

Table 8.4 Evolutionary lifetimes (years)

M/M_{\odot}	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
15	1.0(7)	2.3(5)	←	7.6(4)	→	7.2(5)	6.2(5)	1.9(5)	3.5(4)
9	2.1(7)	6.1(5)	9.1(4)	1.5(5)	6.6(4)	4.9(5)	9.5(4)	3.3(6)	1.6(5)
5	6.5(7)	2.2(6)	1.4(6)	7.5(5)	4.9(5)	6.1(6)	1.0(6)	9.0(6)	9.3(5)
3	2.2(8)	1.0(7)	1.0(7)	4.5(6)	4.2(6)	←	6.6(7)	→	6.0(6)
2.25	4.8(8)	1.6(7)	3.7(7)	1.3(7)	3.8(7)				
1.5	1.6(9)	8.1(7)	3.5(8)	1.0(8)	>2(8)				
1.25	2.8(9)	1.8(8)	1.0(9)	1.5(8)	>4(8)				
1.0	7.0(9)	2.0(9)	1.2(9)	1.6(9)	>1(9)				

Note: Powers of 10 are given in parentheses.

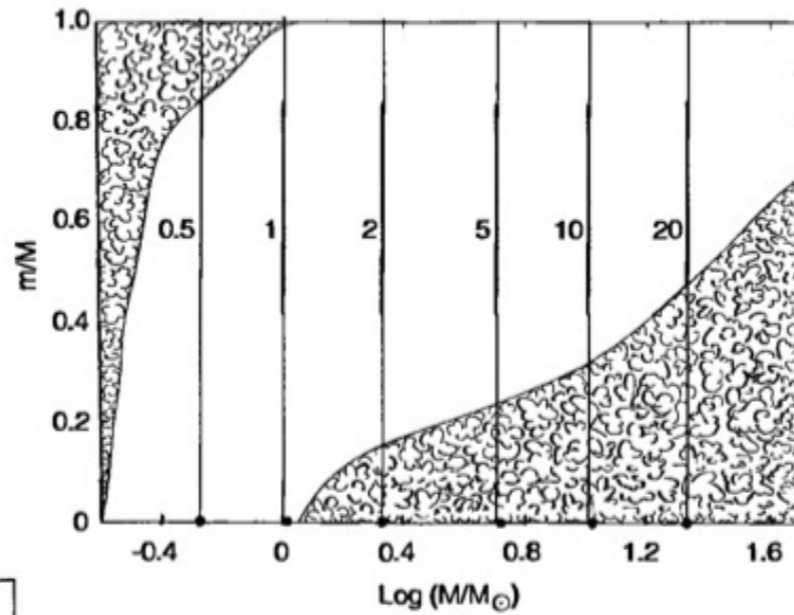


Table 8.1 Evolutionary lifetimes (years)

M/M_{\odot}	1-2	2-3	3-4	4-5
15	6.7(2)	2.6(4)	1.3(4)	6.0(3)
9	1.4(3)	7.8(4)	2.3(4)	1.8(4)
5	2.9(4)	2.8(5)	7.4(4)	6.8(4)
3	2.1(5)	1.0(6)	2.2(5)	2.8(5)
2.25	5.9(5)	2.2(6)	5.0(5)	6.7(5)
1.5	2.4(6)	6.3(6)	1.8(6)	3.0(6)
1.25	4.0(6)	1.0(7)	3.5(6)	1.0(7)
1.0	8.9(6)	1.6(7)	8.9(6)	1.6(7)
0.5	1.6(8)			

Note: powers of 10 are given in parentheses.

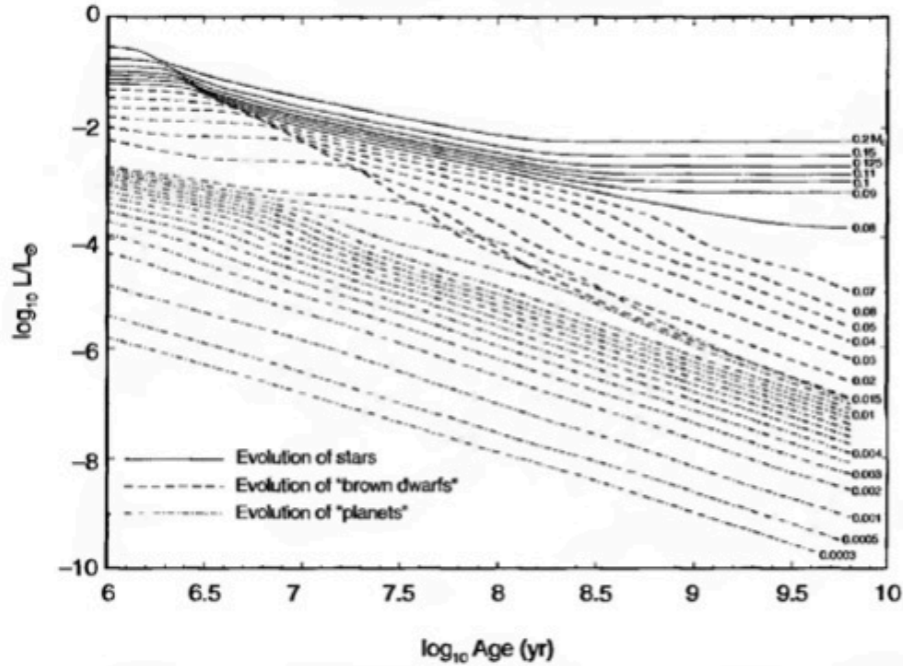


Figure 10.3 Evolution of the luminosity of red dwarf stars (solid curves), brown dwarfs (dashed curves), and planets (dash-dotted curves). Brown dwarfs are here identified as those objects that burn deuterium. Curves are labelled according to mass, the lowest three corresponding to the mass of Jupiter, then half of Jupiter's mass, and finally the mass of Saturn [from A. Burrows et al. (1997), *Astrophys. J.*, 491].

Mass (M_{\odot})	Time (yr)	α
0.1	6×10^{12}	-2.8
0.5	7×10^{10}	-2.8
1.0	1×10^{10}	
1.25	4×10^9	-4.1
1.5	2×10^9	-4.0
3.0	2×10^8	-3.6
5.0	7×10^7	-3.1
9.0	2×10^7	-2.8
15	1×10^7	-2.6
25	6×10^6	-2.3

