

**Table 6.2** – Theoretical physical characteristics of  $\delta$ -Sco generated from the evolution process. We choose 3 or 2 points of model in the evolutionary track to represent the evolutionary status.  $\log T$  and  $\log L$  are the effective temperature and luminosity, respectively, mass is the star mass in solar mass,  $R$  is the star radius in solar radius,  $V_{rot}/V_{cr}$  is rotation rate where  $V_{rot}$  is rotational velocity in km/s and  $V_{cr}$  is critical velocity in km/s,  $Prot$  is rotational period in days, age is the star age in years.

<b>Initial condition</b>	<b>log T</b>	<b>log L</b>	<b>mass</b>	<b>R</b>	<b>Vrot/Vcr</b>	<b>Vrot</b>	<b>Prot (d)</b>	<b>Age</b>	<b>Status</b>
Mass: 12.5 M, Rot: 0.7 d (345 km/s), Z= 0.01	4.43	4.16	12.47	5.51	0.62	333.44	8.36E-01	7.54E+06	*
	4.31	4.46	12.36	13.38	0.83	284.93	2.38E+00	1.73E+07	B
	4.33	4.5	12.36	12.75	1.02	359.16	1.80E+00	1.74E+07	C (TAMS)
Mass: 12.5 M, Rot: 0.78 d (300 km/s), Z= 0.01	4.43	4.19	12.46	5.73	0.56	293.59	9.88E-01	8.90E+06	*
	4.32	4.46	12.36	12.83	0.71	247.89	2.62E+00	1.72E+07	B
	4.35	4.51	12.35	11.74	0.88	320.84	1.85E+00	1.74E+07	C (TAMS)
Mass: 12.5 M, Rot: 0.85 d (270 km/s), Z= 0.01	4.43	4.21	12.46	5.84	0.51	265.99	1.11E+00	9.52E+06	*
	4.33	4.46	12.36	12.53	0.63	223.28	2.84E+00	1.71E+07	B
	4.36	4.51	12.35	11.25	0.76	284.72	2.00E+00	1.73E+07	C (TAMS)
Mass: 12.5 M, Rot: 0.741 d (345 km/s), Z= 0.02	4.3	4.46	12.36	14.03	0.67	225.16	3.15E+00	1.62E+07	B
	4.34	4.51	12.36	12.67	0.82	289.46	2.22E+00	1.64E+07	C (TAMS)
Mass: 12.5 M, Rot: 0.863 d (300 km/s), Z= 0.02	4.3	4.46	12.36	14.45	0.76	251.64	2.91E+00	1.63E+07	B
	4.32	4.51	12.36	13.56	0.96	325.96	2.11E+00	1.64E+07	C (TAMS)
Mass: 12.5 M, Rot: 0.943 d (270 km/s), Z= 0.02	4.43	4.08	12.49	5	0.47	262.52	9.64E-01	1.96E+06	*
	4.28	4.46	12.37	15.83	1	314.4	2.55E+00	1.64E+07	B
	4.34	4.52	12.36	12.69	0.83	290.45	2.21E+00	1.64E+07	C (TAMS)

Notes : Asterisk mark (\*) shows the current status of  $\delta$ -Scorpii, B and C (TAMS) represent the points in Figure 6.3.