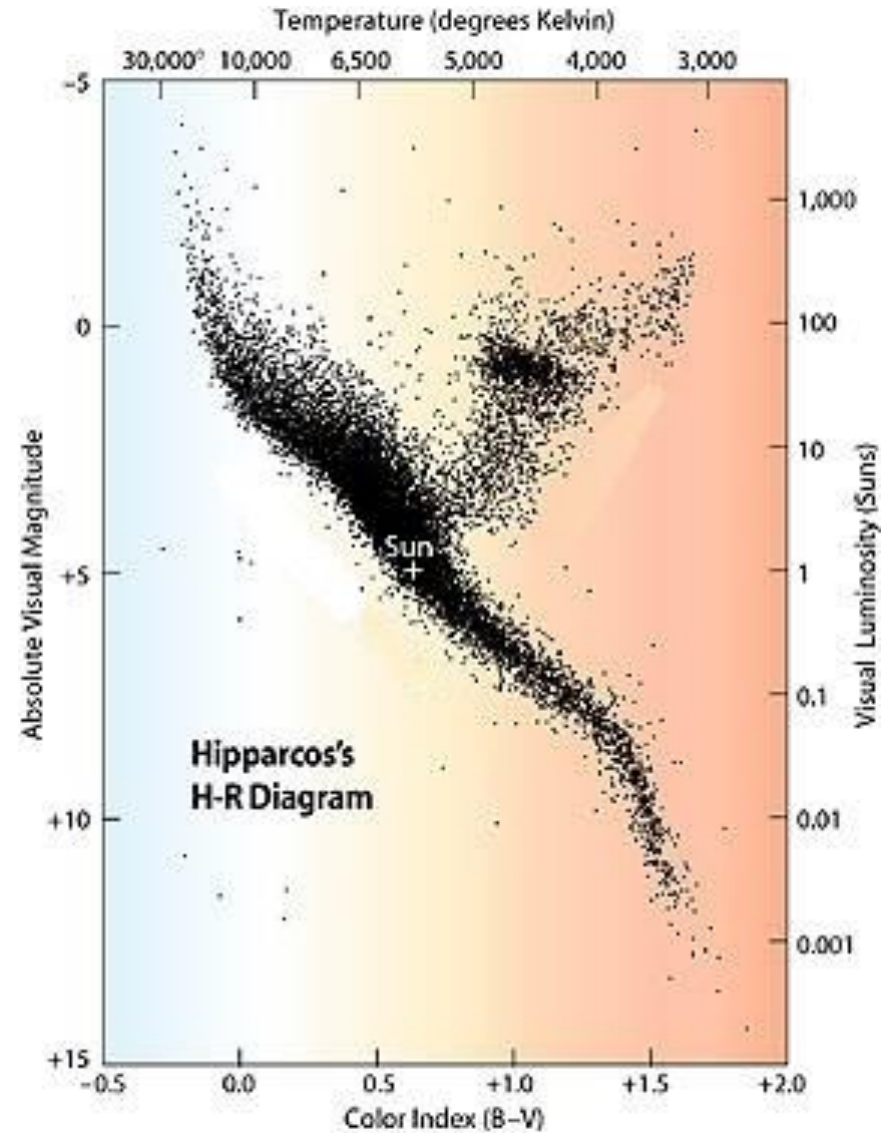


AGA0100

7.2 Recenseando estrelas: o Diagrama HR

O diagrama luminosidade x temperatura

Diagrama HR (Herzsprung-Russell)



Ejnar Hertzsprung (1911)

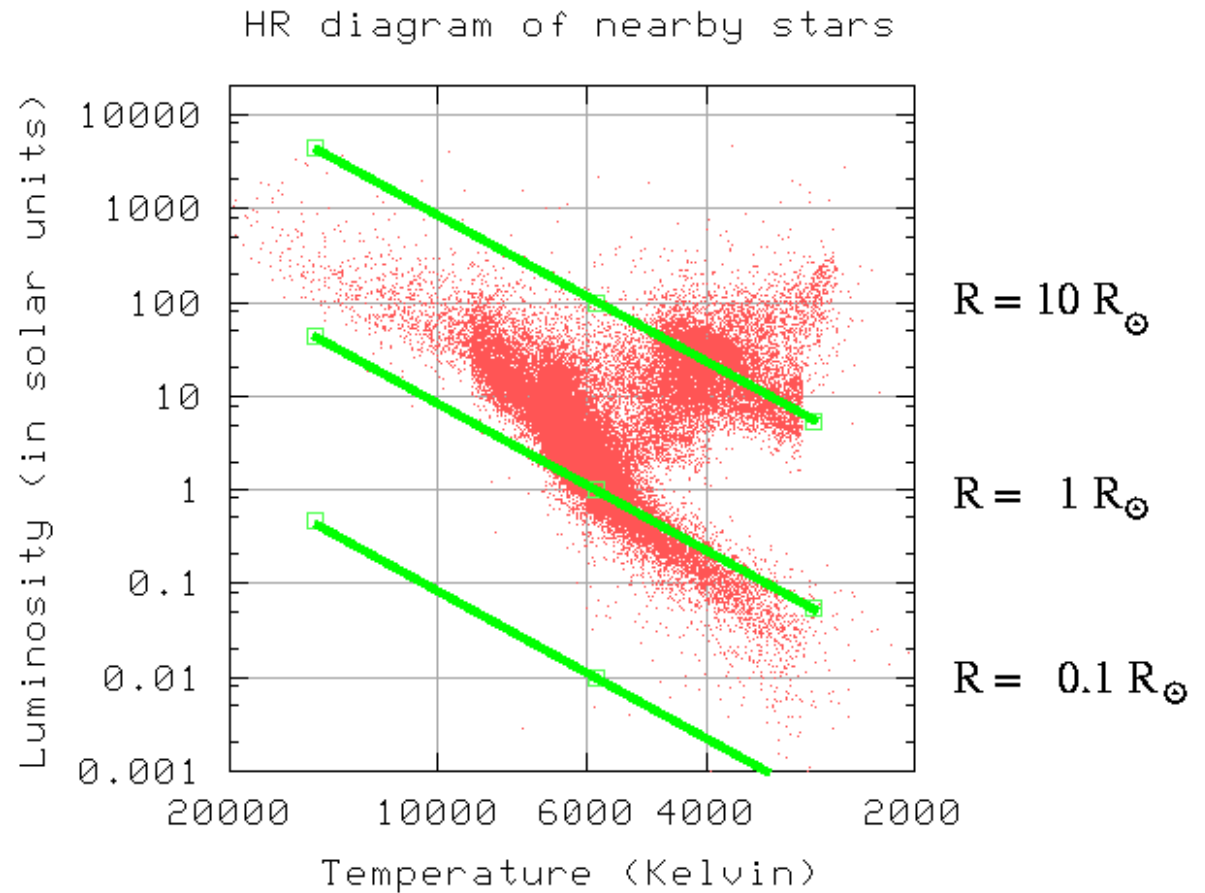


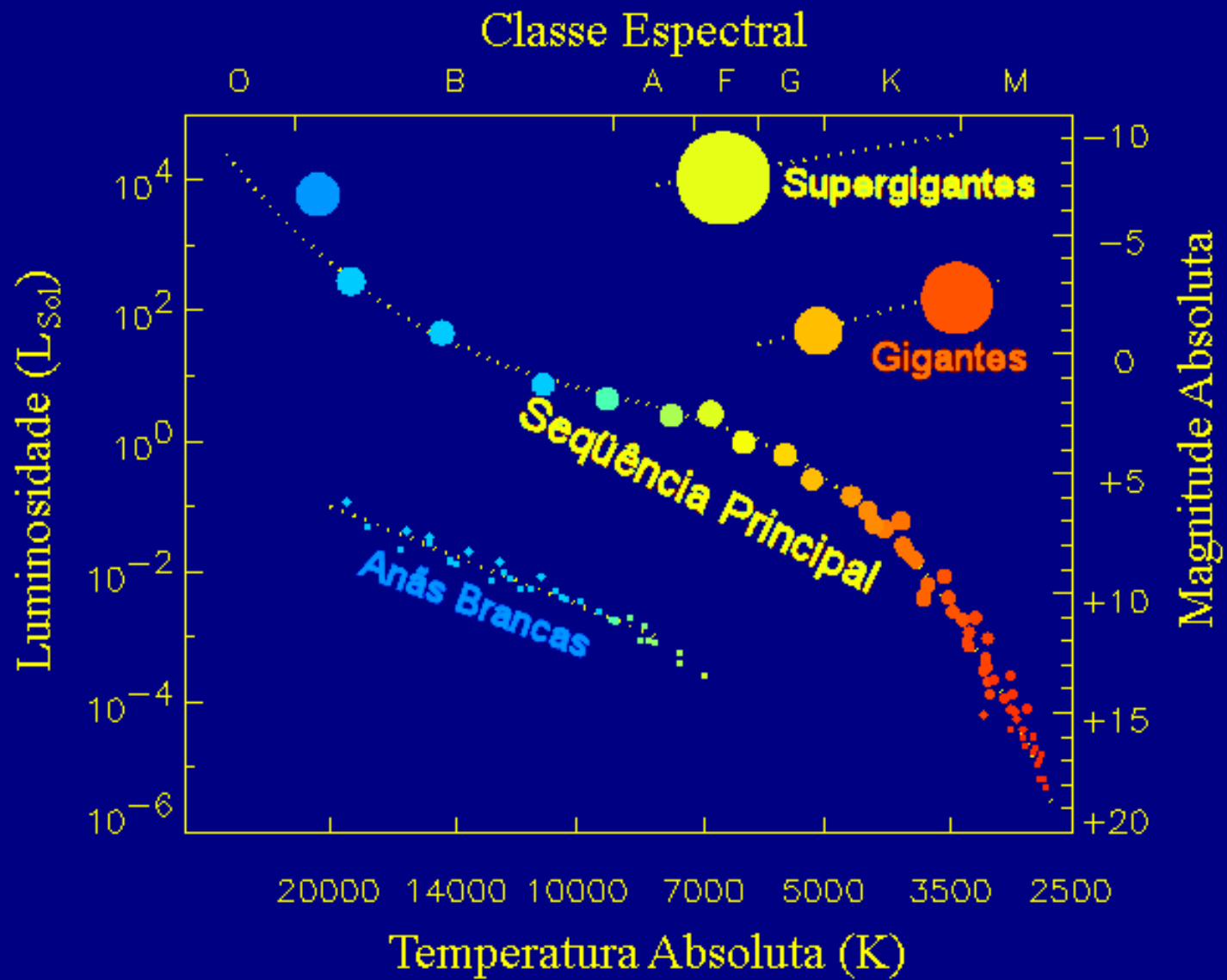
Henry Norris Russell (1913)

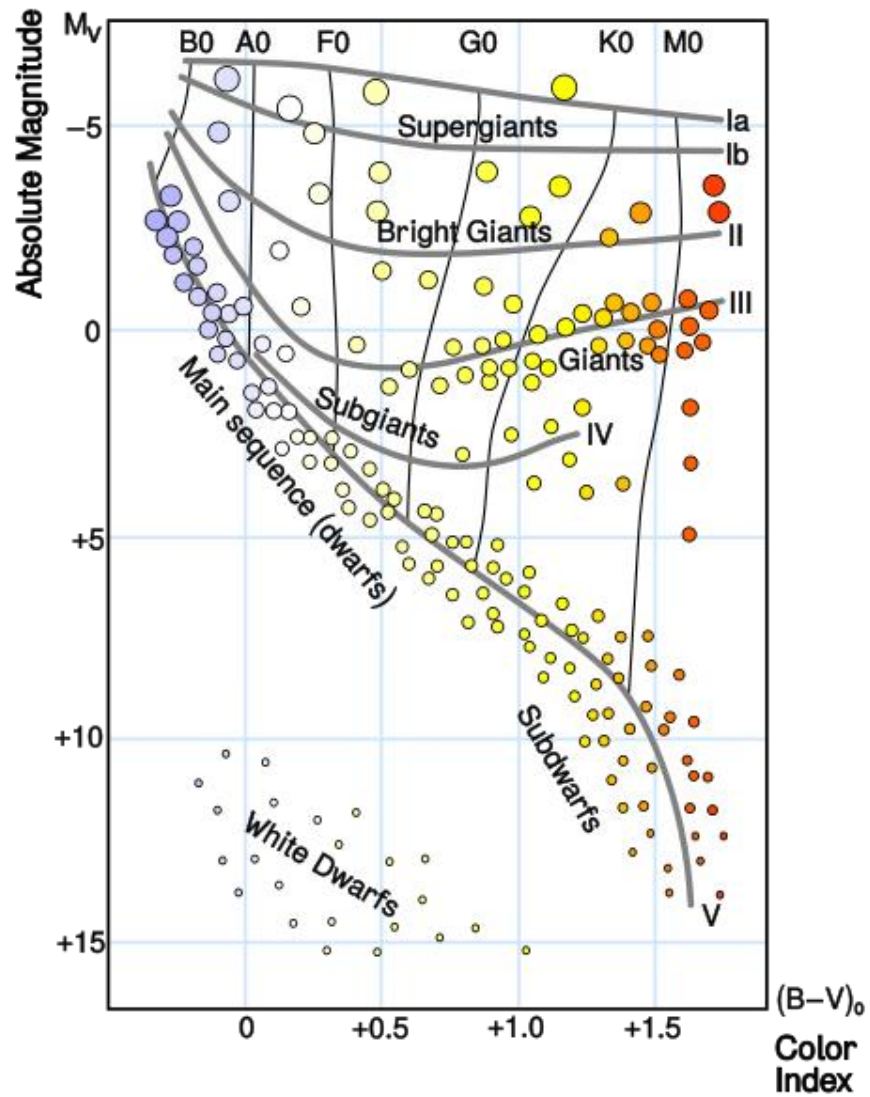
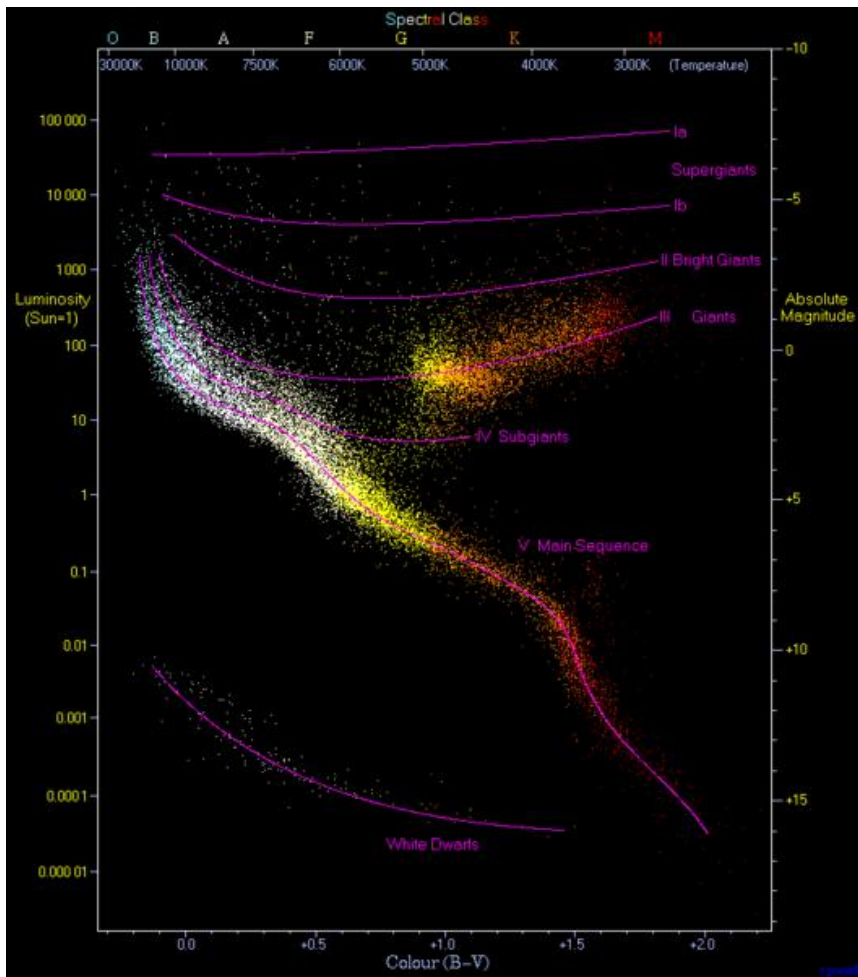


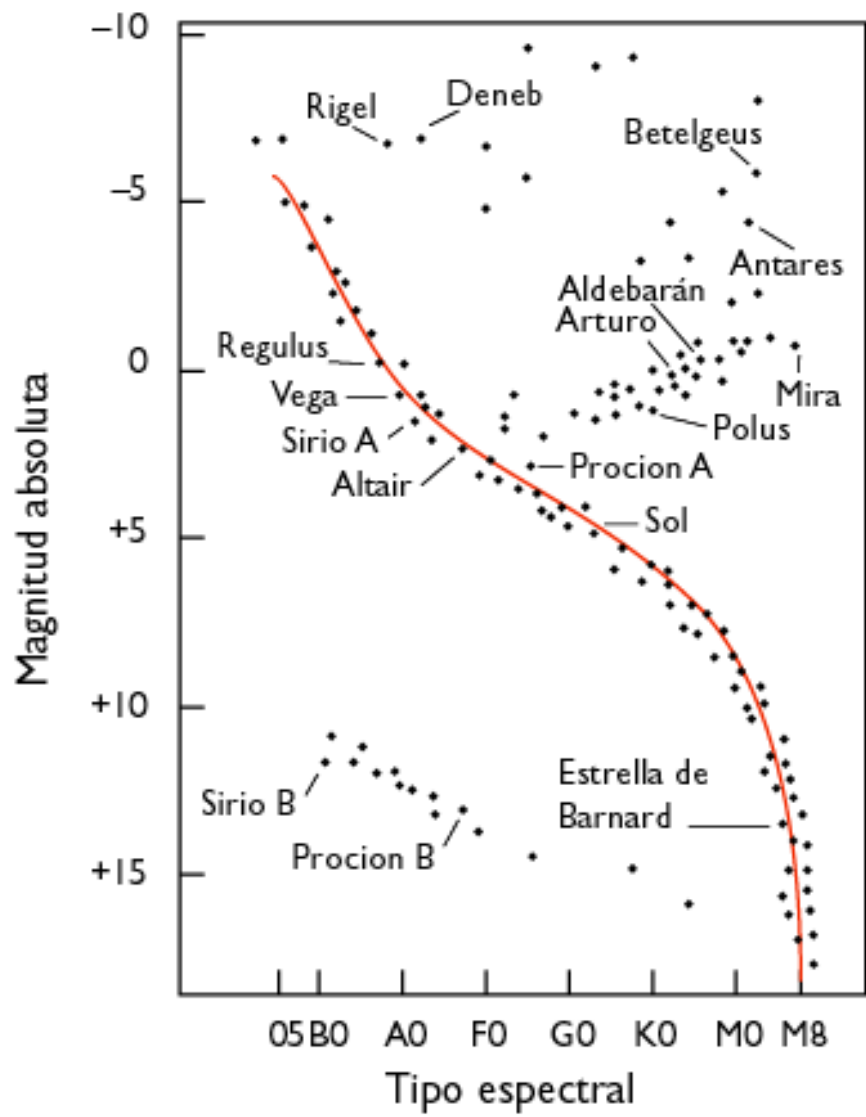
Da Lei de Steffan-Boltzmann:

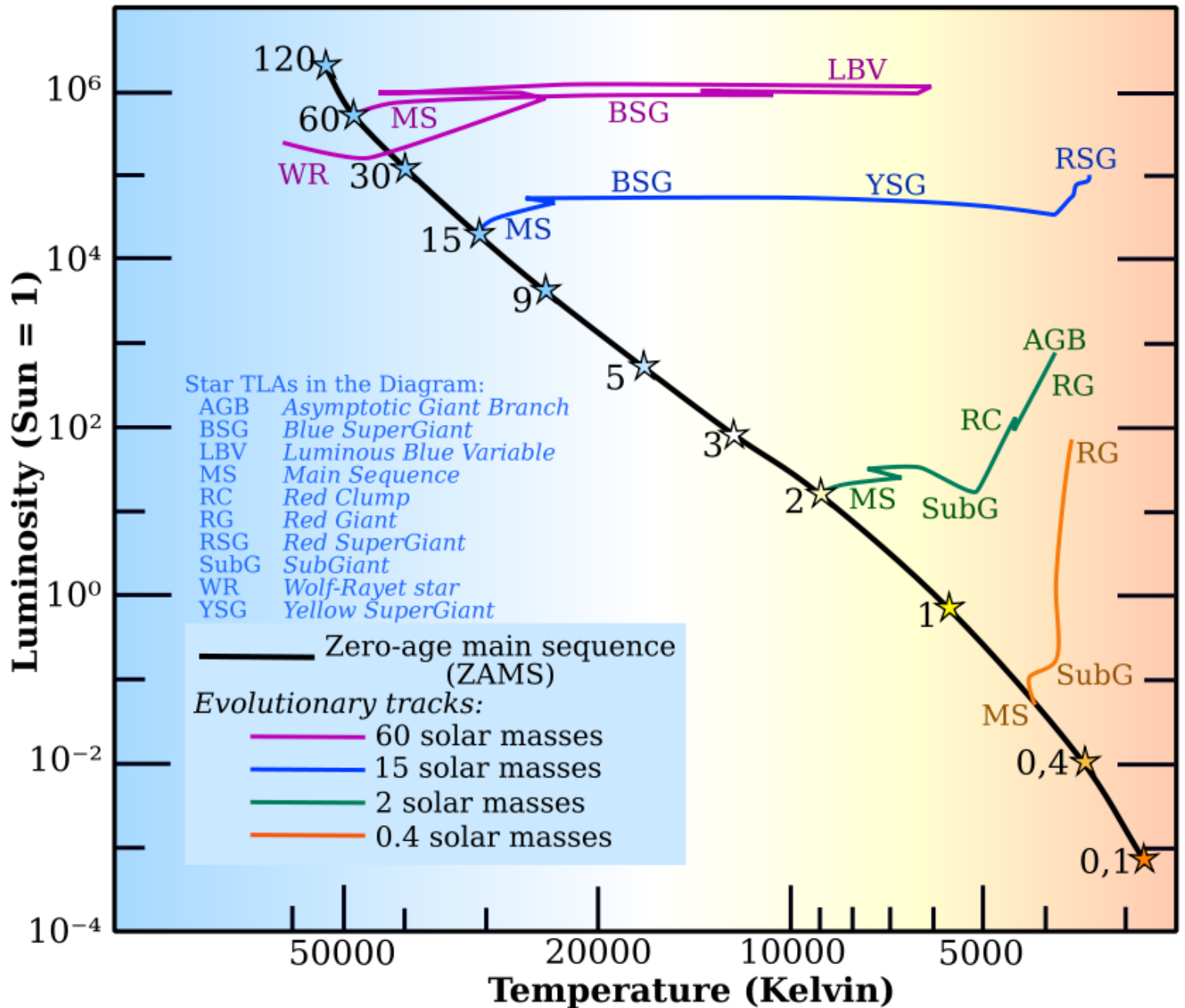
$$L=4\pi R^2 \sigma T^4$$





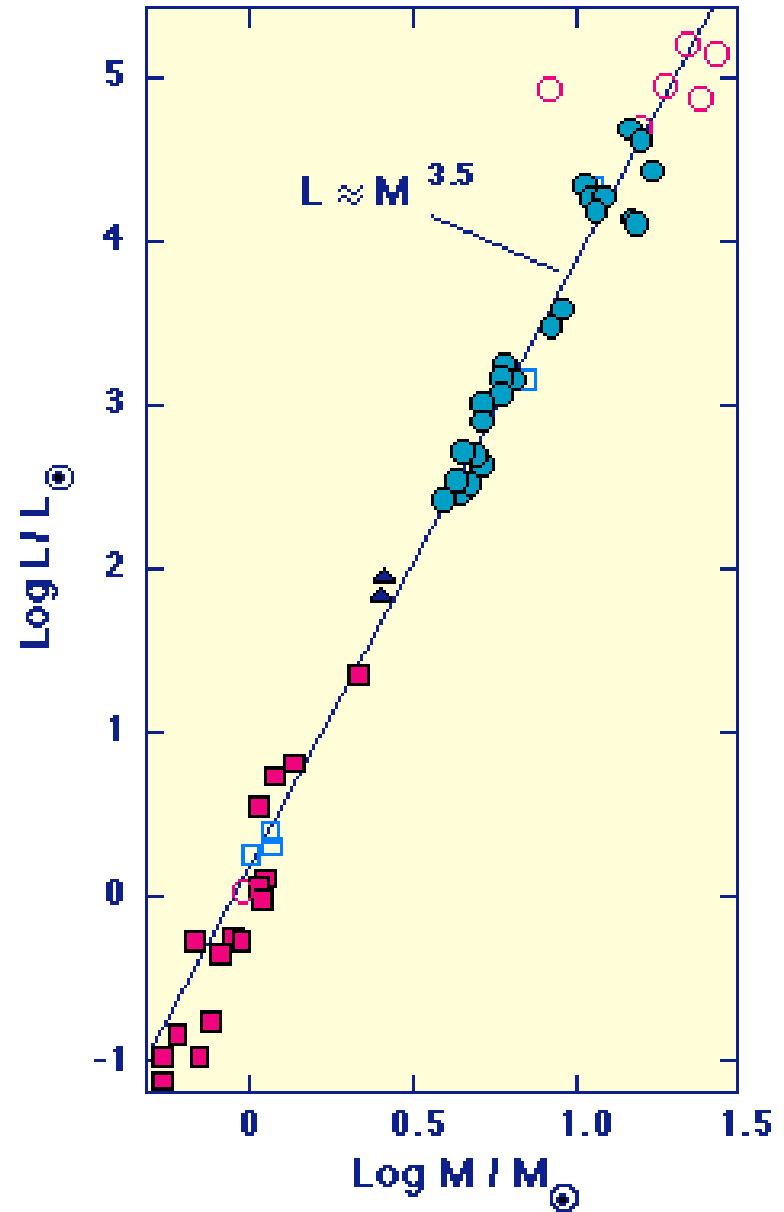




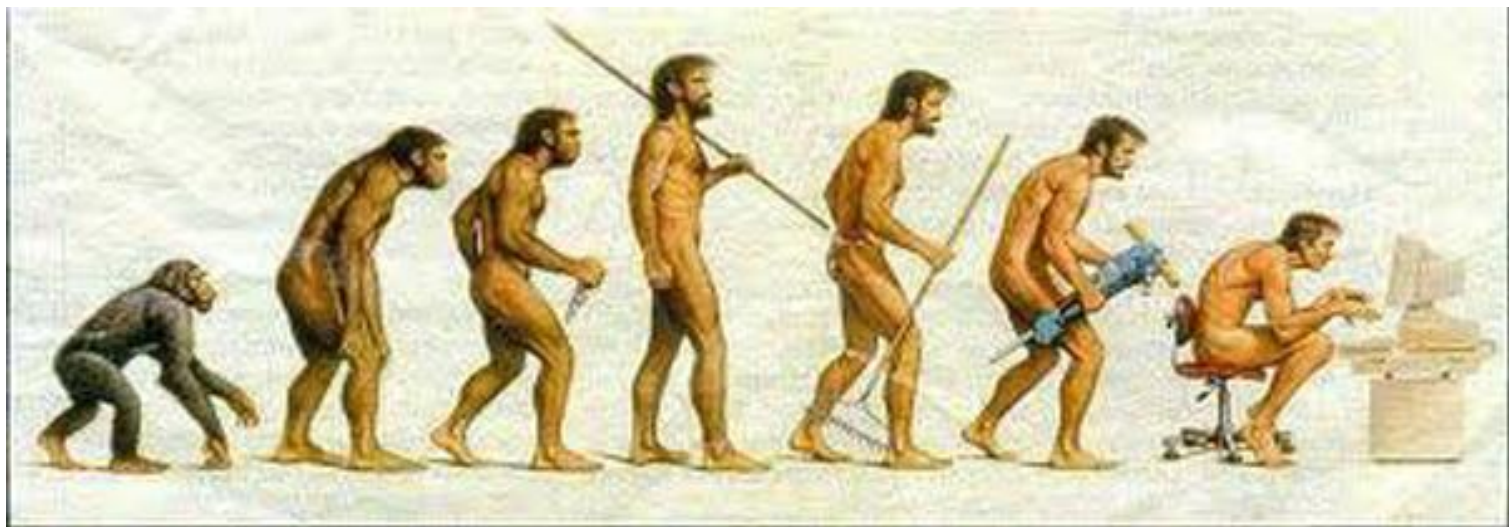
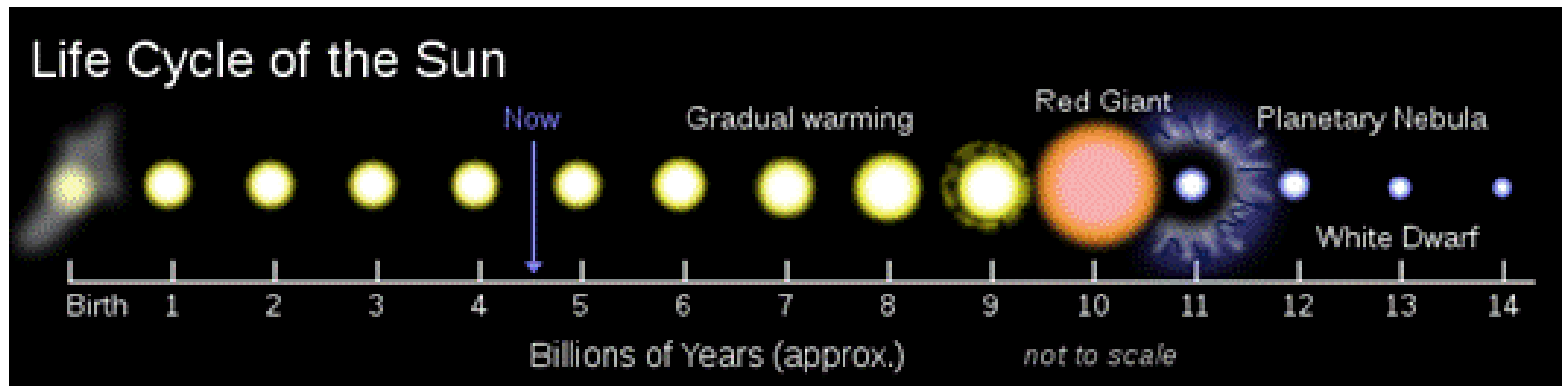


Relação massa-luminosidade das estrelas de sequência principal

- A luminosidade é proporcional à massa a 3.5.
- T (idade) é proporcional à massa dividido pela luminosidade.
- $T \sim M^{-2.5}$



A evolução do Sol



A evolução do Sol

