mass units.
amheca      - Mass of helium layer in stellar mass units.
alfa(1)     - Diffusion exponent for H-rich part of H/He transition zone.
alfa(2)     - Diffusion exponent for He-rich part of H/He transition zone.
alfa(3)     - Diffusion exponent for He-rich part of He/C transition zone.
alfa(4)     - Diffusion exponent for C-rich part of He/C transition zone.
ip5         - >0 Print sk(i),dr2,db2,dp2,dt2 for all shells in subroutine END.
              =0 Print the above for the first iteration only.
              <0 Don't print the above.
ip6         - >0 Print structure of model in subroutine END.
              =0 Print the above for the first iteration only.
              <0 Don't print the above.
NOTE:       - If BOTH IP5 and IP6 are set to 1, the program stops after 1 iteration

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for diagnostic purposes.

ip7 - >0 Writes out the structure of the model for every MD models in a sequence to the model file.
 - <=0 Do not print the output model.

nmod - maximum number of models to run.

nite1 - maximum number of iterations per model. (20 is a typical number).

m - Controls output of models to tape9.

md - Number of models between output to tape9.

nu - <0 Don't include neutrino losses. (WARNING: If model has a prior history, this value will cause code to crash).
 - =1 Use neutrino rates of Beaudet, Petrosian, and Salpeter (1967).
 - =2 Use Plasmon, Photo-, and Pair neutrino rates of Munkata etal (1985).
 - =3 Use Plasmon, Photo-, Pair, Bremsstrahlung rates summarized by Itoh etal (1989). To include latest recombination rates in Itoh etal preprint of 1993.

ip8 - >=0 Forces call to subroutine ARLINE in END. (set to -1 normally.)

ip1 - If the model number is an integer multiple of ip1, prints a shell summary for each shell in WRITE2.

irdold - Tells program how many shells besides the first are in AMS and CORAT.

ip40 - =0 skip over writeout to tape40. Otherwise, write it out.

ams(i) - Fractional mass point for C/O abundance profile.

corat(i) - Carbon mass fraction at that point.

sm - log mass of star in cgs units. (Don't mess with input format!)

rat1 - a ratio not used by the code anymore.

c - maximum step size in mass.

xh - Pre-specified homology transformation coefficient.

yh - Pre-specified homology transformation coefficient.

yyh - Pre-specified homology transformation coefficient.

khomo - <=0 for no homology transformation; >0 gives you a transformation.

time - coarse model stepsize info.

ce - is Mu(electron), which is 2 here.

cif - is mean molecular weight for the C-burn mixture of Kutter & Savedoff. Set to 21.145. No longer in use.

sin - Limit on step size in mass.

smid - Mass step adjustment parameter.

sout - Limit on step size in mass.
 grid1 - Mass step adjustment parameter.
 grid2 - Mass step adjustment parameter.
 NOTE: - sin, smid, sout, grid1, and grid2 only occur at one place in CALC.
 Present values of sin and sout do not allow mass step adjustment.
 dg - Nominal size time step in log(seconds).
 g - Actual previous time step in log(seconds).
 sg - Age of the model in years.
 stpms - Stop mass at the core envelope boundary in log(m/M*) units.
 f - Undercorrection factor for model iterations.
 tmax1 - Max. size of temperature correction for convergence.
 tmax2 - Temperature size correction to determine need for coarse or very
 coarse approximation. (The program starts over trying to converge
 a model in this case.)
 modnr - Model number of starter model.
 g3 - Time step adjustment. (There is a formula for this.)
 speak - Formerly the point where maximum expansion occurred as model lost mass.
 Now set to 0.1 arbitrarily.
 rpeak1 - Radius of shell where max. expansion occurs. (log r in cm.)
 vpeak1 - Velocity of shell where max. expansion occurs. (cgs units)
 rlast - Radius of shell at top of core. (log r in cm.)
 vexp1 - Expansion velocity of shell at top of core. (cgs units)
 egrav1 - Grav. potential energy consumed (+) or liberated (-). (cgs units)
 bgrav - Grav. potential luminosity (log solar units)
 w - =0 for no carbon burning, include it if w=1.
 g1 - some sort of time step.
 ks,ls,ms - Triangle parity values for use in fitting static envelope to the
 evolving core. (Method of triangles from Baker & Kippenhahn.
 kstart - =0 Use envelope solution specified from previous model to start with.
 =1 Cold start. Compute three new envelopes fresh.
 rm - Total stellar radius (log cm).
 bm - log L*/Lsun.

STELLAR MODEL VALUES (ARRAY Y(i,j))

log(m/M*)	log(r)	l/Lsun	log(P)	log(T)	s (entropy)	xc	xo
-0.46854203E+01	7.073129	9.9484E-08	23.255346	7.208996	0.6095144E+08	1.0000000	0.000000

-0.45854203E+01	7.106465	1.2544E-07	23.255247	7.208995	0.6095289E+081	.0000000	.000000
-0.44854203E+01	7.139805	1.5810E-07	23.255132	7.208994	0.6095458E+081	.0000000	.000000
-0.43854203E+01	7.173149	1.9920E-07	23.254997	7.208993	0.6095654E+081	.0000000	.000000
-0.42854203E+01	7.206498	2.5092E-07	23.254841	7.208991	0.6095883E+081	.0000000	.000000
-0.41854203E+01	7.239851	3.1600E-07	23.254658	7.208990	0.6096150E+081	.0000000	.000000
-0.40854203E+01	7.273209	3.9785E-07	23.254445	7.208988	0.6096460E+081	.0000000	.000000
-0.39854203E+01	7.306573	5.0081E-07	23.254197	7.208985	0.6096822E+081	.0000000	.000000
-0.38854203E+01	7.339942	6.3029E-07	23.253908	7.208983	0.6097242E+081	.0000000	.000000
-0.37854203E+01	7.373319	7.9310E-07	23.253571	7.208980	0.6097731E+081	.0000000	.000000
-0.36854203E+01	7.406703	9.9923E-07	23.253176	7.208976	0.6098309E+081	.0000000	.000000
-0.35854203E+01	7.440097	1.2587E-06	23.252716	7.208972	0.6098983E+081	.0000000	.000000
-0.34854203E+01	7.473501	1.5852E-06	23.252179	7.208968	0.6099768E+081	.0000000	.000000
-0.33854203E+01	7.506916	1.9960E-06	23.251553	7.208962	0.6100682E+081	.0000000	.000000
-0.32854203E+01	7.540346	2.5129E-06	23.250823	7.208956	0.6101747E+081	.0000000	.000000
-0.31854203E+01	7.573792	3.1631E-06	23.249972	7.208948	0.6102988E+081	.0000000	.000000
-0.30854203E+01	7.607257	3.9808E-06	23.248979	7.208939	0.6104434E+081	.0000000	.000000
-0.29854203E+01	7.640744	5.0092E-06	23.247820	7.208929	0.6106118E+081	.0000000	.000000
-0.28854203E+01	7.674257	6.3022E-06	23.246468	7.208917	0.6108079E+081	.0000000	.000000
-0.27854203E+01	7.707800	7.9391E-06	23.244884	7.208903	0.6110398E+081	.0000000	.000000
-0.26854203E+01	7.741379	9.9996E-06	23.243033	7.208886	0.6113105E+081	.0000000	.000000
-0.25854203E+01	7.774999	1.2593E-05	23.240872	7.208867	0.6116264E+081	.0000000	.000000
-0.24854203E+01	7.808667	1.5856E-05	23.238346	7.208845	0.6119951E+081	.0000000	.000000
-0.23854203E+01	7.842392	1.9962E-05	23.235395	7.208819	0.6124256E+081	.0000000	.000000
-0.22854203E+01	7.876182	2.5126E-05	23.231943	7.208788	0.6129283E+081	.0000000	.000000
-0.21854203E+01	7.910050	3.1621E-05	23.227904	7.208752	0.6135156E+081	.0000000	.000000
-0.20854203E+01	7.944009	3.9786E-05	23.223175	7.208709	0.6142020E+081	.0000000	.000000
-0.19854203E+01	7.978075	5.0047E-05	23.217635	7.208660	0.6150047E+081	.0000000	.000000
-0.18854203E+01	8.012270	6.3037E-05	23.211107	7.208601	0.6159588E+081	.0000000	.000000
-0.17854203E+01	8.046614	7.9394E-05	23.203439	7.208532	0.6170785E+081	.0000000	.000000
-0.16854203E+01	8.081135	9.9989E-05	23.194420	7.208451	0.6183943E+081	.0000000	.000000
-0.15854203E+01	8.115865	1.2591E-04	23.183794	7.208354	0.6199423E+081	.0000000	.000000
-0.14854203E+01	8.150843	1.5853E-04	23.171252	7.208240	0.6217666E+081	.0000000	.000000
-0.13854203E+01	8.186118	1.9956E-04	23.156414	7.208104	0.6239206E+081	.0000000	.000000
-0.12854203E+01	8.221747	2.5113E-04	23.138812	7.207942	0.6264702E+081	.0000000	.000000
-0.11854203E+01	8.257804	3.1589E-04	23.117860	7.207748	0.6294971E+081	.0000000	.000000
-0.10854203E+01	8.294379	3.9710E-04	23.092816	7.207513	0.6331039E+081	.0000000	.000000
-0.98542030E+00	8.331599	4.9949E-04	23.062625	7.207228	0.6374712E+081	.0000000	.000000

-0.95305990E+00	8.343799	5.3781E-04	23.051604	7.207123	0.6390629E+081	.0000000	.000000
-0.92294444E+00	8.355230	5.7611E-04	23.040714	7.207019	0.6406343E+081	.0000000	.000000
-0.89478256E+00	8.365994	6.1438E-04	23.029935	7.206915	0.6421884E+081	.0000000	.000000
-0.86833616E+00	8.376170	6.5262E-04	23.019254	7.206812	0.6437274E+081	.0000000	.000000
-0.84340819E+00	8.385826	6.9083E-04	23.008655	7.206710	0.6452533E+081	.0000000	.000000
-0.81983372E+00	8.395020	7.2902E-04	22.998125	7.206608	0.6467690E+081	.0000000	.000000
-0.79747331E+00	8.403799	7.6723E-04	22.987646	7.206505	0.6482804E+081	.0000000	.000000
-0.77620800E+00	8.412204	8.0544E-04	22.977219	7.206403	0.6497830E+081	.0000000	.000000
-0.75593553E+00	8.420269	8.4363E-04	22.966836	7.206301	0.6512781E+081	.0000000	.000000
-0.73656731E+00	8.428026	8.8181E-04	22.956489	7.206199	0.6527670E+081	.0000000	.000000
-0.71802610E+00	8.435500	9.1997E-04	22.946172	7.206097	0.6542506E+081	.0000000	.000000
-0.70024417E+00	8.442716	9.5811E-04	22.935877	7.205995	0.6557300E+081	.0000000	.000000
-0.68316175E+00	8.449693	9.9622E-04	22.925600	7.205892	0.6572061E+081	.0000000	.000000
-0.66672590E+00	8.456450	1.0343E-03	22.915334	7.205790	0.6586797E+081	.0000000	.000000
-0.65088945E+00	8.463005	1.0724E-03	22.905070	7.205686	0.6601531E+081	.0000000	.000000
-0.63561021E+00	8.469371	1.1105E-03	22.894802	7.205583	0.6616287E+081	.0000000	.000000
-0.62085030E+00	8.475562	1.1486E-03	22.884531	7.205478	0.6631037E+081	.0000000	.000000
-0.60657558E+00	8.481589	1.1867E-03	22.874252	7.205374	0.6645788E+081	.0000000	.000000
-0.59275515E+00	8.487463	1.2247E-03	22.863963	7.205269	0.6660547E+081	.0000000	.000000
-0.57936100E+00	8.493194	1.2628E-03	22.853657	7.205163	0.6675321E+081	.0000000	.000000
-0.56636762E+00	8.498791	1.3008E-03	22.843333	7.205056	0.6690114E+081	.0000000	.000000
-0.55375170E+00	8.504262	1.3388E-03	22.832986	7.204949	0.6704932E+081	.0000000	.000000
-0.54149195E+00	8.509614	1.3768E-03	22.822611	7.204842	0.6719781E+081	.0000000	.000000
-0.52956880E+00	8.514855	1.4148E-03	22.812203	7.204733	0.6734685E+081	.0000000	.000000
-0.51796426E+00	8.519992	1.4528E-03	22.801757	7.204623	0.6749651E+081	.0000000	.000000
-0.50666175E+00	8.525029	1.4908E-03	22.791274	7.204513	0.6764663E+081	.0000000	.000000
-0.49564593E+00	8.529972	1.5288E-03	22.780750	7.204402	0.6779726E+081	.0000000	.000000
-0.48490264E+00	8.534826	1.5668E-03	22.770184	7.204290	0.6794843E+081	.0000000	.000000
-0.47441870E+00	8.539597	1.6047E-03	22.759570	7.204176	0.6810020E+081	.0000000	.000000
-0.46418189E+00	8.544287	1.6427E-03	22.748907	7.204062	0.6825262E+081	.0000000	.000000
-0.45418083E+00	8.548902	1.6806E-03	22.738191	7.203947	0.6840573E+081	.0000000	.000000
-0.444440491E+00	8.553446	1.7185E-03	22.727418	7.203830	0.6855958E+081	.0000000	.000000
-0.43484420E+00	8.557922	1.7565E-03	22.716580	7.203713	0.6871445E+081	.0000000	.000000
-0.42548944E+00	8.562333	1.7944E-03	22.705676	7.203594	0.6887030E+081	.0000000	.000000
-0.41633194E+00	8.566684	1.8323E-03	22.694706	7.203474	0.6902704E+081	.0000000	.000000
-0.40736355E+00	8.570975	1.8702E-03	22.683667	7.203352	0.6918471E+081	.0000000	.000000
-0.39857662E+00	8.575212	1.9081E-03	22.672554	7.203229	0.6934336E+081	.0000000	.000000

-0.38996396E+00	8.579395	1.9460E-03	22.661365	7.203105	0.6950304E+081.0000000.000000
-0.38151878E+00	8.583528	1.9838E-03	22.650096	7.202979	0.6966380E+081.0000000.000000
-0.37323470E+00	8.587614	2.0217E-03	22.638744	7.202852	0.6982569E+081.0000000.000000
-0.36510568E+00	8.591653	2.0596E-03	22.627304	7.202723	0.6998876E+081.0000000.000000
-0.35712602E+00	8.595651	2.0974E-03	22.615769	7.202592	0.7015334E+081.0000000.000000
-0.34929035E+00	8.599607	2.1353E-03	22.604135	7.202460	0.7031934E+081.0000000.000000
-0.34159354E+00	8.603524	2.1731E-03	22.592403	7.202325	0.7048670E+081.0000000.000000
-0.33403077E+00	8.607404	2.2109E-03	22.580569	7.202189	0.7065548E+081.0000000.000000
-0.32659744E+00	8.611249	2.2488E-03	22.568628	7.202051	0.7082573E+081.0000000.000000
-0.31928921E+00	8.615060	2.2866E-03	22.556575	7.201911	0.7099752E+081.0000000.000000
-0.31210192E+00	8.618839	2.3244E-03	22.544407	7.201769	0.7117090E+081.0000000.000000
-0.30503165E+00	8.622589	2.3622E-03	22.532119	7.201624	0.7134595E+081.0000000.000000
-0.29807464E+00	8.626310	2.4000E-03	22.519707	7.201478	0.7152272E+081.0000000.000000
-0.29122731E+00	8.630004	2.4378E-03	22.507157	7.201329	0.7170163E+081.0000000.000000
-0.28448628E+00	8.633674	2.4756E-03	22.494470	7.201177	0.7188252E+081.0000000.000000
-0.27784827E+00	8.637320	2.5134E-03	22.481643	7.201023	0.7206538E+081.0000000.000000
-0.27131021E+00	8.640943	2.5512E-03	22.468670	7.200866	0.7225028E+081.0000000.000000
-0.26486911E+00	8.644546	2.5890E-03	22.455545	7.200706	0.7243732E+081.0000000.000000
-0.25852214E+00	8.648129	2.6268E-03	22.442263	7.200544	0.7262656E+081.0000000.000000
-0.25226660E+00	8.651694	2.6646E-03	22.428816	7.200378	0.7281812E+081.0000000.000000
-0.24609989E+00	8.655241	2.7024E-03	22.415198	7.200210	0.7301209E+081.0000000.000000
-0.24001951E+00	8.658774	2.7401E-03	22.401402	7.200038	0.7320856E+081.0000000.000000
-0.23402309E+00	8.662293	2.7779E-03	22.387413	7.199863	0.7340807E+081.0000000.000000
-0.22810834E+00	8.665799	2.8157E-03	22.373229	7.199684	0.7361040E+081.0000000.000000
-0.22227306E+00	8.669294	2.8535E-03	22.358843	7.199501	0.7381560E+081.0000000.000000
-0.21651514E+00	8.672779	2.8913E-03	22.344247	7.199314	0.7402379E+081.0000000.000000
-0.21083257E+00	8.676254	2.9291E-03	22.329432	7.199123	0.7423510E+081.0000000.000000
-0.20522339E+00	8.679722	2.9669E-03	22.314389	7.198928	0.7444967E+081.0000000.000000
-0.19968573E+00	8.683184	3.0046E-03	22.299107	7.198729	0.7466766E+081.0000000.000000
-0.19421780E+00	8.686641	3.0424E-03	22.283575	7.198524	0.7488921E+081.0000000.000000
-0.18881786E+00	8.690094	3.0802E-03	22.267782	7.198315	0.7511450E+081.0000000.000000
-0.18348423E+00	8.693546	3.1180E-03	22.251705	7.198101	0.7534426E+081.0000000.000000
-0.17821531E+00	8.696997	3.1558E-03	22.235339	7.197880	0.7557823E+081.0000000.000000
-0.17300955E+00	8.700449	3.1936E-03	22.218672	7.197654	0.7581655E+081.0000000.000000
-0.16786545E+00	8.703903	3.2314E-03	22.201689	7.197422	0.7605944E+081.0000000.000000
-0.16278157E+00	8.707360	3.2693E-03	22.184375	7.197184	0.7630715E+081.0000000.000000
-0.15775652E+00	8.710822	3.3071E-03	22.166712	7.196938	0.7655992E+081.0000000.000000

-0.15278894E+00 8.714291 3.3450E-03 22.148681 7.196685 0.7681804E+081.0000000.000000
-0.14787754E+00 8.717769 3.3828E-03 22.130264 7.196425 0.7708179E+081.0000000.000000
-0.14302106E+00 8.721256 3.4206E-03 22.111437 7.196156 0.7735150E+081.0000000.000000
-0.13821829E+00 8.724757 3.4585E-03 22.092162 7.195879 0.7762832E+081.0000000.000000
-0.13346806E+00 8.728272 3.4964E-03 22.072427 7.195592 0.7791196E+081.0000000.000000
-0.12876921E+00 8.731803 3.5343E-03 22.052206 7.195295 0.7820277E+081.0000000.000000
-0.12412067E+00 8.735352 3.5723E-03 22.031468 7.194987 0.7850121E+081.0000000.000000
-0.11952135E+00 8.738921 3.6103E-03 22.010181 7.194668 0.7880779E+081.0000000.000000
-0.11497023E+00 8.742513 3.6482E-03 21.988308 7.194336 0.7912307E+081.0000000.000000
-0.11046631E+00 8.746131 3.6863E-03 21.965810 7.193992 0.7944764E+081.0000000.000000
-0.10600862E+00 8.749777 3.7243E-03 21.942642 7.193633 0.7978220E+081.0000000.000000
-0.10159622E+00 8.753454 3.7623E-03 21.918756 7.193258 0.8012748E+081.0000000.000000
-0.97228203E-01 8.757167 3.8004E-03 21.894069 7.192866 0.8048568E+081.0000000.000000
-0.92903678E-01 8.760919 3.8385E-03 21.868544 7.192456 0.8085660E+081.0000000.000000
-0.88621790E-01 8.764713 3.8767E-03 21.842113 7.192025 0.8124126E+081.0000000.000000
-0.84381708E-01 8.768554 3.9150E-03 21.814698 7.191573 0.8164090E+081.0000000.000000
-0.80182622E-01 8.772447 3.9533E-03 21.786213 7.191095 0.8205690E+081.0000000.000000
-0.76023747E-01 8.776396 3.9917E-03 21.756555 7.190591 0.8249087E+081.0000000.000000
-0.71904321E-01 8.780408 4.0301E-03 21.725610 7.190056 0.8294464E+081.0000000.000000
-0.67823602E-01 8.784490 4.0685E-03 21.693243 7.189487 0.8342033E+081.0000000.000000
-0.63780870E-01 8.788650 4.1070E-03 21.659299 7.188881 0.8392050E+081.0000000.000000
-0.59775424E-01 8.792900 4.1456E-03 21.623533 7.188229 0.8445101E+081.0000000.000000
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-0.32726312E-01 8.826267 4.4203E-03 21.297411 7.181675 0.8938316E+081.0000000.000000
-0.28996094E-01 8.831830 4.4602E-03 21.233290 7.180242 0.9037643E+081.0000000.000000
-0.25297643E-01 8.837727 4.5005E-03 21.161304 7.178570 0.9151104E+081.0000000.000000
-0.21630423E-01 8.844030 4.5415E-03 21.079311 7.176579 0.9282134E+081.0000000.000000
-0.17993909E-01 8.850860 4.5834E-03 20.983703 7.174135 0.9437682E+081.0000000.000000
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-0.11655479E-01 8.864788 4.6598E-03 20.762058 7.167913 0.9808105E+081.0000000.000000
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-0.59501657E-02 8.881513 4.7324E-03 20.428691 7.156824 0.1040085E+091.0000000.000000
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-0.37461230E-02 8.890429 4.7618E-03 20.204307 7.147910 0.1083340E+091.0000000.000000
-0.29631438E-02 8.894306 4.7728E-03 20.091918 7.142915 0.1106495E+091.0000000.000000
-0.23396610E-02 8.897834 4.7819E-03 19.979647 7.137524 0.1130115E+091.0000000.000000
-0.18440612E-02 8.901045 4.7894E-03 19.867421 7.131692 0.1154029E+091.0000000.000000
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-0.42582674E-03 8.915147 4.8114E-03 19.190004 7.083565 0.1318496E+091.0000000.000000
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-0.25910909E-03 8.918345 4.8143E-03 18.963398 7.060255 0.1382350E+091.0000000.000000
-0.20199939E-03 8.919728 4.8153E-03 18.851040 7.046802 0.1413640E+091.0000000.000000
-0.20000000E-03 8.919780 4.8153E-03 18.846646 7.046250 0.1414834E+091.0000000.000000