

ASTR 1030 - Solar System Astronomy

20 Brightest Stars

Rank/Star	Constellation	Spectral Type	Luminosity (L_{Sun})	Distance (ly)	Feature(s)
1. Sirius A, B	Canis Major	A: Main Sequence	26	8.6	(1) Brightest star in our sky. (2) Binary. The companion is a white dwarf.
2. Canopus	Carina	F: Supergiant	13,000	313	(1) Dying star with 8-9 solar masses. May produce a rare neon-oxygen white dwarf.
3. α Centauri	Centaurus	G: Main Sequence	1.6	4.4	(1) Closest star system - a triple star. (2) Similar to our Sun.
4. Arcturus	Boötes	K: Horizontal Branch	170	37	(1) A halo star passing through the disk at very high speed. (2) Horizontal Branch.
5. Vega	Lyra	A: Main Sequence	60	25	(1) Has a dust disk surrounding it. (2) Part of the summer triangle.
6. Capella	Auriga	G: Horizontal Branch	70 & 77	42	(1) Binary system of two G stars. (2) Both are dying - one on the horizontal branch, the other about to helium flash.
7. Rigel	Orion	B: Blue Supergiant	70,000	772	(1) 17 Solar mass star that is dying - undergoing helium capture. (2) May supernova.
8. Procyon	Canis Minor	F: Main Sequence	7.4	11.4	(1) Binary. The companion is a white dwarf.
9. Betelgeuse	Orion	M: Red Supergiant	38,000	427	(1) Near end of life. Could be forming iron core and supernova. (2) Huge! 2.8 Au in diameter (it would extend past Mars!).
10. Achernar	Eridanus	B: Main Sequence	3,600	144	(1) Rotating so fast that it is flattened. Minor axis is roughly 2/3 of major axis.
11. Hadar	Centaurus	B: Giant	100,000	335	(1) A triple star system. The brightest stars are dying identical twins in a close binary that should have an interesting fate. (2) The more massive star is dimmer.
12. Altair	Aquila	A: Main Sequence	10.5	17	(1) Part of summer triangle. (2) Very rapidly rotating. (3) Moving fast.
13. Acrux	Crux	B: Subgiant	22,000	321	(1) Part of the Southern cross. (2) A triple system. A close binary orbiting a large B-spectral star.
14. Aldebaran	Taurus	K: Giant	350	65	(1) Large - would extend half way to Mercury. (2) Has a large planet or brown dwarf in orbit.
15. Spica	Virgo	B: Main Sequence	23,000	260	(1) Close binary of two B stars.
16. Antares	Scorpio	M: Red Supergiant	38,000	604	(1) Huge. Nearly 4 AU in diameter. (2) About 18 M_{Sun} and may supernova soon.
17. Pollux	Gemini	K: Giant	45	34	(1) Beautiful orange color.
18. Fomalhaut	Piscis Austrinus	A: Main sequence	18	25	(1) Surrounded by a disk of dust - could be forming planets!
19. Deneb	Cygnus	A: Blue supergiant	170,000	2,500	(1) Massive! 25 M_{Sun} and dying fast. The farthest away first magnitude star. (2) Summer triangle.
20. β Crucis (Mimosa)	Crux	B: Giant	37,000	352	(1) Just now running out of hydrogen. (2) Will supernova in a few million years.