

Stellar Characteristics Assignment

Determine the missing information. What is the state of evolution for each star? Which stars are big enough to engulf planets in our solar system, which planets? Each question is worth 5 marks so show all your steps on your own paper.

Rigel	Procyon	Sarph	Pollux	Capella	Regulus
Type: B7 Ia m = 0.15 M = -6.73 T = 9067 K L = 51194 L _{sun} R = ? R _{sun} D = ? parsecs	Type: F2 V m = 0.37 M = 2.65 T = 6800 K L = 7.5 L _{sun} R = ? R _{sun} D = ? parsecs	Type: B2 Ib m = 2.06 M = -4.67 T = 14819 K L = 19159 L _{sun} R = ? R _{sun} D = ? parsecs	Type: G8 III m = 1.15 M = 1.08 T = 4794 K L = 49 L _{sun} R = ? R _{sun} D = ? parsecs	Type: G2 III m = 0.06 M = -0.50 T = 5419 K L = 162 L _{sun} R = ? R _{sun} D = ? parsecs	Type: B8 V m = 1.34 M = -0.54 T = 10747 K L = 221 L _{sun} R = ? R _{sun} D = ? parsecs
Alnitak	Aldebaran	Spica	Eltanin	Deneb	Gacrux
Type: B0 Ia m = 1.71 p = 0.00394" T = 17038 K L = 47480 L _{sun} R = ? R _{sun} M = ?	Type: K5 III p = 0.0501" M = -0.66 T = 3406 K L = ? L _{sun} R = 95 R _{sun} m = ?	Type: B0 Ib m = 0.96 M = 0.96 T = ? K L = 14779 L _{sun} R = 9.8 R _{sun} p = ? "	Type: K5 II m = 2.21 M = -1.07 T = 3442 K L = 1468 L _{sun} R = ? R _{sun} p = ? "	Type: A5 Ia m = 1.25 M = -8.75 T = 8410 K L = 301059 L _{sun} R = ? R _{sun} D = ? ly	Type: M3 II m = 1.56 M = ? T = 3276 K L = ? L _{sun} R = 113 R _{sun} D = 88 ly