

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	02.2	02.8	03.2	03.1	02.6	01.8	01.0	00.3	59.9	59.8	00.1	00.7	77	42.4	42.3	42.2	42.0	41.9	41.9	41.9	42.1	42.2	42.4	42.6	42.7	
Lambda Andromeda	3.9	5	27.5	27.6	27.7	27.6	27.5	27.2	26.9	26.6	26.4	26.4	26.5	26.6	46	31.7	31.7	31.5	31.4	31.4	31.4	31.4	31.6	31.7	31.9	32.0	32.1	
98 Aquarius	4.0	9	05.9	06.0	06.0	05.9	05.8	05.5	05.3	05.1	04.9	04.9	05.0	05.1	-20	02.1	02.1	02.1	02.0	01.9	01.8	01.7	01.6	01.6	01.7	01.7	01.8	
Gamma Tucana	4.0	10	28.2	28.3	28.4	28.3	28.1	27.7	27.4	27.0	26.8	26.8	27.0	27.2	-58	10.4	10.3	10.1	10.0	09.8	09.7	09.6	09.6	09.7	09.9	10.0	10.0	
Gamma Pices	3.7	10	33.0	33.1	33.1	33.0	32.9	32.7	32.4	32.2	32.1	32.1	32.1	32.2	3	21.0	21.0	20.9	20.9	21.0	21.1	21.2	21.3	21.3	21.4	21.4	21.4	
Iota Grus	3.9	12	14.4	14.5	14.6	14.5	14.3	14.0	13.7	13.4	13.3	13.3	13.4	13.5	-45	11.0	11.0	10.8	10.7	10.6	10.4	10.4	10.4	10.4	10.5	10.6	10.7	
88 Aquarius	3.7	12	28.6	28.7	28.7	28.6	28.4	28.2	28.0	27.8	27.6	27.6	27.7	27.8	-21	06.4	06.4	06.4	06.3	06.2	06.1	06.0	06.0	06.0	06.0	06.1	06.1	
Markab	2.5	13	39.5	39.5	39.5	39.5	39.3	39.1	38.8	38.6	38.5	38.5	38.6	38.7	15	16.4	16.3	16.3	16.2	16.2	16.3	16.4	16.5	16.6	16.7	16.7	16.7	
Scheat	2.5	13	54.5	54.6	54.6	54.5	54.4	54.1	53.9	53.6	53.5	53.5	53.6	53.7	28	09.1	09.1	09.0	08.9	08.9	08.9	09.0	09.2	09.3	09.4	09.5	09.5	
Omicron Andromeda	3.6	14	22.8	22.9	22.9	22.8	22.6	22.3	22.1	21.8	21.7	21.7	21.8	21.9	42	23.8	23.7	23.5	23.4	23.4	23.4	23.5	23.7	23.8	24.0	24.1	24.1	
Fomalhaut	1.2	15	25.3	25.3	25.3	25.2	25.0	24.8	24.5	24.3	24.2	24.2	24.3	24.4	-29	33.6	33.5	33.5	33.4	33.2	33.1	33.1	33.0	33.0	33.1	33.2	33.2	
Skat	3.3	16	10.6	10.7	10.7	10.6	10.4	10.2	09.9	09.7	09.6	09.6	09.7	09.8	-15	45.4	45.4	45.4	45.3	45.2	45.1	45.0	45.0	44.9	45.0	45.0	45.0	
Lambda Aquarius	3.8	16	41.3	41.3	41.3	41.2	41.1	40.9	40.6	40.4	40.3	40.3	40.4	40.5	-7	30.9	30.9	30.9	30.9	30.8	30.7	30.6	30.5	30.5	30.5	30.5	30.5	
Sadalbari	3.5	17	21.2	21.2	21.2	21.1	20.9	20.7	20.5	20.3	20.2	20.2	20.2	20.3	24	40.1	40.1	40.0	39.9	39.9	40.0	40.1	40.2	40.3	40.4	40.5	40.5	
Iota Cepheus	3.5	17	28.4	28.7	28.8	28.6	28.3	27.8	27.4	27.0	26.9	26.9	27.2	27.5	66	16.2	16.1	16.0	15.8	15.7	15.7	15.8	16.0	16.2	16.4	16.5	16.6	
Epsilon Grus	3.5	17	40.9	41.0	41.0	40.9	40.7	40.3	40.0	39.7	39.6	39.6	39.7	39.9	-51	15.3	15.3	15.1	15.0	14.8	14.7	14.7	14.7	14.8	14.9	15.0	15.0	
Lambda Pegasus	4.0	18	13.3	13.3	13.3	13.2	13.0	12.8	12.6	12.4	12.3	12.3	12.3	12.4	23	38.0	37.9	37.8	37.8	37.8	37.8	37.9	38.1	38.2	38.3	38.3	38.3	
Matar	2.9	19	06.4	06.5	06.5	06.4	06.2	06.0	05.7	05.5	05.4	05.4	05.5	05.6	30	17.3	17.2	17.1	17.1	17.0	17.1	17.2	17.4	17.5	17.6	17.7	17.7	
Beta Grus	2.1	19	09.3	09.4	09.4	09.3	09.0	08.7	08.4	08.2	08.0	08.1	08.2	08.4	-46	49.4	49.3	49.2	49.1	48.9	48.8	48.8	48.8	48.8	48.9	49.0	49.1	49.1
Homam	3.4	19	29.0	29.0	29.0	28.9	28.8	28.5	28.3	28.1	28.0	28.0	28.1	28.2	10	53.8	53.8	53.7	53.7	53.7	53.8	53.9	54.0	54.1	54.2	54.2	54.2	
Alpha Lacerta	3.8	22	03.2	03.3	03.3	03.2	02.9	02.6	02.3	02.1	02.0	02.0	02.2	02.4	50	21.0	20.9	20.8	20.6	20.6	20.6	20.7	20.9	21.1	21.2	21.3	21.4	
Delta Grus	4.0	22	30.3	30.3	30.3	30.2	29.9	29.7	29.4	29.1	29.0	29.0	29.2	29.3	-43	26.1	26.1	26.0	25.8	25.7	25.6	25.5	25.5	25.6	25.7	25.8	25.8	
Zeta Aquarius	3.7	22	38.2	38.2	38.2	38.1	37.9	37.7	37.5	37.3	37.2	37.2	37.3	37.4	0	02.6	02.6	02.6	02.6	02.6	02.7	02.8	02.9	03.0	03.0	03.0	03.0	
Sadachbia	3.9	24	25.8	25.8	25.8	25.7	25.5	25.3	25.1	24.9	24.8	24.8	24.9	25.0	-1	19.5	19.5	19.5	19.5	19.5	19.4	19.3	19.2	19.1	19.1	19.1	19.2	
Alpha Tucana	2.9	25	10.4	10.5	10.5	10.3	10.0	09.6	09.2	08.9	08.8	08.8	09.1	09.3	-60	12.1	12.0	11.8	11.7	11.5	11.4	11.4	11.5	11.6	11.7	11.8	11.8	
Zeta Cepheus	3.3	27	11.1	11.2	11.2	11.0	10.7	10.3	10.0	09.8	09.7	09.8	10.0	10.3	58	16.0	15.9	15.7	15.6	15.5	15.6	15.7	15.9	16.1	16.2	16.3	16.3	
Baham	3.5	27	17.9	17.9	17.9	17.7	17.6	17.3	17.1	16.9	16.9	16.9	17.0	17.1	6	15.6	15.5	15.5	15.5	15.5	15.6	15.7	15.8	15.9	15.9	15.9	15.9	
Alnair	1.8	27	45.3	45.3	45.3	45.1	44.9	44.6	44.3	44.0	43.9	44.0	44.1	44.3	-46	54.2	54.2	54.0	53.9	53.8	53.7	53.7	53.7	53.8	53.9	53.9	54.0	
Iota Pegasus	3.8	28	06.4	06.5	06.4	06.3	06.1	05.9	05.6	05.4	05.4	05.4	05.5	05.6	25	24.5	24.4	24.3	24.2	24.2	24.3	24.4	24.6	24.7	24.8	24.8	24.8	
Sadal Melik	2.9	28	24.0	24.0	23.9	23.8	23.6	23.4	23.2	23.0	22.9	23.0	23.1	23.2	-0	15.6	15.6	15.6	15.6	15.6	15.5	15.4	15.3	15.2	15.2	15.2	15.2	
Al Dhanab	3.0	31	20.2	20.3	20.2	20.0	19.8	19.5	19.3	19.1	19.0	19.0	19.2	19.3	-37	18.5	18.5	18.4	18.3	18.2	18.1	18.0	18.0	18.1	18.2	18.2	18.3	
Deneb Algiedi	2.9	33	04.5	04.5	04.4	04.3	04.1	03.8	03.6	03.4	03.4	03.4	03.5	03.6	-16	04.3	04.3	04.3	04.2	04.1	04.1	04.0	03.9	03.9	03.9	04.0	04.0	
Enif	2.4	33	48.4	48.4	48.3	48.2	48.0	47.7	47.5	47.4	47.3	47.4	47.5	47.6	9	56.0	55.9	55.9	55.8	55.9	56.0	56.1	56.2	56.3	56.3	56.3	56.3	
Nu Octans	3.7	34	19.2	19.4	19.2	18.7	18.0	17.1	16.4	15.8	15.7	16.0	16.6	17.3	-77	20.3	20.1	19.9	19.8	19.7	19.6	19.6	19.7	19.9	20.0	20.1	20.1	
Nashira	3.7	34	48.7	48.7	48.6	48.5	48.3	48.0	47.8	47.6	47.6	47.6	47.7	47.8	-16	36.4	36.4	36.4	36.3	36.3	36.2	36.1	36.1	36.0	36.1	36.1	36.1	
Rho Cygnus	4.0	36	23.6	23.7	23.6	23.4	23.2	22.9	22.6	22.5	22.5	22.6	22.7	22.9	45	39.0	38.9	38.7	38.6	38.6	38.7	38.8	39.0	39.2	39.3	39.4	39.4	
Sadal Suud	2.9	36	57.1	57.1	57.1	56.9	56.7	56.5	56.3	56.1	56.1	56.1	56.2	56.3	-5	31.0	31.0	31.0	31.0	30.9	30.9	30.8	30.7	30.7	30.6	30.7	30.7	
Alfirk	3.2	37	48.4	48.6	48.6	48.2	47.8	47.2	46.8	46.6	46.6	46.9	47.3	47.7	70	37.1	37.0	36.8	36.7	36.7	36.7	36.9	37.0	37.2	37.4	37.5	37.5	
Zeta Capricornus	3.8	38	09.8	09.7	09.7	09.5	09.3	09.0	08.8	08.6	08.6	08.7	08.8	08.9	-22	21.5	21.5	21.5	21.4	21.3	21.2	21.2	21.1	21.1	21.2	21.2	21.2	
Alderamin	2.5	40	17.4	17.5	17.4	17.2	16.8	16.4	16.1	15.9	15.9	16.1	16.4	16.7	62	38.5	38.4	38.2	38.1	38.1	38.1	38.3	38.5	38.6	38.8	38.9	38.9	
Kitalpha	3.9	40	53.7	53.6	53.6	53.4	53.2	53.0	52.8	52.6	52.6	52.7	52.8	52.9	5	18.0	17.9	17.9	17.9	17.9	18.0	18.1	18.2	18.3	18.3	18.3	18.3	
Tau Cygnus	3.7	41	11.0	11.1	11.0	10.8	10.6	10.3	10.1	09.9	09.9	10.0	10.2	10.3	38	06.0	05.9	05.8	05.7	05.7	05.8	06.0	06.1	06.3	06.4	06.4	06.4	
Zeta Cygnus	3.2	41	38.4	38.4	38.3	38.1	37.9	37.6	37.4	37.3	37.3	37.4	37.5	37.6	30	16.8	16.7	16.6	16.5	16.5	16.6	16.8	16.9	17.0	17.1	17.2	17.2	
Xi Cygnus	3.7	43	39.6	39.7	39.6	39.4	39.1	38.8	38.6	38.5	38.5	38.6	38.8	39.0	43	58.8	58.7	58.5	58.5	58.5	58.5	58.7	58.9	59.0	59.1	59.2	59.2	
Nu Cygnus	3.9	45	35.8	35.8	35.8	35.6	35.3	35.0	34.8	34.7	34.7	34.8	35.0	35.2	41	13.1	12.9	12.8	12.7	12.7	12.8	13.0	13.1	13.3	13.4	13.4	13.4	
Beta Indus	3.7	46	04.1	04.1	03.9	03.6	03.3	02.9	02.5	02.3	02.3	02.5	02.7	02.9	-58	24.5	24.4	24.3	24.2	24.1	24.0	24.1	24.1	24.2	24.3	24.4	24.4	
Albali	3.8	47	55.2	55.1	55.0	54.8	54.6	54.4	54.2	54.1	54.1	54.1	54.3	54.4	-9	27.0	27.0	27.0	27.0	26.9	26.9	26.8	26.7	26.7	26.7	26.7	26.7	
Gienah Cygni	2.5	48	19.7	19.7	19.6	19.4	19.1	18.9	18.7	18.6	18.6	18.7	18.8	19.0	34	01.1	01.0	00.9	00.8	00.9	01.0	01.1	01.3	01.4	01.5	01.5		

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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	01.2	01.1	01.0	00.8	00.6	00.4	00.2	00.1	00.1	00.2	00.4	00.4	-0	47.0	47.1	47.1	47.1	47.1	47.0	47.0	46.9	46.8	46.7	46.7	46.8	
Delta Pavonis	3.6	57	32.0	31.9	31.6	31.1	30.6	30.1	29.8	29.6	29.6	29.9	30.3	30.6	-66	09.0	08.9	08.8	08.7	08.7	08.6	08.6	08.7	08.8	08.9	09.0	09.0	09.0
Epsilon Pavonis	4.0	59	31.2	31.1	30.7	30.0	29.4	28.7	28.3	28.1	28.2	28.6	29.1	29.5	-72	52.7	52.5	52.4	52.3	52.3	52.2	52.2	52.3	52.4	52.6	52.6	52.7	52.6
Gamma Sagitta	3.5	60	10.7	10.7	10.6	10.4	10.1	09.9	09.8	09.7	09.7	09.8	10.0	10.1	19	31.6	31.5	31.5	31.4	31.4	31.5	31.6	31.7	31.8	31.9	32.0	32.0	31.9
Eta Cygnus	3.9	60	48.8	48.8	48.7	48.4	48.2	47.9	47.8	47.7	47.8	47.9	48.1	48.2	35	07.1	07.0	06.9	06.8	06.8	06.8	07.0	07.1	07.3	07.4	07.5	07.5	07.4
Aishain	3.7	61	01.5	01.5	01.3	01.1	00.9	00.7	00.5	00.5	00.5	00.6	00.7	00.8	6	26.3	26.3	26.2	26.2	26.2	26.3	26.3	26.5	26.5	26.6	26.6	26.6	26.6
Eta Aquila	3.9	61	43.8	43.7	43.6	43.4	43.2	43.0	42.8	42.7	42.8	42.9	43.0	43.1	1	02.3	02.3	02.2	02.2	02.2	02.3	02.4	02.4	02.5	02.6	02.6	02.6	02.6
Altair	0.9	62	09.6	09.5	09.3	09.1	08.9	08.7	08.6	08.5	08.5	08.6	08.8	08.8	8	54.1	54.1	54.0	54.0	54.0	54.0	54.1	54.2	54.4	54.4	54.4	54.4	54.4
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	18.1	17.9	17.8	17.7	17.7	17.7	17.8	18.0	18.2	18.4	18.5	18.5	18.4
Kaus Media	3.8	63	01.3	01.2	01.1	00.9	00.6	00.4	00.3	00.2	00.2	00.4	00.5	00.6	18	34.0	33.9	33.8	33.8	33.8	33.8	33.9	34.1	34.2	34.3	34.3	34.3	34.3
Tarazed	2.7	63	17.6	17.6	17.4	17.2	17.0	16.8	16.6	16.6	16.6	16.7	16.9	16.9	10	38.7	38.6	38.5	38.5	38.5	38.6	38.7	38.8	38.9	39.0	39.0	39.0	38.9
Delta Cygnus	2.9	63	40.0	40.0	39.8	39.6	39.3	39.1	38.9	38.8	38.9	39.1	39.3	39.5	45	09.8	09.6	09.5	09.4	09.4	09.5	09.6	09.8	09.9	10.1	10.2	10.2	10.1
Albireo	3.1	67	12.1	12.0	11.9	11.6	11.4	11.2	11.0	11.0	11.1	11.2	11.4	11.5	27	59.2	59.1	59.0	59.0	59.0	59.0	59.1	59.3	59.4	59.5	59.6	59.6	59.5
Iota Cygnus	3.8	67	30.3	30.2	30.0	29.7	29.4	29.2	29.0	29.0	29.1	29.3	29.6	29.8	51	45.5	45.3	45.2	45.1	45.1	45.2	45.3	45.5	45.7	45.8	45.9	45.8	45.8
Delta Aquila	3.4	68	28.5	28.4	28.3	28.1	27.9	27.7	27.5	27.4	27.5	27.6	27.7	27.8	3	08.4	08.4	08.3	08.3	08.3	08.4	08.5	08.6	08.6	08.7	08.7	08.7	08.7
Rukbat	4.0	68	49.4	49.3	49.0	48.8	48.5	48.2	48.0	47.9	48.0	48.1	48.3	48.4	-40	35.5	35.4	35.4	35.3	35.3	35.3	35.3	35.4	35.4	35.5	35.5	35.5	35.4
Arkab	4.0	69	07.7	07.5	07.3	07.0	06.7	06.4	06.2	06.1	06.2	06.4	06.5	06.7	-44	26.1	26.0	25.9	25.9	25.9	25.9	25.9	25.9	25.9	26.0	26.1	26.1	26.0
Rho Sagittarius	3.9	69	24.6	24.4	24.3	24.0	23.8	23.6	23.4	23.4	23.4	23.5	23.7	23.7	-17	49.4	49.4	49.4	49.3	49.3	49.3	49.2	49.2	49.2	49.2	49.2	49.2	49.2
Kappa Cygnus	3.8	70	39.7	39.7	39.5	39.2	38.8	38.6	38.4	38.4	38.6	38.8	39.1	39.3	53	23.6	23.4	23.3	23.2	23.2	23.3	23.4	23.6	23.8	23.9	24.0	24.0	23.9
Nodus Secundus	3.1	71	52.5	52.5	52.2	51.7	51.3	50.9	50.7	50.8	51.1	51.5	52.0	52.3	67	41.1	40.9	40.8	40.7	40.7	40.8	40.9	41.1	41.3	41.4	41.5	41.5	41.4
Albaldah	2.9	72	22.9	22.8	22.6	22.4	22.2	21.9	21.8	21.7	21.8	21.9	22.0	22.1	-21	00.2	00.2	00.2	00.1	00.1	00.1	00.0	00.0	00.0	00.0	00.0	00.0	00.0
Tau Sagittarius	3.3	73	04.8	04.6	04.4	04.2	03.9	03.7	03.6	03.5	03.5	03.7	03.8	03.9	-27	39.1	39.0	39.0	39.0	39.0	39.0	38.9	38.9	38.9	39.0	39.0	39.0	39.0
Al Thalimain	3.4	73	16.8	16.7	16.5	16.3	16.1	15.9	15.7	15.7	15.7	15.9	16.0	16.1	-4	51.8	51.8	51.8	51.8	51.8	51.8	51.7	51.6	51.6	51.6	51.6	51.6	51.6
Deneb el Okab	3.0	73	30.7	30.6	30.4	30.2	30.0	29.8	29.7	29.6	29.7	29.8	30.0	30.0	13	53.0	52.9	52.8	52.8	52.8	52.9	53.0	53.1	53.2	53.3	53.3	53.3	53.2
Omicron Sagittarius	3.8	73	39.1	38.9	38.7	38.5	38.3	38.1	37.9	37.8	37.9	38.0	38.2	38.2	-21	43.3	43.3	43.3	43.3	43.3	43.3	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Ascella	2.6	74	09.5	09.3	09.1	08.9	08.6	08.4	08.2	08.2	08.2	08.4	08.5	08.6	-29	51.7	51.6	51.6	51.6	51.6	51.6	51.5	51.5	51.5	51.6	51.6	51.6	51.6
Sulafat	3.3	75	09.3	09.2	09.0	08.8	08.6	08.4	08.2	08.2	08.3	08.5	08.7	08.8	32	42.5	42.3	42.2	42.2	42.2	42.3	42.4	42.5	42.7	42.8	42.8	42.8	42.7
Xi Sagittarius	3.5	75	23.4	23.3	23.1	22.8	22.6	22.4	22.2	22.2	22.2	22.4	22.5	22.6	-21	05.4	05.3	05.3	05.3	05.3	05.3	05.2	05.2	05.2	05.2	05.2	05.2	05.2
Nunki	2.1	75	59.9	59.8	59.6	59.4	59.1	58.9	58.8	58.7	58.8	58.9	59.0	59.1	-26	16.8	16.8	16.8	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
Sheliak	3.5	77	22.4	22.3	22.1	21.8	21.6	21.4	21.3	21.3	21.4	21.6	21.7	21.8	33	22.7	22.6	22.5	22.4	22.4	22.5	22.6	22.8	22.9	23.0	23.1	23.0	22.9
Phi Sagittarius	3.2	78	24.0	23.8	23.6	23.4	23.1	22.9	22.8	22.7	22.8	22.9	23.1	23.2	-26	58.6	58.6	58.6	58.5	58.5	58.5	58.5	58.5	58.5	58.5	58.5	58.5	58.5
Vega	0.0	80	40.1	40.0	39.8	39.5	39.3	39.1	39.0	39.0	39.1	39.3	39.5	39.6	38	47.8	47.6	47.5	47.5	47.5	47.6	47.7	47.9	48.0	48.1	48.2	48.1	48.0
Alpha Scutum	3.9	81	02.2	02.0	01.9	01.6	01.4	01.2	01.1	01.1	01.1	01.3	01.4	01.4	-8	14.0	14.1	14.1	14.1	14.1	14.1	14.0	13.9	13.9	13.9	13.9	13.9	13.9
Kaus Borealis	2.8	82	49.4	49.3	49.0	48.8	48.5	48.3	48.2	48.2	48.3	48.4	48.5	48.6	-25	24.8	24.8	24.8	24.8	24.8	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7
Alpha Telescopium	3.5	83	02.2	02.0	01.7	01.4	01.1	00.8	00.7	00.6	00.8	00.9	01.1	01.2	-45	57.6	57.5	57.5	57.4	57.4	57.4	57.5	57.6	57.6	57.7	57.6	57.6	57.6
Kaus Australis	1.8	83	45.6	45.4	45.2	44.9	44.6	44.4	44.3	44.2	44.3	44.5	44.6	44.7	-34	22.6	22.6	22.6	22.5	22.5	22.5	22.6	22.6	22.6	22.6	22.6	22.6	22.6
109 Hercules	3.9	83	57.0	56.9	56.7	56.5	56.2	56.1	56.0	56.0	56.1	56.2	56.4	56.4	21	46.6	46.5	46.4	46.4	46.4	46.4	46.6	46.7	46.8	46.9	46.9	46.9	46.8
Eta Serpens	3.3	84	31.1	31.0	30.8	30.6	30.3	30.2	30.1	30.0	30.1	30.3	30.4	30.4	-2	53.7	53.7	53.7	53.7	53.7	53.7	53.6	53.6	53.5	53.5	53.5	53.5	53.5
Chi Draco	3.6	84	48.7	48.5	48.0	47.4	46.9	46.6	46.5	46.7	47.2	47.8	48.4	48.8	72	44.3	44.1	44.0	44.0	44.0	44.1	44.2	44.4	44.6	44.7	44.7	44.7	44.5
Kaus Media	2.7	84	33.6	33.5	33.3	33.0	32.7	32.5	32.4	32.4	32.5	32.6	32.8	32.8	-29	49.3	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.3	49.2	49.2
Eta Sagittarius	3.1	85	23.5	23.3	23.1	22.8	22.5	22.3	22.2	22.1	22.2	22.4	22.6	22.6	-36	45.4	45.3	45.3	45.3	45.3	45.3	45.3	45.4	45.4	45.4	45.4	45.3	45.3
Mu Sagittarius	3.8	86	22.9	22.7	22.5	22.2	22.0	21.8	21.7	21.7	21.8	21.9	22.0	22.1	-21	03.2	03.2	03.2	03.2	03.2	03.2	03.2	03.2	03.2	03.2	03.2	03.2	03.2
Omicron Hercules	3.8	88	00.0	59.9	59.7	59.4	59.2	59.1	59.0	59.0	59.1	59.3	59.4	59.5	28	45.9	45.8	45.7	45.7	45.7	45.7	45.9	46.0	46.1	46.2	46.2	46.2	46.1
Omicron Ophiuchus	3.7	88	01.3	01.2	01.0	00.8	00.6	00.4	00.3	00.3	00.4	00.5	00.7	00.7	9	34.0	33.9	33.9	33.9	33.9	33.9	34.0	34.1	34.2	34.2	34.2	34.2	34.2
Theta Ara	3.7	88	06.7	06.4	06.1	05.8	05.5	05.2	05.1	05.0	05.2	05.4	05.6	05.6	-50	05.3	05.2	05.2	05.2	05.2	05.2	05.2	05.3	05.4	05.4	05.4	05.3	
El Nasl	3.6	88	21.4	21.2	21.0	20.7	20.5	20.3	20.1	20.1	20.2	20.4	20.5	20.5	-30	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3
Nu Ophiuchus	3.3	90	04.8	04.6	04.4	04.2	03.9	03.8	03.7	0																		

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	27.4	27.1	26.8	26.5	26.3	26.1	25.9	25.9	26.1	26.3	26.4	26.4	-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	07.7	07.6	07.4	07.1	06.9	06.8	06.7	06.7	06.9	07.0	07.1	07.1	12	33.1	33.0	33.0	33.0	33.0	33.0	33.1	33.2	33.3	33.3	33.4	33.3
Shaula	1.6	96	23.7	23.5	23.2	22.9	22.7	22.5	22.4	22.4	22.5	22.7	22.8	22.8	-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	48.6	48.3	48.0	47.6	47.3	47.1	47.0	47.0	47.2	47.4	47.5	47.6	-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	57.4	57.1	56.7	56.3	55.9	55.6	55.5	55.5	55.7	56.0	56.2	56.3	-60	41.4	41.3	41.3	41.3	41.3	41.4	41.5	41.6	41.7	41.7	41.7	41.6
Lesath	2.7	97	06.4	06.1	05.9	05.6	05.3	05.1	05.0	05.1	05.2	05.3	05.5	05.5	-37	18.2	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	19.9	19.7	19.4	19.1	18.8	18.7	18.6	18.8	19.0	19.2	19.5	19.6	52	17.5	17.4	17.3	17.3	17.3	17.4	17.5	17.7	17.8	17.9	17.9	17.8
Gamma Ara	3.3	98	24.1	23.7	23.4	23.0	22.6	22.4	22.3	22.3	22.5	22.8	23.0	23.0	-56	23.2	23.1	23.1	23.1	23.1	23.1	23.2	23.3	23.4	23.4	23.3	23.2
Beta Ara	2.8	98	25.7	25.4	25.0	24.6	24.3	24.0	23.9	23.9	24.1	24.4	24.6	24.6	-55	32.3	32.2	32.2	32.2	32.2	32.3	32.3	32.4	32.4	32.5	32.5	32.4
Theta Ophiuchus	3.3	99	18.8	18.6	18.4	18.1	17.9	17.8	17.7	17.7	17.8	17.9	18.1	18.1	-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	08.3	08.1	07.8	07.6	07.4	07.2	07.2	07.3	07.4	07.6	07.8	07.8	36	47.7	47.6	47.5	47.5	47.5	47.6	47.7	47.9	48.0	48.1	48.1	48.0
Sarin	3.1	101	07.3	07.1	06.9	06.6	06.5	06.3	06.3	06.3	06.5	06.6	06.7	06.8	24	49.5	49.4	49.3	49.3	49.3	49.4	49.5	49.6	49.7	49.8	49.8	49.7
Ras Algethi	2.7	101	12.2	12.0	11.8	11.6	11.4	11.2	11.2	11.2	11.3	11.5	11.6	11.6	14	22.6	22.5	22.5	22.5	22.5	22.5	22.6	22.7	22.8	22.8	22.8	22.7
Eta Scorpius	3.3	101	44.9	44.6	44.3	44.0	43.7	43.5	43.5	43.5	43.6	43.8	44.0	44.0	-43	15.1	15.1	15.1	15.1	15.1	15.2	15.2	15.3	15.3	15.4	15.3	15.2
Sabik	2.4	102	14.0	13.8	13.6	13.4	13.2	13.0	13.0	13.0	13.1	13.2	13.3	13.3	-15	44.3	44.3	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	48.2	47.8	47.3	47.0	46.8	46.9	47.1	47.5	47.9	48.3	48.5	65	41.9	41.7	41.7	41.7	41.7	41.8	42.0	42.1	42.3	42.3	42.3	42.2
Epsilon Hercules	3.9	104	48.9	48.8	48.5	48.3	48.1	48.0	48.0	48.0	48.2	48.3	48.5	48.5	30	54.5	54.4	54.3	54.3	54.4	54.5	54.7	54.8	54.8	54.8	54.7	54.6
Zeta Ara	3.1	105	05.9	05.5	05.2	04.8	04.5	04.2	04.2	04.2	04.4	04.7	04.8	04.8	-56	00.3	00.3	00.3	00.3	00.3	00.4	00.5	00.6	00.6	00.7	00.7	00.6
Kappa Ophiuchus	3.2	105	26.5	26.3	26.1	25.9	25.7	25.6	25.6	25.6	25.7	25.9	26.0	26.0	9	21.4	21.3	21.2	21.2	21.2	21.3	21.4	21.5	21.5	21.6	21.6	21.5
Zeta Scorpius	3.6	106	08.6	08.3	08.0	07.7	07.5	07.3	07.3	07.3	07.4	07.6	07.7	07.7	-42	22.7	22.7	22.7	22.8	22.8	22.8	22.9	22.9	23.0	23.0	23.0	22.9
Mu2 Scorpius	3.6	106	42.8	42.5	42.3	42.0	41.7	41.6	41.5	41.5	41.7	41.9	42.0	42.0	-38	02.1	02.1	02.1	02.2	02.2	02.2	02.2	02.3	02.3	02.3	02.3	02.2
Mu1 Scorpius	3.0	106	49.8	49.5	49.2	48.9	48.7	48.6	48.5	48.5	48.7	48.8	48.9	48.9	-38	03.9	03.9	03.9	04.0	04.0	04.0	04.1	04.1	04.1	04.1	04.1	04.0
Epsilon Scorpius	2.3	107	15.9	15.6	15.4	15.1	14.9	14.7	14.7	14.7	14.9	15.0	15.1	15.1	-34	18.8	18.8	18.8	18.8	18.8	18.8	18.9	18.9	18.9	18.9	18.9	18.8
Eta Ara	3.8	107	17.7	17.4	17.0	16.5	16.2	16.0	15.9	16.0	16.2	16.5	16.7	16.7	-59	03.6	03.5	03.5	03.5	03.5	03.6	03.7	03.8	03.9	03.9	03.9	03.8
Atria	1.9	107	31.1	30.6	30.0	29.5	29.0	28.7	28.6	28.8	29.1	29.5	29.8	29.8	-69	02.7	02.7	02.6	02.7	02.7	02.8	02.9	03.0	03.1	03.2	03.1	02.9
Eta Hercules	3.5	109	10.6	10.4	10.1	09.9	09.7	09.6	09.6	09.7	09.9	10.1	10.2	10.2	38	53.9	53.7	53.7	53.7	53.7	53.8	54.0	54.1	54.2	54.2	54.2	54.0
Zeta Hercules	2.9	109	34.1	33.9	33.6	33.4	33.2	33.1	33.1	33.2	33.4	33.5	33.7	33.7	31	34.8	34.7	34.6	34.6	34.7	34.8	35.0	35.1	35.1	35.1	35.0	34.9
Zeta Ophiuchus	2.6	110	32.7	32.5	32.3	32.0	31.9	31.8	31.7	31.7	31.9	32.0	32.1	32.1	-10	35.4	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.4	35.4	35.4	35.4
Tau Scorpius	2.8	110	50.5	50.3	50.1	49.8	49.6	49.5	49.4	49.5	49.6	49.7	49.8	49.8	-28	14.3	14.3	14.4	14.4	14.4	14.4	14.5	14.5	14.5	14.5	14.4	14.4
Gamma Apus	3.9	111	10.8	09.9	08.8	07.8	07.0	06.6	06.5	06.9	07.6	08.4	08.9	08.9	-78	55.1	55.0	55.0	55.1	55.1	55.2	55.4	55.5	55.6	55.6	55.5	55.3
Marfik	3.9	112	07.2	07.0	06.8	06.6	06.4	06.3	06.3	06.3	06.5	06.6	06.7	06.7	1	57.5	57.4	57.3	57.3	57.3	57.4	57.4	57.5	57.6	57.6	57.6	57.5
Kornephoros	2.8	112	19.1	18.9	18.6	18.4	18.2	18.1	18.1	18.2	18.3	18.5	18.6	18.6	21	27.8	27.6	27.6	27.6	27.6	27.7	27.8	27.9	28.0	28.0	28.0	27.9
Antares	1.1	112	27.8	27.6	27.3	27.1	26.9	26.8	26.7	26.8	26.9	27.0	27.1	27.1	-26	27.4	27.4	27.5	27.5	27.5	27.5	27.6	27.6	27.6	27.6	27.5	27.5
Eta Draco	2.7	113	58.2	57.9	57.6	57.2	56.9	56.9	57.0	57.2	57.5	57.9	58.1	58.2	61	29.1	28.9	28.9	28.9	28.9	29.0	29.2	29.4	29.5	29.5	29.5	29.3
Gamma Hercules	3.7	114	23.3	23.1	22.9	22.7	22.5	22.4	22.4	22.5	22.6	22.8	22.9	22.8	19	07.5	07.3	07.3	07.3	07.3	07.4	07.5	07.6	07.7	07.7	07.7	07.5
Alniyat	2.9	114	31.2	31.0	30.7	30.5	30.3	30.2	30.1	30.2	30.3	30.4	30.5	30.5	-25	37.2	37.2	37.2	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3
Tau Hercules	3.9	114	58.8	58.5	58.2	58.0	57.8	57.7	57.7	57.9	58.1	58.3	58.5	58.5	46	17.0	16.8	16.8	16.8	16.8	16.9	17.1	17.2	17.3	17.4	17.3	17.2
Yed Posterior	3.2	115	15.7	15.4	15.2	15.0	14.8	14.7	14.7	14.8	14.9	15.0	15.1	15.0	-4	43.3	43.3	43.4	43.4	43.4	43.4	43.3	43.3	43.3	43.3	43.2	43.3
Atria	3.9	115	52.0	51.6	51.1	50.7	50.3	50.1	50.1	50.3	50.6	50.9	51.0	51.0	-63	42.7	42.7	42.7	42.8	42.8	42.9	43.0	43.1	43.2	43.2	43.2	42.9
Yed Prior	2.7	116	15.4	15.2	14.9	14.7	14.6	14.5	14.5	14.5	14.6	14.7	14.8	14.8	-3	43.5	43.6	43.6	43.6	43.6	43.6	43.6	43.5	43.5	43.4	43.4	43.5
Graffias	2.6	118	27.9	27.7	27.5	27.2	27.1	27.0	26.9	27.0	27.1	27.2	27.3	27.3	-19	50.2	50.3	50.3	50.3	50.3	50.4	50.4	50.4	50.3	50.3	50.3	50.3
Dschubba	2.3	119	44.3	44.1	43.8	43.6	43.4	43.3	43.3	43.4	43.5	43.6	43.7	43.6	-22	39.3	39.3	39.3	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.3
Eta Lupus	3.4	119	46.2	45.9	45.6	45.3	45.2	45.0	45.0	45.1	45.2	45.4	45.5	45.4	-38	25.7	25.7	25.8	25.8	25.8	25.9	25.9	26.0	26.0	26.0	25.9	25.8
Pi Scorpius	2.9	120	06.3	06.0	05.8	05.5	05.4	05.3	05.3	05.3	05.4	05.6	05.6	05.6	-26	08.8	08.8	08.9	08.9	08.9	09.0	09.0	09.0	09.0	09.0	08.9	08.9
Gamma Serpens	3.9	120	44.9	44.7	44.5	44.3	44.1	44.1	44.1	44.1	44.3	44.4	44.5	44.4	15	37.3	37.2	37.1	37.1	37.1	37.2	37.3	37.4	37.4	37.5	37.4	37.3
Beta Triang' Aust'	2.8	120	56.9	56.5	56.0	55.6	55.3	55.1	55.1	55.3	55.6	55.9	56.0	55.9	-63	27.8	27.8	27.8	27.9	27.9	28.0	28.1	28.3	28.3	28.3	28.2	28.0
Epsilon Serpens	3.7	122	08.8	08.6	08.3	08.1	08.0	07.9	07.9	08.0	08.1	08.2	08.3	08.2	4	26.5	26.4	26.3	26.3	26.3	26.4	26.4	26.5	26.5	26.6	26.6	26.5
Mu Serpens	3.6	122	26.3	26.1	25.8	25.6	25.5	25.4	25.4	25.5	25.6	25.7	25.7	25.7	-3	28.0	28.1	28.1	28.2	28.2	28.1	28.1	28.0</				

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	21.4	21.1	20.8	20.6	20.4	20.3	20.3	20.4	20.6	20.7	20.8	20.7	-36	18.1	18.2	18.2	18.3	18.4	18.5	18.5	18.5	18.5	18.5	18.4	18.4	18.4	18.3
Delta Lupus	3.2	129	27.5	27.2	26.9	26.6	26.5	26.4	26.4	26.5	26.7	26.8	26.8	26.7	-40	41.3	41.3	41.4	41.5	41.5	41.6	41.7	41.7	41.7	41.7	41.7	41.6	41.5	41.5
Pherkad	3.0	129	50.1	49.5	49.0	48.5	48.3	48.4	48.7	49.2	49.7	50.1	50.4	50.5	71	47.2	47.1	47.1	47.2	47.3	47.5	47.6	47.7	47.7	47.6	47.5	47.4	47.4	47.2
Gamma Triang' Aust'	2.9	129	59.4	58.8	58.2	57.7	57.4	57.3	57.4	57.7	58.1	58.4	58.5	58.3	-68	43.2	43.1	43.2	43.3	43.5	43.6	43.7	43.8	43.8	43.8	43.7	43.5	43.4	43.4
Zuben Elschemali	2.6	130	35.1	34.9	34.7	34.5	34.3	34.3	34.3	34.4	34.5	34.6	34.6	34.5	-9	25.6	25.7	25.7	25.8	25.8	25.8	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7
Delta Bootes	3.5	131	00.3	00.0	59.8	59.6	59.5	59.4	59.5	59.6	59.8	59.9	00.0	59.9	33	16.0	15.9	15.9	15.9	16.0	16.2	16.3	16.3	16.3	16.3	16.3	16.2	16.0	16.0
Zeta Lupus	3.4	131	42.6	42.3	41.9	41.6	41.4	41.4	41.4	41.5	41.7	41.9	42.0	41.8	-52	08.5	08.5	08.6	08.7	08.8	08.9	09.0	09.0	09.0	09.0	08.9	08.8	08.8	08.7
Kappa Lupus	3.9	131	48.3	48.0	47.6	47.4	47.2	47.1	47.1	47.3	47.5	47.6	47.7	47.5	-48	46.8	46.8	46.9	47.0	47.1	47.2	47.3	47.3	47.3	47.3	47.2	47.1	47.0	47.0
Brachium	3.3	133	48.3	48.0	47.8	47.6	47.4	47.4	47.4	47.5	47.6	47.7	47.7	47.6	-25	19.6	19.7	19.8	19.8	19.8	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.8	19.8
Nekkar	3.5	134	24.1	23.9	23.6	23.4	23.3	23.3	23.4	23.5	23.7	23.8	23.9	23.8	40	20.4	20.3	20.2	20.3	20.4	20.6	20.7	20.7	20.7	20.7	20.6	20.5	20.4	20.4
Ke Kwan	3.1	135	00.7	00.4	00.1	59.9	59.7	59.7	59.7	59.8	00.0	00.1	00.1	00.0	-42	09.0	09.0	09.1	09.2	09.3	09.3	09.4	09.4	09.4	09.4	09.4	09.3	09.2	09.2
Beta Lupus	2.7	135	10.1	09.7	09.5	09.2	09.1	09.0	09.0	09.1	09.3	09.4	09.5	09.3	-43	10.8	10.8	10.9	11.0	11.1	11.1	11.2	11.2	11.2	11.2	11.1	11.0	11.0	11.0
Zuben El Genubi	2.8	137	06.7	06.5	06.3	06.1	06.0	05.9	05.9	06.0	06.1	06.2	06.2	06.1	-16	05.5	05.5	05.6	05.7	05.7	05.7	05.7	05.6	05.6	05.6	05.6	05.6	05.6	05.6
Kochab	2.1	137	20.6	20.0	19.4	18.9	18.8	18.9	19.3	19.9	20.5	20.9	21.2	21.2	74	06.1	06.0	06.0	06.1	06.2	06.4	06.5	06.5	06.5	06.5	06.4	06.2	06.0	06.0
Alpha Apus	3.8	137	39.1	38.0	37.0	36.2	35.8	35.7	36.1	36.7	37.5	38.1	38.2	37.9	-79	05.4	05.4	05.5	05.6	05.8	06.0	06.1	06.1	06.1	06.1	06.0	05.9	05.7	05.7
109 Virgo	3.7	138	17.1	16.8	16.6	16.5	16.4	16.3	16.4	16.4	16.5	16.6	16.7	16.6	1	50.5	50.4	50.3	50.3	50.4	50.4	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.4
Mirak	2.4	138	37.3	37.1	36.9	36.7	36.6	36.6	36.6	36.7	36.9	37.0	37.0	36.9	27	01.2	01.1	01.1	01.1	01.2	01.4	01.4	01.5	01.5	01.5	01.4	01.3	01.2	01.2
Rijl al Awwa	3.9	139	04.5	04.3	04.0	03.9	03.8	03.7	03.8	03.8	03.9	04.0	04.0	03.9	-5	42.6	42.7	42.8	42.8	42.8	42.8	42.8	42.7	42.7	42.7	42.7	42.7	42.7	42.8
Alpha Circinus	3.2	139	07.6	07.1	06.6	06.2	06.0	06.0	06.1	06.4	06.7	06.9	06.9	06.7	-65	01.4	01.4	01.5	01.6	01.8	01.9	02.0	02.0	02.0	02.0	01.9	01.8	01.7	01.7
Men	2.3	139	18.9	18.5	18.2	18.0	17.9	17.8	17.9	18.0	18.2	18.3	18.3	18.2	-47	26.2	26.2	26.3	26.4	26.5	26.6	26.7	26.7	26.7	26.7	26.6	26.5	26.4	26.4
Zeta Bootes	3.8	139	34.1	33.9	33.7	33.5	33.4	33.4	33.4	33.5	33.6	33.7	33.7	33.6	13	40.5	40.4	40.4	40.4	40.4	40.5	40.6	40.6	40.6	40.6	40.6	40.5	40.4	40.4
Rigel Kentaurus	0.0	139	53.4	53.0	52.6	52.3	52.1	52.1	52.2	52.4	52.7	52.9	52.9	52.8	-60	52.8	52.8	52.9	53.1	53.2	53.3	53.4	53.4	53.4	53.4	53.3	53.2	53.1	53.1
Eta Centaurus	2.3	140	55.8	55.4	55.2	54.9	54.8	54.8	54.8	55.0	55.1	55.2	55.2	55.1	-42	12.5	12.5	12.6	12.7	12.8	12.9	12.9	12.9	12.9	12.9	12.8	12.7	12.7	12.7
Seginus	3.0	141	51.6	51.3	51.1	50.9	50.8	50.9	50.9	51.1	51.2	51.4	51.4	51.3	38	15.1	15.0	15.0	15.1	15.2	15.3	15.4	15.4	15.4	15.4	15.3	15.2	15.0	15.0
Rho Bootes	3.6	141	54.8	54.5	54.3	54.1	54.0	54.0	54.1	54.2	54.4	54.5	54.5	54.4	30	18.9	18.8	18.8	18.8	18.8	18.9	19.1	19.2	19.2	19.2	19.2	19.1	19.0	18.8
Lambda Bootes	3.6	144	57.2	56.8	56.6	56.3	56.2	56.2	56.3	56.4	56.6	56.7	56.7	56.5	-46	06.6	06.7	06.8	06.9	07.0	07.1	07.1	07.2	07.2	07.1	07.0	06.9	06.9	06.9
Arcturus	0.2	145	56.8	56.5	56.3	56.2	56.1	56.1	56.2	56.3	56.4	56.5	56.5	56.4	19	07.0	06.9	06.9	06.9	07.0	07.1	07.1	07.2	07.2	07.1	07.0	06.9	06.9	06.9
Menkent	2.1	148	08.9	08.6	08.4	08.2	08.1	08.1	08.2	08.3	08.4	08.5	08.5	08.3	-36	25.6	25.7	25.8	25.9	26.0	26.0	26.1	26.1	26.0	25.9	25.9	25.8	25.8	25.8
Pi Hydra	3.3	148	14.0	13.7	13.5	13.3	13.2	13.2	13.3	13.4	13.5	13.5	13.5	13.4	-26	44.3	44.4	44.5	44.6	44.6	44.7	44.7	44.7	44.7	44.6	44.5	44.5	44.5	44.5
Thuban	3.7	148	49.5	49.1	48.7	48.4	48.4	48.5	48.8	49.1	49.4	49.7	49.7	49.6	64	18.8	18.7	18.7	18.8	19.0	19.1	19.2	19.2	19.2	19.2	19.0	18.8	18.7	18.7
Agena	0.6	148	49.6	49.2	48.8	48.5	48.4	48.4	48.6	48.8	49.0	49.2	49.2	48.9	-60	25.6	25.7	25.8	25.9	26.1	26.2	26.3	26.3	26.2	26.1	26.0	25.9	25.9	25.9
Zeta Centaurus	2.5	150	55.4	55.0	54.8	54.6	54.5	54.5	54.6	54.7	54.9	55.0	55.0	54.8	-47	20.7	20.7	20.8	21.0	21.1	21.2	21.2	21.2	21.2	21.1	21.0	20.9	20.9	20.9
Muphrid	2.7	151	11.1	10.8	10.6	10.5	10.4	10.4	10.5	10.6	10.7	10.8	10.7	10.6	18	20.1	20.0	20.0	20.2	20.0	20.1	20.2	20.2	20.2	20.2	20.1	20.1	19.9	19.9
Mu Centaurus	3.5	152	24.6	24.3	24.1	23.9	23.8	23.8	23.9	24.0	24.2	24.2	24.2	24.0	-42	31.9	31.9	32.0	32.2	32.3	32.4	32.4	32.4	32.3	32.2	32.1	32.1	32.1	32.1
Nu Centaurus	3.4	152	26.4	26.0	25.8	25.6	25.5	25.5	25.6	25.7	25.9	26.0	25.9	25.7	-41	44.7	44.8	44.9	45.0	45.1	45.2	45.2	45.2	45.2	45.1	45.1	45.0	44.9	44.9
Alkaid	1.9	152	59.8	59.5	59.2	59.1	59.0	59.1	59.3	59.4	59.6	59.7	59.7	59.6	49	14.9	14.8	14.8	14.9	15.1	15.2	15.3	15.3	15.2	15.1	14.9	14.8	14.8	14.8
Epsilon Centaurus	2.3	154	49.9	49.6	49.3	49.1	49.0	49.0	49.1	49.3	49.5	49.6	49.5	49.3	-53	31.4	31.5	31.6	31.8	31.9	32.0	32.1	32.1	32.1	32.0	31.9	31.8	31.7	31.7
Heze	3.4	156	10.2	10.0	09.8	09.7	09.6	09.6	09.7	09.8	09.9	09.9	09.9	09.7	-0	39.5	39.6	39.7	39.7	39.7	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.7
d Centaurus	3.9	157	03.6	03.3	03.1	02.9	02.9	02.9	03.0	03.1	03.2	03.3	03.2	03.0	-39	28.0	28.1	28.2	28.4	28.5	28.5	28.5	28.5	28.5	28.5	28.4	28.3	28.3	28.3
Spica	1.1	158	32.4	32.1	32.0	31.8	31.8	31.8	31.9	32.0	32.0	32.1	32.0	31.9	-11	13.5	13.6	13.6	13.7	13.7	13.7	13.7	13.7	13.7	13.6	13.6	13.6	13.7	13.7
Mizar	2.2	158	53.9	53.5	53.2	53.1	53.1	53.2	53.4	53.6	53.8	53.9	53.9	53.7	54	51.4	51.3	51.4	51.5	51.6	51.8	51.8	51.8	51.8	51.7	51.6	51.4	51.3	51.3
Iota Centaurus	2.8	159	40.6	40.3	40.1	40.0	39.9	40.0	40.0	40.2	40.3	40.3	40.3	40.1	-36	46.4	46.5	46.6	46.8	46.8	46.9	46.9	46.9	46.8	46.7	46.7	46.7	46.7	46.7
Gamma Hydra	3.0	160	06.1	05.9	05.7	05.5	05.5	05.5	05.6	05.7	05.8	05.8	05.8	05.6	-23	14.0	14.1	14.2	14.3	14.4	14.4	14.4	14.4	14.4	14.3	14.3	14.2	14.3	14.3
Delta Musca	3.6	164	12.9	12.3	11.8	11.6	11.6	11.8	12.1	12.5	12.9	13.0	12.8	12.4	-71	36.6	36.7	36.8	37.0	37.2	37.3	37.3	37.3	37.3	37.2	37.1	37.0	36.9	36.9
Vindemiatrix	2.8	164	18.2	17.9	17.8	17.7	17.6	17.7	17.8	17.8	17.9	17.9	17.9	17.7	10	53.5	53.4	53.4</											

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			
Epsilon Crux	3.6	174	29.4	29.0	28.7	28.6	28.6	28.8	29.0	29.2	29.4	29.4	29.3	28.9	-60	27.9	28.0	28.1	28.3	28.5	28.6	28.6	28.5	28.4	28.3	28.2	28.1	
Zaniah	3.9	174	51.9	51.7	51.5	51.4	51.5	51.5	51.6	51.7	51.7	51.7	51.6	51.4	-0	44.1	44.2	44.3	44.3	44.3	44.3	44.2	44.2	44.2	44.2	44.3	44.3	
Gienah Ghurab	2.6	175	53.3	53.1	52.9	52.8	52.9	52.9	53.0	53.1	53.1	53.1	53.0	52.8	-17	36.5	36.7	36.8	36.8	36.9	36.9	36.8	36.8	36.7	36.7	36.7	36.8	
Megrez	3.3	175	59.5	59.2	58.9	58.9	58.9	59.1	59.3	59.5	59.7	59.7	59.6	59.3	56	57.5	57.5	57.6	57.7	57.9	58.0	58.0	57.9	57.8	57.7	57.5	57.3	
Delta Crux	2.8	176	02.7	02.4	02.1	02.0	02.1	02.2	02.4	02.6	02.8	02.8	02.6	02.3	-58	48.8	48.9	49.1	49.2	49.4	49.5	49.5	49.4	49.3	49.2	49.1	49.0	
Minkar	3.0	177	18.5	18.3	18.1	18.1	18.1	18.1	18.2	18.3	18.4	18.4	18.2	18.0	-22	41.2	41.3	41.4	41.5	41.6	41.6	41.6	41.5	41.4	41.4	41.4	41.4	
Delta Centaurus	2.6	177	44.8	44.5	44.3	44.2	44.3	44.4	44.6	44.7	44.8	44.8	44.7	44.4	-50	47.2	47.3	47.5	47.7	47.8	47.9	47.9	47.8	47.7	47.6	47.5	47.5	
Phad	2.4	181	22.8	22.5	22.3	22.2	22.3	22.5	22.7	22.9	23.0	22.9	22.8	22.5	53	37.3	37.3	37.3	37.5	37.6	37.7	37.7	37.6	37.5	37.4	37.2	37.0	
Zavijava	3.6	182	09.9	09.6	09.5	09.5	09.5	09.6	09.6	09.7	09.7	09.7	09.6	09.4	1	41.7	41.6	41.5	41.5	41.5	41.5	41.6	41.6	41.6	41.6	41.5	41.5	
Denebola	2.1	182	34.6	34.4	34.2	34.2	34.2	34.3	34.4	34.5	34.5	34.5	34.4	34.2	14	30.1	30.0	30.0	30.0	30.0	30.1	30.1	30.1	30.1	30.1	30.0	29.9	
Chi Ursae Major	3.7	183	19.5	19.2	19.0	19.0	19.0	19.2	19.4	19.5	19.5	19.5	19.4	19.1	47	42.4	42.4	42.4	42.5	42.7	42.7	42.8	42.7	42.6	42.5	42.3	42.2	
Lambda Musca	3.6	183	26.7	26.3	26.1	26.0	26.1	26.4	26.7	27.0	27.2	27.2	26.9	26.4	-66	47.5	47.7	47.9	48.0	48.2	48.3	48.3	48.2	48.1	47.9	47.8	47.8	
Lambda Centaurus	3.1	185	54.4	54.0	53.8	53.7	53.9	54.1	54.4	54.6	54.7	54.7	54.4	54.0	-63	05.0	05.2	05.3	05.5	05.7	05.7	05.7	05.7	05.5	05.4	05.3	05.3	
Xi Hydra	3.5	186	35.7	35.5	35.3	35.3	35.3	35.4	35.5	35.6	35.7	35.6	35.5	35.2	-31	55.4	55.5	55.7	55.8	55.9	55.9	55.9	55.8	55.7	55.6	55.6	55.6	
Giauzar	3.8	186	58.0	57.5	57.2	57.2	57.5	57.8	58.2	58.5	58.6	58.6	58.3	57.9	69	15.4	15.5	15.6	15.7	15.9	15.9	15.9	15.8	15.7	15.5	15.3	15.2	
Pi Centaurus	3.9	189	36.1	35.8	35.7	35.7	35.8	36.0	36.1	36.3	36.4	36.3	36.1	35.8	-54	33.3	33.4	33.6	33.8	33.9	34.0	33.9	33.9	33.7	33.6	33.5	33.5	
Delta Crater	3.6	190	00.5	00.3	00.2	00.1	00.2	00.3	00.4	00.4	00.4	00.4	00.2	00.0	-14	50.7	50.8	50.9	51.0	51.0	51.0	51.0	50.9	50.8	50.8	50.8	50.9	
Alula Borealis	3.5	190	12.8	12.5	12.4	12.4	12.4	12.6	12.7	12.7	12.7	12.7	12.5	12.3	33	01.4	01.4	01.4	01.5	01.6	01.6	01.6	01.6	01.5	01.4	01.3	01.2	
Alula Australis	3.8	190	17.3	17.1	17.0	16.9	17.0	17.1	17.2	17.3	17.3	17.3	17.1	16.9	31	27.4	27.4	27.4	27.5	27.5	27.6	27.6	27.6	27.5	27.4	27.3	27.1	
Chort	3.3	191	16.6	16.4	16.3	16.2	16.3	16.4	16.5	16.5	16.5	16.5	16.3	16.1	15	21.6	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6	21.6	21.5	21.4	
Zozma	2.6	191	18.4	18.2	18.1	18.1	18.1	18.2	18.3	18.4	18.4	18.3	18.2	18.0	20	27.2	27.2	27.2	27.2	27.2	27.3	27.3	27.3	27.3	27.3	27.2	27.1	27.0
Psi Ursae Major	3.0	192	24.6	24.3	24.2	24.2	24.3	24.4	24.6	24.6	24.7	24.6	24.4	24.1	44	25.6	25.6	25.7	25.8	25.9	25.9	25.9	25.9	25.8	25.6	25.5	25.4	
BS 4337	3.9	192	42.9	42.5	42.4	42.4	42.6	42.8	43.0	43.2	43.3	43.2	42.9	42.6	-59	02.3	02.4	02.6	02.8	02.9	03.0	02.9	02.9	02.7	02.6	02.5	02.5	
Dubhe	1.8	193	52.6	52.2	52.1	52.1	52.3	52.5	52.8	52.9	53.0	52.9	52.6	52.3	61	40.8	40.8	40.9	41.0	41.1	41.2	41.2	41.1	40.9	40.8	40.6	40.5	
Merak	2.4	194	21.1	20.8	20.7	20.7	20.8	21.1	21.3	21.4	21.4	21.3	21.1	20.7	56	18.7	18.7	18.8	18.9	19.0	19.1	19.1	19.1	18.8	18.7	18.5	18.4	
u Carina	3.8	196	29.6	29.3	29.2	29.3	29.4	29.7	29.9	30.1	30.1	30.0	29.7	29.4	-58	54.9	55.1	55.2	55.4	55.5	55.6	55.6	55.5	55.3	55.2	55.1	55.1	
Praecipula	3.8	196	29.9	29.6	29.5	29.5	29.6	29.7	29.8	29.9	29.9	29.8	29.6	29.4	34	08.7	08.7	08.7	08.8	08.8	08.9	08.9	08.9	08.8	08.7	08.5	08.4	
Nu Hydra	3.1	197	26.3	26.1	26.0	26.0	26.1	26.2	26.3	26.3	26.3	26.2	26.1	25.8	-16	15.5	15.6	15.7	15.8	15.8	15.8	15.7	15.7	15.6	15.6	15.6	15.7	
Mu Velorum	2.7	198	10.2	09.9	09.8	09.8	10.0	10.1	10.3	10.4	10.4	10.4	10.1	09.8	-49	28.9	29.1	29.3	29.4	29.5	29.6	29.5	29.4	29.3	29.2	29.1	29.1	
Theta Carina	2.7	199	08.5	08.2	08.1	08.2	08.4	08.7	09.0	09.2	09.3	09.1	08.8	08.4	-64	27.3	27.5	27.7	27.8	28.0	28.0	28.0	27.9	27.7	27.6	27.5	27.5	
Rho Leo	3.9	201	37.9	37.7	37.7	37.7	37.7	37.8	37.9	37.9	37.9	37.8	37.7	37.4	9	14.5	14.4	14.4	14.4	14.4	14.4	14.5	14.5	14.5	14.4	14.4	14.3	
BS 4140	3.4	201	52.6	52.3	52.2	52.3	52.5	52.7	53.0	53.2	53.2	53.1	52.8	52.4	-61	44.7	44.9	45.1	45.2	45.4	45.4	45.4	45.3	45.1	45.0	44.9	44.9	
BS 4114	3.8	202	54.6	54.3	54.2	54.3	54.5	54.7	55.0	55.1	55.1	55.0	54.7	54.3	-58	47.9	48.1	48.3	48.5	48.6	48.6	48.6	48.5	48.3	48.2	48.1	48.1	
Mu Hydra	3.8	203	19.5	19.3	19.2	19.2	19.3	19.4	19.5	19.5	19.5	19.4	19.3	19.0	-16	53.9	54.1	54.2	54.2	54.3	54.3	54.2	54.1	54.1	54.0	54.0	54.1	54.1
Tania Australis	3.1	204	13.9	13.7	13.6	13.6	13.7	13.9	14.0	14.0	14.0	13.9	13.7	13.4	41	26.0	26.0	26.1	26.2	26.2	26.3	26.2	26.2	26.1	26.0	25.8	25.7	
Algieba	2.0	204	50.0	49.9	49.8	49.8	49.9	50.0	50.1	50.1	50.1	50.0	49.8	49.5	19	46.6	46.5	46.5	46.6	46.6	46.6	46.7	46.6	46.6	46.5	46.5	46.4	
Tania Borealis	3.4	205	32.2	32.0	31.9	32.0	32.1	32.2	32.4	32.4	32.4	32.2	32.0	31.7	42	50.9	50.9	51.0	51.1	51.2	51.2	51.2	51.1	51.0	50.9	50.7	50.6	
BS4050	3.4	205	37.1	36.8	36.7	36.8	37.1	37.3	37.6	37.7	37.8	37.6	37.3	36.9	-61	23.4	23.6	23.8	24.0	24.1	24.1	24.1	23.9	23.8	23.7	23.6	23.6	
Adhafera	3.4	205	39.2	39.0	38.9	38.9	39.0	39.2	39.2	39.2	39.2	39.1	38.9	38.7	23	21.2	21.1	21.1	21.2	21.2	21.3	21.3	21.3	21.2	21.1	21.0	20.9	
BS 4023	3.8	206	10.9	10.7	10.6	10.7	10.8	10.9	11.1	11.1	11.1	11.0	10.8	10.5	-42	10.9	11.0	11.2	11.3	11.4	11.4	11.3	11.2	11.1	11.0	11.0	11.0	
Omega Carina	3.3	206	28.8	28.5	28.5	28.6	29.0	29.4	29.8	30.0	30.1	29.9	29.4	28.9	-70	05.7	05.9	06.1	06.3	06.4	06.4	06.4	06.3	06.1	06.0	05.9	05.9	
Lambda Hydra	3.6	207	11.9	11.8	11.7	11.7	11.8	11.9	12.0	12.0	12.0	11.9	11.7	11.5	-12	24.9	25.0	25.1	25.2	25.2	25.2	25.1	25.1	25.0	25.0	25.0	25.1	
Regulus	1.4	207	44.4	44.2	44.1	44.2	44.3	44.4	44.4	44.4	44.4	44.3	44.1	43.9	11	54.3	54.2	54.2	54.2	54.2	54.3	54.3	54.3	54.3	54.2	54.2	54.1	
Eta Leo	3.5	207	59.7	59.6	59.5	59.5	59.6	59.7	59.8	59.8	59.8	59.7	59.5	59.2	16	42.0	41.9	41.9	42.0	42.0	42.0	42.0	42.0	42.0	42.0	41.9	41.8	
Tseen Ke	3.5	210	40.1	39.9	39.9	40.0	40.2	40.4	40.6	40.7	40.7	40.5	40.2	39.9	-54	37.4	37.6	37.8	37.9	38.0	38.0	38.0	37.9	37.7	37.6	37.6	37.6	
Rasalas	3.9	211	37.8	37.6	37.6	37.6	37.7	37.9	37.9	37.9	37.9	37.8	37.5	37.3	25	56.7	56.7	56.7	56.8	56.8	56.9	56.9	56.8	56.8	56.7	56.6	56.5	
Upsilon Ursae Major	3.8	212	01.8	01.5	01.4	01.5	01.8	02.0	02.2	02.2	02.2	02.0	01.6	01.2	58	58.5	58.6	58.7	58.8	58.9	58.9	58.9	58.7	58.6	58.5	58.3	58.3	
Upsilon Carina	3.0	213	08.2	08.0	08.0	08.2	08.5	08.8	09.1	09.2	09.2	09.0	08.6	08.2	-65	07.6	07.8	08.0										

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	38.1	37.9	38.0	38.2	38.4	38.7	38.9	39.0	38.9	38.7	38.4	38.0	-59	19.5	19.7	19.9	20.0	20.1	20.1	20.0	19.8	19.7	19.6	19.5	19.6
Theta Hydra	3.9	221	14.7	14.5	14.5	14.6	14.7	14.8	14.8	14.8	14.7	14.6	14.4	14.1	2	15.6	15.6	15.5	15.5	15.5	15.5	15.6	15.6	15.6	15.5	15.5	
Miaplacidus	1.7	221	39.2	39.0	39.1	39.4	39.8	40.2	40.6	40.7	40.7	40.3	39.8	39.3	-69	45.9	46.1	46.3	46.5	46.5	46.5	46.4	46.3	46.1	46.0	46.0	46.0
Canopus	3.4	222	10.0	09.9	09.9	10.1	10.4	10.6	10.8	10.9	10.8	10.6	10.3	09.9	-59	00.9	01.1	01.3	01.4	01.5	01.5	01.4	01.3	01.1	01.0	01.0	01.0
Suhail	2.2	222	52.8	52.7	52.7	52.8	53.0	53.2	53.3	53.3	53.2	53.1	52.8	52.5	-43	28.9	29.1	29.2	29.3	29.4	29.3	29.3	29.1	29.0	28.9	28.9	29.0
BS 3614	3.8	223	50.8	50.7	50.7	50.9	51.1	51.3	51.4	51.4	51.3	51.1	50.9	50.6	-47	08.7	08.9	09.1	09.2	09.3	09.2	09.1	09.0	08.9	08.8	08.8	08.8
Talitha Australis	3.6	223	52.7	52.5	52.5	52.6	52.8	53.0	53.0	53.0	52.9	52.7	52.4	52.1	47	06.2	06.3	06.3	06.4	06.5	06.5	06.4	06.3	06.2	06.1	06.0	06.0
Talitha	3.1	224	58.9	58.7	58.7	58.8	59.0	59.2	59.3	59.2	59.1	58.9	58.6	58.3	47	59.4	59.4	59.5	59.6	59.6	59.6	59.6	59.5	59.3	59.2	59.1	59.1
Zeta Hydra	3.1	225	59.0	58.9	58.9	59.0	59.1	59.2	59.2	59.2	59.1	59.0	58.7	58.5	5	53.8	53.7	53.7	53.7	53.7	53.7	53.8	53.8	53.8	53.8	53.7	53.6
BS 3571	3.8	226	09.5	09.3	09.4	09.6	09.9	10.2	10.4	10.5	10.4	10.1	09.8	09.4	-60	41.4	41.6	41.8	41.9	42.0	41.9	41.8	41.7	41.5	41.4	41.4	41.5
Epsilon Hydra	3.4	228	08.3	08.2	08.2	08.3	08.4	08.5	08.5	08.5	08.4	08.2	08.0	07.8	6	22.3	22.2	22.2	22.2	22.2	22.2	22.3	22.3	22.3	22.3	22.2	22.1
Delta Vela	1.9	228	43.8	43.7	43.7	43.9	44.2	44.4	44.6	44.6	44.5	44.3	43.9	43.6	-54	45.2	45.4	45.5	45.7	45.7	45.7	45.6	45.4	45.3	45.2	45.2	45.3
Asellus Australis	3.9	228	38.9	38.8	38.8	38.9	39.0	39.1	39.1	39.1	39.0	38.8	38.6	38.4	18	06.4	06.3	06.3	06.4	06.4	06.4	06.4	06.4	06.4	06.3	06.3	06.2
Alpha Pyxis	3.7	228	58.3	58.2	58.2	58.3	58.5	58.6	58.7	58.7	58.6	58.4	58.2	57.9	-33	13.8	14.0	14.1	14.2	14.3	14.2	14.1	14.0	13.9	13.8	13.8	13.9
BS 3445	3.8	229	44.0	43.9	43.9	44.1	44.3	44.5	44.6	44.6	44.5	44.3	44.0	43.7	-46	41.5	41.7	41.9	42.0	42.0	42.0	41.9	41.7	41.6	41.5	41.5	41.6
Omicron Velorum	3.6	229	49.8	49.7	49.7	49.9	50.2	50.4	50.5	50.5	50.4	50.2	49.9	49.6	-62	57.9	58.1	58.2	58.3	58.4	58.3	58.2	58.1	58.0	57.9	57.9	58.0
Muscida	3.4	232	10.2	10.0	10.1	10.3	10.6	10.8	10.9	10.8	10.6	10.3	09.9	09.5	60	40.4	40.5	40.6	40.6	40.7	40.6	40.5	40.4	40.3	40.2	40.1	40.1
Beta Volans	3.8	233	31.2	31.1	31.2	31.6	32.0	32.3	32.5	32.6	32.5	32.1	31.7	31.2	-66	10.6	10.8	11.0	11.1	11.1	11.1	11.0	10.8	10.7	10.6	10.6	10.7
BS 3314	3.9	233	25.5	25.4	25.5	25.5	25.7	25.8	25.8	25.7	25.6	25.5	25.2	25.0	-3	56.9	57.0	57.1	57.1	57.1	57.0	57.0	56.9	56.9	56.9	56.9	57.0
Avior	2.0	234	17.8	17.8	17.9	18.1	18.4	18.7	18.9	18.9	18.8	18.5	18.1	17.8	-59	32.9	33.1	33.3	33.4	33.4	33.4	33.2	33.1	32.9	32.8	32.8	32.9
Altarf	3.5	235	41.9	41.8	41.8	41.9	42.1	42.2	42.2	42.1	42.0	41.8	41.6	41.4	9	08.7	08.7	08.6	08.6	08.7	08.7	08.7	08.7	08.7	08.7	08.6	08.6
Suhail	1.8	237	30.8	30.7	30.8	31.0	31.2	31.4	31.5	31.5	31.3	31.1	30.8	30.5	-47	22.4	22.6	22.7	22.8	22.8	22.7	22.6	22.5	22.4	22.3	22.4	
Rho Puppis	2.8	237	58.6	58.5	58.6	58.7	58.8	58.9	59.0	58.9	58.8	58.6	58.4	58.1	-24	20.4	20.6	20.7	20.8	20.8	20.7	20.6	20.5	20.4	20.4	20.4	20.5
Naos	2.2	238	59.3	59.2	59.3	59.5	59.6	59.8	59.9	59.8	59.7	59.5	59.2	59.0	-40	02.3	02.5	02.6	02.7	02.7	02.6	02.5	02.4	02.3	02.2	02.2	02.3
Chi Carina	3.5	240	43.0	43.0	43.1	43.3	43.6	43.8	43.9	43.9	43.7	43.5	43.2	42.9	-53	00.9	01.1	01.3	01.3	01.4	01.3	01.2	01.0	00.9	00.8	00.8	00.9
BS 3080	3.7	241	49.9	49.9	50.0	50.1	50.3	50.5	50.5	50.5	50.3	50.1	49.8	49.6	-40	36.5	36.7	36.8	36.9	36.9	36.8	36.7	36.5	36.4	36.4	36.4	36.5
Asmidiske	3.3	242	32.4	32.4	32.4	32.6	32.7	32.8	32.8	32.8	32.6	32.4	32.2	32.0	-24	53.5	53.7	53.8	53.8	53.8	53.7	53.6	53.5	53.4	53.4	53.4	53.6
Pollux	1.2	243	28.6	28.5	28.5	28.7	28.8	28.9	28.9	28.8	28.6	28.4	28.2	27.9	27	59.6	59.6	59.7	59.7	59.7	59.7	59.7	59.6	59.6	59.5	59.5	59.4
c Puppis	3.6	243	34.1	34.1	34.2	34.3	34.5	34.7	34.7	34.6	34.5	34.3	34.0	33.8	-37	59.9	00.1	00.2	00.3	00.3	00.2	00.1	00.0	59.9	59.8	59.9	00.0
Kappa Gemini	3.6	243	41.8	41.7	41.7	41.9	42.0	42.1	42.1	42.0	41.8	41.6	41.4	41.1	24	21.9	21.9	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.9	21.8	21.8
Alpha Monoceros	3.9	244	32.1	32.0	32.1	32.2	32.3	32.4	32.4	32.4	32.2	32.0	31.8	31.6	-9	34.9	35.0	35.1	35.1	35.1	35.0	35.0	34.9	34.8	34.8	34.9	35.0
Procyon	0.4	245	00.5	00.4	00.4	00.5	00.7	00.7	00.7	00.7	00.5	00.3	00.1	59.9	5	11.5	11.4	11.4	11.4	11.4	11.4	11.4	11.5	11.5	11.5	11.4	11.4
Castor	1.6	246	08.9	08.8	08.8	09.0	09.1	09.2	09.2	09.1	08.9	08.7	08.4	08.2	31	51.5	51.5	51.6	51.6	51.6	51.6	51.5	51.5	51.4	51.4	51.4	51.3
Sigma Puppis	3.3	247	35.2	35.2	35.3	35.5	35.7	35.8	35.9	35.8	35.6	35.4	35.1	34.9	-43	19.6	19.8	19.9	20.0	20.0	19.9	19.8	19.6	19.5	19.5	19.5	19.6
Gomeisa	2.9	248	02.4	02.3	02.4	02.5	02.6	02.7	02.7	02.6	02.4	02.2	02.0	01.8	8	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.8	15.8	15.7	15.6
Iota Gemini	3.8	248	22.3	22.2	22.2	22.4	22.5	22.6	22.6	22.5	22.3	22.1	21.8	21.6	27	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.2	46.2	46.2	46.1	46.1
Aludra	2.5	248	50.9	50.8	50.9	51.0	51.2	51.3	51.3	51.3	51.1	50.9	50.6	50.4	-29	19.7	19.9	20.0	20.0	20.0	19.9	19.8	19.7	19.6	19.5	19.6	19.7
Wasat	3.5	249	46.8	46.7	46.7	46.9	47.0	47.1	47.1	46.9	46.8	46.6	46.3	46.1	21	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.3	57.3
Lambda Gemini	3.6	250	17.6	17.6	17.6	17.7	17.9	17.9	17.9	17.8	17.6	17.4	17.2	17.0	16	30.9	30.9	30.9	30.9	30.9	30.9	30.9	31.0	30.9	30.9	30.9	30.8
Pi Puppis	2.7	250	35.9	35.9	36.0	36.1	36.3	36.4	36.5	36.4	36.2	36.0	35.7	35.5	-37	07.2	07.4	07.5	07.6	07.6	07.5	07.4	07.2	07.1	07.1	07.1	07.2
Gamma Volans	3.8	252	49.3	49.4	49.8	50.3	50.8	51.2	51.4	51.3	51.0	50.6	50.0	49.6	-70	31.1	31.3	31.5	31.5	31.5	31.4	31.3	31.1	31.0	30.9	31.0	31.1
Wezen	1.8	252	46.2	46.2	46.3	46.4	46.6	46.7	46.7	46.6	46.4	46.2	46.0	45.8	-26	24.9	25.0	25.1	25.1	25.1	25.0	24.9	24.8	24.7	24.7	24.7	24.9
Omicron Canis Major	3.0	254	06.5	06.5	06.6	06.7	06.9	07.0	07.0	06.9	06.7	06.5	06.3	06.0	-23	51.2	51.3	51.4	51.4	51.4	51.3	51.2	51.1	51.0	51.0	51.1	51.2
Sigma Canis Major	3.5	254	26.4	26.4	26.5	26.7	26.8	26.9	26.9	26.8	26.7	26.4	26.2	26.0	-27	57.2	57.4	57.5	57.5	57.5	57.4	57.3	57.2	57.1	57.1	57.1	57.2
Adara	1.5	255	12.9	12.9	13.0	13.2	13.3	13.4	13.4	13.3	13.2	12.9	12.7	12.5	-28	59.4	59.6	59.7	59.7	59.7	59.6	59.5	59.4	59.3	59.2	59.3	59.4
Theta Gemini	3.6	256	35.6	35.5	35.6	35.8	35.9	36.0	35.9	35.8	35.6	35.3	35.1	34.8	33	56.6	56.7	56.7	56.7	56.7	56.7	56.6	56.6	56.6	56.5	56.5	56.5
Tau Puppis	2.9	257	25.8	25.8	26.0	26.3	26.5	26.7	26.7	26.6	26.4	26.1	25.8	25.6	-50	37.8	38.0	38.1	38.2	38.1	38.0	37.9	37.7	37.6	37.6	37.6	37.8
Kappa Canis Major	3.5	257	25.1	25.1	25.2	25.3	25.5	25.6	25.6	25.5	25.3	25.1	24.8	24.6	-32	31.5	31.6	31.7	31.7	31.7	31.6	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	51.1	51.1	51.2	51.4	51.5	51.6	51.5	51.3	51.0	50.8	50.5	50.3	37	12.7	12.7	12.8	12.8	12.7	12.7	12.6	12.6	12.6	12.6	12.6
Menkalinan	1.9	269	53.0	53.0	53.1	53.3	53.5	53.5	53.4	53.2	52.9	52.6	52.3	52.1	44	56.8	56.9	56.9	56.9	56.9	56.8	56.7	56.7	56.7	56.7	56.7
Prijipati	3.7	269	51.3	51.3	51.4	51.7	51.9	51.9	51.8	51.6	51.2	50.9	50.5	50.2	54	17.0	17.1	17.2	17.2	17.1	17.0	16.9	16.9	16.8	16.8	16.9
Eta Columba	3.9	270	06.7	06.7	06.9	07.1	07.3	07.4	07.4	07.2	07.0	06.7	06.5	06.3	-42	49.0	49.2	49.2	49.3	49.2	49.1	48.9	48.8	48.7	48.7	48.9
Eta Lepus	3.7	270	45.1	45.2	45.3	45.4	45.5	45.6	45.5	45.4	45.2	45.0	44.7	44.6	-14	10.1	10.2	10.2	10.2	10.2	10.1	10.0	09.9	09.8	09.8	10.0
Betelgeuse	0.6	271	02.1	02.1	02.2	02.3	02.4	02.4	02.3	02.2	02.0	01.8	01.6	01.4	7	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.5	24.5	24.5	24.5
Delta Lepus	3.8	272	01.9	01.9	02.0	02.1	02.3	02.3	02.3	02.1	01.9	01.7	01.5	01.3	-20	52.8	52.9	53.0	53.0	53.0	52.9	52.8	52.6	52.6	52.6	52.7
Wezn	3.1	272	08.7	08.7	08.9	09.0	09.2	09.3	09.2	09.1	08.9	08.6	08.4	08.2	-35	46.0	46.1	46.2	46.2	46.1	46.0	45.9	45.7	45.6	45.6	45.7
Saiph	2.1	272	54.5	54.5	54.6	54.8	54.9	54.9	54.9	54.7	54.5	54.3	54.1	53.9	-9	40.0	40.1	40.2	40.2	40.2	40.1	40.0	39.9	39.8	39.8	40.0
Beta Pictor	3.9	273	05.8	05.9	06.1	06.4	06.6	06.7	06.7	06.5	06.3	06.0	05.7	05.5	-51	03.9	04.0	04.1	04.1	04.0	03.9	03.7	03.6	03.5	03.5	03.7
Zeta Lepus	3.6	273	06.9	07.0	07.1	07.2	07.3	07.4	07.3	07.1	06.9	06.7	06.5	06.4	-14	49.2	49.3	49.3	49.3	49.3	49.2	49.1	49.0	48.9	48.9	49.1
Gamma Lepus	3.6	273	45.0	45.0	45.1	45.3	45.4	45.5	45.4	45.2	45.0	44.8	44.6	44.4	-22	26.8	26.9	27.0	27.0	26.9	26.8	26.7	26.6	26.5	26.5	26.6
Alnitak	1.7	274	38.9	39.0	39.1	39.2	39.3	39.3	39.2	39.1	38.9	38.7	38.5	38.3	-1	56.3	56.4	56.4	56.4	56.4	56.3	56.3	56.2	56.1	56.1	56.2
Phact	2.7	274	58.2	58.2	58.4	58.5	58.7	58.8	58.7	58.5	58.3	58.1	57.9	57.7	-34	04.2	04.3	04.4	04.4	04.3	04.2	04.1	04.0	03.9	03.9	04.1
Sigma Orion	3.8	275	09.2	09.2	09.3	09.4	09.5	09.6	09.5	09.3	09.1	08.9	08.7	08.5	-2	35.7	35.8	35.8	35.8	35.8	35.7	35.7	35.6	35.5	35.5	35.6
Zeta Taurus	3.0	275	23.9	23.9	24.0	24.2	24.3	24.3	24.2	24.0	23.8	23.5	23.3	23.1	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	47.1	47.1	47.2	47.3	47.4	47.4	47.4	47.2	47.0	46.8	46.6	46.4	-1	11.8	11.8	11.9	11.9	11.8	11.8	11.7	11.7	11.6	11.6	11.7
Na'ir al Saif	2.8	275	59.1	59.1	59.2	59.4	59.5	59.5	59.4	59.3	59.1	58.8	58.6	58.5	-5	54.2	54.3	54.4	54.4	54.3	54.3	54.2	54.1	54.0	54.0	54.1
Heka	3.4	276	02.4	02.4	02.5	02.6	02.7	02.8	02.7	02.5	02.3	02.1	01.9	01.7	9	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.5	56.5	56.5	56.5
Beta Dorado	3.8	276	33.3	33.5	33.8	34.2	34.5	34.7	34.6	34.4	34.1	33.7	33.4	33.2	-62	29.1	29.2	29.3	29.3	29.2	29.0	28.9	28.7	28.6	28.6	28.7
Arneb	2.6	276	40.5	40.6	40.7	40.8	40.9	41.0	40.9	40.7	40.5	40.3	40.1	40.0	-17	49.0	49.1	49.1	49.1	49.1	49.0	48.9	48.8	48.7	48.7	48.8
Mintaka	2.2	276	50.1	50.1	50.2	50.4	50.5	50.5	50.4	50.2	50.0	49.8	49.6	49.5	-0	17.5	17.6	17.6	17.6	17.6	17.5	17.5	17.4	17.4	17.4	17.5
Epsilon Columba	3.9	277	04.8	04.9	05.1	05.2	05.4	05.4	05.4	05.2	05.0	04.8	04.5	04.4	-35	27.9	28.0	28.0	28.0	28.0	27.9	27.7	27.6	27.5	27.5	27.6
Nihal	2.8	277	48.0	48.1	48.2	48.4	48.5	48.5	48.4	48.3	48.1	47.8	47.6	47.5	-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	13.5	13.6	13.7	13.8	13.9	13.9	13.8	13.6	13.4	13.1	12.9	12.7	28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	37.0	37.0
Bellatrix	1.7	278	32.8	32.8	32.9	33.0	33.1	33.1	33.0	32.9	32.6	32.4	32.2	32.1	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	43.2	43.2	43.3	43.5	43.6	43.6	43.5	43.3	43.1	42.9	42.7	42.6	-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	26.6	26.6	26.7	26.9	27.0	27.0	26.9	26.7	26.5	26.3	26.1	26.0	-6	50.0	50.1	50.1	50.1	50.1	50.0	49.9	49.8	49.8	49.8	49.9
Capella	0.1	280	35.5	35.5	35.7	35.9	36.0	36.0	35.9	35.6	35.3	35.0	34.7	34.5	46	00.6	00.6	00.7	00.6	00.6	00.5	00.4	00.4	00.4	00.5	00.5
Rigel	0.3	281	12.7	12.7	12.9	13.0	13.1	13.1	13.0	12.8	12.6	12.4	12.2	12.1	-8	11.4	11.5	11.5	11.5	11.5	11.4	11.3	11.2	11.1	11.1	11.2
Mu Lepus	3.3	281	37.4	37.4	37.5	37.7	37.8	37.8	37.7	37.5	37.3	37.1	36.9	36.8	-16	11.6	11.7	11.7	11.7	11.7	11.6	11.5	11.4	11.3	11.3	11.4
Cursa	2.8	282	52.8	52.9	53.0	53.1	53.2	53.2	53.1	52.9	52.7	52.5	52.3	52.2	-5	04.4	04.4	04.5	04.5	04.4	04.4	04.3	04.2	04.1	04.1	04.2
Hoedus II	3.2	283	08.8	08.9	09.0	09.2	09.3	09.3	09.2	08.9	08.6	08.4	08.1	07.9	41	15.0	15.1	15.1	15.1	15.0	14.9	14.9	14.9	14.9	14.9	15.0
Epsilon Lepus	3.2	283	29.9	30.0	30.1	30.2	30.4	30.4	30.3	30.1	29.9	29.7	29.5	29.3	-22	21.4	21.5	21.6	21.6	21.5	21.4	21.3	21.2	21.1	21.1	21.2
Haedi	3.8	284	09.4	09.5	09.6	09.8	09.9	09.9	09.8	09.5	09.2	08.9	08.7	08.5	41	05.6	05.6	05.6	05.6	05.6	05.5	05.5	05.4	05.4	05.5	05.6
Al Anz	3.0	284	16.7	16.8	16.9	17.1	17.2	17.2	17.0	16.8	16.5	16.2	15.9	15.7	43	50.5	50.5	50.5	50.5	50.4	50.4	50.3	50.3	50.3	50.3	50.4
Hassaleh	2.7	285	32.6	32.7	32.8	33.0	33.1	33.0	32.9	32.7	32.4	32.2	31.9	31.8	33	11.1	11.1	11.1	11.1	11.1	11.0	11.0	11.0	11.0	11.0	11.1
Pi5 Orion	3.7	286	16.3	16.3	16.4	16.5	16.6	16.6	16.5	16.3	16.1	15.9	15.7	15.6	2	27.5	27.5	27.5	27.5	27.5	27.5	27.6	27.7	27.7	27.7	27.6
Pi4 Orion	3.7	287	01.7	01.8	01.9	02.0	02.1	02.1	02.0	01.8	01.5	01.3	01.1	01.0	5	37.5	37.4	37.4	37.4	37.4	37.4	37.5	37.6	37.6	37.6	37.6
Pi3 Orion	3.2	287	22.0	22.1	22.2	22.3	22.4	22.4	22.3	22.1	21.8	21.6	21.4	21.3	6	58.9	58.8	58.8	58.8	58.8	58.8	58.9	59.0	59.0	59.0	59.0
Sceptrum	3.9	290	18.5	18.6	18.7	18.8	18.9	18.9	18.8	18.6	18.4	18.2	18.0	17.9	-14	17.0	17.0	17.1	17.1	17.0	16.9	16.8	16.7	16.6	16.6	16.8
Nu Eridanus	3.9	290	45.7	45.7	45.8	46.0	46.0	46.0	45.9	45.7	45.5	45.3	45.1	45.0	-3	19.8	19.8	19.9	19.8	19.8	19.7	19.7	19.6	19.5	19.5	19.6
Aldebaran	1.0	290	50.2	50.3	50.4	50.5	50.6	50.6	50.4	50.2	50.0	49.8	49.6	49.5	16	32.0	32.0	31.9	31.9	31.9	31.9	31.9	32.0	32.0	32.1	32.0
Theemim	3.8	290	59.2	59.3	59.4	59.6	59.7	59.7	59.6	59.4	59.2	59.0	58.8	58.7	-30	32.4	32.5	32.6	32.5	32.4	32.3	32.2	32.0	32.0	32.0	32.1
Alpha Dorado	3.3	291	25.5	25.7	26.0	26.3	26.5	26.5	26.4	26.2	25.9	25.6	25.3	25.2	-55	01.4	01.5	01.5	01.5	01.4	01.2	01.1	00.9	00.8	00.9	01.0
Theta2 Taurus	3.4	292	39.2	39.2	39.3	39.5	39.5	39.5	39.4	39.1	38.9	38.7	38.5	38.4	15	53.8	53.8	53.8	53.8	53.8	53.8	53.9	53.9	53.9	53.9	53.9
Ain	3.5	292	39.6	39.7	39.8	39.9	40.0	39.9	39.8	39.6	39.3	39.1	38.9	38.8	19	12.4	12.4	12.4	12.4	12.3	12.3	12.4	12.4	12.4	12.5	12.5
Secundus Hyadum	3.8	294	05.0	05.0	05.1	05.3	05.3	05.3	05.2	04.9	04.7	04.5	04.3	04.2	17	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.3	34.3	34.3
Primus Hyadum	3.7	294	52.2	52.3	52.4	52.5	52.6	52.6	52.4	52.2	52.0	51.8	51.6	51.5	15	39.4	39.4	39.3	39.3	39.3	39.3	39.4	39.4	39.5	39.5	39.5
Upsilon4 Eridanus	3.6	295	24.2	24.4	24.5	24.7	24.8	24.8	24.7	24.4	24.2	24.0	23.8	23.7	-33	46.3										

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		
Maia	3.9	303	21.3	21.3	21.5	21.6	21.6	21.6	21.4	21.1	20.9	20.7	20.5	20.4	24	24.4	24.4	24.3	24.3	24.3	24.3	24.4	24.4	24.4	24.5	24.5	
Nu Perseus	3.8	303	29.1	29.2	29.4	29.5	29.6	29.5	29.3	29.0	28.7	28.4	28.2	28.1	42	37.1	37.1	37.1	37.0	37.0	36.9	36.9	36.9	37.0	37.1	37.2	
Electra	3.7	303	35.6	35.6	35.8	35.9	35.9	35.8	35.7	35.4	35.2	35.0	34.8	34.7	24	09.1	09.1	09.1	09.0	09.0	09.0	09.0	09.1	09.1	09.2	09.2	
Atik	3.9	303	43.2	43.3	43.5	43.6	43.6	43.6	43.4	43.1	42.9	42.6	42.4	42.3	32	19.6	19.7	19.6	19.6	19.5	19.5	19.5	19.5	19.6	19.6	19.7	19.8
Beta Reticulum	3.8	303	54.1	54.4	54.8	55.2	55.4	55.4	55.2	54.9	54.4	54.1	53.8	53.8	-64	46.4	46.4	46.4	46.4	46.2	46.0	45.9	45.7	45.7	45.8	45.9	46.1
Rana	3.5	304	02.1	02.2	02.4	02.5	02.5	02.5	02.3	02.1	01.9	01.7	01.5	01.5	-9	43.5	43.5	43.5	43.5	43.4	43.4	43.3	43.2	43.1	43.1	43.2	
Delta Perseus	3.0	304	02.5	02.6	02.8	02.9	03.0	02.9	02.7	02.4	02.0	01.8	01.5	01.4	47	49.7	49.7	49.7	49.6	49.6	49.5	49.4	49.4	49.5	49.6	49.7	
Epsilon Eridanus	3.7	306	37.1	37.2	37.3	37.4	37.4	37.4	37.2	37.0	36.8	36.6	36.4	36.4	-9	25.1	25.2	25.2	25.2	25.1	25.0	24.9	24.8	24.8	24.8	24.9	
Xi Taurus	3.7	308	02.2	02.2	02.4	02.5	02.5	02.4	02.2	02.0	01.8	01.6	01.5	01.4	9	46.5	46.4	46.4	46.4	46.4	46.5	46.5	46.6	46.7	46.7	46.7	
Omicron Taurus	3.6	308	37.6	37.7	37.8	37.9	37.9	37.8	37.7	37.4	37.2	37.0	36.9	36.8	9	04.3	04.2	04.2	04.2	04.2	04.3	04.3	04.4	04.5	04.5	04.5	
Mirfak	1.8	308	41.5	41.6	41.8	42.0	42.0	41.9	41.6	41.3	41.0	40.7	40.5	40.4	49	54.4	54.4	54.4	54.3	54.2	54.2	54.1	54.1	54.2	54.3	54.4	54.5
16 Eridanus	3.7	309	58.8	58.9	59.0	59.1	59.2	59.1	59.0	58.7	58.5	58.3	58.2	58.1	-21	43.0	43.0	43.0	43.0	42.9	42.8	42.7	42.5	42.5	42.5	42.6	42.7
Fornacis	3.8	311	50.8	50.9	51.0	51.2	51.2	51.1	51.0	50.7	50.5	50.3	50.2	50.1	-28	56.6	56.6	56.6	56.6	56.5	56.3	56.2	56.1	56.0	56.1	56.2	56.3
Algol	2.1	312	45.0	45.2	45.3	45.4	45.5	45.4	45.1	44.8	44.5	44.3	44.1	44.1	41	00.3	00.3	00.2	00.2	00.1	00.0	00.0	00.1	00.1	00.2	00.3	00.4
Gorgonea Tertia	3.4	313	30.1	30.3	30.4	30.5	30.5	30.4	30.2	29.9	29.6	29.4	29.2	29.2	38	53.4	53.4	53.3	53.3	53.2	53.1	53.1	53.2	53.3	53.3	53.4	53.5
Gamma Perseus	2.9	313	34.1	34.3	34.5	34.7	34.7	34.6	34.3	33.9	33.6	33.3	33.1	33.0	53	33.4	33.4	33.4	33.3	33.2	33.1	33.1	33.1	33.2	33.3	33.4	33.5
Menkar	2.6	314	15.9	16.0	16.1	16.2	16.2	16.1	15.9	15.7	15.5	15.3	15.2	15.1	4	08.2	08.2	08.1	08.1	08.2	08.2	08.3	08.4	08.5	08.5	08.4	
Acamar	3.2	315	18.8	19.0	19.2	19.3	19.4	19.3	19.1	18.8	18.6	18.4	18.3	18.2	-40	15.6	15.6	15.6	15.5	15.4	15.2	15.1	15.0	15.0	15.0	15.1	15.3
Azha	3.9	315	44.3	44.4	44.6	44.6	44.7	44.6	44.4	44.2	43.9	43.8	43.7	43.6	-8	51.1	51.1	51.1	51.1	51.1	51.0	50.9	50.8	50.7	50.7	50.8	50.8
Tau Perseus	3.9	316	12.5	12.7	12.9	13.1	13.1	12.9	12.6	12.3	11.9	11.7	11.5	11.4	52	48.9	48.9	48.9	48.8	48.7	48.6	48.6	48.6	48.7	48.8	48.9	49.0
Miram	3.8	317	05.5	05.7	05.9	06.1	06.1	06.0	05.6	05.3	04.9	04.6	04.4	04.3	55	56.9	57.0	56.9	56.8	56.7	56.6	56.6	56.6	56.7	56.8	56.9	57.1
41 Aries	3.6	317	19.1	19.2	19.3	19.4	19.4	19.3	19.1	18.8	18.6	18.4	18.2	18.2	27	18.7	18.7	18.7	18.6	18.6	18.6	18.6	18.7	18.7	18.8	18.9	18.9
Kaffajidhmah	3.5	319	00.7	00.8	00.9	01.0	01.0	00.9	00.7	00.4	00.2	00.1	00.0	59.9	3	17.2	17.2	17.1	17.1	17.2	17.2	17.3	17.4	17.5	17.5	17.4	
Polaris	2.0	318	00.7	13.0	25.4	34.9	37.3	32.0	20.6	05.6	50.8	39.1	31.9	31.8	89	19.3	19.3	19.3	19.2	19.0	18.9	18.8	18.8	18.8	19.0	19.1	19.3
Phi Eridanus	3.6	325	45.6	45.8	46.0	46.1	46.2	46.0	45.8	45.5	45.2	45.0	44.9	45.0	-51	27.6	27.6	27.6	27.5	27.3	27.1	27.0	26.9	26.9	27.0	27.1	27.3
Beta Triangulum	3.0	327	25.6	25.7	25.8	25.9	25.9	25.7	25.5	25.2	24.9	24.8	24.7	24.6	35	02.8	02.8	02.8	02.7	02.6	02.6	02.6	02.7	02.8	02.9	03.0	03.1
Hamal	2.0	328	01.8	01.9	02.0	02.0	02.0	01.9	01.6	01.4	01.1	01.0	00.9	00.9	23	31.3	31.3	31.2	31.2	31.1	31.2	31.2	31.3	31.4	31.5	31.5	
Almaak	2.2	328	49.9	50.0	50.1	50.2	50.2	50.0	49.7	49.4	49.2	49.0	48.9	48.9	42	23.5	23.5	23.4	23.3	23.2	23.2	23.2	23.3	23.4	23.5	23.6	23.7
Alrishah	3.8	329	19.6	19.7	19.8	19.8	19.8	19.7	19.5	19.2	19.0	18.9	18.8	18.8	2	49.3	49.3	49.3	49.3	49.3	49.4	49.5	49.6	49.6	49.7	49.7	49.6
Alpha Hydrus	2.9	330	12.5	12.8	13.0	13.2	13.2	13.1	12.8	12.4	12.0	11.8	11.7	11.8	-61	30.9	30.9	30.9	30.7	30.5	30.4	30.2	30.2	30.2	30.3	30.4	30.6
Chi Eridanus	3.7	330	53.3	53.5	53.7	53.9	53.8	53.7	53.4	53.1	52.8	52.6	52.6	52.7	-51	33.2	33.2	33.1	33.0	32.8	32.6	32.5	32.4	32.4	32.5	32.7	32.8
Sheratan	2.7	331	10.0	10.1	10.2	10.3	10.2	10.1	09.8	09.6	09.4	09.2	09.1	09.1	60	52.1	52.1	52.1	52.0	52.0	52.0	52.1	52.2	52.3	52.3	52.4	52.4
Segin	3.4	331	10.2	10.5	10.8	10.9	10.9	10.6	10.2	09.7	09.3	09.0	08.9	08.9	23	44.1	44.1	44.0	43.9	43.8	43.7	43.6	43.7	43.8	44.0	44.1	44.2
Mothallah	3.4	331	33.0	33.1	33.2	33.3	33.3	33.1	32.9	32.6	32.4	32.2	32.1	32.1	29	38.4	38.4	38.3	38.3	38.2	38.2	38.3	38.4	38.5	38.5	38.6	38.7
Baten Kaitos	3.7	331	58.8	59.0	59.0	59.1	59.1	58.9	58.7	58.5	58.3	58.1	58.1	58.1	-10	16.6	16.6	16.6	16.6	16.5	16.4	16.3	16.2	16.1	16.1	16.2	16.3
Tau Cetus	3.5	333	50.3	50.4	50.5	50.5	50.5	50.4	50.2	49.9	49.7	49.6	49.5	49.6	-15	52.5	52.5	52.5	52.5	52.4	52.3	52.2	52.1	52.0	52.0	52.1	52.2
51 Andromeda	3.6	335	18.5	18.6	18.8	18.9	18.8	18.6	18.3	17.9	17.7	17.5	17.4	17.4	48	41.6	41.6	41.5	41.4	41.3	41.3	41.3	41.4	41.5	41.6	41.8	41.9
Achemar	0.5	335	27.3	27.6	27.8	27.9	27.9	27.7	27.4	27.1	26.8	26.6	26.5	26.7	-57	10.8	10.8	10.7	10.5	10.4	10.2	10.1	10.0	10.0	10.1	10.3	10.4
Eta Pisces	3.6	336	57.7	57.8	57.9	57.9	57.9	57.7	57.5	57.2	57.0	56.9	56.9	56.9	15	24.6	24.6	24.5	24.5	24.5	24.5	24.6	24.7	24.8	24.8	24.9	24.9
Delta Phoenix	3.9	337	03.5	03.7	03.8	03.9	03.9	03.7	03.5	03.1	02.9	02.7	02.7	02.8	-49	00.8	00.8	00.8	00.6	00.5	00.3	00.2	00.1	00.1	00.2	00.3	00.5
Gamma Phoenix	3.4	337	46.4	46.6	46.8	46.8	46.8	46.6	46.4	46.1	45.8	45.7	45.7	45.7	-43	15.6	15.6	15.5	15.4	15.2	15.1	15.0	14.9	14.9	15.0	15.1	15.2
Ruchbah	2.7	338	20.3	20.5	20.7	20.8	20.7	20.5	20.1	19.6	19.3	19.1	19.0	19.1	60	18.2	18.2	18.1	18.0	17.9	17.8	17.8	17.9	18.0	18.1	18.3	18.4
Theta Cetus	3.6	338	50.3	50.4	50.5	50.5	50.5	50.3	50.1	49.9	49.7	49.6	49.5	49.6	-8	07.3	07.3	07.3	07.3	07.2	07.1	07.0	06.9	06.9	06.9	06.9	07.0
Mirach	2.1	342	23.5	23.6	23.7	23.8	23.7	23.5	23.2	22.9	22.7	22.6	22.5	22.6	35	41.3	41.3	41.2	41.1	41.1	41.0	41.1	41.2	41.3	41.4	41.5	41.6
Dheneb	3.5	342	41.8	41.9	42.0	42.0	41.9	41.8	41.5	41.3	41.1	41.0	41.0	41.0	-10	07.1	07.2	07.2	07.1	07.0	06.9	06.8	06.7	06.7	06.7	06.7	06.8
Beta Phoenix	3.3	343	20.5	20.7	20.8	20.9	20.8	20.6	20.4	20.0	19.8	19.7	19.7	19.8	-46	39.4	39.4	39.3	39.2	39.0	38.9	38.8	38.7	38.7	38.8	39.0	39.1
Mu Andromeda	3.9	345	38.3	38.4	38.5	38.5	38.4	38.2	37.9	37.7	37.4	37.3	37.3	37.3	38	34.1	34.1	34.0	33.9	33.9	33.9	33.9	34.0	34.1	34.3	34.4	34.4
Tsih	2.2	345	37.9	38.2	38.4	38.4	38.3	38.0	37.6	37.1	36.8	36.7	36.6	36.7	60	47.3	47.2	47.1	47.0	46.9	46.8	46.9	46.9	47.1	47.3	47.4	47.5
Achird	3.5	347	32.0	32.2	32																						