

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
ε Tuc	9076	00 00 30.4	-65 30 47		4.50	-0.28	-0.08	B9 IV
θ Oct	9084	00 02 10.3	-77 00 08		4.78	+1.41	+1.27	K2 III
30 YY Psc	9089	00 02 33.0	-05 57 01		4.41	+1.83	+1.63	M3 III
2 Cet	9098	00 04 19.7	-17 16 19		4.55	-0.12	-0.05	B9 IV
33 BC Psc	3	00 05 55.5	-05 38 36	6	4.61	+0.89	+1.04	K0 III-IV
21 α And	15	00 08 59.1	+29 09 14	d6	2.06	-0.46	-0.11	B9p Hg Mn
11 β Cas	21	00 09 47.9	+59 12 47	svd6	2.27	+0.11	+0.34	F2 III
ε Phe	25	00 09 59.5	-45 41 03		3.88	+0.84	+1.03	K0 III
22 And	27	00 10 55.4	+46 08 10		5.03	+0.25	+0.40	F0 II
κ <sup>2</sup> Scl	34	00 12 09.4	-27 44 09	d	5.41	+1.46	+1.34	K5 III
θ Scl	35	00 12 19.0	-35 04 08		5.25		+0.44	F3/5 V
88 γ Peg	39	00 13 49.8	+15 14 51	svd6	2.83	-0.87	-0.23	B2 IV
89 χ Peg	45	00 15 12.0	+20 16 14	as	4.80	+1.93	+1.57	M2+ III
7 AE Cet	48	00 15 13.4	-18 52 09		4.44	+1.99	+1.66	M1 III
25 σ And	68	00 18 55.9	+36 50 56	6	4.52	+0.07	+0.05	A2 Va
8 ι Cet	74	00 20 00.8	-08 45 37	d	3.56	+1.25	+1.22	K1 IIIb
ζ Tuc	77	00 20 39.8	-64 48 26		4.23	+0.02	+0.58	F9 V
41 Psc	80	00 21 11.4	+08 15 15		5.37	+1.55	+1.34	K3- III Ca 1 CN 0.5
27 ρ And	82	00 21 43.8	+38 01 56		5.18	+0.05	+0.42	F6 IV
R And	90	00 24 38.6	+38 38 26	svd	7.39	+1.25	+1.97	S5/4.5e
β Hyi	98	00 26 20.4	-77 11 23		2.80	+0.11	+0.62	G1 IV
κ Phe	100	00 26 46.0	-43 36 58		3.94	+0.11	+0.17	A5 Vn
α Phe	99	00 26 51.0	-42 14 37	67	2.39	+0.88	+1.09	K0 IIIb
	118	00 30 57.1	-23 43 27	6	5.19		+0.12	A5 Vn
λ <sup>1</sup> Phe	125	00 31 58.1	-48 44 24	d6	4.77	+0.04	+0.02	A1 Va
β <sup>1</sup> Tuc	126	00 32 04.0	-62 53 42	d6	4.37	-0.17	-0.07	B9 V
15 κ Cas	130	00 33 39.7	+62 59 42	s6	4.16	-0.80	+0.14	B0.7 Ia
29 π And	154	00 37 29.9	+33 46 57	d6	4.36	-0.55	-0.14	B5 V
17 ζ Cas	153	00 37 37.1	+53 57 36		3.66	-0.87	-0.20	B2 IV
	157	00 37 58.4	+35 27 46	s	5.42	+0.45	+0.88	G2 Ib-II
30 ε And	163	00 39 10.0	+29 22 27		4.37	+0.47	+0.87	G6 III Fe-3 CH 1
31 δ And	165	00 39 56.7	+30 55 26	sd6	3.27	+1.48	+1.28	K3 III
18 α Cas	168	00 41 10.0	+56 36 01	d	2.23	+1.13	+1.17	K0- IIIa
μ Phe	180	00 41 52.0	-46 01 19		4.59	+0.72	+0.97	G8 III
η Phe	191	00 43 52.0	-57 24 01	d	4.36	-0.02	0.00	A0.5 IV
16 β Cet	188	00 44 10.0	-17 55 25		2.04	+0.87	+1.02	G9 III CH-1 CN 0.5 Ca 1
22 σ Cas	193	00 45 22.3	+48 20 50	d6	4.54	-0.51	-0.07	B5 III
34 ζ And	215	00 47 57.0	+24 19 46	vd6	4.06	+0.90	+1.12	K0 III
λ Hyi	236	00 48 59.1	-74 51 40		5.07	+1.68	+1.37	K5 III
63 δ Psc	224	00 49 16.8	+07 38 51	d	4.43	+1.86	+1.50	K4.5 IIIb
64 Psc	225	00 49 35.1	+17 00 09	d6	5.07	0.00	+0.51	F7 V
24 η Cas	219	00 49 48.5	+57 52 33	sd6	3.44	+0.01	+0.57	F9 V
35 ν And	226	00 50 27.1	+41 08 29	6	4.53	-0.58	-0.15	B5 V
19 φ <sup>2</sup> Cet	235	00 50 42.1	-10 34 57		5.19	-0.02	+0.50	F8 V
	233	00 51 26.1	+64 18 36	cd6	5.39	+0.14	+0.49	G0 III-IV + B9.5 V
20 Cet	248	00 53 35.8	-01 04 55		4.77	+1.93	+1.57	M0- IIIa
λ <sup>2</sup> Tuc	270	00 55 25.9	-69 27 54		5.45	+1.00	+1.09	K2 III
37 μ And	269	00 57 23.7	+38 33 41	d	3.87	+0.15	+0.13	A5 IV-V
27 γ Cas	264	00 57 24.7	+60 46 44	d6	2.47	-1.08	-0.15	B0 IVnpe (shell)
38 η And	271	00 57 49.4	+23 28 46	d6	4.42	+0.69	+0.94	G8- IIIb

## BRIGHT STARS, J2011.5

H3

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
68	Psc	274	00 58 27.7	+29 03 15		5.42	+1.08	gG6
$\alpha$	Scl	280	00 59 09.5	-29 17 44	s6	4.31	-0.56	B4 Vp
$\sigma$	Scl	293	01 02 59.3	-31 29 25		5.50	+0.13	A2 V
71 $\epsilon$	Psc	294	01 03 32.5	+07 57 07		4.28	+0.70	G9 III Fe-2
$\beta$	Phe	322	01 06 35.7	-46 39 25	d7	3.31	+0.57	G8 III
$\iota$	Tuc	332	01 07 45.8	-61 42 51		5.37	+0.88	G5 III
$\nu$	Phe	331	01 08 19.3	-41 25 33	d	5.21	+0.09	A3 IV/V
$\zeta$	Phe	338	01 08 51.9	-55 11 04	vd6	3.92	-0.41	B7 V
30 $\mu$	Cas	321	01 09 02.8	+54 58 35	d6	5.17	+0.09	G5 Vb
31 $\eta$	Cet	334	01 09 10.1	-10 07 18	d	3.45	+1.19	K2 <sup>-</sup> III CN 0.5
42 $\phi$	And	335	01 10 10.5	+47 18 10	d7	4.25	-0.34	B7 III
43 $\beta$	And	337	01 10 22.8	+35 40 52	ad	2.06	+1.96	M0 <sup>+</sup> IIIa
		285	01 10 32.1	+86 19 05		4.25	+1.33	K2 III
33 $\theta$	Cas	343	01 11 48.6	+55 12 39	d6	4.33	+0.12	A7m
84 $\chi$	Psc	351	01 12 04.4	+21 05 44		4.66	+0.82	G8.5 III
83 $\tau$	Psc	352	01 12 17.8	+30 09 01	6	4.51	+1.01	K0.5 IIIb
86 $\zeta$	Psc	361	01 14 20.0	+07 38 09	d67	5.24	+0.09	F0 Vn
89	Psc	378	01 18 23.6	+03 40 29	6	5.16	+0.08	A3 V
90 $\nu$	Psc	383	01 20 06.1	+27 19 27	6	4.76	+0.10	A2 IV
34 $\phi$	Cas	382	01 20 48.8	+58 17 30	sd6	4.98	+0.49	F0 Ia
46 $\xi$	And	390	01 23 01.3	+45 35 19	6	4.88	+0.99	K0 <sup>-</sup> IIIb
45 $\theta$	Cet	402	01 24 35.9	-08 07 27	d	3.60	+0.93	K0 IIIb
37 $\delta$	Cas	403	01 26 34.7	+60 17 41	sd6	2.68	+0.12	A5 IV
36 $\psi$	Cas	399	01 26 45.6	+68 11 23	d	4.74	+0.94	K0 III CN 0.5
94	Psc	414	01 27 19.1	+19 17 59		5.50	+1.05	gK1
48 $\omega$	And	417	01 28 21.0	+45 27 56	d	4.83	0.00	F5 V
$\gamma$	Phe	429	01 28 51.8	-43 15 35	v6	3.41	+1.85	M0 <sup>-</sup> IIIa
48	Cet	433	01 30 09.2	-21 34 13	d7	5.12	+0.04	A1 Va
$\delta$	Phe	440	01 31 43.7	-49 00 48		3.95	+0.70	G9 III
99 $\eta$	Psc	437	01 32 06.0	+15 24 17	d	3.62	+0.75	G7 IIIa
50 $\nu$	And	458	01 37 28.6	+41 27 45	d6	4.09	+0.06	F8 V
$\alpha$	Eri	472	01 38 08.4	-57 10 43		0.46	-0.66	B3 Vnp (shell)
51	And	464	01 38 42.3	+48 41 10		3.57	+1.45	K3 <sup>-</sup> III
40	Cas	456	01 39 27.4	+73 05 53	d	5.28	+0.72	G7 III
106 $\nu$	Psc	489	01 42 01.9	+05 32 44		4.44	+1.57	K3 IIIb
$\pi$	Scl	497	01 42 39.7	-32 16 10		5.25	+0.79	K1 II/III
		500	01 43 18.4	-03 37 58		4.99	+1.58	K3 II-III
$\phi$	Per	496	01 44 23.3	+50 44 46	6	4.07	-0.93	B2 Vep
52 $\tau$	Cet	509	01 44 36.1	-15 52 38	d	3.50	+0.21	G8 V
110 $o$	Psc	510	01 46 00.2	+09 12 55	s	4.26	+0.71	G8 III
$\epsilon$	Scl	514	01 46 11.1	-24 59 44	d7	5.31	+0.02	F0 V
		513	01 46 33.9	-05 40 34	s	5.34	+1.88	K4 III
53 $\chi$	Cet	531	01 50 09.0	-10 37 48	d	4.67	+0.03	F2 IV-V
55 $\zeta$	Cet	539	01 52 01.7	-10 16 43	d6	3.73	+1.07	K0 III
2 $\alpha$	Tri	544	01 53 44.4	+29 38 04	dv6	3.41	+0.06	F6 IV
$\psi$	Phe	555	01 54 06.3	-46 14 48	6	4.41	+1.70	M4 III
111 $\xi$	Psc	549	01 54 09.1	+03 14 38	6	4.62	+0.72	G9 IIIb Fe-0.5
$\phi$	Phe	558	01 54 50.6	-42 26 27	6	5.11	-0.15	Ap Hg
$\eta^2$	Hya	570	01 55 13.7	-67 35 27		4.69	+0.64	G8.5 III
45 $\epsilon$	Cas	542	01 55 14.1	+63 43 34		3.38	-0.60	B3 IV:p (shell)

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		h m s	° ' "					
6 β Ari	553	01 55 16.7	+20 51 50	d6	2.64	+0.10	+0.13	A4 V
χ Eri	566	01 56 24.3	-51 33 07	d7	3.70	+0.46	+0.85	G8 III-IV CN-0.5 Hδ 0.5
α Hyi	591	01 59 07.9	-61 30 51		2.86	+0.14	+0.28	F0n III-IV
59 υ Cet	585	02 00 32.8	-21 01 21		4.00	+1.91	+1.57	M0 IIIb
113 α Psc	596	02 02 38.6	+02 49 08	vd6	4.18	-0.05	+0.03	A0p Si Sr
4 Per	590	02 03 04.5	+54 32 33	6	5.04	-0.32	-0.08	B8 III
50 Cas	580	02 04 26.4	+72 28 34	6	3.98	+0.03	-0.01	A1 Va
57 γ <sup>1</sup> And	603	02 04 36.6	+42 23 04	d6	2.26	+1.58	+1.37	K3- IIb
ν For	612	02 05 00.4	-29 14 31	v	4.69	-0.51	-0.17	B9.5p Si
13 α Ari	617	02 07 49.5	+23 30 59	a6	2.00	+1.12	+1.15	K2 IIIab
4 β Tri	622	02 10 13.9	+35 02 28	d6	3.00	+0.10	+0.14	A5 IV
μ For	652	02 13 24.8	-30 40 13		5.28	-0.06	-0.02	A0 Va+nn
65 ξ <sup>1</sup> Cet	649	02 13 36.7	+08 54 01	d6	4.37	+0.60	+0.89	G7 II-III Fe-1
	645	02 14 22.6	+51 07 07	d6	5.31	+0.62	+0.93	G8 III CN 1 CH 0.5 Fe-1
	641	02 14 30.9	+58 36 50	s	6.44	+0.23	+0.60	A3 Iab
φ Eri	674	02 16 55.2	-51 27 33	d	3.56	-0.39	-0.12	B8 V
67 Cet	666	02 17 33.5	-06 22 11		5.51	+0.76	+0.96	G8.5 III
9 γ Tri	664	02 18 00.1	+33 53 59		4.01	+0.02	+0.02	A0 IV-Vn
68 o Cet	681	02 19 55.7	-02 55 33	vd	2 - 10	+1.09	+1.42	M5.5-9e III + pec
62 And	670	02 20 01.7	+47 25 57		5.30	0.00	-0.01	A1 V
δ Hyi	705	02 21 57.4	-68 36 26		4.09	+0.05	+0.03	A1 Va
κ Hyi	715	02 22 56.9	-73 35 38		5.01	+1.04	+1.09	K1 III
κ For	695	02 23 04.1	-23 45 52		5.20	+0.12	+0.60	G0 Va
λ Hor	714	02 25 13.2	-60 15 39		5.35	+0.06	+0.39	F2 IV-V
72 ρ Cet	708	02 26 30.4	-12 14 21		4.89	-0.07	-0.03	A0 III-IVn
κ Eri	721	02 27 24.4	-47 39 09	6	4.25	-0.50	-0.14	B5 IV
73 ξ <sup>2</sup> Cet	718	02 28 46.3	+08 30 40	6	4.28	-0.12	-0.06	A0 III-
12 Tri	717	02 28 50.6	+29 43 12		5.30	+0.10	+0.30	F0 III
ι Cas	707	02 30 01.7	+67 27 12	vd	4.52	+0.06	+0.12	A5p Sr
μ Hyi	776	02 31 27.5	-79 03 33		5.28	+0.73	+0.98	G8 III
76 σ Cet	740	02 32 37.9	-15 11 41		4.75	-0.02	+0.45	F4 IV
14 Tri	736	02 32 48.5	+36 11 52		5.15	+1.78	+1.47	K5 III
78 ν Cet	754	02 36 28.8	+05 38 34	d67	4.97	+0.56	+0.87	G8 III
	753	02 36 42.8	+06 56 28	sd6	5.82	+0.81	+0.98	K3- V
	743	02 39 09.1	+72 52 03		5.16	+0.58	+0.88	G8 III
32 ν Ari	773	02 39 28.3	+22 00 38	6	5.46	+0.16	+0.16	A7 V
ε Hyi	806	02 39 46.2	-68 13 04		4.11	-0.14	-0.06	B9 V
82 δ Cet	779	02 40 04.4	+00 22 39	v6	4.07	-0.87	-0.22	B2 IV
ζ Hor	802	02 41 01.1	-54 30 04	6	5.21	-0.01	+0.40	F4 IV
ι Eri	794	02 41 07.3	-39 48 24		4.11	+0.74	+1.02	K0.5 IIIb Fe-0.5
86 γ Cet	804	02 43 53.9	+03 17 01	d7	3.47	+0.07	+0.09	A2 Va
35 Ari	801	02 44 07.8	+27 45 20	6	4.66	-0.62	-0.13	B3 V
89 π Cet	811	02 44 40.2	-13 48 38	6	4.25	-0.45	-0.14	B7 V
14 Per	800	02 44 50.4	+44 20 43		5.43	+0.65	+0.90	G0 Ib Ca 1
13 θ Per	799	02 44 59.5	+49 16 35	d	4.12	0.00	+0.49	F7 V
87 μ Cet	813	02 45 33.9	+10 09 44	d6	4.27	+0.08	+0.31	F0m F2 V+
1 α UMi	424	02 45 37.5	+89 18 48	vd6	2.02	+0.38	+0.60	F5-8 Ib
1 τ <sup>1</sup> Eri	818	02 45 38.4	-18 31 28	6	4.47	0.00	+0.48	F5 V
β For	841	02 49 34.3	-32 21 29	d	4.46	+0.69	+0.99	G8.5 III Fe-0.5
41 Ari	838	02 50 39.8	+27 18 26	d6	3.63	-0.37	-0.10	B8 Vn

## BRIGHT STARS, J2011.5

H5

Designation		BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
			h m s	° ' "					
16	Per	840	02 51 18.9	+38 21 55	d	4.23	+0.08	+0.34	F1 V+
15	$\eta$ Per	834	02 51 32.6	+55 56 33	d6	3.76	+1.89	+1.68	K3 <sup>-</sup> Ib-IIa
2	$\tau^2$ Eri	850	02 51 33.6	-20 57 26	d	4.75	+0.63	+0.91	K0 III
43	$\sigma$ Ari	847	02 52 07.8	+15 07 44		5.49	-0.43	-0.09	B7 V
	R Hor	868	02 54 15.7	-49 50 35	v	5 - 14	+0.43	+2.11	gM6.5e:
18	$\tau$ Per	854	02 55 04.8	+52 48 32	cd6	3.95	+0.46	+0.74	G5 III + A4 V
3	$\eta$ Eri	874	02 56 59.4	-08 51 11		3.89	+1.00	+1.11	K1 IIIb
		875	02 57 12.1	-03 40 00	6	5.17	+0.05	+0.08	A3 Vn
	$\theta^1$ Eri	897	02 58 41.8	-40 15 32	d6	3.24	+0.14	+0.14	A5 IV
24	Per	882	02 59 46.6	+35 13 43		4.93	+1.29	+1.23	K2 III
91	$\lambda$ Cet	896	03 00 20.0	+08 57 09		4.70	-0.45	-0.12	B6 III
	$\theta$ Hyi	939	03 02 17.3	-71 51 27	d7	5.53	-0.51	-0.14	B9 IVp
92	$\alpha$ Cet	911	03 02 52.9	+04 08 03		2.53	+1.94	+1.64	M1.5 IIIa
11	$\tau^3$ Eri	919	03 02 53.9	-23 34 48		4.09	+0.08	+0.16	A4 V
	$\mu$ Hor	934	03 03 53.2	-59 41 36		5.11	-0.03	+0.34	F0 IV-V
23	$\gamma$ Per	915	03 05 38.2	+53 33 02	cd6	2.93	+0.45	+0.70	G5 III + A2 V
25	$\rho$ Per	921	03 05 55.0	+38 53 03		3.39	+1.79	+1.65	M4 II
		881	03 07 43.1	+79 27 45	d6	5.49		+1.57	M2 IIIab
26	$\beta$ Per	936	03 08 55.3	+40 59 57	cvd6	2.12	-0.37	-0.05	B8 V + F:
	$\iota$ Per	937	03 09 54.2	+49 39 23	d	4.05	+0.12	+0.59	G0 V
27	$\kappa$ Per	941	03 10 16.6	+44 54 01	d6	3.80	+0.83	+0.98	K0 III
57	$\delta$ Ari	951	03 12 17.4	+19 46 10		4.35	+0.87	+1.03	K0 III
	$\alpha$ For	963	03 12 33.9	-28 56 34	d7	3.87	+0.02	+0.52	F6 V
	TW Hor	977	03 12 50.7	-57 16 44	s	5.74	+2.83	+2.28	C6;2.5 Ba2 Y4
94	Cet	962	03 13 21.7	-01 09 13	d7	5.06	+0.12	+0.57	G0 IV
58	$\zeta$ Ari	972	03 15 33.9	+21 05 11		4.89	-0.01	-0.01	A0.5 Va+
13	$\zeta$ Eri	984	03 16 23.6	-08 46 39	6	4.80	+0.09	+0.23	A5m:
29	Per	987	03 19 27.2	+50 15 48	s6	5.15	-0.06	-0.05	B3 V
96	$\kappa$ Cet	996	03 19 58.0	+03 24 42	dasv	4.83	+0.19	+0.68	G5 V
16	$\tau^4$ Eri	1003	03 20 01.7	-21 43 00	d	3.69	+1.81	+1.62	M3 <sup>+</sup> IIIa Ca-1
		1008	03 20 23.2	-43 01 35		4.27	+0.22	+0.71	G8 V
		999	03 21 02.3	+29 05 22		4.47	+1.79	+1.55	K3 IIIa Ba 0.5
		961	03 21 49.8	+77 46 32	d	5.45	+0.11	+0.19	A5 III:
61	$\tau$ Ari	1005	03 21 53.6	+21 11 16	dv	5.28	-0.52	-0.07	B5 IV
33	$\alpha$ Per	1017	03 25 09.0	+49 54 04	das	1.79	+0.37	+0.48	F5 Ib
1	$\sigma$ Tau	1030	03 25 26.0	+09 04 07	6	3.60	+0.61	+0.89	G6 IIIa Fe-1
		1009	03 25 41.2	+64 37 34		5.23	+2.06	+2.08	M0 II
		1029	03 26 46.7	+49 09 38	sv	6.09	-0.49	-0.07	B7 V
2	$\xi$ Tau	1038	03 27 47.6	+09 46 19	d6	3.74	-0.33	-0.09	B9 Vn
	$\kappa$ Ret	1083	03 29 34.9	-62 53 50	d	4.72	-0.04	+0.40	F5 IV-V
		1035	03 30 00.5	+59 58 46	vd	4.21	-0.24	+0.41	B9 Ia
		1040	03 30 50.3	+58 55 03	as6	4.54	-0.11	+0.56	A0 Ia
17	Eri	1070	03 31 11.3	-05 02 11		4.73	-0.27	-0.09	B9 Vs
35	$\sigma$ Per	1052	03 31 23.4	+48 02 02		4.36	+1.54	+1.35	K3 III
5	Tau	1066	03 31 30.6	+12 58 31	6	4.11	+1.02	+1.12	K0 <sup>-</sup> II-III Fe-0.5
18	$\epsilon$ Eri	1084	03 33 28.4	-09 25 12	das	3.73	+0.59	+0.88	K2 V
19	$\tau^5$ Eri	1088	03 34 17.8	-21 35 42	6	4.27	-0.35	-0.11	B8 V
20	EG Eri	1100	03 36 48.9	-17 25 47	dv	5.23	-0.49	-0.13	B9p Si
37	$\psi$ Per	1087	03 37 18.7	+48 13 48		4.23	-0.57	-0.06	B5 Ve
10	Tau	1101	03 37 27.7	+00 26 15		4.28	+0.07	+0.58	F9 IV-V

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
	1106	03 37 30.5	-40 14 14		4.58	+0.77	+1.04	K1 III
δ For	1134	03 42 42.4	-31 54 08	6	5.00	-0.60	-0.16	B5 IV
BD Cam	1105	03 43 09.8	+63 15 11	6	5.10	+1.82	+1.63	S3.5/2
39 δ Per	1122	03 43 44.9	+47 49 24	d6	3.01	-0.51	-0.13	B5 III
23 δ Eri	1136	03 43 48.0	-09 43 30		3.54	+0.69	+0.92	K0+ IV
β Ret	1175	03 44 20.8	-64 46 15	d6	3.85	+1.10	+1.13	K2 III
38 ο Per	1131	03 45 02.6	+32 19 26	vd6	3.83	-0.75	+0.05	B1 III
24 Eri	1146	03 45 05.6	-01 07 39	6	5.25	-0.39	-0.10	B7 V
17 Tau	1142	03 45 33.6	+24 08 55	6	3.70	-0.40	-0.11	B6 III
19 Tau	1145	03 45 53.7	+24 30 09	d6	4.30	-0.46	-0.11	B6 IV
41 ν Per	1135	03 45 58.7	+42 36 50	d	3.77	+0.31	+0.42	F5 II
29 Tau	1153	03 46 17.2	+06 05 07	d6	5.35	-0.61	-0.12	B3 V
20 Tau	1149	03 46 30.8	+24 24 10	s6	3.87	-0.40	-0.07	B7 IIIp
26 π Eri	1162	03 46 41.2	-12 03 58		4.42	+2.01	+1.63	M2- IIIab
23 ν971 Tau	1156	03 47 00.7	+23 59 00		4.18	-0.42	-0.06	B6 IV
γ Hyi	1208	03 47 04.4	-74 12 13		3.24	+1.99	+1.62	M2 III
27 τ <sup>6</sup> Eri	1173	03 47 20.6	-23 12 59		4.23	0.00	+0.42	F3 III
25 η Tau	1165	03 48 10.2	+24 08 24	d	2.87	-0.34	-0.09	B7 IIIIn
27 Tau	1178	03 49 50.9	+24 05 16	d6	3.63	-0.36	-0.09	B8 III
	1195	03 49 53.1	-36 09 57		4.17	+0.69	+0.95	G7 IIIa
BE Cam	1155	03 50 35.1	+65 33 37		4.47	+2.13	+1.88	M2+ IIab
γ Cam	1148	03 51 35.4	+71 21 59	d	4.63	+0.07	+0.03	A1 IIIIn
44 ζ Per	1203	03 54 51.5	+31 55 01	sd67	2.85	-0.77	+0.12	B1 Ib
34 γ Eri	1231	03 58 34.0	-13 28 35	d	2.95	+1.96	+1.59	M0.5 IIb Ca-1
45 ε Per	1220	03 58 37.7	+40 02 33	sd67	2.89	-0.95	-0.20	B0.5 IV
δ Ret	1247	03 58 55.8	-61 22 05		4.56	+1.96	+1.62	M1 III
46 ξ Per	1228	03 59 42.8	+35 49 24	6	4.04	-0.92	+0.01	O7.5 IIIf
35 λ Tau	1239	04 01 19.1	+12 31 19	v6	3.47	-0.62	-0.12	B3 V
35 Eri	1244	04 02 07.1	-01 31 05		5.28	-0.55	-0.15	B5 V
38 ν Tau	1251	04 03 46.2	+06 01 14		3.91	+0.07	+0.03	A1 Va
37 Tau	1256	04 05 22.6	+22 06 45	d	4.36	+0.95	+1.07	K0 III
47 λ Per	1261	04 07 26.7	+50 22 53		4.29	-0.04	-0.02	A0 IIIIn
	1279	04 08 21.1	+15 11 34	sd6	6.01	+0.02	+0.40	F3 V
48 MX Per	1273	04 09 30.0	+47 44 32		4.04	-0.55	-0.03	B3 Ve
43 Tau	1283	04 09 50.3	+19 38 20		5.50		+1.07	K1 III
	1270	04 10 26.5	+59 56 15	s	6.32	+0.92	+1.16	G8 IIa
44 IM Tau	1287	04 11 32.0	+26 30 36	v	5.41	+0.06	+0.34	F2 IV-V
38 ο <sup>1</sup> Eri	1298	04 12 25.7	-06 48 30		4.04	+0.13	+0.33	F1 IV
α Hor	1326	04 14 23.0	-42 15 59		3.86	+1.00	+1.10	K2 III
α Ret	1336	04 14 34.5	-62 26 43	d6	3.35	+0.63	+0.91	G8 II-III
51 μ Per	1303	04 15 44.8	+48 26 15	d67	4.14	+0.64	+0.95	G0 Ib
40 ο <sup>2</sup> Eri	1325	04 15 48.1	-07 38 08	d	4.43	+0.45	+0.82	K0.5 V
49 μ Tau	1320	04 16 09.6	+08 55 13	6	4.29	-0.53	-0.06	B3 IV
γ Dor	1338	04 16 19.7	-51 27 29	v	4.25	+0.03	+0.30	F1 V+
48 Tau	1319	04 16 25.5	+15 25 43	sd	6.32	+0.02	+0.40	F3 V
ε Ret	1355	04 16 41.0	-59 16 29	d	4.44	+1.07	+1.08	K2 IV
41 Eri	1347	04 18 19.8	-33 46 15	d67	3.56	-0.37	-0.12	B9p Mn
54 γ Tau	1346	04 20 27.0	+15 39 17	d6	3.63	+0.82	+0.99	G9.5 IIIab CN 0.5
57 ν483 Tau	1351	04 20 36.6	+14 03 44	sd6	5.59	+0.08	+0.28	F0 IV
	1367	04 21 09.1	-20 36 46		5.38		-0.02	A1 V

## BRIGHT STARS, J2011.5

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Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type	
		h m s	° ' "						
54	Per	1343	04 21 09.6	+34 35 37	d	4.93	+0.69	+0.94	G8 III Fe 0.5
		1327	04 21 45.8	+65 10 02	s	5.27	+0.47	+0.81	G5 Ib
$\eta$	Ret	1395	04 22 01.0	-63 21 33		5.24	+0.69	+0.96	G8 III
61	$\delta$ Tau	1373	04 23 36.0	+17 34 07	d6	3.76	+0.82	+0.98	G9.5 III CN 0.5
63	Tau	1376	04 24 04.7	+16 48 12	cs6	5.64	+0.13	+0.30	F0m
42	$\xi$ Eri	1383	04 24 15.3	-03 43 11	6	5.17	+0.08	+0.08	A2 V
43	Eri	1393	04 24 28.2	-33 59 26		3.96	+1.80	+1.49	K3.5- IIIb
65	$\kappa^1$ Tau	1387	04 26 03.4	+22 19 10	d6	4.22	+0.13	+0.13	A5 IV-V
68	$\nu^{776}$ Tau	1389	04 26 09.4	+17 57 12	d6	4.29	+0.08	+0.05	A2 IV-Vs
69	$\nu$ Tau	1392	04 26 59.9	+22 50 20	d6	4.28	+0.14	+0.26	A9 IV-n
71	$\nu^{777}$ Tau	1394	04 27 00.1	+15 38 37	d6	4.49	+0.14	+0.25	F0n IV-V
77	$\theta^1$ Tau	1411	04 29 14.0	+15 59 13	d6	3.84	+0.73	+0.95	G9 III Fe-0.5
74	$\epsilon$ Tau	1409	04 29 17.4	+19 12 18	d	3.53	+0.88	+1.01	G9.5 III CN 0.5
78	$\theta^2$ Tau	1412	04 29 19.2	+15 53 44	sd6	3.40	+0.13	+0.18	A7 III
$\delta$	Cae	1443	04 31 11.3	-44 55 46		5.07	-0.78	-0.19	B2 IV-V
50	$\nu^1$ Eri	1453	04 33 57.6	-29 44 38		4.51	+0.72	+0.98	K0+ III Fe-0.5
$\alpha$	Dor	1465	04 34 14.8	-55 01 17	vd7	3.27	-0.35	-0.10	A0p Si
86	$\rho$ Tau	1444	04 34 30.2	+14 52 04	6	4.65	+0.08	+0.25	A9 V
52	$\nu^2$ Eri	1464	04 35 59.9	-30 32 22		3.82	+0.72	+0.98	G8.5 IIIa
88	Tau	1458	04 36 17.2	+10 11 01	d6	4.25	+0.11	+0.18	A5m
87	$\alpha$ Tau	1457	04 36 34.9	+16 31 54	sd6	0.85	+1.90	+1.54	K5+ III
48	$\nu$ Eri	1463	04 36 53.7	-03 19 47	vd6	3.93	-0.89	-0.21	B2 III
R	Dor	1492	04 36 53.8	-62 03 17	sd	5.40	+0.86	+1.58	M8e III:
58	Per	1454	04 37 29.4	+41 17 15	c6	4.25	+0.82	+1.22	K0 II-III + B9 V
53	Eri	1481	04 38 42.5	-14 16 56	d67	3.87	+1.01	+1.09	K1.5 IIIb
90	Tau	1473	04 38 48.1	+12 31 59	d6	4.27	+0.13	+0.12	A5 IV-V
$\alpha$	Cae	1502	04 40 56.0	-41 50 32	d	4.45	+0.01	+0.34	F1 V
54	DM Eri	1496	04 40 56.7	-19 39 00	d	4.32	+1.81	+1.61	M3 II-III
$\beta$	Cae	1503	04 42 27.9	-37 07 21		5.05	+0.04	+0.37	F2 V
94	$\tau$ Tau	1497	04 42 56.2	+22 58 41	d67	4.28	-0.57	-0.13	B3 V
57	$\mu$ Eri	1520	04 46 04.7	-03 14 04	6	4.02	-0.60	-0.15	B4 IV
4	Cam	1511	04 48 58.0	+56 46 35	d	5.30	+0.15	+0.25	Am
1	$\pi^3$ Ori	1543	04 50 27.9	+06 58 50	ad6	3.19	-0.01	+0.45	F6 V
		1533	04 50 41.2	+37 30 27		4.88	+1.70	+1.44	K3.5 III
2	$\pi^2$ Ori	1544	04 51 14.4	+08 55 09	6	4.36	0.00	+0.01	A0.5 IVn
3	$\pi^4$ Ori	1552	04 51 49.2	+05 37 26	s6	3.69	-0.81	-0.17	B2 III
97	$\nu^{480}$ Tau	1547	04 52 02.9	+18 51 31	d	5.10	+0.12	+0.21	A9 V+
4	$\sigma^1$ Ori	1556	04 53 11.1	+14 16 08	cv	4.74	+2.03	+1.84	S3.5/1-
61	$\omega$ Eri	1560	04 53 27.6	-05 26 03	6	4.39	+0.16	+0.25	A9 IV
8	$\pi^5$ Ori	1567	04 54 51.1	+02 27 31	v6	3.72	-0.83	-0.18	B2 III
$\eta$	Men	1629	04 54 51.9	-74 55 08		5.47	+1.83	+1.52	K4 III
9	$\alpha$ Cam	1542	04 55 12.0	+66 21 39		4.29	-0.88	+0.03	O9.5 Ia
9	$\sigma^2$ Ori	1580	04 57 01.1	+13 31 54	d	4.07	+1.11	+1.15	K2- III Fe-1
3	$\iota$ Aur	1577	04 57 44.7	+33 11 00	a	2.69	+1.78	+1.53	K3 II
7	Cam	1568	04 58 12.7	+53 46 09	d67	4.47	-0.01	-0.02	A0m A1 III
10	$\pi^6$ Ori	1601	04 59 08.7	+01 43 51		4.47	+1.55	+1.40	K2- II
7	$\epsilon$ Aur	1605	05 02 47.8	+43 50 21	vd6	2.99	+0.33	+0.54	A9 Ia
8	$\zeta$ Aur	1612	05 03 17.0	+41 05 30	cdv6	3.75	+0.38	+1.22	K5 II + B5 V
102	$\iota$ Tau	1620	05 03 47.1	+21 36 20		4.64	+0.15	+0.16	A7 IV
10	$\beta$ Cam	1603	05 04 26.7	+60 27 28	d	4.03	+0.63	+0.92	G1 Ib-IIa

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## BRIGHT STARS, J2011.5

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
11 v1032Ori	1638	05 05 13.6	+15 25 09	v	4.68	-0.09	-0.06	A0p Si
η <sup>2</sup> Pic	1663	05 05 15.9	-49 33 46		5.03	+1.88	+1.49	K5 III
ζ Dor	1674	05 05 42.6	-57 27 26		4.72	-0.04	+0.52	F7 V
2 ε Lep	1654	05 05 56.9	-22 21 22		3.19	+1.78	+1.46	K4 III
10 η Aur	1641	05 07 19.4	+41 14 56	a	3.17	-0.67	-0.18	B3 V
67 β Eri	1666	05 08 25.0	-05 04 20	d	2.79	+0.10	+0.13	A3 IVn
69 λ Eri	1679	05 09 41.8	-08 44 24		4.27	-0.90	-0.19	B2 IVn
16 Ori	1672	05 09 57.7	+09 50 37	d6	5.43	+0.16	+0.24	A9m
3 ι Lep	1696	05 12 50.1	-11 51 22	d	4.45	-0.40	-0.10	B9 V:
5 μ Lep	1702	05 13 26.9	-16 11 33	s	3.31	-0.39	-0.11	B9p Hg Mn
θ Dor	1744	05 13 45.1	-67 10 20		4.83	+1.39	+1.28	K2.5 IIIa
4 κ Lep	1705	05 13 45.8	-12 55 42	d7	4.36	-0.37	-0.10	B7 V
17 ρ Ori	1698	05 13 53.6	+02 52 27	d67	4.46	+1.16	+1.19	K1 III CN 0.5
11 μ Aur	1689	05 14 13.0	+38 29 49		4.86	+0.09	+0.18	A7m
19 β Ori	1713	05 15 05.5	-08 11 21	vdas6	0.12	-0.66	-0.03	B8 Ia
13 α Aur	1708	05 17 32.4	+46 00 31	cd67	0.08	+0.44	+0.80	G6 III + G2 III
ο Col	1743	05 17 54.0	-34 53 04		4.83	+0.80	+1.00	K0/1 III/IV
20 τ Ori	1735	05 18 09.9	-06 49 58	sd6	3.60	-0.47	-0.11	B5 III
ζ Pic	1767	05 19 39.1	-50 35 38		5.45	+0.01	+0.51	F7 III-IV
15 λ Aur	1729	05 19 57.1	+40 06 29	d	4.71	+0.12	+0.63	G1.5 IV-V Fe-1
6 λ Lep	1756	05 20 06.3	-13 09 56		4.29	-1.03	-0.26	B0.5 IV
22 Ori	1765	05 22 21.0	-00 22 19	6	4.73	-0.79	-0.17	B2 IV-V
	1686	05 24 28.4	+79 14 31	d	5.05	-0.13	+0.47	F7 Vs
29 Ori	1784	05 24 30.1	-07 47 54		4.14	+0.69	+0.96	G8 III Fe-0.5
28 η Ori	1788	05 25 03.3	-02 23 14	cdv6	3.36	-0.92	-0.17	B1 IV + B
24 γ Ori	1790	05 25 44.9	+06 21 33	d6	1.64	-0.87	-0.22	B2 III
112 β Tau	1791	05 27 01.2	+28 36 58	sd	1.65	-0.49	-0.13	B7 III
115 Tau	1808	05 27 50.4	+17 58 16	d	5.42	-0.53	-0.10	B5 V
9 β Lep	1829	05 28 44.3	-20 45 03	d	2.84	+0.46	+0.82	G5 II
	1856	05 30 28.5	-47 04 11	d7	5.46	+0.21	+0.62	G3 IV
17 Cam	1802	05 31 15.6	+63 04 31		5.42	+2.00	+1.71	M1 IIIa
32 Ori	1839	05 31 24.0	+05 57 22	d7	4.20	-0.55	-0.14	B5 V
γ Men	1953	05 31 26.1	-76 19 56	d	5.19	+1.19	+1.13	K2 III
ε Col	1862	05 31 37.3	-35 27 46		3.87	+1.08	+1.14	K1 II/III
34 δ Ori	1852	05 32 35.7	-00 17 29	dv6	2.23	-1.05	-0.22	O9.5 II
119 CE Tau	1845	05 32 53.2	+18 36 07		4.38	+2.21	+2.07	M2 Iab-Ib
11 α Lep	1865	05 33 14.3	-17 48 53	das	2.58	+0.23	+0.21	F0 Ib
25 χ Aur	1843	05 33 28.6	+32 11 58	6	4.76	-0.46	+0.34	B5 Iab
β Dor	1922	05 33 43.6	-62 28 57	v	3.76	+0.55	+0.82	F7-G2 Ib
37 φ <sup>1</sup> Ori	1876	05 35 27.2	+09 29 47	d6	4.41	-0.97	-0.16	B0.5 IV-V
39 λ Ori	1879	05 35 46.3	+09 56 28	d	3.54	-1.03	-0.18	O8 IIIf
v1046Ori	1890	05 35 56.0	-04 29 15	sdv6	6.55	-0.77	-0.13	B2 Vh
	1891	05 35 56.5	-04 25 03	ds	6.24	-0.70	-0.15	B2.5 V
44 ι Ori	1899	05 35 59.8	-05 54 11	ds6	2.77	-1.08	-0.24	O9 III
46 ε Ori	1903	05 36 47.9	-01 11 43	das6	1.70	-1.04	-0.19	B0 Ia
40 φ <sup>2</sup> Ori	1907	05 37 32.3	+09 17 46	s	4.09	+0.64	+0.95	K0 IIIb Fe-2
123 ζ Tau	1910	05 38 20.0	+21 08 55	s6	3.00	-0.67	-0.19	B2 IIIpe (shell)
48 σ Ori	1931	05 39 19.4	-02 35 39	d6	3.81	-1.01	-0.24	O9.5 V
α Col	1956	05 40 04.0	-34 04 07	d	2.64	-0.46	-0.12	B7 IV
50 ζ Ori	1948	05 41 20.4	-01 56 14	d6	2.03	-1.04	-0.21	O9.5 Ib

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Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
$\delta$ Dor	2015	05 44 47.7	-65 43 53		4.35	+0.12	+0.21	A7 V <sup>+</sup> n
13 $\gamma$ Lep	1983	05 44 56.6	-22 26 43	d	3.60	0.00	+0.47	F7 V
27 $\sigma$ Aur	1971	05 46 47.6	+49 49 48		5.47	+0.07	+0.03	A0p Cr
14 $\zeta$ Lep	1998	05 47 28.6	-14 49 06	6	3.55	+0.07	+0.10	A2 Van
$\beta$ Pic	2020	05 47 33.5	-51 03 46		3.85	+0.10	+0.17	A6 V
130 Tau	1990	05 48 06.5	+17 43 57		5.49	+0.27	+0.30	F0 III
53 $\kappa$ Ori	2004	05 48 18.1	-09 39 59		2.06	-1.03	-0.17	B0.5 Ia
$\gamma$ Pic	2042	05 50 02.2	-56 09 51		4.51	+0.98	+1.10	K1 III
	2049	05 51 08.9	-52 06 24		5.17	+0.72	+0.99	G8 III
$\beta$ Col	2040	05 51 21.9	-35 45 52		3.12	+1.21	+1.16	K1.5 III
15 $\delta$ Lep	2035	05 51 49.0	-20 52 44		3.81	+0.68	+0.99	K0 III Fe-1.5 CH 0.5
32 $\nu$ Aur	2012	05 52 17.3	+39 09 03	d	3.97	+1.09	+1.13	K0 III CN 0.5
136 Tau	2034	05 54 03.0	+27 36 50	6	4.58	+0.03	-0.02	A0 IV
54 $\chi^1$ Ori	2047	05 55 03.9	+20 16 38	6	4.41	+0.07	+0.59	G0 <sup>-</sup> V Ca 0.5
58 $\alpha$ Ori	2061	05 55 47.7	+07 24 30	ad6	0.50	+2.06	+1.85	M1-M2 Ia-Iab
30 $\xi$ Aur	2029	05 55 48.7	+55 42 30		4.99	+0.12	+0.05	A1 Va
16 $\eta$ Lep	2085	05 56 55.7	-14 09 59		3.71	+0.01	+0.33	F1 V
$\gamma$ Col	2106	05 57 56.7	-35 16 57	d	4.36	-0.66	-0.18	B2.5 IV
60 Ori	2103	05 59 25.1	+00 33 12	d6	5.22	+0.01	+0.01	A1 Vs
$\eta$ Col	2120	05 59 30.0	-42 48 54		3.96	+1.08	+1.14	G8/K1 II
34 $\beta$ Aur	2088	06 00 22.4	+44 56 51	vd6	1.90	+0.05	+0.03	A1 IV
33 $\delta$ Aur	2077	06 00 28.5	+54 17 03	d	3.72	+0.87	+1.00	K0 <sup>-</sup> III
37 $\theta$ Aur	2095	06 00 30.3	+37 12 44	vd67	2.62	-0.18	-0.08	A0p Si
35 $\pi$ Aur	2091	06 00 47.3	+45 56 12		4.26	+1.83	+1.72	M3 II
61 $\mu$ Ori	2124	06 03 01.0	+09 38 47	d6	4.12	+0.11	+0.16	A5m:
62 $\chi^2$ Ori	2135	06 04 36.2	+20 08 14	asv	4.63	-0.68	+0.28	B2 Ia
1 Gem	2134	06 04 49.2	+23 15 42	d67	4.16	+0.53	+0.84	G5 III-IV
17 SS Lep	2148	06 05 29.9	-16 29 09	s6	4.93	+0.12	+0.24	Ap (shell)
67 $\nu$ Ori	2159	06 08 13.7	+14 45 58	d6	4.42	-0.66	-0.17	B3 IV
$\nu$ Dor	2221	06 08 39.8	-68 50 45		5.06	-0.21	-0.08	B8 V
	2180	06 09 26.9	-22 25 49		5.50		-0.01	A0 V
$\alpha$ Men	2261	06 09 53.9	-74 45 24		5.09	+0.33	+0.72	G5 V
$\delta$ Pic	2212	06 10 31.4	-54 58 18	v6	4.81	-1.03	-0.23	B0.5 IV
70 $\xi$ Ori	2199	06 12 35.6	+14 12 19	d6	4.48	-0.65	-0.18	B3 IV
36 Cam	2165	06 14 00.4	+65 42 52	6	5.38	+1.47	+1.34	K2 II-III
5 $\gamma$ Mon	2227	06 15 25.0	-06 16 45	d	3.98	+1.41	+1.32	K1 III Ba 0.5
7 $\eta$ Gem	2216	06 15 34.3	+22 30 09	vd6	3.28	+1.66	+1.60	M2.5 III
44 $\kappa$ Aur	2219	06 16 06.7	+29 29 34		4.35	+0.80	+1.02	G9 IIIb
$\kappa$ Col	2256	06 16 57.7	-35 08 42		4.37	+0.83	+1.00	K0.5 IIIa
74 Ori	2241	06 17 05.4	+12 16 05	d	5.04	-0.02	+0.42	F4 IV
	2209	06 20 06.7	+69 18 50	6	4.80	0.00	+0.03	A0 IV <sup>+</sup> nn
7 Mon	2273	06 20 16.1	-07 49 43	d6	5.27	-0.75	-0.19	B2.5 V
2 UZ Lyn	2238	06 20 38.2	+59 00 20		4.48	+0.03	+0.01	A1 Va
1 $\zeta$ CMa	2282	06 20 45.3	-30 04 09	d6	3.02	-0.72	-0.19	B2.5 V
$\delta$ Col	2296	06 22 32.1	-33 26 34	6	3.85	+0.52	+0.88	G7 II
2 $\beta$ CMa	2294	06 23 12.4	-17 57 44	svd6	1.98	-0.98	-0.23	B1 II-III
13 $\mu$ Gem	2286	06 23 39.4	+22 30 24	sd	2.88	+1.85	+1.64	M3 IIIab
$\alpha$ Car	2326	06 24 12.4	-52 42 08		-0.72	+0.10	+0.15	A9 II
8 Mon	2298	06 24 22.7	+04 35 10	d6	4.44	+0.13	+0.20	A6 IV
	2305	06 24 42.5	-11 32 13		5.22	+1.20	+1.24	K3 III



Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
46 $\psi^1$ Aur	2289	06 25 47.0	+49 16 51	6	4.91	+2.29	+1.97	K5-M0 Iab-Ib
10 Mon	2344	06 28 31.7	-04 46 12	d	5.06	-0.76	-0.17	B2 V
$\lambda$ CMa	2361	06 28 35.8	-32 35 16		4.48	-0.61	-0.17	B4 V
18 $\nu$ Gem	2343	06 29 38.8	+20 12 14	d6	4.15	-0.48	-0.13	B6 III
4 $\xi^1$ CMa	2387	06 32 20.1	-23 25 38	vd6	4.33	-0.99	-0.24	B1 III
	2392	06 33 19.2	-11 10 32	ds6	6.24	+0.78	+1.11	G9.5 III: Ba 3
13 Mon	2385	06 33 31.5	+07 19 25		4.50	-0.18	0.00	A0 Ib-II
	2395	06 34 13.0	-01 13 47		5.10	-0.56	-0.14	B5 Vn
	2435	06 35 13.8	-52 59 07		4.39	-0.15	-0.02	A0 II
5 $\xi^2$ CMa	2414	06 35 32.3	-22 58 28		4.54	-0.03	-0.05	A0 III
7 $\nu^2$ CMa	2429	06 37 11.2	-19 15 59		3.95	+1.01	+1.06	K1.5 III-IV Fe 1
$\nu$ Pup	2451	06 38 06.8	-43 12 23	6	3.17	-0.41	-0.11	B8 IIIIn
24 $\gamma$ Gem	2421	06 38 22.5	+16 23 18	d6	1.93	+0.04	0.00	A1 IVs
8 $\nu^3$ CMa	2443	06 38 23.8	-18 14 53	d	4.43	+1.04	+1.15	K0.5 III
15 S Mon	2456	06 41 36.7	+09 53 03	das6	4.66	-1.07	-0.25	O7 Vf
30 Gem	2478	06 44 38.2	+13 12 56	d	4.49	+1.16	+1.16	K0.5 III CN 0.5
27 $\epsilon$ Gem	2473	06 44 38.4	+25 07 08	das6	2.98	+1.46	+1.40	G8 Ib
9 $\alpha$ CMa	2491	06 45 39.1	-16 43 57	od6	-1.46	-0.05	0.00	A0m A1 Va
	2513	06 45 42.0	-52 12 49	s	6.57		+1.08	G5 Iab
31 $\xi$ Gem	2484	06 45 56.1	+12 52 56		3.36	+0.06	+0.43	F5 IV
56 $\psi^5$ Aur	2483	06 47 34.0	+43 33 54	d	5.25	+0.05	+0.56	G0 V
	2518	06 47 45.0	-37 56 35	d	5.26	-0.25	-0.08	B8/9 V
	2401	06 48 10.7	+79 32 59	6	5.45	-0.02	+0.50	F8 V
$\alpha$ Pic	2550	06 48 18.5	-61 57 14		3.27	+0.13	+0.21	A6 Vn
18 Mon	2506	06 48 27.6	+02 23 56	6	4.47	+1.04	+1.11	K0+ IIIa
57 $\psi^6$ Aur	2487	06 48 32.1	+48 46 34		5.22	+1.04	+1.12	K0 III
v415 Car	2554	06 50 06.3	-53 38 10	6	4.40	+0.61	+0.92	G4 II
$\tau$ Pup	2553	06 50 13.3	-50 37 43	6	2.93	+1.21	+1.20	K1 III
13 $\kappa$ CMa	2538	06 50 16.3	-32 31 20		3.96	-0.92	-0.23	B1.5 IVne
v592 Mon	2534	06 51 15.5	-08 03 18	sv	6.29	+0.02	0.00	A2p Sr Cr Eu
$\iota$ Vol	2602	06 51 18.9	-70 58 39		5.40	-0.38	-0.11	B7 IV
34 $\theta$ Gem	2540	06 53 32.8	+33 56 47	d6	3.60	+0.14	+0.10	A3 III-IV
16 $\sigma^1$ CMa	2580	06 54 36.6	-24 11 57	s	3.87	+1.99	+1.73	K2 Iab
14 $\theta$ CMa	2574	06 54 43.5	-12 03 13		4.07	+1.70	+1.43	K4 III
NP Pup	2591	06 54 48.4	-42 22 50	s	6.32	+2.79	+2.24	C5,2.5
43 Cam	2511	06 54 56.3	+68 52 24		5.12	-0.43	-0.13	B7 III
20 $\iota$ CMa	2596	06 56 39.0	-17 04 11		4.37	-0.70	-0.07	B3 II
15 Lyn	2560	06 58 16.2	+58 24 23	d7	4.35	+0.52	+0.85	G5 III-IV
21 $\epsilon$ CMa	2618	06 59 04.7	-28 59 18	d	1.50	-0.93	-0.21	B2 II
	2527	07 01 43.7	+76 57 38	6	4.55	+1.66	+1.36	K4 III
22 $\sigma$ CMa	2646	07 02 10.7	-27 57 07	d	3.47	+1.88	+1.73	K7 Ib
42 $\omega$ Gem	2630	07 03 06.8	+24 11 53	s	5.18	+0.68	+0.94	G5 IIa
24 $\sigma^2$ CMa	2653	07 03 30.3	-23 51 03	vas6	3.02	-0.80	-0.08	B3 Ia
23 $\gamma$ CMa	2657	07 04 16.7	-15 39 04		4.12	-0.48	-0.12	B8 II
	2666	07 04 24.7	-42 21 17	d6	5.20	+0.15	+0.20	A9m
v386 Car	2683	07 04 31.2	-56 46 03	v	5.17		-0.04	Ap Si
43 $\xi$ Gem	2650	07 04 47.4	+20 33 09	vd6	3.79	+0.62	+0.79	F9 Ib (var)
$\gamma^2$ Vol	2736	07 08 38.8	-70 31 03	d	3.78	+0.88	+1.04	G9 III
25 $\delta$ CMa	2693	07 08 51.6	-26 24 43	das6	1.84	+0.54	+0.68	F8 Ia
20 Mon	2701	07 10 48.0	-04 15 21	d	4.92	+0.78	+1.03	K0 III

## BRIGHT STARS, J2011.5

H11

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
46 $\tau$ Gem	2697	07 11 52.2	+30 13 31	d7	4.41	+1.41	+1.26	K2 III
63 Aur	2696	07 12 26.7	+39 18 03	6	4.90	+1.74	+1.45	K3.5 III
22 $\delta$ Mon	2714	07 12 27.1	-00 30 45	d	4.15	+0.02	-0.01	A1 III+
QW Pup	2740	07 12 53.3	-46 46 44		4.49	-0.01	+0.32	F0 IVs
48 Gem	2706	07 13 08.3	+24 06 30	s	5.85	+0.09	+0.36	F5 III-IV
L <sub>2</sub> Pup	2748	07 13 53.4	-44 39 32	vd	5.10		+1.56	M5 IIIe
51 BQ Gem	2717	07 14 01.9	+16 08 19	d	5.00	+1.82	+1.66	M4 IIIab
27 EW CMa	2745	07 14 43.4	-26 22 23	d6	4.66	-0.71	-0.19	B3 IIIep
28 $\omega$ CMa	2749	07 15 16.7	-26 47 36		3.85	-0.73	-0.17	B2 IV-Ve
$\delta$ Vol	2803	07 16 49.3	-67 58 41		3.98	+0.45	+0.79	F9 Ib
$\pi$ Pup	2773	07 17 32.9	-37 07 07	d	2.70	+1.24	+1.62	K3 Ib
54 $\lambda$ Gem	2763	07 18 45.2	+16 31 08	d67	3.58	+0.10	+0.11	A4 IV
30 $\tau$ CMa	2782	07 19 11.1	-24 58 34	vd6	4.40	-0.99	-0.15	O9 II
55 $\delta$ Gem	2777	07 20 48.5	+21 57 37	d67	3.53	+0.04	+0.34	F0 V+
31 $\eta$ CMa	2827	07 24 33.0	-29 19 34	das	2.45	-0.72	-0.08	B5 Ia
66 Aur	2805	07 24 56.1	+40 38 57	6	5.23	+1.25	+1.25	K1 IIIa Fe-1
60 $\iota$ Gem	2821	07 26 26.4	+27 46 28		3.79	+0.85	+1.03	G9 IIIb
3 $\beta$ CMi	2845	07 27 46.4	+08 15 55	d6	2.90	-0.28	-0.09	B8 V
4 $\gamma$ CMi	2854	07 28 47.3	+08 54 05	d6	4.32	+1.54	+1.43	K3 III Fe-1
$\sigma$ Pup	2878	07 29 35.7	-43 19 31	vd6	3.25	+1.78	+1.51	K5 III
62 $\rho$ Gem	2852	07 29 51.0	+31 45 39	d6	4.18	-0.03	+0.32	F0 V+
6 CMi	2864	07 30 26.2	+11 58 55		4.54	+1.37	+1.28	K1 III
	2906	07 34 32.7	-22 19 17		4.45	+0.06	+0.51	F6 IV
66 $\alpha^1$ Gem	2891	07 35 19.8	+31 51 43	od6	1.98	+0.01	+0.03	A1m A2 Va
66 $\alpha^2$ Gem	2890	07 35 20.1	+31 51 46	od6	2.88	+0.02	+0.04	A2m A5 V:
	2934	07 35 56.8	-52 33 36	6	4.94	+1.63	+1.40	K3 III
69 $\nu$ Gem	2905	07 36 37.8	+26 52 09	d	4.06	+1.94	+1.54	M0 III-IIIb
	2937	07 37 47.7	-34 59 42	d7	4.53	-0.31	-0.09	B8 V
25 Mon	2927	07 37 51.0	-04 08 15	d	5.13	+0.12	+0.44	F6 III
10 $\alpha$ CMi	2943	07 39 54.2	+05 11 42	osd67	0.38	+0.02	+0.42	F5 IV-V
R Pup	2974	07 41 19.4	-31 41 19	s	6.56	+0.85	+1.18	G2 0-Ia
$\zeta$ Vol	3024	07 41 40.4	-72 38 01	d7	3.95	+0.83	+1.04	G9 III
26 $\alpha$ Mon	2970	07 41 47.8	-09 34 43		3.93	+0.88	+1.02	G9 III Fe-1
24 Lyn	2946	07 43 58.5	+58 40 56	d	4.99	+0.08	+0.08	A2 IVn
75 $\sigma$ Gem	2973	07 44 01.8	+28 51 17	d6	4.28	+0.97	+1.12	K1 III
3 Pup	2996	07 44 16.2	-28 58 58	6	3.96	-0.09	+0.18	A2 Ib
77 $\kappa$ Gem	2985	07 45 08.4	+24 22 10	ad7	3.57	+0.69	+0.93	G8 III
OV Cep	2609	07 45 29.7	+86 59 32		5.07	+1.97	+1.63	M2- IIIab
	3017	07 45 39.9	-37 59 49		3.61	+1.72	+1.73	K5 IIa
78 $\beta$ Gem	2990	07 46 01.1	+27 59 51	ad	1.14	+0.85	+1.00	K0 IIIb
4 Pup	3015	07 46 28.6	-14 35 33		5.04	+0.09	+0.33	F2 V
81 Gem	3003	07 46 47.3	+18 28 52	6	4.88	+1.75	+1.45	K4 III
11 CMi	3008	07 46 54.1	+10 44 22	6	5.30	-0.02	+0.01	A0.5 IV <sup>-nn</sup>
	2999	07 47 25.2	+37 29 19		5.18	+1.94	+1.58	M2+ IIIb
	3037	07 47 52.4	-46 38 15	6	5.23	-0.85	-0.14	B1.5 IV
80 $\pi$ Gem	3013	07 48 14.7	+33 23 12	d7	5.14	+1.95	+1.60	M1+ IIIa
$\omicron$ Pup	3034	07 48 33.9	-25 57 59	d	4.50	-1.02	-0.05	B1 IV:nne
	3055	07 49 35.3	-46 24 09	d	4.11	-1.01	-0.18	B0 III
7 $\xi$ Pup	3045	07 49 46.7	-24 53 21	d6	3.34	+1.16	+1.24	G6 Iab-Ib
13 $\zeta$ CMi	3059	07 52 17.8	+01 44 12		5.14	-0.49	-0.12	B8 II

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
	3080	07 52 36.8	-40 36 21	c6	3.73	+0.78	+1.04	K1/2 II + A
QZ Pup	3084	07 53 03.1	-38 53 35	v6	4.49	-0.69	-0.19	B2.5 V
	3090	07 53 38.4	-48 08 00		4.24	-1.00	-0.14	B0.5 Ib
83 $\phi$ Gem	3067	07 54 12.0	+26 44 07	6	4.97	+0.10	+0.09	A3 IV-V
26 Lyn	3066	07 55 32.7	+47 32 02		5.45	+1.73	+1.46	K3 III
$\chi$ Car	3117	07 57 04.3	-53 00 49		3.47	-0.67	-0.18	B3p Si
11 Pup	3102	07 57 21.2	-22 54 41		4.20	+0.42	+0.72	F8 II
	3113	07 58 07.6	-30 21 58		4.79	+0.18	+0.15	A6 II
V Pup	3129	07 58 34.3	-49 16 35	cvd6	4.41	-0.96	-0.17	B1 Vp + B2:
	3153	07 59 49.3	-60 37 08	s	5.17	+1.91	+1.74	M1.5 II
27 Mon	3122	08 00 18.6	-03 42 42		4.93	+1.21	+1.21	K2 III
	3131	08 00 23.0	-18 25 53		4.61	+0.08	+0.08	A2 IVn
	3075	08 01 33.1	+73 53 08		5.41	+1.64	+1.42	K3 III
	3145	08 02 51.8	+02 18 08	d	4.39	+1.28	+1.25	K2 IIIb Fe-0.5
$\zeta$ Pup	3165	08 03 59.3	-40 02 10	s	2.25	-1.11	-0.26	O5 Iafn
$\chi$ Gem	3149	08 04 13.4	+27 45 41	d6	4.94	+1.09	+1.12	K1 III
$\epsilon$ Vol	3223	08 07 57.8	-68 39 03	d67	4.35	-0.46	-0.11	B6 IV
15 $\rho$ Pup	3185	08 08 02.0	-24 20 17	vd6	2.81	+0.19	+0.43	F5 (Ib-II)p
29 $\zeta$ Mon	3188	08 09 10.3	-03 01 05	d	4.34	+0.69	+0.97	G2 Ib
27 Lyn	3173	08 09 19.1	+51 28 21	d	4.84	0.00	+0.05	A1 Va
16 Pup	3192	08 09 32.5	-19 16 45	6	4.40	-0.60	-0.15	B5 IV
$\gamma^2$ Vel	3207	08 09 53.2	-47 22 15	cd6	1.78	-0.99	-0.22	WC8 + O9I:
NS Pup	3225	08 11 46.2	-39 39 12	6	4.45	+1.86	+1.62	K4.5 Ib
20 Pup	3229	08 13 51.7	-15 49 25		4.99	+0.78	+1.07	G5 IIa
	3182	08 13 56.7	+68 26 20		5.45	+0.80	+1.05	G7 II
	3243	08 14 27.4	-40 23 01	d6	4.44	+1.09	+1.17	K1 II/III
17 $\beta$ Cnc	3249	08 17 08.3	+09 08 58	d	3.52	+1.77	+1.48	K4 III Ba 0.5
$\alpha$ Cha	3318	08 18 12.8	-76 57 21		4.07	-0.02	+0.39	F4 IV
	3270	08 18 59.2	-36 41 43		4.45	+0.11	+0.22	A7 IV
$\theta$ Cha	3340	08 20 16.7	-77 31 16	d	4.35	+1.20	+1.16	K2 III CN 0.5
18 $\chi$ Cnc	3262	08 20 45.7	+27 10 47		5.14	-0.06	+0.47	F6 V
	3282	08 21 50.2	-33 05 29		4.83	+1.60	+1.45	K2.5 II-III
$\epsilon$ Car	3307	08 22 44.9	-59 32 48	dc	1.86	+0.19	+1.28	K3: III + B2: V
31 Lyn	3275	08 23 37.1	+43 09 01		4.25	+1.90	+1.55	K4.5 III
	3315	08 25 33.5	-24 05 03	d6	5.28	+1.83	+1.48	K4.5 III CN 1
$\beta$ Vol	3347	08 25 51.5	-66 10 31		3.77	+1.14	+1.13	K2 III
	3314	08 26 14.1	-03 56 40		3.90	-0.02	-0.02	A0 Va
1 $\sigma$ UMa	3323	08 31 12.7	+60 40 43	sd	3.37	+0.52	+0.85	G5 III
33 $\eta$ Cnc	3366	08 33 22.3	+20 24 05		5.33	+1.39	+1.25	K3 III
	3426	08 38 02.9	-43 01 47		4.14	+0.16	+0.11	A6 II
4 $\delta$ Hya	3410	08 38 15.9	+05 39 47	d6	4.16	+0.01	0.00	A1 IVnn
5 $\sigma$ Hya	3418	08 39 21.5	+03 18 02		4.44	+1.28	+1.21	K1 III
$\beta$ Pyx	3438	08 40 33.2	-35 20 59	d6	3.97	+0.65	+0.94	G4 III
6 Hya	3431	08 40 34.2	-12 31 00		4.98	+1.62	+1.42	K4 III
$\sigma$ Vel	3447	08 40 37.4	-52 57 47	v6	3.62	-0.64	-0.18	B3 IV
v343 Car	3457	08 40 52.2	-59 48 08	d6	4.33	-0.80	-0.11	B1.5 III
$\eta$ Cha	3502	08 40 54.5	-79 00 17		5.47	-0.35	-0.10	B8 V
	3445	08 41 00.5	-46 41 24	d	3.82	+0.33	+0.70	F0 Ia
34 Lyn	3422	08 41 48.5	+45 47 34		5.37	+0.75	+0.99	G8 IV
7 $\eta$ Hya	3454	08 43 49.5	+03 21 24	6	4.30	-0.74	-0.20	B4 V

## BRIGHT STARS, J2011.5

H13

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
43 $\gamma$ Cnc	3449	08 43 57.0	+21 25 35	d6	4.66	+0.01	+0.02	A1 Va
$\alpha$ Pyx	3468	08 44 03.3	-33 13 42		3.68	-0.88	-0.18	B1.5 III
	3477	08 44 48.6	-42 41 29	d	4.07	+0.52	+0.87	G6 II-III
$\delta$ Vel	3485	08 45 01.3	-54 45 05	d7	1.96	+0.07	+0.04	A1 Va
47 $\delta$ Cnc	3461	08 45 20.2	+18 06 41	d	3.94	+0.99	+1.08	K0 IIIb
	3487	08 46 25.1	-46 05 02		3.91	-0.05	0.00	A1 II
12 Hya	3484	08 46 55.1	-13 35 25	d6	4.32	+0.62	+0.90	G8 III Fe-1
v344 Car	3498	08 47 00.4	-56 48 44		4.49	-0.73	-0.17	B3 Vne
11 $\epsilon$ Hya	3482	08 47 23.0	+06 22 34	cd67	3.38	+0.36	+0.68	G5: III + A:
48 $\iota$ Cnc	3475	08 47 23.4	+28 43 02	d	4.02	+0.78	+1.01	G8 II-III
13 $\rho$ Hya	3492	08 49 02.5	+05 47 41	d6	4.36	-0.04	-0.04	A0 Vn
14 KX Hya	3500	08 49 56.4	-03 29 11		5.31	-0.35	-0.09	B9p Hg Mn
$\gamma$ Pyx	3518	08 51 01.2	-27 45 11		4.01	+1.40	+1.27	K2.5 III
$\zeta$ Oct	3678	08 54 48.5	-85 42 27		5.42	+0.07	+0.31	F0 III
	3571	08 55 18.4	-60 41 20	d	3.84	-0.45	-0.10	B7 II-III
16 $\zeta$ Hya	3547	08 56 00.1	+05 54 04		3.11	+0.80	+1.00	G9 IIIa
v376 Car	3582	08 57 15.3	-59 16 26	d	4.92	-0.77	-0.19	B2 IV-V
65 $\alpha$ Cnc	3572	08 59 06.9	+11 48 45	d6	4.25	+0.15	+0.14	A5m
9 $\iota$ UMa	3569	08 59 59.4	+47 59 45	d6	3.14	+0.07	+0.19	A7 IVn
64 $\sigma^3$ Cnc	3575	09 00 14.9	+32 22 24	d	5.22	+0.64	+0.92	G8 III
	3591	09 00 31.2	-41 17 56	c6	4.45	+0.38	+0.65	G8/K1 III + A
	3579	09 01 23.0	+41 44 12	od67	3.97	+0.04	+0.43	F7 V
$\alpha$ Vol	3615	09 02 37.5	-66 26 32	6	4.00	+0.13	+0.14	A5m
8 $\rho$ UMa	3576	09 03 34.0	+67 35 02		4.76	+1.88	+1.53	M3 IIIb Ca 1
12 $\kappa$ UMa	3594	09 04 24.3	+47 06 37	d7	3.60	+0.01	0.00	A0 IIIn
	3614	09 04 33.1	-47 08 38		3.75	+1.22	+1.20	K2 III
	3643	09 05 10.2	-72 38 56		4.48	+0.22	+0.61	F8 II
	3612	09 07 15.5	+38 24 20		4.56	+0.82	+1.04	G7 Ib-II
76 $\kappa$ Cnc	3623	09 08 22.1	+10 37 17	d6	5.24	-0.43	-0.11	B8p Hg Mn
$\lambda$ Vel	3634	09 08 25.2	-43 28 46	d	2.21	+1.81	+1.66	K4.5 Ib
15 UMa	3619	09 09 40.6	+51 33 27		4.48	+0.12	+0.27	F0m
77 $\xi$ Cnc	3627	09 10 01.1	+21 59 54	d6	5.14	+0.80	+0.97	G9 IIIa Fe-0.5 CH-1
v357 Car	3659	09 11 16.2	-59 00 51	6	3.44	-0.70	-0.19	B2 IV-V
	3663	09 11 32.3	-62 21 52		3.97	-0.67	-0.18	B3 III
$\beta$ Car	3685	09 13 19.3	-69 45 53		1.68	+0.03	0.00	A1 III
36 Lyn	3652	09 14 33.1	+43 10 11		5.32	-0.48	-0.14	B8p Mn
22 $\theta$ Hya	3665	09 14 57.7	+02 15 55	d6	3.88	-0.12	-0.06	B9.5 IV (C II)
	3696	09 16 31.6	-57 35 24		4.34	+1.98	+1.63	M0.5 III Ba 0.3
$\iota$ Car	3699	09 17 23.9	-59 19 25		2.25	+0.16	+0.18	A7 Ib
38 Lyn	3690	09 19 33.4	+36 45 12	d67	3.82	+0.06	+0.06	A2 IV-
40 $\alpha$ Lyn	3705	09 21 45.2	+34 20 36		3.13	+1.94	+1.55	K7 IIIab
$\theta$ Pyx	3718	09 22 00.2	-26 00 53		4.72	+2.02	+1.63	M0.5 III
$\kappa$ Vel	3734	09 22 28.2	-55 03 36	6	2.50	-0.75	-0.18	B2 IV-V
1 $\kappa$ Leo	3731	09 25 19.3	+26 07 56	d7	4.46	+1.31	+1.23	K2 III
30 $\alpha$ Hya	3748	09 28 09.1	-08 42 32	d	1.98	+1.72	+1.44	K3 II-III
$\epsilon$ Ant	3765	09 29 43.2	-36 00 07	6	4.51	+1.68	+1.44	K3 III
$\psi$ Vel	3786	09 31 09.3	-40 31 03	d7	3.60	-0.03	+0.36	F0 V+
	3803	09 31 34.3	-57 05 07		3.13	+1.89	+1.55	K5 III
	3821	09 31 41.1	-73 07 55		5.47	+1.75	+1.56	K4 III
4 $\lambda$ Leo	3773	09 32 22.5	+22 55 00		4.31	+1.89	+1.54	K4.5 IIIb

Designation		BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type	
			h m s	° ' "						
23	UMa	3757	09 32 25.4	+63 00 39	d	3.67	+0.10	+0.33	F0 IV	
R	Car	3816	09 32 31.9	-62 50 24	vd	4 - 10	+0.23	+1.43	gM5e	
5	ξ	3782	09 32 33.9	+11 14 54		4.97	+0.86	+1.05	G9.5 III	
25	θ	3775	09 33 37.2	+51 37 27	d6	3.17	+0.02	+0.46	F6 IV	
		3808	09 33 44.3	-21 10 01		5.01	+0.87	+1.02	K0 III	
		3825	09 34 46.7	-59 16 53		4.08	-0.56	+0.01	B5 II	
10	SU	LMi	3800	09 34 55.5	+36 20 45		4.55	+0.62	+0.92	G7.5 III Fe-0.5
24	DK	UMa	3771	09 35 28.8	+69 46 44		4.56	+0.34	+0.77	G5 III-IV
26		UMa	3799	09 35 36.3	+51 59 59		4.50	+0.04	+0.01	A1 Va
			3836	09 37 14.3	-49 24 25	d	4.35	+0.13	+0.17	A5 IV-V
			3751	09 38 38.9	+81 16 27		4.29	+1.72	+1.48	K3 IIIa
			3834	09 39 03.2	+04 35 49		4.68	+1.46	+1.32	K3 III
35	ι	Hya	3845	09 40 26.6	-01 11 44		3.91	+1.46	+1.32	K2.5 III
38	κ	Hya	3849	09 40 51.5	-14 23 06		5.06	-0.57	-0.15	B5 V
14	ο	Leo	3852	09 41 45.8	+09 50 22	cd6	3.52	+0.21	+0.49	F5 II + A5?
16	ψ	Leo	3866	09 44 21.4	+13 58 07	d	5.35	+1.95	+1.63	M24 <sup>+</sup> IIIab
	θ	Ant	3871	09 44 42.9	-27 49 21	cd7	4.79	+0.35	+0.51	F7 II-III + A8 V
	λ	Car	3884	09 45 33.8	-62 33 40	v	3.69	+0.85	+1.22	F9-G5 Ib
17	ε	Leo	3873	09 46 30.1	+23 43 15		2.98	+0.47	+0.80	G1 II
	ν	Car	3890	09 47 23.3	-65 07 32	d	3.01	+0.13	+0.27	A6 II
	R	Leo	3882	09 48 10.5	+11 22 30	v	4 - 11	-0.20	+1.30	gM7e
			3881	09 49 19.6	+45 58 01		5.09	+0.10	+0.62	G0.5 Va
29	ν	UMa	3888	09 51 47.9	+58 59 03	vd	3.80	+0.18	+0.28	F0 IV
39	ν <sup>1</sup>	Hya	3903	09 52 01.9	-14 54 03		4.12	+0.65	+0.92	G8.5 IIIa
24	μ	Leo	3905	09 53 24.9	+25 57 08	s	3.88	+1.39	+1.22	K2 III CN 1 Ca 1
			3923	09 55 24.8	-19 03 51	6	4.94	+1.93	+1.57	K5 III
	φ	Vel	3940	09 57 16.0	-54 37 22	d	3.54	-0.62	-0.08	B5 Ib
19		LMi	3928	09 58 23.1	+41 00 01	6	5.14	0.00	+0.46	F5 V
	η	Ant	3947	09 59 22.0	-35 56 47	d	5.23	+0.08	+0.31	F1 III-IV
29	π	Leo	3950	10 00 49.2	+07 59 19		4.70	+1.93	+1.60	M2 <sup>-</sup> IIIab
20		LMi	3951	10 01 40.3	+31 52 00		5.36	+0.27	+0.66	G3 Va Hδ 1
40	ν <sup>2</sup>	Hya	3970	10 05 41.1	-13 07 15	6	4.60	-0.27	-0.09	B8 V
30	η	Leo	3975	10 07 57.5	+16 42 22	asd	3.52	-0.21	-0.03	A0 Ib
21		LMi	3974	10 08 06.3	+35 11 18		4.48	+0.08	+0.18	A7 V
31		Leo	3980	10 08 30.8	+09 56 27	d	4.37	+1.75	+1.45	K3.5 IIIb Fe-1:
15	α	Sex	3981	10 08 31.6	-00 25 42		4.49	-0.07	-0.04	A0 III
32	α	Leo	3982	10 08 59.0	+11 54 38	d6	1.35	-0.36	-0.11	B7 Vn
41	λ	Hya	3994	10 11 08.9	-12 24 41	d6	3.61	+0.92	+1.01	K0 III CN 0.5
	ω	Car	4037	10 14 00.6	-70 05 43		3.32	-0.33	-0.08	B8 III <sub>n</sub>
			4023	10 15 13.2	-42 10 45	6	3.85	+0.06	+0.05	A2 Va
36	ξ	Leo	4031	10 17 19.7	+23 21 35	das6	3.44	+0.20	+0.31	F0 III
	v337	Car	4050	10 17 28.1	-61 23 24	d	3.40	+1.72	+1.54	K2.5 II
33	λ	UMa	4033	10 17 47.1	+42 51 23	s	3.45	+0.06	+0.03	A1 IV
22	ε	Sex	4042	10 18 12.1	-08 07 36		5.24	+0.13	+0.31	F1 IV <sup>-</sup>
	AG	Ant	4049	10 18 39.3	-29 02 59		5.34		+0.24	A0p Ib-II
41	γ <sup>1</sup>	Leo	4057	10 20 36.3	+19 46 59	d6	2.61	+1.00	+1.15	K1 <sup>-</sup> IIIb Fe-0.5
			4080	10 22 49.3	-41 42 29		4.83	+1.08	+1.12	K1 III
34	μ	UMa	4069	10 23 00.6	+41 26 29	6	3.05	+1.89	+1.59	M0 III
			4086	10 23 59.6	-38 04 06		5.33		+0.25	A8 V
			4102	10 24 37.3	-74 05 25	6	4.00	-0.01	+0.35	F2 V

## BRIGHT STARS, J2011.5

H15

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type		
		h m s	° ' "							
42 $\mu$	Hya	4072	10 24 56.9	+65 30 28	6	4.97	-0.13	-0.06	A0p Hg	
		4094	10 26 38.8	-16 53 43		3.81	+1.82	+1.48	K4 <sup>+</sup> III	
$\alpha$	Ant	4104	10 27 40.7	-31 07 36	6	4.25	+1.63	+1.45	K4.5 III	
		4114	10 28 18.2	-58 47 54		3.82	+0.24	+0.31	F0 Ib	
31 $\beta$	LMi	4100	10 28 32.7	+36 38 52	d67	4.21	+0.64	+0.90	G9 IIIab	
29 $\delta$	Sex	4116	10 30 03.7	-02 47 54		5.21	-0.12	-0.06	B9.5 V	
36	UMa	4112	10 31 21.3	+55 55 16	d	4.83	-0.01	+0.52	F8 V	
		4084	10 32 23.6	+82 29 58		5.26	-0.05	+0.37	F4 V	
		4140	10 32 26.1	-61 44 41		3.32	-0.72	-0.09	B4 Vne	
46	Leo	4127	10 32 48.5	+14 04 41		5.46	+2.04	+1.68	M1 IIIb	
		4133	10 33 25.0	+09 14 50	vd6	3.85	-0.96	-0.14	B1 Iab	
44	Hya	4143	10 33 26.1	-47 03 46	d7	5.02	+0.59	+1.04	K1/2 III	
		4145	10 34 33.8	-23 48 17	d	5.08	+1.82	+1.60	K5 III	
37 $\gamma$	UMa	4174	10 35 35.8	-78 40 03		4.11	+1.95	+1.58	M0 III	
		4141	10 35 53.7	+57 01 23		5.16	-0.02	+0.34	F1 V	
37	LMi	4159	10 36 01.9	-57 37 03	6	4.45	+1.79	+1.62	K5 II	
		4126	10 36 02.4	+75 39 11		4.84	+0.72	+0.96	G8 III	
		4167	10 37 47.3	-48 17 08	d67	3.84	+0.07	+0.30	F0m	
		4166	10 39 21.9	+31 54 58		4.71	+0.54	+0.81	G2.5 IIa	
		4180	10 39 46.0	-55 39 48	d	4.28	+0.75	+1.04	G2 II	
$\theta$	Car	4199	10 43 22.2	-64 27 18	6	2.76	-1.01	-0.22	B0.5 Vp	
		4181	10 43 52.6	+69 00 56		5.00	+1.54	+1.38	K3 III	
41	LMi	4192	10 44 02.4	+23 07 41		5.08	+0.05	+0.04	A2 IV	
		4191	10 44 13.2	+46 08 35	d6	5.18	+0.01	+0.33	F5 III	
		4234	10 45 52.8	-80 36 03		4.45	-0.70	-0.19	B2.5 IV	
42	LMi	4203	10 46 30.1	+30 37 17	d6	5.24	-0.14	-0.06	A1 Vn	
51	Leo	4208	10 47 01.6	+18 49 50		5.50	+1.15	+1.13	gK3	
		4216	10 47 16.0	-49 28 52	cd67	2.69	+0.57	+0.90	G5 III + F8: V	
53	Leo	4227	10 49 51.7	+10 29 03	6	5.34	+0.02	+0.03	A2 V	
		4232	10 50 11.6	-16 15 15		3.11	+1.30	+1.25	K1.5 IIIb H $\delta$ -0.5	
46	LMi	4247	10 53 57.1	+34 09 09		3.83	+0.91	+1.04	K0 <sup>+</sup> III-IV	
		4257	10 53 57.9	-58 54 52	d6	3.78	+0.65	+0.95	K0 IIIb	
54	Leo	4259	10 56 14.0	+24 41 17	cd	4.50	+0.01	+0.01	A1 III <sub>n</sub> + A1 IV <sub>n</sub>	
		4273	10 57 15.3	-37 11 59		4.60	+0.84	+1.03	K0 III	
47	UMa	4277	11 00 06.4	+40 22 07		5.05	+0.13	+0.61	G1 <sup>-</sup> V Fe-0.5	
7 $\alpha$	Crt	4287	11 00 20.1	-18 21 37		4.08	+1.00	+1.09	K0 <sup>+</sup> III	
		4293	11 00 41.1	-42 17 16		4.39	+0.12	+0.11	A3 IV	
58	Leo	4291	11 01 09.3	+03 33 20	d	4.84	+1.12	+1.16	K0.5 III Fe-0.5	
48 $\beta$	UMa	4295	11 02 31.7	+56 19 14	6	2.37	+0.01	-0.02	A0m A1 IV-V	
60	Leo	4300	11 02 56.5	+20 07 05		4.42	+0.05	+0.05	A0.5m A3 V	
50 $\alpha$	UMa	4301	11 04 25.7	+61 41 20	d6	1.80	+0.90	+1.07	K0 <sup>-</sup> IIIa	
63 $\chi$	Leo	4310	11 05 36.6	+07 16 25	d7	4.63	+0.08	+0.33	F1 IV	
		4314	11 05 53.2	-27 21 21	d7	4.94	+0.04	+0.36	F3 IV	
52 $\psi$	UMa	v382	4337	11 09 05.1	-59 02 15	c6	3.91	+0.94	+1.23	G4 0-Ia
		4335	11 10 18.4	+44 26 09		3.01	+1.11	+1.14	K1 III	
11 $\beta$	Crt	4343	11 12 13.5	-22 53 20	6	4.48	+0.06	+0.03	A2 IV	
		4350	11 13 04.7	-49 09 49	6	5.36		+0.18	A3 IV/V	
68 $\delta$	Leo	4357	11 14 43.1	+20 27 38	d	2.56	+0.12	+0.12	A4 IV	
70 $\theta$	Leo	4359	11 14 50.6	+15 22 00		3.34	+0.06	-0.01	A2 IV (Kvar)	
74 $\phi$	Leo	4368	11 17 14.8	-03 42 53	d	4.47	+0.14	+0.21	A7 V <sup>+</sup> n	

Designation		BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
			h m s	° ' "					
SV	Crt	4369	11 17 33.2	-07 11 51	sd67	6.14	+0.15	+0.20	A8p Sr Cr
54	<i>v</i> UMa	4377	11 19 05.9	+33 01 53	d6	3.48	+1.55	+1.40	K3 <sup>-</sup> III
55	UMa	4380	11 19 45.3	+38 07 20	d6	4.78	+0.03	+0.12	A1 Va
12	<i>δ</i> Crt	4382	11 19 55.0	-14 50 27	6	3.56	+0.97	+1.12	G9 IIIb CH 0.2
	<i>π</i> Cen	4390	11 21 32.1	-54 33 15	d7	3.89	-0.59	-0.15	B5 Vn
77	<i>σ</i> Leo	4386	11 21 43.8	+05 57 58	6	4.05	-0.12	-0.06	A0 III <sup>+</sup>
78	<i>ι</i> Leo	4399	11 24 31.4	+10 27 58	d67	3.94	+0.07	+0.41	F2 IV
15	<i>γ</i> Crt	4405	11 25 27.5	-17 44 50	d	4.08	+0.11	+0.21	A7 V
84	<i>τ</i> Leo	4418	11 28 31.7	+02 47 34	d	4.95	+0.79	+1.00	G7.5 IIIa
1	<i>λ</i> Dra	4434	11 32 04.5	+69 16 03		3.84	+1.97	+1.62	M0 III Ca-1
	<i>ξ</i> Hya	4450	11 33 34.2	-31 55 17	d	3.54	+0.71	+0.94	G7 III
	<i>λ</i> Cen	4467	11 36 19.0	-63 05 01	d	3.13	-0.17	-0.04	B9.5 IIn
		4466	11 36 29.2	-47 42 20		5.25	+0.12	+0.25	A7m
21	<i>θ</i> Crt	4468	11 37 16.0	-09 51 57	6	4.70	-0.18	-0.08	B9.5 Vn
91	<i>v</i> Leo	4471	11 37 32.3	-00 53 14		4.30	+0.75	+1.00	G8 <sup>+</sup> IIIb
	<i>ο</i> Hya	4494	11 40 47.2	-34 48 30		4.70	-0.22	-0.07	B9 V
61	UMa	4496	11 41 39.2	+34 08 12	das	5.33	+0.25	+0.72	G8 V
3	Dra	4504	11 43 06.3	+66 40 52		5.30	+1.24	+1.28	K3 III
	v810 Cen	4511	11 44 04.5	-62 33 12	s	5.03	+0.35	+0.80	G0 0-Ia Fe 1
27	<i>ζ</i> Crt	4514	11 45 20.8	-18 24 53	d	4.73	+0.74	+0.97	G8 IIIa
	<i>λ</i> Mus	4520	11 46 09.4	-66 47 33	d	3.64	+0.15	+0.16	A7 IV
3	<i>v</i> Vir	4517	11 46 27.0	+06 27 54		4.03	+1.79	+1.51	M1 III
63	<i>χ</i> UMa	4518	11 46 39.2	+47 42 56		3.71	+1.16	+1.18	K0.5 IIIb
		4522	11 47 04.5	-61 14 32	d	4.11	+0.58	+0.90	G3 II
93	DQ Leo	4527	11 48 34.7	+20 09 18	cd6	4.53	+0.28	+0.55	G4 III-IV + A7 V
	II Hya	4532	11 49 20.0	-26 48 50		5.11	+1.67	+1.60	M4 <sup>+</sup> III
94	<i>β</i> Leo	4534	11 49 38.7	+14 30 28	d	2.14	+0.07	+0.09	A3 Va
		4537	11 50 15.0	-63 51 09		4.32	-0.59	-0.15	B3 V
5	<i>β</i> Vir	4540	11 51 17.7	+01 42 00	d	3.61	+0.11	+0.55	F9 V
		4546	11 51 43.4	-45 14 15		4.46	+1.46	+1.30	K3 III
	<i>β</i> Hya	4552	11 53 29.5	-33 58 20	vd7	4.28	-0.33	-0.10	Ap Si
64	<i>γ</i> UMa	4554	11 54 25.9	+53 37 51	a6	2.44	+0.02	0.00	A0 Van
95	Leo	4564	11 56 16.0	+15 34 58	d6	5.53	+0.12	+0.11	A3 V
30	<i>η</i> Crt	4567	11 56 36.2	-17 12 54		5.18	0.00	-0.02	A0 Va
8	<i>π</i> Vir	4589	12 01 27.7	+06 33 01	6	4.66	+0.11	+0.13	A5 IV
	<i>θ</i> <sup>1</sup> Cru	4599	12 03 37.0	-63 22 37	d6	4.33	+0.04	+0.27	A8m
		4600	12 04 15.5	-42 29 54		5.15	-0.03	+0.41	F6 V
9	<i>ο</i> Vir	4608	12 05 47.7	+08 40 09	s	4.12	+0.63	+0.98	G8 IIIa CN-1 Ba 1 CH 1
	<i>η</i> Cru	4616	12 07 29.3	-64 40 40	d6	4.15	+0.03	+0.34	F2 V <sup>+</sup>
		4618	12 08 41.2	-50 43 31	v	4.47	-0.67	-0.15	B2 IIIne
	<i>δ</i> Cen	4621	12 08 57.5	-50 47 11	d	2.60	-0.90	-0.12	B2 IVne
1	<i>α</i> Crv	4623	12 09 00.5	-24 47 35		4.02	-0.02	+0.32	F0 IV-V
2	<i>ε</i> Crv	4630	12 10 43.1	-22 41 01		3.00	+1.47	+1.33	K2.5 IIIa
	<i>ρ</i> Cen	4638	12 12 15.5	-52 25 57		3.96	-0.62	-0.15	B3 V
		4646	12 12 43.5	+77 33 09	v6	5.14	+0.10	+0.33	F2m
	<i>δ</i> Cru	4656	12 15 45.7	-58 48 46		2.80	-0.91	-0.23	B2 IV
69	<i>δ</i> UMa	4660	12 15 59.4	+56 58 08	d	3.31	+0.07	+0.08	A2 Van
4	<i>γ</i> Crv	4662	12 16 23.9	-17 36 21	6	2.59	-0.34	-0.11	B8p Hg Mn
	<i>ε</i> Mus	4671	12 18 12.1	-68 01 29	6	4.11	+1.55	+1.58	M5 III
	<i>β</i> Cha	4674	12 19 02.7	-79 22 34		4.26	-0.51	-0.12	B5 Vn

## BRIGHT STARS, J2011.5

H17

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type		
		h m s	° ' "							
ζ	Cru	4679	12 19 04.1	-64 04 01	d	4.04	-0.69	-0.17	B2.5 V	
3	CVn	4690	12 20 22.5	+48 55 13		5.29	+1.97	+1.66	M1+ IIIab	
15	η	Vir	4689	12 20 29.7	-00 43 50	d6	3.89	+0.06	+0.02	A1 IV+
16	Vir	4695	12 20 56.0	+03 14 55	d	4.96	+1.15	+1.16	K0.5 IIIb Fe-0.5	
ε	Cru	4700	12 21 59.3	-60 27 53		3.59	+1.63	+1.42	K3 III	
12	Com	4707	12 23 04.9	+25 46 57	cd6	4.81	+0.26	+0.49	G5 III + A5	
6	CVn	4728	12 26 24.8	+38 57 18		5.02	+0.73	+0.96	G9 III	
α <sup>1</sup>	Cru	4730	12 27 14.8	-63 09 46	cd6	1.33	-1.03	-0.24	B0.5 IV	
15	γ	Com	4737	12 27 30.6	+28 12 17		4.36	+1.15	+1.13	K1 III Fe 0.5
σ	Cen	4743	12 28 40.0	-50 17 39		3.91	-0.78	-0.19	B2 V	
		4748	12 28 59.4	-39 06 17		5.44		-0.08	B8/9 V	
7	δ	Crv	4757	12 30 27.6	-16 34 46	d7	2.95	-0.08	-0.05	B9.5 IV-n
74	UMa	4760	12 30 29.3	+58 20 33		5.35	+0.14	+0.20	δ Del	
γ	Cru	4763	12 31 48.6	-57 10 39	d	1.63	+1.78	+1.59	M3.5 III	
8	η	Crv	4775	12 32 39.9	-16 15 34	6	4.31	+0.01	+0.38	F2 V
γ	Mus	4773	12 33 10.1	-72 11 47		3.87	-0.62	-0.15	B5 V	
5	κ	Dra	4787	12 33 58.1	+69 43 30	v6	3.87	-0.57	-0.13	B6 IIIpe
		4783	12 34 12.8	+33 11 03		5.42	+0.83	+1.00	K0 III CN-1	
8	β	CVn	4785	12 34 17.2	+41 17 42	ads6	4.26	+0.05	+0.59	G0 V
9	β	Crv	4786	12 34 59.6	-23 27 37		2.65	+0.60	+0.89	G5 IIb
23	Com	4789	12 35 25.4	+22 33 58	d6	4.81	-0.01	0.00	A0m A1 IV	
24	Com	4792	12 35 42.3	+18 18 50	d	5.02	+1.11	+1.15	K2 III	
α	Mus	4798	12 37 52.9	-69 11 56	d	2.69	-0.83	-0.20	B2 IV-V	
τ	Cen	4802	12 38 20.2	-48 36 16		3.86	+0.03	+0.05	A1 IVnn	
26	χ	Vir	4813	12 39 50.4	-08 03 31	d	4.66	+1.39	+1.23	K2 III CN 1.5
γ	Cen	4819	12 42 09.4	-49 01 22	d67	2.17	-0.01	-0.01	A1 IV	
29	γ <sup>1</sup>	Vir	4825	12 42 14.6	-01 30 45	ocd6	3.48	-0.03	+0.36	F1 V
29	γ <sup>2</sup>	Vir	4826	12 42 14.6	-01 30 43	ocd	3.50	-0.03	+0.36	F0m F2 V
30	ρ	Vir	4828	12 42 28.0	+10 10 21	6	4.88	+0.03	+0.09	A0 Va (λ Boo)
		4839	12 44 37.5	-28 23 13		5.48	+1.50	+1.34	K3 III	
Y	CVn	4846	12 45 40.1	+45 22 39		4.99	+6.33	+2.54	C5,5	
32	FM	Vir	4847	12 46 11.9	+07 36 38	6	5.22	+0.15	+0.33	F2m
β	Mus	4844	12 46 59.8	-68 10 15	cd7	3.05	-0.74	-0.18	B2 V + B2.5 V	
β	Cru	4853	12 48 24.0	-59 45 05	vd6	1.25	-1.00	-0.23	B0.5 III	
		4874	12 51 18.8	-34 03 42	d	4.91	-0.11	-0.04	A0 IV	
31	Com	4883	12 52 15.5	+27 28 42	s	4.94	+0.20	+0.67	G0 IIIp	
		4888	12 53 46.3	-49 00 20	6	4.33	+1.58	+1.37	K3/4 III	
		4889	12 54 04.7	-40 14 28		4.27	+0.12	+0.21	A7 V	
77	ε	UMa	4905	12 54 31.9	+55 53 51	dv6	1.77	+0.02	-0.02	A0p Cr
40	ψ	Vir	4902	12 54 57.1	-09 36 05		4.79	+1.53	+1.60	M3- III Ca-1
μ <sup>1</sup>	Cru	4898	12 55 16.6	-57 14 25	d	4.03	-0.76	-0.17	B2 IV-V	
8	Dra	4916	12 55 55.8	+65 22 34	v	5.24	+0.02	+0.28	F0 IV-V	
43	δ	Vir	4910	12 56 11.0	+03 20 07	d	3.38	+1.78	+1.58	M3+ III
ι	Oct	4870	12 56 18.4	-85 11 08	d	5.46	+0.79	+1.02	K0 III	
12	α <sup>2</sup>	CVn	4915	12 56 33.9	+38 15 23	vd	2.90	-0.32	-0.12	A0p Si Eu
78	UMa	4931	13 01 13.1	+56 18 16	asd7	4.93	+0.01	+0.36	F2 V	
47	ε	Vir	4932	13 02 44.9	+10 53 51	asd	2.83	+0.73	+0.94	G8 IIIab
δ	Mus	4923	13 03 04.7	-71 36 38	6	3.62	+1.26	+1.18	K2 III	
14	CVn	4943	13 06 16.6	+35 44 15		5.25	-0.20	-0.08	B9 V	
ξ <sup>2</sup>	Cen	4942	13 07 35.3	-49 58 03	d6	4.27	-0.79	-0.19	B1.5 V	



Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
51 $\theta$ Vir	4963	13 10 32.8	-05 36 01	d6	4.38	-0.01	-0.01	A1 IV
43 $\beta$ Com	4983	13 12 24.5	+27 49 12	d6	4.26	+0.07	+0.57	F9.5 V
$\eta$ Mus	4993	13 16 02.5	-67 57 19	vd6	4.80	-0.35	-0.08	B7 V
	5006	13 17 31.6	-31 34 00		5.10	+0.61	+0.96	K0 III
20 AO CVn	5017	13 18 03.4	+40 30 44	sv	4.73	+0.21	+0.30	F2 III (str. met.)
60 $\sigma$ Vir	5015	13 18 11.2	+05 24 34		4.80	+1.95	+1.67	M1 III
61 Vir	5019	13 19 00.5	-18 22 30	d	4.74	+0.26	+0.71	G6.5 V
46 $\gamma$ Hya	5020	13 19 32.9	-23 13 55	d	3.00	+0.66	+0.92	G8 IIIa
$\iota$ Cen	5028	13 21 14.8	-36 46 22		2.75	+0.03	+0.04	A2 Va
	5035	13 23 23.1	-61 02 54	d	4.53	-0.60	-0.13	B3 V
79 $\zeta$ UMa	5054	13 24 23.2	+54 51 56	d6	2.27	+0.03	+0.02	A1 Va <sup>+</sup> (Si)
80 UMa	5062	13 25 41.1	+54 55 42	6	4.01	+0.08	+0.16	A5 Vn
67 $\alpha$ Vir	5056	13 25 48.0	-11 13 16	vd6	0.98	-0.93	-0.23	B1 V
68 Vir	5064	13 27 19.7	-12 46 02		5.25	+1.75	+1.52	M0 III
	5085	13 28 52.3	+59 53 12	d	5.40	-0.02	-0.01	A1 Vn
70 Vir	5072	13 28 59.6	+13 43 04	d	4.98	+0.26	+0.71	G4 V
	5089	13 31 42.9	-39 27 59	d67	3.88	+1.03	+1.17	G8 III
78 CW Vir	5105	13 34 42.9	+03 36 01	v6	4.94	0.00	+0.03	A1p Cr Eu
79 $\zeta$ Vir	5107	13 35 16.8	-00 39 15		3.37	+0.10	+0.11	A2 IV <sup>-</sup>
BH CVn	5110	13 35 18.6	+37 07 26	6	4.98	+0.06	+0.40	F1 V <sup>+</sup>
	5139	13 37 27.7	+71 11 02		5.50		+1.20	gK2
$\epsilon$ Cen	5132	13 40 37.4	-53 31 28	d	2.30	-0.92	-0.22	B1 III
v744 Cen	5134	13 40 42.8	-50 00 28	s	6.00	+1.15	+1.50	M6 III
82 Vir	5150	13 42 13.1	-08 45 38		5.01	+1.95	+1.63	M1.5 III
1 Cen	5168	13 46 20.7	-33 06 05	6	4.23	0.00	+0.38	F2 V <sup>+</sup>
4 $\tau$ Boo	5185	13 47 48.5	+17 24 00	d7	4.50	+0.04	+0.48	F7 V
v766 Cen	5171	13 47 59.6	-62 38 49	sd	6.51	+1.19	+1.98	K0 0-Ia
85 $\eta$ UMa	5191	13 47 59.6	+49 15 22	a6	1.86	-0.67	-0.19	B3 V
5 $\nu$ Boo	5200	13 50 01.9	+15 44 28		4.07	+1.87	+1.52	K5.5 III
2 v806 Cen	5192	13 50 06.9	-34 30 28		4.19	+1.45	+1.50	M4.5 III
$\nu$ Cen	5190	13 50 11.9	-41 44 40	v6	3.41	-0.84	-0.22	B2 IV
$\mu$ Cen	5193	13 50 18.8	-42 31 50	sd6	3.04	-0.72	-0.17	B2 IV-Vpne (shell)
89 Vir	5196	13 50 29.9	-18 11 28		4.97	+0.92	+1.06	K0.5 III
10 CU Dra	5226	13 51 46.1	+64 40 00	d	4.65	+1.89	+1.58	M3.5 III
8 $\eta$ Boo	5235	13 55 13.9	+18 20 26	asd6	2.68	+0.20	+0.58	G0 IV
$\zeta$ Cen	5231	13 56 15.8	-47 20 40	6	2.55	-0.92	-0.22	B2.5 IV
	5241	13 58 29.5	-63 44 33		4.71	+1.04	+1.11	K1.5 III
$\phi$ Cen	5248	13 58 58.5	-42 09 23		3.83	-0.83	-0.21	B2 IV
47 Hya	5250	13 59 10.0	-25 01 41	6	5.15	-0.40	-0.10	B8 V
$\nu^1$ Cen	5249	13 59 23.7	-44 51 33		3.87	-0.80	-0.20	B2 IV-V
93 $\tau$ Vir	5264	14 02 14.0	+01 29 21	d6	4.26	+0.12	+0.10	A3 IV
$\nu^2$ Cen	5260	14 02 26.8	-45 39 31	6	4.34	+0.27	+0.60	F6 II
	5270	14 03 05.7	+09 37 51	s	6.20	+0.38	+0.90	G8: II: Fe-5
$\beta$ Cen	5267	14 04 38.7	-60 25 41	d6	0.61	-0.98	-0.23	B1 III
11 $\alpha$ Dra	5291	14 04 42.1	+64 19 16	s6	3.65	-0.08	-0.05	A0 III
$\theta$ Aps	5261	14 06 29.2	-76 51 05	s	5.50	+1.05	+1.55	M6.5 III:
$\chi$ Cen	5285	14 06 45.2	-41 14 03		4.36	-0.77	-0.19	B2 V
49 $\pi$ Hya	5287	14 07 01.8	-26 44 14		3.27	+1.04	+1.12	K2 <sup>-</sup> III Fe-0.5
5 $\theta$ Cen	5288	14 07 21.8	-36 25 34	d	2.06	+0.87	+1.01	K0 <sup>-</sup> IIIb
BY Boo	5299	14 08 23.3	+43 48 00		5.27	+1.66	+1.59	M4.5 III

## BRIGHT STARS, J2011.5

H19

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type	
		h m s	° ' "						
4	UMi	5321	14 08 49.2	+77 29 36	d6	4.82	+1.39	+1.36	K3 <sup>-</sup> IIIb Fe-0.5
12	Boo	5304	14 10 55.4	+25 02 15	d6	4.83	+0.07	+0.54	F8 IV
98	$\kappa$ Vir	5315	14 13 30.6	-10 19 36		4.19	+1.47	+1.33	K2.5 III Fe-0.5
16	$\alpha$ Boo	5340	14 16 11.2	+19 07 23	d	-0.04	+1.27	+1.23	K1.5 III Fe-0.5
21	$\iota$ Boo	5350	14 16 34.3	+51 18 52	d6	4.75	+0.06	+0.20	A7 IV
99	$\iota$ Vir	5338	14 16 37.1	-06 03 18		4.08	+0.04	+0.52	F7 III-IV
19	$\lambda$ Boo	5351	14 16 49.2	+46 02 09		4.18	+0.05	+0.08	A0 Va ( $\lambda$ Boo)
		5361	14 18 29.0	+35 27 25	6	4.81	+0.92	+1.06	K0 III
100	$\lambda$ Vir	5359	14 19 44.0	-13 25 25	6	4.52	+0.12	+0.13	A5m:
18	Boo	5365	14 19 49.7	+12 57 06	d	5.41	-0.03	+0.38	F3 V
	$\iota$ Lup	5354	14 20 08.7	-46 06 38		3.55	-0.72	-0.18	B2.5 IVn
		5358	14 21 08.2	-56 26 20		4.33	-0.43	+0.12	B6 Ib
	$\psi$ Cen	5367	14 21 15.6	-37 56 15	d	4.05	-0.11	-0.03	A0 III
	v761 Cen	5378	14 23 45.0	-39 33 50	v	4.42	-0.75	-0.18	B7 IIIp (var)
		5392	14 24 45.7	+05 46 06	6	5.10	+0.10	+0.12	A5 V
		5390	14 25 28.2	-24 51 29		5.32	+0.71	+0.96	K0 III
23	$\theta$ Boo	5404	14 25 35.3	+51 47 52	d	4.05	+0.01	+0.50	F7 V
	$\tau^1$ Lup	5395	14 26 52.8	-45 16 22	vd	4.56	-0.79	-0.15	B2 IV
	$\tau^2$ Lup	5396	14 26 55.5	-45 25 51	cd67	4.35	+0.19	+0.43	F4 IV + A7:
22	Boo	5405	14 26 59.5	+19 10 32		5.39	+0.23	+0.23	F0m
5	UMi	5430	14 27 30.8	+75 38 41	d	4.25	+1.70	+1.44	K4 <sup>-</sup> III
105	$\phi$ Vir	5409	14 28 47.8	-02 16 44	sd67	4.81	+0.21	+0.70	G2 IV
52	Hya	5407	14 28 51.0	-29 32 34	d	4.97	-0.41	-0.07	B8 IV
	$\delta$ Oct	5339	14 28 53.6	-83 43 09		4.32	+1.45	+1.31	K2 III
25	$\rho$ Boo	5429	14 32 19.5	+30 19 17	ad	3.58	+1.44	+1.30	K3 III
27	$\gamma$ Boo	5435	14 32 32.4	+38 15 30	d	3.03	+0.12	+0.19	A7 IV <sup>+</sup>
	$\sigma$ Lup	5425	14 33 23.9	-50 30 27		4.42	-0.84	-0.19	B2 III
28	$\sigma$ Boo	5447	14 35 10.9	+29 41 44	d	4.46	-0.08	+0.36	F2 V
	$\eta$ Cen	5440	14 36 14.5	-42 12 28	v7	2.31	-0.83	-0.19	B1.5 IVpne (shell)
	$\rho$ Lup	5453	14 38 40.0	-49 28 31		4.05	-0.56	-0.15	B5 V
33	Boo	5468	14 39 15.9	+44 21 19	6	5.39	-0.04	0.00	A1 V
	$\alpha^2$ Cen	5460	14 40 22.8	-60 52 57	od	1.33	+0.68	+0.88	K1 V
	$\alpha^1$ Cen	5459	14 40 23.6	-60 52 55	od6	-0.01	+0.24	+0.71	G2 V
30	$\zeta$ Boo	5478	14 41 41.9	+13 40 46	od6	4.52	+0.05	+0.05	A2 Va
		5471	14 42 40.7	-37 50 32		4.00	-0.70	-0.17	B3 V
	$\alpha$ Lup	5469	14 42 42.0	-47 26 13	vd6	2.30	-0.89	-0.20	B1.5 III
	$\alpha$ Cir	5463	14 43 26.9	-65 01 28	d6	3.19	+0.12	+0.24	A7p Sr Eu
107	$\mu$ Vir	5487	14 43 40.1	-05 42 28	6	3.88	-0.02	+0.38	F2 V
34	W Boo	5490	14 43 55.7	+26 28 46	v	4.81	+1.94	+1.66	M3 <sup>-</sup> III
		5485	14 44 21.9	-35 13 21		4.05	+1.53	+1.35	K3 IIIb
36	$\epsilon$ Boo	5506	14 45 29.4	+27 01 34	d	2.70	+0.73	+0.97	K0 <sup>-</sup> II-III
109	Vir	5511	14 46 49.9	+01 50 42		3.72	-0.03	-0.01	A0 IVnn
		5495	14 47 49.9	-52 25 53	d	5.21		+0.98	G8 III
56	Hya	5516	14 48 25.2	-26 08 06		5.24	+0.65	+0.94	G8/K0 III
	$\alpha$ Aps	5470	14 49 20.4	-79 05 32		3.83	+1.68	+1.43	K3 III CN 0.5
7	$\beta$ UMi	5563	14 50 41.0	+74 06 31	d	2.08	+1.78	+1.47	K4 <sup>-</sup> III
58	Hya	5526	14 50 58.0	-28 00 28		4.41	+1.49	+1.40	K2.5 IIIb Fe-1:
8	$\alpha^1$ Lib	5530	14 51 19.4	-16 02 40		5.15	-0.03	+0.41	F3 V
9	$\alpha^2$ Lib	5531	14 51 31.0	-16 05 20	d6	2.75	+0.09	+0.15	A3 III-IV
		5552	14 51 44.0	+59 14 51		5.46	+1.60	+1.36	K4 III

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
<i>o</i> Lup	5528	14 52 23.6	-43 37 20	d67	4.32	-0.61	-0.15	B5 IV
	5558	14 56 27.3	-33 54 07	d6	5.32		+0.04	A0 V
15 $\xi^2$ Lib	5564	14 57 23.6	-11 27 20		5.46	+1.70	+1.49	gK4
RR UMi	5589	14 57 46.2	+65 53 13	6	4.60	+1.59	+1.59	M4.5 III
16 Lib	5570	14 57 47.1	-04 23 34		4.49	+0.05	+0.32	F0 IV-
$\beta$ Lup	5571	14 59 17.4	-43 10 46		2.68	-0.87	-0.22	B2 IV
$\kappa$ Cen	5576	14 59 54.8	-42 08 59	d	3.13	-0.79	-0.20	B2 V
19 $\delta$ Lib	5586	15 01 35.3	-08 33 50	vd6	4.92	-0.10	0.00	B9.5 V
42 $\beta$ Boo	5602	15 02 22.8	+40 20 44		3.50	+0.72	+0.97	G8 IIIa Fe-0.5
110 Vir	5601	15 03 29.0	+02 02 48		4.40	+0.88	+1.04	K0+ IIIb Fe-0.5
20 $\sigma$ Lib	5603	15 04 44.8	-25 19 35		3.29	+1.94	+1.70	M2.5 III
43 $\psi$ Boo	5616	15 04 56.3	+26 54 12		4.54	+1.33	+1.24	K2 III
	5635	15 06 36.5	+54 30 45		5.25	+0.64	+0.96	G8 III Fe-1
45 Boo	5634	15 07 48.4	+24 49 30	d	4.93	-0.02	+0.43	F5 V
$\lambda$ Lup	5626	15 09 37.4	-45 19 24	d67	4.05	-0.68	-0.18	B3 V
$\kappa^1$ Lup	5646	15 12 44.4	-48 46 51	d	3.87	-0.13	-0.05	B9.5 IVnn
24 $\iota$ Lib	5652	15 12 52.7	-19 50 04	d6	4.54	-0.35	-0.08	B9p Si
$\zeta$ Lup	5649	15 13 07.0	-52 08 32	d	3.41	+0.66	+0.92	G8 III
	5691	15 14 46.5	+67 18 12		5.13	+0.08	+0.53	F8 V
1 Lup	5660	15 15 19.8	-31 33 41		4.91	+0.28	+0.37	F0 Ib-II
3 Ser	5675	15 15 45.7	+04 53 50	d	5.33	+0.91	+1.09	gK0
49 $\delta$ Boo	5681	15 15 58.0	+33 16 21	d6	3.47	+0.66	+0.95	G8 III Fe-1
27 $\beta$ Lib	5685	15 17 37.6	-09 25 29	6	2.61	-0.36	-0.11	B8 IIIn
$\beta$ Cir	5670	15 18 25.4	-58 50 36		4.07	+0.09	+0.09	A3 Vb
2 Lup	5686	15 18 32.0	-30 11 25		4.34	+1.07	+1.10	K0- IIIa CH-1
$\mu$ Lup	5683	15 19 20.3	-47 55 00	d7	4.27	-0.37	-0.08	B8 V
$\gamma$ TrA	5671	15 19 59.9	-68 43 15		2.89	-0.02	0.00	A1 III
13 $\gamma$ UMi	5735	15 20 43.1	+71 47 35		3.05	+0.12	+0.05	A3 III
$\delta$ Lup	5695	15 22 07.8	-40 41 18		3.22	-0.89	-0.22	B1.5 IVn
$\phi^1$ Lup	5705	15 22 32.4	-36 18 08	d	3.56	+1.88	+1.54	K4 III
$\epsilon$ Lup	5708	15 23 28.0	-44 43 49	d67	3.37	-0.75	-0.18	B2 IV-V
$\phi^2$ Lup	5712	15 23 53.6	-36 53 56		4.54	-0.63	-0.15	B4 V
$\gamma$ Cir	5704	15 24 18.1	-59 21 40	cd7	4.51	-0.35	+0.19	B5 IV
51 $\mu^1$ Boo	5733	15 24 55.5	+37 20 14	d6	4.31	+0.07	+0.31	F0 IV
12 $\iota$ Dra	5744	15 25 11.2	+58 55 34	d	3.29	+1.22	+1.16	K2 III
9 $\tau^1$ Ser	5739	15 26 19.4	+15 23 17		5.17	+1.95	+1.66	M1 IIIa
3 $\beta$ CrB	5747	15 28 18.2	+29 04 00	vd6	3.68	+0.11	+0.28	F0p Cr Eu
52 $\nu^1$ Boo	5763	15 31 20.6	+40 47 39		5.02	+1.90	+1.59	K4.5 IIIb Ba 0.5
$\kappa^1$ Aps	5730	15 32 47.4	-73 25 41	d	5.49	-0.77	-0.12	B1pne
4 $\theta$ CrB	5778	15 33 23.6	+31 19 15	d	4.14	-0.54	-0.13	B6 Vnn
37 Lib	5777	15 34 48.5	-10 06 12		4.62	+0.86	+1.01	K1 III-IV
5 $\alpha$ CrB	5793	15 35 10.5	+26 40 36	6	2.23	-0.02	-0.02	A0 IV
13 $\delta$ Ser	5789	15 35 21.2	+10 30 04	cd	4.23	+0.12	+0.26	F0 III-IV + F0 IIIb
$\gamma$ Lup	5776	15 35 54.7	-41 12 16	dv67	2.78	-0.82	-0.20	B2 IVn
38 $\gamma$ Lib	5787	15 36 10.3	-14 49 38	d	3.91	+0.74	+1.01	G8.5 III
	5784	15 36 59.6	-44 26 04		5.43	+1.82	+1.50	K4/5 III
39 $\nu$ Lib	5794	15 37 43.5	-28 10 21	d	3.58	+1.58	+1.38	K3.5 III
$\epsilon$ TrA	5771	15 37 47.1	-66 21 16	d	4.11	+1.16	+1.17	K1/2 III
54 $\phi$ Boo	5823	15 38 14.4	+40 18 59		5.24	+0.53	+0.88	G7 III-IV Fe-2
$\omega$ Lup	5797	15 38 49.9	-42 36 15	d6	4.33	+1.72	+1.42	K4.5 III

## BRIGHT STARS, J2011.5

H21

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
40 $\tau$ Lib	5812	15 39 21.9	-29 48 53	6	3.66	-0.70	-0.17	B2.5 V
	5798	15 39 41.1	-52 24 35	d	5.44	0.00	0.00	B9 V
43 $\kappa$ Lib	5838	15 42 36.7	-19 42 55	d6	4.74	+1.95	+1.57	M0- IIIb
8 $\gamma$ CrB	5849	15 43 13.6	+26 15 35	d7	3.84	-0.04	0.00	A0 IV comp.?
16 $\zeta$ UMi	5903	15 43 40.2	+77 45 31		4.32	+0.05	+0.04	A2 III-IVn
24 $\alpha$ Ser	5854	15 44 50.1	+06 23 24	d	2.65	+1.24	+1.17	K2 IIIb CN 1
28 $\beta$ Ser	5867	15 46 43.1	+15 23 11	d	3.67	+0.08	+0.06	A2 IV
	5886	15 46 50.7	+62 33 51		5.19	-0.10	+0.04	A2 IV
27 $\lambda$ Ser	5868	15 47 00.1	+07 19 04	6	4.43	+0.11	+0.60	G0- V
35 $\kappa$ Ser	5879	15 49 15.5	+18 06 24		4.09	+1.95	+1.62	M0.5 IIIab
10 $\delta$ CrB	5889	15 50 04.6	+26 02 02	s	4.62	+0.36	+0.80	G5 III-IV Fe-1
32 $\mu$ Ser	5881	15 50 13.3	-03 27 53	d6	3.53	-0.10	-0.04	A0 III
37 $\epsilon$ Ser	5892	15 51 23.4	+04 26 38		3.71	+0.11	+0.15	A5m
11 $\kappa$ CrB	5901	15 51 40.0	+35 37 20	sd	4.82	+0.87	+1.00	K1 IVa
5 $\chi$ Lup	5883	15 51 41.5	-33 39 41	6	3.95	-0.13	-0.04	B9p Hg
1 $\chi$ Her	5914	15 53 04.4	+42 25 11		4.62	0.00	+0.56	F8 V Fe-2 H $\delta$ -1
45 $\lambda$ Lib	5902	15 54 00.2	-20 12 02	6	5.03	-0.56	-0.01	B2.5 V
46 $\theta$ Lib	5908	15 54 28.9	-16 45 44		4.15	+0.81	+1.02	G9 IIIb
$\beta$ TrA	5897	15 56 09.9	-63 27 54	d	2.85	+0.05	+0.29	F0 IV
41 $\gamma$ Ser	5933	15 56 59.1	+15 37 29	d	3.85	-0.03	+0.48	F6 V
5 $\rho$ Sco	5928	15 57 35.8	-29 14 49	d6	3.88	-0.82	-0.20	B2 IV-V
13 $\epsilon$ CrB	5947	15 58 03.8	+26 50 43	sd	4.15	+1.28	+1.23	K2 IIIab
CL Dra	5960	15 58 03.9	+54 43 03	6	4.95	+0.05	+0.26	F0 IV
48 FX Lib	5941	15 58 50.1	-14 18 42	6	4.88	-0.20	-0.10	B5 IIIpe (shell)
6 $\pi$ Sco	5944	15 59 33.0	-26 08 47	cvd6	2.89	-0.91	-0.19	B1 V + B2 V
T CrB	5958	15 59 59.1	+25 53 17	vd6	2 - 11	+0.59	+1.40	gM3: + Bep
	5943	16 00 17.5	-41 46 35		4.99		+1.00	K0 II/III
$\eta$ Lup	5948	16 00 53.2	-38 25 43	d	3.41	-0.83	-0.22	B2.5 IVn
49 Lib	5954	16 00 58.4	-16 33 59	d6	5.47	+0.03	+0.52	F8 V
7 $\delta$ Sco	5953	16 01 00.9	-22 39 13	d6	2.32	-0.91	-0.12	B0.3 IV
13 $\theta$ Dra	5986	16 02 06.4	+58 32 05	6	4.01	+0.10	+0.52	F8 IV-V
8 $\beta^1$ Sco	5984	16 06 06.5	-19 50 10	d6	2.62	-0.87	-0.07	B0.5 V
8 $\beta^2$ Sco	5985	16 06 06.8	-19 49 57	sd	4.92	-0.70	-0.02	B2 V
$\delta$ Nor	5980	16 07 18.4	-45 12 12		4.72	+0.15	+0.23	A7m
$\theta$ Lup	5987	16 07 21.0	-36 49 58		4.23	-0.70	-0.17	B2.5 Vn
9 $\omega^1$ Sco	5993	16 07 28.9	-20 41 58	s	3.96	-0.81	-0.04	B1 V
10 $\omega^2$ Sco	5997	16 08 04.9	-20 53 56		4.32	+0.50	+0.84	G4 II-III
7 $\kappa$ Her	6008	16 08 35.7	+17 01 01	d	5.00	+0.61	+0.95	G5 III
11 $\phi$ Her	6023	16 09 08.0	+44 54 19	v6	4.26	-0.28	-0.07	B9p Hg Mn
16 $\tau$ CrB	6018	16 09 23.6	+36 27 44	d6	4.76	+0.86	+1.01	K1- III-IV
19 UMi	6079	16 10 30.7	+75 50 54		5.48	-0.36	-0.11	B8 V
14 $\nu$ Sco	6027	16 12 39.9	-19 29 23	d6	4.01	-0.65	+0.04	B2 IVp
$\kappa$ Nor	6024	16 14 23.5	-54 39 33	d	4.94	+0.78	+1.04	G8 III
1 $\delta$ Oph	6056	16 14 57.0	-03 43 23	d	2.74	+1.96	+1.58	M0.5 III
$\delta$ TrA	6030	16 16 29.6	-63 42 50	d	3.85	+0.86	+1.11	G2 Ib-IIa
21 $\eta$ UMi	6116	16 17 10.9	+75 43 42	d	4.95	+0.08	+0.37	F5 V
2 $\epsilon$ Oph	6075	16 18 55.9	-04 43 11	d	3.24	+0.75	+0.96	G9.5 IIIb Fe-0.5
22 $\tau$ Her	6092	16 20 05.2	+46 17 11	vd	3.89	-0.56	-0.15	B5 IV
	6077	16 20 16.5	-30 56 01	d6	5.49	-0.01	+0.47	F6 III
$\gamma^2$ Nor	6072	16 20 42.3	-50 10 58	d	4.02	+1.16	+1.08	K1+ III

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
20 $\sigma$	6084	16 21 53.4	-25 37 10	vd6	2.89	-0.70	+0.13	B1 III
$\delta^1$	6020	16 22 06.0	-78 43 21	d	4.68	+1.69	+1.69	M4 IIIa
20 $\gamma$	6095	16 22 25.7	+19 07 36	d6	3.75	+0.18	+0.27	A9 IIIbn
50 $\sigma$	6093	16 22 39.3	+01 00 10		4.82	+0.04	+0.34	F1 IV-V
14 $\eta$	6132	16 24 09.0	+61 29 18	d67	2.74	+0.70	+0.91	G8 <sup>-</sup> IIIab
4 $\psi$	6104	16 24 46.7	-20 03 48		4.50	+0.82	+1.01	K0 <sup>-</sup> II-III
24 $\omega$	6117	16 25 56.8	+14 00 27	vd	4.57	-0.04	0.00	B9p Cr
7 $\chi$	6118	16 27 41.5	-18 28 53	6	4.42	-0.75	+0.28	B1.5 Ve
15	6161	16 27 57.9	+68 44 36		5.00	-0.12	-0.06	B9.5 III
$\epsilon$	6115	16 28 01.8	-47 34 48	d67	4.46	-0.53	-0.07	B4 V
$\zeta$	6098	16 29 43.1	-70 06 32	6	4.91	+0.04	+0.55	F9 V
21 $\alpha$	6134	16 30 06.9	-26 27 24	d6	0.96	+1.34	+1.83	M1.5 Iab-Ib
27 $\beta$	6148	16 30 42.9	+21 27 55	d6	2.77	+0.69	+0.94	G7 IIIa Fe-0.5
10 $\lambda$	6149	16 31 29.7	+01 57 34	d67	3.82	+0.01	+0.01	A1 IV
8 $\phi$	6147	16 31 47.9	-16 38 13	d	4.28	+0.72	+0.92	G8 <sup>+</sup> IIIa
	6143	16 32 08.2	-34 43 42		4.23	-0.80	-0.16	B2 III-IV
9 $\omega$	6153	16 32 49.2	-21 29 24		4.45	+0.13	+0.13	Ap Sr Cr
35 $\sigma$	6168	16 34 28.5	+42 24 50	d6	4.20	-0.10	-0.01	A0 IIIn
$\gamma$	6102	16 35 14.9	-78 55 15	6	3.89	+0.62	+0.91	G8/K0 III
23 $\tau$	6165	16 36 36.0	-28 14 20	s	2.82	-1.03	-0.25	B0 V
	6166	16 37 08.0	-35 16 41	6	4.16	+1.94	+1.57	K7 III
13 $\zeta$	6175	16 37 47.6	-10 35 22		2.56	-0.86	+0.02	O9.5 Vn
42	6200	16 39 03.6	+48 54 22	d	4.90	+1.76	+1.55	M3 <sup>-</sup> IIIab
40 $\zeta$	6212	16 41 43.2	+31 34 56	d67	2.81	+0.21	+0.65	G0 IV
	6196	16 42 14.4	-17 45 49		4.96	+0.87	+1.11	G7.5 II-III CN 1 Ba 0.5
44 $\eta$	6220	16 43 17.5	+38 54 03	d	3.53	+0.60	+0.92	G7 III Fe-1
$\beta$	6163	16 44 44.7	-77 32 22	d	4.24	+0.95	+1.06	K0 III
22 $\epsilon$	6322	16 44 49.8	+82 01 01	vd6	4.23	+0.55	+0.89	G5 III
	6237	16 45 31.0	+56 45 42	d6	4.85	-0.06	+0.38	F2 V <sup>+</sup>
$\alpha$	6217	16 49 53.5	-69 02 50		1.92	+1.56	+1.44	K2 IIb-IIIa
20	6243	16 50 28.3	-10 48 09	6	4.65	+0.07	+0.47	F7 III
$\eta$	6229	16 50 47.0	-59 03 38	d	3.76	+1.94	+1.57	K5 III
26 $\epsilon$	6241	16 50 54.6	-34 18 47		2.29	+1.27	+1.15	K2 III
51	6270	16 52 13.9	+24 38 16		5.04	+1.29	+1.25	K0.5 IIIa Ca 0.5
$\mu^1$	6247	16 52 39.1	-38 03 58	v6	3.08	-0.87	-0.20	B1.5 IVn
$\mu^2$	6252	16 53 07.0	-38 02 10		3.57	-0.85	-0.21	B2 IV
53	6279	16 53 24.3	+31 41 00	d	5.32	-0.02	+0.29	F2 V
25 $\iota$	6281	16 54 33.2	+10 08 50	6	4.38	-0.32	-0.08	B8 V
$\zeta^2$	6271	16 55 23.7	-42 22 48		3.62	+1.65	+1.37	K3.5 IIIb
27 $\kappa$	6299	16 58 12.8	+09 21 28	as	3.20	+1.18	+1.15	K2 III
$\zeta$	6285	16 59 34.5	-56 00 25		3.13	+1.97	+1.60	K4 III
$\epsilon^1$	6295	17 00 30.2	-53 10 37		4.06	+1.71	+1.45	K4 IIIab
58 $\epsilon$	6324	17 00 43.8	+30 54 36	d6	3.92	-0.10	-0.01	A0 IV <sup>+</sup>
30	6318	17 01 40.0	-04 14 21	d	4.82	+1.83	+1.48	K4 III
59	6332	17 02 01.9	+33 33 08		5.25	+0.02	+0.02	A3 IV-Vs
60	6355	17 05 54.7	+12 43 33	d	4.91	+0.05	+0.12	A4 IV
22 $\zeta$	6396	17 08 49.3	+65 42 02	d	3.17	-0.43	-0.12	B6 III
35 $\eta$	6378	17 11 02.3	-15 44 18	d67	2.43	+0.09	+0.06	A2 Va <sup>+</sup> (Sr)
$\eta$	6380	17 12 58.7	-43 15 12		3.33	+0.09	+0.41	F2 V:p (Cr)
64 $\alpha^1$	6406	17 15 10.4	+14 22 41	sd	3.48	+1.01	+1.44	M5 Ib-II

## BRIGHT STARS, J2011.5

H23

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type	
		h m s	° ' "						
67 $\pi$	Her	6418	17 15 26.9	+36 47 48		3.16	+1.66	+1.44	K3 II
65 $\delta$	Her	6410	17 15 30.3	+24 49 35	d6	3.14	+0.08	+0.08	A1 Vann
v656	Her	6452	17 20 49.3	+18 02 45		5.00	+2.06	+1.62	M1+ IIIab
72	Her	6458	17 21 05.4	+32 27 13	d	5.39	+0.07	+0.62	G0 V
53 $\nu$	Ser	6446	17 21 28.5	-12 51 28	d7	4.33	+0.05	+0.03	A1.5 IV
40 $\xi$	Oph	6445	17 21 41.8	-21 07 28	d7	4.39	-0.05	+0.39	F2 V
42 $\theta$	Oph	6453	17 22 43.0	-25 00 36	dv6	3.27	-0.86	-0.22	B2 IV
$\iota$	Aps	6411	17 23 23.2	-70 08 01	d7	5.41	-0.23	-0.04	B8/9 Vn
$\beta$	Ara	6461	17 26 15.5	-55 32 22		2.85	+1.56	+1.46	K3 Ib-IIa
$\gamma$	Ara	6462	17 26 21.9	-56 23 14	d	3.34	-0.96	-0.13	B1 Ib
44	Oph	6486	17 27 04.4	-24 11 06		4.17	+0.12	+0.28	A9m:
49 $\sigma$	Oph	6498	17 27 05.1	+04 07 52	s	4.34	+1.62	+1.50	K2 II
		6493	17 27 14.5	-05 05 45	6	4.54	-0.03	+0.39	F2 V
45	Oph	6492	17 28 05.4	-29 52 35		4.29	+0.09	+0.40	$\delta$ Del
23 $\delta$	UMi	6789	17 28 33.4	+86 34 42		4.36	+0.03	+0.02	A1 Van
23 $\beta$	Dra	6536	17 30 41.6	+52 17 36	sd	2.79	+0.64	+0.98	G2 Ib-IIa
76 $\lambda$	Her	6526	17 31 12.2	+26 06 09		4.41	+1.68	+1.44	K3.5 III
34 $\nu$	Sco	6508	17 31 32.8	-37 18 14	6	2.69	-0.82	-0.22	B2 IV
27	Dra	6566	17 31 55.2	+68 07 39	d6	5.05	+0.92	+1.08	G9 IIIb
$\delta$	Ara	6500	17 32 08.3	-60 41 31	d	3.62	-0.31	-0.10	B8 Vn
24 $\nu^1$	Dra	6554	17 32 24.2	+55 10 36	6	4.88	+0.04	+0.26	A7m
25 $\nu^2$	Dra	6555	17 32 29.7	+55 09 56	d6	4.87	+0.06	+0.28	A7m
$\alpha$	Ara	6510	17 32 43.9	-49 53 03	d6	2.95	-0.69	-0.17	B2 Vne
35 $\lambda$	Sco	6527	17 34 23.4	-37 06 40	vd6	1.63	-0.89	-0.22	B1.5 IV
55 $\alpha$	Oph	6556	17 35 28.1	+12 33 09	6	2.08	+0.10	+0.15	A5 Vnn
28 $\omega$	Dra	6596	17 36 53.1	+68 45 09	d6	4.80	-0.01	+0.43	F4 V
		6546	17 37 20.4	-38 38 32		4.29	+0.90	+1.09	G8/K0 III/IV
$\theta$	Sco	6553	17 38 08.8	-43 00 15		1.87	+0.22	+0.40	F1 III
55 $\xi$	Ser	6561	17 38 14.7	-15 24 18	d6	3.54	+0.14	+0.26	F0 IIIb
85 $\iota$	Her	6588	17 39 47.4	+46 00 02	svd6	3.80	-0.69	-0.18	B3 IV
31 $\psi$	Dra	6636	17 41 44.2	+72 08 35	d	4.58	+0.01	+0.42	F5 V
56 $o$	Ser	6581	17 42 03.7	-12 52 50	6	4.26	+0.10	+0.08	A2 Va
$\kappa$	Sco	6580	17 43 17.1	-39 02 05	v6	2.41	-0.89	-0.22	B1.5 III
84	Her	6608	17 43 49.9	+24 19 25	s	5.71	+0.27	+0.65	G2 IIIb
60 $\beta$	Oph	6603	17 44 02.5	+04 33 48		2.77	+1.24	+1.16	K2 III CN 0.5
58	Oph	6595	17 44 07.2	-21 41 16		4.87	-0.03	+0.47	F7 V:
$\mu$	Ara	6585	17 45 03.6	-51 50 20		5.15	+0.24	+0.70	G5 V
$\eta$	Pav	6582	17 46 51.8	-64 43 40		3.62	+1.17	+1.19	K1 IIIa CN 1
86 $\mu$	Her	6623	17 46 54.6	+27 42 52	asd	3.42	+0.39	+0.75	G5 IV
3 X	Sgr	6616	17 48 17.1	-27 50 03	v	4.54	+0.50	+0.80	F3 II
$\iota^1$	Sco	6615	17 48 23.4	-40 07 49	sd6	3.03	+0.27	+0.51	F2 Ia
62 $\gamma$	Oph	6629	17 48 28.2	+02 42 13	6	3.75	+0.04	+0.04	A0 Van
35	Dra	6701	17 48 56.2	+76 57 38		5.04	+0.08	+0.49	F7 IV
		6630	17 50 38.5	-37 02 45	d	3.21	+1.19	+1.17	K2 III
32 $\xi$	Dra	6688	17 53 43.7	+56 52 16	d	3.75	+1.21	+1.18	K2 III
89 v441	Her	6685	17 55 53.0	+26 02 56	sv6	5.45	+0.26	+0.34	F2 Ibp
91 $\theta$	Her	6695	17 56 38.9	+37 14 58		3.86	+1.46	+1.35	K1 IIa CN 2
33 $\gamma$	Dra	6705	17 56 52.4	+51 29 16	asd	2.23	+1.87	+1.52	K5 III
92 $\xi$	Her	6703	17 58 12.7	+29 14 50	v	3.70	+0.70	+0.94	G8.5 III
94 $\nu$	Her	6707	17 58 56.6	+30 11 20	d	4.41	+0.15	+0.39	F2m

Designation		BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
			h m s	° ' "					
64	$\nu$ Oph	6698	17 59 39.6	-09 46 27		3.34	+0.88	+0.99	G9 IIIa
93	Her	6713	18 00 34.1	+16 45 04		4.67	+1.22	+1.26	K0.5 IIb
67	Oph	6714	18 01 13.3	+02 55 54	sd	3.97	-0.62	+0.02	B5 Ib
68	Oph	6723	18 02 20.2	+01 18 20	d67	4.45	0.00	+0.02	A0.5 Van
	W Sgr	6742	18 05 45.3	-29 34 43	vd6	4.69	+0.52	+0.78	G0 Ib/II
70	Oph	6752	18 06 02.1	+02 29 55	dv67	4.03	+0.54	+0.86	K0 <sup>-</sup> V
10	$\gamma$ Sgr	6746	18 06 32.8	-30 25 23	6	2.99	+0.77	+1.00	K0 <sup>+</sup> III
	$\theta$ Ara	6743	18 07 31.6	-50 05 22		3.66	-0.85	-0.08	B2 Ib
		6791	18 07 49.6	+43 27 50	s6	5.00	+0.71	+0.91	G8 III CN-1 CH-3
72	Oph	6771	18 07 53.7	+09 33 58	d6	3.73	+0.10	+0.12	A5 IV-V
103	$o$ Her	6779	18 07 59.5	+28 45 53	d6	3.83	-0.07	-0.03	A0 II-III
102	Her	6787	18 09 15.0	+20 49 01	d	4.36	-0.81	-0.16	B2 IV
	$\pi$ Pav	6745	18 09 41.2	-63 40 00	6	4.35	+0.18	+0.22	A7p Sr
	$\epsilon$ Tel	6783	18 12 05.0	-45 57 05	d	4.53	+0.78	+1.01	K0 III
36	Dra	6850	18 13 57.8	+64 24 05	d	5.02	-0.06	+0.41	F5 V
13	$\mu$ Sgr	6812	18 14 27.1	-21 03 18	d6	3.86	-0.49	+0.23	B9 Ia
		6819	18 18 05.6	-56 01 07	6	5.33	-0.69	-0.05	B3 IIIpe
	$\eta$ Sgr	6832	18 18 24.3	-36 45 26	d7	3.11	+1.71	+1.56	M3.5 IIIab
1	$\kappa$ Lyr	6872	18 20 15.9	+36 04 13		4.33	+1.19	+1.17	K2 <sup>-</sup> IIIab CN 0.5
43	$\phi$ Dra	6920	18 20 35.5	+71 20 37	vd67	4.22	-0.33	-0.10	A0p Si
44	$\chi$ Dra	6927	18 20 50.9	+72 44 15	d6	3.57	-0.06	+0.49	F7 V
74	Oph	6866	18 21 26.5	+03 22 59	d	4.86	+0.62	+0.91	G8 III
19	$\delta$ Sgr	6859	18 21 43.8	-29 49 20	d	2.70	+1.55	+1.38	K2.5 IIIa CN 0.5
58	$\eta$ Ser	6869	18 21 54.3	-02 53 42	d	3.26	+0.66	+0.94	K0 III-IV
109	Her	6895	18 24 11.3	+21 46 32	sd	3.84	+1.17	+1.18	K2 IIIab
	$\xi$ Pav	6855	18 24 17.1	-61 29 14	d67	4.36	+1.55	+1.48	K4 III
20	$\epsilon$ Sgr	6879	18 24 56.1	-34 22 41	d	1.85	-0.13	-0.03	A0 II <sup>-</sup> n (shell)
	$\alpha$ Tel	6897	18 27 49.5	-45 57 40		3.51	-0.64	-0.17	B3 IV
22	$\lambda$ Sgr	6913	18 28 40.8	-25 24 52		2.81	+0.89	+1.04	K1 IIIb
	$\zeta$ Tel	6905	18 29 43.0	-49 03 47		4.13	+0.82	+1.02	G8/K0 III
	$\gamma$ Sct	6930	18 29 51.2	-14 33 27		4.70	+0.06	+0.06	A2 III <sup>-</sup>
60	Ser	6935	18 30 16.9	-01 58 37	6	5.39	+0.76	+0.96	K0 III
	$\theta$ Cra	6951	18 34 19.4	-42 18 11		4.64	+0.76	+1.01	G8 III
	$\alpha$ Sct	6973	18 35 50.0	-08 14 07		3.85	+1.54	+1.33	K3 III
		6985	18 37 00.8	+09 07 56	6	5.39	-0.02	+0.37	F5 IIIs
3	$\alpha$ Lyr	7001	18 37 19.7	+38 47 42	asd	0.03	-0.01	0.00	A0 Va
	$\delta$ Sct	7020	18 42 54.2	-09 02 27	vd6	4.72	+0.14	+0.35	F2 III (str. met.)
	$\epsilon$ Sct	7032	18 44 08.8	-08 15 47	d	4.90	+0.87	+1.12	G8 IIb
	$\zeta$ Pav	6982	18 44 22.4	-71 24 59	d	4.01	+1.02	+1.14	K0 III
6	$\xi^1$ Lyr	7056	18 45 10.1	+37 37 04	d6	4.36	+0.16	+0.19	A5m
50	Dra	7124	18 45 59.6	+75 26 49	6	5.35	+0.04	+0.05	A1 Vn
110	Her	7061	18 46 09.4	+20 33 29	d	4.19	+0.01	+0.46	F6 V
27	$\phi$ Sgr	7039	18 46 22.5	-26 58 41	6	3.17	-0.36	-0.11	B8 III
		7064	18 46 32.3	+26 40 30		4.83	+1.23	+1.20	K2 III
111	Her	7069	18 47 31.8	+18 11 42	d6	4.36	+0.07	+0.13	A3 Va <sup>+</sup>
	$\beta$ Sct	7063	18 47 47.1	-04 44 05	6	4.22	+0.81	+1.10	G4 IIa
	R Sct	7066	18 48 05.8	-05 41 31	s	5.20	+1.64	+1.47	K0 Ib:p Ca-1
	$\eta^1$ CrA	7062	18 49 40.2	-43 39 59		5.49		+0.13	A2 Vn
10	$\beta$ Lyr	7106	18 50 30.3	+33 22 36	cvd6	3.45	-0.56	0.00	B7 Vpe (shell)
47	$o$ Dra	7125	18 51 22.2	+59 24 10	dv6	4.66	+1.04	+1.19	G9 III Fe-0.5

## BRIGHT STARS, J2011.5

H25

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
$\lambda$ Pav	7074	18 53 16.7	-62 10 23	d	4.22	-0.89	-0.14	B2 II-III
52 $\nu$ Dra	7180	18 54 15.2	+71 18 45	6	4.82	+1.10	+1.15	K0 III CN 0.5
12 $\delta^2$ Lyr	7139	18 54 54.4	+36 54 50	d	4.30	+1.65	+1.68	M4 II
13 R Lyr	7157	18 55 41.1	+43 57 42	s6	4.04	+1.41	+1.59	M5 III (var)
34 $\sigma$ Sgr	7121	18 55 58.7	-26 16 53	d	2.02	-0.75	-0.22	B3 IV
63 $\theta^1$ Ser	7141	18 56 47.5	+04 13 10	d	4.61	+0.11	+0.16	A5 V
$\kappa$ Pav	7107	18 58 07.8	-67 13 03	v	4.44	+0.71	+0.60	F5 I-II
37 $\xi^2$ Sgr	7150	18 58 24.9	-21 05 26		3.51	+1.13	+1.18	K1 III
14 $\gamma$ Lyr	7178	18 59 22.4	+32 42 21	d	3.24	-0.09	-0.05	B9 II
$\lambda$ Tel	7134	18 59 22.8	-52 55 21	6	4.87		-0.05	A0 III+
13 $\epsilon$ Aql	7176	19 00 08.7	+15 05 05	d6	4.02	+1.04	+1.08	K1- III CN 0.5
$\chi$ Oct	6721	19 01 16.5	-87 35 25		5.28	+1.60	+1.28	K3 III
12 Aql	7193	19 02 17.7	-05 43 20		4.02	+1.04	+1.09	K1 III
38 $\zeta$ Sgr	7194	19 03 20.6	-29 51 46	d67	2.60	+0.06	+0.08	A2 IV-V
39 $o$ Sgr	7217	19 05 22.3	-21 43 26	d	3.77	+0.85	+1.01	G9 IIIb
17 $\zeta$ Aql	7235	19 05 56.3	+13 52 53	d6	2.99	-0.01	+0.01	A0 Vann
16 $\lambda$ Aql	7236	19 06 51.5	-04 51 52		3.44	-0.27	-0.09	A0 IVp (wk 4481)
40 $\tau$ Sgr	7234	19 07 39.4	-27 39 10	6	3.32	+1.15	+1.19	K1.5 IIIb
18 $\iota$ Lyr	7262	19 07 42.8	+36 07 07	d	5.28	-0.51	-0.11	B6 IV
$\alpha$ CrA	7254	19 10 15.2	-37 53 08		4.11	+0.08	+0.04	A2 IVn
41 $\pi$ Sgr	7264	19 10 26.8	-21 00 16	d7	2.89	+0.22	+0.35	F2 II-III
$\beta$ CrA	7259	19 10 49.1	-39 19 18		4.11	+1.07	+1.20	K0 II
57 $\delta$ Dra	7310	19 12 33.3	+67 40 54	d	3.07	+0.78	+1.00	G9 III
20 Aql	7279	19 13 18.1	-07 55 10		5.34	-0.44	+0.13	B3 V
20 $\eta$ Lyr	7298	19 14 09.0	+39 09 59	d6	4.39	-0.65	-0.15	B2.5 IV
60 $\tau$ Dra	7352	19 15 19.4	+73 22 35	6	4.45	+1.45	+1.25	K2+ IIIb CN 1
21 $\theta$ Lyr	7314	19 16 46.1	+38 09 17	d	4.36	+1.23	+1.26	K0 II
1 $\kappa$ Cyg	7328	19 17 22.1	+53 23 24	6	3.77	+0.74	+0.96	G9 III
43 Sgr	7304	19 18 18.4	-18 55 54		4.96	+0.80	+1.02	G8 II-III
25 $\omega^1$ Aql	7315	19 18 21.4	+11 37 01		5.28	+0.22	+0.20	F0 IV
44 $\rho^1$ Sgr	7340	19 22 20.3	-17 49 29		3.93	+0.13	+0.22	F0 III-IV
46 $\nu$ Sgr	7342	19 22 23.1	-15 55 57	6	4.61	-0.53	+0.10	Apep
$\beta^1$ Sgr	7337	19 23 27.8	-44 26 11	d	4.01	-0.39	-0.10	B8 V
$\beta^2$ Sgr	7343	19 24 02.8	-44 46 38		4.29	+0.07	+0.34	F0 IV
$\alpha$ Sgr	7348	19 24 40.9	-40 35 36	6	3.97	-0.33	-0.10	B8 V
31 Aql	7373	19 25 31.1	+11 58 11	d	5.16	+0.42	+0.77	G7 IV H $\delta$ 1
30 $\delta$ Aql	7377	19 26 04.7	+03 08 18	d6	3.36	+0.04	+0.32	F2 IV-V
6 $\alpha$ Vul	7405	19 29 11.1	+24 41 20	d	4.44	+1.81	+1.50	M0.5 IIIb
10 $i^2$ Cyg	7420	19 29 59.7	+51 45 17		3.79	+0.11	+0.14	A4 V
6 $\beta$ Cyg	7417	19 31 11.1	+27 59 04	cd	3.08	+0.62	+1.13	K3 II + B9.5 V
36 Aql	7414	19 31 15.9	-02 45 51		5.03	+2.05	+1.75	M1 IIIab
8 Cyg	7426	19 32 12.0	+34 28 41		4.74	-0.65	-0.14	B3 IV
61 $\sigma$ Dra	7462	19 32 20.1	+69 40 51	asd	4.68	+0.38	+0.79	K0 V
38 $\mu$ Aql	7429	19 34 39.1	+07 24 15	d	4.45	+1.26	+1.17	K3- IIIb Fe 0.5
$\iota$ Tel	7424	19 36 04.0	-48 04 24		4.90		+1.09	K0 III
13 $\theta$ Cyg	7469	19 36 45.0	+50 14 53	d	4.48	-0.03	+0.38	F4 V
41 $\iota$ Aql	7447	19 37 19.0	-01 15 37	d	4.36	-0.44	-0.08	B5 III
52 Sgr	7440	19 37 24.3	-24 51 27	d	4.60	-0.15	-0.07	B8/9 V
39 $\kappa$ Aql	7446	19 37 30.5	-07 00 04		4.95	-0.87	0.00	B0.5 IIIIn
5 $\alpha$ Sge	7479	19 40 36.6	+18 02 28	d	4.37	+0.43	+0.78	G1 II



Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
		h m s	° ' "					
	7495	19 41 11.5	+45 33 10	sd	5.06	+0.15	+0.40	F5 II-III
54 Sgr	7476	19 41 22.9	-16 15 58	d	5.30	+1.06	+1.13	K2 III
6 β Sge	7488	19 41 33.9	+17 30 12		4.37	+0.89	+1.05	G8 IIIa CN 0.5
16 Cyg	7503	19 42 07.3	+50 33 08	sd	5.96	+0.19	+0.64	G1.5 Vb
16 Cyg	7504	19 42 10.3	+50 32 40	s	6.20	+0.20	+0.66	G3 V
55 Sgr	7489	19 43 10.5	-16 05 46	6	5.06	+0.09	+0.33	F0 IVn:
10 Vul	7506	19 44 11.6	+25 48 00		5.49	+0.67	+0.93	G8 III
15 Cyg	7517	19 44 41.5	+37 22 58		4.89	+0.69	+0.95	G8 III
18 δ Cyg	7528	19 45 20.0	+45 09 34	d67	2.87	-0.10	-0.03	B9.5 III
50 γ Aql	7525	19 46 48.4	+10 38 31	d	2.72	+1.68	+1.52	K3 II
56 Sgr	7515	19 47 01.9	-19 43 58		4.86	+0.96	+0.93	K0 <sup>+</sup> III
7 δ Sge	7536	19 47 54.0	+18 33 48	cd6	3.82	+0.96	+1.41	M2 II + A0 V
63 ε Dra	7582	19 48 07.7	+70 17 50	d67	3.83	+0.52	+0.89	G7 IIIb Fe-1
ν Tel	7510	19 48 57.2	-56 20 02		5.35	+0.20	+0.20	A9 Vn
χ Cyg	7564	19 51 00.5	+32 56 37	vd	4.23	+0.96	+1.82	S6+/1e
53 α Aql	7557	19 51 20.7	+08 53 58	dv	0.77	+0.08	+0.22	A7 Vnn
51 Aql	7553	19 51 24.7	-10 44 01	d	5.39		+0.38	F0 V
	7589	19 52 19.9	+47 03 27	s	5.62	-0.97	-0.07	O9.5 Iab
v3961Sgr	7552	19 52 37.3	-39 50 39	sv6	5.33	-0.22	-0.06	A0p Si Cr Eu
9 Sge	7574	19 52 52.5	+18 42 07	s6	6.23	-0.92	+0.01	O8 If
55 η Aql	7570	19 53 03.5	+01 02 09	v6	3.90	+0.51	+0.89	F6-G1 Ib
v1291Aql	7575	19 53 54.8	-03 05 02	s	5.65	+0.10	+0.20	A5p Sr Cr Eu
60 β Aql	7602	19 55 52.7	+06 26 10	ad	3.71	+0.48	+0.86	G8 IV
ι Sgr	7581	19 56 03.1	-41 50 14		4.13	+0.90	+1.08	G8 III
21 η Cyg	7615	19 56 44.3	+35 06 52	d	3.89	+0.89	+1.02	K0 III
61 Sgr	7614	19 58 36.1	-15 27 37		5.02	+0.07	+0.05	A3 Va
12 γ Sge	7635	19 59 16.1	+19 31 26	s	3.47	+1.93	+1.57	M0 <sup>-</sup> III
θ <sup>1</sup> Sgr	7623	20 00 29.0	-35 14 40	d6	4.37	-0.67	-0.15	B2.5 IV
15 NT Vul	7653	20 01 34.5	+27 47 09	6	4.64	+0.16	+0.18	A7m
ε Pav	7590	20 01 54.2	-72 52 43		3.96	-0.05	-0.03	A0 Va
62 v3872Sgr	7650	20 03 21.8	-27 40 37		4.58	+1.80	+1.65	M4.5 III
ξ Tel	7673	20 08 15.7	-52 50 49	6	4.94	+1.84	+1.62	M1 IIab
1 κ Cep	7750	20 08 29.0	+77 44 44	d7	4.39	-0.11	-0.05	B9 III
δ Pav	7665	20 09 50.7	-66 09 05		3.56	+0.45	+0.76	G6/8 IV
28 v1624Cyg	7708	20 09 51.3	+36 52 26	6	4.93	-0.77	-0.13	B2.5 V
65 θ Aql	7710	20 11 53.9	-00 47 12	d6	3.23	-0.14	-0.07	B9.5 III <sup>+</sup>
33 Cyg	7740	20 13 39.9	+56 36 12	6	4.30	+0.08	+0.11	A3 IVn
31 σ <sup>1</sup> Cyg	7735	20 13 59.6	+46 46 36	cvd6	3.79	+0.42	+1.28	K2 II + B4 V
67 ρ Aql	7724	20 14 48.5	+15 14 00	6	4.95	+0.01	+0.08	A1 Va
32 σ <sup>2</sup> Cyg	7751	20 15 49.7	+47 45 00	cvd6	3.98	+1.03	+1.52	K3 II + B9: V
24 Vul	7753	20 17 16.6	+24 42 26		5.32	+0.67	+0.95	G8 III
34 P Cyg	7763	20 18 12.7	+38 04 09	s	4.81	-0.58	+0.42	B1pe
5 α <sup>1</sup> Cap	7747	20 18 17.1	-12 28 19	d6	4.24	+0.78	+1.07	G3 Ib
6 α <sup>2</sup> Cap	7754	20 18 41.5	-12 30 31	d6	3.57	+0.69	+0.94	G9 III
9 β Cap	7776	20 21 39.4	-14 44 39	cd67	3.08	+0.28	+0.79	K0 II: + A5n: V:
37 γ Cyg	7796	20 22 38.5	+40 17 38	asd	2.20	+0.53	+0.68	F8 Ib
	7794	20 23 44.9	+05 22 49		5.31	+0.77	+0.97	G8 III-IV
39 Cyg	7806	20 24 19.2	+32 13 40	s	4.43	+1.50	+1.33	K2.5 III Fe-0.5
α Pav	7790	20 26 33.0	-56 41 50	d6	1.94	-0.71	-0.20	B2.5 V
2 θ Cep	7850	20 29 46.4	+63 01 59	6	4.22	+0.16	+0.20	A7m

## BRIGHT STARS, J2011.5

H27

Designation		BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
			h m s	° ' "					
41	Cyg	7834	20 29 51.9	+30 24 27		4.01	+0.27	+0.40	F5 II
69	Aql	7831	20 30 15.0	-02 50 48		4.91	+1.22	+1.15	K2 III
73	AF Dra	7879	20 31 20.6	+74 59 38	6	5.20	+0.11	+0.07	A0p Sr Cr Eu
2	ε Del	7852	20 33 45.7	+11 20 34		4.03	-0.47	-0.13	B6 III
6	β Del	7882	20 38 05.3	+14 38 08	d6	3.63	+0.08	+0.44	F5 IV
	α Ind	7869	20 38 22.3	-47 15 02	d	3.11	+0.79	+1.00	K0 III CN-1
71	Aql	7884	20 38 55.9	-01 03 52	d6	4.32	+0.69	+0.95	G7.5 IIIa
29	Vul	7891	20 39 02.2	+21 14 31		4.82	-0.08	-0.02	A0 Va (shell)
7	κ Del	7896	20 39 41.3	+10 07 38	d	5.05	+0.21	+0.72	G2 IV
9	α Del	7906	20 40 10.3	+15 57 12	d6	3.77	-0.21	-0.06	B9 IV
15	ν Cap	7900	20 40 42.1	-18 05 51		5.10	+1.99	+1.66	M1 III
49	Cyg	7921	20 41 30.5	+32 20 55	sd6	5.51		+0.88	G8 IIb
50	α Cyg	7924	20 41 49.5	+45 19 19	asd6	1.25	-0.24	+0.09	A2 Ia
11	δ Del	7928	20 43 59.7	+15 06 59	v6	4.43	+0.10	+0.32	F0m
	η Ind	7920	20 44 52.7	-51 52 45		4.51	+0.09	+0.27	A9 IV
3	η Cep	7957	20 45 31.3	+61 53 01	d	3.43	+0.62	+0.92	K0 IV
		7955	20 45 38.2	+57 37 17	d6	4.51	+0.10	+0.54	F8 IV-V
	β Pav	7913	20 45 58.9	-66 09 39		3.42	+0.12	+0.16	A6 IV-
52	Cyg	7942	20 46 08.3	+30 45 44	d	4.22	+0.89	+1.05	K0 IIIa
53	ε Cyg	7949	20 46 40.6	+34 00 50	ad6	2.46	+0.87	+1.03	K0 III
16	ψ Cap	7936	20 46 46.5	-25 13 44		4.14	+0.02	+0.43	F4 V
12	γ <sup>2</sup> Del	7948	20 47 11.5	+16 09 59	d	4.27	+0.97	+1.04	K1 IV
54	λ Cyg	7963	20 47 51.4	+36 32 00	d67	4.53	-0.49	-0.11	B6 IV
2	ε Aqr	7950	20 48 17.8	-09 27 11		3.77	+0.02	0.00	A1 III-
3	EN Aqr	7951	20 48 20.6	-04 59 06		4.42	+1.92	+1.65	M3 III
	ι Mic	7943	20 49 15.7	-43 56 45	d7	5.11	+0.06	+0.35	F1 IV
55	v1661Cyg	7977	20 49 19.8	+46 09 26	sd	4.84	-0.45	+0.41	B2.5 Ia
18	ω Cap	7980	20 52 30.3	-26 52 32		4.11	+1.93	+1.64	M0 III Ba 0.5
6	μ Aqr	7990	20 53 16.4	-08 56 22	d6	4.73	+0.11	+0.32	F2m
32	Vul	8008	20 55 03.1	+28 06 07		5.01	+1.79	+1.48	K4 III
	β Ind	7986	20 55 42.0	-58 24 36	d	3.65	+1.23	+1.25	K1 II
		8023	20 56 59.1	+44 58 10	s6	5.96	-0.85	+0.05	O6 V
58	ν Cyg	8028	20 57 36.2	+41 12 43	d6	3.94	0.00	+0.02	A0.5 III <sub>n</sub>
33	Vul	8032	20 58 47.2	+22 22 15		5.31		+1.40	K3.5 III
59	v832 Cyg	8047	21 00 13.1	+47 33 58	d6	4.70	-0.93	-0.04	B1.5 V <sub>nne</sub>
20	AO Cap	8033	21 00 15.3	-18 59 24	sv	6.25		-0.13	B9psi
	γ Mic	8039	21 01 59.6	-32 12 44	d	4.67	+0.54	+0.89	G8 III
	ξ Mic	8048	21 03 41.8	-38 35 09		5.30		+0.41	F3 V
62	ξ Cyg	8079	21 05 21.0	+43 58 27	s6	3.72	+1.83	+1.65	K4.5 Ib-II
	α Oct	8021	21 06 04.4	-76 58 43	cv6	5.15	+0.13	+0.49	G2 III + A7 III
23	θ Cap	8075	21 06 35.5	-17 11 12	6	4.07	+0.01	-0.01	A1 Va <sup>+</sup>
61	v1803Cyg	8085	21 07 24.9	+38 48 23	asd	5.21	+1.11	+1.18	K5 V
61	Cyg	8086	21 07 26.2	+38 47 56	sd	6.03	+1.23	+1.37	K7 V
24	Cap	8080	21 07 47.9	-24 57 33	d	4.50	+1.93	+1.61	M1- III
13	ν Aqr	8093	21 10 13.2	-11 19 28		4.51	+0.70	+0.94	G8 <sup>+</sup> III
	5 γ Equ	8097	21 10 54.0	+10 10 42	d	4.69	+0.10	+0.26	F0p Sr Eu
64	ξ Cyg	8115	21 13 25.6	+30 16 28	sd6	3.20	+0.76	+0.99	G8 <sup>+</sup> III-IIIa Ba 0.5
		8110	21 13 58.1	-27 34 19		5.42	+1.69	+1.42	K5 III
	ο Pav	8092	21 14 24.1	-70 04 42	6	5.02	+1.56	+1.58	M1/2 III
7	δ Equ	8123	21 15 02.4	+10 03 15	d67	4.49	-0.01	+0.50	F8 V

Designation		BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type
			h m s	° ' "					
65	$\tau$ Cyg	8130	21 15 15.1	+38 05 41	d67	3.72	+0.02	+0.39	F2 V
8	$\alpha$ Equ	8131	21 16 23.9	+05 17 45	cd6	3.92	+0.29	+0.53	G2 II-III + A4 V
67	$\sigma$ Cyg	8143	21 17 52.1	+39 26 36	6	4.23	-0.39	+0.12	B9 Iab
66	$\nu$ Cyg	8146	21 18 23.5	+34 56 44	d6	4.43	-0.82	-0.11	B2 Ve
	$\sigma$ Oct	7228	21 18 30.6	-88 54 31	v	5.47	+0.13	+0.27	F0 III
	$\epsilon$ Mic	8135	21 18 38.0	-32 07 26		4.71	+0.02	+0.06	A1m A2 Va+
5	$\alpha$ Cep	8162	21 18 51.2	+62 38 04	d	2.44	+0.11	+0.22	A7 V+n
	$\theta$ Ind	8140	21 20 40.8	-53 24 02	d7	4.39	+0.12	+0.19	A5 IV-V
	$\theta^1$ Mic	8151	21 21 29.6	-40 45 37	dv	4.82	-0.07	+0.02	Ap Cr Eu
1	Peg	8173	21 22 37.1	+19 51 15	d6	4.08	+1.06	+1.11	K1 III
32	$\iota$ Cap	8167	21 22 53.1	-16 47 06		4.28	+0.58	+0.90	G7 III Fe-1.5
18	Aqr	8187	21 24 49.1	-12 49 42	d	5.49		+0.29	F0 V+
69	Cyg	8209	21 26 15.3	+36 43 03	sd	5.94	-0.94	-0.08	B0 Ib
34	$\zeta$ Cap	8204	21 27 19.3	-22 21 40	d6	3.74	+0.59	+1.00	G4 Ib: Ba 2
	$\gamma$ Pav	8181	21 27 22.8	-65 18 48		4.22	-0.12	+0.49	F6 Vp
8	$\beta$ Cep	8238	21 28 48.3	+70 36 41	vd6	3.23	-0.95	-0.22	B1 III
36	Cap	8213	21 29 22.6	-21 45 24		4.51	+0.60	+0.91	G7 IIIb Fe-1
71	Cyg	8228	21 29 52.5	+46 35 30		5.24	+0.80	+0.97	K0 <sup>-</sup> III
2	Peg	8225	21 30 28.2	+23 41 23	d	4.57	+1.93	+1.62	M1 <sup>+</sup> III
22	$\beta$ Aqr	8232	21 32 09.8	-05 31 12	asd	2.91	+0.56	+0.83	G0 Ib
73	$\rho$ Cyg	8252	21 34 24.9	+45 38 35		4.02	+0.56	+0.89	G8 III Fe-0.5
74	Cyg	8266	21 37 24.7	+40 27 56		5.01	+0.10	+0.18	A5 V
9	v337 Cep	8279	21 38 13.7	+62 08 03	as	4.73	-0.53	+0.30	B2 Ib
5	Peg	8267	21 38 17.7	+19 22 15		5.45	+0.14	+0.30	F0 V+
23	$\xi$ Aqr	8264	21 38 21.8	-07 48 08	d6	4.69	+0.13	+0.17	A5 Vn
75	Cyg	8284	21 40 38.3	+43 19 35	sd	5.11	+1.90	+1.60	M1 IIIab
40	$\gamma$ Cap	8278	21 40 43.6	-16 36 36	6	3.68	+0.20	+0.32	A7m:
11	Cep	8317	21 42 05.2	+71 21 52		4.56	+1.10	+1.10	K0.5 III
	$\nu$ Oct	8254	21 42 43.0	-77 20 17	6	3.76	+0.89	+1.00	K0 III
	$\mu$ Cep	8316	21 43 51.6	+58 49 59	asd	4.08	+2.42	+2.35	M2 <sup>-</sup> Ia
8	$\epsilon$ Peg	8308	21 44 45.0	+09 55 41	sd	2.39	+1.70	+1.53	K2 Ib-II
9	Peg	8313	21 45 03.4	+17 24 11	as	4.34	+1.00	+1.17	G5 Ib
10	$\kappa$ Peg	8315	21 45 10.0	+25 41 54	d67	4.13	+0.03	+0.43	F5 IV
9	$\iota$ PsA	8305	21 45 37.7	-32 58 22	d6	4.34	-0.11	-0.05	A0 IV
10	$\nu$ Cep	8334	21 45 46.9	+61 10 27		4.29	+0.13	+0.52	A2 Ia
81	$\pi^2$ Cyg	8335	21 47 13.2	+49 21 47	d6	4.23	-0.71	-0.12	B2.5 III
49	$\delta$ Cap	8322	21 47 40.4	-16 04 29	vd6	2.87	+0.09	+0.29	F2m
14	Peg	8343	21 50 21.3	+30 13 41	6	5.04	+0.03	-0.03	A1 Vs
	$o$ Ind	8333	21 51 44.5	-69 34 31		5.53	+1.63	+1.37	K2/3 III
16	Peg	8356	21 53 35.2	+25 58 47	6	5.08	-0.67	-0.17	B3 V
51	$\mu$ Cap	8351	21 53 55.3	-13 29 50		5.08	-0.01	+0.37	F2 V
	$\gamma$ Gru	8353	21 54 37.3	-37 18 37		3.01	-0.37	-0.12	B8 IV-Vs
13	Cep	8371	21 55 16.4	+56 39 57	s	5.80	-0.02	+0.73	B8 Ib
	$\delta$ Ind	8368	21 58 41.6	-54 56 15	d7	4.40	+0.10	+0.28	F0 III-IVn
17	$\xi$ Cep	8417	22 04 07.5	+64 41 03	d6	4.29	+0.09	+0.34	A7m:
	$\epsilon$ Ind	8387	22 04 13.9	-56 44 17		4.69	+0.99	+1.06	K4/5 V
20	Cep	8426	22 05 21.5	+62 50 31		5.27	+1.78	+1.41	K4 III
19	Cep	8428	22 05 30.1	+62 20 10	sd	5.11	-0.84	+0.08	O9.5 Ib
34	$\alpha$ Aqr	8414	22 06 22.4	-00 15 49	sd	2.96	+0.74	+0.98	G2 Ib
	$\lambda$ Gru	8411	22 06 48.2	-39 29 15		4.46	+1.66	+1.37	K3 III

## BRIGHT STARS, J2011.5

H29

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type	
		h m s	° ' "						
33 $\iota$	Aqr	8418	22 07 03.4	-13 48 49	6	4.27	-0.29	-0.07	B9 IV-V
24 $\iota$	Peg	8430	22 07 32.8	+25 24 06	d6	3.76	-0.04	+0.44	F5 V
$\alpha$	Gru	8425	22 08 57.2	-46 54 17	d	1.74	-0.47	-0.13	B7 Vn
14 $\mu$	PsA	8431	22 09 03.1	-32 55 55		4.50	+0.05	+0.05	A1 IVnn
24	Cep	8468	22 10 01.5	+72 23 53		4.79	+0.61	+0.92	G7 II-III
29 $\pi$	Peg	8454	22 10 30.0	+33 14 06		4.29	+0.18	+0.46	F3 III
26 $\theta$	Peg	8450	22 10 46.8	+06 15 17	6	3.53	+0.10	+0.08	A2m A1 IV-V
21 $\zeta$	Cep	8465	22 11 15.3	+58 15 30	6	3.35	+1.71	+1.57	K1.5 Ib
22 $\lambda$	Cep	8469	22 11 54.1	+59 28 17	s	5.04	-0.74	+0.25	O6 If
		8546	22 12 03.8	+86 09 55	6	5.27	-0.11	-0.03	B9.5 Vn
		8485	22 14 22.4	+39 46 20	d6	4.49	+1.45	+1.39	K2.5 III
16 $\lambda$	PsA	8478	22 14 57.7	-27 42 34		5.43	-0.55	-0.16	B8 III
23 $\epsilon$	Cep	8494	22 15 27.8	+57 06 04	d6	4.19	+0.04	+0.28	A9 IV
1	Lac	8498	22 16 28.3	+37 48 23		4.13	+1.63	+1.46	K3- II-III
43 $\theta$	Aqr	8499	22 17 26.4	-07 43 32		4.16	+0.81	+0.98	G9 III
$\alpha$	Tuc	8502	22 19 16.8	-60 12 07	6	2.86	+1.54	+1.39	K3 III
$\epsilon$	Oct	8481	22 21 15.5	-80 22 54		5.10	+1.09	+1.47	M6 III
31 IN	Peg	8520	22 22 05.1	+12 15 48		5.01	-0.81	-0.13	B2 IV-V
47	Aqr	8516	22 22 13.4	-21 32 25		5.13	+0.92	+1.07	K0 III
48 $\gamma$	Aqr	8518	22 22 15.0	-01 19 45	d6	3.84	-0.12	-0.05	B9.5 III-IV
3 $\beta$	Lac	8538	22 24 00.9	+52 17 13	d	4.43	+0.77	+1.02	G9 IIIb Ca 1
52 $\pi$	Aqr	8539	22 25 51.8	+01 26 10		4.66	-0.98	-0.03	B1 Ve
$\delta$	Tuc	8540	22 28 08.3	-64 54 27	d7	4.48	-0.07	-0.03	B9.5 IVn
$\nu$	Gru	8552	22 29 19.4	-39 04 24	d	5.47		+0.95	G8 III
55 $\zeta^2$	Aqr	8559	22 29 25.4	+00 02 21	cd	4.49	0.00	+0.37	F2.5 IV-V
27 $\delta$	Cep	8571	22 29 36.0	+58 28 27	vd6	3.75		+0.60	F5-G2 Ib
$\delta^1$	Gru	8556	22 29 57.2	-43 26 11	d	3.97	+0.80	+1.03	G6/8 III
29 $\rho^2$	Cep	8591	22 29 58.5	+78 53 00	6	5.50	+0.08	+0.07	A3 V
5	Lac	8572	22 30 00.7	+47 45 58	cd6	4.36	+1.11	+1.68	M0 II + B8 V
$\delta^2$	Gru	8560	22 30 26.4	-43 41 24	d	4.11	+1.71	+1.57	M4.5 IIIa
6	Lac	8579	22 30 59.2	+43 10 57	6	4.51	-0.74	-0.09	B2 IV
57 $\sigma$	Aqr	8573	22 31 15.3	-10 37 08	d6	4.82	-0.11	-0.06	A0 IV
7 $\alpha$	Lac	8585	22 31 46.1	+50 20 31	d	3.77	0.00	+0.01	A1 Va
17 $\beta$	PsA	8576	22 32 09.4	-32 17 12	d7	4.29	+0.02	+0.01	A1 Va
59 $\nu$	Aqr	8592	22 35 19.3	-20 38 56		5.20	0.00	+0.44	F5 V
62 $\eta$	Aqr	8597	22 35 56.8	-00 03 29		4.02	-0.26	-0.09	B9 IV-V:n
31	Cep	8615	22 36 03.2	+73 42 11		5.08	+0.16	+0.39	F3 III-IV
63 $\kappa$	Aqr	8610	22 38 21.1	-04 10 06	d	5.03	+1.16	+1.14	K1.5 IIIb CN 0.5
30	Cep	8627	22 39 03.7	+63 38 40	6	5.19	0.00	+0.06	A3 IV
10	Lac	8622	22 39 46.7	+39 06 37	ad	4.88	-1.04	-0.20	O9 V
		8626	22 40 05.6	+37 39 11	sd	6.03		+0.86	G3 Ib-II: CN-1 CH 2 Fe-1
11	Lac	8632	22 41 01.2	+44 20 12		4.46	+1.36	+1.33	K2.5 III
18 $\epsilon$	PsA	8628	22 41 17.4	-26 59 00		4.17	-0.37	-0.11	B8 Ve
42 $\zeta$	Peg	8634	22 42 02.2	+10 53 30	d	3.40	-0.25	-0.09	B8.5 III
$\beta$	Gru	8636	22 43 21.0	-46 49 27		2.10	+1.67	+1.60	M4.5 III
44 $\eta$	Peg	8650	22 43 32.6	+30 16 54	cd6	2.94	+0.55	+0.86	G8 II + F0 V
13	Lac	8656	22 44 36.4	+41 52 47	d	5.08	+0.78	+0.96	K0 III
47 $\lambda$	Peg	8667	22 47 05.2	+23 37 35		3.95	+0.91	+1.07	G8 IIIa CN 0.5
$\beta$	Oct	8630	22 47 10.4	-81 19 15	6	4.15	+0.11	+0.20	A7 III-IV
46 $\xi$	Peg	8665	22 47 16.1	+12 13 56	d	4.19	-0.03	+0.50	F6 V

Designation		BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type	
			h m s	° ' "						
68	Aqr	8670	22 48 10.1	-19 33 11		5.26	+0.59	+0.94	G8 III	
	ε	Gru	8675	22 49 14.6	-51 15 22	3.49	+0.10	+0.08	A2 Va	
32	ι	Cep	8694	22 50 05.5	+66 15 40	s	3.52	+0.90	K0 <sup>-</sup> III	
71	τ	Aqr	8679	22 50 12.0	-13 31 54	d	4.01	+1.95	M0 III	
48	μ	Peg	8684	22 50 33.6	+24 39 45	s	3.48	+0.68	G8 <sup>+</sup> III	
			8685	22 51 41.2	-39 05 44		5.42	+1.69	+1.43	K3 III
22	γ	PsA	8695	22 53 09.7	-32 48 51	d7	4.46	-0.14	-0.04	A0m A1 III-IV
73	λ	Aqr	8698	22 53 12.8	-07 31 06		3.74	+1.74	+1.64	M2.5 III Fe-0.5
			8748	22 54 17.0	+84 24 28		4.71	+1.69	+1.43	K4 III
76	δ	Aqr	8709	22 55 15.6	-15 45 34		3.27	+0.08	+0.05	A3 IV-V
23	δ	PsA	8720	22 56 35.0	-32 28 41	d	4.21	+0.69	+0.97	G8 III
			8726	22 56 56.4	+49 47 42	s	4.95	+1.96	+1.78	K5 Ib
24	α	PsA	8728	22 58 17.0	-29 33 40	a	1.16	+0.08	+0.09	A3 Va
			8732	22 59 13.2	-35 27 43	s	6.13		+0.58	F8 III-IV
	v509	Cas	8752	23 00 34.4	+57 00 26	s	5.00	+1.16	+1.42	G4v 0
	ζ	Gru	8747	23 01 33.2	-52 41 32	6	4.12	+0.70	+0.98	G8/K0 III
1	ο	And	8762	23 02 27.2	+42 23 17	d6	3.62	-0.53	-0.09	B6pe (shell)
	π	PsA	8767	23 04 07.8	-34 41 13	6	5.11	+0.02	+0.29	F0 V:
53	β	Peg	8775	23 04 20.0	+28 08 43	d	2.42	+1.96	+1.67	M2.5 II-III
4	β	Psc	8773	23 04 27.7	+03 52 56		4.53	-0.49	-0.12	B6 Ve
54	α	Peg	8781	23 05 20.1	+15 16 02	6	2.49	-0.05	-0.04	A0 III-IV
86		Aqr	8789	23 07 17.8	-23 40 51	d	4.47	+0.58	+0.90	G6 IIIb
	θ	Gru	8787	23 07 31.4	-43 27 29	d7	4.28	+0.16	+0.42	F5 (II-III)m
55		Peg	8795	23 07 35.0	+09 28 18		4.52	+1.90	+1.57	M1 IIIab
33	π	Cep	8819	23 08 16.0	+75 26 59	d67	4.41	+0.46	+0.80	G2 III
88		Aqr	8812	23 10 03.5	-21 06 35		3.66	+1.24	+1.22	K1.5 III
	ι	Gru	8820	23 11 00.3	-45 11 03	6	3.90	+0.86	+1.02	K1 III
59		Peg	8826	23 12 19.1	+08 46 58		5.16	+0.08	+0.13	A3 Van
90	φ	Aqr	8834	23 14 55.1	-05 59 13		4.22	+1.90	+1.56	M1.5 III
91	ψ <sup>1</sup>	Aqr	8841	23 16 29.6	-09 01 30	d	4.21	+0.99	+1.11	K1 <sup>-</sup> III Fe-0.5
6	γ	Psc	8852	23 17 45.7	+03 20 43	s	3.69	+0.58	+0.92	G9 III: Fe-2
	γ	Tuc	8848	23 18 05.6	-58 10 21		3.99	-0.02	+0.40	F2 V
93	ψ <sup>2</sup>	Aqr	8858	23 18 30.0	-09 07 11		4.39	-0.56	-0.15	B5 Vn
	γ	Scl	8863	23 19 26.6	-32 28 09		4.41	+1.06	+1.13	K1 III
95	ψ <sup>3</sup>	Aqr	8865	23 19 33.5	-09 32 52	d	4.98	-0.02	-0.02	A0 Va
62	τ	Peg	8880	23 21 12.5	+23 48 12	v	4.60	+0.10	+0.17	A5 V
98		Aqr	8892	23 23 34.4	-20 02 16		3.97	+0.95	+1.10	K1 III
4		Cas	8904	23 25 21.2	+62 20 46	d	4.98	+2.07	+1.68	M2 <sup>-</sup> IIIab
68	υ	Peg	8905	23 25 57.3	+23 28 03	s	4.40	+0.14	+0.61	F8 III
99		Aqr	8906	23 26 39.0	-20 34 44		4.39	+1.81	+1.47	K4.5 III
8	κ	Psc	8911	23 27 31.3	+01 19 07	d	4.94	-0.02	+0.03	A0p Cr Sr
10	θ	Psc	8916	23 28 33.1	+06 26 32		4.28	+1.01	+1.07	K0.5 III
	τ	Oct	8862	23 29 26.3	-87 25 08		5.49	+1.43	+1.27	K2 III
70		Peg	8923	23 29 44.2	+12 49 27		4.55	+0.73	+0.94	G8 IIIa
			8924	23 30 07.7	-04 28 12	s	6.25	+1.16	+1.09	K3 <sup>-</sup> IIIb Fe 2
	β	Scl	8937	23 33 35.1	-37 45 16		4.37	-0.36	-0.09	B9.5p Hg Mn
			8952	23 35 29.4	+71 42 20	s	5.84	+1.73	+1.80	G9 Ib
	ι	Phe	8949	23 35 41.5	-42 33 05	d	4.71	+0.07	+0.08	Ap Sr
16	λ	And	8961	23 38 07.8	+46 31 14	vd6	3.82	+0.69	+1.01	G8 III-IV
			8959	23 38 27.9	-45 25 43	6	4.74	+0.09	+0.08	A1/2 V

## BRIGHT STARS, J2011.5

H31

Designation	BS=HR No.	Right Ascension	Declination	Notes	<i>V</i>	<i>U-B</i>	<i>B-V</i>	Spectral Type	
		h m s	° ' "						
17 $\iota$	And	8965	23 38 42.2	+43 19 54	6	4.29	-0.29	-0.10	B8 V
35 $\gamma$	Cep	8974	23 39 49.8	+77 41 47	as	3.21	+0.94	+1.03	K1 III-IV CN 1
17 $\iota$	Psc	8969	23 40 32.6	+05 41 19	d	4.13	0.00	+0.51	F7 V
19 $\kappa$	And	8976	23 40 58.7	+44 23 52	d	4.15	-0.21	-0.08	B8 IVn
$\mu$	Scl	8975	23 41 14.2	-32 00 34		5.31	+0.66	+0.97	K0 III
18 $\lambda$	Psc	8984	23 42 38.0	+01 50 36	6	4.50	+0.08	+0.20	A6 IV-
105 $\omega^2$	Aqr	8988	23 43 19.1	-14 28 53	d6	4.49	-0.12	-0.04	B9.5 IV
106	Aqr	8998	23 44 47.8	-18 12 47		5.24	-0.27	-0.08	B9 Vn
20 $\psi$	And	9003	23 46 36.5	+46 29 03	d	4.99	+0.81	+1.11	G3 Ib-II
		9013	23 48 28.2	+67 52 15	6	5.04	-0.04	-0.01	A1 Vn
20	Psc	9012	23 48 32.0	-02 41 52	d	5.49	+0.70	+0.94	gG8
$\delta$	Scl	9016	23 49 31.4	-28 04 00	d	4.57	-0.03	+0.01	A0 Va+n
81 $\phi$	Peg	9036	23 53 04.5	+19 11 03		5.08	+1.86	+1.60	M3- IIIb
82 HT	Peg	9039	23 53 12.4	+11 00 41		5.31	+0.10	+0.18	A4 Vn
7 $\rho$	Cas	9045	23 54 57.8	+57 33 48		4.54	+1.12	+1.22	G2 0 (var)
84 $\psi$	Peg	9064	23 58 20.8	+25 12 19	d	4.66	+1.68	+1.59	M3 III
27	Psc	9067	23 59 15.7	-03 29 32	d6	4.86	+0.70	+0.93	G9 III
$\pi$	Phe	9069	23 59 31.3	-52 40 54		5.13	+1.03	+1.13	K0 III
28 $\omega$	Psc	9072	23 59 54.2	+06 55 37	6	4.01	+0.06	+0.42	F3 V

## Notes to Table

- a anchor point for the MK system
- c composite or combined spectrum
- d double star given in Washington Double Star Catalog
- o orbital position generated using FK5 center-of-mass position and proper motion
- s MK standard star
- v star given in Hipparcos Periodic Variables list
- 6 spectroscopic binary
- 7 magnitude and color refer to combined light of two or more stars

 A searchable version of this table appears on *The Astronomical Almanac Online*.



This symbol indicates that these data or auxiliary material may also be found on *The Astronomical Almanac Online* at <http://asa.usno.navy.mil> and <http://asa.hmnao.com>