

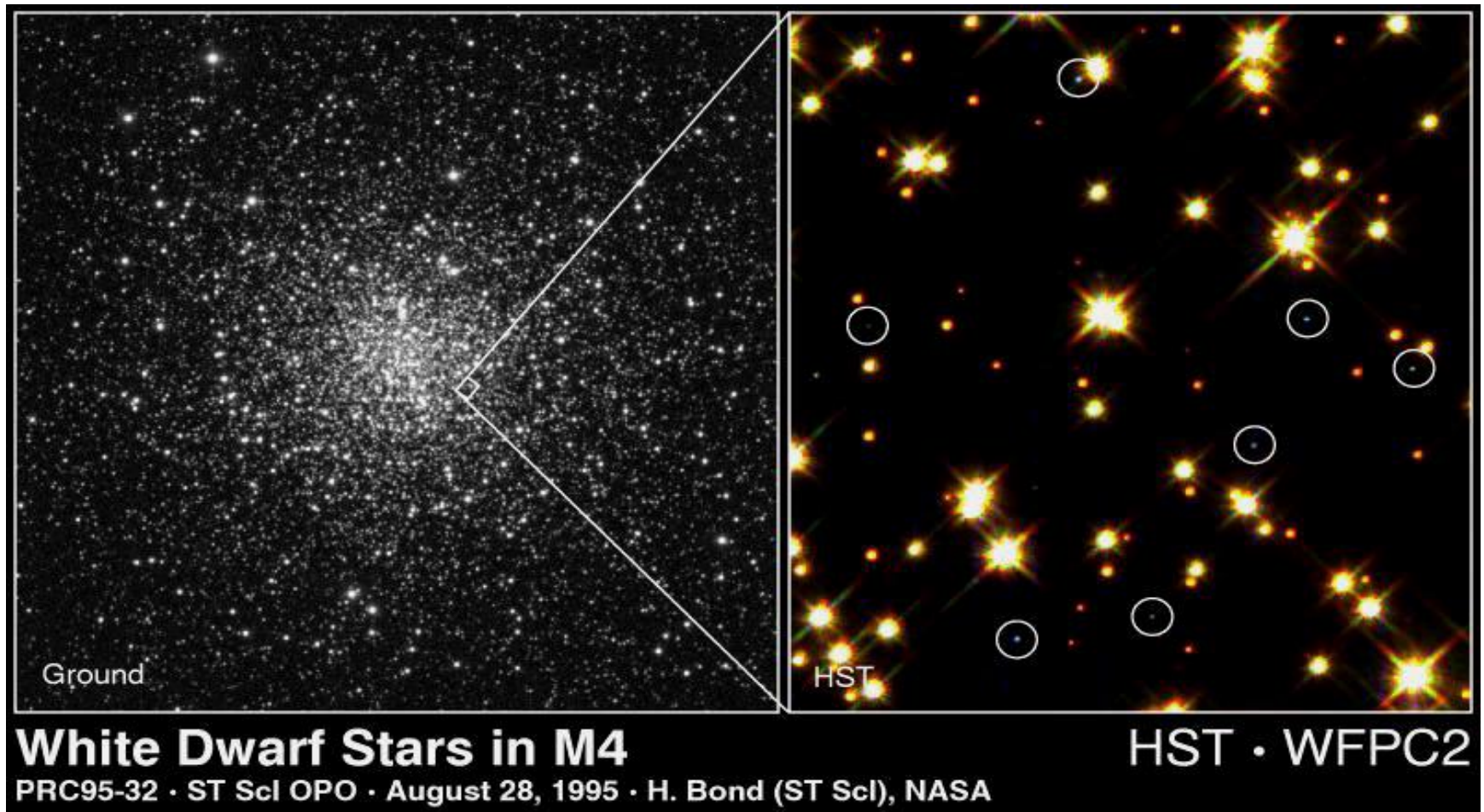
AGA0100

8.2 Estrelas: da adolescência à velhice

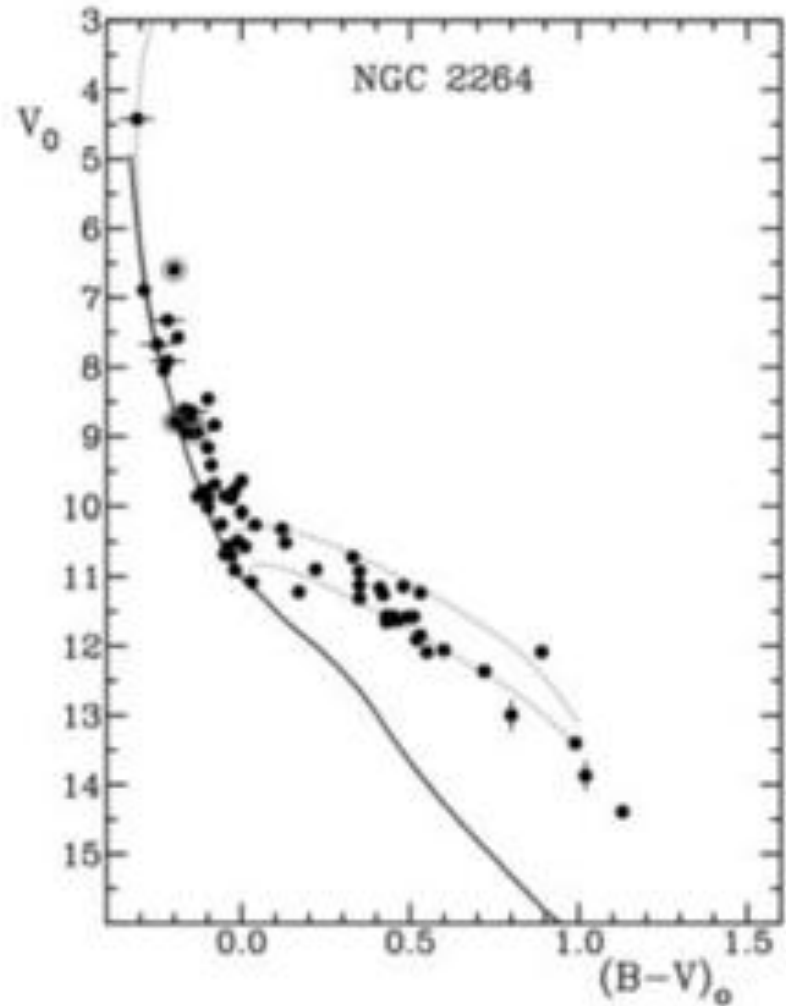
Tempo de vida na Sequencia principal

Tipo Espectral	Massa/M_{Sol}	Tempo na Sequencia Principal
O5	40	1 milhão
B0	16	10 milhões
A0	3,3	500 milhões
F0	1,7	2,7 bilhões
G0	1,1	9 bilhões
K0	0,8	14 bilhões
M0	0,4	200 bilhões

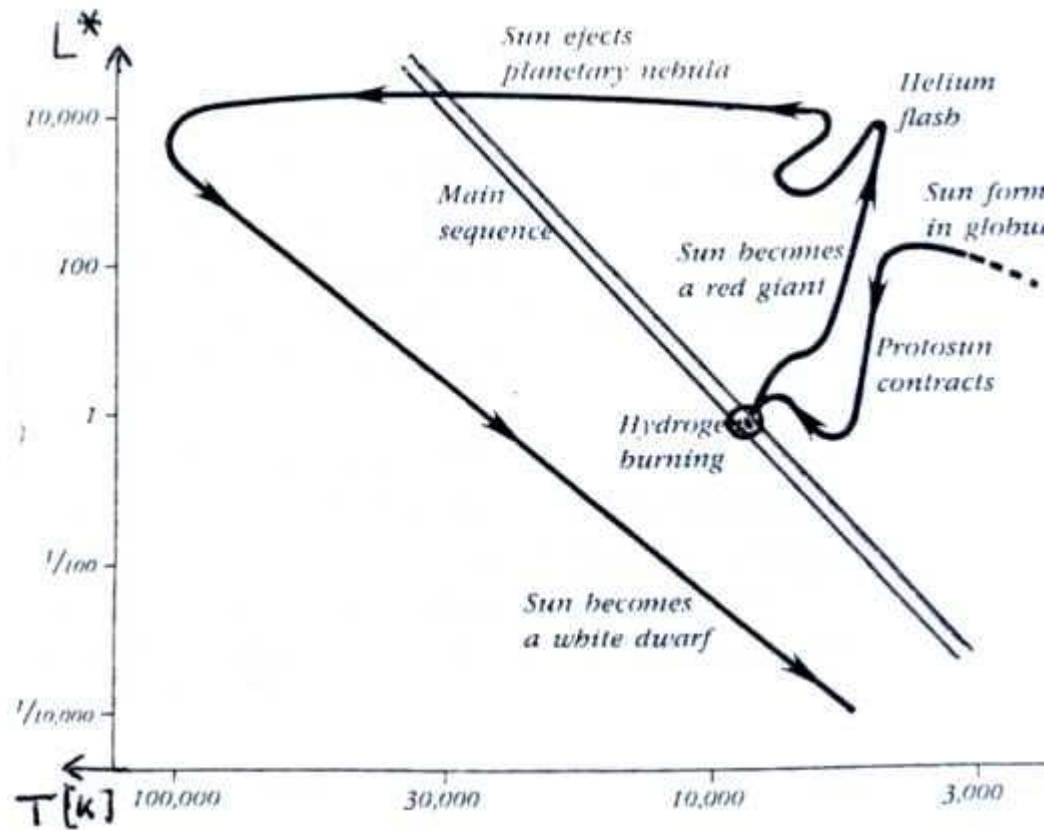
Aglomerados: uma família, uma origem.



Aglomerado NGC 2264: Sequencia Principal e estrelas T Tauri



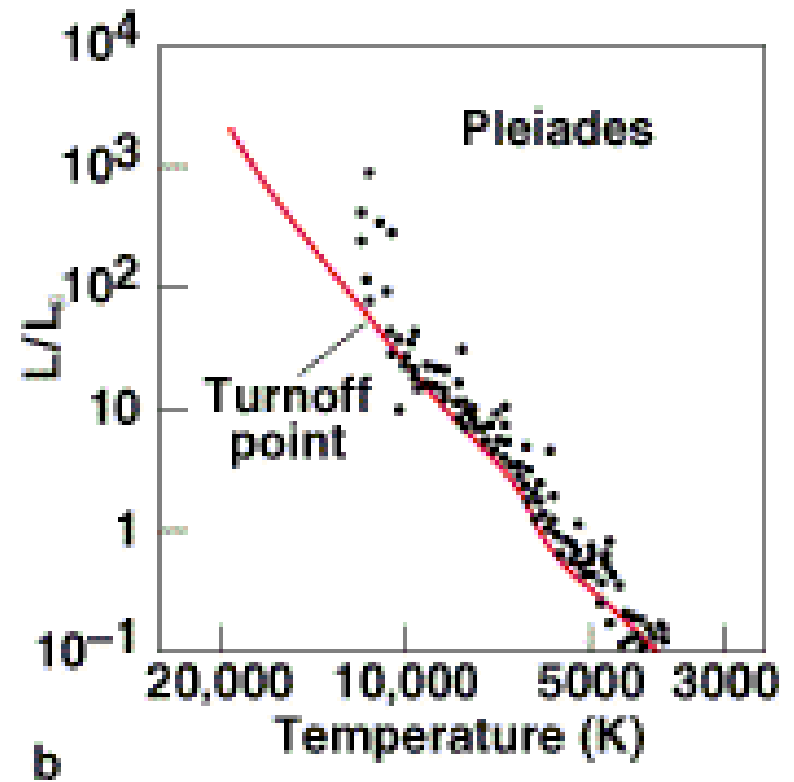
Trajétória evolutiva de uma estrela de 1 M_{sol}



O limite de Schönberg-Schandrasekhar (1942)

As estrelas deixam a Sequencia Principal quando 9% da sua massa for transformada em Hélio, no núcleo

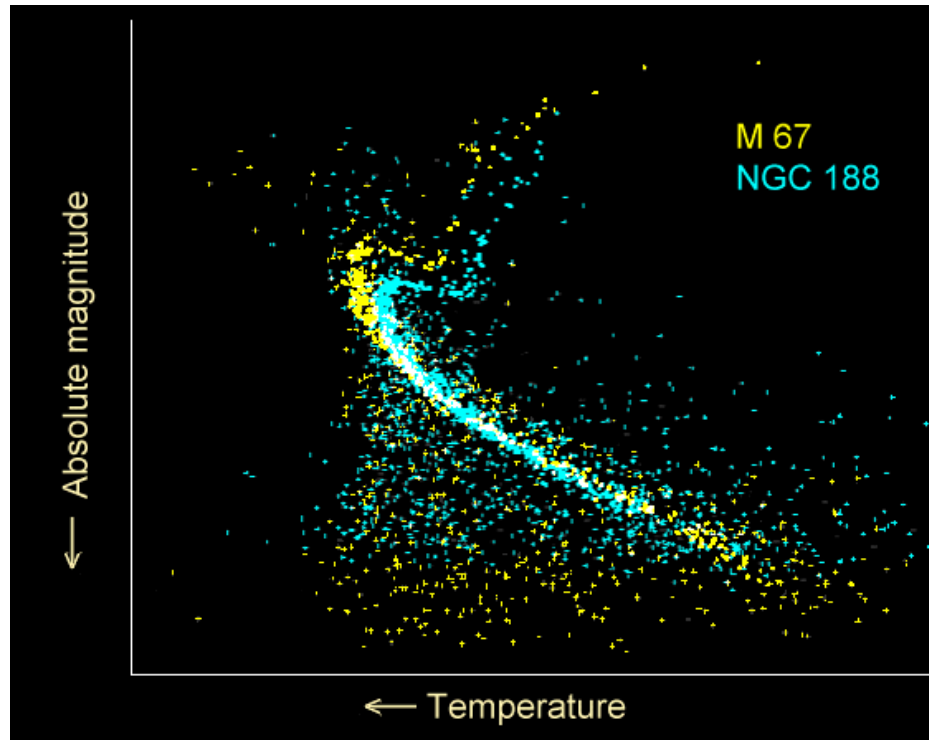
- Pleiades
- $T \sim 100$ Milhões de anos



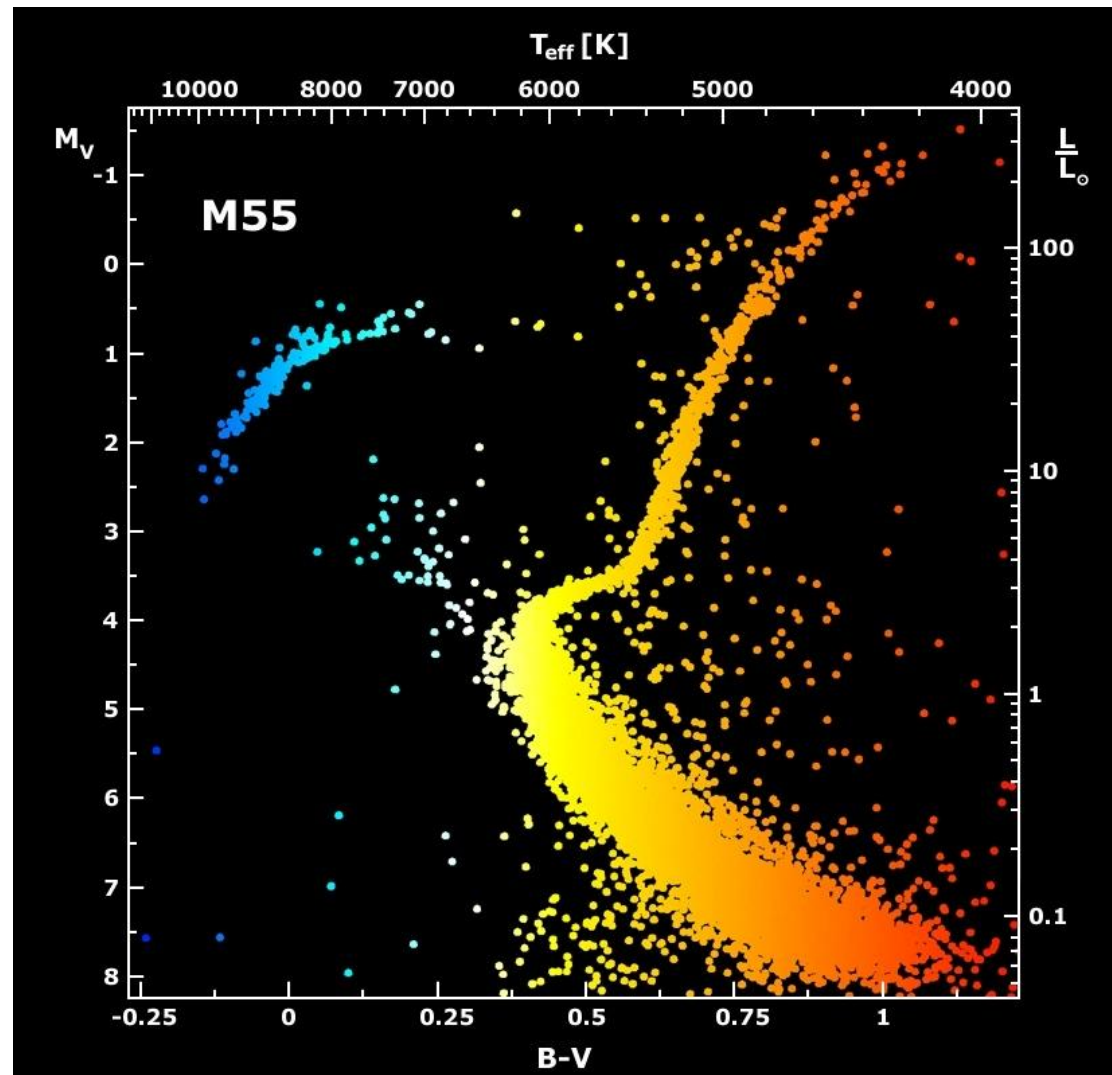
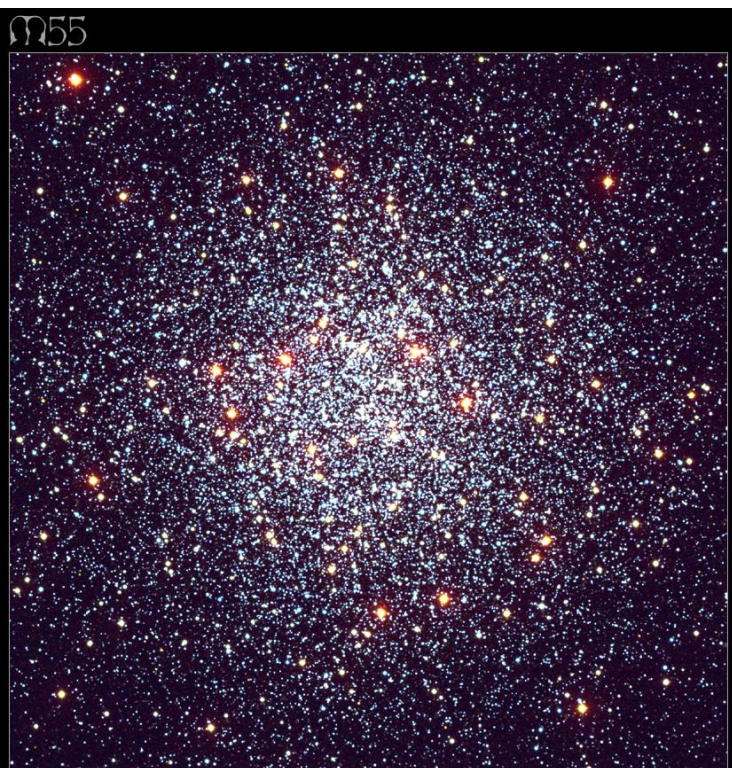
M67

NGC 188

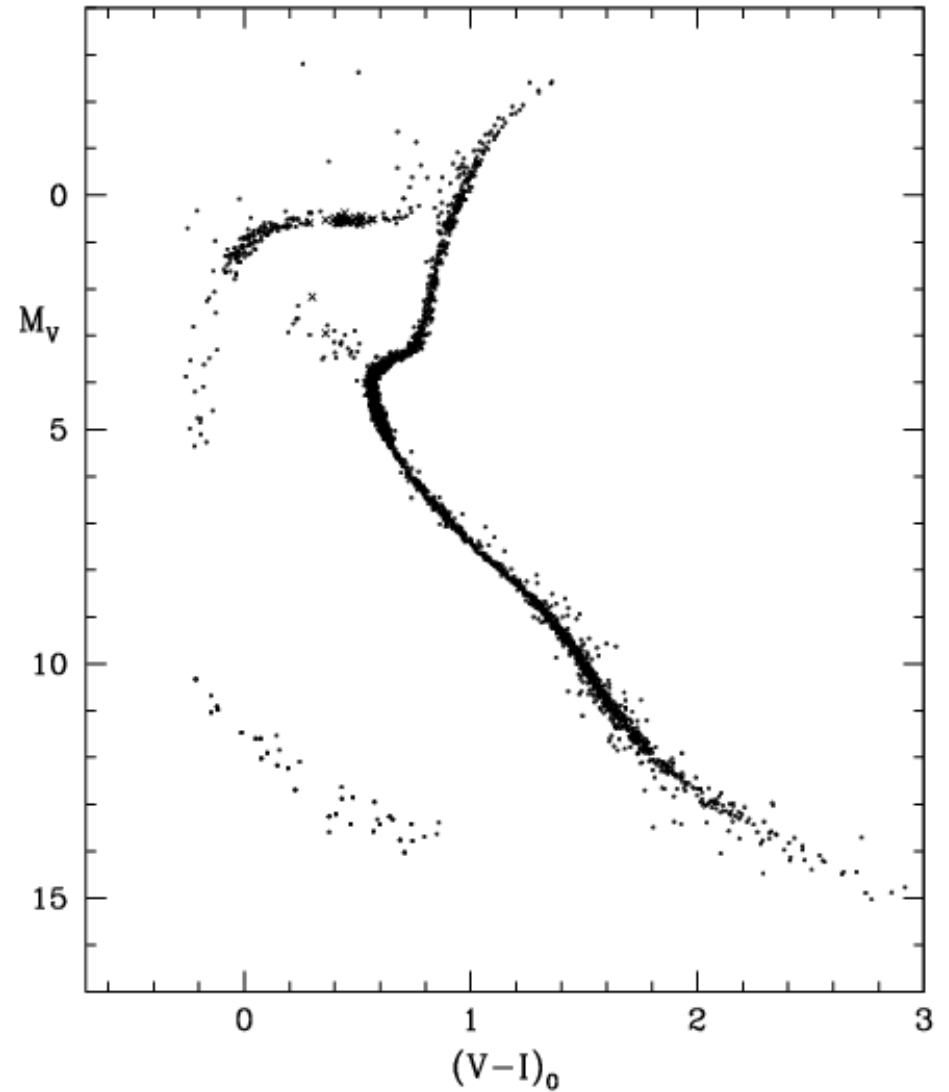
- $T \sim 3.2$ a 5 Gano

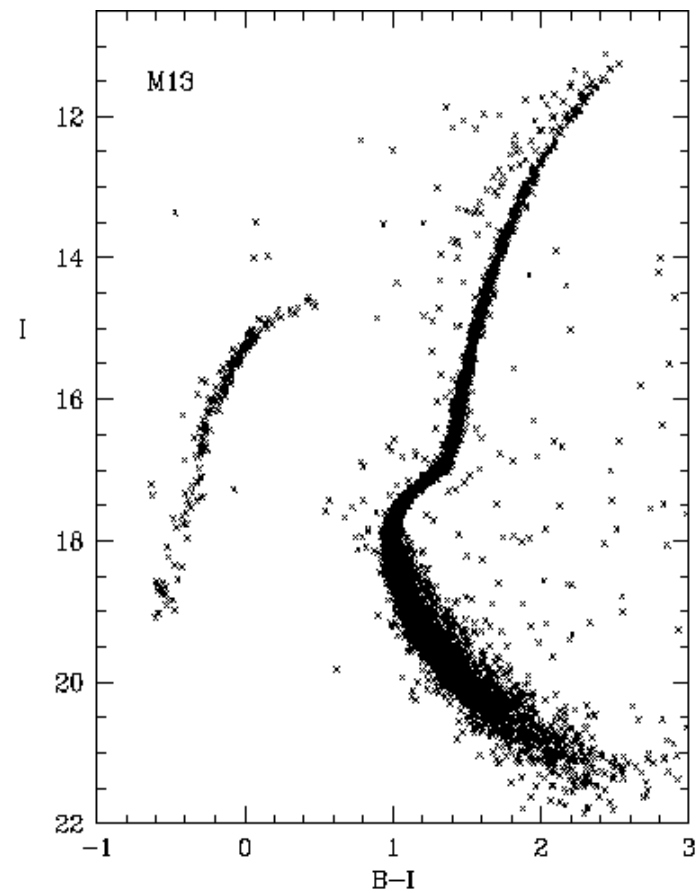


- M 55
- T ~12.3 Gano

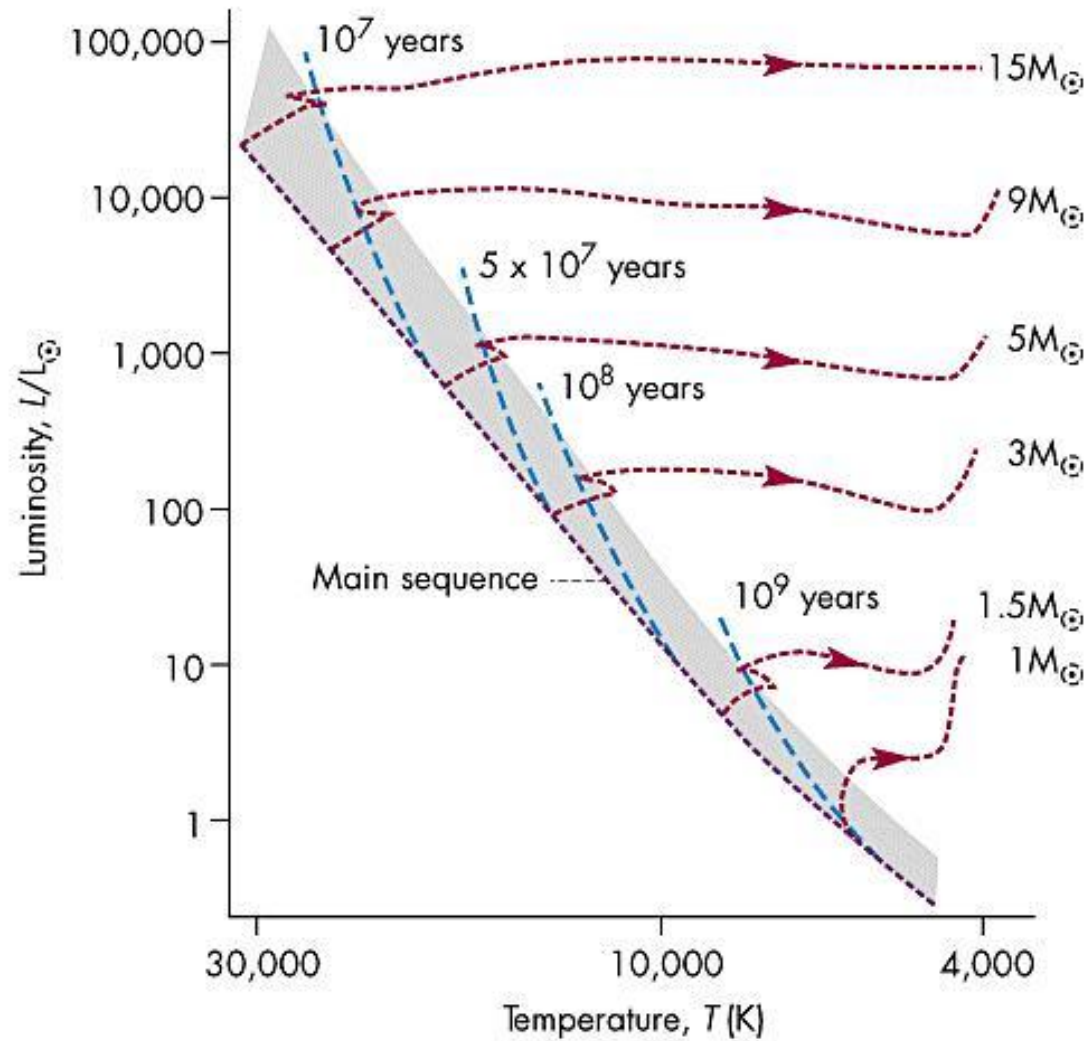


- Composição de aglomerados globulares pobres em metais

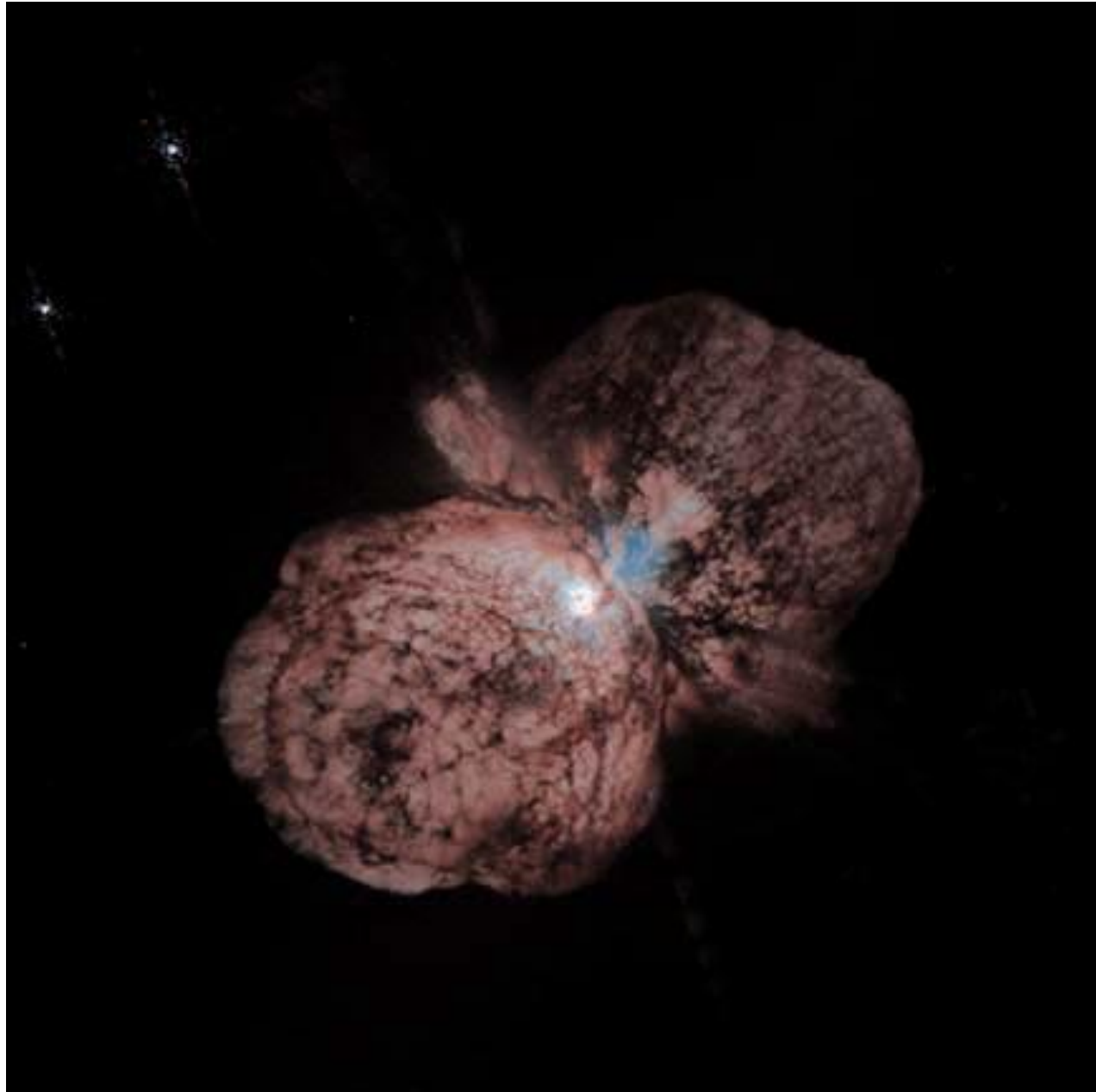




Color-magnitude diagram for 6,624 minimally crowded stars in the field of M13.



Eta Carinae



O produto final de uma estrela depende de sua massa inicial (M_{in})

- $M_{\text{in}} < 8 M_{\text{sol}}$ → anã branca
- $8 M_{\text{sol}} < M_{\text{in}} < 20 M_{\text{sol}}$ → estrela de nêutrons
- $M_{\text{in}} > 20 M_{\text{sol}}$ → buraco negro

