Chart of Stellar Classes

Investigating Stars: Exploration Two: Activity 1

Stellar Classes and Wavelengths of Important Elements

Spectral Type	Temperature (K)	Spectral Lines
O	28 — 50,000	Helium, very few lines overall, no hydrogen lines
B	10- 28,000	A little helium, some hydrogen
A	7,500 — 10,000	Very strong hydrogen, some sodium
F	6,000 — 7,500	Weaker hydrogen, stronger sodium, weak calcium lines, iron visible but weaker than H_{gamma}
G	5 — 6,000	Weak hydrogen, strong iron, calcium lines very strong, iron strong
K	3.500 — 5,000	Many lines visible between H_{gamma} and H_{Δ}, iron weak, hydrogen almost invisible, calcium weaker, iron weaker
M	2,500 — 3,500	Titanium oxide bands at 4750 and 4950 Å, many, many lines in spectrum

Wavelengths of Some Elements in Stellar Spectra

Spectral Lines	Wavelengths (Å) (rounded off)
Hydrogen (H_{σ}, H_{β}, H_{gamma}, H_{Δ})	6600, 4800, 4350, 4100
Calcium	3930, 3960
Helium	4200, 4400
Sodium	5800
Iron	4300
Titanium Oxide bands	Lots of lines between 4900 and 5200, 5400-5700, 6200-6900