

Name	Mag	Sidereal Hour Angle												Declination													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Alrai	3.2	5	05.6	06.3	06.6	06.5	06.0	05.2	04.4	03.7	03.3	03.3	03.6	04.1	77	41.0	40.9	40.8	40.6	40.5	40.5	40.5	40.7	40.8	41.0	41.2	41.3
Lambda Andromeda	3.9	5	30.8	30.9	31.0	30.9	30.7	30.4	30.1	29.8	29.6	29.6	29.7	29.8	46	30.4	30.3	30.2	30.1	30.0	30.0	30.1	30.2	30.4	30.6	30.7	30.7
98 Aquarius	4.0	9	09.1	09.2	09.2	09.1	08.9	08.7	08.4	08.2	08.1	08.0	08.1	08.2	-20	03.5	03.5	03.5	03.4	03.3	03.2	03.1	03.0	03.0	03.0	03.1	03.1
Gamma Tucana	4.0	10	31.5	31.7	31.7	31.6	31.4	31.0	30.6	30.3	30.1	30.0	30.2	30.4	-58	11.8	11.7	11.5	11.4	11.2	11.1	11.0	11.0	11.1	11.2	11.3	11.4
Gamma Pices	3.7	10	36.3	36.3	36.3	36.3	36.1	35.9	35.6	35.4	35.3	35.3	35.3	35.4	3	19.6	19.6	19.5	19.5	19.6	19.7	19.8	19.9	20.0	20.0	20.0	20.0
Iota Grus	3.9	12	17.8	17.9	17.9	17.8	17.6	17.3	17.0	16.7	16.5	16.5	16.6	16.8	-45	12.4	12.3	12.2	12.1	11.9	11.8	11.7	11.7	11.8	11.9	12.0	12.1
88 Aquarius	3.7	12	31.9	31.9	31.9	31.8	31.7	31.4	31.2	30.9	30.8	30.8	30.8	30.9	-21	07.8	07.8	07.8	07.7	07.6	07.5	07.4	07.3	07.3	07.4	07.4	07.5
Markab	2.5	13	42.6	42.7	42.7	42.6	42.4	42.2	42.0	41.7	41.6	41.6	41.7	41.7	15	15.0	14.9	14.9	14.9	14.9	14.9	15.1	15.2	15.3	15.4	15.4	15.4
Scheat	2.5	13	57.6	57.7	57.7	57.6	57.5	57.2	56.9	56.7	56.6	56.6	56.6	56.7	28	07.7	07.7	07.6	07.5	07.5	07.5	07.7	07.8	07.9	08.0	08.1	08.1
Omicron Andromeda	3.6	14	25.8	25.9	25.9	25.8	25.6	25.4	25.1	24.8	24.7	24.7	24.8	24.9	42	22.4	22.3	22.2	22.1	22.0	22.1	22.2	22.3	22.5	22.6	22.7	22.8
Fomalhaut	1.2	15	28.6	28.6	28.6	28.5	28.3	28.1	27.8	27.6	27.5	27.4	27.5	27.6	-29	34.9	34.9	34.8	34.7	34.6	34.5	34.4	34.4	34.4	34.5	34.5	34.6
Skat	3.3	16	13.9	13.9	13.9	13.8	13.6	13.4	13.1	12.9	12.8	12.8	12.9	12.9	-15	46.8	46.8	46.7	46.7	46.6	46.5	46.4	46.3	46.3	46.3	46.4	46.4
Lambda Aquarius	3.8	16	44.5	44.6	44.5	44.4	44.3	44.1	43.8	43.6	43.5	43.5	43.5	43.6	-7	32.3	32.3	32.3	32.2	32.2	32.1	32.0	31.9	31.8	31.8	31.8	31.9
Sadalbari	3.5	17	24.2	24.3	24.3	24.2	24.0	23.8	23.5	23.3	23.2	23.2	23.3	23.4	24	38.8	38.7	38.6	38.6	38.6	38.6	38.7	38.9	39.0	39.1	39.2	39.2
Iota Cepheus	3.5	17	31.1	31.3	31.4	31.2	30.9	30.4	30.0	29.6	29.5	29.5	29.8	30.1	66	14.8	14.7	14.6	14.5	14.4	14.4	14.5	14.6	14.8	15.0	15.2	15.2
Epsilon Grus	3.5	17	44.4	44.5	44.5	44.4	44.1	43.8	43.5	43.2	43.0	43.0	43.2	43.3	-51	16.7	16.6	16.5	16.3	16.2	16.1	16.0	16.0	16.1	16.2	16.3	16.4
Lambda Pegasus	4.0	18	16.3	16.4	16.4	16.3	16.1	15.9	15.6	15.4	15.3	15.3	15.4	15.4	23	36.6	36.5	36.4	36.4	36.4	36.5	36.6	36.7	36.8	36.9	37.0	37.0
Matar	2.9	19	09.5	09.5	09.5	09.4	09.2	09.0	08.7	08.5	08.4	08.4	08.5	08.6	30	15.9	15.9	15.8	15.7	15.7	15.7	15.9	16.0	16.1	16.3	16.3	16.3
Beta Grus	2.1	19	12.8	12.9	12.9	12.7	12.5	12.2	11.9	11.6	11.5	11.5	11.6	11.8	-46	50.8	50.7	50.6	50.4	50.3	50.2	50.1	50.1	50.2	50.3	50.4	50.4
Homam	3.4	19	32.1	32.2	32.2	32.1	31.9	31.6	31.4	31.2	31.1	31.1	31.2	31.2	10	52.4	52.4	52.3	52.3	52.4	52.4	52.6	52.7	52.8	52.8	52.8	52.8
Alpha Lacerta	3.8	22	06.0	06.1	06.1	05.9	05.7	05.4	05.1	04.8	04.7	04.8	04.9	05.1	50	19.6	19.5	19.4	19.3	19.2	19.3	19.4	19.6	19.7	19.9	20.0	20.0
Delta Grus	4.0	22	33.8	33.9	33.8	33.7	33.5	33.2	32.9	32.6	32.5	32.5	32.6	32.8	-43	27.5	27.4	27.3	27.2	27.0	26.9	26.9	26.9	26.9	27.0	27.1	27.2
Zeta Aquarius	3.7	22	41.4	41.4	41.4	41.3	41.1	40.9	40.6	40.4	40.3	40.3	40.4	40.5	0	01.3	01.2	01.2	01.2	01.3	01.4	01.5	01.6	01.6	01.7	01.7	01.6
Sadachbia	3.9	24	29.0	29.0	29.0	28.9	28.7	28.5	28.2	28.0	27.9	28.0	28.0	28.1	-1	20.8	20.9	20.9	20.9	20.8	20.7	20.6	20.5	20.5	20.4	20.4	20.5
Alpha Tucana	2.9	25	14.4	14.5	14.4	14.2	13.9	13.5	13.1	12.7	12.6	12.7	12.9	13.1	-60	13.4	13.3	13.2	13.0	12.9	12.8	12.7	12.8	12.9	13.0	13.1	13.1
Zeta Cepheus	3.3	27	13.5	13.6	13.6	13.4	13.1	12.8	12.4	12.2	12.1	12.2	12.4	12.6	58	14.7	14.5	14.4	14.3	14.2	14.3	14.4	14.6	14.8	14.9	15.0	15.1
Baham	3.5	27	21.0	21.1	21.0	20.9	20.7	20.5	20.2	20.0	20.0	20.0	20.1	20.1	6	14.2	14.2	14.2	14.2	14.2	14.3	14.4	14.5	14.6	14.6	14.6	14.6
Alnair	1.8	27	49.0	49.1	49.0	48.8	48.6	48.2	47.9	47.7	47.6	47.6	47.7	47.9	-46	55.5	55.5	55.3	55.2	55.1	55.0	54.9	55.0	55.0	55.1	55.2	55.2
Iota Pegasus	3.8	28	09.4	09.4	09.4	09.3	09.1	08.8	08.6	08.4	08.3	08.3	08.4	08.5	25	23.2	23.1	23.0	22.9	22.9	23.0	23.1	23.3	23.4	23.5	23.5	23.5
Sadal Melik	2.9	28	27.2	27.2	27.1	27.0	26.8	26.6	26.3	26.1	26.1	26.1	26.2	26.3	-0	16.9	16.9	16.9	16.9	16.9	16.8	16.7	16.6	16.5	16.5	16.5	16.5
Al Dhanab	3.0	31	23.9	23.9	23.8	23.6	23.4	23.1	22.9	22.6	22.5	22.6	22.7	22.8	-37	19.8	19.7	19.6	19.5	19.4	19.3	19.3	19.3	19.3	19.4	19.5	19.5
Deneb Algiedi	2.9	33	07.9	07.8	07.8	07.6	07.4	07.2	06.9	06.7	06.7	06.7	06.8	06.9	-16	05.6	05.5	05.5	05.5	05.4	05.3	05.2	05.2	05.2	05.2	05.2	05.2
Enif	2.4	33	51.4	51.5	51.4	51.2	51.0	50.8	50.6	50.4	50.4	50.4	50.5	50.6	9	54.7	54.7	54.6	54.6	54.6	54.7	54.8	55.0	55.0	55.1	55.1	55.1
Nu Octans	3.7	34	25.2	25.4	25.2	24.7	23.9	23.1	22.3	21.7	21.6	21.9	22.5	23.1	-77	21.5	21.3	21.2	21.0	20.9	20.8	20.9	21.0	21.1	21.2	21.3	21.3
Nashira	3.7	34	52.1	52.1	52.0	51.8	51.6	51.4	51.1	51.0	50.9	50.9	51.0	51.1	-16	37.7	37.7	37.6	37.6	37.5	37.4	37.3	37.3	37.3	37.3	37.3	37.3
Rho Cygnus	4.0	36	26.1	26.2	26.1	25.9	25.7	25.4	25.1	24.9	24.9	25.0	25.2	25.3	45	37.8	37.6	37.5	37.4	37.4	37.5	37.6	37.8	38.0	38.1	38.2	38.2
Sadal Suud	2.9	37	00.4	00.4	00.3	00.2	00.0	59.7	59.5	59.3	59.3	59.3	59.4	59.5	-5	32.2	32.2	32.2	32.2	32.2	32.1	32.0	31.9	31.9	31.8	31.9	31.9
Alfirk	3.2	37	49.6	49.8	49.7	49.4	48.9	48.4	48.0	47.7	47.8	48.0	48.5	48.9	70	35.9	35.8	35.6	35.5	35.5	35.5	35.7	35.9	36.0	36.2	36.3	36.3
Zeta Capricornus	3.8	38	13.3	13.2	13.1	13.0	12.7	12.5	12.3	12.1	12.0	12.1	12.2	12.3	-22	22.7	22.7	22.7	22.6	22.5	22.4	22.4	22.3	22.3	22.4	22.4	22.4
Alderamin	2.5	40	19.1	19.3	19.2	18.9	18.5	18.1	17.8	17.6	17.7	17.8	18.1	18.5	62	37.3	37.2	37.0	36.9	36.9	37.0	37.1	37.3	37.5	37.6	37.7	37.7
Kitalpha	3.9	40	56.8	56.8	56.7	56.5	56.3	56.1	55.9	55.7	55.7	55.7	55.8	55.9	5	16.8	16.8	16.7	16.7	16.8	16.9	17.0	17.1	17.2	17.2	17.2	17.2
Tau Cygnus	3.7	41	13.6	13.6	13.6	13.4	13.1	12.9	12.6	12.5	12.5	12.6	12.7	12.9	38	04.9	04.7	04.6	04.5	04.5	04.6	04.8	04.9	05.1	05.2	05.3	05.2
Zeta Cygnus	3.2	41	41.1	41.1	41.0	40.8	40.6	40.4	40.1	40.0	40.0	40.0	40.2	40.3	30	15.6	15.5	15.4	15.4	15.4	15.5	15.6	15.8	15.9	16.0	16.0	16.0
Xi Cygnus	3.7	43	42.0	42.1	42.0	41.8	41.5	41.2	41.0	40.8	40.8	41.0	41.1	41.3	43	57.7	57.5	57.4	57.3	57.3	57.4	57.6	57.8	57.9	58.0	58.1	58.1
Nu Cygnus	3.9	45	38.3	38.3	38.2	38.0	37.7	37.4	37.2	37.1	37.1	37.2	37.4	37.5	41	12.0	11.8	11.7	11.6	11.6	11.7	11.9	12.0	12.2	12.3	12.4	12.3
Beta Indus	3.7	46	08.8	08.7	08.5	08.2	07.8	07.4	07.1	06.8	06.8	07.0	07.2	07.4	-58	25.6	25.5	25.4	25.2	25.2	25.1	25.1	25.2	25.3	25.4	25.5	25.4
Albali	3.8	47	58.5	58.5	58.4	58.2	57.9	57.7	57.5	57.4	57.3	57.4	57.5	57.6	-9	28.1	28.1	28.1	28.1	28.0	27.9	27.8	27.8	27.7	27.7	27.8	27.8
Gienah Cygni	2.5	48	22.3	22.3	22.2	22.0	21.7	21.5	21.2	21.1	21.1	21.2	21.4	21.5	34	00.1	59.9	59.8	59.8	59.8	59.9	00.0	00.2	00.3	00.4	00.5	00.4
Eta Cepheus	3.4																										

Name	Mag	Sidereal Hour Angle												Declination												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Ancha	3.3	57	04.4	04.4	04.2	04.0	03.8	03.6	03.4	03.3	03.3	03.4	03.5	03.6	-0	47.9	48.0	48.0	48.0	47.9	47.9	47.8	47.7	47.6	47.6	47.7
Delta Pavonis	3.6	57	37.8	37.7	37.4	36.9	36.4	35.9	35.5	35.3	35.3	35.6	35.9	36.2	-66	09.9	09.7	09.6	09.5	09.4	09.4	09.5	09.6	09.7	09.8	09.8
Epsilon Pavonis	4.0	59	38.0	37.9	37.4	36.8	36.1	35.5	35.0	34.7	34.8	35.2	35.7	36.1	-72	53.5	53.3	53.2	53.1	53.1	53.1	53.2	53.3	53.4	53.5	53.4
Gamma Sagitta	3.5	60	13.6	13.5	13.4	13.1	12.9	12.7	12.5	12.4	12.5	12.6	12.7	12.8	19	30.8	30.7	30.6	30.6	30.6	30.7	30.9	31.0	31.1	31.1	31.1
Eta Cygnus	3.9	60	51.2	51.2	51.0	50.8	50.6	50.3	50.2	50.1	50.1	50.3	50.4	50.6	35	06.3	06.1	06.0	06.0	06.0	06.1	06.3	06.4	06.6	06.6	06.6
Alshain	3.7	61	04.6	04.5	04.4	04.2	04.0	03.7	03.6	03.5	03.5	03.6	03.7	03.8	6	25.5	25.5	25.4	25.4	25.5	25.6	25.7	25.8	25.8	25.8	
Eta Aquila	3.9	61	47.0	46.9	46.8	46.6	46.3	46.1	45.9	45.8	45.9	46.0	46.1	46.2	1	01.5	01.4	01.4	01.4	01.5	01.5	01.6	01.7	01.8	01.8	
Altair	0.9	62	12.6	12.5	12.4	12.2	12.0	11.7	11.6	11.5	11.5	11.6	11.7	11.8	8	53.3	53.2	53.2	53.2	53.2	53.3	53.4	53.5	53.6	53.6	53.6
Tyl	3.8	62	59.0	59.0	58.8	58.3	57.8	57.4	57.1	57.1	57.4	57.8	58.3	58.8	70	17.3	17.1	17.0	16.9	16.9	17.0	17.2	17.4	17.6	17.7	17.6
Kaus Media	3.8	63	04.1	04.0	03.9	03.7	03.4	03.2	03.0	03.0	03.0	03.1	03.2	03.3	18	33.2	33.1	33.0	33.0	33.0	33.1	33.3	33.4	33.5	33.5	33.5
Tarazed	2.7	63	20.6	20.5	20.4	20.2	20.0	19.7	19.6	19.5	19.5	19.6	19.8	19.8	10	37.9	37.8	37.8	37.7	37.8	37.9	38.0	38.1	38.2	38.2	38.2
Delta Cygnus	2.9	63	42.1	42.0	41.9	41.6	41.3	41.1	40.9	40.8	40.9	41.1	41.3	41.5	45	09.0	08.8	08.7	08.7	08.7	08.8	09.0	09.2	09.3	09.4	09.3
Albireo	3.1	67	14.6	14.6	14.4	14.2	13.9	13.7	13.6	13.5	13.6	13.7	13.9	14.0	27	58.5	58.4	58.3	58.3	58.3	58.4	58.6	58.7	58.8	58.9	58.8
Iota Cygnus	3.8	67	31.9	31.9	31.7	31.4	31.1	30.8	30.6	30.6	30.7	31.0	31.2	31.4	51	44.8	44.6	44.5	44.4	44.5	44.6	44.8	44.9	45.1	45.2	45.1
Delta Aquila	3.4	68	31.7	31.6	31.4	31.2	31.0	30.8	30.6	30.5	30.6	30.7	30.8	30.9	3	07.8	07.7	07.7	07.7	07.7	07.8	07.9	08.0	08.0	08.0	08.0
Rukbat	4.0	68	53.6	53.5	53.3	53.0	52.7	52.4	52.2	52.1	52.1	52.3	52.5	52.5	-40	36.2	36.1	36.0	36.0	36.0	35.9	36.0	36.0	36.1	36.1	36.1
Arkab	4.0	69	12.1	11.9	11.7	11.4	11.1	10.8	10.6	10.5	10.5	10.7	10.8	10.9	-44	26.8	26.7	26.6	26.5	26.5	26.5	26.6	26.6	26.7	26.7	26.7
Rho Sagittarius	3.9	69	28.2	28.0	27.9	27.6	27.4	27.2	27.0	26.9	26.9	27.0	27.2	27.2	-17	50.0	50.0	50.0	50.0	50.0	49.9	49.9	49.8	49.9	49.9	49.9
Kappa Cygnus	3.8	70	41.3	41.2	41.0	40.7	40.4	40.1	39.9	39.9	40.1	40.3	40.6	40.8	53	22.9	22.8	22.6	22.6	22.6	22.8	22.9	23.1	23.3	23.3	23.2
Nodus Secundus	3.1	71	52.7	52.6	52.3	51.9	51.4	51.1	50.9	51.0	51.2	51.7	52.1	52.5	67	40.5	40.3	40.2	40.1	40.2	40.3	40.5	40.6	40.8	40.9	40.8
Albaldah	2.9	72	26.6	26.5	26.3	26.0	25.8	25.6	25.4	25.3	25.4	25.5	25.6	25.7	-21	00.8	00.8	00.7	00.7	00.7	00.6	00.6	00.6	00.6	00.6	00.6
Tau Sagittarius	3.3	73	08.6	08.5	08.3	08.0	07.8	07.5	07.4	07.3	07.3	07.4	07.6	07.6	-27	39.6	39.6	39.6	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5
Al Thalimain	3.4	73	20.1	20.0	19.8	19.6	19.4	19.1	19.0	18.9	19.0	19.1	19.2	19.3	-4	52.3	52.4	52.4	52.4	52.4	52.3	52.2	52.2	52.1	52.1	52.2
Deneb el Okab	3.0	73	33.6	33.5	33.3	33.1	32.8	32.6	32.5	32.5	32.5	32.6	32.8	32.8	13	52.4	52.3	52.3	52.3	52.3	52.4	52.5	52.6	52.7	52.7	52.7
Omicron Sagittarius	3.8	73	42.8	42.6	42.4	42.2	41.9	41.7	41.6	41.5	41.5	41.7	41.8	41.8	-21	43.9	43.9	43.9	43.8	43.8	43.8	43.7	43.8	43.8	43.8	43.8
Ascella	2.6	74	13.4	13.3	13.1	12.8	12.5	12.3	12.1	12.0	12.1	12.2	12.4	12.4	-29	52.2	52.2	52.2	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.1
Sulafat	3.3	75	11.7	11.6	11.4	11.2	10.9	10.7	10.6	10.5	10.6	10.8	11.0	11.1	32	41.9	41.8	41.7	41.7	41.7	41.9	42.0	42.2	42.3	42.3	42.2
Xi Sagittarius	3.5	75	27.1	27.0	26.8	26.5	26.3	26.0	25.9	25.8	25.9	26.0	26.1	26.2	-21	05.9	05.9	05.9	05.8	05.8	05.8	05.7	05.7	05.7	05.8	05.8
Nunki	2.1	76	03.8	03.6	03.4	03.2	02.9	02.7	02.5	02.5	02.5	02.6	02.8	02.8	-26	17.3	17.3	17.3	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
Sheliak	3.5	77	24.7	24.6	24.4	24.2	23.9	23.7	23.6	23.6	23.7	23.8	24.0	24.1	33	22.2	22.1	22.0	22.0	22.0	22.1	22.3	22.4	22.5	22.6	22.5
Phi Sagittarius	3.2	78	27.9	27.7	27.5	27.2	27.0	26.8	26.6	26.5	26.6	26.7	26.9	26.9	-26	59.1	59.0	59.0	59.0	59.0	59.0	58.9	59.0	59.0	59.0	59.0
Vega	0.0	80	42.2	42.1	41.9	41.6	41.4	41.2	41.1	41.1	41.2	41.4	41.6	41.7	38	47.4	47.2	47.1	47.1	47.1	47.3	47.4	47.6	47.7	47.7	47.6
Alpha Scutum	3.9	81	05.6	05.4	05.2	05.0	04.8	04.6	04.4	04.4	04.5	04.6	04.7	04.7	-8	14.4	14.5	14.5	14.5	14.4	14.4	14.3	14.3	14.3	14.3	14.3
Kaus Borealis	2.8	82	53.3	53.1	52.9	52.6	52.4	52.1	52.0	51.9	52.0	52.2	52.3	52.3	-25	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
Alpha Telescopium	3.5	83	06.8	06.6	06.3	06.0	05.7	05.4	05.2	05.2	05.3	05.4	05.6	05.7	-45	57.9	57.8	57.8	57.8	57.8	57.8	57.9	57.9	58.0	58.0	57.9
Kaus Australis	1.8	83	49.7	49.5	49.3	49.0	48.7	48.5	48.3	48.3	48.4	48.5	48.6	48.7	-34	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	23.0	23.0	22.9
109 Hercules	3.9	83	59.7	59.5	59.3	59.1	58.9	58.7	58.6	58.6	58.7	58.8	59.0	59.0	21	46.3	46.2	46.1	46.1	46.1	46.2	46.4	46.5	46.6	46.6	46.5
Eta Serpens	3.3	84	34.3	34.2	34.0	33.8	33.5	33.4	33.2	33.2	33.3	33.4	33.5	33.6	-2	53.9	54.0	54.0	54.0	54.0	53.9	53.8	53.8	53.8	53.8	53.8
Chi Draco	3.6	84	47.6	47.4	46.9	46.4	45.8	45.5	45.4	45.7	46.1	46.7	47.3	47.7	72	44.0	43.8	43.7	43.7	43.8	43.9	44.1	44.3	44.4	44.4	44.2
Kaus Media	2.7	84	37.6	37.5	37.2	36.9	36.7	36.5	36.3	36.3	36.4	36.5	36.6	36.7	-29	49.6	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.6	49.6	49.5
Eta Sagittarius	3.1	85	27.7	27.5	27.3	27.0	26.7	26.5	26.3	26.3	26.4	26.5	26.7	26.7	-36	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.7	45.7	45.6
Mu Sagittarius	3.8	86	26.6	26.4	26.2	25.9	25.7	25.5	25.4	25.3	25.4	25.5	25.7	25.7	-21	03.5	03.5	03.5	03.5	03.5	03.5	03.4	03.4	03.5	03.5	03.4
Omicron Hercules	3.8	88	02.5	02.3	02.1	01.9	01.6	01.5	01.4	01.4	01.5	01.7	01.8	01.9	28	45.7	45.5	45.5	45.4	45.5	45.6	45.8	45.9	46.0	46.0	45.9
Omicron Ophiuchus	3.7	88	04.3	04.1	03.9	03.7	03.5	03.3	03.2	03.2	03.3	03.4	03.5	03.6	9	33.8	33.7	33.6	33.6	33.7	33.8	33.9	33.9	34.0	34.0	33.9
Theta Ara	3.7	88	11.5	11.3	11.0	10.6	10.3	10.0	09.8	09.8	09.9	10.1	10.3	10.3	-50	05.5	05.4	05.4	05.4	05.4	05.5	05.5	05.6	05.7	05.7	05.6
El Nasl	3.6	88	25.4	25.2	25.0	24.7	24.4	24.2	24.1	24.1	24.1	24.3	24.4	24.4	-30	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.6	25.6	25.5
Nu Ophiuchus	3.3	90	08.2	08.0	07.8	07.6	07.4	07.2	07.1	07.0	07.1	07.2	07.4	07.4	-9	46.6	46.6	46.7	46.7	46.6	46.6	46.5	46.5	46.5	46.5	46.5
Xi Hercules	3.7	90	29.2	29.0	28.8	28.5	28.3	28.1	28.1	28.1	28.2	28.4	28.5	28.6	29	14.7	14.5	14.5	14.4	14.5	14.6	14.8	14.9	15.0	15.0	14.9
Eltanin	2.2	90	48.6	48.4	48.2	47.9	47.6	47.4	47.3	47.4	47.6	47.9	48.1	48.2	51	29.1	28.9	28.8	28.8	28.9	29.1	29.2	29.4	29.5	29.5	29.4
Theta Hercules	3.8	90	52.4	52.3	52.0	51.8	51.5	51.4	51.3	51.3	51.5	51.7	51.8	51.9	37	14.8	14.7	14.6	14.6	14.6	14.8	14.9	15.1	15.1	15.2	



Name	Mag	Sidereal Hour Angle												Declination														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Phi Lupus	3.6	129	25.4	25.1	24.9	24.6	24.4	24.4	24.3	24.4	24.6	24.7	24.7	24.6	-36	17.4	17.4	17.5	17.6	17.7	17.7	17.8	17.8	17.8	17.7	17.6	17.6	
Delta Lupus	3.2	129	31.7	31.4	31.1	30.8	30.7	30.6	30.6	30.6	30.8	30.9	31.0	30.8	-40	40.5	40.6	40.6	40.7	40.8	40.9	40.9	41.0	40.9	40.9	40.8	40.8	
Pherkad	3.0	129	49.7	49.1	48.6	48.1	47.9	48.0	48.3	48.7	49.3	49.7	50.0	50.0	71	47.9	47.8	47.8	47.9	48.1	48.2	48.3	48.4	48.4	48.3	48.1	47.9	
Gamma Triang' Aust'	2.9	130	05.6	05.0	04.4	03.9	03.6	03.5	03.5	03.8	04.2	04.5	04.6	04.4	-68	42.4	42.4	42.4	42.6	42.7	42.9	43.0	43.0	43.0	42.9	42.8	42.7	
Zuben Elschemali	2.6	130	38.5	38.3	38.0	37.8	37.7	37.6	37.6	37.7	37.8	37.9	37.9	37.8	-9	24.8	24.9	25.0	25.0	25.0	25.0	25.0	25.0	24.9	24.9	24.9	25.0	
Delta Bootes	3.5	131	02.7	02.5	02.2	02.0	01.9	01.8	01.9	02.0	02.1	02.3	02.3	02.3	33	16.8	16.7	16.7	16.7	16.8	16.9	17.0	17.1	17.1	17.0	16.9	16.8	
Zeta Lupus	3.4	131	47.3	46.9	46.6	46.3	46.1	46.0	46.0	46.1	46.3	46.5	46.5	46.4	-52	07.7	07.7	07.8	07.9	08.0	08.1	08.2	08.2	08.2	08.1	08.0	07.9	
Kappa Lupus	3.9	131	52.8	52.5	52.1	51.8	51.7	51.6	51.6	51.7	51.9	52.0	52.1	51.9	-48	46.0	46.0	46.1	46.2	46.3	46.4	46.5	46.5	46.5	46.4	46.3	46.3	
Brachium	3.3	133	52.0	51.7	51.5	51.3	51.1	51.1	51.1	51.1	51.3	51.4	51.4	51.3	-25	18.8	18.9	18.9	19.0	19.1	19.1	19.1	19.1	19.1	19.0	19.0	19.0	
Nekkar	3.5	134	26.4	26.1	25.8	25.6	25.5	25.5	25.6	25.7	25.9	26.0	26.1	26.0	40	21.2	21.1	21.1	21.1	21.3	21.4	21.5	21.6	21.5	21.5	21.3	21.2	
Ke Kwan	3.1	135	04.9	04.6	04.3	04.0	03.9	03.8	03.8	03.9	04.1	04.2	04.2	04.1	-42	08.1	08.1	08.2	08.3	08.4	08.5	08.6	08.6	08.5	08.5	08.4	08.3	
Beta Lupus	2.7	135	14.3	14.0	13.7	13.4	13.3	13.2	13.2	13.3	13.5	13.6	13.6	13.5	-43	09.9	09.9	10.0	10.1	10.2	10.3	10.4	10.4	10.3	10.3	10.2	10.1	
Zuben El Genubi	2.8	137	10.2	10.0	09.7	09.6	09.4	09.4	09.4	09.5	09.6	09.7	09.7	09.5	-16	04.5	04.6	04.7	04.8	04.8	04.8	04.8	04.8	04.7	04.7	04.7	04.7	
Kochab	2.1	137	20.0	19.4	18.8	18.3	18.2	18.3	18.7	19.3	19.9	20.3	20.6	20.5	74	07.0	06.9	06.9	07.0	07.1	07.3	07.4	07.4	07.4	07.2	07.1	06.9	
Alpha Apus	3.8	137	47.8	46.7	45.7	44.9	44.5	44.4	44.7	45.3	46.1	46.6	46.8	46.4	-79	04.5	04.5	04.6	04.7	04.9	05.1	05.2	05.3	05.2	05.1	05.0	04.8	
109 Virgo	3.7	138	20.2	20.0	19.8	19.6	19.5	19.4	19.5	19.5	19.6	19.7	19.7	19.6	1	51.4	51.3	51.3	51.2	51.3	51.3	51.4	51.4	51.4	51.4	51.3	51.3	
Mirak	2.4	138	40.0	39.7	39.5	39.3	39.2	39.2	39.2	39.3	39.5	39.6	39.6	39.5	27	02.2	02.1	02.0	02.1	02.1	02.3	02.3	02.4	02.4	02.3	02.2	02.1	
Rijl al Awwa	3.9	139	07.8	07.6	07.3	07.1	07.0	07.0	07.0	07.1	07.2	07.3	07.3	07.2	-5	41.7	41.8	41.8	41.8	41.9	41.8	41.8	41.8	41.8	41.8	41.8	41.8	
Alpha Circinus	3.2	139	13.0	12.5	12.0	11.6	11.4	11.3	11.4	11.7	12.0	12.2	12.2	12.0	-65	00.4	00.5	00.5	00.7	00.8	01.0	01.1	01.1	01.1	01.1	01.0	00.8	00.7
Men	2.3	139	23.2	22.9	22.6	22.3	22.1	22.1	22.1	22.3	22.4	22.5	22.5	22.4	-47	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.8	25.8	25.8	25.7	25.6	25.5
Zeta Bootes	3.8	139	37.1	36.8	36.6	36.4	36.3	36.3	36.3	36.4	36.5	36.6	36.6	36.5	13	41.4	41.3	41.3	41.3	41.4	41.4	41.5	41.5	41.5	41.5	41.4	41.3	
Rigel Kentaurus	0.0	139	58.0	57.5	57.1	56.8	56.6	56.6	56.7	56.9	57.2	57.4	57.4	57.2	-60	51.9	51.9	52.0	52.2	52.3	52.4	52.5	52.5	52.5	52.4	52.3	52.2	
Eta Centaurus	2.3	140	59.9	59.6	59.3	59.0	58.9	58.9	58.9	59.0	59.1	59.3	59.2	59.1	-42	11.5	11.5	11.6	11.8	11.9	11.9	12.0	12.0	12.0	11.9	11.8	11.8	
Seginus	3.0	141	54.0	53.7	53.5	53.3	53.2	53.2	53.3	53.4	53.6	53.7	53.7	53.6	38	16.1	16.0	16.0	16.0	16.1	16.3	16.4	16.4	16.4	16.4	16.3	16.1	16.0
Rho Bootes	3.6	141	57.4	57.1	56.9	56.7	56.6	56.6	56.7	56.8	56.9	57.0	57.0	56.9	30	19.9	19.8	19.8	19.8	19.9	20.0	20.1	20.1	20.1	20.1	20.1	19.9	19.8
Lambda Bootes	3.6	145	01.4	01.0	00.7	00.5	00.4	00.3	00.4	00.5	00.7	00.8	00.8	00.6	-46	05.6	05.7	05.8	05.9	06.0	06.1	06.1	06.1	06.1	06.0	05.9	05.9	
Arcturus	0.2	145	59.6	59.3	59.1	59.0	58.9	58.9	58.9	59.0	59.1	59.2	59.2	59.1	19	08.2	08.1	08.1	08.1	08.2	08.2	08.3	08.3	08.3	08.3	08.3	08.2	08.0
Menkent	2.1	148	12.8	12.4	12.2	12.0	11.9	11.9	11.9	12.0	12.2	12.2	12.2	12.0	-36	24.5	24.6	24.7	24.8	24.9	24.9	25.0	25.0	24.9	24.8	24.8	24.8	
Pi Hydra	3.3	148	17.6	17.3	17.1	16.9	16.8	16.8	16.9	16.9	17.0	17.1	17.1	16.9	-26	43.2	43.3	43.4	43.5	43.6	43.6	43.6	43.6	43.6	43.6	43.5	43.5	
Thuban	3.7	148	50.9	50.5	50.1	49.8	49.7	49.9	50.1	50.4	50.8	51.0	51.0	50.9	64	19.9	19.8	19.8	19.9	20.1	20.2	20.3	20.3	20.2	20.1	19.9	19.7	
Agena	0.6	148	54.3	53.9	53.5	53.2	53.1	53.1	53.2	53.4	53.7	53.8	53.8	53.5	-60	24.5	24.6	24.7	24.8	25.0	25.1	25.2	25.2	25.2	25.0	24.9	24.8	
Zeta Centaurus	2.5	150	59.5	59.1	58.8	58.6	58.5	58.5	58.6	58.8	58.9	59.0	59.0	58.7	-47	19.5	19.6	19.7	19.9	20.0	20.1	20.1	20.1	20.1	20.1	20.0	19.9	19.8
Muphrid	2.7	151	14.0	13.7	13.5	13.3	13.3	13.3	13.4	13.4	13.5	13.6	13.6	13.4	18	21.2	21.1	21.1	21.1	21.2	21.3	21.3	21.4	21.3	21.3	21.2	21.1	
Mu Centaurus	3.5	152	28.6	28.2	28.0	27.8	27.7	27.7	27.8	27.9	28.0	28.1	28.0	27.8	-42	30.7	30.8	30.9	31.0	31.1	31.2	31.3	31.3	31.2	31.1	31.0	31.0	
Nu Centaurus	3.4	152	30.3	29.9	29.7	29.5	29.4	29.4	29.5	29.6	29.7	29.8	29.8	29.6	-41	43.5	43.6	43.7	43.9	44.0	44.1	44.1	44.1	44.0	43.9	43.9	43.8	
Alkaid	1.9	153	02.1	01.8	01.5	01.3	01.3	01.3	01.5	01.7	01.8	01.9	01.9	01.8	49	16.0	16.0	16.0	16.1	16.2	16.3	16.4	16.4	16.3	16.2	16.1	15.9	
Epsilon Centaurus	2.3	154	54.2	53.8	53.5	53.2	53.2	53.2	53.3	53.5	53.6	53.7	53.7	53.4	-53	30.3	30.3	30.5	30.6	30.8	30.9	30.9	30.9	30.9	30.8	30.7	30.6	30.6
Heze	3.4	156	13.4	13.2	13.0	12.8	12.8	12.8	12.8	12.9	13.0	13.0	13.0	12.8	-0	38.3	38.4	38.5	38.5	38.5	38.5	38.4	38.4	38.4	38.4	38.4	38.5	
d Centaurus	3.9	157	07.4	07.1	06.8	06.7	06.6	06.6	06.7	06.8	06.9	07.0	06.9	06.7	-39	26.8	26.9	27.0	27.2	27.3	27.3	27.4	27.3	27.3	27.2	27.1	27.1	
Spica	1.1	158	35.7	35.5	35.3	35.1	35.1	35.1	35.1	35.2	35.3	35.3	35.3	35.1	-11	12.2	12.3	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.5		
Mizar	2.2	158	56.2	55.8	55.5	55.3	55.3	55.4	55.6	55.8	56.0	56.1	56.1	55.9	54	52.6	52.6	52.6	52.7	52.9	53.0	53.0	53.0	52.9	52.8	52.6	52.4	
Iota Centaurus	2.8	159	44.3	44.0	43.8	43.6	43.5	43.6	43.6	43.8	43.9	43.9	43.8	43.6	-36	45.2	45.3	45.4	45.5	45.6	45.7	45.7	45.7	45.6	45.5	45.5	45.5	
Gamma Hydra	3.0	160	09.6	09.3	09.1	09.0	08.9	09.0	09.0	09.1	09.2	09.2	09.1	09.0	-23	12.8	12.9	13.0	13.1	13.2	13.2	13.2	13.2	13.1	13.1	13.0	13.1	
Delta Musca	3.6	164	17.8	17.2	16.7	16.5	16.4	16.6	16.9	17.3	17.7	17.8	17.7	17.2	-71	35.3	35.4	35.5	35.7	35.9	36.0	36.1	36.1	36.0	35.8	35.7	35.6	
Vindemiatrix	2.8	164	21.3	21.0	20.8	20.7	20.7	20.7	20.8	20.9	20.9	20.9	20.9	20.7	10	54.8	54.7	54.7	54.7	54.7	54.8	54.8	54.8	54.8	54.8	54.8	54.7	54.6
Cor Caroli	2.9	165	53.8	53.5	53.3	53.2	53.2	53.3	53.4	53.5	53.6	53.6	53.5	53.3	38	16.2	16.1	16.2	16.2	16.3	16.4	16.5	16.5	16.4	16.3	16.1	16.0	
Auva	3.4	165	59.8	59.5	59.4	59.2	59.2	59.3	59.3	59.4	59.5	59.5	59.4	59.2	3	21.1	21.0	21.0	20.9	21.0	21.0	21.0	21.1	21.1	21.0	21.0	20.9	
Alioth	1.8	166	24.1	23.7	23.4	23.3	23.3	23.4	23.6	23.8	24.0	24.1	24.0	23.7	55	54.6	54.6	54.6										

Name	Mag	Sidereal Hour Angle												Declination														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Epsilon Crux	3.6	174	33.1	32.7	32.4	32.3	32.3	32.5	32.7	32.9	33.1	33.1	32.9	32.6	-60	26.5	26.6	26.8	27.0	27.1	27.2	27.2	27.2	27.1	27.0	26.9	26.8	
Zaniah	3.9	174	55.1	54.9	54.7	54.6	54.6	54.7	54.7	54.8	54.8	54.8	54.7	54.5	-0	42.8	42.9	42.9	43.0	43.0	42.9	42.9	42.9	42.9	42.9	42.9	43.0	
Gienah Ghurab	2.6	175	56.6	56.3	56.2	56.1	56.1	56.2	56.2	56.3	56.4	56.3	56.2	56.0	-17	35.2	35.3	35.4	35.5	35.5	35.5	35.5	35.5	35.4	35.4	35.4	35.4	
Megrez	3.3	176	02.3	02.0	01.7	01.6	01.7	01.9	02.1	02.3	02.4	02.4	02.3	02.0	56	58.9	58.9	59.0	59.1	59.2	59.3	59.3	59.3	59.2	59.0	58.8	58.7	
Delta Crux	2.8	176	06.4	06.0	05.8	05.7	05.7	05.9	06.0	06.2	06.4	06.4	06.2	05.9	-58	47.4	47.5	47.7	47.9	48.0	48.1	48.1	48.1	48.0	47.8	47.7	47.7	
Minkar	3.0	177	21.8	21.6	21.4	21.3	21.3	21.4	21.5	21.5	21.6	21.6	21.4	21.2	-22	39.8	39.9	40.0	40.1	40.2	40.2	40.2	40.2	40.1	40.0	40.0	40.1	
Delta Centaurus	2.6	177	48.3	48.0	47.8	47.7	47.7	47.9	48.0	48.1	48.3	48.2	48.1	47.8	-50	45.8	46.0	46.1	46.3	46.4	46.5	46.5	46.5	46.3	46.2	46.1	46.1	
Phad	2.4	181	25.9	25.5	25.3	25.2	25.3	25.5	25.7	25.8	25.9	25.9	25.7	25.4	53	38.7	38.7	38.7	38.9	39.0	39.0	39.1	39.0	38.9	38.7	38.5	38.4	
Zavijava	3.6	182	13.1	12.9	12.7	12.7	12.7	12.8	12.8	12.9	12.9	12.9	12.7	12.5	1	43.1	43.0	42.9	42.9	42.9	42.9	43.0	43.0	43.0	43.0	42.9	42.8	
Denebola	2.1	182	37.8	37.5	37.4	37.3	37.3	37.4	37.5	37.5	37.6	37.5	37.4	37.2	14	31.5	31.4	31.4	31.4	31.4	31.5	31.5	31.5	31.5	31.4	31.3	31.2	
Chi Ursae Major	3.7	183	22.6	22.3	22.1	22.0	22.1	22.2	22.4	22.5	22.5	22.5	22.3	22.1	47	43.8	43.8	43.8	43.9	44.0	44.1	44.1	44.1	44.0	43.8	43.7	43.5	
Lambda Musca	3.6	183	30.1	29.7	29.4	29.4	29.5	29.8	30.1	30.4	30.5	30.5	30.2	29.8	-66	46.1	46.3	46.5	46.7	46.8	46.9	46.9	46.9	46.7	46.6	46.5	46.4	
Lambda Centaurus	3.1	185	57.6	57.2	57.0	57.0	57.1	57.3	57.6	57.8	58.0	57.9	57.6	57.2	-63	03.6	03.8	03.9	04.1	04.3	04.3	04.4	04.3	04.2	04.0	03.9	03.9	
Xi Hydra	3.5	186	38.9	38.6	38.5	38.5	38.5	38.6	38.7	38.8	38.8	38.8	38.6	38.3	-31	54.0	54.1	54.3	54.4	54.5	54.5	54.5	54.4	54.3	54.3	54.2	54.3	
Giauzar	3.8	187	01.2	00.7	00.4	00.4	00.6	00.9	01.3	01.6	01.7	01.6	01.3	00.9	69	16.8	16.9	17.0	17.1	17.3	17.3	17.3	17.2	17.0	16.9	16.7	16.5	
Pi Centaurus	3.9	189	39.2	38.9	38.8	38.8	38.9	39.0	39.2	39.4	39.5	39.4	39.2	38.8	-54	31.9	32.0	32.2	32.4	32.5	32.6	32.6	32.5	32.4	32.2	32.1	32.2	
Delta Crater	3.6	190	03.7	03.4	03.3	03.3	03.3	03.4	03.5	03.5	03.5	03.5	03.3	03.1	-14	49.3	49.4	49.5	49.6	49.6	49.6	49.6	49.5	49.5	49.5	49.5	49.5	
Alula Borealis	3.5	190	16.0	15.7	15.6	15.6	15.6	15.7	15.8	15.9	15.9	15.8	15.7	15.4	33	02.8	02.8	02.8	02.9	02.9	03.0	03.0	03.0	02.9	02.8	02.7	02.5	
Alula Australis	3.8	190	20.5	20.3	20.1	20.1	20.2	20.3	20.4	20.4	20.4	20.4	20.2	20.0	31	28.8	28.8	28.8	28.9	29.0	29.0	29.0	29.0	28.9	28.8	28.7	28.5	
Chort	3.3	191	19.8	19.6	19.5	19.4	19.5	19.6	19.6	19.7	19.7	19.6	19.5	19.2	15	23.0	22.9	22.9	22.9	23.0	23.0	23.0	23.0	23.0	22.9	22.9	22.7	
Zozma	2.6	191	21.7	21.5	21.3	21.3	21.4	21.4	21.5	21.6	21.6	21.5	21.3	21.1	20	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.6	28.6	28.5	28.4
Psi Ursae Major	3.0	192	27.9	27.6	27.5	27.4	27.5	27.7	27.8	27.9	27.9	27.8	27.6	27.3	44	27.0	27.0	27.1	27.2	27.3	27.3	27.3	27.3	27.2	27.0	26.9	26.7	
BS 4337	3.9	192	45.8	45.5	45.4	45.4	45.5	45.7	45.9	46.1	46.2	46.1	45.9	45.5	-59	00.9	01.0	01.2	01.4	01.5	01.6	01.6	01.5	01.4	01.2	01.1	01.1	
Dubhe	1.8	193	56.1	55.7	55.5	55.5	55.7	56.0	56.2	56.3	56.4	56.3	56.0	55.6	61	42.1	42.2	42.3	42.4	42.5	42.6	42.5	42.4	42.3	42.1	42.0	41.8	
Merak	2.4	194	24.6	24.3	24.1	24.1	24.3	24.5	24.6	24.8	24.8	24.7	24.4	24.1	56	20.1	20.1	20.2	20.3	20.4	20.5	20.4	20.3	20.2	20.0	19.9	19.8	
u Carina	3.8	196	32.5	32.2	32.1	32.1	32.3	32.5	32.7	32.9	32.9	32.8	32.5	32.2	-58	53.5	53.7	53.9	54.0	54.2	54.2	54.2	54.1	54.0	53.8	53.8	53.8	
Praecipula	3.8	196	33.2	33.0	32.9	32.9	32.9	33.1	33.1	33.2	33.2	33.1	32.9	32.6	34	10.1	10.1	10.1	10.2	10.2	10.3	10.3	10.2	10.2	10.0	09.9	09.8	
Nu Hydra	3.1	197	29.4	29.2	29.1	29.1	29.2	29.3	29.4	29.4	29.4	29.3	29.1	28.9	-16	14.1	14.2	14.3	14.4	14.4	14.4	14.4	14.3	14.3	14.2	14.3	14.3	
Mu Velorum	2.7	198	13.1	12.8	12.7	12.7	12.8	13.0	13.2	13.3	13.3	13.2	13.0	12.6	-49	27.6	27.7	27.9	28.1	28.2	28.2	28.2	28.1	27.9	27.8	27.8	27.8	
Theta Carina	2.7	199	11.1	10.8	10.7	10.7	11.0	11.3	11.5	11.7	11.8	11.7	11.4	10.9	-64	25.9	26.1	26.3	26.5	26.6	26.7	26.6	26.5	26.4	26.3	26.2	26.2	
Rho Leo	3.9	201	41.2	41.0	40.9	40.9	41.0	41.1	41.1	41.1	41.1	41.0	40.8	40.6	9	15.8	15.8	15.7	15.7	15.7	15.8	15.8	15.8	15.8	15.8	15.7	15.6	
BS 4140	3.4	201	55.1	54.8	54.7	54.8	55.0	55.3	55.5	55.7	55.7	55.6	55.3	54.9	-61	43.4	43.5	43.7	43.9	44.0	44.1	44.0	43.9	43.8	43.6	43.6	43.6	
BS 4114	3.8	202	57.1	56.9	56.8	56.9	57.0	57.3	57.5	57.6	57.7	57.5	57.2	56.9	-58	46.6	46.8	47.0	47.1	47.2	47.3	47.2	47.1	47.0	46.9	46.8	46.8	
Mu Hydra	3.8	203	22.5	22.4	22.3	22.3	22.4	22.5	22.5	22.6	22.5	22.4	22.2	22.0	-16	52.6	52.7	52.8	52.9	52.9	52.9	52.8	52.8	52.7	52.7	52.7	52.8	
Tania Australis	3.1	204	17.4	17.2	17.1	17.1	17.2	17.4	17.5	17.5	17.5	17.3	17.1	16.8	41	27.3	27.3	27.4	27.5	27.6	27.6	27.6	27.5	27.4	27.3	27.1	27.0	
Algieba	2.0	204	53.4	53.2	53.1	53.1	53.2	53.3	53.4	53.4	53.4	53.2	53.1	52.8	19	47.9	47.9	47.9	47.9	47.9	48.0	48.0	48.0	47.9	47.9	47.8	47.7	
Tania Borealis	3.4	205	35.8	35.6	35.5	35.5	35.6	35.8	35.9	35.9	35.9	35.7	35.5	35.2	42	52.2	52.3	52.3	52.4	52.5	52.5	52.5	52.4	52.3	52.2	52.0	51.9	
BS4050	3.4	205	39.4	39.2	39.1	39.2	39.4	39.7	39.9	40.1	40.1	40.0	39.6	39.2	-61	22.1	22.3	22.5	22.6	22.8	22.8	22.7	22.6	22.5	22.4	22.3	22.3	
Adhafera	3.4	205	42.6	42.4	42.3	42.3	42.4	42.5	42.6	42.6	42.5	42.4	42.2	42.0	23	22.5	22.5	22.5	22.5	22.6	22.6	22.6	22.6	22.5	22.4	22.3	22.2	
BS 4023	3.8	206	13.6	13.4	13.4	13.4	13.5	13.7	13.8	13.9	13.9	13.7	13.5	13.2	-42	09.5	09.7	09.9	10.0	10.1	10.1	10.0	09.9	09.8	09.7	09.7	09.7	
Omega Carina	3.3	206	30.8	30.4	30.4	30.6	30.9	31.3	31.7	31.9	32.0	31.8	31.3	30.8	-70	04.4	04.6	04.8	05.0	05.1	05.1	05.1	05.0	04.8	04.7	04.6	04.6	
Lambda Hydra	3.6	207	15.0	14.8	14.8	14.8	14.9	15.0	15.0	15.0	15.0	14.9	14.7	14.5	-12	23.6	23.7	23.8	23.9	23.9	23.9	23.8	23.8	23.7	23.7	23.7	23.8	
Regulus	1.4	207	47.7	47.5	47.4	47.4	47.5	47.6	47.7	47.7	47.6	47.5	47.3	47.1	11	55.6	55.5</											

Name	Mag	Sidereal Hour Angle												Declination													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Turais	2.3	220	40.0	39.8	39.9	40.1	40.3	40.6	40.8	40.9	40.8	40.6	40.2	39.8	-59	18.3	18.5	18.7	18.8	18.9	18.9	18.8	18.7	18.5	18.4	18.4	18.5
Theta Hydra	3.9	221	17.9	17.7	17.7	17.8	17.9	18.0	18.0	18.0	17.9	17.7	17.5	17.3	2	16.8	16.7	16.7	16.7	16.7	16.7	16.7	16.8	16.8	16.8	16.7	16.6
Miaplacidus	1.7	221	40.2	40.0	40.1	40.4	40.8	41.3	41.6	41.7	41.7	41.4	40.9	40.4	-69	44.8	45.0	45.2	45.3	45.4	45.4	45.3	45.2	45.0	44.9	44.9	44.9
Canopus	3.4	222	11.9	11.7	11.8	12.0	12.2	12.5	12.7	12.8	12.7	12.5	12.1	11.7	-58	59.8	00.0	00.2	00.3	00.4	00.3	00.3	00.1	00.0	59.9	59.8	59.9
Suhail	2.2	222	55.3	55.1	55.1	55.2	55.4	55.6	55.7	55.7	55.6	55.4	55.2	54.9	-43	27.7	27.9	28.1	28.2	28.2	28.2	28.1	28.0	27.9	27.8	27.8	27.9
BS 3614	3.8	223	53.1	53.0	53.0	53.2	53.3	53.5	53.6	53.7	53.6	53.4	53.1	52.8	-47	07.6	07.8	08.0	08.1	08.1	08.1	08.0	07.9	07.8	07.7	07.7	07.7
Talitha Australis	3.6	223	56.8	56.6	56.6	56.7	56.8	57.0	57.1	57.0	56.9	56.7	56.4	56.0	47	07.3	07.4	07.5	07.6	07.6	07.6	07.5	07.4	07.3	07.2	07.1	07.1
Talitha	3.1	225	03.0	02.8	02.8	02.9	03.1	03.2	03.3	03.3	03.1	02.9	02.6	02.2	48	00.5	00.5	00.6	00.7	00.7	00.7	00.7	00.6	00.5	00.3	00.2	00.2
Zeta Hydra	3.1	226	02.3	02.2	02.2	02.2	02.3	02.4	02.5	02.4	02.3	02.2	01.9	01.7	5	54.9	54.8	54.8	54.8	54.8	54.8	54.8	54.9	54.9	54.9	54.8	54.7
BS 3571	3.8	226	11.1	11.0	11.0	11.3	11.6	11.8	12.0	12.1	12.0	11.8	11.4	11.0	-60	40.3	40.5	40.7	40.8	40.9	40.9	40.8	40.6	40.5	40.4	40.3	40.4
Epsilon Hydra	3.4	228	11.6	11.5	11.4	11.5	11.6	11.7	11.7	11.7	11.6	11.4	11.2	10.9	6	23.4	23.3	23.3	23.2	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.2
Delta Vela	1.9	228	45.7	45.6	45.6	45.8	46.1	46.3	46.4	46.5	46.3	46.1	45.8	45.4	-54	44.1	44.3	44.5	44.6	44.6	44.6	44.5	44.4	44.2	44.1	44.1	44.2
Asellus Australis	3.9	228	42.4	42.3	42.3	42.4	42.5	42.6	42.6	42.5	42.4	42.2	42.0	41.7	18	07.4	07.4	07.4	07.4	07.5	07.5	07.5	07.5	07.4	07.4	07.3	07.2
Alpha Pyxis	3.7	229	00.9	00.8	00.8	00.9	01.0	01.2	01.2	01.2	01.1	00.9	00.7	00.4	-33	12.8	13.0	13.1	13.2	13.2	13.2	13.1	13.0	12.9	12.8	12.8	12.9
BS 3445	3.8	229	46.2	46.1	46.1	46.3	46.5	46.7	46.8	46.8	46.7	46.5	46.2	45.9	-46	40.5	40.7	40.8	40.9	41.0	40.9	40.8	40.7	40.6	40.5	40.5	40.6
Omicron Velorum	3.6	229	51.7	51.6	51.7	51.8	52.1	52.3	52.4	52.4	52.3	52.1	51.8	51.5	-52	56.8	57.0	57.2	57.3	57.4	57.3	57.2	57.1	56.9	56.8	56.8	56.9
Muscida	3.4	232	15.2	15.0	15.0	15.2	15.4	15.7	15.7	15.7	15.4	15.1	14.7	14.2	60	41.4	41.4	41.6	41.6	41.7	41.6	41.5	41.4	41.3	41.2	41.1	41.1
Beta Volans	3.8	233	32.1	32.0	32.1	32.5	32.9	33.2	33.4	33.5	33.4	33.0	32.6	32.1	-66	09.6	09.8	10.0	10.1	10.2	10.1	10.0	09.9	09.7	09.6	09.6	09.7
BS 3314	3.9	233	28.7	28.6	28.6	28.6	28.8	28.8	28.9	28.8	28.7	28.5	28.3	28.0	-3	55.9	56.0	56.1	56.1	56.1	56.1	56.0	56.0	55.9	55.9	56.0	56.1
Avior	2.0	234	19.3	19.2	19.3	19.6	19.9	20.2	20.3	20.3	20.2	19.9	19.5	19.2	-59	31.9	32.1	32.3	32.4	32.4	32.4	32.3	32.1	32.0	31.9	31.9	32.0
Altarf	3.5	235	45.3	45.2	45.2	45.3	45.4	45.5	45.5	45.4	45.3	45.1	44.9	44.6	9	09.6	09.6	09.6	09.6	09.6	09.6	09.6	09.6	09.7	09.6	09.6	09.5
Suhail	1.8	237	32.8	32.8	32.8	33.0	33.2	33.4	33.5	33.5	33.3	33.1	32.8	32.5	-47	21.5	21.7	21.8	21.9	21.9	21.9	21.7	21.6	21.5	21.4	21.4	21.5
Rho Puppis	2.8	238	01.3	01.2	01.2	01.4	01.5	01.6	01.6	01.6	01.4	01.3	01.0	00.8	-24	19.6	19.7	19.8	19.9	19.9	19.8	19.7	19.6	19.5	19.5	19.5	19.6
Naos	2.2	239	01.6	01.5	01.6	01.7	01.9	02.0	02.1	02.1	01.9	01.7	01.4	01.2	-40	01.4	01.6	01.7	01.8	01.8	01.8	01.7	01.5	01.4	01.3	01.4	01.5
Chi Carina	3.5	240	44.7	44.7	44.8	45.0	45.3	45.5	45.6	45.6	45.4	45.2	44.8	44.5	-53	00.1	00.3	00.4	00.5	00.5	00.5	00.3	00.2	00.1	00.0	00.0	00.1
BS 3080	3.7	241	52.1	52.1	52.2	52.3	52.5	52.7	52.7	52.7	52.5	52.3	52.0	51.8	-40	35.7	35.8	36.0	36.1	36.1	36.0	35.9	35.7	35.6	35.6	35.6	35.7
Asmidiske	3.3	242	35.1	35.0	35.1	35.2	35.3	35.4	35.5	35.4	35.3	35.1	34.8	34.6	-24	52.7	52.9	53.0	53.0	53.0	52.9	52.9	52.7	52.6	52.6	52.7	52.8
Pollux	1.2	243	32.4	32.3	32.3	32.4	32.5	32.6	32.6	32.5	32.3	32.1	31.8	31.6	28	00.4	00.4	00.4	00.5	00.5	00.5	00.4	00.4	00.4	00.3	00.3	00.2
c Puppis	3.6	243	36.4	36.4	36.4	36.6	36.8	36.9	37.0	36.9	36.7	36.5	36.3	36.0	-37	59.2	59.3	59.5	59.5	59.5	59.5	59.4	59.2	59.1	59.0	59.1	59.2
Kappa Gemini	3.6	243	45.5	45.4	45.4	45.5	45.7	45.8	45.7	45.6	45.5	45.2	45.0	44.7	24	22.7	22.7	22.7	22.8	22.8	22.8	22.7	22.7	22.7	22.7	22.6	22.6
Alpha Monoceros	3.9	244	35.1	35.0	35.1	35.2	35.3	35.4	35.4	35.3	35.1	35.0	34.7	34.5	-9	34.1	34.2	34.3	34.3	34.3	34.3	34.2	34.1	34.1	34.1	34.1	34.2
Procyon	0.4	245	03.7	03.6	03.7	03.8	03.9	04.0	04.0	03.9	03.7	03.5	03.3	03.0	5	12.3	12.2	12.2	12.2	12.2	12.2	12.3	12.3	12.3	12.3	12.2	12.2
Castor	1.6	246	12.8	12.7	12.7	12.9	13.0	13.1	13.1	12.9	12.8	12.5	12.2	12.0	31	52.2	52.2	52.3	52.3	52.3	52.3	52.3	52.2	52.2	52.1	52.1	52.1
Sigma Puppis	3.3	247	37.2	37.2	37.3	37.5	37.7	37.8	37.9	37.8	37.6	37.4	37.1	36.9	-43	18.9	19.1	19.2	19.3	19.3	19.2	19.1	19.0	18.8	18.8	18.8	18.9
Gomeisa	2.9	248	05.7	05.7	05.7	05.8	05.9	06.0	06.0	05.9	05.7	05.5	05.3	05.0	8	16.4	16.4	16.3	16.3	16.4	16.4	16.4	16.4	16.5	16.4	16.4	16.3
Iota Gemini	3.8	248	26.1	26.0	26.0	26.2	26.3	26.4	26.3	26.2	26.0	25.8	25.5	25.3	27	46.9	46.9	47.0	47.0	47.0	47.0	47.0	46.9	46.9	46.9	46.8	46.8
Aludra	2.5	248	53.4	53.3	53.4	53.5	53.7	53.8	53.8	53.7	53.6	53.3	53.1	52.9	-29	19.0	19.2	19.3	19.3	19.3	19.3	19.1	19.0	18.9	18.9	18.9	19.0
Wasat	3.5	249	50.5	50.4	50.4	50.5	50.7	50.7	50.7	50.6	50.4	50.2	49.9	49.7	21	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.0	58.0	57.9
Lambda Gemini	3.6	250	21.2	21.1	21.2	21.3	21.4	21.5	21.4	21.3	21.1	20.9	20.7	20.4	16	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.5	31.5
Pi Puppis	2.7	250	38.1	38.1	38.2	38.4	38.5	38.7	38.7	38.6	38.4	38.2	37.9	37.7	-37	06.6	06.8	06.9	06.9	06.9	06.8	06.7	06.6	06.5	06.4	06.5	06.6
Gamma Volans	3.8	252	48.9	49.0	49.4	49.9	50.4	50.8	51.0	51.0	50.6	50.2	49.6	49.2	-70	30.6	30.8	30.9	31.0	30.9	30.9	30.7	30.5	30.4	30.4	30.4	30.5
Wezen	1.8	252	48.8	48.7	48.8	49.0	49.1	49.2	49.2	49.1	48.9	48.7	48.5	48.3	-26	24.3	24.4	24.5	24.6	24.5	24.5	24.3	24.2	24.1	24.1	24.2	24.3
Omicron Canis Major	3.0	254	09.1	09.1	09.2	09.3	09.5	09.6	09.5	09.4	09.3	09.1	08.8	08.6	-23	50.6	50.8	50.8	50.9	50.9	50.8	50.7	50.6	50.5	50.4	50.5	50.6
Sigma Canis Major	3.5	254	29.0	28.9	29.0	29.2	29.3	29.4	29.4	29.3	29.1	28.9	28.7	28.4	-27	56.7	56.8	56.9	57.0	57.0	56.9	56.8	56.6	56.5	56.5	56.6	56.7
Adara	1.5	255	15.4	15.4	15.5	15.6	15.8	15.9	15.9	15.8	15.6	15.4	15.1	14.9	-28	58.9	59.0	59.1	59.2	59.2	59.1	59.0	58.8	58.7	58.7	58.8	58.9
Theta Gemini	3.6	256	39.7	39.6	39.7	39.8	39.9	40.0	39.9	39.8	39.6	39.3	39.0	38.8	33	57.1	57.2	57.2	57.2	57.2	57.2	57.1	57.1	57.1	57.0	57.0	57.0
Tau Puppis	2.9	257	27.4	27.4	27.6	27.8	28.1	28.2	28.3	28.2	28.0	27.7	27.4	27.1	-50	37.4	37.5	37.6	37.7	37.7	37.6	37.4	37.3	37.1	37.1	37.1	37.3
Kappa Canis Major	3.5	257	27.4	27.4	27.5	27.7	27.8	27.9	27.9	27.8	27.6	27.4	27.1	26.9	-32	31.0	31.1	31.2	31.3	31.2	31.1	31.0	30.9</				



