

Evolution .g file (GENEC)

n°	variable	format	grandeur	description
1	nm	i6		model number
2	u1	1pe21.15		age
3	u2	f10.6	$M/M_{\odot}$	
4	xl	f8.6	$\log(L/L_{\odot})$	
5	xtt	f8.6	$\log(T_{\text{eff}})$	
6	u5	e13.7	$X(1)$	)
7	u7	e13.7	$Y(1)$	)
8	b33	1pe13.7	$^3\text{He}(1)$	)
9	u8	1pe13.7	$^{12}\text{C}(1)$	)
10	u9	1pe13.7	$^{13}\text{C}(1)$	)
11	u10	1pe13.7	$^{14}\text{N}(1)$	)
12	u12	1pe13.7	$^{16}\text{O}(1)$	)
13	u13	1pe13.7	$^{17}\text{O}(1)$	)
14	u14	1pe13.7	$^{18}\text{O}(1)$	)
15	u6	1pe13.7	$^{20}\text{Ne}(1)$	)
16	u11	1pe13.7	$^{22}\text{Ne}(1)$	)
17	qmnc	f6.4	M_{cc}	convective-core mass fraction
18	xte	f8.6	$\log(T_{\text{eff}})_{\text{not corr.}}$	T_{eff} not corrected (<i>corrwind</i>)
19	xmdot	f7.3	$\log(\dot{M})$	
20	rhoc	f8.6	$\log(\rho_c)$	
21	tc	f8.6	$\log(T_c)$	
22	u15	e14.7	$X(\text{m})$	)
23	u17	e13.7	$Y(\text{m})$	)
24	b33m	1pe13.7	$^3\text{He}(\text{m})$	)
25	u18	1pe13.7	$^{12}\text{C}(\text{m})$	)
26	u19	1pe13.7	$^{13}\text{C}(\text{m})$	)
27	u20	1pe13.7	$^{14}\text{N}(\text{m})$	)
28	u22	1pe13.7	$^{16}\text{O}(\text{m})$	)
29	u23	1pe13.7	$^{17}\text{O}(\text{m})$	)
30	u24	1pe13.7	$^{18}\text{O}(\text{m})$	)
31	u16	1pe13.7	$^{20}\text{Ne}(\text{m})$	)
32	u21	1pe13.7	$^{22}\text{Ne}(\text{m})$	)
33	ybe7m	1pe9.3	$^7\text{Be}(\text{m})$	)
34	yb8m	1pe9.3	$^8\text{B}(\text{m})$	)
35	flube7	1pe9.3		neutrino flux from $^7\text{Be}(e^-, \nu)^7\text{Li}$
36	flub8	1pe9.3		neutrino flux from $^8\text{B}(e^+ \nu)^8\text{Be}$
37	snube7	1pe9.3		as 35 but in SNU units
38	snub8	1pe9.3		as 36 but in SNU units
39	rapcrj	f10.8	$\Omega/\Omega_{\text{crit}}$	
40	rot1	1pe9.3	$\Omega(1)$	surface Ω
41	rotm	1pe9.3	$\Omega(\text{m})$	central Ω
42	xobla	1pe9.3	$R_{\text{pol}}/R_{\text{eq}}$	
43	u27	1pe9.3	$^{26}\text{Al}g(1)$	surface abundance
44	u33	1pe9.3	$^{26}\text{Al}g(\text{m})$	central abundance
45	alpro6	1pe9.3	$\dot{M}(\Omega)/\dot{M}(0)$	correction of mass loss due to rotation
46	lnom	i4	$i_{\text{CNO,max}}$	layer with max of CNO
47	xmcno	f8.4	$m_{i_{\text{CNO,max}}}$	mass of the lcnom layer
48	scno	1pe8.2	$\sum \text{CNO}_{i_{\text{CNO,max}}}$	sum of CNO elements in the lcnom layer
49	xjspe1	f10.3	$j(3 M_{\odot})$	specific angular momentum within $3 M_{\odot}$ [$10^{16} \text{ cm}^2 \text{ s}^{-1}$]
50	xjspe2	f10.3	$j(5 M_{\odot})$	specific angular momentum within $5 M_{\odot}$ [$10^{16} \text{ cm}^2 \text{ s}^{-1}$]
51	vcrit1m	1pe8.2	$V_{\text{crit},1}$	1st root
52	vcrit2m	1pe8.2	$V_{\text{crit},2}$	2nd root
53	vequam	1pe8.2	V_{eq}	(before convergence)
54	rapomm	f8.6	$\Omega/\Omega_{\text{crit}}$	$\Gamma\Omega$ limit
55	eddesm	f8.6	Γ_{Edd}	
56	vcrit1	1pe8.2	$V_{\text{crit},1}$	1st root
57	vcrit2	1pe8.2	$V_{\text{crit},2}$	2nd root
58	vequa	1pe8.2	V_{eq}	(after convergence)
59	rapom2	f8.6	$\Omega/\Omega_{\text{crit}}$	$\Gamma\Omega$ limit
60	eddesc	f8.6	Γ_{Edd}	
61	dmneed	1pe13.7	ΔM_{need}	mass needed to be lost at the equator (critical velocity)
62	xmdotneed	1pe13.7	$\dot{M}_{\text{need}}$	mass loss rate needed to lose ΔM_{need}
63	dlex	1pe13.7	$\Delta \mathcal{L}_{\text{rad+aniso+mech}}$	ang. mom. lost in one timestep (wind + mechanical) [$10^{53} \text{ g cm}^2 \text{ s}^{-1}$]
64	bmomit	1pe13.7	I	total momentum of inertia [10^{57} g cm^2]
65	btot	1pe13.7	$\mathcal{L}_{\text{tot}}$	total angular momentum [$10^{53} \text{ g cm}^2 \text{ s}^{-1}$]
66	ekrote	1pe13.7	E_{rot}	kinetic energy of rotation [E_{51}]
67	epote	1pe13.7	E_{pot}	potential energy [E_{51}]
68	ekine	1pe13.7	E_{gaz}	thermal energy of the gas [E_{51}]
69	erade	1pe13.7	E_{rad}	radiative energy [E_{51}]
70 - 109	uudrawc	f5.3		limits of convective zones
110	btotatm	1pe16.10	$\mathcal{L}_{\text{tot}}$	total angular momentum (star + envelope) [$10^{53} \text{ g cm}^2 \text{ s}^{-1}$]