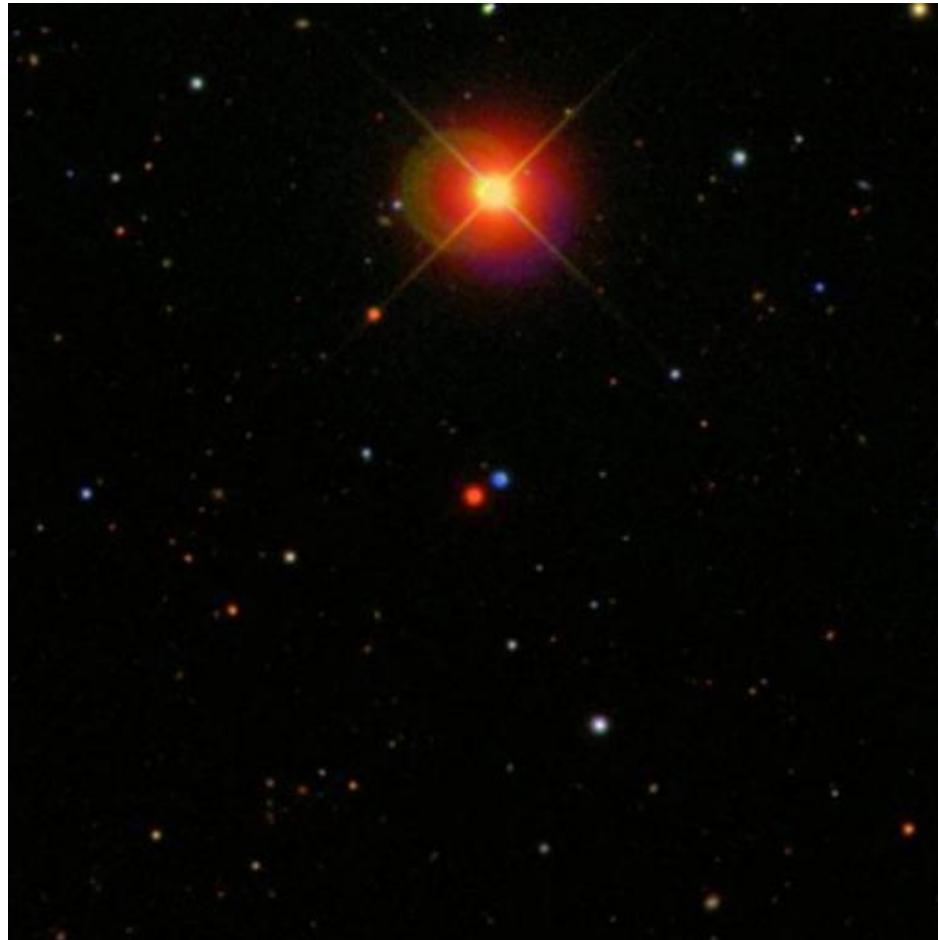
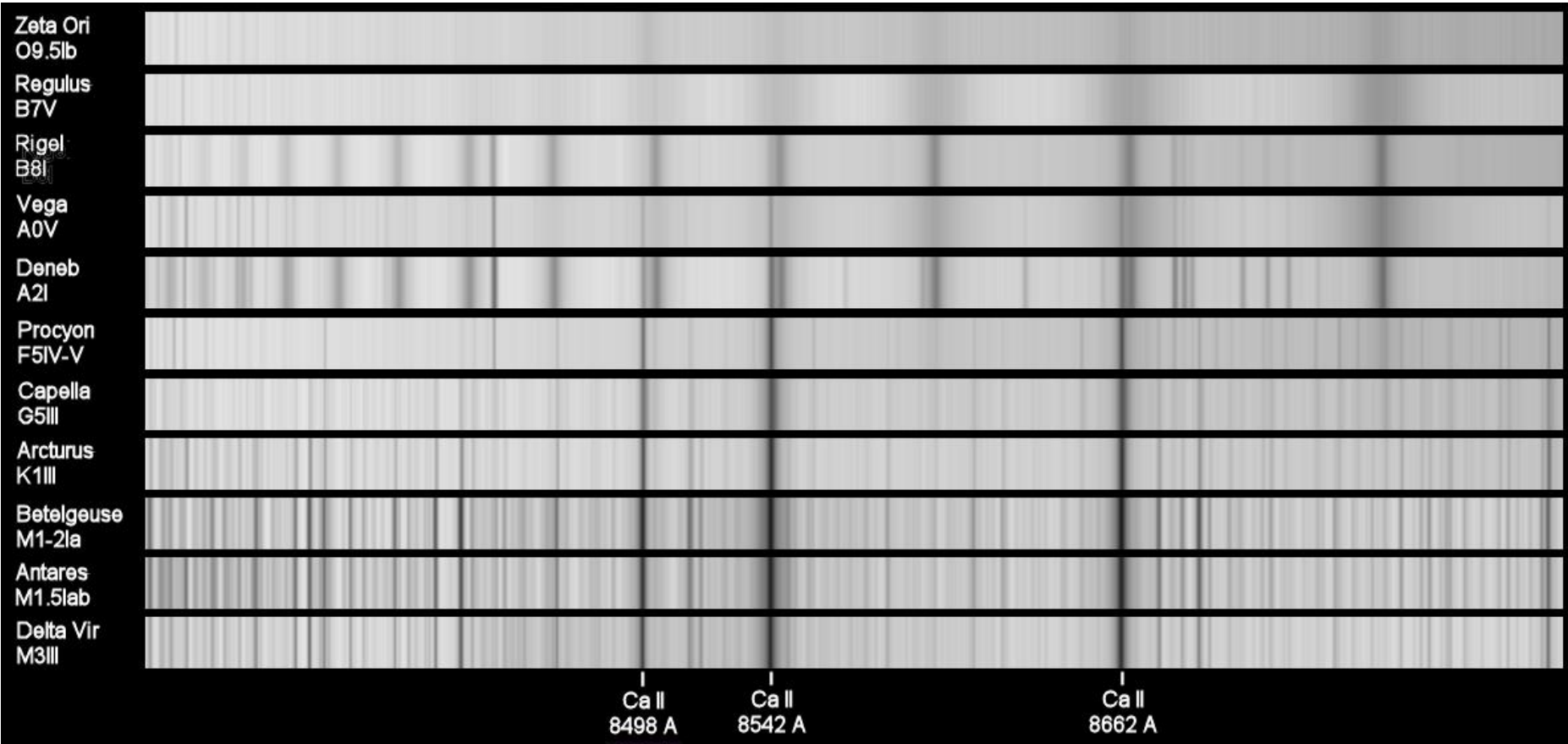


AGA 0100

7.1 Classificação espectral: a temperatura das estrelas



Espectroscopia



Hydrogen



Helium



Lithium



Oxygen



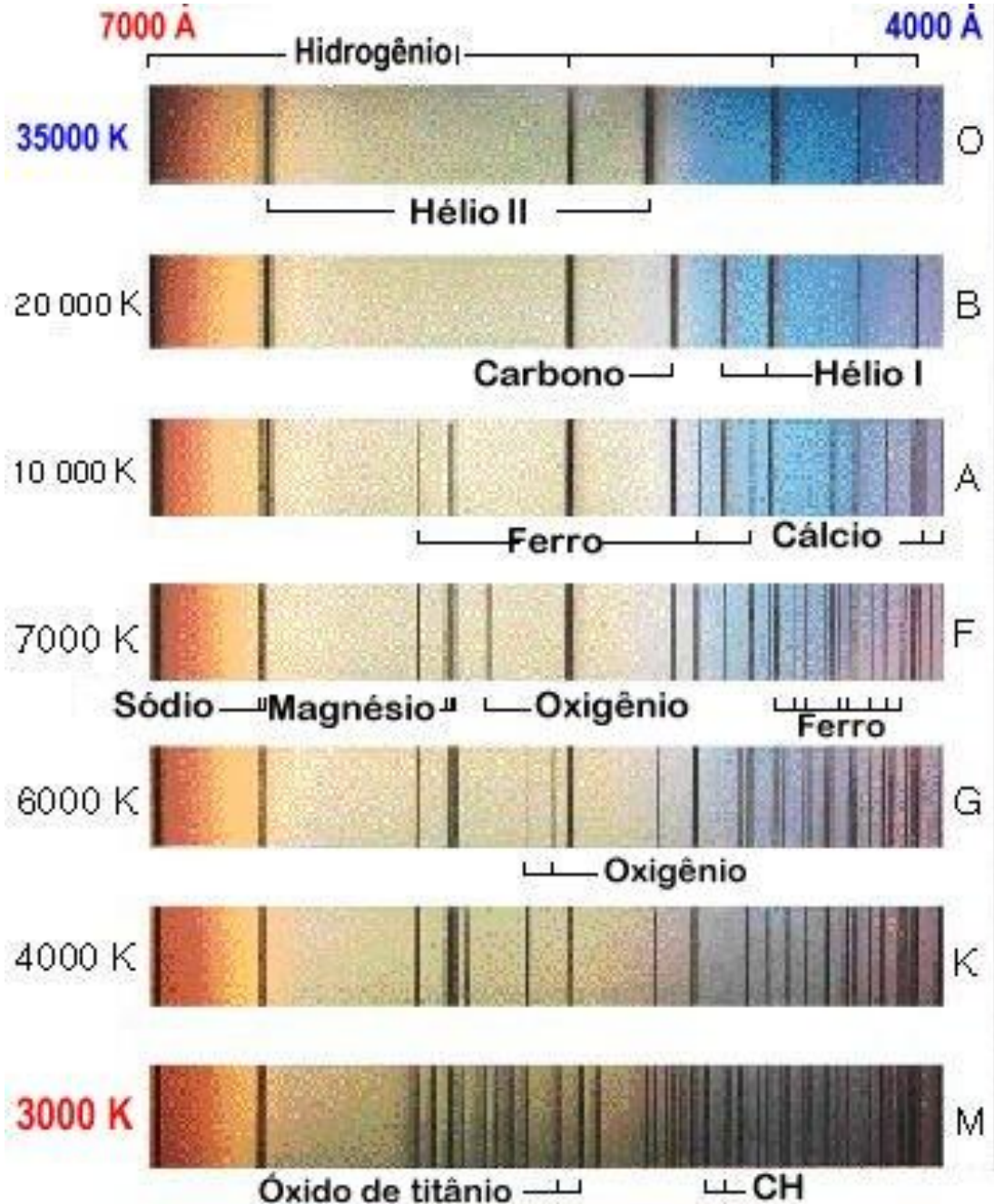
Carbon



Nitrogen

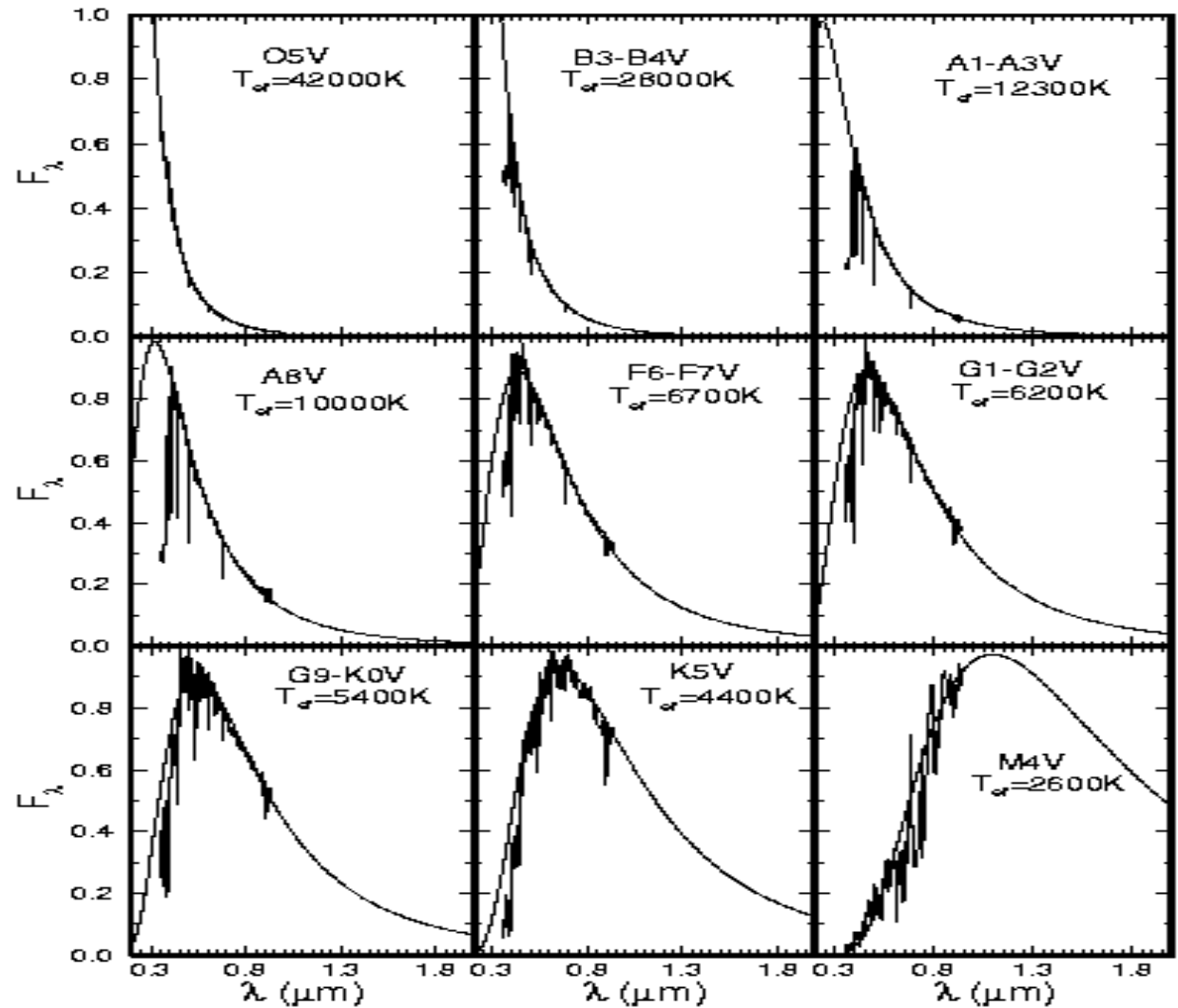


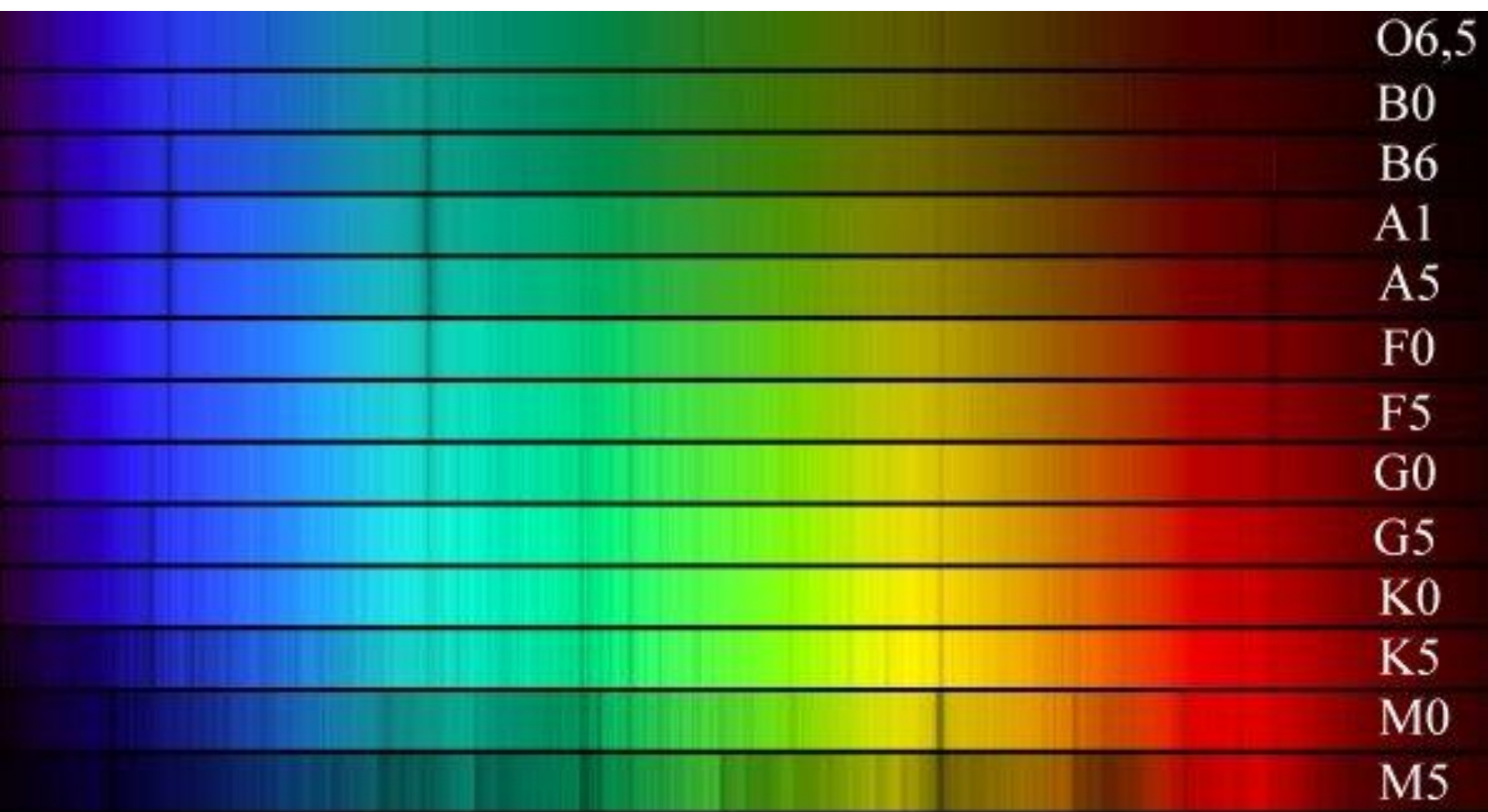
- Tipos de espectros:
A descoberta do Hélio



Lei de Wien: $\lambda_{\max} = 3 \times 10^6/T(K)$ nm

$T(K) = 3 \times 10^6/\lambda_{\max}$

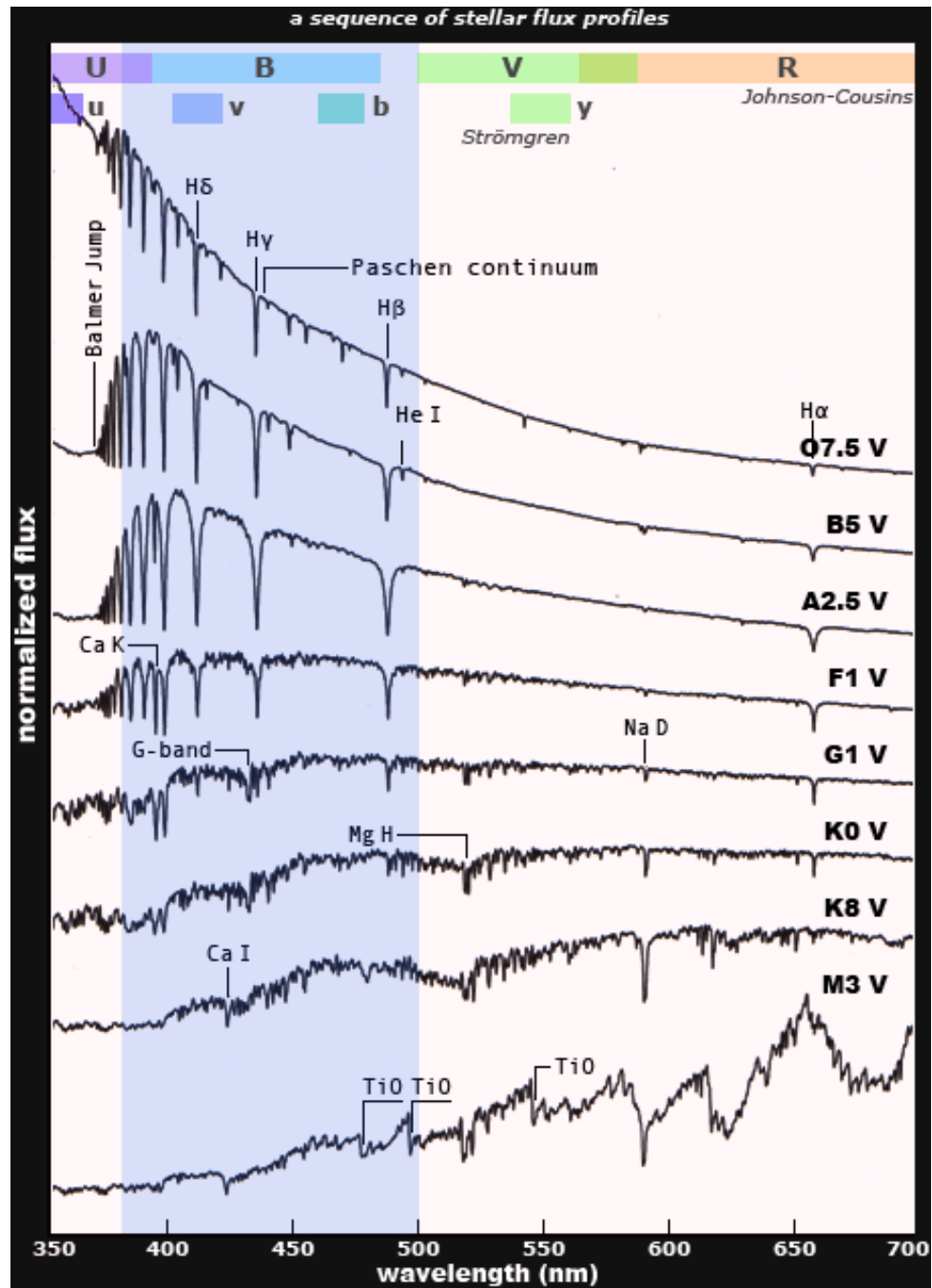




4000Å

7000Å

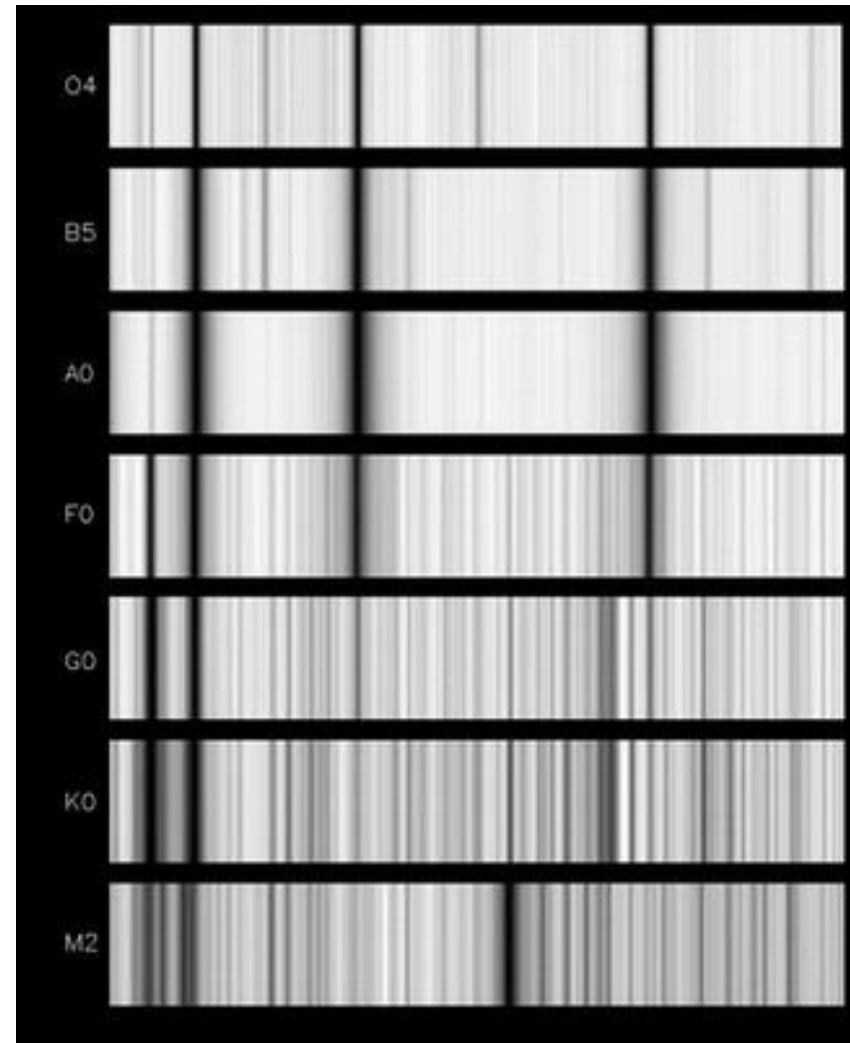
A partir dos espectros podemos determinar as abundâncias dos elementos químicos



Sequência de temperatura:

O B A F G K M

O Be A Fine Girl (Guy) Kiss Me



Subclasses de temperatura

- Cada classe principal tem 10 divisões:

B0, B1, B2.....B9

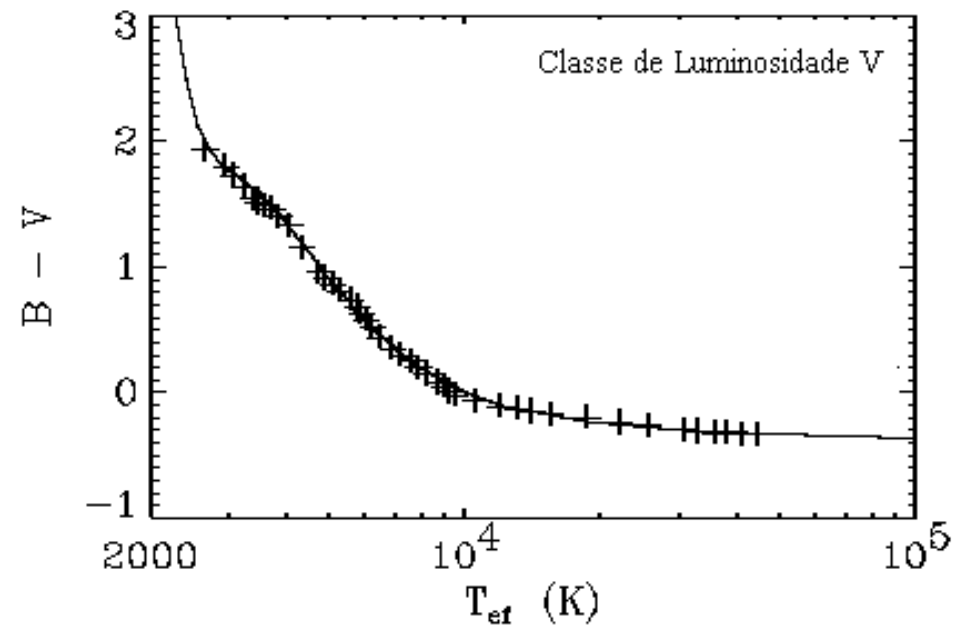
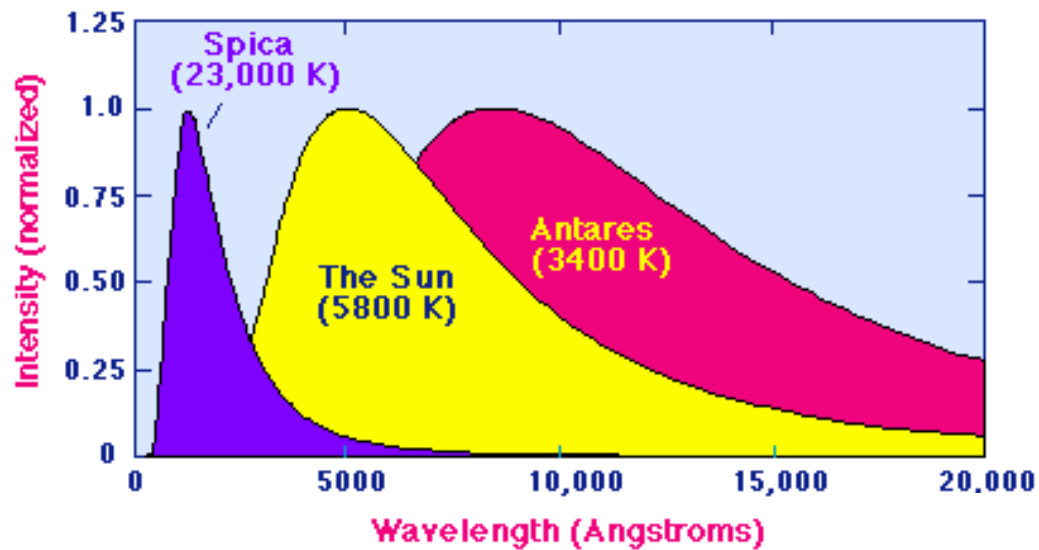
B0 é mais quente e B9, a mais fria

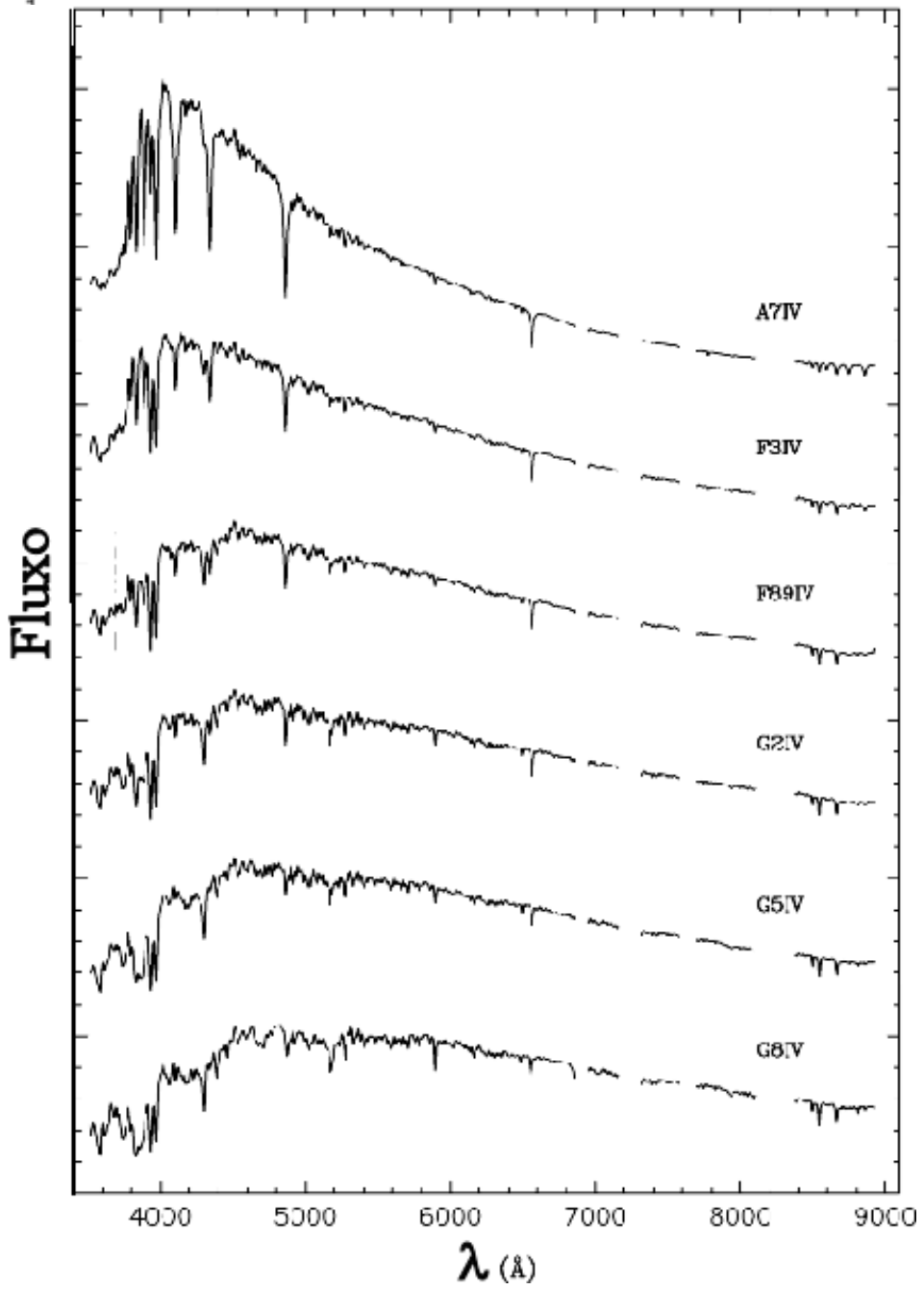
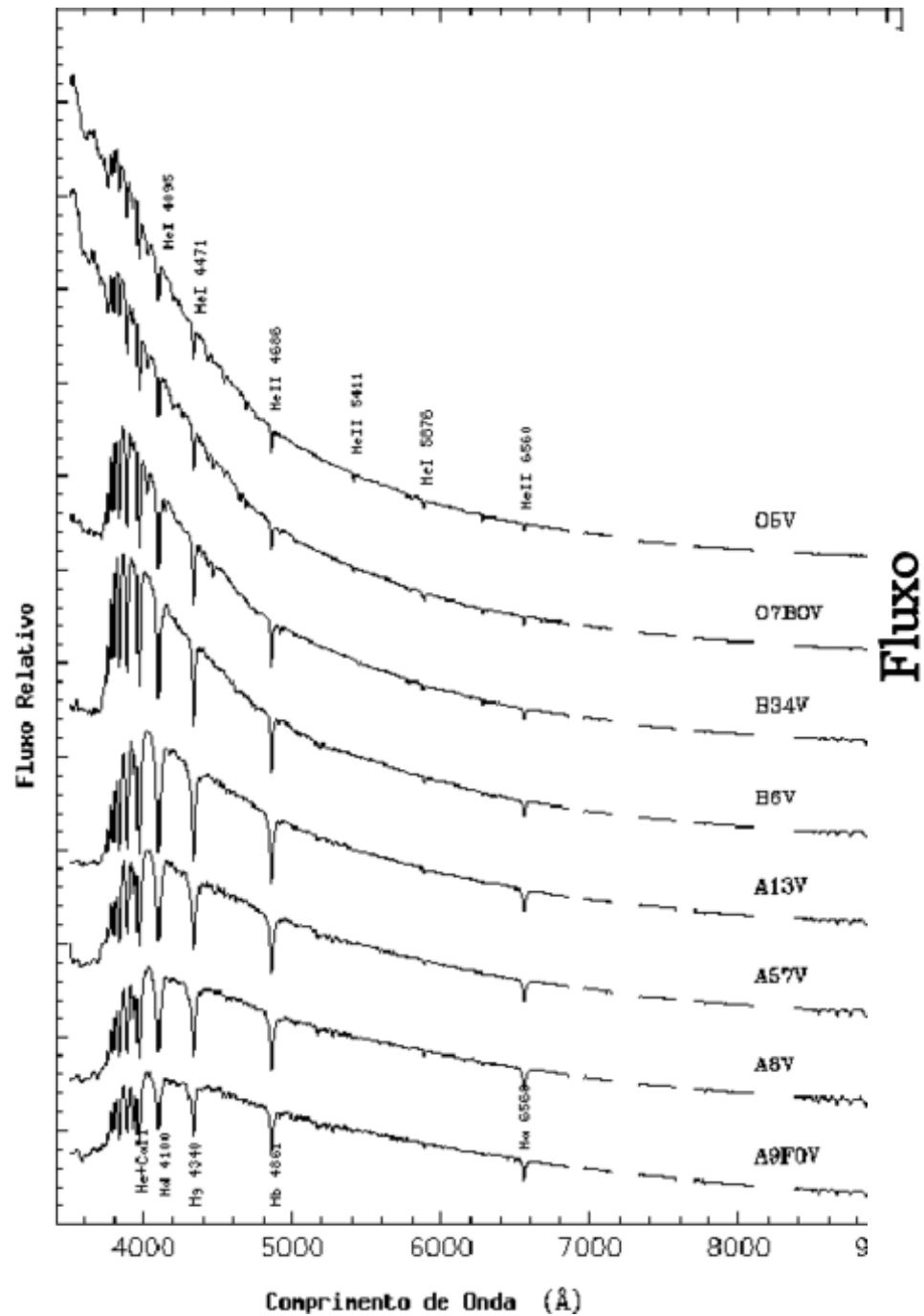
- Mais tarde se subdividiu ainda mais:

F3.5 ou M4.5

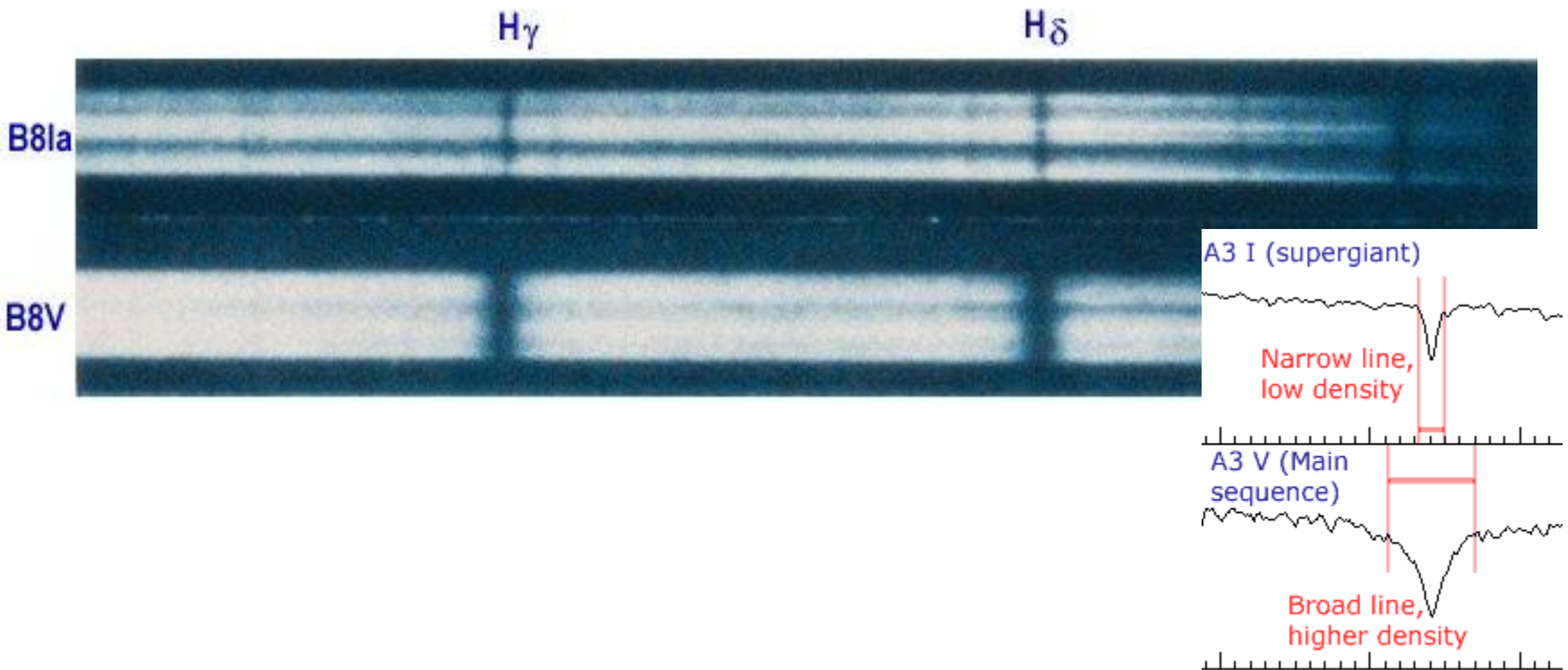
- O Sol é uma estrela de tipo espectral G2.

A temperatura se relaciona com o índice de cor





Luminosidade



Anãs marrons

- Objetos com $M < M_{\text{s}}/13$ não queimam Hidrogênio, mas podem queimar Deutério.
- $M < 13 M_{\text{j}}$ não queimam Deutério e são planetas.
- As primeiras anãs marrons foram descobertas em 1995 (Teide 1 e Gliese 229B).
- Anãs marrons podem ter tipo espectrais adicionais como L e T.

Sequência de temperatura, incluindo as anãs marrons (L, T):

O B A F G K M L T

O Be A Fine Girl (Guy) Kiss My Lips Tenderly