

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	03.9	04.6	04.9	04.8	04.3	03.5	02.7	02.0	01.6	01.5	01.8	02.4	77	41.7	41.6	41.5	41.3	41.2	41.2	41.3	41.4	41.6	41.8	41.9	42.0
Lambda Andromeda	3.9	5	29.1	29.2	29.3	29.2	29.0	28.7	28.4	28.2	28.0	27.9	28.0	28.1	46	31.1	31.0	30.9	30.8	30.7	30.7	30.8	30.9	31.1	31.3	31.4	31.4
98 Aquarius	4.0	9	07.4	07.5	07.5	07.4	07.3	07.0	06.8	06.6	06.4	06.4	06.5	06.6	-20	02.8	02.8	02.7	02.7	02.6	02.4	02.3	02.3	02.3	02.3	02.4	02.4
Gamma Tucana	4.0	10	29.8	29.9	30.0	29.9	29.6	29.3	28.9	28.6	28.4	28.4	28.5	28.7	-58	11.0	10.9	10.8	10.6	10.5	10.4	10.3	10.3	10.4	10.5	10.6	10.7
Gamma Pices	3.7	10	34.6	34.7	34.7	34.6	34.4	34.2	34.0	33.8	33.6	33.6	33.7	33.7	3	20.3	20.3	20.3	20.3	20.3	20.4	20.5	20.6	20.7	20.7	20.7	20.7
Iota Grus	3.9	12	16.0	16.1	16.1	16.1	15.9	15.6	15.3	15.0	14.9	14.8	14.9	15.1	-45	11.7	11.6	11.5	11.4	11.2	11.1	11.0	11.0	11.1	11.2	11.3	11.4
88 Aquarius	3.7	12	30.2	30.2	30.2	30.2	30.0	29.8	29.5	29.3	29.2	29.1	29.2	29.3	-21	07.1	07.1	07.1	07.0	06.9	06.8	06.7	06.6	06.6	06.7	06.7	06.8
Markab	2.5	13	41.0	41.1	41.1	41.0	40.8	40.6	40.3	40.1	40.0	40.0	40.1	40.2	15	15.7	15.6	15.6	15.6	15.6	15.7	15.8	15.9	16.0	16.1	16.1	16.1
Scheat	2.5	13	56.0	56.1	56.1	56.0	55.9	55.6	55.3	55.1	55.0	55.0	55.1	55.2	28	08.5	08.4	08.3	08.2	08.2	08.3	08.4	08.5	08.6	08.8	08.8	08.8
Omicron Andromeda	3.6	14	24.3	24.4	24.4	24.3	24.1	23.8	23.5	23.3	23.2	23.1	23.2	23.4	42	23.1	23.0	22.9	22.8	22.7	22.8	22.9	23.0	23.2	23.3	23.4	23.5
Fomalhaut	1.2	15	26.9	26.9	26.9	26.8	26.6	26.4	26.1	25.9	25.8	25.8	25.8	25.9	-29	34.2	34.2	34.1	34.0	33.9	33.8	33.7	33.7	33.7	33.8	33.8	33.9
Skat	3.3	16	12.2	12.2	12.2	12.1	12.0	11.7	11.5	11.3	11.2	11.1	11.2	11.3	-15	46.1	46.1	46.0	46.0	45.9	45.8	45.7	45.6	45.6	45.6	45.7	45.7
Lambda Aquarius	3.8	16	42.9	42.9	42.9	42.8	42.6	42.4	42.2	42.0	41.8	41.8	41.9	42.0	-7	31.5	31.6	31.6	31.5	31.4	31.3	31.2	31.2	31.1	31.1	31.1	31.2
Sadalbari	3.5	17	22.7	22.7	22.7	22.6	22.4	22.2	21.9	21.7	21.6	21.6	21.7	21.8	24	39.5	39.4	39.3	39.3	39.3	39.3	39.4	39.6	39.7	39.8	39.8	39.9
Iota Cepheus	3.5	17	29.7	30.0	30.1	29.9	29.6	29.1	28.6	28.3	28.2	28.2	28.4	28.8	66	15.6	15.4	15.3	15.2	15.1	15.1	15.2	15.3	15.5	15.7	15.8	15.9
Epsilon Grus	3.5	17	42.6	42.7	42.7	42.6	42.3	42.0	41.7	41.4	41.2	41.2	41.4	41.6	-51	16.0	15.9	15.8	15.6	15.5	15.4	15.3	15.4	15.4	15.5	15.6	15.7
Lambda Pegasus	4.0	18	14.8	14.8	14.8	14.7	14.5	14.3	14.0	13.8	13.7	13.7	13.8	13.9	23	37.3	37.2	37.1	37.1	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.7
Matar	2.9	19	07.9	08.0	08.0	07.9	07.7	07.4	07.2	07.0	06.9	06.9	06.9	07.1	30	16.6	16.6	16.5	16.4	16.4	16.4	16.6	16.7	16.8	17.0	17.0	17.0
Beta Grus	2.1	19	11.0	11.1	11.0	10.9	10.7	10.4	10.1	09.8	09.7	09.7	09.8	10.0	-46	50.1	50.0	49.9	49.7	49.6	49.5	49.4	49.4	49.5	49.6	49.7	49.8
Homam	3.4	19	30.5	30.6	30.5	30.4	30.3	30.0	29.8	29.6	29.5	29.5	29.6	29.7	10	53.1	53.1	53.0	53.0	53.1	53.1	53.3	53.4	53.5	53.5	53.5	53.5
Alpha Lacerta	3.8	22	04.6	04.7	04.7	04.5	04.3	04.0	03.7	03.4	03.3	03.4	03.5	03.7	50	20.3	20.2	20.1	20.0	19.9	20.0	20.1	20.3	20.4	20.6	20.7	20.7
Delta Grus	4.0	22	32.0	32.0	32.0	31.9	31.6	31.3	31.0	30.8	30.7	30.7	30.8	31.0	-43	26.8	26.7	26.6	26.5	26.3	26.2	26.2	26.2	26.3	26.3	26.4	26.5
Zeta Aquarius	3.7	22	39.7	39.8	39.7	39.6	39.4	39.2	39.0	38.8	38.7	38.7	38.8	38.9	0	01.9	01.9	01.9	01.9	02.0	02.1	02.2	02.3	02.3	02.3	02.3	02.3
Sadachbia	3.9	24	27.4	27.4	27.3	27.2	27.0	26.8	26.6	26.4	26.3	26.3	26.4	26.5	-1	20.2	20.2	20.2	20.2	20.1	20.0	19.9	19.8	19.8	19.8	19.8	19.8
Alpha Tucana	2.9	25	12.3	12.4	12.4	12.2	11.8	11.4	11.0	10.7	10.6	10.7	10.9	11.1	-60	12.7	12.6	12.5	12.3	12.2	12.1	12.1	12.1	12.2	12.3	12.4	12.5
Zeta Cepheus	3.3	27	12.3	12.4	12.4	12.2	11.9	11.5	11.2	10.9	10.9	11.0	11.2	11.4	58	15.3	15.2	15.1	14.9	14.9	14.9	15.1	15.2	15.4	15.6	15.7	15.7
Baham	3.5	27	19.4	19.4	19.4	19.3	19.1	18.8	18.6	18.4	18.4	18.4	18.5	18.6	6	14.9	14.9	14.8	14.8	14.9	15.0	15.1	15.2	15.3	15.3	15.3	15.3
Alnair	1.8	27	47.1	47.1	47.0	46.9	46.6	46.3	46.0	45.8	45.7	45.7	45.9	46.0	-46	54.9	54.8	54.7	54.5	54.4	54.3	54.3	54.3	54.4	54.5	54.6	54.6
Iota Pegasus	3.8	28	07.9	07.9	07.9	07.7	07.5	07.3	07.0	06.9	06.8	06.8	06.9	07.0	25	23.8	23.7	23.6	23.6	23.6	23.7	23.8	23.9	24.1	24.2	24.2	24.2
Sadal Melik	2.9	28	25.5	25.5	25.5	25.3	25.2	24.9	24.7	24.5	24.4	24.5	24.6	24.7	-0	16.2	16.2	16.3	16.2	16.2	16.1	16.0	15.9	15.8	15.8	15.8	15.9
Al Dhanab	3.0	31	22.0	22.0	21.9	21.8	21.5	21.2	21.0	20.8	20.7	20.7	20.9	21.0	-37	19.2	19.1	19.0	18.9	18.8	18.7	18.6	18.7	18.7	18.8	18.8	18.9
Deneb Algiedi	2.9	33	06.1	06.1	06.0	05.9	05.7	05.4	05.2	05.0	05.0	05.0	05.1	05.2	-16	04.9	04.9	04.9	04.8	04.7	04.7	04.6	04.5	04.5	04.5	04.6	04.6
Enif	2.4	33	49.9	49.9	49.8	49.7	49.5	49.2	49.0	48.8	48.8	48.8	48.9	49.0	9	55.4	55.3	55.2	55.2	55.3	55.4	55.5	55.6	55.7	55.7	55.7	55.7
Nu Octans	3.7	34	22.1	22.2	22.0	21.5	20.8	19.9	19.2	18.6	18.5	18.8	19.4	20.1	-77	20.9	20.7	20.5	20.4	20.3	20.2	20.2	20.3	20.5	20.6	20.7	20.7
Nashira	3.7	34	50.3	50.3	50.2	50.1	49.9	49.6	49.4	49.2	49.2	49.2	49.3	49.4	-16	37.0	37.0	37.0	36.9	36.9	36.8	36.7	36.7	36.6	36.7	36.7	36.7
Rho Cygnus	4.0	36	24.8	24.9	24.8	24.7	24.4	24.1	23.8	23.7	23.6	23.7	23.9	24.1	45	38.4	38.3	38.1	38.0	38.0	38.1	38.2	38.4	38.6	38.7	38.8	38.8
Sadal Suud	2.9	36	58.7	58.7	58.6	58.5	58.3	58.0	57.8	57.7	57.6	57.7	57.8	57.9	-5	31.6	31.6	31.6	31.6	31.5	31.4	31.4	31.3	31.2	31.2	31.2	31.3
Alfirk	3.2	37	49.0	49.2	49.2	48.8	48.3	47.8	47.4	47.2	47.2	47.5	47.9	48.3	70	36.6	36.4	36.2	36.1	36.1	36.1	36.3	36.5	36.7	36.8	36.9	36.9
Zeta Capricornus	3.8	38	11.4	11.4	11.3	11.2	10.9	10.7	10.5	10.3	10.3	10.3	10.4	10.5	-22	22.1	22.1	22.0	22.0	21.9	21.8	21.7	21.7	21.7	21.8	21.8	21.8
Alderamin	2.5	40	18.3	18.4	18.3	18.0	17.6	17.2	16.9	16.8	16.8	17.0	17.3	17.6	62	37.9	37.8	37.6	37.5	37.5	37.6	37.7	37.9	38.1	38.2	38.3	38.3
Kitalpha	3.9	40	55.2	55.2	55.1	54.9	54.7	54.5	54.3	54.1	54.1	54.1	54.3	54.4	5	17.4	17.4	17.3	17.3	17.4	17.5	17.6	17.7	17.7	17.8	17.8	17.8
Tau Cygnus	3.7	41	12.3	12.3	12.2	12.1	11.8	11.5	11.3	11.2	11.2	11.2	11.4	11.6	38	05.5	05.3	05.2	05.1	05.2	05.2	05.4	05.5	05.7	05.8	05.9	05.8
Zeta Cygnus	3.2	41	39.7	39.7	39.6	39.4	39.2	38.9	38.7	38.6	38.6	38.7	38.8	38.9	30	16.2	16.1	16.0	16.0	16.0	16.1	16.2	16.4	16.5	16.6	16.6	16.6
Xi Cygnus	3.7	43	40.8	40.8	40.7	40.5	40.3	40.0	39.8	39.6	39.6	39.7	39.9	40.1	43	58.3	58.1	58.0	57.9	57.9	58.0	58.1	58.3	58.5	58.6	58.7	58.6
Nu Cygnus	3.9	45	37.0	37.0	36.9	36.7	36.5	36.2	36.0	35.9	35.9	36.0	36.2	36.3	41	12.5	12.4	12.2	12.2	12.2	12.3	12.4	12.6	12.8	12.9	12.9	12.9
Beta Indus	3.7	46	06.3	06.3	06.1	05.8	05.5	05.0	04.7	04.5	04.5	04.6	04.9	05.1	-58	25.1	25.0	24.8	24.7	24.6	24.6	24.6	24.7	24.8	24.9	24.9	24.9
Albali	3.8	47	56.8	56.7	56.6	56.4	56.2	56.0	55.8	55.7	55.6	55.7	55.8	55.9	-9	27.5	27.6	27.6	27.5	27.5	27.4	27.3	27.2	27.2	27.2	27.2	27.2
Gienah Cygni	2.5	48	20.9	20.9	20.8	20.6	20.4	20.1	19.9	19.8	19.8	19.9	20.1	20.2	34	00.6	00.5	00.4	00.3	00.3	00.4	00.6	00.7	00.9	01.0	01.0	01.0

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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	02.8	02.7	02.6	02.4	02.1	01.9	01.7	01.6	01.7	01.7	01.9	02.0	-0	47.5	47.5	47.6	47.5	47.5	47.4	47.3	47.2	47.2	47.2	47.2	
Delta Pavonis	3.6	57	34.8	34.7	34.4	33.9	33.4	32.9	32.5	32.3	32.4	32.6	33.0	33.3	-66	09.4	09.3	09.2	09.1	09.0	09.0	09.1	09.2	09.3	09.4	09.4	
Epsilon Pavonis	4.0	59	34.5	34.3	33.9	33.3	32.6	31.9	31.5	31.3	31.4	31.8	32.3	32.7	-72	53.1	52.9	52.8	52.7	52.6	52.6	52.7	52.8	53.0	53.1	53.1	53.0
Gamma Sagitta	3.5	60	12.1	12.0	11.9	11.7	11.5	11.2	11.1	11.0	11.0	11.1	11.3	11.4	19	31.2	31.1	31.0	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.6	31.5
Eta Cygnus	3.9	60	50.0	50.0	49.8	49.6	49.3	49.1	48.9	48.9	48.9	49.1	49.2	49.4	35	06.7	06.5	06.4	06.4	06.4	06.5	06.7	06.9	07.0	07.1	07.1	07.0
Aishain	3.7	61	03.0	02.9	02.8	02.6	02.4	02.2	02.0	01.9	01.9	02.0	02.2	02.3	6	25.9	25.9	25.8	25.8	25.9	26.0	26.1	26.2	26.2	26.2	26.2	26.2
Eta Aquila	3.9	61	45.4	45.3	45.1	44.9	44.7	44.5	44.3	44.2	44.3	44.4	44.5	44.6	1	01.9	01.8	01.8	01.8	01.9	02.0	02.0	02.1	02.2	02.2	02.2	02.2
Altair	0.9	62	11.0	11.0	10.8	10.6	10.4	10.2	10.0	09.9	10.0	10.1	10.2	10.3	8	53.7	53.6	53.6	53.6	53.6	53.7	53.8	53.9	54.0	54.0	54.0	54.0
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	17.7	17.5	17.4	17.3	17.3	17.5	17.6	17.8	18.0	18.1	18.1	18.0
Kaus Media	3.8	63	02.6	02.6	02.4	02.2	02.0	01.8	01.6	01.5	01.6	01.7	01.8	01.9	18	33.6	33.5	33.4	33.4	33.4	33.5	33.7	33.8	33.9	33.9	33.9	33.9
Tarazed	2.7	63	19.1	19.0	18.9	18.7	18.4	18.2	18.1	18.0	18.0	18.1	18.3	18.3	10	38.3	38.2	38.1	38.1	38.2	38.3	38.4	38.5	38.6	38.6	38.6	38.6
Delta Cygnus	2.9	63	41.0	41.0	40.8	40.6	40.3	40.0	39.9	39.8	39.9	40.1	40.3	40.5	45	09.4	09.2	09.1	09.1	09.1	09.2	09.4	09.6	09.7	09.8	09.8	09.7
Albireo	3.1	67	13.3	13.2	13.1	12.9	12.6	12.4	12.3	12.2	12.3	12.4	12.6	12.7	27	58.9	58.8	58.7	58.6	58.7	58.8	58.9	59.1	59.2	59.2	59.2	59.2
Iota Cygnus	3.8	67	31.1	31.0	30.8	30.5	30.2	30.0	29.8	29.8	29.9	30.1	30.4	30.6	51	45.1	45.0	44.8	44.8	44.8	45.0	45.1	45.3	45.4	45.5	45.5	45.4
Delta Aquila	3.4	68	30.1	30.0	29.8	29.6	29.4	29.1	29.0	28.9	29.0	29.1	29.2	29.3	3	08.1	08.0	08.0	08.0	08.0	08.1	08.2	08.3	08.4	08.4	08.4	08.3
Rukbat	4.0	68	51.4	51.3	51.1	50.8	50.5	50.2	50.0	49.9	50.0	50.1	50.3	50.4	-40	35.8	35.8	35.7	35.7	35.6	35.6	35.6	35.7	35.7	35.8	35.8	35.7
Arkab	4.0	69	09.8	09.6	09.4	09.1	08.8	08.5	08.3	08.2	08.3	08.4	08.6	08.7	-44	26.4	26.3	26.3	26.2	26.2	26.2	26.2	26.3	26.3	26.4	26.4	26.3
Rho Sagittarius	3.9	69	26.3	26.2	26.0	25.8	25.5	25.3	25.1	25.1	25.1	25.2	25.4	25.4	-17	49.7	49.7	49.7	49.7	49.6	49.6	49.5	49.5	49.5	49.5	49.5	49.5
Kappa Cygnus	3.8	70	40.5	40.4	40.2	39.9	39.6	39.3	39.2	39.2	39.3	39.6	39.8	40.0	53	23.3	23.1	23.0	22.9	23.0	23.1	23.3	23.4	23.6	23.7	23.6	23.6
Nodus Secundus	3.1	71	52.6	52.5	52.2	51.8	51.3	51.0	50.8	50.9	51.2	51.6	52.1	52.4	67	40.8	40.6	40.5	40.4	40.5	40.6	40.8	41.0	41.1	41.2	41.2	41.1
Albaldah	2.9	72	24.7	24.6	24.4	24.2	23.9	23.7	23.5	23.5	23.5	23.6	23.8	23.8	-21	00.5	00.5	00.5	00.4	00.4	00.3	00.3	00.3	00.3	00.3	00.3	00.3
Tau Sagittarius	3.3	73	06.6	06.5	06.3	06.0	05.8	05.5	05.4	05.3	05.4	05.5	05.6	05.7	-27	39.4	39.3	39.3	39.3	39.2	39.2	39.2	39.2	39.2	39.3	39.3	39.2
Al Thalimain	3.4	73	18.4	18.3	18.1	17.9	17.7	17.4	17.3	17.3	17.3	17.4	17.5	17.6	-4	52.1	52.1	52.1	52.1	52.1	52.0	51.9	51.9	51.8	51.8	51.8	51.9
Deneb el Okab	3.0	73	32.1	32.0	31.8	31.6	31.4	31.2	31.0	31.0	31.1	31.2	31.3	31.4	13	52.7	52.6	52.5	52.5	52.6	52.7	52.8	52.9	53.0	53.0	53.0	52.9
Omicron Sagittarius	3.8	73	40.8	40.7	40.5	40.3	40.0	39.8	39.7	39.6	39.7	39.8	39.9	40.0	-21	43.6	43.6	43.6	43.6	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5
Ascella	2.6	74	11.4	11.2	11.0	10.8	10.5	10.3	10.1	10.0	10.1	10.2	10.4	10.4	-29	52.0	51.9	51.9	51.9	51.8	51.8	51.8	51.8	51.9	51.9	51.9	51.8
Sulafat	3.3	75	10.5	10.4	10.2	09.9	09.7	09.5	09.4	09.4	09.4	09.6	09.8	09.9	32	42.2	42.1	42.0	41.9	42.0	42.1	42.3	42.4	42.5	42.6	42.5	42.5
Xi Sagittarius	3.5	75	25.2	25.0	24.8	24.6	24.4	24.1	24.0	23.9	24.0	24.1	24.2	24.3	-21	05.6	05.6	05.6	05.6	05.5	05.5	05.5	05.5	05.5	05.5	05.5	05.5
Nunki	2.1	76	01.8	01.7	01.5	01.2	01.0	00.7	00.6	00.5	00.6	00.7	00.8	00.9	-26	17.1	17.0	17.0	17.0	17.0	16.9	16.9	16.9	17.0	17.0	17.0	17.0
Sheliak	3.5	77	23.5	23.4	23.2	23.0	22.7	22.5	22.4	22.4	22.5	22.7	22.8	22.9	33	22.5	22.3	22.2	22.2	22.3	22.4	22.5	22.7	22.8	22.8	22.8	22.7
Phi Sagittarius	3.2	78	25.9	25.7	25.5	25.3	25.0	24.8	24.6	24.6	24.6	24.8	24.9	25.0	-26	58.8	58.8	58.8	58.8	58.7	58.7	58.7	58.7	58.7	58.8	58.8	58.7
Vega	0.0	80	41.1	41.0	40.8	40.5	40.3	40.1	40.0	40.0	40.1	40.3	40.5	40.6	38	47.6	47.4	47.3	47.3	47.4	47.5	47.7	47.8	47.9	47.9	47.9	47.8
Alpha Scutum	3.9	81	03.8	03.7	03.5	03.3	03.0	02.8	02.7	02.7	02.7	02.9	03.0	03.0	-8	14.2	14.3	14.3	14.3	14.3	14.2	14.1	14.1	14.1	14.1	14.1	14.1
Kaus Borealis	2.8	82	51.3	51.1	50.9	50.6	50.4	50.2	50.0	50.0	50.1	50.2	50.3	50.4	-25	25.0	25.0	25.0	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9
Alpha Telescopium	3.5	83	04.4	04.2	03.9	03.6	03.3	03.0	02.9	02.8	02.9	03.1	03.3	03.4	-45	57.8	57.7	57.6	57.6	57.6	57.6	57.7	57.8	57.8	57.8	57.8	57.7
Kaus Australis	1.8	83	47.6	47.4	47.1	46.9	46.6	46.4	46.2	46.2	46.3	46.4	46.6	46.6	-34	22.8	22.8	22.7	22.7	22.7	22.7	22.7	22.8	22.8	22.8	22.7	22.7
109 Hercules	3.9	83	58.3	58.2	58.0	57.7	57.5	57.3	57.2	57.2	57.3	57.5	57.6	57.7	21	46.4	46.3	46.2	46.2	46.3	46.4	46.5	46.6	46.7	46.7	46.7	46.6
Eta Serpens	3.3	84	32.7	32.5	32.3	32.1	31.9	31.7	31.6	31.6	31.7	31.8	31.9	31.9	-2	53.8	53.9	53.9	53.9	53.8	53.8	53.7	53.7	53.6	53.6	53.6	53.7
Chi Draco	3.6	84	48.1	47.9	47.5	46.9	46.4	46.0	46.0	46.2	46.7	47.3	47.9	48.3	72	44.1	44.0	43.9	43.8	43.9	44.1	44.2	44.4	44.5	44.6	44.5	44.4
Kaus Media	2.7	84	35.6	35.4	35.2	34.9	34.6	34.4	34.3	34.3	34.4	34.5	34.6	34.7	-29	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4
Eta Sagittarius	3.1	85	25.5	25.3	25.1	24.8	24.5	24.3	24.2	24.2	24.2	24.4	24.5	24.6	-36	45.5	45.5	45.4	45.4	45.4	45.4	45.5	45.5	45.5	45.5	45.5	45.5
Mu Sagittarius	3.8	86	24.7	24.5	24.3	24.0	23.8	23.6	23.5	23.4	23.5	23.6	23.8	23.8	-21	03.4	03.4	03.4	03.4	03.4	03.3	03.3	03.3	03.3	03.3	03.3	03.3
Omicron Hercules	3.8	88	01.2	01.1	00.9	00.6	00.4	00.2	00.1	00.2	00.3	00.4	00.6	00.7	28	45.8	45.6	45.6	45.6	45.6	45.8	45.9	46.0	46.1	46.1	46.1	46.0
Omicron Ophiuchus	3.7	88	02.8	02.6	02.4	02.2	02.0	01.8	01.7	01.7	01.8	01.9	02.0	02.1	9	33.9	33.8	33.7	33.7	33.8	33.9	34.0	34.1	34.1	34.1	34.1	34.0
Theta Ara	3.7	88	09.0	08.8	08.5	08.1	07.8	07.5	07.4	07.3	07.5	07.7	07.8	07.9	-50	05.4	05.3	05.3	05.3	05.3	05.4	05.4	05.5	05.5	05.5	05.5	05.4
El Nasl	3.6	88	23.3	23.1	22.9	22.6	22.4	22.2	22.0	22.0	22.1	22.3	22.4	22.4	-30	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
Nu Ophiuchus	3.3	90	06.4	06.2	06.0	05.8	05.6	05.4	05.3	05.3	05.4	05.5	05.6	05.7	-9	46.5	46.6	46.6	46.6	46.6	46.5	46.5	46.4	46.4	46.4	46.4	46.4
Xi Hercules	3.7	90	27.9	27.7	27.5	27.3	27.1	26.9	26.8	26.9	27.0	27.1	27.3	27.4	29	14.7	14.6	14.5	14.5	14.6	14.7	14.9	15.0	15.1	15.1	15.0	14.9
Elt																											

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	29.5	29.3	29.0	28.7	28.4	28.2	28.1	28.1	28.2	28.4	28.5	28.6	-43	00.2	00.2	00.2	00.2	00.2	00.2	00.2	00.3	00.3	00.4	00.4	00.3	00.3	
Ras Alhague	2.1	96	09.1	09.0	08.7	08.5	08.3	08.2	08.1	08.1	08.2	08.4	08.5	08.5	12	33.1	33.0	32.9	32.9	32.9	33.0	33.1	33.2	33.3	33.3	33.3	33.3	33.2	
Shaula	1.6	96	25.8	25.5	25.3	25.0	24.7	24.5	24.4	24.4	24.5	24.7	24.8	24.8	-37	06.6	06.6	06.6	06.6	06.6	06.6	06.7	06.7	06.7	06.7	06.8	06.8	06.7	06.7
Choo	2.9	96	50.9	50.6	50.3	50.0	49.6	49.4	49.3	49.3	49.5	49.7	49.8	49.8	-49	53.0	52.9	52.9	52.9	52.9	53.0	53.0	53.1	53.2	53.2	53.2	53.1	53.1	
Delta Ara	3.6	97	00.2	59.8	59.4	59.0	58.6	58.3	58.2	58.2	58.4	58.7	58.9	59.0	-60	41.4	41.4	41.3	41.3	41.3	41.4	41.5	41.6	41.7	41.7	41.7	41.7	41.6	
Lesath	2.7	97	08.4	08.2	07.9	07.6	07.4	07.2	07.1	07.1	07.2	07.3	07.5	07.5	-37	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.3	18.3	18.3	18.3	18.3	18.2	
Rastaban	2.8	97	20.5	20.3	20.1	19.7	19.5	19.3	19.3	19.4	19.6	19.9	20.1	20.2	52	17.5	17.3	17.3	17.3	17.3	17.4	17.5	17.7	17.8	17.9	17.9	17.8	17.7	
Gamma Ara	3.3	98	26.6	26.3	25.9	25.5	25.2	24.9	24.8	24.8	25.0	25.3	25.4	25.5	-56	23.1	23.1	23.1	23.1	23.1	23.1	23.2	23.3	23.4	23.4	23.4	23.4	23.3	
Beta Ara	2.8	98	28.2	27.9	27.5	27.1	26.8	26.5	26.4	26.4	26.6	26.8	27.0	27.1	-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	32.4	
Theta Ophiuchus	3.3	99	20.7	20.5	20.2	20.0	19.8	19.6	19.5	19.5	19.6	19.8	19.9	19.9	-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	00.6	
Pi Hercules	3.1	101	09.3	09.1	08.9	08.6	08.4	08.3	08.2	08.3	08.5	08.6	08.8	08.8	36	47.7	47.6	47.5	47.5	47.5	47.6	47.8	47.9	48.0	48.1	48.1	48.0	47.9	
Sarin	3.1	101	08.5	08.3	08.1	07.9	07.7	07.5	07.5	07.5	07.7	07.8	07.9	08.0	24	49.5	49.4	49.3	49.3	49.3	49.4	49.5	49.7	49.8	49.8	49.8	49.8	49.6	
Ras Algethi	2.7	101	13.5	13.4	13.1	12.9	12.7	12.6	12.5	12.6	12.7	12.8	12.9	12.9	14	22.6	22.5	22.5	22.5	22.5	22.5	22.6	22.7	22.8	22.9	22.9	22.8	22.7	
Eta Scorpius	3.3	101	47.0	46.8	46.5	46.2	45.9	45.7	45.6	45.6	45.8	45.9	46.1	46.1	-43	15.1	15.1	15.1	15.1	15.1	15.1	15.2	15.2	15.3	15.3	15.3	15.2	15.2	
Sabik	2.4	102	15.8	15.6	15.3	15.1	14.9	14.7	14.7	14.7	14.8	14.9	15.0	15.0	-15	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.2	44.2	44.2	
Aldhibah	3.2	102	48.5	48.2	47.8	47.4	47.0	46.9	46.9	47.2	47.6	48.0	48.3	48.5	65	41.9	41.8	41.7	41.7	41.7	41.9	42.0	42.2	42.3	42.4	42.4	42.3	42.1	
Epsilon Hercules	3.9	104	50.1	49.9	49.7	49.4	49.2	49.1	49.1	49.1	49.3	49.4	49.6	49.6	30	54.6	54.4	54.4	54.4	54.4	54.5	54.6	54.7	54.8	54.9	54.9	54.8	54.7	
Zeta Ara	3.1	105	08.4	08.1	07.7	07.3	07.0	06.7	06.7	06.7	06.9	07.1	07.3	07.3	-56	00.3	00.2	00.2	00.2	00.2	00.3	00.4	00.5	00.6	00.6	00.6	00.5	00.4	
Kappa Ophiuchus	3.2	105	27.9	27.7	27.5	27.3	27.1	27.0	27.0	27.0	27.1	27.2	27.3	27.3	9	21.5	21.4	21.3	21.3	21.3	21.4	21.5	21.6	21.6	21.7	21.7	21.6	21.5	
Zeta Scorpius	3.6	106	10.8	10.5	10.2	09.9	09.6	09.4	09.4	09.4	09.6	09.7	09.8	09.8	-42	22.6	22.6	22.6	22.6	22.7	22.7	22.8	22.8	22.9	22.9	22.9	22.8	22.8	
Mu2 Scorpius	3.6	106	44.8	44.6	44.3	44.0	43.8	43.6	43.5	43.6	43.7	43.9	44.0	44.0	-38	02.0	02.0	02.0	02.1	02.1	02.1	02.2	02.2	02.2	02.2	02.2	02.2	02.1	
Mu1 Scorpius	3.0	106	51.8	51.6	51.3	51.0	50.8	50.6	50.5	50.6	50.7	50.8	50.9	50.9	-38	03.8	03.8	03.8	03.9	03.9	03.9	04.0	04.0	04.0	04.0	04.0	04.0	03.9	
Epsilon Scorpius	2.3	107	17.9	17.6	17.3	17.1	16.9	16.7	16.6	16.7	16.8	16.9	17.0	17.0	-34	18.6	18.6	18.7	18.7	18.7	18.7	18.8	18.8	18.8	18.8	18.8	18.8	18.7	
Eta Ara	3.8	107	20.4	20.0	19.6	19.2	18.8	18.6	18.5	18.6	18.8	19.1	19.3	19.3	-59	03.4	03.4	03.4	03.4	03.4	03.5	03.6	03.7	03.8	03.8	03.8	03.7	03.6	
Atria	1.9	107	34.4	33.9	33.3	32.7	32.2	31.9	31.9	32.0	32.4	32.7	33.0	33.0	-69	02.6	02.6	02.5	02.5	02.6	02.7	02.8	02.9	03.0	03.1	03.0	02.9	02.8	
Eta Hercules	3.5	109	11.6	11.4	11.1	10.9	10.7	10.6	10.6	10.7	10.9	11.0	11.2	11.2	38	54.0	53.9	53.8	53.8	53.8	53.9	54.1	54.2	54.3	54.4	54.4	54.3	54.1	
Zeta Hercules	2.9	109	35.2	35.0	34.8	34.5	34.3	34.2	34.2	34.3	34.5	34.6	34.7	34.7	31	34.9	34.8	34.7	34.7	34.7	34.8	35.0	35.1	35.2	35.2	35.2	35.1	35.0	
Zeta Ophiuchus	2.6	110	34.4	34.2	33.9	33.7	33.5	33.4	33.4	33.4	33.5	33.6	33.7	33.7	-10	35.3	35.3	35.4	35.4	35.4	35.4	35.4	35.3	35.3	35.3	35.3	35.3	35.3	
Tau Scorpius	2.8	110	52.4	52.2	51.9	51.7	51.5	51.3	51.3	51.3	51.5	51.6	51.7	51.6	-28	14.2	14.2	14.2	14.3	14.3	14.3	14.3	14.4	14.4	14.3	14.3	14.3	14.3	
Gamma Apus	3.9	111	15.7	14.7	13.7	12.7	11.9	11.4	11.4	11.8	12.5	13.2	13.7	13.7	-78	55.0	54.9	54.9	54.9	54.9	55.1	55.2	55.4	55.5	55.5	55.5	55.3	55.2	
Marfik	3.9	112	08.8	08.5	08.3	08.1	07.9	07.8	07.8	07.8	08.0	08.1	08.1	08.1	1	57.6	57.6	57.5	57.5	57.5	57.5	57.6	57.7	57.7	57.7	57.7	57.7	57.6	
Kornephoros	2.8	112	20.3	20.1	19.9	19.7	19.5	19.4	19.4	19.5	19.6	19.7	19.8	19.8	21	27.9	27.8	27.7	27.8	27.8	27.8	28.0	28.1	28.1	28.2	28.2	28.1	28.0	
Antares	1.1	112	29.7	29.4	29.2	29.0	28.8	28.6	28.6	28.6	28.7	28.9	28.9	28.9	-26	27.2	27.3	27.3	27.3	27.3	27.4	27.4	27.4	27.4	27.4	27.4	27.3	27.3	
Eta Draco	2.7	113	58.6	58.3	57.9	57.5	57.3	57.2	57.3	57.5	57.9	58.2	58.4	58.5	61	29.2	29.1	29.0	29.1	29.1	29.2	29.4	29.5	29.6	29.7	29.6	29.5	29.3	
Gamma Hercules	3.7	114	24.7	24.4	24.2	24.0	23.8	23.7	23.7	23.8	23.9	24.0	24.1	24.1	19	07.6	07.5	07.5	07.5	07.5	07.6	07.7	07.8	07.8	07.9	07.8	07.8	07.7	
Alniyat	2.9	114	33.1	32.8	32.6	32.3	32.1	32.0	32.0	32.0	32.1	32.2	32.3	32.3	-25	37.0	37.0	37.1	37.1	37.1	37.1	37.1	37.2	37.2	37.2	37.1	37.1	37.1	
Tau Hercules	3.9	114	59.6	59.4	59.1	58.8	58.6	58.5	58.6	58.7	58.9	59.1	59.3	59.3	46	17.1	17.0	17.0	17.0	17.0	17.1	17.3	17.4	17.5	17.5	17.5	17.4	17.2	
Yed Posterior	3.2	115	17.3	17.0	16.8	16.6	16.4	16.3	16.3	16.3	16.4	16.6	16.6	16.6	-4	43.1	43.2	43.2	43.2	43.2	43.2	43.2	43.1	43.1	43.0	43.0	43.1	43.1	
Atria	3.9	115	54.9	54.4	54.0	53.5	53.1	52.9	52.9	53.1	53.4	53.6	53.8	53.7	-63	42.5	42.5	42.5	42.5	42.6	42.7	42.8	42.9	43.0	43.0	43.0	42.9	42.7	
Yed Prior	2.7	116	17.0	16.7	16.5	16.3	16.1	16.0	16.0	16.1	16.2	16.3	16.3	16.3	-3	43.3	43.4	43.4	43.4	43.4	43.4	43.3	43.3	43.3	43.3	43.2	43.2	43.3	
Graffias	2.6	118	29.7	29.5	29.2	29.0	28.8	28.7	28.7	28.7	28.9	29.0	29.0	29.0	-19	50.0	50.0	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	
Dschubba	2.3	119	46.1	45.9	45.6	45.4	45.2	45.1	45.1	45.1	45.3	45.4	45.4	45.4	-22	39.0	39.1	39.1	39.1	39.1	39.2	39.2	39.2	39.2	39.2	39.1	39.1	39.1	
Eta Lupus	3.4	119	48.2	47.9	47.6	47.4	47.2	47.0	47.0	47.1	47.2	47.4	47.4	47.4	-38	25.4	25.5	25.5	25.5	25.6	25.6	25.7	25.7	25.8	25.8	25.7	25.7	25.6	
Pi Scorpius	2.9	120	08.1	07.9	07.6	07.4	07.2	07.1	07.1	07.1	07.3	07.4	07.4	07.4	-26	08.6	08.6	08.6	08.7	08.7	08.7	08.8	08.8	08.8	08.8	08.8	08.7	08.7	
Gamma Serpens	3.9	120	46.3	46.1	45.9	45.6	45.5	45.4	45.4	45.5	45.6	45.7	45.8	45.8	15	37.6	37.5	37.4	37.4	37.4	37.5	37.6	37.7	37.7	37.8	37.7	37.7	37.6	
Beta Triang' Aust'	2.8	120	59.7	59.2	58.8	58.3	58.0	57.8	57.8	58.0	58.3	58.6	58.7	58.6	-63	27.5	27.5	27.6	27.6	27.6	27.8	27.9	28.0	28.1	28.1	28.0	27.9	27.8	
Epsilon Serpens	3.7	122	10.3	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	23.3	23.0	22.8	22.5	22.4	22.3	22.3	22.4	22.5	22.6	22.7	22.6	-36	17.8	17.8	17.9	18.0	18.0	18.1	18.1	18.2	18.1	18.1	18.0	18.0	
Delta Lupus	3.2	129	29.5	29.2	28.9	28.7	28.5	28.4	28.4	28.5	28.7	28.8	28.8	28.7	-40	40.9	41.0	41.0	41.1	41.2	41.3	41.3	41.3	41.3	41.3	41.2	41.1	
Pherkad	3.0	129	49.8	49.3	48.8	48.3	48.1	48.2	48.5	48.9	49.5	49.9	50.2	50.2	71	47.5	47.4	47.4	47.5	47.7	47.8	48.0	48.0	48.0	47.9	47.7	47.5	
Gamma Triang' Aust'	2.9	130	02.4	01.8	01.2	00.7	00.4	00.3	00.4	00.7	01.0	01.3	01.4	01.3	-68	42.8	42.8	42.9	43.0	43.1	43.2	43.4	43.4	43.4	43.3	43.2	43.1	
Zuben Elschemali	2.6	130	36.8	36.5	36.3	36.1	36.0	35.9	35.9	36.0	36.1	36.2	36.2	36.1	-9	25.2	25.3	25.4	25.4	25.4	25.4	25.4	25.3	25.3	25.3	25.3	25.4	
Delta Bootes	3.5	131	01.5	01.2	00.9	00.7	00.6	00.6	00.6	00.8	00.9	01.0	01.1	01.0	33	16.4	16.3	16.2	16.3	16.4	16.5	16.6	16.7	16.7	16.6	16.5	16.4	
Zeta Lupus	3.4	131	44.9	44.5	44.2	43.9	43.7	43.6	43.6	43.8	44.0	44.1	44.2	44.0	-52	08.1	08.1	08.2	08.3	08.4	08.5	08.6	08.6	08.6	08.5	08.4	08.3	
Kappa Lupus	3.9	131	50.5	50.1	49.8	49.5	49.4	49.3	49.3	49.4	49.6	49.7	49.8	49.7	-48	46.4	46.5	46.5	46.6	46.7	46.8	46.9	46.9	46.9	46.8	46.7	46.7	
Brachium	3.3	133	50.1	49.8	49.6	49.4	49.2	49.2	49.2	49.3	49.4	49.5	49.5	49.4	-25	19.3	19.3	19.4	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.4	19.4	
Nekkar	3.5	134	25.2	24.9	24.7	24.5	24.3	24.3	24.4	24.6	24.7	24.9	24.9	24.9	40	20.8	20.7	20.6	20.7	20.8	21.0	21.1	21.1	21.1	21.0	20.9	20.7	
Ke Kwan	3.1	135	02.7	02.4	02.1	01.9	01.7	01.7	01.7	01.8	02.0	02.1	02.1	02.0	-42	08.6	08.6	08.7	08.8	08.9	09.0	09.0	09.0	09.0	08.9	08.8	08.8	
Beta Lupus	2.7	135	12.1	11.8	11.5	11.2	11.1	11.0	11.1	11.2	11.3	11.4	11.5	11.3	-43	10.4	10.4	10.5	10.6	10.7	10.8	10.8	10.8	10.8	10.8	10.7	10.6	10.6
Zuben El Genubi	2.8	137	08.4	08.2	07.9	07.8	07.6	07.6	07.6	07.7	07.8	07.9	07.9	07.8	-16	05.0	05.1	05.2	05.2	05.3	05.3	05.2	05.2	05.2	05.2	05.2	05.2	
Kochab	2.1	137	20.3	19.7	19.1	18.6	18.4	18.6	19.0	19.6	20.2	20.6	20.9	20.8	74	06.5	06.4	06.4	06.5	06.7	06.8	06.9	07.0	06.9	06.8	06.6	06.4	
Alpha Apus	3.8	137	43.3	42.3	41.3	40.5	40.0	40.0	40.3	41.0	41.7	42.2	42.4	42.0	-79	05.0	05.0	05.1	05.2	05.4	05.5	05.7	05.7	05.7	05.6	05.4	05.3	
109 Virgo	3.7	138	18.6	18.4	18.1	18.0	17.9	17.8	17.9	17.9	18.0	18.1	18.1	18.0	1	50.9	50.8	50.8	50.8	50.8	50.8	50.9	50.9	50.9	50.9	50.9	50.8	
Mirak	2.4	138	38.6	38.4	38.1	37.9	37.8	37.8	37.9	38.0	38.1	38.2	38.3	38.2	27	01.7	01.6	01.5	01.6	01.7	01.8	01.9	01.9	01.9	01.8	01.7	01.6	
Rijl al Awwa	3.9	139	06.1	05.8	05.6	05.5	05.3	05.3	05.3	05.4	05.5	05.6	05.6	05.5	-5	42.2	42.3	42.3	42.4	42.4	42.3	42.3	42.3	42.3	42.3	42.3	42.3	
Alpha Circinus	3.2	139	10.2	09.7	09.2	08.8	08.6	08.6	08.7	09.0	09.3	09.5	09.5	09.3	-65	00.9	01.0	01.0	01.2	01.3	01.5	01.6	01.6	01.6	01.5	01.3	01.2	
Men	2.3	139	21.0	20.6	20.3	20.1	19.9	19.9	19.9	20.1	20.2	20.4	20.4	20.2	-47	25.7	25.8	25.9	26.0	26.1	26.2	26.3	26.3	26.2	26.2	26.1	26.0	
Zeta Bootes	3.8	139	35.5	35.3	35.1	34.9	34.8	34.8	34.8	34.9	35.0	35.1	35.1	35.0	13	40.9	40.8	40.8	40.8	40.9	40.9	41.0	41.1	41.1	41.0	40.9	40.8	
Rigel Kentaurus	0.0	139	55.6	55.2	54.8	54.5	54.3	54.3	54.4	54.6	54.9	55.1	55.1	54.9	-60	52.4	52.4	52.5	52.6	52.8	52.9	53.0	53.0	53.0	52.9	52.7	52.6	
Eta Centaurus	2.3	140	57.8	57.4	57.2	56.9	56.8	56.7	56.8	56.9	57.1	57.2	57.2	57.0	-42	12.0	12.1	12.2	12.3	12.4	12.4	12.5	12.5	12.4	12.4	12.3	12.2	
Seginus	3.0	141	52.8	52.5	52.2	52.1	52.0	52.0	52.1	52.2	52.4	52.5	52.5	52.4	38	15.6	15.5	15.5	15.5	15.6	15.8	15.9	15.9	15.9	15.8	15.6	15.5	
Rho Bootes	3.6	141	56.0	55.8	55.5	55.4	55.3	55.3	55.3	55.5	55.6	55.7	55.7	55.6	30	19.4	19.3	19.3	19.3	19.4	19.5	19.6	19.7	19.6	19.6	19.4	19.3	
Lambda Bootes	3.6	144	59.2	58.9	58.6	58.4	58.2	58.2	58.3	58.4	58.6	58.7	58.6	58.5	-46	06.1	06.2	06.3	06.4	06.5	06.6	06.7	06.7	06.6	06.5	06.4	06.4	
Arcturus	0.2	145	58.1	57.9	57.7	57.5	57.4	57.4	57.5	57.6	57.7	57.8	57.8	57.7	19	07.6	07.5	07.5	07.5	07.6	07.6	07.7	07.7	07.7	07.7	07.6	07.4	
Menkent	2.1	148	10.8	10.5	10.2	10.0	10.0	09.9	10.0	10.1	10.2	10.3	10.3	10.1	-36	25.1	25.2	25.3	25.4	25.4	25.5	25.5	25.5	25.5	25.4	25.3	25.3	
Pi Hydra	3.3	148	15.7	15.4	15.2	15.1	15.0	14.9	15.0	15.1	15.2	15.3	15.2	15.1	-26	43.8	43.9	44.0	44.1	44.1	44.2	44.2	44.2	44.1	44.1	44.0	44.0	
Thuban	3.7	148	50.2	49.7	49.3	49.1	49.0	49.2	49.4	49.7	50.1	50.3	50.3	50.2	64	19.3	19.2	19.2	19.4	19.5	19.6	19.7	19.7	19.7	19.5	19.3	19.2	
Agena	0.6	148	51.9	51.5	51.1	50.8	50.7	50.7	50.8	51.1	51.3	51.4	51.4	51.2	-60	25.1	25.2	25.3	25.4	25.6	25.7	25.8	25.8	25.7	25.6	25.5	25.4	
Zeta Centaurus	2.5	150	57.4	57.0	56.8	56.5	56.5	56.5	56.5	56.7	56.8	56.9	56.9	56.7	-47	20.1	20.2	20.3	20.4	20.6	20.7	20.7	20.7	20.7	20.6	20.5	20.4	20.4
Muphrid	2.7	151	12.5	12.2	12.0	11.8	11.8	11.8	11.9	12.0	12.1	12.1	12.1	12.0	18	20.6	20.5	20.5	20.5	20.6	20.7	20.7	20.8	20.8	20.7	20.6	20.5	
Mu Centaurus	3.5	152	26.5	26.2	26.0	25.8	25.7	25.7	25.8	25.9	26.0	26.1	26.1	25.9	-42	31.3	31.4	31.5	31.6	31.7	31.8	31.8	31.8	31.8	31.7	31.6	31.6	
Nu Centaurus	3.4	152	28.3	27.9	27.7	27.5	27.4	27.4	27.5	27.6	27.8	27.8	27.8	27.6	-41	44.1	44.2	44.3	44.5	44.6	44.7	44.7	44.7	44.6	44.5	44.4	44.4	
Alkaid	1.9	153	00.9	00.6	00.3	00.1	00.1	00.2	00.3	00.5	00.7	00.8	00.8	00.6	49	15.4	15.4	15.4	15.5	15.6	15.7	15.8	15.8	15.8	15.6	15.5	15.3	
Epsilon Centaurus	2.3	154	52.0	51.6	51.3	51.1	51.0	51.0	51.2	51.3	51.5	51.6	51.5	51.3	-53	30.9	31.0	31.1	31.2	31.4	31.5	31.5	31.5	31.5	31.4	31.3	31.2	31.2
Heze	3.4	156	11.8	11.5	11.3	11.2	11.2	11.2	11.2	11.3	11.4	11.4	11.4	11.2	-0	38.9	39.0	39.1	39.1	39.1	39.1	39.0	39.0	39.0	39.0	39.1	39.1	
d Centaurus	3.9	157	05.4	05.1	04.9	04.7	04.7	04.7	04.8	04.9	05.0	05.1	05.0	04.8	-39	27.4	27.5	27.7	27.8	27.9	28.0	28.0	28.0	27.9	27.8	27.7	27.7	
Spica	1.1	158	34.0	33.7	33.6	33.4	33.4	33.4	33.5	33.5	33.6	33.6	33.6	33.4	-11	12.9	13.0	13.1	13.1	13.1	13.1	13.1	13.1	13.0	13.0	13.0	13.1	
Mizar	2.2	158	55.0	54.6	54.3	54.1	54.1	54.3	54.4	54.7	54.9	54.9	54.9	54.7	-54	52.0	51.9	52.0	52.1	52.2	52.3	52.4	52.4	52.3	52.2	52.0	51.8	
Iota Centaurus	2.8	159	42.4	42.1	41.9	41.7	41.7	41.7	41.8	41.9	42.0	42.1	42.0	41.8	-36	45.8	45.9	46.0	46.2	46.3	46.3	46.3	46.3	46.2	46.2	46.1	46.1	
Gamma Hydra	3.0	160	07.8	07.5	07.3	07.2	07.2	07.2	07.2	07.3	07.4	07.5	07.4	07.2	-23	13.4	13.6	13.7	13.7	13.8	13.8	13.8	13.8	13.7	13.7	13.7	13.7	
Delta Musca	3.6	164	15.3	14.7	14.2	14.0	13.9	14.1	14.5	14.9	15.2	15.3	15.2	14.7	-71	36.0	36.0	36.2	36.4	36.5	36.7	36.7	36.7	36.6	36.5	36.4	36.3	
Vindemiatrix	2.8	164	19.7	19.4	19.2	19.1	19.1	19.1	19.2	19.3	19.4	19.4	19.3	19.2	10	54.1	54.0	54.0	54.0	54.0	54.1	54.1	54.2	54.2	54.1	54.0	53.9	
Cor Caroli	2.9	165	52.4	52.1	51.9	51.7	51.7	51.8	51.9	52.1	52.2	52.2	52.1	51.9	38	15.5	15.5	15.5	15.6	15.7	15.8	15.8	15.8	15.7	15.6	15.5	15.3	
Auva	3.4	165	58.2	57.9	57.7	57.6	57.6	57.6	57.7	57.8	57.9	57.9	57.8	57.6	3	20.4	20.3	20.3	20.3	20.3	20.3	20.4	20.4	20.4	20.4	20.3	20.2	
Alioth	1.8	166	22.8	22.4	22.1	22.0	22.0	22.2	22.4	22.6	22.8	22.8	22.7	22.5	55	53.9	53.9	53.9	54.1	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	31.2	30.8	30.5	30.4	30.4	30.6	30.8	31.0	31.2	31.2	31.0	30.7	-60	27.2	27.3	27.5	27.7	27.8	27.9	27.9	27.9	27.9	27.8	27.6	27.5	27.5
Zaniah	3.9	174	53.5	53.2	53.1	53.0	53.0	53.0	53.1	53.2	53.2	53.2	53.1	52.9	-0	43.5	43.6	43.6	43.7	43.7	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.7
Gienah Ghurab	2.6	175	54.9	54.7	54.5	54.4	54.4	54.5	54.6	54.6	54.7	54.7	54.6	54.4	-17	35.9	36.0	36.1	36.2	36.2	36.2	36.2	36.2	36.2	36.1	36.1	36.1	36.1
Megrez	3.3	176	00.9	00.5	00.2	00.2	00.3	00.4	00.6	00.8	01.0	01.0	00.8	00.6	56	58.2	58.2	58.3	58.4	58.5	58.6	58.6	58.6	58.6	58.5	58.3	58.1	58.0
Delta Crux	2.8	176	04.5	04.1	03.9	03.8	03.8	04.0	04.2	04.4	04.6	04.6	04.4	04.0	-58	48.1	48.2	48.4	48.6	48.7	48.8	48.8	48.8	48.8	48.7	48.5	48.4	48.4
Minkar	3.0	177	20.1	19.9	19.7	19.6	19.6	19.7	19.8	19.9	19.9	19.9	19.8	19.6	-22	40.5	40.7	40.8	40.9	40.9	40.9	40.9	40.9	40.9	40.8	40.7	40.7	40.8
Delta Centaurus	2.6	177	46.5	46.2	46.0	45.9	46.0	46.1	46.2	46.4	46.5	46.5	46.3	46.0	-50	46.5	46.7	46.8	47.0	47.1	47.2	47.2	47.1	47.1	47.0	46.9	46.8	46.8
Phad	2.4	181	24.3	23.9	23.7	23.7	23.8	23.9	24.1	24.3	24.4	24.3	24.2	23.9	53	38.0	37.9	38.0	38.1	38.3	38.3	38.3	38.3	38.3	38.2	38.0	37.8	37.7
Zavijava	3.6	182	11.4	11.2	11.1	11.0	11.0	11.1	11.2	11.2	11.3	11.2	11.1	10.9	1	42.4	42.3	42.2	42.2	42.2	42.2	42.3	42.3	42.3	42.3	42.3	42.2	42.1
Denebola	2.1	182	36.1	35.9	35.7	35.7	35.7	35.8	35.9	36.0	36.0	35.9	35.8	35.6	14	30.8	30.7	30.7	30.7	30.7	30.8	30.8	30.8	30.8	30.8	30.7	30.6	30.5
Chi Ursae Major	3.7	183	20.9	20.6	20.5	20.4	20.5	20.6	20.8	20.9	21.0	20.9	20.8	20.5	47	43.1	43.0	43.1	43.2	43.3	43.4	43.4	43.4	43.4	43.3	43.1	42.9	42.8
Lambda Musca	3.6	183	28.4	28.0	27.7	27.7	27.8	28.1	28.4	28.7	28.8	28.8	28.5	28.1	-66	46.9	47.0	47.2	47.4	47.5	47.6	47.6	47.6	47.6	47.4	47.3	47.2	47.1
Lambda Centaurus	3.1	185	55.9	55.6	55.4	55.3	55.5	55.7	55.9	56.2	56.3	56.3	56.0	55.6	-63	04.3	04.5	04.7	04.8	05.0	05.1	05.1	05.0	04.9	04.7	04.6	04.6	
Xi Hydra	3.5	186	37.2	37.0	36.9	36.8	36.9	37.0	37.1	37.2	37.2	37.1	37.0	36.7	-31	54.7	54.9	55.0	55.1	55.2	55.2	55.2	55.1	55.1	55.0	54.9	55.0	
Giauzar	3.8	186	59.5	59.0	58.7	58.7	58.9	59.3	59.6	59.9	00.1	00.0	59.7	59.3	69	16.1	16.2	16.3	16.4	16.5	16.6	16.6	16.5	16.3	16.1	16.0	15.8	
Pi Centaurus	3.9	189	37.7	37.3	37.2	37.2	37.3	37.5	37.7	37.8	37.9	37.8	37.6	37.3	-54	32.6	32.8	32.9	33.1	33.2	33.3	33.3	33.2	33.1	32.9	32.9	32.9	
Delta Crater	3.6	190	02.0	01.8	01.7	01.7	01.7	01.8	01.9	01.9	01.9	01.9	01.7	01.5	-14	50.0	50.1	50.2	50.3	50.3	50.3	50.3	50.2	50.2	50.2	50.2	50.2	
Alula Borealis	3.5	190	14.3	14.1	13.9	13.9	14.0	14.1	14.2	14.3	14.3	14.2	14.0	13.8	33	02.1	02.0	02.1	02.2	02.2	02.3	02.3	02.3	02.2	02.1	01.9	01.8	
Alula Australis	3.8	190	18.9	18.6	18.5	18.5	18.5	18.6	18.7	18.8	18.8	18.8	18.6	18.4	31	28.1	28.1	28.1	28.1	28.2	28.3	28.3	28.3	28.2	28.1	27.9	27.8	
Chort	3.3	191	18.1	17.9	17.8	17.8	17.8	17.9	18.0	18.1	18.1	18.0	17.8	17.6	15	22.3	22.2	22.2	22.2	22.3	22.3	22.3	22.3	22.3	22.2	22.1	22.0	
Zozma	2.6	191	20.0	19.8	19.7	19.6	19.7	19.8	19.9	19.9	19.9	19.9	19.7	19.5	20	27.9	27.8	27.8	27.9	27.9	28.0	28.0	28.0	28.0	27.9	27.9	27.8	27.6
Psi Ursae Major	3.0	192	26.2	25.9	25.7	25.7	25.8	26.0	26.1	26.2	26.2	26.1	25.9	25.7	44	26.3	26.3	26.4	26.5	26.6	26.6	26.6	26.6	26.6	26.4	26.3	26.2	26.0
BS 4337	3.9	192	44.3	44.0	43.9	43.9	44.0	44.2	44.4	44.6	44.7	44.6	44.3	44.0	-59	01.6	01.8	01.9	02.1	02.2	02.3	02.3	02.2	02.1	01.9	01.8	01.8	
Dubhe	1.8	193	54.3	53.9	53.7	53.7	53.9	54.2	54.4	54.6	54.6	54.5	54.2	53.9	61	41.4	41.5	41.6	41.7	41.8	41.9	41.8	41.7	41.6	41.4	41.3	41.1	
Merak	2.4	194	22.8	22.5	22.3	22.3	22.5	22.7	22.9	23.0	23.0	22.9	22.7	22.3	56	19.3	19.4	19.5	19.6	19.7	19.7	19.7	19.6	19.5	19.3	19.2	19.1	
u Carina	3.8	196	31.0	30.7	30.6	30.7	30.8	31.0	31.3	31.4	31.5	31.4	31.1	30.7	-58	54.2	54.4	54.6	54.7	54.9	54.9	54.9	54.8	54.7	54.5	54.5	54.5	
Praecipula	3.8	196	31.5	31.2	31.1	31.1	31.2	31.3	31.4	31.5	31.5	31.4	31.2	30.9	34	09.4	09.3	09.4	09.5	09.5	09.6	09.6	09.5	09.4	09.3	09.2	09.1	
Nu Hydra	3.1	197	27.8	27.6	27.5	27.5	27.6	27.7	27.8	27.8	27.8	27.7	27.5	27.3	-16	14.8	14.9	15.0	15.1	15.1	15.1	15.1	15.0	15.0	14.9	14.9	15.0	
Mu Velorum	2.7	198	11.6	11.3	11.2	11.3	11.4	11.5	11.7	11.8	11.8	11.7	11.5	11.2	-49	28.3	28.4	28.6	28.8	28.9	28.9	28.9	28.8	28.6	28.5	28.5	28.5	
Theta Carina	2.7	199	09.8	09.5	09.4	09.4	09.7	09.9	10.2	10.4	10.5	10.4	10.0	09.6	-64	26.6	26.8	27.0	27.2	27.3	27.4	27.3	27.2	27.1	27.0	26.9	26.9	
Rho Leo	3.9	201	39.5	39.3	39.2	39.2	39.3	39.4	39.5	39.5	39.5	39.4	39.2	38.9	9	15.1	15.1	15.0	15.0	15.1	15.1	15.1	15.1	15.1	15.1	15.0	14.9	
BS 4140	3.4	201	53.8	53.5	53.4	53.5	53.7	54.0	54.2	54.4	54.4	54.3	54.0	53.6	-61	44.1	44.2	44.4	44.6	44.7	44.7	44.7	44.6	44.5	44.3	44.3	44.3	
BS 4114	3.8	202	55.8	55.6	55.5	55.6	55.7	56.0	56.2	56.4	56.4	56.2	55.9	55.6	-58	47.3	47.5	47.6	47.8	47.9	48.0	47.9	47.8	47.7	47.5	47.5	47.5	
Mu Hydra	3.8	203	21.0	20.8	20.7	20.7	20.8	20.9	21.0	21.0	21.0	20.9	20.7	20.5	-16	53.3	53.4	53.5	53.6	53.6	53.6	53.6	53.5	53.4	53.4	53.4	53.5	
Tania Australis	3.1	204	15.6	15.3	15.3	15.3	15.4	15.6	15.7	15.7	15.7	15.5	15.3	15.0	41	26.6	26.7	26.7	26.8	26.9	26.9	26.9	26.8	26.7	26.6	26.5	26.4	
Algieba	2.0	204	51.7	51.5	51.4	51.4	51.5	51.6	51.7	51.7	51.6	51.5	51.3	51.1	19	47.2	47.2	47.2	47.2	47.3	47.3	47.3	47.3	47.3	47.2	47.1	47.0	
Tania Borealis	3.4	205	34.0	33.7	33.6	33.7	33.8	33.9	34.0	34.1	34.0	33.9	33.7	33.4	42	51.6	51.6	51.6	51.7	51.8	51.8	51.8	51.7	51.6	51.5	51.4	51.3	
BS4050	3.4	205	38.2	38.0	37.9	38.0	38.2	38.5	38.7	38.9	38.9	38.8	38.4	38.0	-61	22.8	23.0	23.2	23.3	23.4	23.5	23.4	23.3	23.2	23.0	23.0	23.0	
Adhafera	3.4	205	40.8	40.6	40.5	40.6	40.7	40.8	40.8	40.9	40.8	40.7	40.5	40.2	23	21.8	21.8	21.8	21.8	21.9	21.9	21.9	21.9	21.8	21.8	21.7	21.6	
BS 4023	3.8	206	12.2	12.0	11.9	12.0	12.1	12.3	12.4	12.5	12.4	12.3	12.1	11.8	-42	10.2	10.4	10.5	10.7	10.8	10.8	10.7	10.6	10.5	10.4	10.4	10.4	
Omega Carina	3.3	206	29.8	29.5	29.4	29.6	29.9	30.4	30.7	31.0	31.0	30.8	30.4	29.8	-70	05.1	05.3	05.5	05.6	05.8	05.8	05.7	05.6	05.5	05.3	05.3	05.3	
Lambda Hydra	3.6	207	13.4	13.2	13.2	13.2	13.3	13.4	13.5	13.5	13.4	13.3	13.1	12.9	-12	24.3	24.4	24.5	24.5	24.6	24.5	24.5	24.4	24.4	24.4	24.4	24.5	
Regulus	1.4	207	46.0	45.8	45.7	45.7	45.8	45.9	46.0	46.0	45.9	45.8	45.6	45.4	11	54.9	54.9	54.8	54.8	54.9	54.9	54.9	54.9	54.9	54.9	54.8	54.7	
Eta Leo	3.5	208	01.4	01.2	01.1	01.1	01.2	01.3	01.4	01.4	01.3	01.2	01.0	00.8	16	42.6	42.6	42.6	42.6	42.6	42.7	42.7	42.7	42.7	42.6	42.6	42.5	42.4
Tseen Ke	3.5	210	41.3	41.1	41.0	41.2	41.3	41.6	41.7	41.8	41.8	41.7	41.4	41.0	-54	36.8	37.0	37.2	37.3	37.4	37.4	37.4	37.2	37.1	37.0	36.9	37.0	
Rasalas	3.9	211	39.5	39.3	39.2	39.3	39.4	39.5	39.6	39.6	39.5	39.4	39.2	38.9	25	57.4	57.3	57.4	57.4	57.5	57.5	57.5	57.4	57.4	57.3	57.2	57.1	
Upsilon Ursae Major	3.8	212	03.7	03.5	03.4	03.5	03.7	03.9	04.1	04.2	04.1	03.9	03.5	03.1	58	59.2	59.2	59.3	59.5	59.5	59.5	59.5	59.4	59.2	59.1	58.9	58.9	
Upsilon Carina	3.0	213	09.1	08.9	08.9																							

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	39.0	38.9	38.9	39.1	39.4	39.6	39.8	39.9	39.8	39.6	39.3	38.9	-59	18.9	19.1	19.3	19.4	19.5	19.5	19.4	19.3	19.1	19.0	19.0	19.1
Theta Hydra	3.9	221	16.2	16.1	16.0	16.1	16.2	16.3	16.3	16.3	16.2	16.1	15.9	15.6	2	16.2	16.1	16.1	16.1	16.1	16.1	16.1	16.2	16.2	16.2	16.1	16.0
Miaplacidus	1.7	221	39.7	39.5	39.6	39.9	40.3	40.7	41.1	41.2	41.2	40.8	40.4	39.8	-69	45.4	45.6	45.7	45.9	46.0	46.0	45.9	45.7	45.6	45.5	45.4	45.5
Canopus	3.4	222	10.9	10.8	10.8	11.0	11.3	11.5	11.7	11.8	11.7	11.5	11.2	10.8	-59	00.4	00.6	00.7	00.9	00.9	00.9	00.8	00.7	00.6	00.4	00.4	00.5
Suhail	2.2	222	54.0	53.9	53.9	54.0	54.2	54.3	54.5	54.5	54.4	54.2	53.9	53.7	-43	28.3	28.5	28.7	28.8	28.8	28.8	28.7	28.6	28.5	28.4	28.4	28.4
BS 3614	3.8	223	52.0	51.8	51.8	52.0	52.2	52.4	52.5	52.5	52.4	52.2	51.9	51.6	-47	08.2	08.4	08.5	08.7	08.7	08.7	08.6	08.5	08.3	08.2	08.2	08.3
Talitha Australis	3.6	223	54.7	54.5	54.4	54.6	54.7	54.9	55.0	54.9	54.8	54.6	54.3	54.0	47	06.8	06.8	06.9	07.0	07.0	07.0	07.0	06.9	06.8	06.6	06.5	06.5
Talitha	3.1	225	00.9	00.7	00.7	00.8	01.0	01.1	01.2	01.2	01.0	00.8	00.5	00.2	47	59.9	00.0	00.0	00.1	00.2	00.2	00.1	00.0	59.9	59.8	59.7	59.6
Zeta Hydra	3.1	226	00.6	00.5	00.5	00.6	00.7	00.7	00.8	00.8	00.7	00.5	00.3	00.0	5	54.3	54.3	54.2	54.2	54.2	54.3	54.3	54.3	54.3	54.3	54.2	54.2
BS 3571	3.8	226	10.3	10.1	10.2	10.4	10.7	11.0	11.2	11.3	11.2	10.9	10.6	10.2	-60	40.9	41.1	41.2	41.4	41.4	41.4	41.3	41.2	41.0	40.9	40.9	41.0
Epsilon Hydra	3.4	228	09.9	09.8	09.8	09.8	09.9	10.0	10.1	10.0	09.9	09.7	09.5	09.3	6	22.8	22.7	22.7	22.7	22.7	22.7	22.8	22.8	22.8	22.8	22.7	22.6
Delta Vela	1.9	228	44.7	44.6	44.7	44.9	45.1	45.3	45.5	45.5	45.4	45.2	44.8	44.5	-54	44.7	44.8	45.0	45.1	45.2	45.1	45.0	44.9	44.8	44.7	44.7	44.7
Asellus Australis	3.9	228	40.6	40.5	40.5	40.6	40.7	40.8	40.8	40.8	40.6	40.5	40.2	40.0	18	06.9	06.9	06.9	06.9	06.9	06.9	06.9	06.9	06.9	06.8	06.8	06.7
Alpha Pyxis	3.7	228	59.6	59.4	59.5	59.6	59.7	59.9	59.9	59.9	59.8	59.6	59.4	59.1	-33	13.3	13.5	13.6	13.7	13.7	13.7	13.6	13.5	13.4	13.3	13.3	13.4
BS 3445	3.8	229	45.1	45.0	45.0	45.2	45.4	45.5	45.6	45.7	45.5	45.3	45.0	44.8	-46	41.0	41.2	41.3	41.5	41.5	41.5	41.4	41.2	41.1	41.0	41.0	41.1
Omicron Velorum	3.6	229	50.7	50.6	50.7	50.9	51.1	51.3	51.4	51.5	51.4	51.1	50.8	50.5	-62	57.4	57.6	57.7	57.8	57.9	57.8	57.7	57.6	57.5	57.4	57.4	57.5
Muscida	3.4	232	12.6	12.4	12.4	12.6	12.9	13.1	13.2	13.2	12.9	12.6	12.2	11.8	60	40.8	40.9	41.1	41.1	41.2	41.1	41.0	40.9	40.8	40.7	40.6	40.6
Beta Volans	3.8	233	31.6	31.5	31.7	32.0	32.4	32.8	33.0	33.0	32.9	32.6	32.1	31.7	-66	10.1	10.3	10.5	10.6	10.7	10.6	10.5	10.3	10.2	10.1	10.1	10.2
BS 3314	3.9	233	27.0	26.9	27.0	27.0	27.2	27.2	27.3	27.2	27.1	26.9	26.7	26.5	-3	56.4	56.5	56.6	56.6	56.6	56.6	56.5	56.5	56.4	56.4	56.5	56.6
Avior	2.0	234	18.6	18.5	18.6	18.9	19.2	19.4	19.6	19.6	19.5	19.2	18.8	18.5	-59	32.4	32.6	32.8	32.9	32.9	32.9	32.8	32.6	32.5	32.4	32.4	32.5
Altarf	3.5	235	43.6	43.4	43.5	43.6	43.7	43.8	43.8	43.7	43.6	43.4	43.2	42.9	9	09.2	09.1	09.1	09.1	09.1	09.1	09.2	09.2	09.2	09.2	09.1	09.0
Suhail	1.8	237	31.8	31.7	31.8	32.0	32.2	32.4	32.5	32.4	32.3	32.1	31.8	31.5	-47	21.9	22.1	22.3	22.3	22.4	22.3	22.2	22.0	21.9	21.8	21.9	22.0
Rho Puppis	2.8	237	59.9	59.8	59.9	00.0	00.1	00.2	00.3	00.2	00.1	59.9	59.6	59.4	-24	20.0	20.2	20.3	20.3	20.3	20.2	20.2	20.1	20.0	19.9	20.0	20.1
Naos	2.2	239	00.4	00.3	00.4	00.6	00.7	00.9	00.9	00.9	00.8	00.5	00.3	00.0	-40	01.9	02.0	02.2	02.2	02.3	02.2	02.1	01.9	01.8	01.8	01.8	01.9
Chi Carina	3.5	240	43.9	43.8	43.9	44.2	44.4	44.6	44.7	44.7	44.5	44.3	44.0	43.7	-53	00.5	00.7	00.8	00.9	00.9	00.9	00.8	00.6	00.5	00.4	00.4	00.5
BS 3080	3.7	241	51.0	50.9	51.0	51.2	51.4	51.5	51.6	51.5	51.4	51.2	50.9	50.6	-40	36.1	36.3	36.4	36.5	36.5	36.4	36.3	36.1	36.0	36.0	36.0	36.1
Asmidiske	3.3	242	33.7	33.7	33.7	33.8	34.0	34.1	34.1	34.0	33.9	33.7	33.5	33.2	-24	53.1	53.3	53.4	53.4	53.4	53.3	53.3	53.1	53.1	53.0	53.1	53.2
Pollux	1.2	243	30.4	30.3	30.4	30.5	30.6	30.7	30.7	30.6	30.4	30.2	29.9	29.7	28	00.0	00.0	00.0	00.1	00.1	00.1	00.0	00.0	00.0	59.9	59.9	59.8
c Puppis	3.6	243	35.2	35.2	35.3	35.4	35.6	35.7	35.8	35.7	35.6	35.4	35.1	34.9	-37	59.6	59.7	59.9	59.9	59.9	59.9	59.7	59.6	59.5	59.4	59.5	59.6
Kappa Gemini	3.6	243	43.6	43.5	43.5	43.6	43.8	43.8	43.8	43.7	43.6	43.4	43.1	42.9	24	22.3	22.3	22.3	22.4	22.4	22.4	22.4	22.3	22.3	22.3	22.2	22.2
Alpha Monoceros	3.9	244	33.6	33.5	33.5	33.7	33.8	33.8	33.9	33.8	33.6	33.4	33.2	33.0	-9	34.5	34.6	34.7	34.7	34.7	34.7	34.6	34.5	34.5	34.4	34.5	34.6
Procyon	0.4	245	02.0	02.0	02.0	02.1	02.2	02.3	02.3	02.2	02.0	01.8	01.6	01.4	5	11.9	11.8	11.8	11.8	11.8	11.8	11.9	11.9	11.9	11.9	11.8	11.8
Castor	1.6	246	10.8	10.7	10.7	10.9	11.0	11.1	11.1	11.0	10.8	10.5	10.3	10.0	31	51.9	51.9	51.9	51.9	52.0	51.9	51.9	51.9	51.8	51.8	51.7	51.7
Sigma Puppis	3.3	247	36.2	36.2	36.3	36.5	36.7	36.8	36.8	36.8	36.6	36.4	36.1	35.8	-43	19.3	19.5	19.6	19.7	19.6	19.6	19.4	19.3	19.2	19.1	19.2	19.3
Gomeisa	2.9	248	04.0	03.9	04.0	04.1	04.2	04.3	04.3	04.2	04.0	03.8	03.6	03.3	8	16.1	16.0	16.0	16.0	16.0	16.0	16.1	16.1	16.1	16.1	16.0	16.0
Iota Gemini	3.8	248	24.1	24.0	24.1	24.2	24.3	24.4	24.4	24.3	24.1	23.9	23.6	23.3	27	46.6	46.6	46.6	46.7	46.7	46.6	46.6	46.6	46.6	46.5	46.5	46.4
Aludra	2.5	248	52.1	52.0	52.1	52.3	52.4	52.5	52.5	52.4	52.3	52.1	51.8	51.6	-29	19.4	19.5	19.6	19.7	19.7	19.6	19.5	19.4	19.3	19.2	19.3	19.4
Wasat	3.5	249	48.5	48.5	48.5	48.6	48.8	48.8	48.8	48.7	48.5	48.3	48.0	47.8	21	57.7	57.7	57.8	57.8	57.8	57.8	57.8	57.8	57.7	57.7	57.7	57.6
Lambda Gemini	3.6	250	19.3	19.3	19.3	19.5	19.6	19.6	19.6	19.5	19.3	19.1	18.9	18.6	16	31.3	31.2	31.2	31.2	31.2	31.3	31.3	31.3	31.3	31.2	31.2	31.1
Pi Puppis	2.7	250	37.0	36.9	37.0	37.2	37.4	37.5	37.5	37.5	37.3	37.1	36.8	36.6	-37	06.9	07.1	07.2	07.3	07.2	07.2	07.0	06.9	06.8	06.8	06.8	06.9
Gamma Volans	3.8	252	49.2	49.3	49.6	50.1	50.6	51.0	51.2	51.2	50.8	50.4	49.8	49.4	-70	30.9	31.0	31.2	31.2	31.2	31.1	31.0	30.8	30.7	30.6	30.7	30.8
Wezen	1.8	252	47.5	47.4	47.5	47.7	47.8	47.9	47.9	47.8	47.6	47.4	47.2	47.0	-26	24.6	24.7	24.8	24.8	24.8	24.7	24.6	24.5	24.4	24.4	24.4	24.6
Omicron Canis Major	3.0	254	07.8	07.8	07.8	08.0	08.1	08.2	08.2	08.1	07.9	07.7	07.5	07.3	-23	50.9	51.0	51.1	51.2	51.1	51.1	51.0	50.8	50.8	50.7	50.8	50.9
Sigma Canis Major	3.5	254	27.7	27.6	27.7	27.9	28.0	28.1	28.1	28.0	27.8	27.6	27.4	27.2	-27	57.0	57.1	57.2	57.2	57.2	57.1	57.0	56.9	56.8	56.8	56.8	57.0
Adara	1.5	255	14.1	14.1	14.2	14.4	14.5	14.6	14.6	14.5	14.3	14.1	13.9	13.7	-28	59.2	59.3	59.4	59.4	59.4	59.3	59.2	59.1	59.0	59.0	59.0	59.1
Theta Gemini	3.6	256	37.5	37.5	37.6	37.7	37.8	37.9	37.9	37.7	37.5	37.2	37.0	36.7	33	56.9	56.9	57.0	57.0	57.0	56.9	56.9	56.9	56.8	56.8	56.8	56.7
Tau Puppis	2.9	257	26.6	26.6	26.8	27.0	27.3	27.4	27.5	27.4	27.1	26.9	26.6	26.3	-50	37.6	37.8	37.9	37.9	37.9	37.8	37.6	37.5	37.4	37.3	37.4	37.5
Kappa Canis Major	3.5	257	26.2	26.2	26.3	26.5	26.6	26.7	26.7	26.6	26.4	26.2	25.9	25.7	-32	31.2	31.4	31.5	31.5	31.5	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	53.2	53.2	53.3	53.5	53.6	53.6	53.5	53.3	53.1	52.8	52.5	52.3	37	12.8	12.9	12.9	12.9	12.8	12.8	12.8	12.7	12.7	12.7	12.7
Menkalinan	1.9	269	55.2	55.2	55.3	55.5	55.7	55.7	55.6	55.4	55.1	54.8	54.5	54.2	44	56.9	57.0	57.0	57.0	57.0	56.9	56.9	56.8	56.8	56.8	56.8
Prijipati	3.7	269	53.7	53.8	53.9	54.2	54.3	54.4	54.3	54.0	53.7	53.3	52.9	52.6	54	17.1	17.2	17.3	17.3	17.2	17.1	17.1	17.0	16.9	16.9	17.0
Eta Columba	3.9	270	07.6	07.6	07.8	08.0	08.2	08.3	08.3	08.1	07.9	07.6	07.4	07.2	-42	48.9	49.1	49.1	49.2	49.1	49.0	48.8	48.7	48.6	48.6	48.8
Eta Lepus	3.7	270	46.5	46.5	46.6	46.8	46.9	46.9	46.9	46.7	46.5	46.3	46.1	45.9	-14	10.0	10.1	10.1	10.1	10.1	10.0	09.9	09.8	09.8	09.8	09.9
Betelgeuse	0.6	271	03.7	03.7	03.8	03.9	04.0	04.0	03.9	03.8	03.6	03.4	03.1	03.0	7	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.6	24.6	24.6	24.5
Delta Lepus	3.8	272	03.1	03.2	03.3	03.4	03.6	03.6	03.5	03.4	03.2	02.9	02.7	02.6	-20	52.7	52.8	52.9	52.9	52.9	52.8	52.7	52.5	52.5	52.5	52.6
Wezn	3.1	272	09.7	09.8	09.9	10.1	10.3	10.3	10.3	10.1	09.9	09.6	09.4	09.2	-35	45.9	46.0	46.1	46.1	46.1	45.9	45.8	45.7	45.6	45.6	45.8
Saiph	2.1	272	56.0	56.0	56.1	56.2	56.3	56.3	56.3	56.1	55.9	55.7	55.5	55.3	-9	40.0	40.1	40.1	40.1	40.1	40.0	39.9	39.8	39.8	39.8	39.9
Beta Pictor	3.9	273	06.5	06.6	06.8	07.1	07.3	07.4	07.4	07.2	07.0	06.7	06.4	06.2	-51	03.8	04.0	04.0	04.0	04.0	03.8	03.7	03.5	03.4	03.4	03.5
Zeta Lepus	3.6	273	08.3	08.3	08.4	08.6	08.7	08.7	08.6	08.5	08.3	08.0	07.8	07.7	-14	49.1	49.2	49.3	49.3	49.2	49.2	49.0	48.9	48.9	48.9	49.0
Gamma Lepus	3.6	273	46.2	46.3	46.4	46.5	46.6	46.7	46.6	46.5	46.3	46.0	45.8	45.7	-22	26.7	26.9	26.9	26.9	26.9	26.8	26.6	26.5	26.5	26.5	26.6
Alnitak	1.7	274	40.5	40.5	40.6	40.7	40.8	40.8	40.7	40.6	40.4	40.1	39.9	39.8	-1	56.3	56.3	56.3	56.4	56.3	56.3	56.2	56.1	56.1	56.1	56.2
Phact	2.7	274	59.2	59.3	59.4	59.6	59.8	59.8	59.8	59.6	59.4	59.1	58.9	58.8	-34	04.2	04.3	04.4	04.4	04.3	04.2	04.0	03.9	03.8	03.8	03.9
Sigma Orion	3.8	275	10.7	10.7	10.8	10.9	11.0	11.0	11.0	10.8	10.6	10.4	10.2	10.0	-2	35.7	35.7	35.8	35.8	35.7	35.7	35.6	35.5	35.5	35.5	35.6
Zeta Taurus	3.0	275	25.7	25.7	25.8	26.0	26.0	26.0	25.9	25.8	25.5	25.3	25.1	24.9	21	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	48.6	48.6	48.7	48.8	48.9	48.9	48.9	48.7	48.5	48.3	48.1	47.9	-1	11.7	11.8	11.8	11.8	11.8	11.8	11.7	11.6	11.6	11.6	11.7
Na'ir al Saif	2.8	276	00.6	00.6	00.7	00.8	00.9	00.9	00.9	00.7	00.5	00.3	00.1	59.9	-5	54.2	54.3	54.3	54.3	54.3	54.2	54.2	54.1	54.0	54.0	54.1
Heka	3.4	276	04.1	04.1	04.2	04.3	04.4	04.4	04.3	04.1	03.9	03.7	03.5	03.3	9	56.5	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	33.5	33.7	34.1	34.4	34.7	34.9	34.9	34.7	34.3	34.0	33.6	33.4	-62	29.0	29.2	29.3	29.3	29.2	29.0	28.9	28.7	28.6	28.6	28.7
Arneb	2.6	276	41.9	41.9	42.0	42.2	42.3	42.3	42.2	42.0	41.8	41.6	41.4	41.3	-17	48.9	49.0	49.1	49.1	49.0	48.9	48.8	48.7	48.7	48.7	48.8
Mintaka	2.2	276	51.6	51.7	51.8	51.9	52.0	52.0	51.9	51.7	51.5	51.3	51.1	50.9	-0	17.5	17.6	17.6	17.6	17.6	17.5	17.5	17.4	17.3	17.3	17.4
Epsilon Columba	3.9	277	05.9	06.0	06.1	06.3	06.4	06.5	06.4	06.3	06.0	05.8	05.6	05.4	-35	27.8	28.0	28.0	28.0	28.0	27.8	27.7	27.6	27.5	27.5	27.7
Nihal	2.8	277	49.3	49.4	49.5	49.6	49.7	49.8	49.7	49.5	49.3	49.1	48.9	48.7	-20	45.1	45.2	45.3	45.3	45.2	45.1	45.0	44.9	44.8	44.8	44.9
Alnath	1.7	278	15.4	15.5	15.6	15.7	15.8	15.8	15.7	15.5	15.2	15.0	14.7	14.6	28	37.0	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	37.0	37.0
Bellatrix	1.7	278	34.4	34.4	34.5	34.6	34.7	34.7	34.6	34.5	34.2	34.0	33.8	33.6	6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6
Eta Orion	3.4	278	44.7	44.7	44.8	45.0	45.1	45.1	45.0	44.8	44.6	44.4	44.2	44.0	-2	23.3	23.3	23.4	23.4	23.4	23.3	23.2	23.1	23.1	23.1	23.2
Tau Orion	3.6	280	28.0	28.1	28.2	28.3	28.4	28.4	28.3	28.1	27.9	27.7	27.5	27.4	-6	50.0	50.1	50.1	50.1	50.1	50.0	49.9	49.9	49.8	49.8	49.9
Capella	0.1	280	37.7	37.8	37.9	38.1	38.2	38.2	38.1	37.8	37.5	37.2	36.9	36.7	46	00.6	00.6	00.7	00.6	00.6	00.5	00.4	00.4	00.4	00.4	00.5
Rigel	0.3	281	14.2	14.2	14.3	14.4	14.5	14.5	14.4	14.3	14.0	13.8	13.6	13.5	-8	11.4	11.5	11.5	11.5	11.5	11.4	11.3	11.2	11.2	11.2	11.3
Mu Lepus	3.3	281	38.7	38.8	38.9	39.0	39.1	39.1	39.0	38.9	38.6	38.4	38.2	38.1	-16	11.6	11.7	11.8	11.8	11.7	11.6	11.5	11.4	11.3	11.3	11.4
Cursa	2.8	282	54.3	54.3	54.4	54.6	54.7	54.7	54.6	54.4	54.2	53.9	53.7	53.6	-5	04.4	04.5	04.5	04.5	04.5	04.4	04.3	04.2	04.2	04.2	04.3
Hoedus II	3.2	283	11.0	11.0	11.2	11.3	11.4	11.4	11.3	11.0	10.7	10.4	10.2	10.0	41	15.0	15.0	15.0	15.0	15.0	14.9	14.8	14.8	14.8	14.8	14.9
Epsilon Lepus	3.2	283	31.2	31.2	31.4	31.5	31.6	31.6	31.5	31.4	31.1	30.9	30.7	30.6	-22	21.5	21.6	21.6	21.6	21.6	21.5	21.3	21.2	21.1	21.1	21.2
Haedi	3.8	284	11.6	11.6	11.7	11.9	12.0	12.0	11.8	11.6	11.3	11.0	10.7	10.6	41	05.5	05.6	05.6	05.6	05.5	05.4	05.4	05.4	05.4	05.4	05.5
Al Anz	3.0	284	18.9	18.9	19.1	19.3	19.4	19.3	19.2	18.9	18.6	18.3	18.1	17.9	43	50.4	50.4	50.5	50.4	50.4	50.3	50.2	50.2	50.2	50.3	50.4
Hassaleh	2.7	285	34.6	34.7	34.8	34.9	35.0	35.0	34.8	34.6	34.4	34.1	33.8	33.7	33	11.0	11.0	11.0	11.0	11.0	10.9	10.9	10.9	10.9	10.9	11.0
Pi5 Orion	3.7	286	17.8	17.9	18.0	18.1	18.2	18.2	18.0	17.9	17.6	17.4	17.2	17.1	2	27.4	27.4	27.4	27.4	27.4	27.4	27.5	27.6	27.6	27.6	27.5
Pi4 Orion	3.7	287	03.3	03.4	03.5	03.6	03.7	03.7	03.5	03.3	03.1	02.9	02.7	02.6	5	37.4	37.3	37.3	37.3	37.3	37.3	37.4	37.5	37.5	37.5	37.5
Pi3 Orion	3.2	287	23.7	23.7	23.8	23.9	24.0	24.0	23.9	23.7	23.4	23.2	23.0	22.9	6	58.8	58.7	58.7	58.7	58.7	58.7	58.8	58.9	58.9	58.9	58.9
Sceptrum	3.9	290	19.9	19.9	20.1	20.2	20.3	20.3	20.1	19.9	19.7	19.5	19.3	19.2	-14	17.1	17.2	17.2	17.2	17.1	17.0	16.9	16.8	16.8	16.8	16.9
Nu Eridanus	3.9	290	47.2	47.2	47.3	47.5	47.5	47.5	47.4	47.2	46.9	46.7	46.6	46.4	-3	19.9	20.0	20.0	20.0	20.0	19.9	19.8	19.7	19.7	19.7	19.8
Aldebaran	1.0	290	52.0	52.0	52.1	52.3	52.3	52.3	52.1	51.9	51.7	51.5	51.3	51.1	16	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.9	31.9	31.9	31.9
Theemim	3.8	291	00.4	00.4	00.6	00.8	00.9	00.9	00.7	00.5	00.3	00.1	59.9	59.8	-30	32.6	32.7	32.7	32.7	32.6	32.5	32.3	32.2	32.1	32.1	32.2
Alpha Dorado	3.3	291	26.1	26.3	26.6	26.9	27.1	27.1	27.0	26.8	26.4	26.1	25.9	25.8	-55	01.6	01.7	01.7	01.6	01.5	01.4	01.2	01.1	01.0	01.0	01.1
Theta2 Taurus	3.4	292	40.9	41.0	41.1	41.2	41.2	41.2	41.1	40.8	40.6	40.4	40.2	40.1	15	53.7	53.6	53.6	53.6	53.6	53.6	53.7	53.7	53.8	53.8	53.8
Ain	3.5	292	41.4	41.4	41.5	41.7	41.7	41.7	41.5	41.3	41.1	40.8	40.7	40.5	19	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.3	12.3	12.3
Secundus Hyadum	3.8	294	06.7	06.8	06.9	07.0	07.1	07.0	06.9	06.7	06.4	06.2	06.0	05.9	17	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.1	34.1	34.1	34.1
Primus Hyadum	3.7	294	54.0	54.0	54.1	54.3	54.3	54.3	54.1	53.9	53.7	53.4	53.2	53.1	15	39.2	39.2	39.2	39.1	39.1	39.1	39.2	39.2	39.3	39.3	39.3
Upsilon4 Eridanus	3.6	295	25.4	25.5	25.6	25.8	25.9	25.9	25.7	25.5	25.3	25.1	24.9	24.8	-33	46.5										

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		
Maia	3.9	303	23.1	23.2	23.3	23.4	23.4	23.3	23.2	22.9	22.7	22.4	22.3	22.2	24	24.1	24.1	24.1	24.0	24.0	24.0	24.0	24.0	24.1	24.1	24.2	24.2
Nu Perseus	3.8	303	31.2	31.3	31.5	31.6	31.6	31.5	31.3	31.0	30.7	30.5	30.3	30.1	42	36.8	36.8	36.8	36.8	36.7	36.6	36.6	36.6	36.7	36.7	36.8	36.9
Electra	3.7	303	37.4	37.4	37.6	37.7	37.7	37.6	37.5	37.2	37.0	36.7	36.6	36.5	24	08.8	08.8	08.8	08.8	08.7	08.7	08.8	08.8	08.8	08.9	08.9	09.0
Atik	3.9	303	45.2	45.3	45.4	45.5	45.6	45.5	45.3	45.0	44.7	44.5	44.3	44.2	32	19.4	19.4	19.4	19.3	19.3	19.2	19.2	19.3	19.3	19.4	19.4	19.5
Beta Reticulum	3.8	303	54.4	54.7	55.1	55.5	55.7	55.7	55.5	55.1	54.7	54.3	54.1	54.1	-64	46.7	46.7	46.7	46.6	46.5	46.3	46.1	46.0	46.0	46.1	46.2	46.4
Rana	3.5	304	03.6	03.7	03.8	03.9	03.9	03.9	03.7	03.5	03.3	03.1	02.9	02.9	-9	43.8	43.8	43.8	43.8	43.8	43.7	43.6	43.5	43.4	43.4	43.5	43.5
Delta Perseus	3.0	304	04.7	04.8	05.0	05.1	05.2	05.1	04.9	04.5	04.2	03.9	03.7	03.6	47	49.4	49.4	49.4	49.3	49.3	49.2	49.1	49.1	49.2	49.3	49.4	49.5
Epsilon Eridanus	3.7	306	38.5	38.6	38.7	38.8	38.8	38.7	38.6	38.4	38.1	38.0	37.8	37.8	-9	25.5	25.5	25.5	25.5	25.4	25.3	25.2	25.1	25.1	25.1	25.1	25.2
Xi Taurus	3.7	308	03.8	03.9	04.0	04.1	04.1	04.0	03.9	03.6	03.4	03.2	03.1	03.0	9	46.1	46.1	46.1	46.1	46.1	46.1	46.2	46.3	46.3	46.4	46.4	46.3
Omicron Taurus	3.6	308	39.2	39.3	39.4	39.5	39.5	39.4	39.3	39.0	38.8	38.6	38.5	38.4	9	03.9	03.9	03.9	03.9	03.9	03.9	04.0	04.1	04.1	04.2	04.2	04.1
Mirfak	1.8	308	43.7	43.8	44.0	44.2	44.2	44.1	43.8	43.5	43.2	42.9	42.6	42.5	49	54.0	54.1	54.1	54.0	53.9	53.8	53.8	53.8	53.8	53.9	54.0	54.1
16 Eridanus	3.7	310	00.1	00.2	00.3	00.5	00.5	00.4	00.2	00.0	59.8	59.6	59.4	59.4	-21	43.3	43.4	43.4	43.3	43.3	43.1	43.0	42.9	42.8	42.9	42.9	43.1
Fornacis	3.8	311	52.0	52.1	52.3	52.4	52.4	52.4	52.2	51.9	51.7	51.5	51.4	51.3	-28	57.0	57.0	57.0	57.0	56.8	56.7	56.6	56.5	56.4	56.4	56.5	56.7
Algol	2.1	312	47.1	47.2	47.3	47.5	47.5	47.3	47.1	46.8	46.5	46.3	46.1	46.0	40	59.9	59.9	59.9	59.8	59.7	59.7	59.7	59.7	59.8	59.9	59.9	00.0
Gorgonea Tertia	3.4	313	32.1	32.2	32.4	32.5	32.5	32.4	32.1	31.9	31.6	31.3	31.2	31.1	38	53.0	53.0	52.9	52.9	52.8	52.8	52.8	52.8	52.9	53.0	53.0	53.1
Gamma Perseus	2.9	313	36.4	36.6	36.8	37.0	37.0	36.8	36.5	36.2	35.8	35.5	35.3	35.2	53	33.0	33.0	33.0	32.9	32.8	32.7	32.7	32.7	32.8	32.9	33.0	33.1
Menkar	2.6	314	17.5	17.6	17.7	17.8	17.8	17.7	17.5	17.3	17.0	16.8	16.7	16.7	4	07.8	07.8	07.8	07.8	07.8	07.8	07.9	08.0	08.1	08.1	08.1	08.1
Acamar	3.2	315	19.9	20.1	20.2	20.4	20.4	20.3	20.2	19.9	19.6	19.4	19.3	19.3	-40	16.0	16.0	16.0	15.9	15.8	15.6	15.5	15.4	15.4	15.4	15.5	15.7
Azha	3.9	315	45.8	45.9	46.0	46.1	46.1	46.0	45.8	45.6	45.4	45.2	45.1	45.0	-8	51.5	51.5	51.5	51.5	51.5	51.4	51.2	51.2	51.1	51.1	51.1	51.2
Tau Perseus	3.9	316	14.8	15.0	15.2	15.3	15.3	15.1	14.8	14.5	14.1	13.8	13.7	13.6	52	48.5	48.5	48.5	48.4	48.3	48.2	48.2	48.2	48.3	48.4	48.5	48.6
Miram	3.8	317	07.9	08.0	08.3	08.4	08.4	08.2	07.9	07.5	07.2	06.9	06.7	06.6	55	56.5	56.5	56.5	56.4	56.3	56.2	56.2	56.2	56.3	56.4	56.5	56.6
41 Aries	3.6	317	20.9	21.0	21.1	21.2	21.2	21.1	20.8	20.6	20.3	20.1	20.0	19.9	27	18.3	18.3	18.3	18.2	18.2	18.2	18.2	18.2	18.3	18.4	18.5	18.5
Kaffajjidmah	3.5	319	02.3	02.4	02.5	02.5	02.5	02.4	02.2	02.0	01.8	01.6	01.5	01.4	3	16.8	16.7	16.7	16.7	16.7	16.8	16.9	17.0	17.0	17.1	17.1	17.0
Polaris	2.0	318	46.1	58.5	10.8	19.9	21.6	15.8	04.6	49.8	34.7	23.0	16.3	16.4	89	18.8	18.9	18.9	18.8	18.6	18.5	18.4	18.4	18.4	18.6	18.7	18.9
Phi Eridanus	3.6	325	46.5	46.8	47.0	47.1	47.1	47.0	46.7	46.4	46.1	45.9	45.8	45.9	-51	28.1	28.1	28.1	28.0	27.8	27.6	27.5	27.4	27.4	27.5	27.6	27.8
Beta Triangulum	3.0	327	27.4	27.6	27.7	27.8	27.7	27.5	27.3	27.0	26.7	26.6	26.5	26.4	35	02.3	02.3	02.3	02.2	02.1	02.1	02.1	02.2	02.3	02.4	02.5	02.6
Hamal	2.0	328	03.5	03.6	03.7	03.8	03.7	03.6	03.3	03.1	02.9	02.7	02.6	02.6	23	30.8	30.8	30.7	30.7	30.6	30.7	30.7	30.8	30.9	31.0	31.0	31.0
Almaak	2.2	328	51.8	51.9	52.1	52.2	52.1	51.9	51.7	51.3	51.1	50.9	50.8	50.8	42	23.0	22.9	22.9	22.8	22.7	22.7	22.7	22.8	22.9	23.0	23.1	23.2
Alrishah	3.8	329	21.1	21.2	21.3	21.4	21.3	21.2	21.0	20.8	20.5	20.4	20.3	20.3	2	48.8	48.8	48.8	48.8	48.8	48.9	49.0	49.1	49.1	49.2	49.1	49.1
Alpha Hydrus	2.9	330	13.3	13.6	13.8	14.0	14.0	13.8	13.5	13.1	12.8	12.6	12.5	12.6	-61	31.5	31.5	31.4	31.2	31.1	30.9	30.7	30.7	30.7	30.8	31.0	31.1
Chi Eridanus	3.7	330	54.4	54.6	54.8	54.9	54.9	54.7	54.5	54.2	53.9	53.7	53.6	53.7	-51	33.7	33.7	33.7	33.5	33.4	33.2	33.0	33.0	33.0	33.1	33.2	33.4
Sheratan	2.7	331	11.7	11.8	11.9	12.0	11.9	11.7	11.5	11.3	11.0	10.9	10.8	10.8	20	51.6	51.6	51.5	51.5	51.5	51.5	51.6	51.6	51.7	51.8	51.9	51.9
Segin	3.4	331	12.6	12.9	13.1	13.3	13.2	12.9	12.5	12.0	11.6	11.3	11.2	11.2	63	43.5	43.5	43.5	43.3	43.2	43.1	43.1	43.2	43.3	43.4	43.6	43.7
Mothallah	3.4	331	34.8	34.9	35.0	35.1	35.0	34.8	34.6	34.3	34.1	33.9	33.8	33.8	29	37.9	37.9	37.8	37.7	37.7	37.7	37.8	37.8	37.9	38.0	38.1	38.1
Baten Kaitos	3.7	332	00.3	00.4	00.5	00.6	00.5	00.4	00.2	59.9	59.7	59.6	59.5	59.5	-10	17.1	17.2	17.2	17.1	17.0	16.9	16.8	16.7	16.7	16.7	16.7	16.8
Tau Cetus	3.5	333	51.7	51.8	51.9	51.9	51.9	51.7	51.5	51.3	51.1	50.9	50.9	50.9	-15	53.1	53.1	53.1	53.1	53.0	52.8	52.7	52.6	52.6	52.6	52.7	52.7
51 Andromeda	3.6	335	20.4	20.6	20.8	20.8	20.7	20.5	20.2	19.9	19.6	19.4	19.3	19.3	48	41.1	41.0	41.0	40.9	40.8	40.7	40.7	40.8	40.9	41.1	41.2	41.3
Achemar	0.5	335	28.3	28.6	28.8	28.9	28.9	28.7	28.4	28.0	27.7	27.5	27.5	27.6	-57	11.3	11.3	11.3	11.1	10.9	10.8	10.6	10.6	10.6	10.7	10.8	11.0
Eta Pisces	3.6	336	59.4	59.5	59.5	59.6	59.5	59.3	59.1	58.9	58.7	58.5	58.5	58.5	15	24.0	24.0	23.9	23.9	23.9	24.0	24.0	24.1	24.2	24.3	24.3	24.3
Delta Phoenix	3.9	337	04.6	04.8	05.0	05.1	05.0	04.8	04.6	04.3	04.0	03.8	03.8	03.9	-49	01.4	01.4	01.3	01.2	01.0	00.9	00.7	00.7	00.7	00.8	00.9	01.0
Gamma Phoenix	3.4	337	47.7	47.8	48.0	48.0	48.0	47.8	47.6	47.3	47.0	46.9	46.8	46.9	-43	16.2	16.2	16.1	16.0	15.8	15.7	15.5	15.5	15.5	15.6	15.7	15.8
Ruchbah	2.7	338	22.4	22.7	22.9	23.0	22.9	22.6	22.2	21.8	21.4	21.2	21.1	21.2	60	17.6	17.6	17.5	17.4	17.3	17.2	17.2	17.3	17.4	17.6	17.7	17.9
Theta Cetus	3.6	338	51.8	51.9	52.0	52.0	52.0	51.8	51.6	51.3	51.1	51.0	51.0	51.0	-8	07.9	07.9	07.9	07.9	07.8	07.7	07.6	07.5	07.4	07.4	07.5	07.5
Mirach	2.1	342	25.3	25.4	25.5	25.5	25.4	25.2	24.9	24.7	24.4	24.3	24.3	24.3	35	40.7	40.7	40.6	40.5	40.5	40.4	40.5	40.6	40.7	40.8	40.9	41.0
Dheneb	3.5	342	43.3	43.4	43.5	43.5	43.4	43.2	43.0	42.8	42.6	42.5	42.4	42.5	-10	07.7	07.8	07.8	07.7	07.6	07.5	07.4	07.3	07.3	07.3	07.3	07.4
Beta Phoenix	3.3	343	21.8	21.9	22.1	22.1	22.0	21.8	21.6	21.3	21.0	20.9	20.9	21.0	-46	40.0	40.0	39.9	39.8	39.6	39.5	39.4	39.3	39.3	39.4	39.6	39.7
Mu Andromeda	3.9	345	40.1	40.2	40.3	40.3	40.2	40.0	39.7	39.4	39.2	39.0	39.0	39.1	38	33.5	33.5	33.4	33.3	33.2	33.2	33.3	33.4	33.5	33.7	33.8	33.8
Tsih	2.2	345	39.9	40.2	40.4	40.4	40.3	39.9	39.5	39.1	38.8	38.6	38.6	38.7	60	46.6	46.6	46.5	46.4	46.3	46.2	46.2					