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Table of contents, briefly:

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Table of potentially useful constants and a few common equations

gravitational constant	G	$6.674 \cdot 10^{-11}$ m^3 kg^{-1} s^{-2}	$4\pi^2$ AU^3 M$_\odot^{-1}$ yr^{-2}
useful in		$F = GM_1 m_2 / r^2 = gm_2$;	$P^2 = [4\pi^2 a^3] / [G(M_1+M_2)]$
and in		$v = [G(M_1+M_2) \cdot (2/r - 1/a)]^{1/2}$	
speed of light	c	$2.998 \cdot 10^8$ m s^{-1}	
useful in		$c = \lambda f$;	$\lambda = \lambda_0 [1 + (v_r/c)]$
Planck constant	h	$6.626 \cdot 10^{-34}$ J s	$4.136 \cdot 10^{-15}$ eV s
useful in		$E = hf = hc / \lambda$	
Boltzmann constant	k	$1.381 \cdot 10^{-23}$ J K^{-1}	$8.617 \cdot 10^{-5}$ eV K^{-1}
useful in		$E \sim kT$;	$v \sim [2kT/m]^{1/2}$;
and in		$P = (\rho kT/m)$;	$H = kT / (gm)$
Stefan-Boltzmann constant	σ	$5.670 \cdot 10^{-8}$ J s^{-1} m^{-2} K^{-4}	$= \frac{2\pi^5 k^4}{15h^3c^2}$
useful in		$L = 4\pi r^2 \sigma T^4$	
Wien's law		$\lambda = [2.898 \cdot 10^{-3}$ m K$] / [T$ (K)]	
converting eV to J		1 eV = $1.602 \cdot 10^{-19}$ J	
converting seconds to years		1 yr = $3.16 \cdot 10^7$ s	
mass of an electron	m_e	$9.109 \cdot 10^{-31}$ kg	0.511 MeV/c
unified atomic mass unit	m_u or u	$1.661 \cdot 10^{-27}$ kg	
mass of a hydrogen atom	m_H	$1.67 \cdot 10^{-27}$ kg	1.008 u
mass of a proton	m_p	938.3 MeV/c	1.0073 u
mass of a neutron	m_n	939.6 MeV/c	1.0087 u
astronomical unit	1 AU =	$1.496 \cdot 10^{11}$ m	
parsec	1 pc =	206,265 AU	$3.0857 \cdot 10^{16}$ m = 3.26 ly
light year	1 ly =	63,241 AU	$9.4607 \cdot 10^{15}$ m = 0.3066 pc

Pressure units: 1 Pa = 1 N/m^2 = 1 kg / (m s^2)
1 bar = 10^5 Pa
1 atm ~101 kPa = 1 atm ~760 mm Hg ~ 14 psi.

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Table 4.1: Summary of orbital and physical properties of selected solar system objects

Object	semi-major axis (AU or km)	revolution period (days or years)	orbit eccentricity	& inclination to ecliptic or planet equator (°)	rotation period (hours or days)	obliquity (°)
Sun	_	_	_	_	25 – 34 d	7.25
Mercury	0.387	87.97 d	0.206	7.0	58.65 d	0.003
Venus	0.723	0.615	0.007	3.39	–243 d	177.4
Earth	1.0	1.0	0.017	7.2 to Sun eq.	23.93	23.44
Moon	384,400 km	27.32 d	0.055	5.15 to ecl.	27.32 d	6.69
Mars	1.52	1.88	0.094	1.85	1.026 d	25.19
Phobos	9,376 km	0.32 d	0.015	1.09	0.32 d	0
Deimos	23,463 km	1.26 d	~0	0.93	1.26 d	
4 Vesta	2.36	3.63	0.09	7.14	5.34	
Ceres	2.77	4.60	0.08	10.59	9.07	~3
2 Pallas	2.77	4.61	0.23	34.84	7.81	~78?
10 Hygiea	3.14	5.56	0.12	3.84	27.62	
Jupiter	5.20	11.86	0.05	1.31	9.93	3.13
Io	421,700 km	1.77 d	0.004	0.05	1.77 d	
Europa	670,900 km	3.55 d	0.009	0.47	3.55 d	0.1
Ganymede	$1.070 \cdot 10^6$ km	7.15 d	0.0013	0.20	7.15 d	
Callisto	$1.883 \cdot 10^6$ km	16.69 d	0.0074	~1	16.69 d	0
Saturn	9.58	29.46	0.056	2.49	10.55	26.73
Mimas	185,539 km	0.94 d	0.02	1.57	0.94 d	0
Enceladus	237,948 km	1.37 d	0.005	0.019	1.37 d	0
Tethys	294,619 km	1.89 d	~0	1.12	1.89 d	0
Dione	377,396 km	2.74 d	0.002	0.019	2.74 d	0
Rhea	527,108 km	4.52 d	0.001	0.345	4.52 d	0
Titan	$1.222 \cdot 10^6$ km	15.95 d	0.029	0.35	15.95 d	0
Iapetus	$3.561 \cdot 10^6$ km	79.32 d	0.029	15.47	79.32 d	0
2060 Chiron	13.71	50.76	0.38	6.93	5.92	
Uranus	19.19	84.02	0.05	0.77	–17.24	97.8
Miranda	129,390 km	1.41 d	0.0013	4.23	1.41 d	0
Ariel	191,020 km	2.52 d	0.0012	0.26	2.52 d	?
Umbriel	266,300 km	4.14 d	0.0039	0.21	4.14 d	0?
Titania	435,910 km	8.71 d	0.0011	0.34	8.71 d	?
Oberon	583,520 km	13.46 d	0.0014	0.06	13.46 d	?
5145 Pholus	20.36	91.85	0.57	24.65	9.98	?
Neptune	30.07	164.8	0.0087	1.77	16.11	28.32
Proteus	117,647 km	1.122 d	~0	0.52	1.122 d	~0
Triton	354,759 km	– 5.88 d	~0	157	5.88	0
Pluto	39.26	247.7	0.25	17.16	6.387 d	122.5
Charon	19,591 km	6.387 d	0	0	6.387 d	
Haumea	43.22	284	0.19	28.19	3.92	?
Makemake	45.72	309	0.16	29.00	7.8	?
Eris	67.78	558	0.44	44.04	25.9	?
90377 Sedna	524.4	~11,400	0.85	11.93	10.3	?

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Table 4.1: Summary of orbital and physical properties of selected solar system objects, continued

Object	mass (kg)	diameter (km)	ave. density (g/cm^3)	albedo (Bond or geom.)	surface temp. (K)	atmosphere or color
Sun	$1.99 \cdot 10^{30}$	$1.39 \cdot 10^{6}$ (eq.)	1.41	_	5780	H, He
Mercury	$3.30 \cdot 10^{23}$	4,879	5.43	0.068 Bond	80 – 700	trace
Venus	$4.87 \cdot 10^{24}$	12,104	5.24	0.90 Bond	737	CO_2, N_2, SO_2
Earth	$5.97 \cdot 10^{24}$	12,742	5.51	0.31 Bond	184 – 330	N_2, O_2, Ar, H_2O
Moon	$7.35 \cdot 10^{22}$	3,474	3.35	0.12 geom	70 – 390	trace
Mars	$6.42 \cdot 10^{23}$	6,779	3.93	0.25 Bond	130 – 308	CO_2, Ar, N_2, O_2
Phobos	$1.07 \cdot 10^{16}$	27 x 22 x 18	1.88	0.071 geom	~233	
Deimos	$\cdot 10^{20}$	15 x 12 x 11	1.47	0.068 geom	~233	
4 Vesta	$2.59 \cdot 10^{20}$	~525	3.46	0.42 geom	85 – 270	V-type
Ceres	$9.39 \cdot 10^{20}$	938	2.17	0.09 geom	168 – 235	C-type
2 Pallas	$2.11 \cdot 10^{20}$	544	~2.8	0.16 geom	~164	B-type
10 Hygiea	$8.67 \cdot 10^{19}$	~431	2.08	0.07 geom	~164	C-type
Jupiter	$1.90 \cdot 10^{27}$	139,822	1.33	0.50 Bond	165 @ 1 bar	H_2, H2, CH_4, NH_3
Io	$8.93 \cdot 10^{22}$	3,643	3.53	0.63 geom	110	trace SO_2
Europa	$4.80 \cdot 10^{22}$	3,122	3.01	0.67 geom	102	trace
Ganymede	$1.48 \cdot 10^{23}$	5,268	1.94	0.43 geom	110	trace O_2
Callisto	$1.08 \cdot 10^{23}$	4.821	1.83	0.2 geom	134	trace O_2, CO_2
Saturn	$5.68 \cdot 10^{26}$	116,464	0.69	0.34 Bond	134 @ 1 bar	H_2, He, CH_4, NH_3
Mimas	$3.75 \cdot 10^{19}$	396	1.15	0.86 geom	~64	
Enceladus	$1.08 \cdot 10^{20}$	504	1.61	0.99 Bond	75 (ave)	trace H_2O, N_2, CO_2
Tethys	$6.17 \cdot 10^{20}$	1,062	0.98	0.80 Bond	86	
Dione	$1.10 \cdot 10^{21}$	1,123	1.48	0.99 geom	87	
Rhea	$2.31 \cdot 10^{21}$	1,527	1.24	0.95 geom	53 – 99	
Titan	$1.345 \cdot 10^{23}$	5,150	1.88	0.2 geom	93.7	N_2, CH_4, H_2
Iapetus	$6.5xx \cdot 10^{19}$	1,470	1.09	~0.6 geom	90 – 130	
2060 Chiron	?	~166 km	?	~0.15 geom	~75	
Uranus	$8.68 \cdot 10^{25}$	50,724	1.27	0.30 Bond	76 K @ 1 bar	H_2, He, CH_4
Miranda	$6.59 \cdot 10^{19}$	471	1.20	0.32 geom	~60	
Ariel	$1.35 \cdot 10^{21}$	1,158	1.59	0.23 Bond	~60	
Umbriel	$1.17 \cdot 10^{21}$	1,169	1.39	0.10 Bond	~75	
Titania	$3.53 \cdot 10^{21}$	1,577	1.71	0.17 Bond	70	
Oberon	$3.01 \cdot 10^{21}$	1,523	1.63	0.14 Bond	70-80	~0 atm
5145 Pholus	?	185	?	0.046	~62	red
Neptune	$1.02 \cdot 10^{26}$	49,244	1.64	0.29 Bond	72 K @ 1 bar	H_2, He, CH_4
Proteus	$4.4 \cdot 10^{19}$	~420	~1.3	0.096 geom	~51	
Triton	$2.14 \cdot 10^{22}$	2,706	2.06	0.719 geom	38	N_2
Pluto	$1.303 \cdot 10^{22}$	2,377	1.86	0.49 – 0.66 geo	33 – 55	N_2, CH_4, CO
Charon	$1.586 \cdot 10^{21}$	1,212	1.66	0.37 geom	53	
Haumea	$4.0 \cdot 10^{21}$	~1,400	2.6	~0.8	< 50	neutral
Makemake	$<4.4 \cdot 10^{21}$	~1,470	?	0.81	~38	reddish
Eris	$1.66 \cdot 10^{22}$	2326	2.52	0.96	~ 42-55	reddish
Sedna	?	~1,000	?	0.32 geom	~12	red

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Table 9.1: Bulk properties of giant planets

	Jupiter	Saturn	Uranus	Neptune
Mass (Earth masses)	318	95	14.5	17.1
Average radius (Earth radii)	11.0	9.1	4.0	3.9
Flattening ($1 - R_{polar}/R_{equator}$)	0.065	0.098	0.023	0.017
Moment of inertia factor	0.254	0.210	0.225	~0.25
Density (g/cm^3)	1.33	0.69	1.27	1.64
Rotation period (hours)	9.925	10.57	-17.23	16.10

Table 5.1: Densities and magnetic fields of selected terrestrial solar system objects

object	average density (g/cm^3)	surface magnetic field (μT)	field source / comments	interior liquid layer?
Mercury	5.43	0.25	dynamo?	partially molten core?
Venus	5.24	~$5 \cdot 10^{-4}$	induced by solar wind	Fe-Ni core?
Earth	5.51	31	dynamo	Fe-Ni outer core
Moon	3.35	~0.03	localized crustal field	thin outer core
Mars	3.93	~10^{-3}	loc. crustal field + solar wind	Fe/FeS core?
Io	3.53	~1.3	interacts with Jupiter's field	thin outer mantle shell
Europa	3.01	~0.2	interacts with Jupiter's field	ocean
Ganymede	1.94	~0.75	intrinsic; dynamo?	ocean; possibly two
Callisto	1.83	~0.04		ocean? not completely differentiated
Titan	1.88	~0	interacts with Saturn's field	ocean
Enceladus	1.61	~0	interacts with Saturn's field	ocean
Pluto	1.86	no?		ocean?

Models suggest subsurface oceans are possible on Rhea, Titania & Oberon, Triton, Orcus (a plutino), Eris, Sedna (TNO; very long eccentric orbit)

Table 9.3: Magnetic fields of giant (and comparison) planets

	Surface field strength μT	Magnetic moment T·m^3	relative to Earth
Jupiter	428	$1.6 \cdot 10^{20}$	20,000
Saturn	22	$4.8 \cdot 10^{18}$	600
Uranus	23	$3.8 \cdot 10^{17}$	50
Neptune	14	$2.2 \cdot 10^{17}$	25
Earth	31	$7.9 \cdot 10^{15}$	1
Ganymede	0.72	$1.3 \cdot 10^{13}$	$1.7 \cdot 10^{-3}$
Mercury	0.3	$2.8 \cdot 10^{12}$	$3.5 \cdot 10^{-4}$

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Table 8.1: properties substantial atmospheres of terrestrial objects

	Venus	Mars	Earth	Titan
N_2	0.035	0.019	**0.78**	**0.98**
O_2	< 20 ppm*	0.0015	**0.21**	
O_3		0.01 ppm	10 ppm	
Ar	70 ppm	0.019	0.0093	
H_2O	~30 ppm	< 100 ppm	< 0.05	
CO_2	**0.96**	**0.96**	400 ppm	
CO	~25 ppm	< 0.001	0.2 ppm	
CH_4			1.8 ppm	0.14
SO_2	20 – 200 ppm		trace (& trace N_2O)	traces H_2 and various hydrocarbons
H_2S	1 – 2 ppm			
H_2SO_4	4 – 10 ppm, clouds			
Ne	7 ppm	2.5 ppm	18 ppm	
He	12 ppm		5 ppm	
surface pressure	9200 kPa	0.6 kPa	101 kPa	147 kPa

*Parts per million by volume

Table 8.2: properties of tenuous atmospheres of terrestrial objects

Object	principal gases	surface pressure
Triton	N_2; CO & CH_4 ~few 10^{-3} N_2; Ar, Ne?	~1.6 Pa
Pluto	N_2; CO & CH_4	~0.3 – 1 Pa
Io	SO_2; traces of SO, NaCl, S, O	~10^{-4} Pa
Ganymede	O, O_2, H	~10^{-6} Pa
Europa	O_2	~10^{-7} Pa
Rhea	O_2, CO_2	~10^{-7} Pa
Dione	O_2	~10^{-8} Pa
Mercury	Na, Mg, O_2, S, H_2S, Ca, K, H_2O, He, H	~10^{-9} Pa
Moon	Ar, He, Ne, Na, K	~10^{-9} Pa

Any moon with pole caps, even very small moons, will have had some molecules of ices spending some amount of time hopping from warmer subsolar latitudes to the poles.

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Table 9.2: Atmospheric properties of giant planets

	Jupiter	Saturn	Uranus	Neptune
H_2	0.864	0.963	0.85	0.85
He	0.136	0.033	0.13	0.13
H_2O	$2.3 \cdot 10^{-3}$	$\sim 1.6 \cdot 10^{-3}$	$\sim 1.4 \cdot 10^{-3}$	$\sim 1.4 \cdot 10^{-3}$
CH_4	$1.8 \cdot 10^{-3}$	$4.3 \cdot 10^{-3}$	0.020	0.030
NH_3	$2.3 \cdot 10^{-4}$	$4.8 \cdot 10^{-4}$	$< 1.9 \cdot 10^{-4}$	$< 1.9 \cdot 10^{-4}$
H_2S	$1.9 \cdot 10^{-4}$	$3.8 \cdot 10^{-4}$	$\sim 3 \cdot 10^{-4}$	$\sim 8 \cdot 10^{-4}$
Ne	$2.0 \cdot 10^{-5}$			
Ar	$1.3 \cdot 10^{-5}$			
C_2H_6	$\sim 3 \cdot 10^{-6}$	$\sim 3 \cdot 10^{-6}$	$< 1 \cdot 10^{-8}$	$1.7 \cdot 10^{-6}$
Traces	other hydrocarbons, CO →			
	PH_3, GeH_4 →		HCN →	

Table 13.1: selected properties of the Sun

Mass	$1.99 \cdot 10^{30}$ kg
Radius	$6.96 \cdot 10^{5}$ km
Luminosity	$3.828 \cdot 10^{26}$ J/s
Average density	1.41 g/cm^3
Temperature — Core	$15.7 \cdot 10^{6}$ K
Temperature — Photosphere	5,778 K ($T_{effective}$)
Temperature — Corona	range; several million K
Rotation period	~25 days near equator; ~35 days near poles
Magnetic field	$\sim 1\text{-}2 \cdot 10^{-4}$ T globally; ~0.3 T in sunspots
absolute magnitude	$M_V = 4.83$
color index	$B-V = 0.62$
spectral type	G2V
metallicity	$Z = 0.0122$

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Table 14.1: some of the principal characteristics of the spectral types.

O	blue	T_{eff} >30,000 K	He II; multiply ionized metals; some lines in emission
B	blue-white	T_{eff}: 10,000 - 30,000 K	He I, Balmers increasing
A	blue-white - white	T_{eff}: 7,500 - 10,000 K	Balmer lines; ionized metals; Ca II strengthening
F	white - yellow-white	T_{eff}: 6,000 - 7,500 K	Balmer lines ↓; Ca II ↑; neutral metals increasing
G	yellow-white - yellow	T_{eff}: 5,200 - 6,000 K	Balmers weak; Ca II max; neutral metals ↑; CH
K	yellow - orange	T_{eff}: 3,700 - 5,200 K	Balmers very weak; Ca II; neutral metals strong; TiO
M	orange - red	T_{eff}: 2,400 - 3,700 K	Ca II ↓; neutral metals strong; molecular bands

WR	Wolf-Rayet stars; no hydrogen lines; emission lines of helium and N &/or C, sometimes O
L	mostly brown dwarfs; some very low-mass stars; some very cool supergiants
T	infrared brown dwarfs, T_{eff} ~ 700 - 1,300 K; methane present in spectra
Y	recently created classification for very cool brown dwarfs; possibly NH_3, H_2O present in spectra
C	Carbon stars; most are CR, CN giants similar to G/K and K/M stars but with added carbon
S	ZrO in spectra; carbon intermediate between carbon stars and normal M stars
wd or D	white dwarfs: degenerate remnants of solar-type stars; broad lines

Table 14.2: approximate properties of Population I main sequence (luminosity class V) stars

	T_{eff}	B−V	M_V	B.C.*	$R / R_\odot$	$M / M_\odot$
O2	48,000	−1.0	−6.1	−4.7	15	100
O5	42,000	−0.33	−5.7	−4.40	12	60
B0	30,000	−0.3	−4.0	−3.16	7.4	17.5
B5	15,200	−0.17	−1.2	−1.46	3.9	5.9
B8	11,400	−0.11	−0.25	−0.80	3.0	3.8
A0	9,790	−0.02	0.65	−0.30	2.4	2.9
A5	8,180	0.15	2.0	−0.15	1.7	2.0
F0	7,300	0.30	2.7	−0.09	1.5	1.6
F5	6,650	0.44	3.5	−0.14	1.3	1.4
G0	5,940	0.58	4.4	−0.18	1.1	1.05
G5	5,560	0.68	5.1	−0.21	0.92	0.92
K0	5,150	0.81	5.9	−0.31	0.85	0.79
K5	4,410	1.15	7.4	−0.72	0.72	0.67

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M0	3,840	1.40	8.8	−1.38	0.60	0.51
M5	3,000	1.64	12.3	−2.73	0.2	0.15
M8	2,400	2.12	18.7	−4.1	0.10	0.08

*B.C. = bolometric correction

Table 14.3: roughly, approximate properties of Population I supergiants (luminosity class I)

	T_{eff}	B−V	M_V	B.C.	$R / R_\odot$
O9	32,000	−0.27	−6.5	−3.2	25
B2	17,600	−0.17	−6.4	−1.6	40
B5	13,600	−0.10	−6.2	−0.95	50
A0	9,980	−0.01	−6.3	−0.4	60
A5	8,610	0.09	−6.6	−0.1	65
F0	7,460	0.17	−6.6	−0.01	80
F5	6,370	0.32	−6.6	−0.03	100
G0	5,370	0.76	−6.4	−0.15	120
G5	4,930	1.02	−6.2	−0.3	150
K0	4,550	1.25	−6.0	−0.5	200
K5	3,990	1.60	−5.8	−1.0	400
M0	3,620	1.67	−5.6	−1.3	500
M5	2,880	1.80	−5.6	−3.5	800

Table 14.4: properties of a few interesting and/or well-known stars.

	RA (2000)			Dec (2000)		m_B	m_V	B-V	parallax	μ RA	μ Dec	v_{radial}	Spt& LC	notes
	h	m	s	°	′				mas	mas	mas	km/s		
α Cen A	14	39	36.5	-60	50.0	0.72	0.01	0.71	754.81	-3679	474	-21.4	G2V	
α Cen B	14	39	35.1	-60	50.3	2.21	1.33	0.88	796.92	-3614	803	-20.7	K1V	
α Cen C	14	29	42.9	-62	40.8	12.95	11.13	1.82	769.8	-3776	766	-22.4	M5.5Ve	+ planet
Albireo (β Cyg) A	19	30	43.3	27	57.6	4.17	3.09	1.08	7.51	-7.2	-6.2	-24.07	K3II+B9.5 V	
Albireo (βCyg) B	19	30	45.4	27	57.9	5.01	5.11	-0.1	8.38	-0.99	-0.5	-18.80	B8Ve	
Aldebaran (α Tau)	4	35	55.2	16	30.6	2.4	0.86	1.54	48.94	63.5	-189	54.26	K5III	
Algol (β Per)	3	8	10.1	40	57.3	2.07	2.12	-0.05	36.27	2.99	-1.7	4.0	B8V	eclipsing binary
Altair (αAql)	19	50	47	8	52.1	0.98	0.76	0.22	194.95	536	385	-26.6	A7Vn	
Antares (α Sco)	16	9	24.5	-26	25.9	2.75	0.91	1.84	5.89	-12	-23	-3.5	M0.5Iab+ B3V	
Arcturus (α Boo)	14	15	39.7	19	10.9	1.18	-0.05	1.23	88.83	-1093	-2000	-5.19	K1.5III	
Barnard's	17	57	48.5	4	41.6	11.24	9.51	1.73	547.5	-803	10362.54	-110.51	M4V	BY Dra var

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Betelgeuse (α Ori)	5	55	10.3	7	24.4	2.27	0.42	1.85	6.55	27.5	11	21.91	M1-2Ia-Iab	
Canopus (α Car)	6	23	57.1	-52	41.7	-0.59	-0.74	0.15	10.55	19.9	23.2	20.3	A9II	
Capella (α Aur)	5	16	41.4	45	59.9	0.88	0.08	0.8	76.2	75.3	-427	29.19	K0+G1III	spectroscopic bin
Castor (α Gem) Aab	7	34	35.9	31	53.3	1.62	1.93	-0.31	64.12	-206.3	-148	6	A1.5IV+dM1e	spectroscopic bin
Castor (α Gem) Bab	7	34	36.1	31	53.3	1.62	2.97	-1.35	64.12	-206.3	-148	-1.2	A1IV+dM1e	spectroscopic bin
Castor (α Gem) Cab	7	34	37.6	31	52.2	10.56	9.27	1.29	64.12	-207.6	-96	2.5	2(M0.5Ve)	BY Dra &bin
τ Ceti	1	44	4.1	-15	56.2	4.22	3.5	0.72	273.96	-1721	854	-16.68	G8V	multiple planets; debris disk
61 Cygni A	21	6	53.9	38	45.0	6.39	5.21	1.18	285.95	416	32	-65.74	K5V	BY Dra var
61 Cygni B	21	6	55.3	38	44.5	7.4	6.03	1.37	286.15	4106	3156	-64.07	K7V	
Deneb (α Cygni)	20	41	25.9	45	16.8	1.34	1.25	0.09	2.31	2.0	1.9	-4.9	A2Ia	
ε Eri	3	32	55.8	-9	27.5	4.61	3.73	0.88	310.9	-975.2	19.5	16.43	K2 V	BY Dra var; + planet
Fomalhaut (α PsA) A	22	57	39	-29	37.3	1.25	1.16	0.09	129.8	329	-165	6.5	A4V	+planet; debris disk; angular size 0.212 ’
Fomalhaut B (TW PsA)	22	56	24.1	-31	33.9	7.58	6.48	1.1	131.4	330	-158	7.2	K4Ve	BY Dra var
Fomalhaut C	22	48	4.5	-24	22.1	14.3	12.624	1.676	130.3	332	-184	6.5	M4.0Ve	
ε Indi	22	3	21.7	-56	47.2	5.75	4.69	1.06	274.8	3967	-2536	-40	K5V	
Luten 726-8 A (BL Cet)	1	39	1.5	-17	57.0		12.7		374	3296	563	29	M5.5V	flare
Luten 726-8 B (UV Cet)	1	39	1.5	-17	57.0		13.2		374	3296	563	29	M6V	flare
Mizar (ζ 1 UMa) A	13	23	55.5	54	55.5	2.29	2.23	0.06	39.4	121	-22	-5.6	A1.5V	spectroscopic bin
Mizar (ζ 2 UMa) B	13	23	56.3	54	55.3	4.05	3.88	0.17	40.5	114	-26.5	-9.3	A1+A7IV-V	spectroscopic bin
Alcor (80 UMa)	13	25	13.5	54	59.3	4.18	4.01	0.17	39.9	113	-28.6	-8.9	A5+M3-4V	binary
Polaris (α UMi) Aa	2	31	49.1	89	15.9	2.62	2.02	0.6	7.54	44.5	-11.9	-16.4	F8 Ib	Cepheid
Polaris (α UMi) Ab							9.2						F6V	
Polaris (α UMi) B	2	30	33.5	89	15.6	8.69	8.2	0.49				-8	F3V	
Pollux (β Gem)	7	45	18.95	28	1.6	2.14	1.14	1.0	94.54	-627	-45.8	3.23	K0IIIb	+ planet
Procyon (α CMi) A	7	39	18.1	5	13.5	0.79	0.37	0.4	284.6	-717	-1035	-3.2	F5 IV-V	
Procyon (αCMi) B	7	39	17.9	5	3.4	10.7	10.92	-0.2		-709	-1024		DQZ	
R136a1	5	38	42.4	-69	6.0	12.78	12.77	0.01	0.02				WN5h	LMC
Regulus (α Leo) A	10	8	22.3	11	58.0	1.24	1.4	-0.2	41.13	-249	5.6	5.9	B8IVn	
Regulus (α Leo) B/C	10	8	12.8	11	59.8	8.99	8.13	0.9	41.21	-254	8.0	6.72	K0Ve (+M4V?)	binary
Rigel (βOri) A	5	14	32.3	-8	12.1	0.1	0.13	-0.03	3.78	1.3	0.5	17.8	B8Iae	
Rigel (βOri) Bab	5	14	32	-8	12.2	10.4	10.4	0.00				19.1	B9+B9	spectroscopic bin
Ross 128	11	47	44.4	0	48.3	12.905	11.153	1.75	295.8	607	-1223	-31.2	M4V	flare; +planet
Sirius (α CMa) A	6	45	8.9	-16	43.0	-1.09	-1.09	0.00	379.2	-546	-1223	-5.5	A1V	spectroscopic bin
Sirius (α CMa) B	6	45	9	-16	43.1	8.41	8.44	-0.03		-547	-1207		DA1.9	
Spica (α Vir)	13	25	11.6	-11	9.7	0.74	0.97	-0.23	13.06	-42	-30.7	1	B1V	
Vega (αLyr)	18	36	56.3	38	47.0	0.03	0.03	0.00	130.23	201	286	-20.6	A0V	
WISE 0855-0714	8	55	10.8	-7	14.7				448	-4800	500		Y2	$m_J = 25$

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