This sample of 313 stars, our own Sun included ("Sample S"), is found to lie in a region, around 3000 ly in radius, essentially confined to the sandwich-filler, or "thin disk," part of the overall galactic disk. Of the few Sample-S interlopers born outside the sandwich filling, and now temporarily passing through it on orbits oblique to the thin disk, the best known is α Boo. It is convenient here to use the term "Population P" for the ensemble of non-brown-dwarf, non-white-dwarf, stars in the much larger, 3000-ly radius, subdisk-of-the-thin-disk from which our (tiny) Sample S is drawn. This P-region is itself only a (tiny) fraction of the overall galactic thin-disk region, ~50,000 ly in radius.

Sample S, being formally defined by an apparent-magnitude cutoff as opposed to a distance cutoff, is itself far from statistically representative of Population P. *(a)* In P, the O stars are vanishingly rare. A tabulation by Glenn Ledrew, in *JRASC* **95** (2001), pp. 32ff, suggests an O-star frequency within P of just 0.00003%. By contrast, O stars comprise a hefty 2% of S. A similar overrepresentation occurs for the B, A, F, G, and K stars, with Ledrew's tabulation suggesting that these MK temperature types might have a respective frequency within P of 0.1%, 0.6%, 3.2%, 8.0%, and 12.9%. (A small caveat: unavoidable rounding errors make our various percentages, throughout this discussion, capable of adding up to 99% instead of 100%, or to 99.9% instead of 100.0%.) By contrast, these five types comprise 28%, 19%, 9%, 13%, and 21%, respectively, of S. *(b)* In P, something on the order of 76% or 78%–different authorities are perhaps mildly discrepant–must be M stars. (Ledrew's tabulation, in particular, suggests an M-star frequency of 78.2%.) Only a few of these (the Ledrew tabulation suggests 0.04%) have evolved to beyond the main-sequence stage of stable core hydrogen fusion. By contrast, the M stars comprise just 7% of S. All of them have evolved beyond the main sequence, having started their lives as types hotter than M or K.

The statistically anomalous character of S is further illustrated by the fact that in S, in each of the Big Six MK temperature types hotter than M, the stars that have ended stable core hydrogen fusion (and so have evolved out of Main Sequence MK luminosity class V into one of the brighter MK luminosity classes IV, III, II, or I) are in the numerical majority. In Ledrew's tabulation, the percentages of evolved stars in F, G, and K, as a percentage of the overall respective F, G, and K populations, are just 2.0%, 2.5%, and 3.8%. Consistently with this, the 1991 Gliese-Jahreiss catalogue of the nearest 1000 stars (containing, we admit, not only the local OBAFGKM VI, V, IV, III, II, and I stars, but also at least many of the local white dwarfs) assigns less than 1% of its population to MK luminosity classes IV, III, II, or I.

Sample S–so rich, we stress, in varieties of star statistically infrequent within Population P–harbours physical extremes. Although the extremes are for the most part not written into our table, they can be studied easily, from such sources as Prof. James Kaler's http://stars.astro.illinois.edu/sow/sowlist.html.

Around 58 of our 314 each radiate, across the full spectrum from X-ray through UV and optical to IR and radio, at least as much power as is radiated by 10,000 Suns. The most dramatic is ζ Ori, with a bolometric luminosity of 375,000 Suns–making ζ Ori notable not within S alone, but even within the overall galaxy. Several others are not far behind, among them ζ Pup (360,000 Suns, suggests Kaler, as of July 2008 revising his earlier, circa-1999, suggestion of ~750,000 Suns). Just two stars in Sample S, nearby τ Cet and nearby α Cen B, radiate more feebly than our Sun, each at about 0.5 of the Sun's bolometric luminosity. – The principal determinant of stellar luminosity, for any given phase in stellar evolution, is mass, with even small variations in mass translating into large variations in energy output. The exceptional luminosities of ζ Ori and ζ Pup, in particular, are a consequence of their exceptionally high respective masses, 20 $M_\odot$ and 40 $M_\odot$. (Kaler now suggests 40 $M_\odot$ for ζ Pup, while having previously suggested 60 $M_\odot$. He additionally notes from the literature the lower suggested value of 22.5 $M_\odot$. – Theory does predict, although our small Sample S does not manage to illustrate, the possibility of masses up to the Eddington stellar-mass limit, somewhere above 100 $M_\odot$, and even of some "super-Eddington" stars. (Eddington's limit is by definition attained when luminosity rises so high as to make the outward radiation push, tending to tear a star apart, exceed the inward gravitational pull.)

Rotation periods in Sample S vary from far in excess of our Sun's to far short of our Sun's (which we may here take as a nominal 27 d; refined treatments of solar rotation provide for rotation-period variations both with solar latitude and with solar depth). Spectroscopy yields for γ Cep a period of 781 d, i.e. of 2.14 y. Kaler suggests that the respective rotation periods of α Hya and ε Crv could be as long as 2.4 y and 3.9 y. At the other extreme, Kaler suggests for ζ Aql A, α Aql, and ζ Lep, respectively, 16 h, at most 10 h, and around 6 h.

Radii (as distance from centre to outermost opaque layer, perpendicular to the axis of stellar rotation) are typically greater than the solar radius. Two notable instances of stellar expansion–in other words, of notably tenuous stellar atmosphere–are α Sco (with a radius of 3.4 AU, not far short of the Sun-Jupiter distance) and α Ori (with a radius of 4.1 AU or 4.6 AU from interferometry, or alternatively 3.1 AU or 3.4 AU from luminosity-temperature deductions). Results in these extreme cases depend strongly on the wavelength selected for evaluating opacity. Observations within Population P do indicate, although our sample S does not necessarily succeed in illustrating, the possibility of still more extreme stellar radii, to values approaching ~10 AU.

The broad range of temperatures is reflected in the fact that all of the Big Seven temperature-type bins in the MK classification scheme are well occupied, however statistically skewed (as we have argued above) is the distribution in the MK Big Five luminosity-class bins (with 7 O stars, 89 B stars, 61 A stars, 28 F stars, 41 G stars, 66 K stars, and 22 M stars). At the MK temperature extremes are the hot ζ Pup (O5; 42,000 K) and the cool o [omicron] Cet (M5-10; a typical temperature for this variable is variously suggested as ~2000 K or ~3000 K).

Interesting spectral anomalies in Sample S include the sky's brightest Wolf-Rayet star (of exotic MK type W, rather than in the everyday gamut OBAFGKM), as one component in the γ^2 Vel pair, and several Be, or emission-line, stars (marked in our table, and where appropriate accompanied by notations indicating "shell," or circumstellar ejecta disk aligned nearly edge-on with the observatory line of sight). Especially worth monitoring at the moment, both photometrically and (for possible Be behaviour) spectroscopically is δ Sco, a binary system stimulated into outburst by periastron passage in 2000 and 2011, and therefore perhaps due for another outburst around 2022.

We use the flags "+nP" (n = 1, 2, ...) for companions of sub-stellar mass, such as have been found outside our solar system, in an accelerating tempo of discovery that has eventually reached even the tiny Sample S, from the 1990s onward. Such companions are typically planets, but could in principle also be brown dwarfs. We do not attempt here to define formally the difference between a planet and a brown-dwarf companion.

In a departure from our practice prior to 2017, we now give star names in all and only those cases in which star names are formally promulgated in the International Astronomical Union star-naming project, as launched in 2016 at www.iau.org/public/themes/naming_stars. Readers requiring further information on names could start with the individual star descriptions in http://stars.astro.illinois.edu/sow/sowlist.html. Richard Hinckley Allen's 1899 book *Star Names: Their Lore and Meaning* has been much cited over the decades. More recent scholarship, with duly professional attention to Arabic philology, is however, presented in Paul Kunitzsch and Tim Smart, *Short Guide to Modern Star Names and their Derivations* (Wiesbaden, 1986), and (by the same pair of authors) *Dictionary of Modern Star Names: A Short Guide to 254 Star Names and their Derivations* (Cambridge, MA, circa 2006).

In the following Remarks column, a **BOLDFACE** star name indicates a navigation star.

Star Name	RA (2019.5) h m	Dec ° ′	m_V	$B-V$	MK Type	π mas	M_V	D ly	μ ″/y	PA °	V_{rad} km/s	Remarks	
Sun			−26.75	0.63	G2 V		4.8	8 lm					
α And	0 09.4	+29 12	2.07	−0.04	B9p IV: (HgMn)	34	−0.3	97	0.214	140	−12 SB		**Alpheratz**
β Cas	0 10.2	+59 15	2.28v	0.38	F2 III	60	1.2	55	0.554	109	+12 SB	var.: 2.25–2.31, 0.10 d	Caph
												E(B–V) =0.00	
γ Peg	0 14.2	+15 18	2.83v	−0.19	B2 IV	8	−2.6	400	0.009	168	+4 SB	var.: 2.78–2.89, 0.15 d	Algenib
												E(B–V) =+0.01	
β Hyi	0 26.8	−77 09	2.82	0.62	G1 IV	134.1	3.5	24.3	2.243	82	+23		
α Phe	0 27.2	−42 12	2.40	1.08	K0 IIIb	38.5	0.3	~85	0.426	147	+75 SB		Ankaa
δ And A	0 40.4	+30 58	3.27	1.27	K3 III	~30.9	0.7	106	0.142	126	−7 SB		
α Cas	0 41.6	+56 39	2.24	1.17	K0 IIIa	~14.3	−2.0	230	0.060	122	−4 V?		Schedar
β Cet	0 44.6	−17 53	2.04	1.02	K0 III	~33.9	−0.3	96	0.235	82	+13 V?		Diphda
η Cas A	0 50.3	+57 55	3.46	0.59	G0 V	168	4.6	19.4	1.222	117	+9 SB	B:7.51, K4 Ve, 13.4″, PA:62°→325°, 1779→2016	Achird
												orbit 480 y	
γ Cas	0 57.9	+60 49	2.15v	−0.05	B0 IVnpe (shell)	5	−4.2	600	0.026	98	−7 SB	var.:1.6-3.0; B: 8.8, 2.1″, PA:255°→259°, 1888→2002	
												orbit > 1500 y	
												first Be discovery (Secchi, 1866); outburst 1937	
												for background on Be phenomena and γ Cas, consult	
												www.aavso.org/vsots_gammacas	
β Phe AB	1 07.0	−46 37	3.32	0.88	G8 III	16	0.3:	~180	0.088	293	−1	AB similar, 0.7″, PA:26°→84°, 1891→2016	
												orbit 168 y	
η Cet +2P	1 09.6	−10 05	3.46	1.16	K1.5 III CN1	26.3	0.6	124	0.257	123	+12V		
β And	1 10.8	+35 43	2.07	1.58	M0 IIIa	17	−1.8	200	0.209	123	+3 V		Mirach
δ Cas	1 27.1	+60 20	2.66v	0.16	A5 IV	32.8	0.2	99	0.301	99	+7 SB	ecl.? 2.68–2.76, 759 d	Ruchbah
												E(B–V) =+0.27	
γ Phe	1 29.2	−43 13	3.41v	1.54	K7 IIIa	14	−0.9	230	0.209	185	+26 SB	irreg. var.: 3.39–3.49	
α Eri	1 38.4	−57 08	0.45	−0.16	B3 Vnp (shell?)	23	−2.7	140	0.095	114	+16 V		**Achernar**
τ Cet	1 45.0	−15 50	3.49	0.73	G8 V	~274.0	5.7	11.9	1.921	296	−16 V		
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
α Tri	1 54.2	+29 40	3.42	0.49	F6 IV	52	2.0	63	0.234	177	−13 SB		Mothallah
β Ari	1 55.7	+20 54	2.64	0.16	A4 V	56	1.4	59	0.148	138	−2 SB		Sheratan
ε Cas	1 55.8	+63 46	3.35	−0.15	B3 IV:p (shell)	8	−2.2	400	0.037	121	−8 V		
α Hyi	1 59.4	−61 29	2.86	0.29	F0n III–IV	45	1.1	72	0.265	84	+1 V		
γ And A	2 05.1	+42 25	2.10	1.37	K3 IIb	9	−3.1	400	~0.065	~139	−12 SB	B: 5.4, B9 V, 9.8″; C: 6.2, A0 V; BC 0.2″	Almach
												BC orbit: 63.7 y	
α Ari +1P	2 08.3	+23 33	2.01	1.15	K2 IIIab	~49.6	0.5	66	0.240	128	−14 SB	calcium weak?	**Hamal**
β Tri	2 10.7	+35 05	3.00	0.14	A5 IV	26	0.1	130	0.154	105	+10 SB2		
ο Cet Aa	2 20.3	−2 53	6.47v	0.97	M5–10 IIIe	11	1.7	300	0.238	178	+64 V	LPV, 2–10; Ab(VZCet): WD, 10.4, 0.5″, ~400y	Mira
γ Cet AB	2 44.3	+3 19	3.47	0.09	A2 Va	41	1.5	80	0.207	225	−5 V	A: 3.57; B: 6.23, 2.0″, PA:283°→299°, 1825→2015	
												orbit ≥ 320 y	
α UMi A	2 56.4	+89 21	1.97v	0.64	F5–8 Ib	7.5	−3.6	430	~0.046	~105?	−17 SB	low-amp. Cep., 4.0 d; B: 9.1, F3 V, 18.4″(2016)	**Polaris**
												amplitude range and period are varying,	
												with pulsation mode and evolution history controverted	
												B has E(B–V)=0.0	
θ Eri A	2 59.0	−40 14	3.28	0.17	A5 IV	30	0.5	100	0.057	293	+12 SB2	B: 4.35, A1 Va, 8.6″, PA:82°→91°, 1835→2013	**Acamar**
α Cet	3 03.3	+4 10	2.54	1.63	M2 III	13	−1.9	250	0.078	188	−26 V		**Menkar**
γ Per	3 06.2	+53 35	2.91	0.72	G8 III + A2 V	13	−1.5	240	0.006	175	+3 SB2	composite spectrum; orbit 14.6 y, next eclipse 2019	
												eclipse duration < 2 weeks	
												eclipse variation ~ threshold of naked-eye detection	
ρ Per	3 06.4	+38 55	3.32v	1.53	M4 II	11	−1.6	310	0.167	129	+28	semiregular var.: 3.3–4.0	
β Per	3 09.4	+41 02	2.09v	0.00	B8 V + F:	36	−0.1	90	0.003	119	+4 SB	ecl.: 2.12–3.39, 2.9 d; composite	Algol
												E(B–V) =+0.03	
α Per	3 25.7	+49 56	1.79	0.48	F5 Ib	~6.4	−4.2	510	0.035	138	−2 V	in open cluster	**Mirfak**
δ Eri	3 44.2	−9 42	3.52	0.92	K0 IV	111	3.7	29.5	0.749	353	−6		
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
δ Per	3 44.3	+47 51	3.01	−0.12	B5 IIIn	6	−3.0	500	0.050	149	+4 SB		
												E(B–V) =+0.04	
γ Hyi	3 47.0	−74 11	3.26	1.59	M2 III	15.2	−0.8	~214	0.126	24	+16		
η Tau	3 48.6	+24 10	2.85	−0.09	B7 IIIn	8	−2.6	400	0.048	156	+10 V?	in Pleiades	Alcyone
												E(B–V) = +0.03	
												BSC5: "rotationally unstable Be shell star"	
ζ Per A	3 55.4	+31 56	2.84	0.27	B1 Ib	4	−4.0	800	0.011	150	+20 SB	B: 9.16, B8 V, 12.9″, PA:205°→209°,1824→2012	
												orbit ≥ 50,000 y	
												E(B–V) =+0.33 (pronounced reddening)	
γ Eri	3 58.9	−13 27	2.97	1.59	M1 IIIb	16	−1.0	200	0.129	151	+62	calcium, chromium weak	Zaurak

ε	Per A	3 59.2	+40 04	2.90	−0.20	B0.5 IV	5	−3.6	600	0.028	149	+1 SB2	B: 7.39, B9.5 V, 8.7″, PA:10°→10°, 1821→2012 orbit≥ 16,000 y one of the most extreme spectroscopic variables (periods 2.27 h and 8.46 h) E(B–V) =+0.10	
λ	Tau A	4 01.8	+12 33	3.41v	−0.10	B3 V	7	−2.4	480	0.017	209	+18 SB2	ecl.: 3.37–3.91, 4.0 d; B: A4 IV	
α	Ret A	4 14.7	−62 26	3.33	0.92	G8 II–III	20.2	−0.1	162	0.065	40	+36 SB?		
ε	Tau +1P	4 29.8	+19 13	3.53	1.01	K0 III	22.2	0.3	150	0.113	110	+39 V?	in Hyades	Ain
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
θ^2	Tau	4 29.8	+15 55	3.40	0.18	A7 III	22	0.1	150	0.112	104	+40 SB	in Hyades	Chamukuy
α	Dor AB	4 34.4	−55 00	3.30	−0.08	A0p V: (Si)	19	−0.3	169	~0.059	~79?	+26	A: 3.8; B: 4.3, B9 IV; 0.3″ (2016); orbit 12 y	
α	Tau A	4 37.0	+16 33	0.87v	1.54	K5 III	49	−0.7	67	0.199	161	+54 SB	irregular var.: 0.75–0.95 foreground star, not true Hyades member BSC5 says “MgII emissions indicate a cooler shell surrounding the supergiant”, notes variable emission in Ca H and K lines	Aldebaran
π^3	Ori	4 50.9	+7 00	3.19	0.48	F6 V	124	3.7	26.3	0.464	89	+24 SB2		Tabit
ι	Aur	4 58.3	+33 12	2.69v	1.49	K3 II	7	−3.2	500	0.016	155	+18V	var.: 2.63–2.78	Hassaleh
ε	Aur A	5 03.4	+43 51	3.03v	0.54	F0Iab? + ~B5V	<2?	−8.0:	~2000	~0.003	n.a.	−3 SB	ecl.: 2.92–3.83, 9892 d (dim ~700d) in place of Iab, II-III is also suggested (Hoard et al, 2010); BSC5: “shell star”, “spectrum var. even outside eclipse”; for 2009–2011 AAVSO on ε Aur, consult www.citizensky.org	Almaaz
ε	Lep	5 06.3	−22 21	3.19	1.46	K4 III	15	−0.9	210	0.076	164	+1		
η	Aur	5 07.9	+41 16	3.18	−0.15	B3 V	13	−1.2	240	0.075	155	+7 V?		Haedus
β	Eri	5 08.8	−5 04	2.78	0.16	A3 IVn	36	0.6	89	0.112	228	−9		Cursa
μ	Lep	5 13.8	−16 11	3.29v	−0.11	B9p IV: (HgMn)	18	−0.5	190	0.050	109	+28	var.: 2.97–3.41, 2 d	
β	Ori A	5 15.5	−8 11	0.18	−0.03	B8 Ia	4	−6.9	900	0.001	69	+21 SB	B: 6.8, B5 V, 9.5″ (2014); C: 7.6; BC: 0.1″ A-BC orbit ≥ 25,000 y, BC orbit ~400 y E(B–V) =+0.00	Rigel
α	Aur Aa+Ab	5 18.1	+46 01	0.08	0.80	G6:III + G2:III	76	−0.5	43	0.433	170	+30 SB2	composite; Aa: 0.7, Ab: 0.9 0.0–~0.1″ orbit 104.0 y	**Capella**
η	Ori AB	5 25.5	−2 23	3.35v	−0.24	B0.5 V + B	3	−4.0	1000	~0.004?	n.a.	+20 SB2	ecl.: 3.31–3.60, 8.0 d; A: 3.6; B: 5.0, 1.8″ (2017) PA: 87°→77°, 1848→2017, orbit ≥ 2000 y BSC5: “expanding circumstellar shell”	
γ	Ori	5 26.2	+6 22	1.64	−0.22	B2 III	13	−2.8	250	0.015	212	+18 SB?	BSC5: “expanding circumstellar shell”	**Bellatrix**
β	Tau	5 27.5	+28 37	1.65	−0.13	B7 III	24	−1.4	130	0.175	173	+9 V	E(B–V)=0.00 BSC5: “expanding circumstellar shell”	**Elnath**
β	Lep A	5 29.1	−20 45	2.81	0.81	G5 II	~20.3	−0.6	160	0.086	183	−14 V?	B: 7.5, 2.7″, PA:268°→8°, 1875→2015	Nihal
δ	Ori A	5 33.0	−0 17	2.25v	−0.18	O9.5 II	5	−4.4	700	0.001	137	+16 SB	ecl.: 2.14–2.26, 5.7 d E(B–V)=+0.07	Mintaka
α	Lep	5 33.6	−17 49	2.58	0.21	F0 Ib	1.5	−6.6	2000	0.004	72	+24		Arneb
β	Dor	5 33.8	−62 29	3.76v	0.64	F7–G2 Ib	3.2	−3.7	1000	0.013	4	+7 V	Cepheid var.: 3.46–4.08, 9.8 d	
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
λ	Ori A	5 36.2	+9 57	3.39	−0.16	O8 IIIf	3	−4.2	~1100	0.004	216	+34	B: 5.61, B0 V, 4.5″, PA:45°→45°, 1779→2017 E(B–V)=+0.12	Meissa
ι	Ori A	5 36.4	−5 54	2.75	−0.21	O9 III	~1.4	−6.5	2000	0.001	108	+22 SB2	B: 7.3, B7 IIIp (He wk), 11.6″, PA:134°→141°, 1779→2012 orbit ≥ 700,000 y E(B–V)=+0.07	Hatysa
ε	Ori	5 37.2	−1 11	1.69	−0.18	B0 Ia	2	−7.2	2000	0.002	118	+26 SB	E(B–V)=+0.08	**Alnilam**
ζ	Tau	5 38.8	+21 09	2.97v	−0.15	B2 IIIpe (shell)	7	−2.7	400	0.020	175	+20 SB	ecl., var.: 2.88–3.17, 133 d; B: 5.0, 0.007″, 0.36 y E(B–V)=+0.09 BSC5: “expanding circumstellar shell”; “shell-line velocities do not correspond to orbital elements; possible gaseous ring”; “unstable shell star with pseudo-periodic phenomena” BSC5: “Widths H-lines vary in about 10 min. Polarization at H beta changes in tens of minutes, probably due to circumstellar matter”	Tianguan
α	Col A	5 40.4	−34 04	2.65	−0.12	B7 IV	12	−1.9	260	0.025	176	+35 V?	E(B–V) =0.00 BSC5: “expanding circumstellar shell”, and Hα is variable, and Hβ profile varies rapidly	Phact
ζ	Ori A	5 41.7	−1 56	1.74	−0.20	O9.5 Ib	4	−5.0	700	0.005	58	+18 SB	B: 4.2, B0 III, 2.4″, PA:152°→166°, 1822→2017 orbit ≥ 1500 y E(B–V) =+0.09	Alnitak
ζ	Lep	5 47.8	−14 49	3.55	0.10	A2 Vann	~46.3	1.9	~70.5	0.015	266	+20 SB?		
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
κ	Ori	5 48.7	−9 40	2.07	−0.17	B0.5 Ia	5	−4.4	600	0.002	131	+21 V?	E(B–V) =+0.07	Saiph
β	Col	5 51.6	−35 46	3.12	1.15	K1.5 III	37.4	1.0	87	0.408	8	+89 V		Wazn
α	Ori	5 56.2	+7 25	0.45v	1.50	M2 Iab	7	−5.5	500	0.030	68	+21 SB	semiregular var.: 0.0–1.3 BSC5 discusses shells (gas, dust; UV and radio are cited)	**Betelgeuse**
β	Aur	6 01.0	+44 57	1.90v	0.08	A1 IV	~40.2	−0.1	81	0.056	269	−18 SB2	ecl.: 1.89–1.98, 4.0 d (mags. equal)	Menkalinan
θ	Aur AB	6 01.1	+37 13	2.65	−0.08	A0p II: (Si)	~19.7	−0.9	166	~0.086	~149	+30 SB	B: 7.2, G2 V, 4.0″, PA:7°→304°, 1871→2014 orbit ≥ 1200 y	Mahasim

η	Gem	6 16.1	+22 30	3.31v	1.60	M3 III	8	−2.0	400	~0.064	~259	+19 SB	ecl. var.: 3.2–3.9, 233 d; B: 6.2, 1.8″ (2016)	Propus
													orbit ≥ 700 y	
ζ	CMa	6 21.1	−30 04	3.02	−0.16	B2.5 V	9.0	−2.2	360	0.008	61	+32 SB		Furud
β	CMa	6 23.6	−17 58	1.98v	−0.24	B1 II–III	7	−3.9	~490	0.003	256	+34 SB	var.: 1.93–2.00, 0.25 d	Mirzam
													E(B–V) =+0.01	
μ	Gem	6 24.1	+22 30	2.87v	1.62	M3 IIIab	14	−1.4	230	0.124	153	+55 V?	irregular var.: 2.75–3.02	Tejat
α	Car	6 24.4	−52 42	−0.62	0.16	A9 Ib	11	−5.5	~310	0.031	41	+21		**Canopus**
ν	Pup	6 38.4	−43 13	3.17	−0.10	B8 IIIn	9	−2.1	370	0.004	186	+28 SB		
γ	Gem	6 38.8	+16 23	1.93	0.00	A1 IVs	30	−0.7	110	0.057	166	−13 SB		Alhena
													E(B–V) =+0.03	
ε	Gem	6 45.1	+25 07	3.06	1.38	G8 Ib	4	−4.0	800	0.014	204	+10 SB		Mebsuta
α	CMa A	6 46.0	−16 45	−1.44	0.01	A0mA1 Va	~379	1.5	8.6	~1.339	~204	−8 SB	B: 8.5, WDA; 10.7″ (2016) ; orbit 50.1 y	**Sirius**
													E(B–V) =-0.03	
ξ	Gem	6 46.4	+12 52	3.35	0.44	F5 IV	56	2.1	58.7	0.223	211	+25 V?		Alzirr
α	Pic	6 48.4	−61 58	3.24	0.22	A6 Vn	~34	0.9	100	0.252	345	+21		
τ	Pup	6 50.4	−50 38	2.94	1.21	K1 III	18	−0.8	180	0.077	154	+36 SB		
ε	CMa A	6 59.4	−29 00	1.50	−0.21	B2 II	8.0	−4.0	410	0.004	68	+27		**Adhara**
													E(B–V) =+0.02	
σ	CMa	7 02.5	−27 58	3.49v	1.73	K7 Ib	3	−4.2	1100	0.008	308	+22	irregular var.: 3.43–3.51	Unurgunite
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
o^2	CMa	7 03.8	−23 52	3.02	−0.08	B3 Ia	1	−6.6	3000	0.004	329	+48 SB		
													E(B–V) =+0.03	
δ	CMa	7 09.2	−26 26	1.83	0.67	F8 Ia	2	−6.6	2000	0.005	317	+34 SB		Wezen
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
π	Pup	7 17.8	−37 08	2.71	1.62	K3 Ib	4	−4.3	800	0.012		303	+16	
δ	Gem AB	7 21.3	+21 57	3.50	0.37	F0 IV	54	2.2	60	0.018	237	+4 SB	B: 8.2, K3 V, 5.5″, PA:198°→230°, 1822→2016	Wasat
													orbit 1200 y	
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
η	CMa	7 24.9	−29 21	2.45	−0.08	B5 Ia	2	−6.5	2000	0.007	325	+41 V		Aludra
													E(B–V) =+0.02	
													BSC5: “circumstellar shell”	
β	CMi	7 28.2	+8 15	2.89	−0.10	B8 V	~20.2	−0.6	~162	0.064	234	+22 SB		Gomeisa
													BSC5: “rotationally unstable Be shell star”	
σ	Pup A	7 29.8	−43 20	3.25	1.51	K5 III	17	−0.6	190	0.198	342	+88 SB	B: 8.6, G5: V, 21.5″, PA:90°→73°, 1826→2011	
													orbit ≥ 27,000 y	
α	Gem A	7 35.8	+31 51	1.93	0.03	A1mA2 Va	63	0.9	52	~0.254	~234	+6 SB	orbit 445 y; max = 6.5″, in 1880;	
α	Gem B	7 35.8	+31 51	2.97	0.03	A2mA5 V:	63	2.0	52	~0.254	~234	−1 SB	min = 1.8″, in 1965; 5.2″ (2017)	Castor
α	CMi A	7 40.3	+5 10	0.40	0.43	F5 IV–V	285	2.7	11.5	~1.259	~215	−3 SB	B: 10.3, WD; 3.8″ (2014); orbit 41 y	Procyon
β	Gem +1P	7 46.5	+27 59	1.16	0.99	K0 IIIb	97	1.1	33.8	0.628	266	+3 V		Pollux
ξ	Pup	7 50.1	−24 55	3.34	1.22	G6 Iab–Ib	3	−4.5	1200	0.005	260	+3 SB		Azmidi
χ	Car	7 57.3	−53 02	3.46	−0.18	B3 IVp	7	−2.3	500	0.035	304	+19 V	Si II strong	
ζ	Pup	8 04.3	−40 04	2.21	−0.27	O5 Iafn	3.0	−5.4	1080	0.034	299	−24 V?		Naos
													E(B–V) =+0.04	
ρ	Pup	8 08.4	−24 22	2.83v	0.46	F2mF5 II: (var)	51.3	1.4	64	0.095	299	+46 SB	var.: 2.68–2.87, 0.14 d	Tureis
													prototype of the “ρ Pup stars” (these combine	
													δ Sct variability with Am-like abundance anomalies)	
γ^2	Vel	8 10.1	−47 24	1.75v	−0.14	O9 I: + WC8	3	−5.9	1100	0.012	330	+35 SB2	var.: 1.81–1.87	
													the Wolf-Rayet component is	
													the visually brightest of all WR stars,	
													is an exceptionally massive WR,	
													and is approaching its supernova stage;	
													“Spectral Gem of Southern Skies”;	
													BSC5: “symmetric shell”	
β	Cnc +1P	8 17.6	+9 07	3.53	1.48	K4 III	11	−1.3	300	0.068	224	+22 V?		Tarf
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
ε	Car	8 22.9	−59 34	1.86v	1.20	K3:III + B2:V	5	−4.5	600	0.034	311	+2	ecl.?: 1.82–1.94	**Avior**
o	UMa A+1P	8 31.9	+60 39	3.35v?	0.86	G5 III	~18.2	−0.3	~179	0.172	231	+20	var.?: 3.30? –3.36?	Muscida
δ	Vel AB	8 45.2	−54 47	1.93	0.04	A1 Va	40	0.0	81	~0.107	~164	+ 2 V?		Alsephina
													B: 5.0, 0.5″, PA:177°→209°, 1894→2017	
													orbit 142 y (min angular separation was in 2000)	
ε	Hya ABC	8 47.8	+6 21	3.38	0.68	G5:III + A:	25	0.4	130	~0.232	259	+36 SB		Ashlesha
													composite A: 3.8; B: 4.7, 0.3″ (2014); C: 7.8, 2.8″ (2016)	
													AB orbit 15.09 y, AB-C orbit 590 y	
ζ	Hya	8 56.4	+5 52	3.11	0.98	G9 II–III	~19.5	−0.4	~167	0.101	279	+23		
ι	UMa A	9 00.5	+47 58	3.12	0.22	A7 IVn	~68.9	2.3	47.3	~0.491	~244	+9 SB	BC: 10.8, M1 V, 2.4″, PA:349°→82°, 1831→2012	Talitha
													orbit 818 y	
λ	Vel	9 08.7	−43 31	2.23v	1.66	K4 Ib–IIa	6.0	−3.9	540	0.028	299	+18	var.: 2.14–2.30	**Suhail**
a	Car	9 11.5	−59 03	3.43v	−0.19	B2 IV–V	7	−2.3	500	0.022	312	+23 SB2	ecl.?: 3.41–3.44	HR 3659
β	Car	9 13.4	−69 48	1.67	0.07	A1 III	28.8	−1.0	113	0.191	305	−5 V?		**Miaplacidus**
ι	Car	9 17.6	−59 21	2.21v	0.19	A7 Ib	4.3	−4.6	800	0.022	302	+13	var.: 2.23–2.28	Aspidiske
α	Lyn	9 22.2	+34 19	3.14	1.55	K7 IIIab	16	−0.8	~203	0.224	274	+38		
κ	Vel	9 22.7	−55 06	2.47	−0.14	B2 IV–V	6	−3.8	600	0.016	315	+22 SB		Markeb
α	Hya	9 28.5	−8 45	1.99	1.44	K3 II–III	18	−1.7	180	0.038	336	−4 V?		Alphard
N	Vel	9 31.8	−57 07	3.16	1.54	K5 III	13.6	−1.2	240	0.033	280	−14		HR 3803
θ	UMa	9 34.2	+51 35	3.17	0.48	F6 IV	74.2	2.5	44.0	1.088	241	+15 SB		
o	Leo AB	9 42.2	+9 48	3.52v	0.52	F5 II + A5?	25	0.5	130	0.148	255	+27 SB	A: occ. bin. (mags. equal)	Subra
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
l	Car	9 45.8	−62 36	3.69v	1.01	F9–G5 Ib	2	−4.7	2000	0.015	302	+3 V	Cepheid var.: 3.28–4.18, 36 d	HR 3884
													BSC5: “possible circumstellar shell”	
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
ε	Leo	9 47.0	+23 41	2.97	0.81	G1 II	13.2	−1.4	250	0.047	259	+4 V?		
υ	Car AB	9 47.6	−65 10	2.92	0.29	A6 II	2.3	−5.3	~1400	0.028	307	+14	A: 3.01; B: 5.99, B7 III, 5.0″, PA:126°→126°, 1836→2010	
													orbit ≥ 20,000 y	

φ	Vel	9 57.6	−54 40	3.52	−0.07	B5 Ib	2.0	−4.9	1600	0.014	285	+14		
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
η	Leo	10 08.4	+16 40	3.48	−0.03	A0 Ib	3	−4.5	1300	~0.003	n.a.	+3 V	B: 4.5, 0.1″, PA:84°→309°, 1937→1993	
													BSC5: "chromospheric shell"	
α	Leo A	10 09.4	+11 52	1.36	−0.09	B7 Vn	41	−0.6	79	0.249	271	+6 SB		**Regulus**
									E(B–V) =+0.01					
ω	Car	10 14.2	−70 08	3.29	−0.07	B8 IIIn	9.5	−1.8	340	0.037	281	+7 V		
													BSC5: variable Hα; shell	
q	Car	10 17.7	−61 26	3.39v	1.54	K3 IIa	5.0	−3.1	660	0.026	286	+8	irregular var.: 3.36–3.44	HR 4050
ζ	Leo	10 17.8	+23 19	3.43	0.31	F0 IIIa	12	−1.2	270	0.020	110	−16 SB		Adhafera
λ	UMa	10 18.3	+42 49	3.45	0.03	A1 IV	24	0.3	140	0.186	256	+18 V		Tania Borealis
γ	Leo A +1P	10 21.0	+19 45	2.61	1.13	K1 IIIb Fe–0.5	26	−0.3	130	~0.333	~118	−37 SB	4.8″ (2017), PA:99° →126°, 1820→ 2017 (510.3 y);	
γ	Leo B	10 21.0	+19 45	3.16	1.42	G7 III Fe–1	26	0.2	130	~0.346	~118	−36 V	max = ~5″, around 2100	Algieba
μ	UMa	10 23.5	+41 24	3.06	1.60	M0 IIIp	14	−1.2	230	0.089	293	−21 SB	Ca II emission	Tania Australis
p	Car	10 32.7	−61 47	3.30v	−0.09	B4 Vne	7	−2.6	500	0.021	304	+26	irregular var.: 3.27–3.37	HR 4140
													BSC5: shell; variable Balmer-line profiles	
θ	Car	10 43.7	−64 30	2.74	−0.22	B0.5 Vp	7	−3.0	460	0.022	303	+24 SB	nitrogen enhanced	
													E(B–V) =+0.06	
μ	Vel AB	10 47.6	−49 31	2.69	1.07	G5 III + F8:V	28	−0.1	~117	0.083	131	+6 SB	A: 2.72; B: 5.92, 2.3″, PA:55°→57°, 1880→2016	
													orbit 138 y	
ν	Hya	10 50.6	−16 18	3.11	1.23	K2 III	23	−0.1	144	0.220	25	−1		
β	UMa	11 03.0	+56 17	2.34	0.03	A0mA1 IV–V	~40.9	0.4	80	0.088	68	−12 SB		Merak
α	UMa AB	11 04.9	+61 39	1.81	1.06	K0 IIIa	27	−1.1	120	0.139	255	−9 SB	A: 1.86; B: 4.8, A8 V, 0.7″ (2014)	**Dubhe**
													orbit 44 y	
ψ	UMa	11 10.8	+44 24	3.00	1.14	K1 III	22.6	−0.2	145	0.068	246	−4 V?		
δ	Leo	11 15.1	+20 25	2.56	0.13	A4 IV	56	1.3	58	0.193	132	−20 V		Zosma
θ	Leo	11 15.3	+15 19	3.33	0.00	A2 IV	~19.8	−0.2	165	0.099	217	+8 V	(K-line var.)	Chertan
ν	UMa	11 19.5	+32 59	3.49	1.40	K3 III Ba0.3	~8.2	−1.9	400	0.039	317	−9 SB	B: 9.5, 7.8″, PA:145°→145°, 1827→2015	Alula Borealis
													orbit ≥ 12,000 y	
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
ξ	Hya	11 34.0	−31 58	3.54	0.95	G7 III	~25.2	0.5	130	0.214	259	−5 V		
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
λ	Cen	11 36.7	−63 08	3.11	−0.04	B9.5 IIn	8	−2.4	400	0.034	258	−1 V		
β	Leo	11 50.1	+14 28	2.14	0.09	A3 Va	91	1.9	36	0.511	257	0 V		**Denebola**
γ	UMa	11 54.8	+53 35	2.41	0.04	A0 Van	39	0.4	83	0.108	84	−13 SB		Phecda
													E(B–V) =0.00	
δ	Cen	12 09.4	−50 50	2.58v	−0.13	B2 IVne	8	−2.9	400	0.050	262	+11 V	irregular var.: 2.51–2.65	
													BSC5: shell; equivalent width of Hα varies	
ε	Crv	12 11.1	−22 44	3.02	1.33	K2 III	~10.3	−1.9	320	0.072	278	+5		
δ	Cru	12 16.2	−58 51	2.79v	−0.19	B2 IV	9.4	−2.3	350	0.037	254	+22 V?	var.: 2.78–2.84, 0.15 d	
													BSC5: "expanding circumstellar shell"	
δ	UMa	12 16.4	+56 55	3.32	0.08	A2 Van	40.5	1.4	81	0.104	86	−13 V		Megrez
γ	Crv	12 16.8	−17 39	2.58	−0.11	B8 III	21	−0.8	154	0.160	278	−4 SB	sp. var.?	**Gienah**
													BSC5: "expanding circumstellar shell"	
α	Cru A	12 27.7	−63 12	1.25	−0.20	B0.5 IV	10	−3.7	~320	0.037	251	−11 SB	5.4″ (1826); 4.2″ (2016)	**Acrux**
α	Cru B	12 27.7	−63 12	1.64	−0.18	B1 Vn	10	−3.3	~320	0.037?	251?	−1	PA: 114°→112°, 1826→2016	
													orbit ≥ 1300 y	
δ	Crv A	12 30.9	−16 37	2.94	−0.01	B9.5 IVn	~37.6	0.8	87	0.252	237	+9 V	B:8.26, K2 V, 24.6″, PA: 216°→213°, 1782→2012	Algorab
													orbit ≥ 9400 y	
γ	Cru	12 32.3	−57 13	1.59v	1.60	M3.5 III	37	−0.6	89	0.267	174	+21	var.: 1.60–1.67	**Gacrux**
β	Crv	12 35.4	−23 30	2.65	0.89	G5 II	22	−0.6	146	0.057	179	−8 V		Kraz
α	Mus	12 38.4	−69 15	2.69v	−0.18	B2 IV–V	10.3	−2.2	320	0.042	252	+13 V	var.: 2.68–2.73, 0.090 d	
γ	Cen A	12 42.6	−49 04	2.95	−0.02	A1 IV	25	−0.1	130	~0.194	~267	−6	orbit 84 y; 0.4″ (2010),	
γ	Cen B	12 42.6	−49 04	2.85	−0.02	A0 IV	25	−0.2	130	~0.194	~267	−6	0.1″ (2017); max = 1.7″	
γ	Vir AB	12 42.6	−1 33	2.74	0.37	F1 V + F0mF2 V	85	2.4	39	~0.619	~276	−20	A: 3.48; B: 3.50; 0.8″ (2007); 2.5″ (2016)	Porrima
													orbit 169 y	
β	Mus AB	12 47.5	−68 13	3.04	−0.18	B2 V + B2.5 V	~9.6	−2.1	340	~0.043	~258	+42 V	A: 3.51; B: 4.00, 1.1″, PA:317°→53°, 1880→2016	
													orbit 194 y	
β	Cru	12 48.9	−59 48	1.25v	−0.24	B0.5 III	12	−3.4	300	0.046	249	+16 SB	var.: 1.23–1.31, 0.24 d	Mimosa
ε	UMa	12 54.9	+55 51	1.76v	−0.02	A0p IV: (CrEu)	~39.5	−0.3	83	0.112	94	−9 SB?	var.: 1.76–1.78, 5.1 d	**Alioth**
δ	Vir	12 56.6	+3 18	3.39	1.57	M3 III	16	−0.5	~198	0.473	264	−18 V?		Minelauva
α^2	CVn A	12 56.9	+38 13	2.85	−0.06	A0p (SiEu)	28	0.1	110	0.241	283	−3 V	B:5.6, F0 V, 19.3″, PA:234°→230°, 1777→2017	Cor Caroli
													orbit ≥ 8300 y (common prpr motion indicates true binarity)	
ε	Vir	13 03.1	+10 51	2.85	0.93	G9 IIIab	29.8	0.2	110	0.275	274	−14 V?		Vindemiatrix
γ	Hya	13 20.0	−23 16	2.99	0.92	G8 IIIa	~24.4	−0.1	134	0.081	121	−5 V?		
ι	Cen	13 21.7	−36 49	2.75	0.07	A2 Va	55	1.5	59	0.352	256	0		
ζ	UMa A	13 24.7	+54 49	2.23	0.06	A1 Va	40	0.1	90	0.123	100	−6 SB2	B:3.94, A1mA7 IV–V, 14.4″; period >5000 y?	Mizar
													not only are A+B a true binary; it is now additionally believed that Alcor is gravitationally bound to A+B (Bob King, *Sky & Tel* .2015-03-25)	
α	Vir	13 26.2	−11 16	0.98v	−0.24	B1 V	13	−3.4	250	0.052	234	+1 SB2	var.: 0.95–1.05, 4.0 d; mult. 3.1, 4.5, 7.5	**Spica**
													E(B–V)=+0.03	
ζ	Vir	13 35.7	−0 42	3.38	0.11	A2 IV	44	1.6	74	0.285	280	−13		Heze
ε	Cen	13 41.1	−53 34	2.29	−0.17	B1 III	8	−3.3	400	0.019	233	+3		
η	UMa	13 48.3	+49 13	1.85	−0.10	B3 V	31	−0.7	104	0.122	263	−11 SB?		**Alkaid**
													E(B–V)=+0.02	
ν	Cen	13 50.7	−41 47	3.41	−0.22	B2 IV	~7.5	−2.2	440	0.034	233	+9 SB		
μ	Cen	13 50.8	−42 34	3.47v	−0.17	B2 IV–V pne	~6.4	−2.5	510	0.031	232	+9 SB	variable shell: 2.92–3.47	
													BSC5: "line profiles of MgII 4481 change in period 0.505 d, about five times the period of weaker absorption"; variable Hα; "variable line profiles"	
η	Boo	13 55.6	+18 18	2.68	0.58	G0 IV	88	2.4	37	0.361	190	0 SB		Muphrid
ζ	Cen	13 56.8	−47 23	2.55	−0.18	B2.5 IV	8.5	−2.8	380	0.073	232	+7 SB2		

													E(B–V) =–0.02	
													BSC5: “expanding circumstellar shell”	
β	Cen AB	14 05.2	−60 28	0.58v	−0.23	B1 III	8	−4.8	400	0.041	235	+6 SB	B:3.94, A1mA7 IV–V, 0.3″(2017); period 1500 y?	**Hadar**
													E(B–V) =+0.02	
π	Hya	14 07.5	−26 47	3.25	1.09	K2 IIIb	~32.3	0.8	101	0.148	163	+27 V		
θ	Cen	14 07.8	−36 28	2.06	1.01	K0 IIIb	55	0.8	59	0.734	225	+1		**Menkent**
α	Boo	14 16.6	+19 05	−0.05	1.24	K1.5 III Fe–0.5	89	−0.3	37	2.279	209	−5 V	high space velocity	**Arcturus**
ι	Lup	14 20.7	−46 09	3.55	−0.18	B2.5 IVn	~9.6	−1.5	340	0.013	249	+22		
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
γ	Boo	14 32.9	+38 13	3.04	0.19	A7 IV+	37.6	0.9	87	0.190	323	−37 V		Seginus
η	Cen	14 36.8	−42 15	2.33v	−0.16	B1.5 IV pne	11	−2.5	310	0.048	227	0 SB	variable shell: 2.30–2.41	
													BSC5: Hα variable, Hβ “sometimes bright,	
													sometimes dark and double or multiple”	
α	Cen B	14 40.9	−60 55	1.35	0.9	K1 V	750	5.7	4.3	~3.703	~283	−21 V?	AB 4.1″ (2016); orbit 79.9 y; min = 2″ (1955); max 22″	
													2012 exoplanet claim now discounted	
α	Cen A	14 40.9	−60 55	−0.01	0.71	G2 V	750	4.4	4.3	~3.710	~277	−22 SB	C: Proxima, 12.4, M5e, 212°	Rigil Kentaurus
α	Lup	14 43.2	−47 28	2.30v	−0.15	B1.5 III	7	−3.5	460	0.032	221	+5 SB	var.: 2.29–2.34, 0.26 d	
α	Cir	14 44.1	−65 04	3.18	0.26	A7p (Sr)	60.4	2.1	54.1	0.303	220	+7 SB?	B: 8.6, K5 V, 15.7″, PA:263°→224°, 1826→2017	
													AB probably true binary, with orbit ≥ 2600 y	
ε	Boo AB	14 45.8	+27 00	2.35	1.34	K0 II–III+A0 V	16	−1.6	200	0.044	288	−17 V	A:2.50; B:4.66, 2.9″, PA:318°→345°,1822→2015	Izar
													orbit well over 1000 y	
													F.G.W. von Struve: “pulcherrima” (“the loveliest”)	
β	UMi +1P	14 50.7	+74 05	2.07	1.46	K4 III	24.9	−0.9	131	0.035	289	+17 V		**Kochab**
α^2	Lib	14 52.0	−16 07	2.75	0.15	A3 III–IV	43	0.9	76	0.126	237	−10 SB		**Zubenelgenubi**
β	Lup	14 59.8	−43 13	2.68	−0.18	B2 IV	9	−2.7	380	0.054	222	0 SB		
κ	Cen	15 00.4	−42 11	3.13	−0.21	B2 V	9	−2.2	400	0.029	218	+8 SB		
β	Boo	15 02.7	+40 19	3.49	0.96	G8 IIIa	14.5	−0.7	230	0.049	234	−20 V?	Ba 0.4, Fe −0.5	Nekkar
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
σ	Lib	15 05.2	−25 21	3.25v	1.67	M2.5 III	11	−1.5	290	0.083	239	−4	semiregular var.: 3.20–3.46	Brachium
ζ	Lup	15 13.7	−52 10	3.41	0.92	G8 III	~27.8	0.6	117	0.133	238	−10		
δ	Boo	15 16.3	+33 15	3.46	0.96	G8 III Fe–1	~26.8	0.6	122	0.140	143	−12 SB		
β	Lib	15 18.1	−9 27	2.61	−0.07	B8 IIIn	~17.6	−1.2	190	0.100	259	−35 SB		Zubeneschamali
													E(B–V) =–0.02	
γ	UMi	15 20.7	+71 46	3.00	0.06	A3 III	6.7	−2.9	490	0.025	315	−4 V		Pherkad
													BSC5: “shell possibly variable”, H and CaII variable	
γ	TrA	15 20.8	−68 45	2.87	0.01	A1 IIIn	17.7	−0.9	184	0.074	244	−3 V		
δ	Lup	15 22.7	−40 43	3.22	−0.23	B1.5 IVn	4	−3.9	900	0.032	218	0 V?		
ε	Lup AB	15 24.0	−44 46	3.37	−0.19	B2 IV–V	6	−2.6	500	~0.030	~230	+8 SB2	A: 3.56; B: 5.04, 0.2″, PA:285°→70°, 1883→2017	
													orbit 737 y	
ι	Dra +1P	15 25.4	+58 54	3.29	1.17	K2 III	32.2	0.8	101	0.019	334	−11		Edasich
α	CrB	15 35.5	+26 39	2.22v	0.03	A0 IV (composite)	43	0.4	75	0.150	127	+2 SB	ecl.: 2.21–2.32, 17 d	**Alphecca**
γ	Lup AB	15 36.4	−41 14	2.80	−0.22	B2 IVn	8	−2.8	400	~0.030	~212	+2 V	A: 3.5; B: 3.6; similar spectra 0.8″ (2017)	
													PA: 94°→275°, 1835→2017;	
													max angular separation 1980, min ang. sep. 2075;	
													orbit 190 y	
													BSC5 asserts expanding circumstellar shell,	
													and (citing 1987 Vainu Bappu spectra)	
													notes emission peaks in Hα profiles,	
													says star may be in transition from B to Be	
α	Ser	15 45.2	+6 22	2.63v?	1.17	K2 IIIb CN1	44	0.9	74	0.141	71	+3 V?	var.?	Unukalhai
μ	Ser	15 50.6	−3 29	3.54	−0.04	A0 III	19	0.0	170	0.104	255	−9 SB		
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
β	TrA	15 56.9	−63 29	2.83	0.32	F0 IV	~80.8	2.4	40.4	0.444	205	0		
π	Sco A	16 00.0	−26 10	2.89	−0.18	B1 V + B2 V	6	−3.4	600	0.029	203	−3 SB2	A: occ. bin.: 3.4 + 4.5, 1.57 d	Fang
													E(B–V) =+0.08	
T	CrB	16 00.3	+25 52	10.08v	1.34	gM3: + Bep	—	0.6	2500?	0.011	329	−29 SB	recurrent nova 1866 (mag. 3), 1946 (mag. 2)	
η	Lup A	16 01.4	−38 27	3.42	−0.21	B2.5 IVn	7	−2.2	440	0.033	211	+8 V	A: 3.47; B: 7.70, 15.0″, PA:22°→19°, 1834→2016	
													orbit ≥ 26,000 y	
δ	Sco AB	16 01.5	−22 41	2.29	−0.12	B0.3 IVe + B3V	7	−3.6	500	~0.037	~196	−7 SB	periastron outbursts 2000, 2011	Dschubba
													AB: 10.8 y, 0.2″(2016)	
													for 2000–2011 AAVSO on δ Sco, consult	
													www.aavso.org/vsots_delsco	
													E(B–V)=+0.16	
β	Sco AB	16 06.6	−19 51	2.56	−0.06	B0.5 V	8	−2.9	400	0.025	192	−1 SB	A: 2.78; B: 5.04, 0.3″(2017); C: 4.93, 14″	Acrab
													period > 16,000 y	
δ	Oph	16 15.4	−3 45	2.73	1.58	M1 III	~19.1	−0.9	171	0.150	198	−20 V		Yed Prior
ε	Oph	16 19.4	−4 44	3.23	0.97	G9.5 IIIb	31	0.7	106	0.093	64	−10 V		Yed Posterior
σ	Sco A	16 22.4	−25 38	2.91v	0.13	B1 III	5	−3.7	700	0.019	213	+3 SB	var.: 2.86–2.94, 0.25 d; B: 8.3, B9 V, 20.3″ (2016)	Alniyat
													E(B–V) =+0.40 (pronounced reddening)	
η	Dra A	16 24.3	+61 28	2.73	0.91	G8 IIIab	35.4	0.5	92	0.059	343	−14 SB?	B: 8.7, 4.4″, PA:150°→143°, 1843→2015	Athebyne
													orbit ≥1000 y	
α	Sco A	16 30.6	−26 28	1.06v	1.86	M1.5 Iab	6	−5.1	600	0.026	207	−3 SB	irregular var.: 0.88–1.16; B: 5.37, 3.2″ (2016)	**Antares**
													PA: 273°→276°, 1847→2016; orbit 2500 y?	
β	Her	16 31.1	+21 27	2.78	0.95	G7 IIIa	23	−0.4	140	0.100	261	−26 SB		Kornephoros
τ	Sco	16 37.1	−28 15	2.82	−0.21	B0 V	7	−3.0	500	0.025	203	+2 V		
													E(B–V) =+0.06	
ζ	Oph	16 38.2	−10 36	2.54	0.04	O9.5 Vn	9	−2.7	370	0.029	32	−15 V		
													E(B–V) =+0.32 (pronounced reddening)	
													BSC5 discusses shell, gives some history	
													of Hα absorption, Hα emission	
ζ	Her AB	16 42.0	+31 34	2.81	0.65	G1 IV	93	2.7	35	~0.575	~307	−70 SB	A: 2.90; B: 5.53, G7 V, 1.3″ (2016), orbit 34 y	
η	Her	16 43.6	+38 53	3.48	0.92	G7.5 IIIb Fe–1	30.0	0.9	109	0.092	157	+8 V?		
α	TrA	16 50.7	−69 04	1.91	1.45	K2 IIb–IIIa	~8.4	−3.5	390	0.036	150	−3		**Atria**

ε Sco	16 51.4	−34 20	2.29	1.14	K2 III	51	0.8	64	0.666	247	−3		Larawag
μ^1 Sco	16 53.2	−38 05	3.00v	−0.20	B1.5 IVn	7	−2.9	500	0.024	206	−25 SB2	ecl.: 2.94–3.22, 1.4 d	Xamidimura
κ Oph	16 58.6	+9 21	3.19	1.16	K2 III	36	1.0	91	0.292	268	−56 V		
ζ Ara	17 00.2	−56 01	3.12	1.55	K4 III	7	−2.7	490	0.041	206	−6		
ζ Dra	17 08.8	+65 41	3.17	−0.12	B6 III	10	−1.8	330	0.028	314	−17 V		Aldhibah
												E(B–V) =+0.03	
η Oph AB	17 11.5	−15 45	2.43	0.06	A2.5 Va	37	0.3	90	~0.107	~22	−1 SB	A: 3.0; B: 3.5, A3 V, 0.5″ (2017), orbit 87.6 y	**Sabik**
η Sco	17 13.6	−43 16	3.32	0.44	F2 V:p (Cr)	~44.4	1.6	73	0.290	175	−28		
α Her AB	17 15.5	+14 22	2.78v	1.16	M5 Ib–II	9	−2.4	400	0.032	347	−33 V	semiregular var.: 2.7–4.0; B: 5.4, 4.8″ (2017) PA: 117°→104°, 1777→2017; orbit > 3000 y	Rasalgethi
π Her	17 15.7	+36 47	3.16	1.44	K3 IIab	8.7	−2.2	380	0.027	276	−26 V?		
δ Her	17 15.8	+24 49	3.12	0.08	A1 Vann	43.4	1.3	75	~0.158	~188	−40 SB	B: 8.8, 12.7″ (2013) is optical companion	Sarin
θ Oph	17 23.2	−25 01	3.27v	−0.19	B2 IV	~7.5	−2.4	440	0.025	197	−2 SB	occ. bin.: 3.4, 5.4; var.: 3.25–3.31, 0.14 d	
β Ara	17 26.9	−55 33	2.84	1.48	K3 Ib–IIa	5	−3.6	600	0.027	199	0		
γ Ara A	17 27.0	−56 24	3.31	−0.15	B1 Ib	~2.9	−4.4	1100	0.016	182	−3 V	broad lines for Ib; B:10.0,18.4″,PA:324°→326°, 1835→2016 orbit ≥ 135,000 y	
												E(B–V) =+0.08	
β Dra A	17 30.9	+52 17	2.79	0.95	G2 Ib–IIa	8.6	−2.5	380	0.020	308	−20 V	B: 11.5, 4.4″, PA:13°→12°, 1889→1934 orbit ≥ 4000 y	Rastaban
υ Sco	17 32.1	−37 19	2.70	−0.18	B2 IV	6	−3.5	600	0.030	185	+8 SB		Lesath
												E(B–V) =+0.02	
α Ara	17 33.4	−49 53	2.84	−0.14	B2 Vne	12	−1.7	300	0.075	206	0 SB		
												BSC5: shell, variable Hα emission	
λ Sco	17 34.9	−37 07	1.62v	−0.23	B1.5 IV	6	−4.6	600	0.032	195	−3 SB2	ecl.?, var: 1.62−1.68, 0.21 d	**Shaula**
												E(B–V) =+0.03	
α Oph	17 35.8	+12 33	2.08	0.16	A5 Vnn	67	1.2	49	0.247	154	+13 SB?		**Rasalhague**
ξ Ser	17 38.7	−15 25	3.54	0.26	F0 IIIb	31	1.0	105	0.073	215	−43 SB		
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
θ Sco	17 38.7	−43 00	1.86	0.41	F1 III	~11	−3.0	300	0.006	119	+1		Sargas
κ Sco	17 43.8	−39 02	2.39v	−0.17	B1.5 III	7	−3.5	480	0.026	193	−14 SB	var.: 2.41–2.42, 0.20 d	
β Oph	17 44.4	+4 34	2.76	1.17	K2 III	~39.8	0.8	82	0.165	345	−12 V		Cebalrai
μ Her A	17 47.2	+27 43	3.42	0.75	G5 IV	~120.3	3.8	27.1	0.804	201	−16 V	BC: 9.78, 35.5″, PA:240°→249°, 1781→2015 orbit ≥ 3700 y	
ι^1 Sco	17 49.0	−40 08	2.99	0.51	F2 Ia	2	−5.9	2000	0.006	180	−28 SB		
G Sco	17 51.2	−37 03	3.19	1.19	K2 III	25.9	0.3	126	0.049	56	+25		HR6630, Fuyue
γ Dra	17 57.1	+51 29	2.24	1.52	K5 III	21.1	−1.1	154	0.024	200	−28		**Eltanin**
ν Oph +2P	18 00.1	−9 46	3.32	0.99	G9.5 IIIa	22	0.0	150	0.117	185	+13		
γ^2 Sgr	18 07.1	−30 25	2.98	0.98	K0 III	34	0.6	97	0.189	197	+22 SB		Alnasl
η Sgr A	18 18.9	−36 45	3.10v	1.5	M3.5 IIIab	22	−0.2	~146	0.211	218	+1 V?	irreg. var.: 3.05–3.12; B: 8.33, G8: IV:, 3.5″ (2016) PA:100°→110°, 1879→2016; orbit ≥ 1270 y	
δ Sgr	18 22.2	−29 49	2.72	1.38	K2.5 IIIa	9	−2.4	350	0.041	128	−20 V?		Kaus Media
η Ser	18 22.3	−2 54	3.23	0.94	K0 III–IV	54	1.9	~60.5	0.890	218	+9 V?		
ε Sgr	18 25.5	−34 22	1.79	−0.03	A0 IIn (shell?)	23	−1.4	~143	0.130	198	−15		**Kaus Australis**
α Tel	18 28.4	−45 57	3.49	−0.18	B3 IV	12	−1.2	280	0.056	198	0 V?		
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
λ Sgr	18 29.2	−25 25	2.82	1.02	K1 IIIb	~41.7	0.9	78	0.191	194	−43 V?		Kaus Borealis
α Lyr	18 37.6	+38 48	0.03	0.00	A0 Va	130	0.6	25.0	0.350	35	−14 V	protoplanetary debris?	**Vega**
												E(B–V) =0.00	
φ Sgr	18 46.9	−26 58	3.17	−0.11	B8 III	14	−1.2	240	0.051	89	+22 SB	apparent duplicity now discounted	
β Lyr	18 50.8	+33 23	3.52v	0.00	B7 Vpe (shell)	~3.4	−3.8	~960	0.004	152	−19 SB	ecl.: 3.25–4.36, 13 d	Sheliak
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
σ Sgr	18 56.5	−26 16	2.05	−0.13	B3 IV	14	−2.2	230	0.056	164	−11V		**Nunki**
												E(B–V) =+0.02	
ξ^2 Sgr	18 58.9	−21 05	3.52	1.15	K1 III	9	−1.7	400	0.034	113	−20		
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
γ Lyr	18 59.7	+32 43	3.25	−0.05	B9 II	5	−3.1	600	0.003	290	−21 V		Sulafat
ζ Sgr AB	19 03.8	−29 51	2.60	0.06	A2 IV–V + A4:V:	37	0.4	90	n.a.	n.a.	+22 SB	A: 3.2; B: 3.5, 0.6″ (2017), orbit 21.1 y	Ascella
ζ Aql A	19 06.3	+13 54	2.99	0.01	A0 Vann	~39.3	1.0	83	0.096	184	−25 SB		Okab
λ Aql	19 07.3	−4 51	3.43	−0.10	B9 Vnp (kB7HeA0)	26	0.5	120	0.093	192	−12 V		
τ Sgr	19 08.2	−27 38	3.32	1.17	K1.5 IIIb	27	0.5	120	0.255	191	+45 SB		
π Sgr ABC	19 10.9	−20 59	2.88	0.38	F2 II–III	6	−3.1	500	0.036	182	−10	A: 3.7; B: 3.8 0.1″ (1989); C: 6.0, AB-CD<1″?	Albaldah
δ Dra	19 12.6	+67 42	3.07	0.99	G9 III	33.5	0.7	97	0.133	46	+25 V		Altais
δ Aql	19 26.5	+3 09	3.36	0.32	F2 IV	64	2.4	51	0.268	72	−30 SB		
β Cyg A	19 31.5	+28 00	3.36	1.09	K3 II + B9.5 V	8	−2.3	430	0.009	229	−24 V	B: 5.11, 35″; Aa, Ac: Δm = 1.5, 0.4″ (2008) if AB is true binary, orbit is possibly ≥ 100 000 y; the competing mere-optical-companions thesis is argued by Bob King in *Sky & Tel* 2016 Sep. 21	Albireo
δ Cyg AB	19 45.6	+45 11	2.86	0.00	B9.5 III	20	−0.7	160	~0.066	~42	−20 SB		Fawaris
												B: 6.4, F1 V; 2.7″, PA:41°→217°, 1826→2016 orbit 780 y	
												E(B–V)=+0.05	
γ Aql	19 47.2	+10 40	2.72	1.51	K3 II	~8.3	−2.7	390	0.017	100	−2 V		Tarazed
α Aql	19 51.7	+8 55	0.76	0.22	A7 Vnn	195	2.2	16.7	0.660	54	−26		**Altair**
η Aql	19 53.5	+1 03	3.87v	0.63	F6–G1 Ib	2	−4.3	1000	0.011	140	−15 SB	Cepheid var.: 3.48–4.39, 7.2 d	
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
γ Sge	19 59.6	+19 33	3.51	1.57	M0 III	13	−1.0	260	0.070	71	−33 V?		
												[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
θ Aql	20 12.3	−0 46	3.24	−0.07	B9.5 III	11	−1.5	290	0.036	81	−27 SB2		
β Cap A	20 22.1	−14 43	3.05	0.79	K0: II: + A5: V:n	10	−2.0	300	0.046	81	−19 SB	A: mult.: 4.0 + 4.3 + 4.8 + 6.7, <1″	Dabih
γ Cyg	20 22.9	+40 19	2.23	0.67	F8 Ib	2	−6.5	2000	0.003	111	−8 V		Sadr
α Pav	20 27.2	−56 40	1.94	−0.12	B2.5 V	18	−1.8	180	0.086	175	+2 SB		**Peacock**
												E(B–V)=+0.02	
α Ind	20 38.9	−47 13	3.11	1.00	K0 III CN–1	33	0.7	98	0.083	37	−1		
α Cyg	20 42.1	+45 21	1.25	0.09	A2 Ia	2	−6.9	~1400	0.003	47	−5 SB		**Deneb**

η	Cep	20 45.7	+61 55	3.41	0.91	K0 IV	70.1	2.6	46.5	0.823	6	−87		
β	Pav	20 46.7	−66 08	3.42	0.16	A6 IV	~24.1	0.3	135	0.044	283	+10		
ε	Cyg	20 47.0	+34 03	2.48	1.02	K0 III	44.9	0.7	73	0.486	47	−11 SB?		Aljanah
													B(75″): optical; C: common proper motion, 78.7″ (2007)	
													AC PA: 266°→265°, 1959 →2007; AC orbit ≥ 50,000 y	
ζ	Cyg	21 13.8	+30 18	3.21	0.99	G8 IIIa Ba 0.5	23	0.0	140	0.069	175	+17 SB		
α	Cep	21 19.0	+62 40	2.45	0.26	A7 Van	66.5	1.6	49.1	0.158	72	−10 V		Alderamin
β	Cep	21 28.9	+70 39	3.23v	−0.20	B1 III	5	−3.4	700	0.015	56	−8 SB	var.: 3.16–3.27, 0.19 d; B: 7.8; 13.5″ (2016)	Alfirk
													PA: 255°→251°, 1779 →2016; orbit ≥ 40,000 y	
													prototype β Cep variable	
β	Aqr	21 32.6	−5 29	2.9	0.83	G0 Ib	6	−3.2	500	0.020	114	+7 V?		Sadalsuud
ε	Peg	21 45.1	+9 58	2.38v	1.52	K2 Ib	5	−4.2	700	0.027	89	+5 V	irregular var.: 0.7–3.5 (flare in 1972)	**Enif**
													BSC5 suggests “cooler shell surrounding”	
δ	Cap	21 48.1	−16 02	2.85v	0.18	A3mF2 IV:	84	2.5	38.7	0.396	139	−6 SB	occ. bin.: 2.81–3.05, 1.0 d, 3.2 + 5.2	Deneb Algedi
γ	Gru	21 55.1	−37 16	3.00	−0.08	B8 IV–Vs	15	−1.1	210	0.099	98	−2 V?		Aldhanab
α	Aqr	22 06.8	−0 13	2.95	0.97	G2 Ib	6	−3.1	~520	0.021	117	+8 V?		Sadalmelik
α	Gru	22 09.5	−46 52	1.73	−0.07	B7 Vn	32	−0.7	101	0.194	139	+12		**Alnair**
													E(B–V)=–0.02	
θ	Peg	22 11.2	+6 18	3.52	0.09	A2mA1 IV–V	35	1.3	90	0.284	84	−6 SB2		Biham
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
ζ	Cep	22 11.5	+58 18	3.39	1.56	K1.5 Ib	3.9	−3.7	800	0.014	69	−18 SB		
α	Tuc	22 19.8	−60 10	2.87	1.39	K3 III	16	−1.1	200	0.081	241	+42 SB		
δ	Cep A	22 29.9	+58 31	4.07v	0.78	F5–G2 Ib	4	−3.0	900	0.016	77	−15 SB	prototype Cepheid var.: 3.48–4.37, 5.4 d	
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
ζ	Peg	22 42.4	+10 56	3.41	−0.09	B8.5 III	16	−0.6	210	0.078	98	+7 V?		Homam
β	Gru	22 43.8	−46 47	2.07v	1.61	M5 III	18	−1.6	180	0.135	92	+2	irregular var.: 2.0–2.3	Tiaki
η	Peg	22 43.9	+30 19	2.93	0.85	G8 II + F0 V	15	−1.2	210	0.029	153	+4 SB		Matar
ε	Gru	22 49.7	−51 13	3.49	0.08	A2 Va	25	0.5	130	0.126	121	0 V		
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
ι	Cep	22 50.4	+66 18	3.50	1.05	K0 III	28.3	0.8	115	0.141	208	−12		
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
μ	Peg	22 50.9	+24 42	3.51	0.93	G8 III	31	0.9	106	0.151	106	+14		Sadalbari
													[THIS STAR ONLY IN ONLINE VERSION OF TABLE]	
δ	Aqr	22 55.7	−15 43	3.27	0.07	A3 IV–V	20	−0.2	160	0.051	237	+18 V	(wk λ4481)	Skat
α	PsA +1P	22 58.7	−29 31	1.17	0.14	A3 Va	130	1.7	25.1	0.368	1 17	+7	exoplanet image published 2008	**Fomalhaut**
β	Peg	23 04.7	+28 11	2.44v	1.66	M2 II–III	16.6	−1.5	~196	0.232	54	+9 V	irregular var.: 2.31–2.74	Scheat
α	Peg	23 05.7	+15 19	2.49	0.00	A0 III–IV	24	−0.6	133	0.073	124	−4 SB		**Markab**
γ	Cep +1P	23 40.2	+77 44	3.21	1.03	K1 III–IV	71	2.5	46	0.135	339	−42 V?		Errai