

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	01.4	02.0	02.4	02.3	01.8	01.0	00.2	59.5	59.1	59.1	59.4	00.0	77	42.7	42.6	42.5	42.3	42.2	42.2	42.2	42.4	42.5	42.7	42.9	43.0	
Lambda Andromeda	3.9	5	26.8	26.9	27.0	26.9	26.7	26.4	26.1	25.9	25.7	25.7	25.7	25.9	46	32.1	32.0	31.8	31.7	31.7	31.7	31.8	31.9	32.1	32.2	32.3	32.4	
98 Aquarius	4.0	9	05.2	05.2	05.2	05.2	05.0	04.8	04.6	04.4	04.2	04.2	04.3	04.4	-20	01.8	01.8	01.8	01.7	01.6	01.5	01.4	01.3	01.3	01.3	01.4	01.5	
Gamma Tucana	4.0	10	27.4	27.6	27.6	27.6	27.3	27.0	26.6	26.3	26.1	26.1	26.2	26.5	-58	10.0	09.9	09.8	09.6	09.5	09.4	09.3	09.3	09.4	09.5	09.7	09.7	
Gamma Pices	3.7	10	32.3	32.4	32.4	32.3	32.1	31.9	31.7	31.5	31.4	31.4	31.4	31.5	3	21.3	21.3	21.2	21.3	21.3	21.4	21.5	21.6	21.7	21.7	21.7	21.7	
Iota Grus	3.9	12	13.7	13.8	13.8	13.7	13.5	13.3	13.0	12.7	12.5	12.5	12.6	12.8	-45	10.7	10.6	10.5	10.4	10.2	10.1	10.1	10.1	10.1	10.2	10.3	10.4	
88 Aquarius	3.7	12	27.9	27.9	27.9	27.9	27.7	27.5	27.2	27.0	26.9	26.9	27.0	27.1	-21	06.1	06.1	06.1	06.0	05.9	05.8	05.7	05.6	05.6	05.7	05.7	05.8	
Markab	2.5	13	38.8	38.8	38.8	38.8	38.6	38.4	38.1	37.9	37.8	37.8	37.9	38.0	15	16.7	16.6	16.6	16.5	16.6	16.6	16.7	16.9	17.0	17.0	17.1	17.0	
Scheat	2.5	13	53.8	53.9	53.9	53.8	53.6	53.4	53.1	52.9	52.8	52.8	52.9	53.0	28	09.5	09.4	09.3	09.2	09.2	09.3	09.4	09.5	09.6	09.7	09.8	09.8	
Omicron Andromeda	3.6	14	22.1	22.2	22.2	22.1	21.9	21.6	21.4	21.1	21.0	21.0	21.1	21.3	42	24.1	24.0	23.9	23.8	23.7	23.7	23.8	24.0	24.2	24.3	24.4	24.4	
Fomalhaut	1.2	15	24.5	24.6	24.6	24.5	24.3	24.0	23.8	23.6	23.5	23.4	23.5	23.7	-29	33.2	33.2	33.1	33.0	32.9	32.8	32.7	32.7	32.7	32.8	32.9	32.9	
Skat	3.3	16	09.9	09.9	09.9	09.8	09.7	09.4	09.2	09.0	08.9	08.9	09.0	09.1	-15	45.1	45.1	45.0	45.0	44.9	44.8	44.7	44.6	44.6	44.7	44.7	44.7	
Lambda Aquarius	3.8	16	40.6	40.6	40.6	40.5	40.3	40.1	39.9	39.7	39.6	39.6	39.7	39.8	-7	30.6	30.6	30.6	30.5	30.5	30.4	30.3	30.2	30.2	30.2	30.2	30.2	
Sadalbari	3.5	17	20.4	20.5	20.5	20.4	20.2	20.0	19.8	19.6	19.5	19.5	19.6	19.7	24	40.5	40.4	40.3	40.2	40.2	40.3	40.4	40.5	40.7	40.8	40.8	40.8	
Iota Cepheus	3.5	17	27.8	28.1	28.2	28.0	27.7	27.2	26.8	26.4	26.3	26.4	26.6	26.9	66	16.5	16.4	16.3	16.1	16.0	16.1	16.1	16.3	16.5	16.7	16.8	16.9	
Epsilon Grus	3.5	17	40.1	40.2	40.2	40.1	39.9	39.5	39.2	38.9	38.8	38.8	39.0	39.2	-51	15.0	14.9	14.8	14.7	14.5	14.4	14.4	14.4	14.5	14.6	14.7	14.7	
Lambda Pegasus	4.0	18	12.5	12.6	12.6	12.5	12.3	12.1	11.9	11.7	11.6	11.6	11.7	11.8	23	38.3	38.2	38.1	38.1	38.1	38.1	38.2	38.4	38.5	38.6	38.6	38.6	
Matar	2.9	19	05.7	05.8	05.8	05.7	05.5	05.3	05.0	04.8	04.7	04.7	04.8	05.0	30	17.6	17.5	17.4	17.4	17.4	17.4	17.5	17.7	17.8	17.9	18.0	18.0	
Beta Grus	2.1	19	08.5	08.6	08.6	08.5	08.2	07.9	07.6	07.4	07.3	07.3	07.4	07.6	-46	49.1	49.0	48.9	48.8	48.6	48.5	48.5	48.5	48.6	48.7	48.8	48.8	
Homam	3.4	19	28.3	28.3	28.3	28.2	28.0	27.8	27.6	27.4	27.3	27.3	27.4	27.5	10	54.1	54.1	54.0	54.0	54.0	54.1	54.2	54.3	54.4	54.5	54.5	54.5	
Alpha Lacerta	3.8	22	02.6	02.7	02.7	02.5	02.3	02.0	01.7	01.5	01.4	01.4	01.6	01.8	50	21.3	21.2	21.1	20.9	20.9	20.9	21.0	21.2	21.4	21.5	21.6	21.7	
Delta Grus	4.0	22	29.5	29.5	29.5	29.4	29.1	28.9	28.6	28.3	28.2	28.3	28.4	28.6	-43	25.8	25.7	25.6	25.5	25.4	25.3	25.2	25.2	25.3	25.4	25.5	25.5	
Zeta Aquarius	3.7	22	37.4	37.5	37.5	37.4	37.2	37.0	36.7	36.6	36.5	36.5	36.6	36.7	0	02.9	02.9	02.9	02.9	02.9	03.0	03.1	03.2	03.3	03.3	03.3	03.3	
Sadachbia	3.9	24	25.1	25.1	25.1	25.0	24.8	24.5	24.3	24.2	24.1	24.1	24.2	24.3	-1	19.2	19.2	19.2	19.2	19.2	19.1	19.0	18.9	18.8	18.8	18.8	18.9	
Alpha Tucana	2.9	25	09.5	09.6	09.6	09.4	09.1	08.7	08.3	08.0	07.9	08.0	08.2	08.5	-60	11.8	11.7	11.5	11.4	11.2	11.1	11.1	11.2	11.3	11.4	11.5	11.5	
Zeta Cepheus	3.3	27	10.5	10.6	10.6	10.5	10.1	09.8	09.4	09.2	09.2	09.3	09.5	09.7	58	16.3	16.2	16.0	15.9	15.8	15.9	16.0	16.2	16.4	16.5	16.6	16.6	
Baham	3.5	27	17.1	17.2	17.1	17.0	16.8	16.6	16.4	16.2	16.2	16.2	16.3	16.4	6	15.9	15.8	15.8	15.8	15.8	15.9	16.0	16.1	16.2	16.2	16.2	16.2	
Alnair	1.8	27	44.4	44.5	44.4	44.3	44.0	43.7	43.4	43.2	43.1	43.1	43.3	43.5	-46	53.9	53.9	53.7	53.6	53.5	53.4	53.4	53.4	53.5	53.6	53.7	53.7	
Iota Pegasus	3.8	28	05.7	05.8	05.7	05.6	05.4	05.2	04.9	04.8	04.7	04.8	04.9	05.0	25	24.8	24.7	24.6	24.5	24.5	24.6	24.7	24.9	25.0	25.1	25.1	25.1	
Sadal Melik	2.9	28	23.2	23.2	23.2	23.1	22.9	22.7	22.5	22.3	22.2	22.3	22.3	22.5	-0	15.3	15.3	15.3	15.3	15.3	15.2	15.1	15.0	14.9	14.9	14.9	14.9	
Al Dhanab	3.0	31	19.4	19.4	19.4	19.2	19.0	18.7	18.4	18.3	18.2	18.2	18.4	18.5	-37	18.2	18.2	18.1	18.0	17.9	17.8	17.7	17.7	17.8	17.9	17.9	18.0	
Deneb Algiedi	2.9	33	03.7	03.7	03.6	03.5	03.3	03.0	02.8	02.7	02.6	02.6	02.8	02.9	-16	04.0	04.0	04.0	03.9	03.9	03.8	03.7	03.7	03.6	03.7	03.7	03.7	
Enif	2.4	33	47.6	47.7	47.6	47.5	47.3	47.0	46.8	46.7	46.6	46.7	46.8	46.9	9	56.3	56.2	56.1	56.1	56.2	56.3	56.4	56.5	56.6	56.6	56.6	56.6	
Nu Octans	3.7	34	17.8	18.0	17.8	17.3	16.6	15.7	15.0	14.5	14.4	14.7	15.3	16.0	-77	20.0	19.8	19.7	19.5	19.4	19.3	19.4	19.5	19.6	19.7	19.8	19.8	
Nashira	3.7	34	47.9	47.9	47.8	47.7	47.5	47.2	47.0	46.9	46.8	46.9	47.0	47.1	-16	36.1	36.1	36.1	36.1	36.0	35.9	35.8	35.8	35.8	35.8	35.8	35.9	
Rho Cygnus	4.0	36	23.0	23.1	23.0	22.9	22.6	22.3	22.1	21.9	21.9	22.0	22.2	22.4	45	39.3	39.1	39.0	38.9	38.9	39.0	39.1	39.3	39.4	39.6	39.6	39.6	
Sadal Suud	2.9	36	56.4	56.4	56.3	56.2	56.0	55.7	55.5	55.4	55.3	55.4	55.5	55.6	-5	30.7	30.7	30.8	30.7	30.7	30.6	30.5	30.4	30.4	30.4	30.4	30.4	
Alfirk	3.2	37	48.2	48.4	48.3	48.0	47.5	46.9	46.5	46.3	46.3	46.6	47.0	47.5	70	37.4	37.3	37.1	37.0	37.0	37.0	37.1	37.3	37.5	37.7	37.8	37.8	
Zeta Capricornus	3.8	38	09.0	08.9	08.9	08.7	08.5	08.2	08.0	07.9	07.8	07.9	08.0	08.1	-22	21.2	21.2	21.2	21.1	21.0	20.9	20.9	20.9	20.9	20.9	20.9	21.0	21.0
Alderamin	2.5	40	17.0	17.1	17.0	16.8	16.4	16.0	15.7	15.5	15.5	15.7	16.0	16.4	62	38.8	38.6	38.5	38.4	38.3	38.4	38.5	38.7	38.9	39.1	39.1	39.1	
Kitalpha	3.9	40	52.9	52.9	52.9	52.7	52.5	52.3	52.1	51.9	51.9	52.0	52.1	52.2	5	18.3	18.2	18.2	18.2	18.2	18.3	18.4	18.5	18.6	18.6	18.6	18.6	
Tau Cygnus	3.7	41	10.4	10.5	10.4	10.2	10.0	09.7	09.5	09.3	09.3	09.4	09.6	09.8	38	06.3	06.2	06.1	06.0	06.0	06.1	06.2	06.4	06.5	06.7	06.7	06.7	
Zeta Cygnus	3.2	41	37.7	37.7	37.7	37.5	37.3	37.0	36.8	36.7	36.7	36.8	36.9	37.0	30	17.1	16.9	16.8	16.8	16.8	16.9	17.0	17.2	17.3	17.4	17.4	17.4	
Xi Cygnus	3.7	43	39.1	39.1	39.0	38.8	38.6	38.3	38.1	37.9	38.0	38.1	38.3	38.4	43	59.1	58.9	58.8	58.7	58.7	58.8	59.0	59.1	59.3	59.4	59.4	59.4	
Nu Cygnus	3.9	45	35.3	35.3	35.2	35.0	34.7	34.5	34.3	34.1	34.2	34.3	34.5	34.6	41	13.3	13.2	13.0	13.0	13.0	13.1	13.2	13.4	13.5	13.6	13.7	13.6	
Beta Indus	3.7	46	03.1	03.0	02.9	02.6	02.2	01.8	01.5	01.3	01.3	01.4	01.7	01.9	-58	24.3	24.2	24.0	23.9	23.8	23.8	23.8	23.9	24.0	24.1	24.2	24.1	
Albali	3.8	47	54.4	54.4	54.3	54.1	53.9	53.6	53.4	53.3	53.3	53.4	53.5	53.6	-9	26.8	26.8	26.8	26.8	26.7	26.6	26.5	26.5	26.5	26.5	26.5	26.5	
Gienah Cygni	2.5	48	19.1	19.1	19.0	18.8	18.5	18.3	18.1	18.0	18.0	18.1	18.3	18.4	34	01.4	01.3	01.1	01.1	01.1	01.2	01.3	01.5	01.6	01.7	01.8		

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		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	00.5	00.4	00.3	00.1	59.9	59.7	59.5	59.4	59.4	59.5	59.7	59.7	-0	46.8	46.9	46.9	46.9	46.8	46.8	46.7	46.6	46.5	46.5	46.6
Delta Pavonis	3.6	57	30.7	30.5	30.2	29.8	29.3	28.8	28.5	28.3	28.3	28.6	29.0	29.3	-66	08.8	08.7	08.6	08.5	08.4	08.4	08.5	08.6	08.7	08.8	08.8
Epsilon Pavonis	4.0	59	29.6	29.5	29.1	28.5	27.8	27.2	26.7	26.5	26.7	27.1	27.6	28.0	-72	52.5	52.3	52.2	52.1	52.0	52.0	52.1	52.2	52.4	52.5	52.4
Gamma Sagitta	3.5	60	10.1	10.0	09.9	09.7	09.5	09.3	09.1	09.0	09.1	09.2	09.4	09.5	19	31.8	31.7	31.7	31.6	31.7	31.8	31.9	32.0	32.1	32.2	32.1
Eta Cygnus	3.9	60	48.3	48.2	48.1	47.9	47.6	47.4	47.2	47.2	47.2	47.4	47.6	47.7	35	07.3	07.1	07.0	07.0	07.0	07.1	07.3	07.5	07.6	07.6	07.7
Aishain	3.7	61	00.8	00.8	00.6	00.4	00.2	00.0	59.9	59.8	59.8	59.9	00.1	00.1	6	26.5	26.4	26.4	26.4	26.4	26.5	26.6	26.7	26.8	26.8	26.8
Eta Aquila	3.9	61	43.1	43.0	42.9	42.7	42.5	42.2	42.1	42.0	42.0	42.2	42.3	42.4	1	02.5	02.4	02.4	02.4	02.5	02.5	02.6	02.7	02.8	02.8	02.7
Altair	0.9	62	08.9	08.8	08.6	08.4	08.2	08.0	07.9	07.8	07.8	07.9	08.1	08.2	8	54.3	54.2	54.2	54.2	54.2	54.3	54.4	54.5	54.6	54.6	54.6
Tyl	3.8	62	59.0	59.0	58.8	58.3	57.8	57.3	57.1	57.1	57.4	57.8	58.3	58.8	70	18.3	18.1	18.0	17.9	17.9	18.0	18.2	18.4	18.5	18.6	18.7
Kaus Media	3.8	63	00.6	00.6	00.4	00.2	00.0	59.8	59.6	59.6	59.6	59.7	59.9	00.0	18	34.2	34.1	34.0	34.0	34.0	34.1	34.2	34.4	34.4	34.5	34.4
Tarazed	2.7	63	17.0	16.9	16.7	16.5	16.3	16.1	16.0	15.9	15.9	16.1	16.2	16.3	10	38.9	38.8	38.7	38.7	38.8	38.9	39.0	39.1	39.1	39.2	39.1
Delta Cygnus	2.9	63	39.6	39.5	39.4	39.1	38.8	38.6	38.4	38.4	38.5	38.7	38.9	39.1	45	10.0	09.8	09.7	09.6	09.7	09.8	09.9	10.1	10.3	10.3	10.3
Albireo	3.1	67	11.5	11.4	11.3	11.1	10.8	10.6	10.5	10.4	10.5	10.6	10.8	10.9	27	59.4	59.3	59.2	59.1	59.2	59.3	59.5	59.6	59.7	59.7	59.7
Iota Cygnus	3.8	67	29.9	29.8	29.6	29.3	29.0	28.8	28.6	28.6	28.8	29.0	29.2	29.4	51	45.6	45.5	45.4	45.3	45.3	45.5	45.6	45.8	46.0	46.0	45.9
Delta Aquila	3.4	68	27.8	27.7	27.6	27.4	27.1	26.9	26.8	26.7	26.8	26.9	27.1	27.1	3	08.6	08.5	08.5	08.5	08.5	08.6	08.7	08.8	08.8	08.9	08.8
Rukbat	4.0	68	48.4	48.3	48.1	47.8	47.5	47.2	47.1	47.0	47.0	47.2	47.4	47.5	-40	35.4	35.3	35.2	35.2	35.1	35.1	35.2	35.2	35.3	35.3	35.3
Arkab	4.0	69	06.6	06.5	06.3	06.0	05.7	05.4	05.2	05.1	05.2	05.4	05.6	05.7	-44	25.9	25.9	25.8	25.7	25.7	25.7	25.7	25.8	25.9	25.9	25.9
Rho Sagittarius	3.9	69	23.7	23.6	23.5	23.2	23.0	22.8	22.6	22.6	22.6	22.7	22.9	23.0	-17	49.2	49.2	49.2	49.2	49.1	49.1	49.1	49.0	49.0	49.1	49.1
Kappa Cygnus	3.8	70	39.4	39.3	39.1	38.8	38.5	38.2	38.1	38.1	38.3	38.5	38.8	39.0	53	23.7	23.6	23.4	23.4	23.4	23.6	23.7	23.9	24.0	24.1	24.1
Nodus Secundus	3.1	71	52.5	52.4	52.1	51.7	51.2	50.9	50.7	50.8	51.1	51.5	52.0	52.3	67	41.2	41.0	40.9	40.9	40.9	41.0	41.2	41.4	41.5	41.6	41.5
Albaldah	2.9	72	22.1	22.0	21.8	21.5	21.3	21.1	21.0	20.9	20.9	21.1	21.2	21.3	-21	00.0	00.0	00.0	00.0	00.0	59.9	59.9	59.9	59.9	59.9	59.9
Tau Sagittarius	3.3	73	03.9	03.7	03.6	03.3	03.1	02.8	02.7	02.6	02.7	02.8	03.0	03.0	-27	38.9	38.9	38.9	38.9	38.8	38.8	38.8	38.8	38.8	38.9	38.8
Al Thalimain	3.4	73	16.0	15.9	15.8	15.5	15.3	15.1	15.0	15.0	15.0	15.1	15.3	15.3	-4	51.6	51.7	51.7	51.7	51.7	51.6	51.5	51.5	51.4	51.4	51.5
Deneb el Okab	3.0	73	30.0	29.9	29.8	29.6	29.3	29.1	29.0	29.0	29.1	29.2	29.3	29.4	13	53.1	53.0	53.0	52.9	53.0	53.1	53.2	53.3	53.4	53.4	53.4
Omicron Sagittarius	3.8	73	38.2	38.1	37.9	37.7	37.4	37.2	37.1	37.0	37.1	37.2	37.3	37.4	-21	43.2	43.2	43.2	43.2	43.1	43.1	43.1	43.1	43.1	43.1	43.1
Ascella	2.6	74	08.6	08.4	08.2	08.0	07.7	07.5	07.4	07.3	07.4	07.5	07.7	07.7	-29	51.5	51.5	51.5	51.4	51.4	51.4	51.4	51.4	51.5	51.5	51.5
Sulafat	3.3	75	08.8	08.7	08.5	08.3	08.0	07.8	07.7	07.7	07.8	08.0	08.1	08.3	32	42.6	42.5	42.4	42.3	42.4	42.5	42.7	42.8	42.9	43.0	42.9
Xi Sagittarius	3.5	75	22.5	22.4	22.2	22.0	21.8	21.5	21.4	21.4	21.4	21.6	21.7	21.8	-21	05.2	05.2	05.2	05.2	05.2	05.1	05.1	05.1	05.1	05.1	05.1
Nunki	2.1	75	59.1	58.9	58.7	58.5	58.2	58.0	57.9	57.8	57.9	58.0	58.2	58.3	-26	16.7	16.7	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
Sheliak	3.5	77	21.8	21.7	21.5	21.3	21.1	20.9	20.8	20.8	20.9	21.0	21.2	21.3	33	22.8	22.7	22.6	22.5	22.6	22.7	22.9	23.0	23.1	23.2	23.1
Phi Sagittarius	3.2	78	23.1	23.0	22.8	22.5	22.3	22.1	21.9	21.9	21.9	22.1	22.2	22.3	-26	58.5	58.5	58.5	58.4	58.4	58.4	58.4	58.4	58.4	58.4	58.4
Vega	0.0	80	39.6	39.5	39.3	39.0	38.8	38.6	38.5	38.5	38.6	38.8	39.0	39.1	38	47.9	47.7	47.6	47.6	47.7	47.8	48.0	48.1	48.2	48.2	48.1
Alpha Scutum	3.9	81	01.4	01.3	01.1	00.9	00.6	00.4	00.3	00.3	00.4	00.5	00.6	00.7	-8	14.0	14.0	14.0	14.0	14.0	13.9	13.9	13.8	13.8	13.8	13.8
Kaus Borealis	2.8	82	48.5	48.4	48.2	47.9	47.7	47.5	47.4	47.3	47.4	47.5	47.7	47.7	-25	24.7	24.7	24.7	24.7	24.7	24.6	24.6	24.7	24.7	24.7	24.7
Alpha Telescopium	3.5	83	01.1	00.9	00.7	00.4	00.1	59.8	59.7	59.6	59.7	59.9	00.1	00.2	-45	57.5	57.4	57.4	57.4	57.4	57.4	57.4	57.5	57.6	57.6	57.5
Kaus Australis	1.8	83	44.6	44.4	44.2	43.9	43.7	43.5	43.3	43.3	43.4	43.6	43.7	43.8	-34	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.6	22.6	22.5
109 Hercules	3.9	83	56.4	56.3	56.1	55.8	55.6	55.5	55.4	55.4	55.5	55.6	55.8	55.8	21	46.7	46.5	46.5	46.5	46.5	46.6	46.8	46.9	46.9	47.0	46.9
Eta Serpens	3.3	84	30.4	30.2	30.0	29.8	29.6	29.4	29.3	29.3	29.4	29.5	29.7	29.7	-2	53.6	53.7	53.7	53.7	53.6	53.6	53.5	53.5	53.4	53.4	53.5
Chi Draco	3.6	84	48.9	48.7	48.3	47.7	47.1	46.8	46.7	47.0	47.5	48.0	48.6	49.0	72	44.4	44.2	44.1	44.1	44.1	44.3	44.5	44.6	44.7	44.8	44.7
Kaus Media	2.7	84	32.7	32.6	32.3	32.1	31.8	31.6	31.5	31.5	31.6	31.7	31.9	31.9	-29	49.2	49.2	49.2	49.1	49.1	49.1	49.1	49.2	49.2	49.2	49.1
Eta Sagittarius	3.1	85	22.5	22.4	22.1	21.8	21.6	21.4	21.2	21.2	21.3	21.5	21.6	21.7	-36	45.3	45.3	45.2	45.2	45.2	45.2	45.3	45.3	45.3	45.3	45.3
Mu Sagittarius	3.8	86	22.0	21.8	21.6	21.4	21.2	21.0	20.9	20.8	20.9	21.1	21.2	21.2	-21	03.2	03.2	03.2	03.2	03.2	03.1	03.1	03.1	03.1	03.1	03.1
Omicron Hercules	3.8	87	59.5	59.3	59.1	58.9	58.7	58.5	58.4	58.5	58.6	58.7	58.9	59.0	28	46.0	45.8	45.7	45.7	45.8	45.9	46.1	46.2	46.3	46.3	46.2
Omicron Ophiuchus	3.7	88	00.6	00.5	00.3	00.1	59.9	59.7	59.6	59.6	59.7	59.9	00.0	00.0	9	34.1	34.0	33.9	33.9	34.0	34.1	34.2	34.2	34.3	34.3	34.2
Theta Ara	3.7	88	05.5	05.3	05.0	04.7	04.4	04.1	04.0	04.0	04.1	04.3	04.5	04.6	-50	05.2	05.2	05.1	05.1	05.1	05.2	05.2	05.3	05.4	05.4	05.3
El Nasl	3.6	88	20.5	20.3	20.1	19.8	19.6	19.4	19.2	19.2	19.3	19.5	19.6	19.7	-30	25.3	25.2	25.2	25.2	25.2	25.2	25.3	25.3	25.3	25.3	25.2
Nu Ophiuchus	3.3	90	04.0	03.8	03.6	03.4	03.2	03.0	02.9	02.9	03.0	03.1	03.3	03.3	-9	46.4	46.4	46.4	46.4	46.4	46.4	46.3	46.3	46.3	46.3	46.3
Xi Hercules	3.7	90	26.2	26.0	25.8	25.6	25.4	25.2	25.1	25.2	25.3	25.5	25.6	25.7	29	14.9	14.7	14.7	14.7	14.7	14.9	15.0	15.1	15.2	15.2	15.1
Eltanin	2.2	90	46.8	46.6	46.4	46.1	45.8	45.6	45.6	45.7	45.9	46.1	46.4	46.5	51	29.3	29.1	29.0	29.0	29.1	29.3	29.4	29.6	29.7	29.7	29.6
Theta Hercules	3.8	90	49.8	49.6	49.4	49.2	48.9	48.8	48.7	48.8	48.9	49.1	49.3	49.4	37	15.0	14.9	14.8	14.8							

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		
Sargas	1.9	95	26.3	26.1	25.8	25.5	25.2	25.0	24.9	25.0	25.1	25.3	25.4	25.5	-43	00.2	00.1	00.1	00.1	00.1	00.1	00.2	00.2	00.3	00.3	00.3	00.2
Ras Alhague	2.1	96	07.1	06.9	06.7	06.5	06.3	06.1	06.1	06.1	06.2	06.4	06.5	06.5	12	33.1	33.0	33.0	33.0	33.0	33.0	33.1	33.2	33.3	33.4	33.4	33.3
Shaula	1.6	96	22.7	22.5	22.2	22.0	21.7	21.5	21.4	21.5	21.6	21.7	21.9	21.9	-37	06.6	06.6	06.6	06.6	06.6	06.6	06.6	06.7	06.7	06.7	06.7	06.6
Choo	2.9	96	47.4	47.2	46.9	46.5	46.2	46.0	45.9	45.9	46.1	46.3	46.5	46.5	-49	53.0	52.9	52.9	52.9	52.9	52.9	53.0	53.1	53.1	53.2	53.2	53.0
Delta Ara	3.6	96	56.1	55.8	55.4	55.0	54.6	54.3	54.2	54.2	54.5	54.7	55.0	55.0	-60	41.4	41.3	41.3	41.3	41.3	41.4	41.5	41.6	41.7	41.7	41.7	41.5
Lesath	2.7	97	05.4	05.2	04.9	04.6	04.4	04.2	04.1	04.1	04.2	04.4	04.5	04.6	-37	18.2	18.1	18.1	18.2	18.2	18.2	18.3	18.3	18.3	18.3	18.2	
Rastaban	2.8	97	19.5	19.4	19.1	18.8	18.5	18.4	18.3	18.5	18.7	18.9	19.2	19.3	52	17.5	17.4	17.3	17.3	17.4	17.5	17.7	17.8	17.8	17.9	17.9	17.8
Gamma Ara	3.3	98	22.8	22.5	22.2	21.8	21.4	21.2	21.1	21.1	21.3	21.6	21.8	21.8	-56	23.1	23.1	23.1	23.1	23.1	23.1	23.3	23.4	23.4	23.4	23.4	23.3
Beta Ara	2.8	98	24.4	24.2	23.8	23.4	23.1	22.8	22.7	22.8	23.0	23.2	23.4	23.5	-55	32.3	32.2	32.2	32.2	32.2	32.3	32.3	32.4	32.5	32.6	32.6	32.5
Theta Ophiuchus	3.3	99	17.9	17.7	17.5	17.3	17.0	16.9	16.8	16.8	16.9	17.1	17.2	17.2	-25	00.6	00.6	00.6	00.6	00.6	00.6	00.6	00.6	00.6	00.6	00.6	00.6
Pi Hercules	3.1	101	07.8	07.6	07.3	07.1	06.9	06.8	06.7	06.8	07.0	07.2	07.3	07.4	36	47.7	47.5	47.5	47.5	47.6	47.7	47.9	48.0	48.0	48.0	48.0	47.8
Sarin	3.1	101	06.7	06.5	06.3	06.1	05.9	05.7	05.7	05.8	05.9	06.1	06.2	06.2	24	49.5	49.4	49.3	49.3	49.4	49.5	49.6	49.7	49.7	49.8	49.8	49.7
Ras Algethi	2.7	101	11.5	11.3	11.1	10.9	10.7	10.6	10.6	10.6	10.7	10.9	11.0	11.0	14	22.6	22.5	22.4	22.4	22.5	22.6	22.7	22.8	22.8	22.8	22.8	22.7
Eta Scorpius	3.3	101	43.8	43.6	43.3	43.0	42.7	42.5	42.4	42.5	42.6	42.8	43.0	43.0	-43	15.2	15.1	15.1	15.1	15.2	15.2	15.3	15.4	15.4	15.4	15.3	15.2
Sabik	2.4	102	13.2	13.0	12.8	12.6	12.4	12.2	12.2	12.2	12.3	12.4	12.5	12.5	-15	44.3	44.4	44.4	44.4	44.4	44.4	44.3	44.3	44.3	44.3	44.3	44.3
Aldhibah	3.2	102	48.4	48.1	47.7	47.3	47.0	46.8	46.9	47.1	47.5	47.9	48.3	48.4	65	41.9	41.7	41.6	41.7	41.8	41.9	42.1	42.2	42.2	42.3	42.2	42.0
Epsilon Hercules	3.9	104	48.4	48.2	48.0	47.7	47.6	47.4	47.4	47.5	47.6	47.8	47.9	48.0	30	54.4	54.3	54.3	54.3	54.4	54.5	54.6	54.7	54.8	54.8	54.7	54.6
Zeta Ara	3.1	105	04.7	04.3	04.0	03.6	03.3	03.0	03.0	03.1	03.3	03.5	03.7	03.7	-56	00.4	00.3	00.3	00.4	00.4	00.5	00.6	00.7	00.7	00.7	00.6	00.5
Kappa Ophiuchus	3.2	105	25.8	25.7	25.4	25.2	25.1	24.9	24.9	24.9	25.1	25.2	25.3	25.3	9	21.4	21.3	21.2	21.2	21.3	21.3	21.4	21.5	21.5	21.5	21.5	21.4
Zeta Scorpius	3.6	106	07.6	07.3	07.0	06.7	06.5	06.3	06.3	06.3	06.5	06.6	06.8	06.8	-42	22.8	22.8	22.8	22.8	22.9	22.9	23.0	23.0	23.0	23.0	23.0	22.9
Mu2 Scorpius	3.6	106	41.8	41.5	41.3	41.0	40.8	40.6	40.6	40.6	40.7	40.9	41.0	41.0	-38	02.2	02.2	02.2	02.2	02.2	02.3	02.3	02.4	02.4	02.4	02.3	02.3
Mu1 Scorpius	3.0	106	48.8	48.5	48.2	48.0	47.7	47.6	47.5	47.6	47.7	47.9	48.0	48.0	-38	04.0	04.0	04.0	04.0	04.0	04.1	04.1	04.2	04.2	04.2	04.1	04.1
Epsilon Scorpius	2.3	107	14.9	14.7	14.5	14.2	14.0	13.8	13.8	13.8	13.9	14.1	14.2	14.2	-34	18.8	18.8	18.8	18.9	18.9	18.9	19.0	19.0	19.0	19.0	18.9	18.9
Eta Ara	3.8	107	16.5	16.1	15.7	15.3	14.9	14.7	14.7	14.8	15.0	15.3	15.5	15.5	-59	03.6	03.5	03.5	03.6	03.7	03.8	03.9	03.9	04.0	03.9	03.9	03.7
Atria	1.9	107	29.5	29.0	28.5	27.9	27.4	27.2	27.1	27.3	27.6	28.0	28.3	28.3	-69	02.8	02.7	02.7	02.7	02.8	03.0	03.1	03.2	03.2	03.2	03.1	03.0
Eta Hercules	3.5	109	10.1	09.9	09.7	09.4	09.2	09.1	09.1	09.2	09.4	09.6	09.7	09.8	38	53.8	53.7	53.6	53.6	53.8	53.9	54.0	54.1	54.2	54.2	54.1	53.9
Zeta Hercules	2.9	109	33.6	33.3	33.1	32.9	32.7	32.6	32.6	32.7	32.8	33.0	33.1	33.2	31	34.7	34.6	34.5	34.6	34.7	34.8	34.9	35.0	35.1	35.0	35.0	34.8
Zeta Ophiuchus	2.6	110	31.9	31.7	31.5	31.3	31.1	31.0	30.9	31.0	31.1	31.2	31.3	31.3	-10	35.5	35.5	35.6	35.6	35.6	35.6	35.5	35.5	35.5	35.5	35.5	35.5
Tau Scorpius	2.8	110	49.6	49.4	49.2	48.9	48.7	48.6	48.5	48.6	48.7	48.9	49.0	48.9	-28	14.4	14.4	14.4	14.5	14.5	14.5	14.6	14.6	14.6	14.5	14.5	14.5
Gamma Apus	3.9	111	08.4	07.5	06.5	05.5	04.7	04.3	04.3	04.7	05.4	06.2	06.7	06.7	-78	55.2	55.1	55.1	55.2	55.3	55.4	55.6	55.7	55.7	55.7	55.6	55.4
Marfik	3.9	112	06.5	06.3	06.1	05.9	05.7	05.6	05.6	05.6	05.8	05.9	06.0	06.0	1	57.4	57.3	57.3	57.3	57.3	57.4	57.4	57.5	57.5	57.5	57.5	57.4
Kornephoros	2.8	112	18.4	18.2	18.0	17.8	17.6	17.5	17.5	17.6	17.7	17.9	18.0	18.0	21	27.7	27.6	27.5	27.5	27.6	27.7	27.8	27.9	27.9	27.9	27.8	27.7
Antares	1.1	112	26.9	26.7	26.5	26.2	26.0	25.9	25.9	25.9	26.0	26.2	26.3	26.2	-26	27.5	27.5	27.5	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
Eta Draco	2.7	113	58.1	57.8	57.4	57.0	56.8	56.7	56.8	57.0	57.4	57.7	58.0	58.0	61	29.0	28.8	28.8	28.8	28.8	29.0	29.1	29.3	29.4	29.4	29.4	29.2
Gamma Hercules	3.7	114	22.7	22.5	22.3	22.1	21.9	21.8	21.8	21.9	22.0	22.2	22.3	22.2	19	07.4	07.2	07.2	07.2	07.3	07.4	07.5	07.6	07.6	07.6	07.5	07.4
Alniyat	2.9	114	30.3	30.1	29.8	29.6	29.4	29.3	29.3	29.3	29.5	29.6	29.7	29.6	-25	37.3	37.3	37.3	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4
Tau Hercules	3.9	114	58.3	58.1	57.8	57.6	57.4	57.3	57.3	57.5	57.7	57.9	58.1	58.1	46	16.9	16.7	16.7	16.7	16.8	17.0	17.1	17.2	17.3	17.2	17.1	16.9
Yed Posterior	3.2	115	14.9	14.7	14.5	14.2	14.1	14.0	14.0	14.0	14.1	14.3	14.3	14.3	-4	43.4	43.4	43.5	43.5	43.5	43.4	43.4	43.4	43.4	43.3	43.3	43.4
Atria	3.9	115	50.7	50.2	49.8	49.3	49.0	48.8	48.8	49.0	49.2	49.5	49.7	49.7	-63	42.8	42.8	42.8	42.9	43.0	43.1	43.2	43.3	43.3	43.3	43.1	43.0
Yed Prior	2.7	116	14.6	14.4	14.2	14.0	13.8	13.7	13.7	13.8	13.9	14.0	14.1	14.0	-3	43.6	43.7	43.7	43.7	43.7	43.7	43.6	43.6	43.5	43.5	43.6	43.6
Graffias	2.6	118	27.1	26.9	26.6	26.4	26.2	26.1	26.1	26.2	26.3	26.4	26.5	26.5	-19	50.3	50.4	50.4	50.5	50.5	50.5	50.5	50.5	50.4	50.4	50.4	50.4
Dschubba	2.3	119	43.4	43.2	43.0	42.7	42.6	42.5	42.5	42.5	42.7	42.8	42.8	42.8	-22	39.4	39.4	39.5	39.5	39.5	39.5	39.6	39.5	39.5	39.5	39.5	39.5
Eta Lupus	3.4	119	45.2	44.9	44.6	44.4	44.2	44.1	44.1	44.1	44.3	44.5	44.5	44.5	-38	25.8	25.8	25.9	25.9	26.0	26.1	26.1	26.1	26.1	26.1	26.0	26.0
Pi Scorpius	2.9	120	05.4	05.1	04.9	04.7	04.5	04.4	04.4	04.5	04.6	04.7	04.8	04.7	-26	08.9	09.0	09.0	09.1	09.1	09.1	09.1	09.1	09.1	09.1	09.1	09.0
Gamma Serpens	3.9	120	44.3	44.0	43.8	43.6	43.5	43.4	43.4	43.5	43.6	43.8	43.8	43.8	15	37.1	37.0	37.0	37.0	37.1	37.2	37.2	37.3	37.3	37.3	37.2	37.1
Beta Triang' Aust'	2.8	120	55.6	55.1	54.7	54.3	53.9	53.8	53.8	54.0	54.3	54.6	54.7	54.7	-63	27.9	27.9	27.9	28.0	28.2	28.3	28.4	28.5	28.5	28.4	28.3	28.2
Epsilon Serpens	3.7	122	08.1	07.8	07.6	07.4	07.3	07.2	07.2	07.3	07.4	07.5	07.6	07.5	4	26.3	26.3	26.2	26.2	26.2	26.3	26.4	26.4	26.4	26.4	26.4	26.3
Mu Serpens	3.6	122	25.5	25.3	25.1	24.9	24.7	24.7	24.7	24.7	24.8	25.0	25.0	25.0	-3	28.1	28.2	28.3	28.3	28.3	28.2	28.2	28.1	28.1</			

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	20.4	20.1	19.9	19.6	19.5	19.4	19.4	19.5	19.7	19.8	19.9	19.8	-36	18.3	18.3	18.4	18.5	18.6	18.6	18.7	18.7	18.6	18.6	18.5	18.5
Delta Lupus	3.2	129	26.5	26.2	25.9	25.7	25.5	25.4	25.5	25.6	25.7	25.9	25.9	25.8	-40	41.5	41.5	41.5	41.6	41.7	41.8	41.8	41.9	41.8	41.8	41.7	41.6
Pherkad	3.0	129	50.1	49.6	49.1	48.6	48.4	48.5	48.8	49.3	49.8	50.2	50.5	50.5	71	47.0	46.9	46.9	47.0	47.2	47.3	47.4	47.5	47.5	47.4	47.2	47.0
Gamma Triang' Aust'	2.9	129	57.9	57.3	56.8	56.3	56.0	55.9	56.0	56.3	56.7	57.0	57.1	57.0	-68	43.3	43.3	43.4	43.5	43.6	43.8	43.9	43.9	43.9	43.8	43.7	43.6
Zuben Elschemali	2.6	130	34.4	34.1	33.9	33.7	33.6	33.5	33.5	33.6	33.7	33.8	33.9	33.8	-9	25.8	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.8	25.8	25.8	25.9
Delta Bootes	3.5	130	59.7	59.5	59.2	59.0	58.9	58.9	58.9	59.1	59.2	59.4	59.4	59.4	33	15.9	15.7	15.7	15.8	15.9	16.0	16.1	16.2	16.2	16.1	16.0	15.8
Zeta Lupus	3.4	131	41.6	41.2	40.9	40.6	40.4	40.3	40.4	40.5	40.7	40.9	40.9	40.8	-52	08.7	08.7	08.7	08.8	09.0	09.1	09.1	09.2	09.1	09.1	09.0	08.9
Kappa Lupus	3.9	131	47.3	46.9	46.6	46.3	46.2	46.1	46.1	46.3	46.5	46.6	46.7	46.6	-48	47.0	47.0	47.1	47.2	47.3	47.4	47.4	47.5	47.4	47.4	47.3	47.2
Brachium	3.3	133	47.4	47.2	46.9	46.7	46.6	46.5	46.6	46.7	46.8	46.9	46.9	46.8	-25	19.8	19.9	20.0	20.0	20.1	20.1	20.1	20.1	20.1	20.0	20.0	20.0
Nekkar	3.5	134	23.6	23.3	23.1	22.9	22.8	22.8	22.9	23.0	23.2	23.3	23.4	23.3	40	20.2	20.1	20.1	20.1	20.2	20.4	20.5	20.5	20.5	20.5	20.3	20.2
Ke Kwan	3.1	134	59.7	59.4	59.1	58.9	58.8	58.7	58.7	58.9	59.0	59.2	59.2	59.1	-42	09.2	09.2	09.3	09.4	09.5	09.5	09.6	09.6	09.6	09.5	09.4	09.4
Beta Lupus	2.7	135	09.1	08.8	08.5	08.2	08.1	08.0	08.1	08.2	08.4	08.5	08.5	08.4	-43	11.0	11.0	11.1	11.2	11.3	11.3	11.4	11.4	11.4	11.3	11.2	11.2
Zuben El Genubi	2.8	137	05.9	05.7	05.5	05.3	05.2	05.1	05.2	05.2	05.4	05.5	05.5	05.4	-16	05.7	05.7	05.8	05.9	05.9	05.9	05.9	05.8	05.8	05.8	05.8	05.8
Kochab	2.1	137	20.7	20.1	19.5	19.1	18.9	19.1	19.5	20.0	20.6	21.1	21.3	21.3	74	05.8	05.8	05.8	05.9	06.0	06.2	06.3	06.3	06.3	06.2	06.0	05.8
Alpha Apus	3.8	137	37.0	36.0	35.0	34.2	33.8	33.8	34.1	34.8	35.5	36.1	36.3	35.9	-79	05.6	05.6	05.7	05.8	06.0	06.2	06.3	06.3	06.3	06.2	06.1	05.9
109 Virgo	3.7	138	16.4	16.1	15.9	15.7	15.6	15.6	15.7	15.7	15.8	15.9	16.0	15.9	1	50.3	50.2	50.1	50.1	50.1	50.2	50.2	50.3	50.3	50.3	50.3	50.2
Mirak	2.4	138	36.7	36.5	36.3	36.1	36.0	36.0	36.0	36.1	36.3	36.4	36.4	36.3	27	01.0	00.9	00.9	00.9	01.0	01.1	01.2	01.3	01.3	01.2	01.1	01.0
Rijl al Awwa	3.9	139	03.7	03.5	03.3	03.1	03.0	03.0	03.0	03.1	03.2	03.3	03.3	03.2	-5	42.9	42.9	43.0	43.0	43.0	43.0	43.0	42.9	42.9	42.9	42.9	43.0
Alpha Circinus	3.2	139	06.3	05.8	05.4	05.0	04.8	04.8	04.9	05.2	05.5	05.7	05.8	05.5	-65	01.6	01.6	01.7	01.8	02.0	02.1	02.2	02.2	02.2	02.1	02.0	01.9
Men	2.3	139	17.9	17.5	17.2	17.0	16.9	16.8	16.9	17.0	17.2	17.3	17.4	17.2	-47	26.4	26.4	26.5	26.6	26.8	26.8	26.9	26.9	26.9	26.8	26.7	26.6
Zeta Bootes	3.8	139	33.4	33.2	33.0	32.8	32.7	32.7	32.8	32.8	33.0	33.1	33.1	33.0	13	40.3	40.2	40.1	40.2	40.2	40.3	40.4	40.4	40.4	40.4	40.3	40.2
Rigel Kentaurus	0.0	139	52.4	51.9	51.6	51.2	51.1	51.1	51.2	51.5	51.7	51.9	52.0	51.8	-60	53.0	53.1	53.1	53.3	53.4	53.5	53.6	53.6	53.6	53.5	53.4	53.3
Eta Centaurus	2.3	140	54.8	54.5	54.2	54.0	53.9	53.9	53.9	54.0	54.2	54.3	54.3	54.2	-42	12.7	12.7	12.8	12.9	13.0	13.1	13.1	13.2	13.1	13.0	12.9	12.9
Seginus	3.0	141	51.1	50.8	50.6	50.4	50.3	50.3	50.4	50.5	50.7	50.8	50.9	50.8	38	14.9	14.8	14.8	14.8	15.0	15.1	15.2	15.2	15.2	15.1	15.0	14.8
Rho Bootes	3.6	141	54.2	53.9	53.7	53.5	53.5	53.5	53.5	53.7	53.8	53.9	53.9	53.8	30	18.7	18.6	18.6	18.6	18.7	18.9	18.9	19.0	19.0	18.9	18.8	18.6
Lambda Bootes	3.6	144	56.2	55.9	55.6	55.4	55.3	55.3	55.3	55.5	55.6	55.8	55.8	55.6	-46	06.9	06.9	07.0	07.1	07.2	07.3	07.4	07.4	07.3	07.2	07.1	07.1
Arcturus	0.2	145	56.2	55.9	55.7	55.5	55.5	55.5	55.6	55.7	55.8	55.9	55.9	55.7	19	06.8	06.7	06.6	06.7	06.7	06.8	06.9	06.9	06.9	06.8	06.7	06.6
Menkent	2.1	148	08.1	07.8	07.5	07.3	07.3	07.3	07.3	07.4	07.6	07.7	07.6	07.5	-36	25.9	25.9	26.0	26.1	26.2	26.3	26.3	26.3	26.3	26.2	26.1	26.1
Pi Hydra	3.3	148	13.1	12.9	12.6	12.5	12.4	12.4	12.4	12.5	12.7	12.7	12.7	12.6	-26	44.6	44.7	44.7	44.8	44.9	44.9	44.9	44.9	44.9	44.8	44.8	44.8
Thuban	3.7	148	49.2	48.8	48.4	48.1	48.1	48.2	48.5	48.8	49.1	49.4	49.4	49.3	64	18.5	18.4	18.5	18.6	18.7	18.9	19.0	19.0	18.9	18.8	18.6	18.4
Agena	0.6	148	48.5	48.1	47.7	47.4	47.3	47.3	47.5	47.7	48.0	48.1	48.1	47.9	-60	25.9	25.9	26.0	26.2	26.3	26.4	26.5	26.5	26.5	26.4	26.2	26.1
Zeta Centaurus	2.5	150	54.4	54.1	53.8	53.6	53.5	53.6	53.7	53.8	54.0	54.1	54.0	53.9	-47	20.9	21.0	21.1	21.2	21.4	21.4	21.5	21.5	21.4	21.3	21.2	21.2
Muphrid	2.7	151	10.4	10.1	09.9	09.8	09.7	09.8	09.8	09.9	10.0	10.1	10.1	10.0	18	19.8	19.7	19.7	19.7	19.8	19.9	19.9	20.0	20.0	19.9	19.7	19.7
Mu Centaurus	3.5	152	23.7	23.4	23.2	23.0	22.9	22.9	23.0	23.1	23.3	23.4	23.3	23.2	-42	32.1	32.2	32.3	32.4	32.5	32.6	32.6	32.6	32.6	32.5	32.4	32.3
Nu Centaurus	3.4	152	25.5	25.1	24.9	24.7	24.6	24.7	24.7	24.9	25.0	25.1	25.1	24.9	-41	45.0	45.0	45.1	45.3	45.4	45.4	45.5	45.5	45.4	45.3	45.2	45.2
Alkaid	1.9	152	59.3	59.0	58.7	58.6	58.5	58.6	58.8	58.9	59.1	59.2	59.2	59.1	49	14.6	14.5	14.6	14.7	14.8	14.9	15.0	15.0	15.0	14.8	14.7	14.5
Epsilon Centaurus	2.3	154	49.0	48.6	48.3	48.1	48.0	48.1	48.2	48.4	48.6	48.7	48.6	48.4	-53	31.7	31.8	31.9	32.1	32.2	32.3	32.3	32.3	32.3	32.1	32.0	32.0
Heze	3.4	156	09.5	09.3	09.1	09.0	08.9	08.9	09.0	09.1	09.2	09.2	09.2	09.0	-0	39.8	39.9	39.9	40.0	39.9	39.9	39.9	39.8	39.8	39.8	39.9	39.9
d Centaurus	3.9	157	02.7	02.4	02.2	02.0	02.0	02.0	02.1	02.2	02.4	02.4	02.4	02.2	-39	28.3	28.4	28.5	28.6	28.7	28.8	28.8	28.8	28.7	28.6	28.6	28.5
Spica	1.1	158	31.6	31.4	31.2	31.1	31.0	31.1	31.1	31.2	31.3	31.3	31.3	31.1	-11	13.7	13.8	13.9	14.0	14.0	14.0	14.0	13.9	13.9	13.9	13.9	13.9
Mizar	2.2	158	53.4	53.0	52.7	52.6	52.6	52.7	52.9	53.1	53.3	53.4	53.4	53.2	54	51.1	51.1	51.1	51.2	51.4	51.5	51.6	51.5	51.5	51.3	51.1	51.0
Iota Centaurus	2.8	159	39.8	39.5	39.3	39.1	39.1	39.1	39.2	39.3	39.5	39.5	39.5	39.3	-36	46.7	46.8	46.9	47.0	47.1	47.2	47.2	47.2	47.1	47.0	46.9	46.9
Gamma Hydra	3.0	160	05.3	05.1	04.9	04.7	04.7	04.7	04.8	04.9	05.0	05.0	05.0	04.8	-23	14.3	14.4	14.5	14.6	14.7	14.7	14.7	14.7	14.6	14.5	14.5	14.5
Delta Musca	3.6	164	11.8	11.1	10.7	10.4	10.4	10.6	11.0	11.4	11.8	11.9	11.7	11.3	-71	36.9	37.0	37.1	37.3	37.4	37.6	37.6	37.6	37.5	37.4	37.2	37.1
Vindemiatrix	2.8	164	17.5	17.2	17.1	17.0	16.9	17.0	17.1	17.2	17.2	17.3	17.2	17.0	10	53.2	53.1	53.1	53.1	53.1	53.2	53.3	53.3	53.3	53.3	53.2	53.0
Cor Caroli	2.9	165	50.4	50.1	49.9	49.8	49.8	49.9	50.0	50.2	50.3	50.3	50.2	50.1	38	14.6	14.5	14.6	14.7	14.8	14.9	14.9	14.9	14.8	14.7	14.6	14.4
Auva	3.4	165	55.9	55.7	55.5	55.4	55.4	55.5	55.5	55.6	55.7	55.7	55.6	55.5	3	19.5	19.4	19.4	19.3	19.4	19.4	19.5	19.5	19.5	19.5	19.4	19.3
Alioth	1.8	166	21.0	20.7	20.4	20.3	20.3	20.5	20.7	20.9	21.1	21.1	21.0	20.8	55	53.0	53.0	53.0	53.1	53.3	53.4	53.4	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		
Epsilon Crux	3.6	174	28.5	28.1	27.8	27.7	27.8	28.0	28.2	28.4	28.6	28.6	28.4	28.1	-60	28.2	28.3	28.5	28.6	28.8	28.9	28.9	28.8	28.7	28.6	28.5	28.4
Zaniah	3.9	174	51.2	50.9	50.8	50.7	50.7	50.8	50.9	51.0	51.0	51.0	50.9	50.7	-0	44.4	44.5	44.6	44.6	44.6	44.6	44.5	44.5	44.5	44.5	44.6	44.6
Gienah Ghurab	2.6	175	52.6	52.3	52.2	52.1	52.1	52.2	52.3	52.4	52.4	52.4	52.3	52.1	-17	36.9	37.0	37.1	37.1	37.2	37.2	37.2	37.1	37.1	37.0	37.0	37.1
Megrez	3.3	175	58.9	58.5	58.3	58.2	58.3	58.5	58.7	58.9	59.1	59.1	58.9	58.7	56	57.2	57.2	57.3	57.4	57.6	57.7	57.7	57.6	57.5	57.4	57.2	57.0
Delta Crux	2.8	176	01.9	01.5	01.3	01.2	01.2	01.4	01.6	01.8	02.0	02.0	01.8	01.5	-58	49.1	49.2	49.4	49.5	49.7	49.8	49.8	49.7	49.6	49.5	49.4	49.3
Minkar	3.0	177	17.8	17.5	17.4	17.3	17.3	17.4	17.5	17.6	17.6	17.6	17.5	17.3	-22	41.5	41.6	41.7	41.8	41.9	41.9	41.9	41.8	41.8	41.7	41.7	41.7
Delta Centaurus	2.6	177	44.0	43.7	43.5	43.4	43.5	43.6	43.8	43.9	44.1	44.0	43.9	43.6	-50	47.5	47.7	47.8	48.0	48.1	48.2	48.2	48.1	48.0	47.9	47.8	47.8
Phad	2.4	181	22.1	21.8	21.6	21.6	21.7	21.8	22.0	22.2	22.3	22.3	22.1	21.8	53	37.0	37.0	37.0	37.2	37.3	37.4	37.4	37.3	37.2	37.0	36.9	36.7
Zavijava	3.6	182	09.1	08.9	08.8	08.7	08.7	08.8	08.9	09.0	09.0	09.0	08.9	08.6	1	41.3	41.3	41.2	41.2	41.2	41.2	41.3	41.3	41.3	41.3	41.2	41.1
Denebola	2.1	182	33.9	33.7	33.5	33.5	33.5	33.6	33.7	33.8	33.8	33.8	33.7	33.5	14	29.7	29.7	29.7	29.7	29.7	29.8	29.8	29.8	29.8	29.7	29.7	29.5
Chi Ursae Major	3.7	183	18.8	18.5	18.3	18.3	18.4	18.5	18.7	18.8	18.9	18.8	18.7	18.4	47	42.1	42.1	42.1	42.2	42.3	42.4	42.4	42.4	42.3	42.1	42.0	41.8
Lambda Musca	3.6	183	25.9	25.5	25.3	25.2	25.4	25.6	26.0	26.2	26.4	26.4	26.1	25.7	-66	47.9	48.0	48.2	48.4	48.5	48.6	48.6	48.5	48.4	48.3	48.1	48.1
Lambda Centaurus	3.1	185	53.6	53.2	53.0	53.0	53.1	53.4	53.6	53.9	54.0	54.0	53.7	53.3	-63	05.3	05.5	05.7	05.8	06.0	06.1	06.0	06.0	05.8	05.7	05.6	05.6
Xi Hydra	3.5	186	34.9	34.7	34.6	34.6	34.6	34.7	34.8	34.9	35.0	34.9	34.8	34.5	-31	55.7	55.9	56.0	56.1	56.2	56.2	56.2	56.1	56.0	55.9	55.9	55.9
Giauzar	3.8	186	57.3	56.8	56.5	56.5	56.8	57.1	57.5	57.8	57.9	57.9	57.6	57.1	69	15.1	15.2	15.3	15.4	15.5	15.6	15.6	15.5	15.4	15.2	15.0	14.9
Pi Centaurus	3.9	189	35.4	35.1	35.0	35.0	35.1	35.3	35.5	35.6	35.7	35.6	35.4	35.1	-54	33.6	33.8	33.9	34.1	34.2	34.3	34.3	34.2	34.0	33.9	33.8	33.8
Delta Crater	3.6	189	59.8	59.5	59.4	59.4	59.5	59.6	59.6	59.7	59.7	59.7	59.5	59.3	-14	51.0	51.1	51.2	51.3	51.3	51.3	51.3	51.2	51.2	51.1	51.1	51.2
Alula Borealis	3.5	190	12.0	11.8	11.6	11.6	11.7	11.8	11.9	12.0	12.0	12.0	11.8	11.6	33	01.1	01.1	01.1	01.1	01.2	01.2	01.3	01.3	01.2	01.1	01.0	00.9
Alula Australis	3.8	190	16.6	16.3	16.2	16.2	16.3	16.4	16.5	16.6	16.6	16.5	16.4	16.2	31	27.1	27.0	27.1	27.1	27.2	27.3	27.3	27.2	27.2	27.1	26.9	26.8
Chort	3.3	191	15.8	15.6	15.5	15.5	15.6	15.7	15.8	15.8	15.8	15.8	15.6	15.4	15	21.3	21.2	21.2	21.2	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.1
Zozma	2.6	191	17.7	17.5	17.4	17.4	17.4	17.5	17.6	17.7	17.7	17.6	17.5	17.2	20	26.9	26.8	26.8	26.9	26.9	27.0	27.0	27.0	27.0	26.9	26.8	26.7
Psi Ursae Major	3.0	192	23.8	23.5	23.4	23.4	23.5	23.7	23.8	23.9	23.9	23.9	23.7	23.4	44	25.3	25.3	25.4	25.5	25.6	25.6	25.6	25.6	25.5	25.3	25.2	25.1
BS 4337	3.9	192	42.1	41.8	41.7	41.7	41.9	42.1	42.3	42.5	42.6	42.5	42.3	41.9	-59	02.6	02.8	02.9	03.1	03.2	03.3	03.3	03.2	03.0	02.9	02.8	02.8
Dubhe	1.8	193	51.8	51.5	51.3	51.3	51.5	51.8	52.0	52.2	52.2	52.1	51.9	51.5	61	40.4	40.5	40.6	40.7	40.8	40.9	40.9	40.8	40.6	40.4	40.3	40.2
Merak	2.4	194	20.4	20.0	19.9	19.9	20.1	20.3	20.5	20.6	20.6	20.5	20.3	20.0	56	18.4	18.4	18.5	18.6	18.7	18.8	18.7	18.7	18.5	18.4	18.2	18.1
u Carina	3.8	196	29.0	28.7	28.6	28.6	28.8	29.0	29.2	29.4	29.5	29.4	29.1	28.7	-58	55.2	55.4	55.6	55.7	55.8	55.9	55.9	55.8	55.6	55.5	55.4	55.4
Praecipula	3.8	196	29.1	28.9	28.8	28.8	28.9	29.0	29.1	29.2	29.2	29.1	28.9	28.6	34	08.4	08.3	08.4	08.5	08.5	08.6	08.6	08.5	08.5	08.4	08.2	08.1
Nu Hydra	3.1	197	25.6	25.4	25.3	25.3	25.4	25.5	25.6	25.6	25.6	25.5	25.4	25.1	-16	15.8	15.9	16.0	16.1	16.1	16.1	16.0	16.0	15.9	15.9	15.9	16.0
Mu Velorum	2.7	198	09.5	09.2	09.1	09.2	09.3	09.5	09.7	09.8	09.8	09.7	09.5	09.2	-49	29.3	29.4	29.6	29.7	29.8	29.9	29.8	29.7	29.6	29.5	29.4	29.5
Theta Carina	2.7	199	07.9	07.6	07.5	07.6	07.8	08.1	08.4	08.6	08.7	08.5	08.2	07.8	-64	27.6	27.8	28.0	28.2	28.3	28.3	28.3	28.2	28.0	27.9	27.8	27.8
Rho Leo	3.9	201	37.2	37.0	36.9	36.9	37.0	37.1	37.2	37.2	37.2	37.1	36.9	36.7	9	14.2	14.1	14.1	14.1	14.1	14.1	14.2	14.2	14.2	14.1	14.1	14.0
BS 4140	3.4	201	51.9	51.7	51.6	51.7	51.9	52.2	52.4	52.6	52.6	52.5	52.2	51.8	-61	45.0	45.2	45.4	45.6	45.7	45.7	45.7	45.6	45.4	45.3	45.2	45.2
BS 4114	3.8	202	53.9	53.7	53.6	53.7	53.9	54.2	54.4	54.5	54.6	54.4	54.1	53.8	-58	48.3	48.4	48.6	48.6	48.9	48.9	48.9	48.8	48.6	48.5	48.4	48.4
Mu Hydra	3.8	203	18.8	18.6	18.5	18.5	18.6	18.7	18.8	18.9	18.8	18.7	18.6	18.3	-16	54.2	54.4	54.5	54.6	54.6	54.6	54.5	54.4	54.4	54.4	54.4	54.4
Tania Australis	3.1	204	13.1	12.8	12.8	12.8	12.9	13.1	13.2	13.2	13.2	13.1	12.9	12.6	41	25.7	25.7	25.8	25.9	25.9	26.0	25.9	25.9	25.8	25.7	25.5	25.4
Algieba	2.0	204	49.3	49.1	49.0	49.0	49.1	49.2	49.3	49.3	49.3	49.2	49.0	48.8	19	46.3	46.2	46.2	46.3	46.3	46.3	46.4	46.3	46.3	46.2	46.2	46.1
Tania Borealis	3.4	205	31.4	31.2	31.1	31.2	31.3	31.4	31.6	31.6	31.6	31.4	31.2	30.9	42	50.6	50.6	50.7	50.8	50.9	50.9	50.9	50.8	50.7	50.6	50.4	50.4
BS4050	3.4	205	36.5	36.2	36.2	36.3	36.5	36.8	37.0	37.2	37.2	37.1	36.8	36.3	-61	23.7	23.9	24.1	24.3	24.4	24.4	24.4	24.2	24.1	24.0	23.9	23.9
Adhafera	3.4	205	38.4	38.2	38.1	38.2	38.3	38.4	38.5	38.5	38.5	38.3	38.2	37.9	23	20.9	20.8	20.8	20.9	20.9	21.0	21.0	21.0	20.9	20.8	20.7	20.6
BS 4023	3.8	206	10.2	10.0	10.0	10.0	10.2	10.3	10.4	10.5	10.5	10.4	10.2	09.9	-42	11.2	11.3	11.5	11.6	11.7	11.7	11.6	11.5	11.4	11.3	11.3	11.3
Omega Carina	3.3	206	28.4	28.1	28.0	28.2	28.5	29.0	29.3	29.6	29.6	29.4	29.0	28.5	-70	06.0	06.2	06.4	06.6	06.7	06.7	06.7	06.6	06.4	06.3	06.2	06.2
Lambda Hydra	3.6	207	11.2	11.1	11.0	11.0	11.1	11.2	11.3	11.3	11.3	11.2	11.0	10.8	-12	25.2	25.3	25.4	25.5	25.5	25.5	25.4	25.4	25.3	25.3	25.3	25.4
Regulus	1.4	207	43.6	43.5	43.4	43.4	43.5	43.6	43.7	43.7	43.7	43.6	43.4	43.1	11	54.0	53.9	53.9	53.9	53.9	54.0	54.0	54.0	54.0	53.9	53.9	53.8
Eta Leo	3.5	207	59.0	58.8	58.7	58.8	58.9	59.0	59.0	59.1	59.0	58.9	58.7	58.5	16	41.7	41.6	41.6	41.7	41.7	41.7	41.8	41.7	41.7	41.7	41.6	41.5
Tseen Ke	3.5	210	39.5	39.3	39.3	39.4	39.6	39.8	40.0	40.1	40.1	40.0	39.7	39.3	-54	37.7	37.9	38.1	38.2	38.3	38.3	38.3	38.1	38.0	37.9	37.8	37.9
Rasalas	3.9	211	37.0	36.9	36.8	36.9	37.0	37.1	37.2	37.2	37.1	37.0	36.8	36.5	25	56.4	56.4	56.4	56.5	56.5	56.6	56.6	56.5	56.5	56.4	56.3	56.2
Upsilon Ursae Major	3.8	212	00.8	00.6	00.5	00.6	00.8	01.1	01.3	01.3	01.2	01.0	00.7	00.3	58	58.2	58.3	58.4	58.5	58.6	58.6	58.6	58.5	58.3	58.2	58.0	58.0
Upsilon Carina	3.0	213	07.7	07.5	07.5	07.7	08.0	08.4	08.6	08.8	08.8	08.6	08.2	07.7	-65	07.9	08.1	08.2	08.4	08.5							

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	37.7	37.5	37.5	37.7	38.0	38.3	38.5	38.6	38.5	38.3	37.9	37.6	-59	19.8	20.0	20.1	20.3	20.3	20.3	20.2	20.1	20.0	19.8	19.8	19.9
Theta Hydra	3.9	221	13.9	13.8	13.8	13.8	13.9	14.0	14.1	14.1	14.0	13.8	13.6	13.4	2	15.4	15.3	15.2	15.2	15.2	15.3	15.3	15.3	15.3	15.3	15.3	15.2
Miaplacidus	1.7	221	38.9	38.7	38.8	39.1	39.6	40.0	40.3	40.5	40.4	40.1	39.6	39.1	-69	46.2	46.4	46.6	46.7	46.8	46.8	46.7	46.6	46.4	46.3	46.2	46.3
Canopus	3.4	222	09.6	09.4	09.5	09.7	09.9	10.2	10.4	10.5	10.4	10.2	09.8	09.5	-59	01.2	01.4	01.6	01.7	01.8	01.7	01.7	01.5	01.4	01.3	01.2	01.3
Suhail	2.2	222	52.3	52.1	52.2	52.3	52.5	52.6	52.7	52.8	52.7	52.5	52.3	52.0	-43	29.1	29.3	29.5	29.6	29.6	29.6	29.5	29.4	29.3	29.2	29.2	29.2
BS 3614	3.8	223	50.3	50.2	50.2	50.4	50.5	50.7	50.9	50.9	50.8	50.6	50.3	50.0	-47	09.0	09.2	09.3	09.5	09.5	09.5	09.4	09.3	09.1	09.0	09.0	09.1
Talitha Australis	3.6	223	51.8	51.6	51.6	51.7	51.9	52.0	52.1	52.1	52.0	51.8	51.5	51.2	47	05.9	06.0	06.1	06.2	06.2	06.2	06.2	06.1	06.0	05.8	05.8	05.7
Talitha	3.1	224	58.0	57.8	57.8	57.9	58.1	58.3	58.4	58.3	58.2	58.0	57.7	57.4	47	59.1	59.2	59.2	59.3	59.4	59.4	59.3	59.2	59.1	59.0	58.9	58.8
Zeta Hydra	3.1	225	58.3	58.2	58.2	58.2	58.4	58.4	58.5	58.5	58.4	58.2	58.0	57.8	5	53.5	53.5	53.4	53.4	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.4
BS 3571	3.8	226	09.1	09.0	09.0	09.3	09.6	09.9	10.1	10.1	10.0	09.8	09.4	09.0	-60	41.7	41.9	42.0	42.2	42.2	42.2	42.1	41.9	41.8	41.7	41.7	41.7
Epsilon Hydra	3.4	228	07.5	07.4	07.4	07.5	07.6	07.7	07.8	07.7	07.6	07.5	07.3	07.0	6	22.0	22.0	21.9	21.9	22.0	22.0	22.0	22.0	22.1	22.0	22.0	21.9
Delta Vela	1.9	228	43.3	43.2	43.3	43.5	43.7	44.0	44.1	44.2	44.1	43.8	43.5	43.2	-54	45.4	45.6	45.8	45.9	45.9	45.9	45.8	45.7	45.5	45.4	45.4	45.5
Asellus Australis	3.9	228	38.1	38.0	38.0	38.1	38.2	38.3	38.4	38.3	38.2	38.0	37.8	37.6	18	06.1	06.1	06.1	06.1	06.1	06.2	06.2	06.2	06.1	06.1	06.0	06.0
Alpha Pyxis	3.7	228	57.7	57.6	57.6	57.7	57.9	58.0	58.1	58.1	58.0	57.8	57.6	57.3	-33	14.1	14.3	14.4	14.5	14.5	14.4	14.4	14.2	14.1	14.1	14.1	14.2
BS 3445	3.8	229	43.5	43.4	43.4	43.6	43.8	44.0	44.1	44.1	44.0	43.8	43.5	43.2	-46	41.8	41.9	42.1	42.2	42.2	42.2	42.1	41.9	41.8	41.7	41.7	41.8
Omicron Velorum	3.6	229	49.3	49.2	49.3	49.5	49.7	49.9	50.1	50.1	50.0	49.8	49.4	49.1	-62	58.1	58.3	58.5	58.6	58.6	58.6	58.5	58.3	58.2	58.1	58.1	58.2
Muscida	3.4	232	09.1	08.9	09.0	09.2	09.5	09.7	09.8	09.7	09.5	09.2	08.8	08.4	-60	40.1	40.2	40.3	40.4	40.4	40.4	40.3	40.2	40.1	39.9	39.9	39.9
Beta Volans	3.8	233	30.9	30.9	31.0	31.4	31.8	32.1	32.3	32.4	32.2	31.9	31.5	31.0	-66	10.8	11.0	11.2	11.3	11.4	11.3	11.2	11.0	10.9	10.8	10.8	10.9
BS 3314	3.9	233	24.8	24.7	24.7	24.8	25.0	25.1	25.1	25.0	24.9	24.8	24.5	24.3	-3	57.1	57.2	57.3	57.3	57.3	57.3	57.2	57.1	57.1	57.1	57.1	57.2
Avior	2.0	234	17.5	17.4	17.6	17.8	18.1	18.4	18.6	18.6	18.4	18.2	17.8	17.4	-59	33.1	33.3	33.5	33.6	33.6	33.6	33.5	33.3	33.1	33.1	33.1	33.2
Altarf	3.5	235	41.2	41.1	41.1	41.2	41.3	41.4	41.4	41.4	41.2	41.1	40.8	40.6	9	08.5	08.4	08.4	08.4	08.4	08.5	08.5	08.5	08.5	08.5	08.5	08.4
Suhail	1.8	237	30.3	30.3	30.4	30.6	30.8	31.0	31.0	31.0	30.9	30.7	30.4	30.1	-47	22.6	22.8	22.9	23.0	23.0	23.0	22.8	22.7	22.6	22.5	22.6	22.6
Rho Puppis	2.8	237	58.0	57.9	57.9	58.1	58.2	58.3	58.4	58.3	58.2	58.0	57.8	57.6	-24	20.7	20.8	20.9	21.0	21.0	20.9	20.8	20.7	20.6	20.6	20.6	20.7
Naos	2.2	238	58.8	58.7	58.8	58.9	59.1	59.3	59.3	59.3	59.2	59.0	58.7	58.4	-40	02.5	02.7	02.8	02.9	02.9	02.8	02.7	02.6	02.4	02.4	02.4	02.5
Chi Carina	3.5	240	42.6	42.6	42.7	43.0	43.2	43.4	43.5	43.5	43.3	43.1	42.8	42.5	-53	01.1	01.3	01.5	01.5	01.6	01.5	01.4	01.2	01.1	01.0	01.0	01.1
BS 3080	3.7	241	49.4	49.4	49.5	49.6	49.8	50.0	50.0	50.0	49.8	49.6	49.3	49.1	-40	36.7	36.8	37.0	37.1	37.1	37.0	36.9	36.7	36.6	36.5	36.6	36.7
Asmidiske	3.3	242	31.8	31.8	31.8	32.0	32.1	32.2	32.2	32.2	32.0	31.8	31.6	31.4	-24	53.7	53.8	53.9	54.0	54.0	53.9	53.8	53.7	53.6	53.6	53.6	53.7
Pollux	1.2	243	27.7	27.7	27.7	27.8	28.0	28.1	28.1	28.0	27.8	27.6	27.3	27.1	27	59.4	59.4	59.5	59.5	59.5	59.5	59.5	59.4	59.4	59.4	59.3	59.3
c Puppis	3.6	243	33.6	33.6	33.7	33.8	34.0	34.1	34.2	34.1	34.0	33.8	33.5	33.3	-38	00.1	00.3	00.4	00.5	00.5	00.4	00.3	00.2	00.0	00.0	00.0	00.1
Kappa Gemini	3.6	243	40.9	40.8	40.9	41.0	41.1	41.2	41.2	41.1	41.0	40.8	40.5	40.3	24	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.7	21.7	21.7	21.6
Alpha Monoceros	3.9	244	31.4	31.4	31.4	31.5	31.7	31.7	31.8	31.7	31.5	31.4	31.1	30.9	-9	35.1	35.2	35.2	35.3	35.3	35.2	35.1	35.1	35.0	35.0	35.0	35.1
Procyon	0.4	244	59.7	59.6	59.7	59.8	59.9	00.0	00.0	59.9	59.8	59.6	59.4	59.2	5	11.3	11.2	11.2	11.2	11.2	11.2	11.3	11.3	11.3	11.3	11.3	11.2
Castor	1.6	246	08.0	07.9	08.0	08.1	08.2	08.3	08.3	08.2	08.0	07.8	07.6	07.3	31	51.3	51.3	51.4	51.4	51.4	51.4	51.4	51.3	51.3	51.2	51.2	51.2
Sigma Puppis	3.3	247	34.7	34.7	34.8	35.0	35.2	35.4	35.4	35.3	35.2	34.9	34.7	34.4	-43	19.8	20.0	20.1	20.2	20.1	20.1	19.9	19.8	19.7	19.6	19.6	19.8
Gomeisa	2.9	248	01.6	01.5	01.6	01.7	01.8	01.9	01.9	01.8	01.6	01.5	01.2	01.0	8	15.6	15.5	15.5	15.5	15.5	15.5	15.6	15.6	15.6	15.6	15.6	15.5
Iota Gemini	3.8	248	21.4	21.3	21.4	21.5	21.6	21.7	21.7	21.6	21.4	21.2	21.0	20.7	27	46.1	46.1	46.1	46.2	46.2	46.1	46.1	46.1	46.1	46.0	46.0	46.0
Aludra	2.5	248	50.3	50.2	50.3	50.5	50.6	50.7	50.8	50.7	50.5	50.3	50.1	49.9	-29	19.9	20.0	20.1	20.2	20.1	20.1	20.0	19.8	19.7	19.7	19.7	19.9
Wasat	3.5	249	45.9	45.9	45.9	46.0	46.2	46.2	46.2	46.1	45.9	45.7	45.5	45.3	21	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.2	57.2	57.2
Lambda Gemini	3.6	250	16.8	16.8	16.8	16.9	17.1	17.1	17.1	17.0	16.8	16.6	16.4	16.2	16	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.7	30.7
Pi Puppis	2.7	250	35.4	35.3	35.5	35.6	35.8	35.9	36.0	35.9	35.7	35.5	35.2	35.0	-37	07.4	07.6	07.7	07.7	07.7	07.6	07.5	07.4	07.2	07.2	07.2	07.4
Gamma Volans	3.8	252	49.4	49.5	49.9	50.4	50.9	51.3	51.5	51.4	51.1	50.6	50.1	49.7	-70	31.3	31.5	31.6	31.7	31.7	31.6	31.4	31.2	31.1	31.1	31.1	31.2
Wezen	1.8	252	45.6	45.6	45.7	45.8	46.0	46.1	46.1	46.0	45.8	45.6	45.4	45.2	-26	25.0	25.1	25.2	25.3	25.2	25.2	25.1	24.9	24.8	24.8	24.9	25.0
Omicron Canis Major	3.0	254	05.9	05.9	06.0	06.1	06.3	06.4	06.4	06.3	06.1	05.9	05.7	05.5	-23	51.3	51.4	51.5	51.6	51.5	51.5	51.4	51.2	51.2	51.1	51.2	51.3
Sigma Canis Major	3.5	254	25.9	25.9	25.9	26.1	26.3	26.4	26.4	26.3	26.1	25.9	25.6	25.4	-27	57.4	57.5	57.6	57.6	57.6	57.5	57.4	57.3	57.2	57.2	57.2	57.3
Adara	1.5	255	12.4	12.4	12.5	12.6	12.8	12.9	12.9	12.8	12.6	12.4	12.2	11.9	-28	59.6	59.7	59.8	59.8	59.8	59.7	59.6	59.5	59.4	59.3	59.4	59.5
Theta Gemini	3.6	256	34.6	34.6	34.7	34.8	35.0	35.0	35.0	34.9	34.7	34.4	34.1	33.9	33	56.5	56.6	56.6	56.6	56.6	56.6	56.5	56.5	56.4	56.4	56.4	56.4
Tau Puppis	2.9	257	25.4	25.5	25.7	25.9	26.1	26.3	26.3	26.2	26.0	25.7	25.4	25.2	-50	38.0	38.1	38.2	38.3	38.3	38.1	38.0	37.8	37.7	37.7	37.7	37.9
Kappa Canis Major	3.5	257	24.5	24.5	24.6	24.8	25.0	25.1	25.1	25.0	24.8	24.6	24.3	24.1	-32	31.6	31.7	31.8	31.9	31.8	3						

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		
Theta Auriga	2.7	269	50.2	50.2	50.3	50.5	50.6	50.6	50.5	50.3	50.1	49.8	49.6	49.3	37	12.7	12.7	12.7	12.7	12.7	12.6	12.6	12.6	12.5	12.5	12.6	12.6
Menkalinan	1.9	269	52.0	52.0	52.1	52.3	52.4	52.5	52.4	52.2	51.9	51.6	51.3	51.1	44	56.8	56.8	56.9	56.9	56.8	56.8	56.7	56.6	56.6	56.6	56.6	56.7
Prijipati	3.7	269	50.1	50.1	50.3	50.5	50.7	50.8	50.7	50.4	50.1	49.7	49.4	49.1	54	17.0	17.1	17.1	17.1	17.1	17.0	16.9	16.8	16.8	16.8	16.8	16.9
Eta Columba	3.9	270	06.2	06.3	06.5	06.7	06.9	07.0	06.9	06.8	06.6	06.3	06.0	05.9	-42	49.1	49.2	49.3	49.3	49.2	49.1	49.0	48.8	48.7	48.7	48.8	48.9
Eta Lepus	3.7	270	44.5	44.5	44.6	44.8	44.9	44.9	44.9	44.7	44.5	44.3	44.1	43.9	-14	10.1	10.2	10.3	10.3	10.2	10.1	10.0	09.9	09.9	09.9	09.9	10.0
Betelgeuse	0.6	271	01.3	01.3	01.4	01.5	01.6	01.7	01.6	01.4	01.2	01.0	00.8	00.6	7	24.4	24.4	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.5	24.4	24.4
Delta Lepus	3.8	272	01.2	01.3	01.4	01.5	01.7	01.7	01.7	01.5	01.3	01.1	00.9	00.7	-20	52.9	53.0	53.0	53.0	53.0	52.9	52.8	52.7	52.6	52.6	52.7	52.8
Wezn	3.1	272	08.1	08.2	08.4	08.6	08.7	08.8	08.7	08.6	08.4	08.1	07.9	07.7	-35	46.0	46.1	46.2	46.2	46.2	46.0	45.9	45.8	45.7	45.6	45.7	45.9
Saiph	2.1	272	53.8	53.9	54.0	54.1	54.2	54.3	54.2	54.0	53.8	53.6	53.4	53.3	-9	40.1	40.2	40.2	40.2	40.2	40.1	40.0	39.9	39.9	39.9	39.9	40.0
Beta Pictor	3.9	273	05.5	05.6	05.8	06.1	06.3	06.4	06.4	06.2	05.9	05.6	05.4	05.2	-51	03.9	04.1	04.1	04.1	04.1	03.9	03.8	03.6	03.5	03.5	03.6	03.8
Zeta Lepus	3.6	273	06.3	06.3	06.4	06.6	06.7	06.7	06.7	06.5	06.3	06.1	05.9	05.7	-14	49.2	49.3	49.4	49.4	49.3	49.2	49.1	49.0	49.0	49.0	49.0	49.1
Gamma Lepus	3.6	273	44.4	44.4	44.5	44.7	44.8	44.9	44.8	44.7	44.4	44.2	44.0	43.9	-22	26.8	27.0	27.0	27.0	27.0	26.9	26.7	26.6	26.6	26.5	26.6	26.7
Alnitak	1.7	274	38.2	38.2	38.3	38.5	38.6	38.6	38.5	38.4	38.2	38.0	37.8	37.6	-1	56.3	56.4	56.4	56.4	56.4	56.3	56.3	56.2	56.1	56.1	56.2	56.3
Phact	2.7	274	57.6	57.7	57.9	58.0	58.2	58.2	58.2	58.0	57.8	57.6	57.4	57.2	-34	04.2	04.4	04.4	04.4	04.4	04.2	04.1	04.0	03.9	03.9	04.0	04.1
Sigma Orion	3.8	275	08.5	08.5	08.6	08.7	08.8	08.8	08.8	08.6	08.4	08.2	08.0	07.8	-2	35.7	35.8	35.8	35.8	35.8	35.7	35.7	35.6	35.5	35.5	35.6	35.7
Zeta Taurus	3.0	275	23.0	23.1	23.2	23.3	23.4	23.4	23.3	23.2	22.9	22.7	22.5	22.3	21	08.9	08.9	08.9	08.9	08.9	08.9	08.9	08.9	08.9	08.9	08.9	08.9
Alnilam	1.7	275	46.3	46.4	46.5	46.6	46.7	46.7	46.6	46.5	46.3	46.1	45.9	45.7	-1	11.8	11.8	11.9	11.9	11.9	11.8	11.7	11.7	11.6	11.6	11.6	11.7
Na'ir al Saif	2.8	275	58.4	58.4	58.5	58.7	58.8	58.8	58.7	58.6	58.4	58.2	58.0	57.8	-5	54.3	54.3	54.4	54.4	54.3	54.3	54.2	54.1	54.1	54.0	54.1	54.2
Heka	3.4	276	01.6	01.6	01.7	01.9	02.0	02.0	01.9	01.7	01.5	01.3	01.1	00.9	9	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.5	56.5	56.5	56.5	56.5
Beta Dorado	3.8	276	33.2	33.4	33.7	34.1	34.4	34.6	34.5	34.3	34.0	33.6	33.3	33.1	-62	29.1	29.2	29.3	29.3	29.2	29.1	28.9	28.7	28.6	28.6	28.7	28.9
Arneb	2.6	276	39.9	39.9	40.1	40.2	40.3	40.4	40.3	40.1	39.9	39.7	39.5	39.4	-17	49.0	49.1	49.1	49.1	49.1	49.0	48.9	48.8	48.7	48.7	48.7	48.9
Mintaka	2.2	276	49.4	49.4	49.5	49.6	49.7	49.8	49.7	49.5	49.3	49.1	48.9	48.7	-0	17.5	17.6	17.6	17.6	17.6	17.6	17.5	17.4	17.4	17.4	17.5	
Epsilon Columba	3.9	277	04.3	04.4	04.6	04.7	04.9	04.9	04.9	04.7	04.5	04.3	04.0	03.9	-35	27.9	28.0	28.1	28.1	28.0	27.9	27.7	27.6	27.5	27.5	27.6	27.7
Nihal	2.8	277	47.4	47.5	47.6	47.8	47.9	47.9	47.8	47.7	47.5	47.2	47.0	46.9	-20	45.1	45.2	45.3	45.3	45.2	45.1	45.0	44.9	44.8	44.8	44.9	45.0
Alnath	1.7	278	12.6	12.7	12.8	12.9	13.0	13.0	12.9	12.7	12.5	12.2	12.0	11.8	28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	36.9	37.0	37.0
Bellatrix	1.7	278	32.0	32.0	32.1	32.3	32.4	32.4	32.3	32.1	31.9	31.7	31.5	31.3	6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6	21.6
Eta Orion	3.4	278	42.5	42.5	42.6	42.8	42.9	42.9	42.8	42.6	42.4	42.2	42.0	41.9	-2	23.3	23.3	23.4	23.4	23.3	23.3	23.2	23.1	23.1	23.1	23.1	23.2
Tau Orion	3.6	280	25.9	25.9	26.0	26.2	26.3	26.3	26.2	26.0	25.8	25.6	25.4	25.3	-6	50.0	50.1	50.1	50.1	50.1	50.0	49.9	49.8	49.8	49.8	49.8	49.9
Capella	0.1	280	34.4	34.5	34.6	34.8	35.0	35.0	34.8	34.6	34.3	34.0	33.7	33.5	46	00.6	00.6	00.7	00.6	00.6	00.5	00.5	00.4	00.4	00.4	00.5	00.5
Rigel	0.3	281	12.0	12.1	12.2	12.3	12.4	12.4	12.3	12.2	11.9	11.7	11.6	11.4	-8	11.4	11.4	11.5	11.5	11.4	11.4	11.3	11.2	11.1	11.1	11.1	11.3
Mu Lepus	3.3	281	36.7	36.8	36.9	37.1	37.2	37.2	37.1	36.9	36.7	36.5	36.3	36.2	-16	11.6	11.7	11.7	11.7	11.7	11.6	11.5	11.4	11.3	11.3	11.3	11.5
Cursa	2.8	282	52.1	52.2	52.3	52.4	52.5	52.5	52.4	52.2	52.0	51.8	51.6	51.5	-5	04.3	04.4	04.4	04.4	04.4	04.3	04.3	04.2	04.1	04.1	04.2	04.2
Hoedus II	3.2	283	07.8	07.9	08.0	08.2	08.3	08.3	08.2	07.9	07.6	07.4	07.1	06.9	-1	15.0	15.1	15.1	15.1	15.0	15.0	14.9	14.9	14.9	14.9	15.0	15.0
Epsilon Lepus	3.2	283	29.3	29.4	29.5	29.7	29.8	29.8	29.7	29.5	29.3	29.1	28.9	28.8	-22	21.4	21.5	21.6	21.5	21.5	21.4	21.2	21.1	21.1	21.1	21.1	21.3
Haedi	3.8	284	08.4	08.5	08.6	08.8	08.9	08.9	08.8	08.5	08.2	08.0	07.7	07.5	41	05.6	05.7	05.7	05.7	05.6	05.5	05.5	05.5	05.5	05.5	05.5	05.6
Al Anz	3.0	284	15.7	15.7	15.9	16.1	16.2	16.2	16.0	15.8	15.5	15.2	14.9	14.7	43	50.5	50.5	50.6	50.5	50.5	50.4	50.3	50.3	50.3	50.4	50.4	50.5
Hassaleh	2.7	285	31.7	31.7	31.9	32.0	32.1	32.1	32.0	31.8	31.5	31.2	31.0	30.9	33	11.1	11.1	11.2	11.1	11.1	11.1	11.0	11.0	11.0	11.1	11.1	11.1
Pi5 Orion	3.7	286	15.5	15.6	15.7	15.8	15.9	15.9	15.8	15.6	15.4	15.2	15.0	14.8	2	27.6	27.5	27.5	27.5	27.5	27.6	27.6	27.7	27.8	27.8	27.7	27.7
Pi4 Orion	3.7	287	01.0	01.0	01.1	01.3	01.3	01.3	01.2	01.0	00.8	00.6	00.4	00.3	5	37.5	37.5	37.4	37.4	37.5	37.5	37.6	37.6	37.7	37.7	37.7	37.6
Pi3 Orion	3.2	287	21.2	21.3	21.4	21.5	21.6	21.6	21.5	21.3	21.1	20.9	20.7	20.6	6	58.9	58.9	58.9	58.8	58.9	58.9	58.9	59.0	59.1	59.1	59.1	59.0
Sceptrum	3.9	290	17.9	17.9	18.1	18.2	18.3	18.3	18.2	18.0	17.7	17.5	17.4	17.3	-14	16.9	17.0	17.0	17.0	16.9	16.8	16.7	16.6	16.6	16.6	16.6	16.7
Nu Eridanus	3.9	290	44.9	45.0	45.1	45.3	45.3	45.3	45.2	45.0	44.8	44.6	44.4	44.3	-3	19.7	19.8	19.8	19.8	19.7	19.7	19.6	19.5	19.5	19.4	19.5	19.6
Aldebaran	1.0	290	49.4	49.5	49.6	49.7	49.8	49.8	49.6	49.4	49.2	49.0	48.8	48.7	16	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.1	32.1	32.1	32.1	32.1
Theemim	3.8	290	58.7	58.8	58.9	59.1	59.2	59.2	59.1	58.9	58.6	58.4	58.2	58.1	-30	32.4	32.5	32.5	32.5	32.4	32.2	32.1	32.0	31.9	31.9	32.0	32.1
Alpha Dorado	3.3	291	25.3	25.5	25.7	26.0	26.2	26.2	26.1	25.9	25.6	25.3	25.0	24.9	-55	01.3	01.4	01.5	01.4	01.3	01.1	01.0	00.8	00.8	00.8	00.9	01.1
Theta2 Taurus	3.4	292	38.3	38.4	38.5	38.7	38.7	38.7	38.5	38.3	38.1	37.9	37.7	37.6	15	53.9	53.9	53.9	53.8	53.8	53.9	53.9	53.9	54.0	54.0	54.0	54.0
Ain	3.5	292	38.8	38.8	38.9	39.1	39.1	39.1	39.0	38.8	38.5	38.3	38.1	38.0	19	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.6	12.6	12.6
Secundus Hyadum	3.8	294	04.1	04.2	04.3	04.5	04.5	04.5	04.3	04.1	03.9	03.7	03.5	03.4	17	34.3	34.3	34.3	34.3	34.2	34.3	34.3	34.3	34.4	34.4		

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		
Maia	3.9	303	20.4	20.5	20.6	20.7	20.8	20.7	20.5	20.3	20.0	19.8	19.7	19.6	24	24.5	24.5	24.5	24.4	24.4	24.4	24.5	24.5	24.6	24.6		
Nu Perseus	3.8	303	28.1	28.2	28.4	28.5	28.6	28.5	28.3	28.0	27.7	27.4	27.2	27.1	42	37.2	37.3	37.2	37.2	37.2	37.0	37.0	37.1	37.1	37.2	37.3	
Electra	3.7	303	34.7	34.8	34.9	35.0	35.1	35.0	34.8	34.6	34.3	34.1	34.0	33.9	24	09.2	09.2	09.2	09.2	09.2	09.1	09.2	09.2	09.3	09.3	09.4	09.4
Atik	3.9	303	42.3	42.4	42.6	42.7	42.7	42.7	42.5	42.2	42.0	41.7	41.6	41.5	32	19.8	19.8	19.8	19.7	19.7	19.6	19.6	19.7	19.7	19.8	19.8	19.9
Beta Reticulum	3.8	303	54.0	54.3	54.7	55.1	55.3	55.3	55.1	54.7	54.3	53.9	53.7	53.7	-64	46.2	46.3	46.3	46.2	46.1	45.9	45.7	45.6	45.6	45.6	45.8	45.9
Rana	3.5	304	01.5	01.6	01.7	01.8	01.8	01.8	01.6	01.4	01.2	01.0	00.9	00.8	-9	43.3	43.4	43.4	43.4	43.3	43.2	43.1	43.0	42.9	42.9	43.0	43.1
Delta Perseus	3.0	304	01.4	01.5	01.7	01.9	02.0	01.9	01.6	01.3	01.0	00.7	00.5	00.4	47	49.8	49.9	49.8	49.8	49.7	49.6	49.6	49.6	49.6	49.7	49.8	49.9
Epsilon Eridanus	3.7	306	36.4	36.5	36.6	36.7	36.8	36.7	36.5	36.3	36.1	35.9	35.8	35.7	-9	25.0	25.0	25.1	25.0	25.0	24.9	24.8	24.7	24.6	24.6	24.7	24.8
Xi Taurus	3.7	308	01.4	01.5	01.6	01.7	01.7	01.6	01.5	01.2	01.0	00.8	00.7	00.6	9	46.6	46.6	46.6	46.6	46.6	46.6	46.7	46.7	46.8	46.8	46.8	46.8
Omicron Taurus	3.6	308	36.8	36.9	37.0	37.1	37.1	37.1	36.9	36.7	36.4	36.3	36.1	36.1	9	04.4	04.4	04.4	04.4	04.4	04.4	04.5	04.5	04.6	04.6	04.6	04.6
Mirfak	1.8	308	40.4	40.5	40.7	40.9	40.9	40.8	40.6	40.3	39.9	39.6	39.5	39.4	49	54.6	54.6	54.6	54.5	54.4	54.3	54.3	54.3	54.3	54.4	54.5	54.6
16 Eridanus	3.7	309	58.2	58.3	58.4	58.5	58.6	58.5	58.3	58.1	57.9	57.7	57.6	57.5	-21	42.8	42.9	42.9	42.8	42.7	42.6	42.5	42.4	42.3	42.4	42.4	42.5
Fornacis	3.8	311	50.2	50.3	50.5	50.6	50.6	50.5	50.4	50.1	49.9	49.7	49.6	49.6	-28	56.4	56.4	56.4	56.4	56.3	56.1	56.0	55.9	55.8	55.9	56.0	56.1
Algol	2.1	312	44.1	44.2	44.4	44.5	44.5	44.4	44.2	43.9	43.6	43.4	43.2	43.1	41	00.4	00.5	00.4	00.4	00.3	00.2	00.2	00.3	00.3	00.4	00.5	00.6
Gorgonea Tertia	3.4	313	29.2	29.3	29.5	29.6	29.6	29.5	29.3	29.0	28.7	28.5	28.3	28.3	38	53.5	53.5	53.5	53.4	53.4	53.3	53.3	53.4	53.4	53.5	53.6	53.7
Gamma Perseus	2.9	313	33.1	33.2	33.4	33.6	33.6	33.5	33.2	32.9	32.5	32.2	32.0	32.0	53	33.6	33.6	33.6	33.5	33.4	33.3	33.3	33.3	33.4	33.5	33.6	33.7
Menkar	2.6	314	15.2	15.2	15.4	15.5	15.5	15.4	15.2	15.0	14.7	14.6	14.5	14.4	4	08.4	08.4	08.3	08.3	08.4	08.4	08.5	08.6	08.6	08.7	08.7	08.6
Acamar	3.2	315	18.3	18.5	18.7	18.8	18.8	18.8	18.6	18.3	18.1	17.9	17.8	17.7	-40	15.4	15.4	15.4	15.3	15.2	15.0	14.9	14.8	14.8	14.8	14.9	15.1
Azha	3.9	315	43.6	43.8	43.9	44.0	44.0	43.9	43.7	43.5	43.3	43.1	43.0	43.0	-8	50.9	50.9	51.0	50.9	50.9	50.8	50.7	50.6	50.5	50.5	50.6	50.6
Tau Perseus	3.9	316	11.5	11.7	11.9	12.0	12.0	11.9	11.6	11.2	10.9	10.6	10.4	10.4	52	49.1	49.1	49.1	49.0	48.9	48.8	48.8	48.8	48.9	49.0	49.1	49.2
Miram	3.8	317	04.4	04.6	04.8	05.0	05.0	04.9	04.6	04.2	03.8	03.5	03.3	03.3	55	57.1	57.2	57.1	57.0	56.9	56.8	56.8	56.8	56.9	57.0	57.1	57.3
41 Aries	3.6	317	18.2	18.3	18.4	18.5	18.5	18.4	18.2	18.0	17.7	17.5	17.4	17.4	27	18.9	18.9	18.9	18.8	18.8	18.8	18.8	18.9	18.9	19.0	19.1	19.1
Kaffajjidmah	3.5	319	00.0	00.1	00.2	00.2	00.2	00.1	00.0	59.7	59.5	59.3	59.2	59.2	3	17.4	17.4	17.3	17.3	17.4	17.4	17.5	17.6	17.7	17.7	17.7	17.6
Polaris	2.0	317	39.1	51.8	04.4	13.8	16.1	10.8	59.5	44.6	29.6	18.0	11.2	11.2	89	19.5	19.5	19.5	19.4	19.2	19.1	19.0	19.0	19.0	19.2	19.4	19.5
Phi Eridanus	3.6	325	45.1	45.3	45.5	45.7	45.7	45.6	45.3	45.0	44.7	44.5	44.5	44.5	-51	27.4	27.4	27.4	27.2	27.1	26.9	26.8	26.7	26.7	26.8	26.9	27.1
Beta Triangulum	3.0	327	24.7	24.8	25.0	25.0	25.0	24.8	24.6	24.3	24.1	23.9	23.8	23.8	35	03.1	03.1	03.0	02.9	02.9	02.9	02.9	03.0	03.0	03.1	03.2	03.3
Hamal	2.0	328	00.9	01.1	01.2	01.2	01.2	01.0	00.8	00.6	00.3	00.2	00.1	00.1	23	31.5	31.5	31.5	31.4	31.4	31.4	31.4	31.5	31.6	31.7	31.7	31.8
Almaak	2.2	328	48.9	49.1	49.2	49.3	49.3	49.1	48.8	48.5	48.3	48.1	48.0	48.0	42	23.7	23.7	23.6	23.6	23.5	23.4	23.5	23.5	23.6	23.7	23.8	23.9
Alrishah	3.8	329	18.8	18.9	19.0	19.1	19.1	18.9	18.7	18.5	18.3	18.1	18.1	18.1	2	49.6	49.5	49.5	49.5	49.6	49.6	49.7	49.8	49.9	49.9	49.9	49.9
Alpha Hydrus	2.9	330	12.1	12.4	12.7	12.9	12.9	12.7	12.4	12.0	11.6	11.4	11.4	11.5	-61	30.7	30.7	30.6	30.5	30.3	30.1	30.0	29.9	29.9	30.0	30.2	30.3
Chi Eridanus	3.7	330	52.8	53.0	53.2	53.4	53.3	53.2	52.9	52.6	52.3	52.1	52.1	52.2	-51	32.9	32.9	32.9	32.7	32.6	32.4	32.3	32.2	32.2	32.3	32.4	32.6
Sheratan	2.7	331	09.2	09.3	09.4	09.5	09.4	09.3	09.0	08.8	08.6	08.4	08.4	08.4	20	52.4	52.4	52.3	52.3	52.3	52.3	52.3	52.4	52.5	52.6	52.6	52.6
Segin	3.4	331	09.1	09.4	09.7	09.8	09.7	09.5	09.1	08.6	08.2	07.9	07.8	07.8	63	44.3	44.3	44.3	44.1	44.0	43.9	43.9	44.0	44.1	44.2	44.4	44.5
Mothallah	3.4	331	32.2	32.3	32.4	32.5	32.4	32.3	32.0	31.8	31.5	31.4	31.3	31.3	29	38.7	38.6	38.6	38.5	38.5	38.5	38.6	38.6	38.7	38.8	38.9	38.9
Baten Kaitos	3.7	331	58.2	58.3	58.4	58.4	58.4	58.2	58.0	57.8	57.6	57.5	57.4	57.4	-10	16.3	16.4	16.4	16.3	16.2	16.1	16.0	15.9	15.9	15.9	15.9	16.0
Tau Cetus	3.5	333	49.6	49.7	49.9	49.9	49.9	49.7	49.5	49.3	49.1	49.0	48.9	48.9	-15	52.2	52.3	52.3	52.2	52.1	52.0	51.9	51.8	51.7	51.8	51.8	51.9
51 Andromeda	3.6	335	17.5	17.7	17.9	17.9	17.9	17.7	17.4	17.0	16.7	16.6	16.5	16.5	48	41.9	41.9	41.8	41.7	41.6	41.6	41.6	41.6	41.8	41.9	42.0	42.1
Achemar	0.5	335	26.9	27.1	27.3	27.5	27.4	27.3	27.0	26.6	26.3	26.1	26.1	26.2	-57	10.5	10.5	10.4	10.3	10.1	09.9	09.8	09.7	09.8	09.9	10.0	10.2
Eta Pisces	3.6	336	56.9	57.0	57.1	57.2	57.1	57.0	56.7	56.5	56.3	56.2	56.1	56.1	15	24.9	24.8	24.8	24.8	24.8	24.8	24.9	25.0	25.0	25.1	25.1	25.1
Delta Phoenix	3.9	337	02.9	03.1	03.3	03.4	03.3	03.2	02.9	02.6	02.3	02.2	02.2	02.2	-49	00.5	00.5	00.5	00.3	00.2	00.0	59.9	59.8	59.8	59.9	00.1	00.2
Gamma Phoenix	3.4	337	45.9	46.0	46.2	46.3	46.2	46.0	45.8	45.5	45.3	45.1	45.1	45.2	-43	15.3	15.3	15.3	15.1	15.0	14.8	14.7	14.6	14.6	14.7	14.9	15.0
Ruchbah	2.7	338	19.3	19.5	19.7	19.8	19.7	19.4	19.0	18.6	18.3	18.1	18.0	18.1	60	18.5	18.5	18.4	18.2	18.1	18.1	18.1	18.1	18.3	18.4	18.6	18.7
Theta Cetus	3.6	338	49.6	49.7	49.8	49.8	49.8	49.6	49.4	49.2	49.0	48.9	48.8	48.9	-8	07.0	07.0	07.0	07.0	06.9	06.8	06.7	06.6	06.6	06.6	06.6	06.7
Mirach	2.1	342	22.7	22.8	22.9	22.9	22.8	22.6	22.4	22.1	21.9	21.8	21.7	21.8	35	41.6	41.5	41.5	41.4	41.3	41.3	41.4	41.5	41.6	41.7	41.8	41.9
Dheneb	3.5	342	41.1	41.2	41.3	41.3	41.2	41.1	40.8	40.6	40.4	40.3	40.3	40.3	-10	06.8	06.9	06.9	06.8	06.7	06.6	06.5	06.4	06.4	06.4	06.5	06.5
Beta Phoenix	3.3	343	19.9	20.1	20.2	20.3	20.2	20.0	19.8	19.5	19.2	19.1	19.1	19.2	-46	39.1	39.1	39.0	38.9	38.7	38.6	38.5	38.4	38.4	38.5	38.7	38.8
Mu Andromeda	3.9	345	37.5	37.6	37.7	37.7	37.6	37.4	37.1	36.8	36.6	36.5	36.5	36.6	38	34.4	34.4	34.3	34.2	34.2	34.1	34.2	34.3	34.4	34.6	34.7	34.7
Tsih	2.2	345	37.0	37.2	37.4	37.5	37.3	37.0	36.6	36.2	35.9	35.7	35.7	35.8	60	47.6	47.5	47.4	47.3	47.2	47.1	47.1	47.2	47.4	47.5	47.7	47.8