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Nautical Almanac (Selected Stars)

2021

Star Maps

The Nautical Almanac 2021 (Selected Stars)

Polaris Tables 2021

Revision V0.6 - Nov 2018

Warning and Terms of Usage:

The following pages have been generated by a computer program. Complex computer programs usually have bugs and may produce wrong data. The data in this Nautical Almanac is believed to be accurate but no warranty is given for its correctness.

Use this Nautical Almanac only for training and exercising!

Compiled by Erik De Man (mail2erik@siranah.de) on Wed Sep 2 17:54:02 2020

Introduction

This Nautical Almanac contains the Ephemerides of the "First Point of Aries" and sixty selected stars. It is designed for determination of Position (geographical Latitude and Longitude) from astronomical observations (Altitude of Celestial Objects).

The data compiled in this Nautical Almanac is based on calculations done with the software package "NOVAS" from the U.S. Naval Observatory (<http://aa.usno.navy.mil/AA/software>). The fundamental star data was originally obtained from the "Bright Star Catalogue" (5th revised edition of 1991). However, this data has recently been updated from other star catalogues. The complete star data as used in this Almanac is shown on the next page.

Values for "deltaT"

For the astrodynamical calculations, the following values for "delta T" (the difference between terrestrial time realized by atomic clocks and UT defined by the irregular rotation of the Earth) have been used:

Jan : 69.4 s	Apr : 69.4 s	Jul : 69.4 s	Oct : 69.4 s
Feb : 69.4 s	May : 69.4 s	Aug : 69.4 s	Nov : 69.4 s
Mar : 69.4 s	Jun : 69.4 s	Sep : 69.4 s	Dec : 69.4 s

Interpolation of the integral-hour GHA values

This Nautical Almanac uses a slightly different approach for the interpolation of the integral-hour values of Greenwich Hour Angle, compared to the techniques used in most commercially available Almanacs.

For more information please refer to the following web site: "<http://www.siranah.de/>"

The following table shows the fundamental star data as used in this Almanac. The data refers to Equinox J2000 / Epoch J2000.0.

Star Name	RA			Dec		mu_RA	mu_Dec	prllx	rad.vel.
	h	m	s	°	'	["/yr]	["/yr]	["]	[km/s]
Alpheratz	00	08	23.3	N 29	05.4	0.135680	-0.162950	0.034	-11
Ankaa	00	26	17.0	S 42	18.4	0.233050	-0.356300	0.039	75
Schedir	00	40	30.4	N 56	32.2	0.050360	-0.032170	0.014	-4
Diphda	00	43	35.4	S 17	59.2	0.232550	0.031990	0.034	13
Achernar	01	37	42.8	S 57	14.2	0.088020	-0.038240	0.023	16
Hamal	02	07	10.4	N 23	27.7	0.190730	-0.145770	0.049	-14
Polaris	02	31	49.1	N 89	15.8	0.044480	-0.011850	0.008	-17
Acamar	02	58	15.7	S 40	18.3	-0.044600	-0.019000	0.028	12
Menkar	03	02	16.8	N 04	05.4	-0.010410	-0.076850	0.013	-26
Mirfak	03	24	19.4	N 49	51.7	0.024110	-0.026010	0.005	-2
Aldebaran	04	35	55.2	N 16	30.6	0.063000	-0.190000	0.050	54
Capella	05	16	41.4	N 45	59.9	0.075520	-0.427110	0.077	29
Rigel	05	14	32.3	S 08	12.1	0.001870	-0.000560	0.004	21
Bellatrix	05	25	07.9	N 06	21.0	-0.008750	-0.013280	0.013	18
Elnath	05	26	17.5	N 28	36.5	0.023280	-0.174220	0.025	9
Alnilam	05	36	12.8	S 01	12.1	0.001490	-0.001060	0.002	26
Betelgeuze	05	55	10.3	N 07	24.4	0.024950	0.009560	0.005	22
Canopus	06	23	57.1	S 52	41.7	0.019990	0.023670	0.010	21
Sirius	06	45	08.9	S 16	43.0	-0.546050	-1.223140	0.379	-8
Adhara	06	58	37.6	S 28	58.3	0.002600	0.002290	0.008	27
Castor	07	34	36.0	N 31	53.3	-0.206330	-0.148180	0.066	5
Procyon	07	39	18.1	N 05	13.5	-0.716570	-1.034580	0.286	-3
Pollux	07	45	19.4	N 28	01.6	-0.625690	-0.045950	0.097	3
Avior	08	22	30.8	S 59	30.6	-0.025340	0.022720	0.005	2
Suhail	09	07	59.8	S 43	25.9	-0.023210	0.014280	0.006	18
Miaplacidus	09	13	12.0	S 69	43.0	-0.157660	0.108910	0.029	-5
Alphard	09	27	35.2	S 08	39.5	-0.014500	0.033250	0.018	-4
Regulus	10	08	22.3	N 11	58.0	0.249000	0.002000	0.042	6
Dubhe	11	03	43.7	N 61	45.0	-0.136460	-0.035250	0.026	-9
Denebola	11	49	03.6	N 14	34.3	-0.499020	-0.113780	0.090	0
Gienah	12	15	48.4	S 17	32.5	-0.161000	0.023000	0.020	-4
Acruz	12	26	35.9	S 63	05.9	-0.035370	-0.014730	0.010	-11
Gacrux	12	31	09.9	S 57	06.8	0.027940	-0.264330	0.037	21
Alioth	12	54	01.6	N 55	57.6	0.112000	-0.009000	0.040	-9
Spica	13	25	11.6	S 11	09.7	-0.042500	-0.031730	0.012	1
Alkaid	13	47	32.4	N 49	18.8	-0.122000	-0.015600	0.032	-11
Hadar	14	03	49.4	S 60	22.4	-0.033960	-0.025060	0.009	6
Menkent	14	06	41.3	S 36	22.1	-0.519290	-0.517870	0.053	1
Arcturus	14	15	39.7	N 19	10.9	-1.093450	-1.999400	0.089	5
Rigel Kentaurus	14	39	36.5	S 60	50.0	-3.678190	0.481840	0.747	-22
Zubenelgenubi	14	50	52.8	S 16	02.5	-0.106000	-0.067000	0.058	-10
Kocab	14	50	42.3	N 74	09.3	-0.032290	0.011910	0.026	17
Alphecca	15	34	41.3	N 26	42.9	0.120380	-0.089440	0.044	2
Antares	16	29	24.0	S 26	25.9	-0.010160	-0.023210	0.005	-3
Atria	16	48	39.9	S 69	01.7	0.017850	-0.032920	0.008	-3
Sabik	17	10	22.7	S 15	43.5	0.041160	0.097650	0.039	-2
Shaula	17	33	36.5	S 37	06.2	-0.008900	-0.029950	0.005	-3
Rasalhague	17	34	56.1	N 12	33.6	0.110080	-0.222610	0.070	13
Etamin	17	56	36.4	N 51	29.3	-0.008480	-0.022790	0.021	-28
Kaus Australis	18	24	10.3	S 34	23.1	-0.039420	-0.124200	0.023	-15
Vega	18	36	56.3	N 38	47.0	0.201030	0.287470	0.129	-14
Nunki	18	55	15.9	S 26	17.8	0.015140	-0.053430	0.014	-11
Albireo	19	30	43.3	N 27	57.6	0.005000	0.006000	0.009	-24
Altair	19	50	47.0	N 08	52.1	0.536870	0.385570	0.194	-26
Peacock	20	25	38.9	S 56	44.1	0.007710	-0.086150	0.018	2
Deneb	20	41	25.9	N 45	16.8	0.001990	0.001950	0.002	-5
Enif	21	44	11.2	N 09	52.5	0.030020	-0.001380	0.005	3
Alnair	22	08	14.0	S 46	57.7	0.128000	-0.148000	0.032	11
Formalhaut	22	57	39.0	S 29	37.3	0.329220	-0.164220	0.131	7
Markab	23	04	45.6	N 15	12.3	0.060400	-0.041300	0.024	-4

The following table lists the traditional star names as used in this Almanac with the corresponding scientific names (Bayer designation) as used in astronomical star constellation maps.

Star Name	Bayer designation	Apparent Magnitude
Alpheratz	Alpha Andromedae	2.06
Ankaa	Alpha Phoenicis	2.39
Schedir	Alpha Cassiopeiae	2.23
Diphda	Beta Ceti	2.04
Achernar	Alpha Eridani	0.46
Hamal	Alpha Arietis	2.00
Polaris	Alpha Ursae Minoris	2.02
Acamar	Theta Eridani	3.24
Menkar	Alpha Ceti	2.53
Mirfak	Alpha Persei	1.79
Aldebaran	Alpha Tauri	0.85
Capella	Alpha Aurigae	0.08
Rigel	Beta Orionis	0.12
Bellatrix	Gamma Orionis	1.64
Elnath	Beta Tauri	1.65
Alnilam	Epsilon Orionis	1.70
Betelgeuze	Alpha Orionis	0.50
Canopus	Alpha Carinae	-0.72
Sirius	Alpha Canis Majoris	-1.46
Adhara	Epsilon Canis Majoris	1.50
Castor	Alpha Geminorum	2.88
Procyon	Alpha Canis Minoris	0.38
Pollux	Beta Geminorum	1.14
Avior	Epsilon Carinae	1.86
Suhail	Lambda Velorum	2.21
Miaplacidus	Beta Carinae	1.68
Alphard	Alpha Hydrae	1.98
Regulus	Alpha Leonis	1.35
Dubhe	Alpha Ursae Majoris	1.79
Denebola	Beta Leonis	2.14
Gienah	Gamma Corvi	2.59
Acrux	Alpha Crucis	1.33
Gacrux	Gamma Crucis	1.63
Alioth	Epsilon Ursae Majoris	1.77
Spica	Alpha Virginis	0.98
Alkaid	Eta Ursae Majoris	1.86
Hadar	Beta Centauri	0.61
Menkent	Theta Centauri	2.06
Arcturus	Alpha Bootis	-0.04
Rigel Kentaurus	Alpha Centauri	-0.01
Zubenelgenubi	Alpha-2 Librae	2.75
Kocab	Beta Ursae Minoris	2.08
Alphecca	Alpha Coronae Borealis	2.23
Antares	Alpha Scorpii	0.96
Atria	Alpha Trianguli Australis	1.92
Sabik	Eta Ophiuchi	2.43
Shaula	Lambda Scorpii	1.63
Rasalhague	Alpha Ophiuchi	2.08
Etamin	Gamma Draconis	2.23
Kaus Australis	Epsilon Sagittarii	1.85
Vega	Alpha Lyrae	0.03
Nunki	Sigma Sagittarii	2.02
Albireo	Beta Cygni	3.08
Altair	Alpha Aquilae	0.77
Peacock	Alpha Pavonis	1.94
Deneb	Alpha Cygni	1.25
Enif	Epsilon Pegasi	2.39
Alnair	Alpha Gruis	1.74
Formalhaut	Alpha Piscis Austrini	1.16
Markab	Alpha Pegasi	2.49

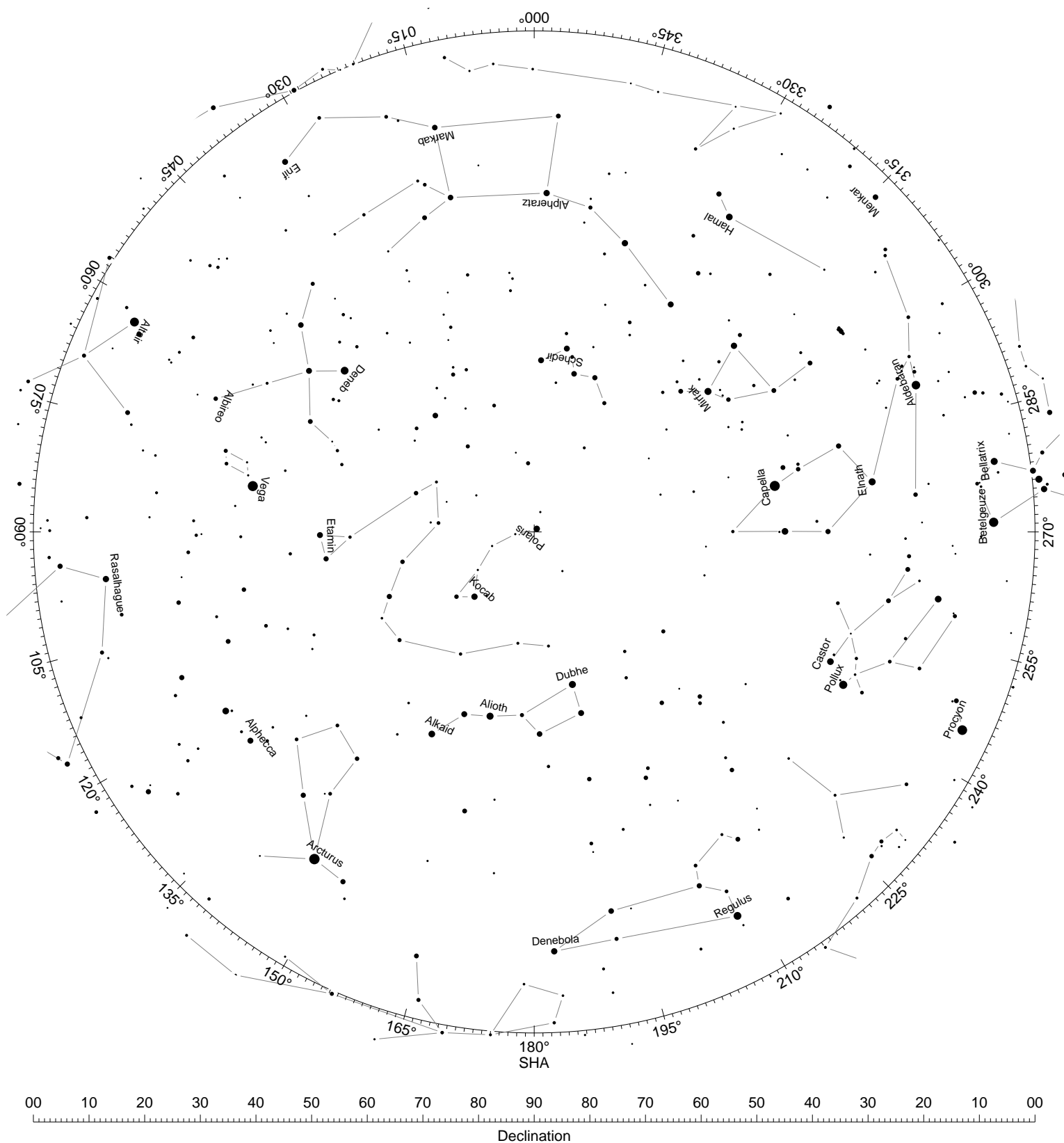
Position of the Stars on the local hemisphere

The following pages show different maps of the brightest stars on the night sky (down to magnitude 4.5) as well as some of the standard constellations. On each of the maps, the stars used in this Almanac are labeled with their traditional names.

The first two maps are stereographic maps of the stars of the northern- and southern hemisphere, respectively. These maps are centered on the celestial poles and may be used for observations at locations in high northern- or southern latitudes.

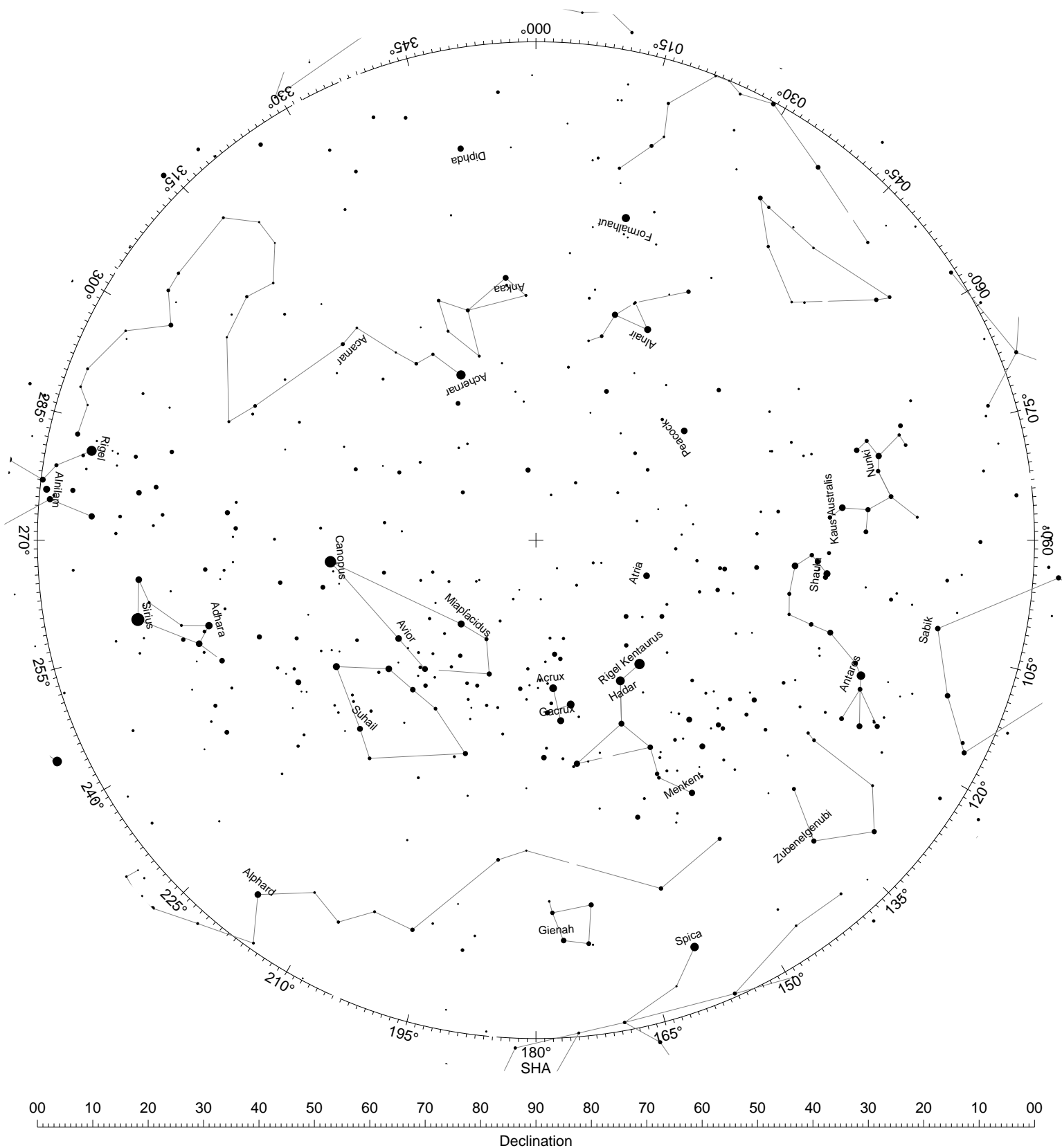
The following eight maps show the star constellations on the local hemisphere for locations on the Equator. These maps can be used for observations at locations in lower latitudes.

Map of bright Stars of the Northern Celestial Sphere



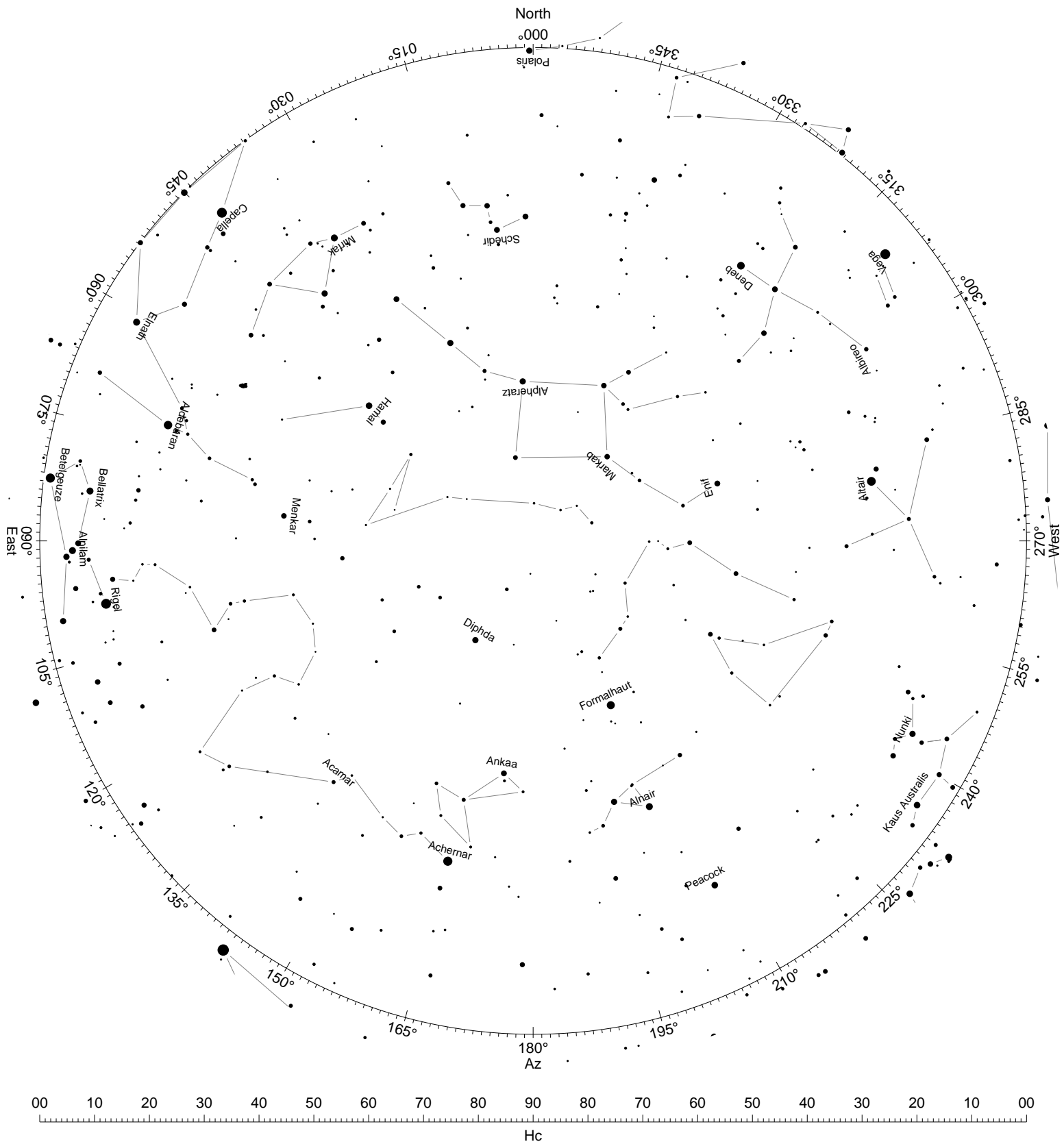
The map is centered on the celestial north pole and shows the brightest stars (up to magnitude 4.5) of the northern celestial hemisphere. The circle of constant declination is shown at 00° (Celestial Equator). The Sidereal Hour Angle of a specific star can be directly read from the SHA scale plotted on the Celestial Equator, while, the Declination can be determined by transferring the distance from the star to the center of the map onto the separate Declination scale. The Sidereal Hour Angle is zero for the "First-Point-of-Aries" and increases westward.

Map of bright Stars of the Southern Celestial Sphere



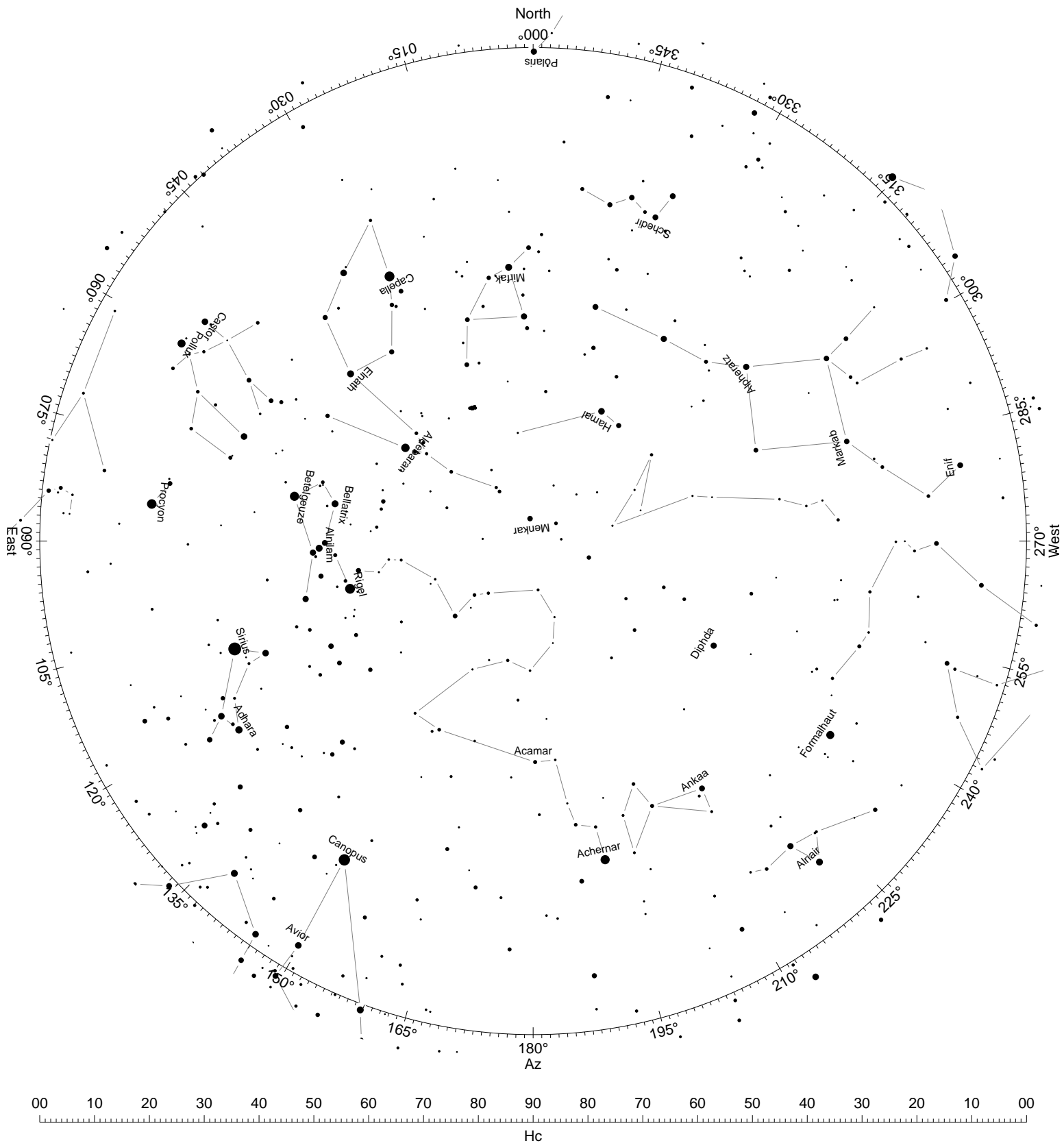
The map is centered on the celestial south pole and shows the brightest stars (up to magnitude 4.5) of the southern celestial hemisphere. The circle of constant declination is shown at 00° (Celestial Equator). The Sidereal Hour Angle of a specific star can be directly read from the SHA scale plotted on the Celestial Equator, while, the Declination can be determined by transferring the distance from the star to the center of the map onto the separate Declination scale. The Sidereal Hour Angle is zero for the "First-Point-of-Aries" and increases westward.

Horizontal-Coordinate-System Map of bright Stars - Part I



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible. Each of these maps is valid for a location on the equator at a specific time of the day.

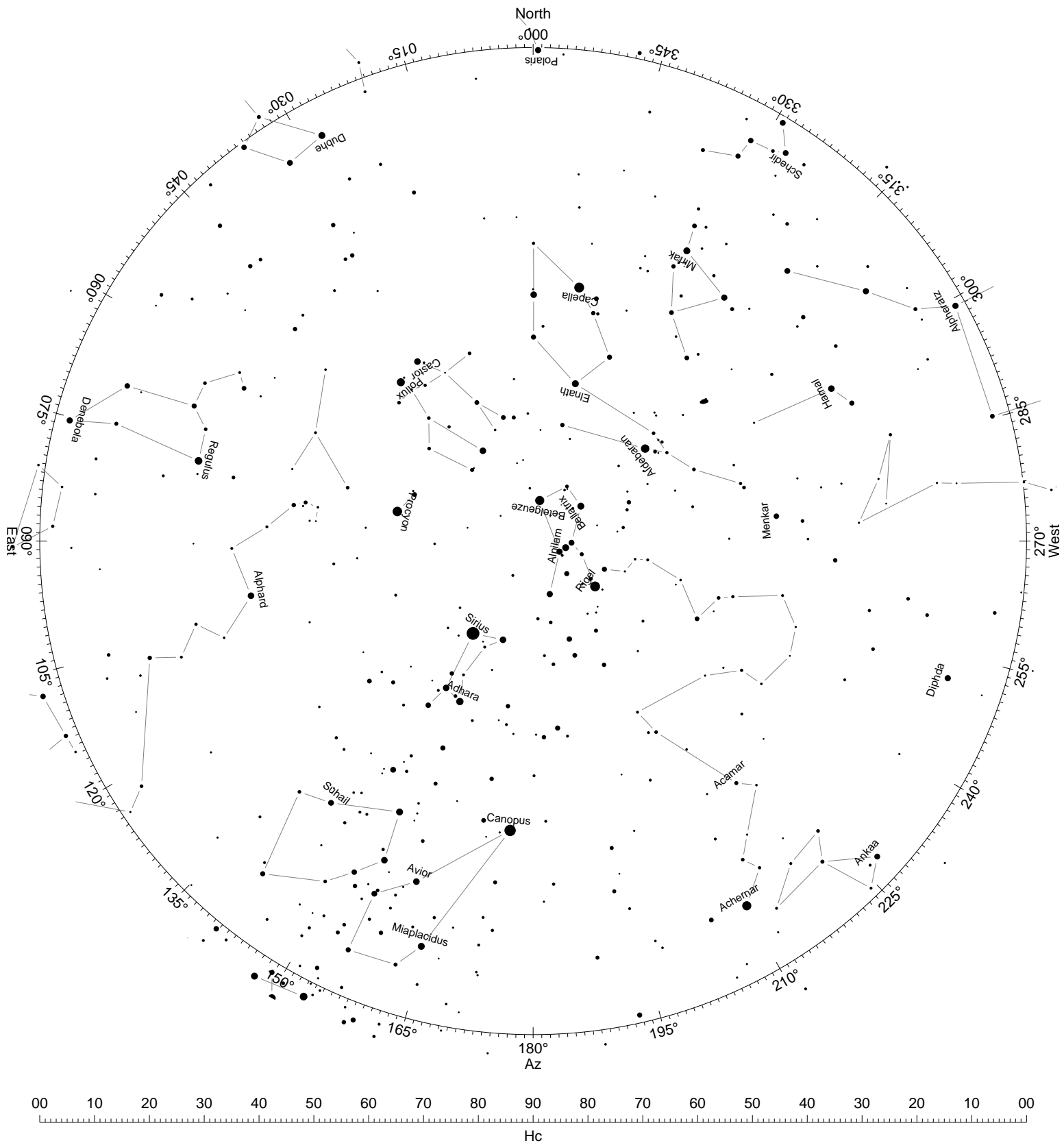
Horizontal-Coordinate-System Map of bright Stars - Part II



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible.

Each of these maps is valid for a location on the equator at a specific time of the day.

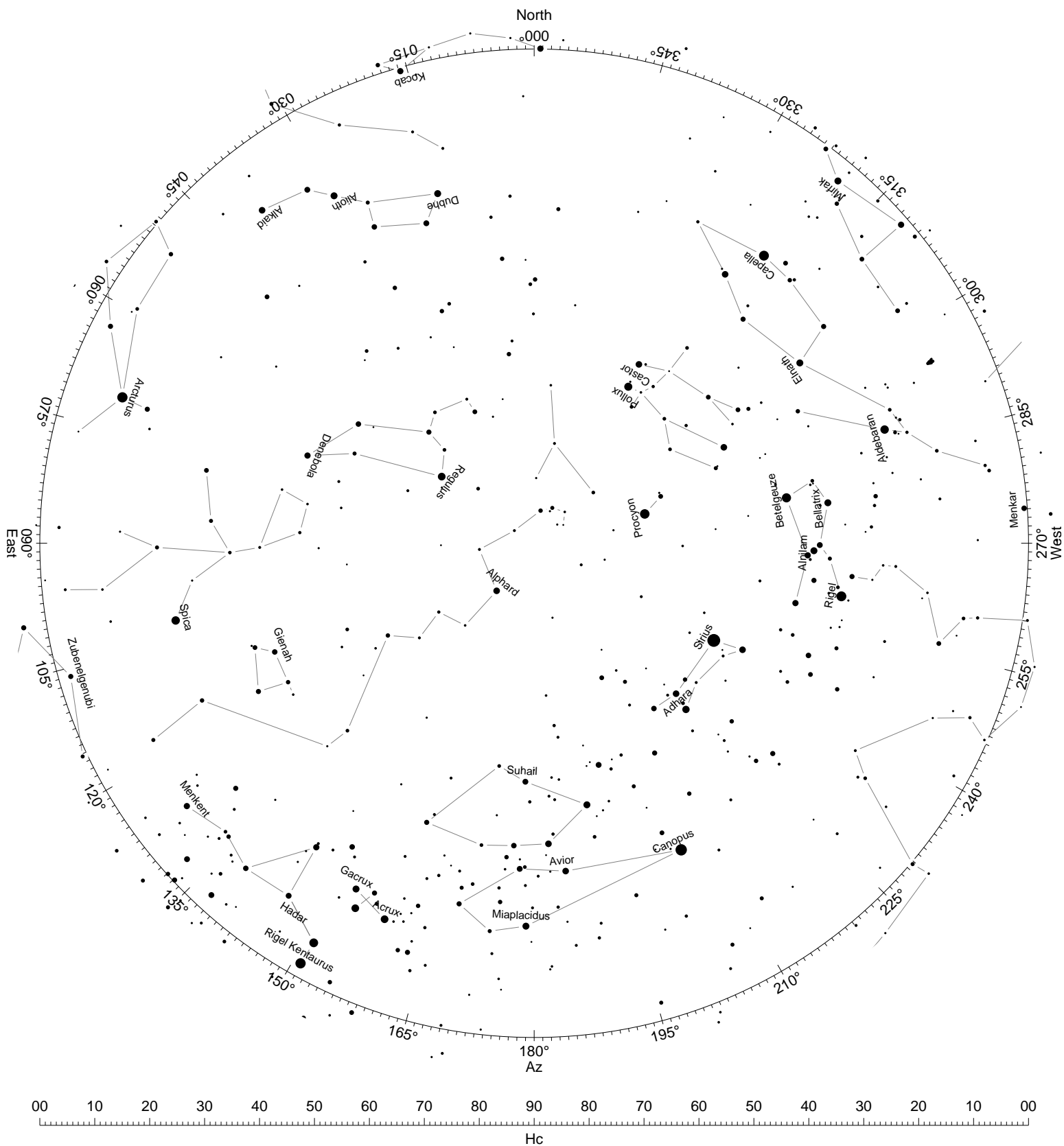
Horizontal-Coordinate-System Map of bright Stars - Part III



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible.

Each of these maps is valid for a location on the equator at a specific time of the day.

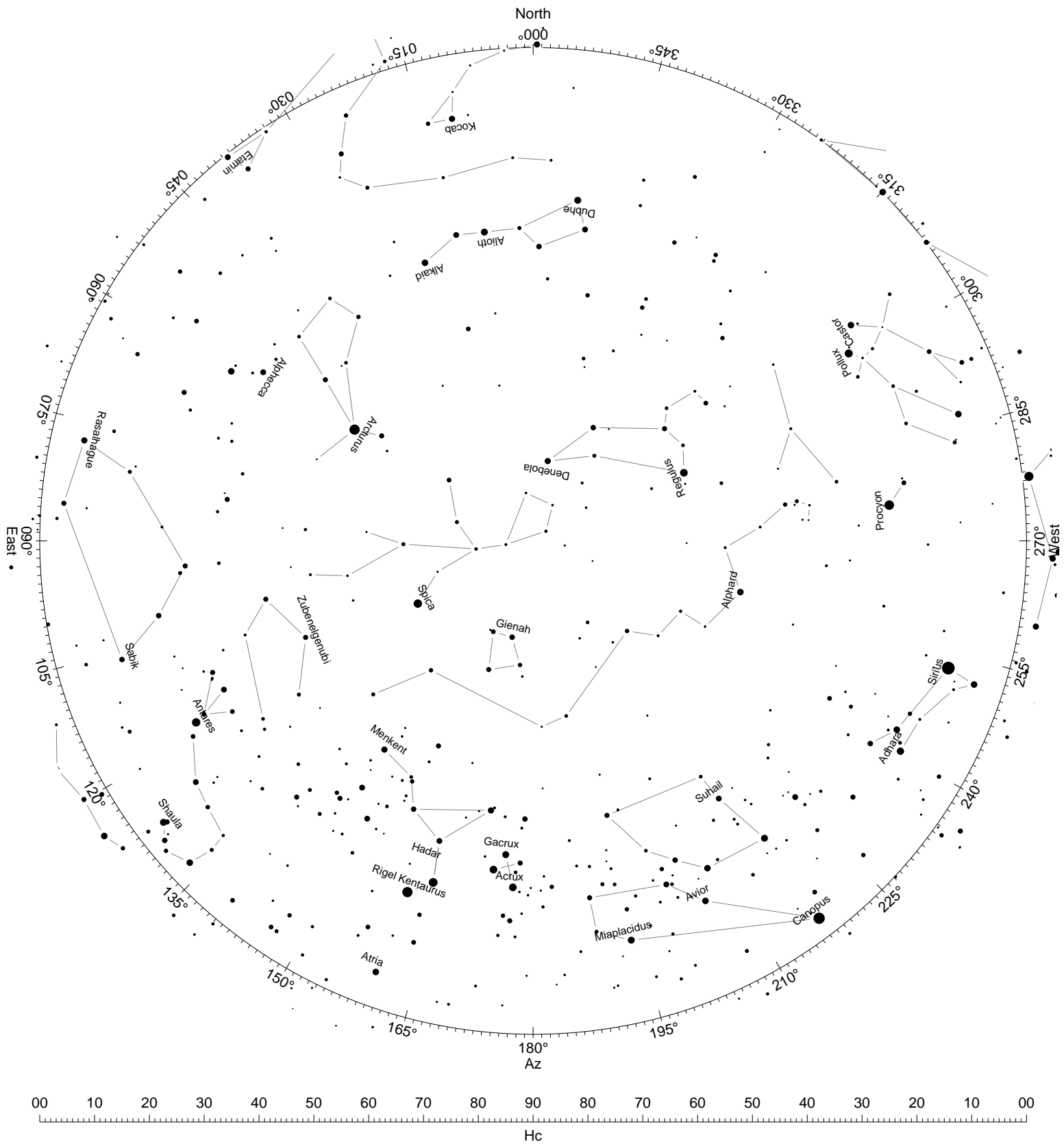
Horizontal-Coordinate-System Map of bright Stars - Part IV



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible.

Each of these maps is valid for a location on the equator at a specific time of the day.

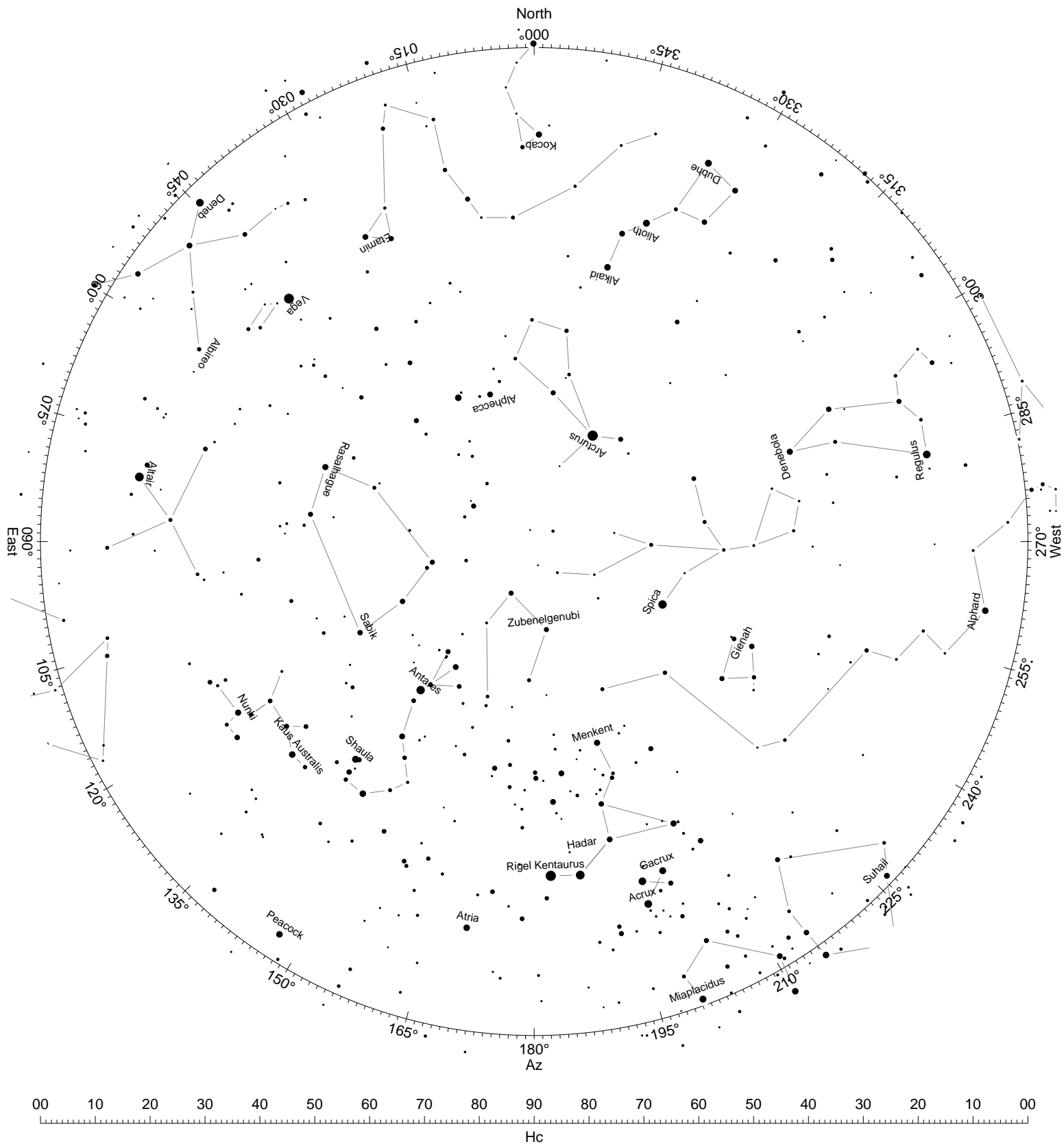
Horizontal-Coordinate-System Map of bright Stars - Part V



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible.

Each of these maps is valid for a location on the equator at a specific time of the day.

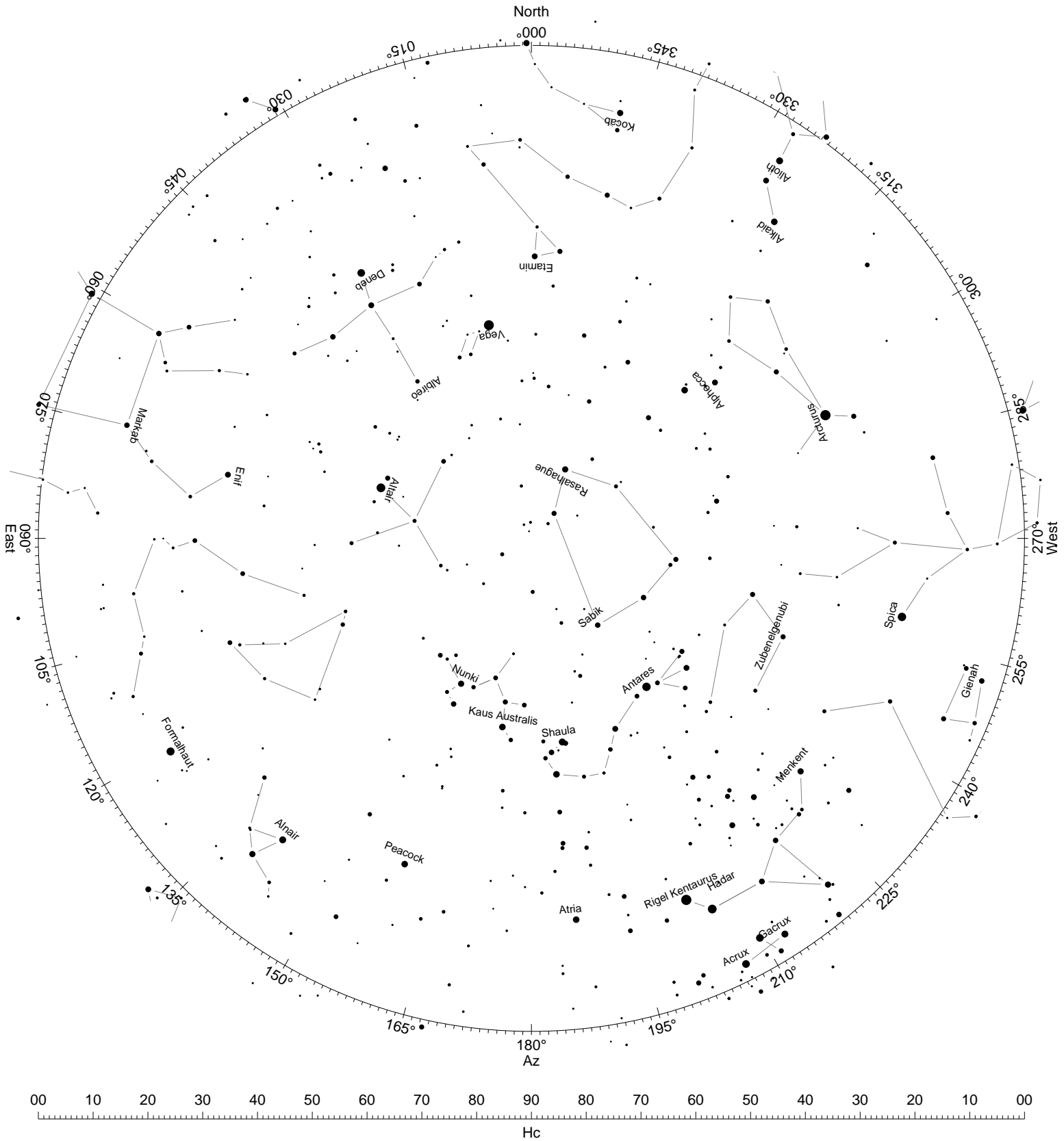
Horizontal-Coordinate-System Map of bright Stars - Part VI



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible.

Each of these maps is valid for a location on the equator at a specific time of the day.

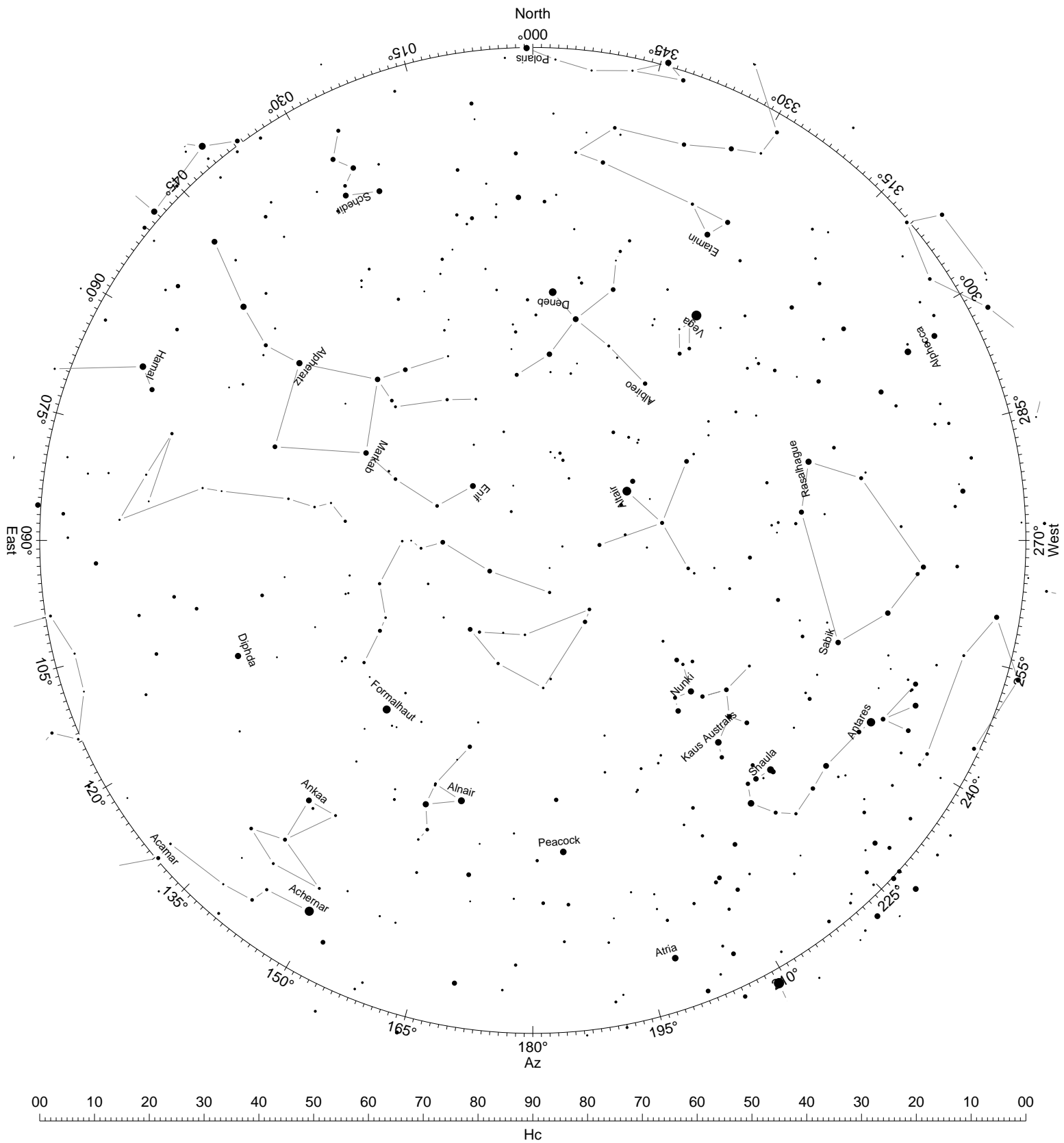
Horizontal-Coordinate-System Map of bright Stars - Part VII



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible.

Each of these maps is valid for a location on the equator at a specific time of the day.

Horizontal-Coordinate-System Map of bright Stars - Part VIII



The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth is the approximate compass direction in which the star is visible. Each of these maps is valid for a location on the equator at a specific time of the day.

Nautical Almanac for selected Stars

The following pages contain the celestial coordinates of the "First Point of Aries" and a set of selected stars. Each page compiles the almanac data for five successive days of the year. For this time span, the recorded star data consisting of Siderial Hour Angle (SHA) and Declination (Dec) is valid. The time used in this Almanac is Universal Time (UT).

The GHA of a specific star is obtained from the GHA of the "First Point of Aries" and the star's SHA by the following relationship: $GHA_{star} = GHA_{Aries} + SHA_{star}$

NOTICE:

This Nautical Almanac uses a slightly different approach for the interpolation of the integral-hour values of Greenwich Hour Angle and Declination, compared to the techniques used in most commercially available Almanacs.

For more information please refer to the following web site: "<http://www.siranah.de/>"

Abbreviations used in the Almanac tables:

UT	Universal Time	
GHA	Greenwich Hour Angle	° [degrees]
ddGHA	the increment of the GHA value for the next hour of time, additional to the "linear" increment of 15°/h	' [minutes of arc]
SHA	Siderial Hour Angle	° [degrees]
Dec	Declination	° [degrees]

2021 - First Point of Aries / Selected Stars

UT	day 1 of 365			day 2 of 365			day 3 of 365			day 4 of 365			day 5 of 365			UT		
	<i>January 1</i>			<i>January 2</i>			<i>January 3</i>			<i>January 4</i>			<i>January 5</i>					
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA				
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
00	100	51.9	+02.4	101	51.0	+02.5	102	50.2	+02.4	103	49.3	+02.5	104	48.4	+02.5	00		
01	115	54.3	+02.5	116	53.5	+02.4	117	52.6	+02.5	118	51.8	+02.4	119	50.9	+02.5	01		
02	130	56.8	+02.5	131	55.9	+02.5	132	55.1	+02.5	133	54.2	+02.5	134	53.4	+02.4	02		
03	145	59.3	+02.4	146	58.4	+02.5	147	57.6	+02.4	148	56.7	+02.5	149	55.8	+02.5	03		
04	161	01.7	+02.5	162	00.9	+02.4	163	00.0	+02.5	163	59.2	+02.4	164	58.3	+02.5	04		
05	176	04.2	+02.5	177	03.3	+02.5	178	02.5	+02.4	179	01.6	+02.5	180	00.8	+02.4	05		
06	191	06.7	+02.4	192	05.8	+02.5	193	04.9	+02.5	194	04.1	+02.4	195	03.2	+02.5	06		
07	206	09.1	+02.5	207	08.3	+02.4	208	07.4	+02.5	209	06.5	+02.5	210	05.7	+02.4	07		
08	221	11.6	+02.5	222	10.7	+02.5	223	09.9	+02.4	224	09.0	+02.5	225	08.1	+02.5	08		
09	236	14.1	+02.4	237	13.2	+02.5	238	12.3	+02.5	239	11.5	+02.4	240	10.6	+02.5	09		
10	251	16.5	+02.5	252	15.7	+02.4	253	14.8	+02.5	254	13.9	+02.5	255	13.1	+02.4	10		
11	266	19.0	+02.4	267	18.1	+02.5	268	17.3	+02.4	269	16.4	+02.5	270	15.5	+02.5	11		
12	281	21.4	+02.5	282	20.6	+02.5	283	19.7	+02.5	284	18.9	+02.4	285	18.0	+02.5	12		
13	296	23.9	+02.5	297	23.1	+02.4	298	22.2	+02.5	299	21.3	+02.5	300	20.5	+02.4	13		
14	311	26.4	+02.4	312	25.5	+02.5	313	24.7	+02.4	314	23.8	+02.5	315	22.9	+02.5	14		
15	326	28.8	+02.5	327	28.0	+02.4	328	27.1	+02.5	329	26.3	+02.4	330	25.4	+02.5	15		
16	341	31.3	+02.5	342	30.4	+02.5	343	29.6	+02.4	344	28.7	+02.5	345	27.9	+02.4	16		
17	356	33.8	+02.4	357	32.9	+02.5	358	32.0	+02.5	359	31.2	+02.5	0	30.3	+02.5	17		
18	11	36.2	+02.5	12	35.4	+02.4	13	34.5	+02.5	14	33.7	+02.4	15	32.8	+02.5	18		
19	26	38.7	+02.5	27	37.8	+02.5	28	37.0	+02.4	29	36.1	+02.5	30	35.3	+02.4	19		
20	41	41.2	+02.4	42	40.3	+02.5	43	39.4	+02.5	44	38.6	+02.4	45	37.7	+02.5	20		
21	56	43.6	+02.5	57	42.8	+02.4	58	41.9	+02.5	59	41.0	+02.5	60	40.2	+02.4	21		
22	71	46.1	+02.5	72	45.2	+02.5	73	44.4	+02.4	74	43.5	+02.5	75	42.6	+02.5	22		
23	86	48.6	+02.4	87	47.7	+02.5	88	46.8	+02.5	89	46.0	+02.4	90	45.1	+02.5	23		

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.2	N 29	12.5	Gienah	175	46.8	S 17	39.3
Ankaa	353	10.6	S 42	11.7	Acrux	173	03.5	S 63	12.5
Schedir	349	34.6	N 56	39.3	Gacrux	171	55.2	S 57	13.4
Diphda	348	50.7	S 17	52.5	Alioth	166	16.1	N 55	50.6
Achernar	335	22.6	S 57	08.2	Spica	158	25.8	S 11	16.1
Hamal	327	54.8	N 23	33.7	Alkaid	152	54.8	N 49	12.4
Polaris	315	13.9	N 89	21.3	Hadar	148	40.7	S 60	28.0
Acamar	315	14.0	S 40	13.6	Menkent	148	01.3	S 36	27.8
Menkar	314	09.4	N 04	10.2	Arcturus	145	50.7	N 19	05.1
Mirfak	308	32.5	N 49	56.2	Rigel Kentaurus	139	42.6	S 60	55.1
Aldebaran	290	43.1	N 16	33.1	Zubenelgenubi	136	59.8	S 16	07.5
Capella	280	26.3	N 46	01.2	Kocab	137	20.6	N 74	04.0
Rigel	281	06.7	S 08	10.8	Alphecca	126	06.8	N 26	38.6
Bellatrix	278	26.0	N 06	22.0	Antares	112	20.3	S 26	28.5
Elnath	278	05.6	N 28	37.5	Atria	107	17.8	S 69	03.6
Alnilam	275	40.7	S 01	11.4	Sabik	102	06.9	S 15	45.0
Betelgeuze	270	55.3	N 07	24.6	Shaula	96	15.2	S 37	07.0
Canopus	263	53.3	S 52	42.5	Rasalhague	96	01.9	N 12	32.8
Sirius	258	28.6	S 16	44.3	Etamin	90	44.2	N 51	29.2
Adhara	255	08.0	S 29	00.1	Kaus Australis	83	37.2	S 34	22.4
Castor	246	00.8	N 31	50.5	Vega	80	35.9	N 38	48.1
Procyon	244	53.7	N 05	10.5	Nunki	75	52.2	S 26	16.2
Pollux	243	20.6	N 27	58.5	Albireo	67	07.0	N 28	00.2
Avior	234	15.4	S 59	34.5	Altair	62	03.6	N 08	55.3
Suhail	222	48.2	S 43	30.9	Peacock	53	11.5	S 56	40.1
Miaplacidus	221	37.8	S 69	48.0	Deneb	49	28.4	N 45	21.4
Alphard	217	50.7	S 08	44.9	Enif	33	42.2	N 09	58.2
Regulus	207	37.6	N 11	51.8	Alnair	27	37.4	S 46	51.8
Dubhe	193	44.8	N 61	38.1	Formalhaut	15	18.4	S 29	30.9
Denebola	182	28.1	N 14	27.3	Markab	13	33.3	N 15	19.1

2021 - First Point of Aries / Selected Stars

UT	day 6 of 365		day 7 of 365		day 8 of 365		day 9 of 365		day 10 of 365		UT					
	<i>January 6</i>		<i>January 7</i>		<i>January 8</i>		<i>January 9</i>		<i>January 10</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	105	47.6	+02.4	106	46.7	+02.5	107	45.8	+02.5	108	45.0	+02.5	109	44.1	+02.5	00
01	120	50.0	+02.5	121	49.2	+02.4	122	48.3	+02.5	123	47.5	+02.4	124	46.6	+02.5	01
02	135	52.5	+02.5	136	51.6	+02.5	137	50.8	+02.4	138	49.9	+02.5	139	49.1	+02.4	02
03	150	55.0	+02.4	151	54.1	+02.5	152	53.2	+02.5	153	52.4	+02.4	154	51.5	+02.5	03
04	165	57.4	+02.5	166	56.6	+02.4	167	55.7	+02.5	168	54.8	+02.5	169	54.0	+02.5	04
05	180	59.9	+02.5	181	59.0	+02.5	182	58.2	+02.4	183	57.3	+02.5	184	56.5	+02.4	05
06	196	02.4	+02.4	197	01.5	+02.5	198	00.6	+02.5	198	59.8	+02.4	199	58.9	+02.5	06
07	211	04.8	+02.5	212	04.0	+02.4	213	03.1	+02.5	214	02.2	+02.5	215	01.4	+02.4	07
08	226	07.3	+02.4	227	06.4	+02.5	228	05.6	+02.4	229	04.7	+02.5	230	03.8	+02.5	08
09	241	09.7	+02.5	242	08.9	+02.5	243	08.0	+02.5	244	07.2	+02.4	245	06.3	+02.5	09
10	256	12.2	+02.5	257	11.4	+02.4	258	10.5	+02.5	259	09.6	+02.5	260	08.8	+02.4	10
11	271	14.7	+02.4	272	13.8	+02.5	273	13.0	+02.4	274	12.1	+02.5	275	11.2	+02.5	11
12	286	17.1	+02.5	287	16.3	+02.4	288	15.4	+02.5	289	14.6	+02.4	290	13.7	+02.5	12
13	301	19.6	+02.5	302	18.7	+02.5	303	17.9	+02.4	304	17.0	+02.5	305	16.2	+02.4	13
14	316	22.1	+02.4	317	21.2	+02.5	318	20.3	+02.5	319	19.5	+02.5	320	18.6	+02.5	14
15	331	24.5	+02.5	332	23.7	+02.4	333	22.8	+02.5	334	22.0	+02.4	335	21.1	+02.5	15
16	346	27.0	+02.5	347	26.1	+02.5	348	25.3	+02.4	349	24.4	+02.5	350	23.6	+02.4	16
17	1	29.5	+02.4	2	28.6	+02.5	3	27.7	+02.5	4	26.9	+02.4	5	26.0	+02.5	17
18	16	31.9	+02.5	17	31.1	+02.4	18	30.2	+02.5	19	29.3	+02.5	20	28.5	+02.4	18
19	31	34.4	+02.5	32	33.5	+02.5	33	32.7	+02.4	34	31.8	+02.5	35	30.9	+02.5	19
20	46	36.9	+02.4	47	36.0	+02.5	48	35.1	+02.5	49	34.3	+02.4	50	33.4	+02.5	20
21	61	39.3	+02.5	62	38.5	+02.4	63	37.6	+02.5	64	36.7	+02.5	65	35.9	+02.4	21
22	76	41.8	+02.4	77	40.9	+02.5	78	40.1	+02.4	79	39.2	+02.5	80	38.3	+02.5	22
23	91	44.2	+02.5	92	43.4	+02.4	93	42.5	+02.5	94	41.7	+02.4	95	40.8	+02.5	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 38.2	N 29 12.5	Gienah	175 46.8	S 17 39.3
Ankaa	353 10.6	S 42 11.8	Acrux	173 03.5	S 63 12.5
Schedir	349 34.7	N 56 39.3	Gacrux	171 55.1	S 57 13.4
Diphda	348 50.7	S 17 52.5	Alioth	166 16.0	N 55 50.6
Achernar	335 22.7	S 57 08.2	Spica	158 25.7	S 11 16.1
Hamal	327 54.8	N 23 33.7	Alkaid	152 54.7	N 49 12.3
Polaris	315 16.0	N 89 21.4	Hadar	148 40.7	S 60 28.0
Acamar	315 14.0	S 40 13.6	Menkent	148 01.2	S 36 27.8
Menkar	314 09.4	N 04 10.2	Arcturus	145 50.7	N 19 05.0
Mirfak	308 32.5	N 49 56.2	Rigel Kentaurus	139 42.5	S 60 55.1
Aldebaran	290 43.1	N 16 33.1	Zubenelgenubi	136 59.7	S 16 07.5
Capella	280 26.3	N 46 01.3	Kocab	137 20.5	N 74 03.9
Rigel	281 06.7	S 08 10.8	Alphecca	126 06.8	N 26 38.6
Bellatrix	278 26.0	N 06 22.0	Antares	112 20.2	S 26 28.5
Elnath	278 05.6	N 28 37.5	Atria	107 17.7	S 69 03.6
Alnilam	275 40.7	S 01 11.4	Sabik	102 06.8	S 15 45.0
Betelgeuze	270 55.3	N 07 24.6	Shaula	96 15.2	S 37 07.0
Canopus	263 53.3	S 52 42.5	Rasalhague	96 01.9	N 12 32.8
Sirius	258 28.6	S 16 44.4	Etamin	90 44.2	N 51 29.1
Adhara	255 08.0	S 29 00.1	Kaus Australis	83 37.2	S 34 22.4
Castor	246 00.8	N 31 50.5	Vega	80 35.9	N 38 48.1
Procyon	244 53.7	N 05 10.5	Nunki	75 52.2	S 26 16.2
Pollux	243 20.6	N 27 58.5	Albireo	67 07.0	N 28 00.2
Avior	234 15.3	S 59 34.5	Altair	62 03.6	N 08 55.3
Suhail	222 48.2	S 43 30.9	Peacock	53 11.5	S 56 40.1
Miaplacidus	221 37.8	S 69 48.0	Deneb	49 28.4	N 45 21.4
Alphard	217 50.7	S 08 45.0	Enif	33 42.2	N 09 58.2
Regulus	207 37.6	N 11 51.8	Alnair	27 37.5	S 46 51.8
Dubhe	193 44.7	N 61 38.1	Formalhaut	15 18.5	S 29 30.9
Denebola	182 28.0	N 14 27.3	Markab	13 33.3	N 15 19.1

2021 - First Point of Aries / Selected Stars

UT	day 11 of 365 <i>January 11</i>			day 12 of 365 <i>January 12</i>			day 13 of 365 <i>January 13</i>			day 14 of 365 <i>January 14</i>			day 15 of 365 <i>January 15</i>			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	110	43.3	+02.4	111	42.4	+02.5	112	41.6	+02.4	113	40.7	+02.5	114	39.8	+02.5	00
01	125	45.7	+02.5	126	44.9	+02.4	127	44.0	+02.5	128	43.2	+02.4	129	42.3	+02.5	01
02	140	48.2	+02.5	141	47.3	+02.5	142	46.5	+02.4	143	45.6	+02.5	144	44.8	+02.4	02
03	155	50.7	+02.4	156	49.8	+02.5	157	48.9	+02.5	158	48.1	+02.5	159	47.2	+02.5	03
04	170	53.1	+02.5	171	52.3	+02.4	172	51.4	+02.5	173	50.6	+02.4	174	49.7	+02.5	04
05	185	55.6	+02.5	186	54.7	+02.5	187	53.9	+02.4	188	53.0	+02.5	189	52.2	+02.4	05
06	200	58.1	+02.4	201	57.2	+02.5	202	56.3	+02.5	203	55.5	+02.4	204	54.6	+02.5	06
07	216	00.5	+02.5	216	59.7	+02.4	217	58.8	+02.5	218	57.9	+02.5	219	57.1	+02.4	07
08	231	03.0	+02.4	232	02.1	+02.5	233	01.3	+02.4	234	00.4	+02.5	234	59.5	+02.5	08
09	246	05.4	+02.5	247	04.6	+02.5	248	03.7	+02.5	249	02.9	+02.4	250	02.0	+02.5	09
10	261	07.9	+02.5	262	07.1	+02.4	263	06.2	+02.5	264	05.3	+02.5	265	04.5	+02.4	10
11	276	10.4	+02.4	277	09.5	+02.5	278	08.7	+02.4	279	07.8	+02.5	280	06.9	+02.5	11
12	291	12.8	+02.5	292	12.0	+02.4	293	11.1	+02.5	294	10.3	+02.4	295	09.4	+02.5	12
13	306	15.3	+02.5	307	14.4	+02.5	308	13.6	+02.5	309	12.7	+02.5	310	11.9	+02.4	13
14	321	17.8	+02.4	322	16.9	+02.5	323	16.1	+02.4	324	15.2	+02.5	325	14.3	+02.5	14
15	336	20.2	+02.5	337	19.4	+02.4	338	18.5	+02.5	339	17.7	+02.4	340	16.8	+02.5	15
16	351	22.7	+02.5	352	21.8	+02.5	353	21.0	+02.4	354	20.1	+02.5	355	19.3	+02.4	16
17	6	25.2	+02.4	7	24.3	+02.5	8	23.4	+02.5	9	22.6	+02.4	10	21.7	+02.5	17
18	21	27.6	+02.5	22	26.8	+02.4	23	25.9	+02.5	24	25.0	+02.5	25	24.2	+02.5	18
19	36	30.1	+02.5	37	29.2	+02.5	38	28.4	+02.4	39	27.5	+02.5	40	26.7	+02.4	19
20	51	32.6	+02.4	52	31.7	+02.5	53	30.8	+02.5	54	30.0	+02.4	55	29.1	+02.5	20
21	66	35.0	+02.5	67	34.2	+02.4	68	33.3	+02.5	69	32.4	+02.5	70	31.6	+02.4	21
22	81	37.5	+02.4	82	36.6	+02.5	83	35.8	+02.4	84	34.9	+02.5	85	34.0	+02.5	22
23	96	39.9	+02.5	97	39.1	+02.5	98	38.2	+02.5	99	37.4	+02.4	100	36.5	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.2	N 29 12.5	Gienah	175 46.8	S 17 39.4
Ankaa	353 10.6	S 42 11.7	Acrux	173 03.4	S 63 12.5
Schedir	349 34.7	N 56 39.3	Gacrux	171 55.0	S 57 13.4
Diphda	348 50.7	S 17 52.6	Alioth	166 16.0	N 55 50.5
Achernar	335 22.7	S 57 08.2	Spica	158 25.7	S 11 16.1
Hamal	327 54.8	N 23 33.7	Alkaid	152 54.7	N 49 12.3
Polaris	315 17.8	N 89 21.4	Hadar	148 40.6	S 60 28.0
Acamar	315 14.1	S 40 13.6	Menkent	148 01.2	S 36 27.9
Menkar	314 09.4	N 04 10.2	Arcturus	145 50.6	N 19 05.0
Mirfak	308 32.6	N 49 56.2	Rigel Kentaurus	139 42.4	S 60 55.1
Aldebaran	290 43.1	N 16 33.1	Zubenelgenubi	136 59.7	S 16 07.5
Capella	280 26.3	N 46 01.3	Kocab	137 20.4	N 74 03.9
Rigel	281 06.7	S 08 10.8	Alphecca	126 06.8	N 26 38.6
Bellatrix	278 26.0	N 06 22.0	Antares	112 20.2	S 26 28.5
Elnath	278 05.6	N 28 37.5	Atria	107 17.7	S 69 03.6
Alnilam	275 40.7	S 01 11.4	Sabik	102 06.8	S 15 45.0
Betelgeuze	270 55.3	N 07 24.5	Shaula	96 15.1	S 37 07.0
Canopus	263 53.3	S 52 42.5	Rasalhague	96 01.9	N 12 32.8
Sirius	258 28.6	S 16 44.4	Etamin	90 44.2	N 51 29.1
Adhara	255 08.0	S 29 00.1	Kaus Australis	83 37.2	S 34 22.3
Castor	246 00.7	N 31 50.5	Vega	80 35.9	N 38 48.0
Procyon	244 53.7	N 05 10.5	Nunki	75 52.2	S 26 16.2
Pollux	243 20.6	N 27 58.5	Albireo	67 07.0	N 28 00.2
Avior	234 15.3	S 59 34.5	Altair	62 03.6	N 08 55.3
Suhail	222 48.2	S 43 30.9	Peacock	53 11.5	S 56 40.1
Miaplacidus	221 37.7	S 69 48.0	Deneb	49 28.4	N 45 21.3
Alphard	217 50.6	S 08 45.0	Enif	33 42.2	N 09 58.2
Regulus	207 37.5	N 11 51.8	Alnair	27 37.5	S 46 51.8
Dubhe	193 44.6	N 61 38.1	Formalhaut	15 18.5	S 29 30.9
Denebola	182 28.0	N 14 27.3	Markab	13 33.3	N 15 19.1

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UT	day 16 of 365 January 16		day 17 of 365 January 17		day 18 of 365 January 18		day 19 of 365 January 19		day 20 of 365 January 20		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	115 39.0	+02.4	116 38.1	+02.5	117 37.2	+02.5	118 36.4	+02.5	119 35.5	+02.5	00
01	130 41.4	+02.5	131 40.6	+02.4	132 39.7	+02.5	133 38.9	+02.4	134 38.0	+02.5	01
02	145 43.9	+02.5	146 43.0	+02.5	147 42.2	+02.4	148 41.3	+02.5	149 40.5	+02.4	02
03	160 46.4	+02.4	161 45.5	+02.5	162 44.6	+02.5	163 43.8	+02.4	164 42.9	+02.5	03
04	175 48.8	+02.5	176 48.0	+02.4	177 47.1	+02.5	178 46.2	+02.5	179 45.4	+02.4	04
05	190 51.3	+02.5	191 50.4	+02.5	192 49.6	+02.4	193 48.7	+02.5	194 47.8	+02.5	05
06	205 53.8	+02.4	206 52.9	+02.5	207 52.0	+02.5	208 51.2	+02.4	209 50.3	+02.5	06
07	220 56.2	+02.5	221 55.4	+02.4	222 54.5	+02.5	223 53.6	+02.5	224 52.8	+02.4	07
08	235 58.7	+02.5	236 57.8	+02.5	237 57.0	+02.4	238 56.1	+02.5	239 55.2	+02.5	08
09	251 01.2	+02.4	252 00.3	+02.5	252 59.4	+02.5	253 58.6	+02.4	254 57.7	+02.5	09
10	266 03.6	+02.5	267 02.8	+02.4	268 01.9	+02.5	269 01.0	+02.5	270 00.2	+02.4	10
11	281 06.1	+02.4	282 05.2	+02.5	283 04.4	+02.4	284 03.5	+02.5	285 02.6	+02.5	11
12	296 08.5	+02.5	297 07.7	+02.4	298 06.8	+02.5	299 06.0	+02.4	300 05.1	+02.5	12
13	311 11.0	+02.5	312 10.1	+02.5	313 09.3	+02.4	314 08.4	+02.5	315 07.6	+02.4	13
14	326 13.5	+02.4	327 12.6	+02.5	328 11.7	+02.5	329 10.9	+02.4	330 10.0	+02.5	14
15	341 15.9	+02.5	342 15.1	+02.4	343 14.2	+02.5	344 13.3	+02.5	345 12.5	+02.5	15
16	356 18.4	+02.5	357 17.5	+02.5	358 16.7	+02.4	359 15.8	+02.5	0 15.0	+02.4	16
17	11 20.9	+02.4	12 20.0	+02.5	13 19.1	+02.5	14 18.3	+02.4	15 17.4	+02.5	17
18	26 23.3	+02.5	27 22.5	+02.4	28 21.6	+02.5	29 20.7	+02.5	30 19.9	+02.4	18
19	41 25.8	+02.5	42 24.9	+02.5	43 24.1	+02.4	44 23.2	+02.5	45 22.3	+02.5	19
20	56 28.3	+02.4	57 27.4	+02.5	58 26.5	+02.5	59 25.7	+02.4	60 24.8	+02.5	20
21	71 30.7	+02.5	72 29.9	+02.4	73 29.0	+02.5	74 28.1	+02.5	75 27.3	+02.4	21
22	86 33.2	+02.4	87 32.3	+02.5	88 31.5	+02.4	89 30.6	+02.5	90 29.7	+02.5	22
23	101 35.6	+02.5	102 34.8	+02.4	103 33.9	+02.5	104 33.1	+02.4	105 32.2	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.2	N 29 12.5	Gienah	175 46.7	S 17 39.4
Ankaa	353 10.6	S 42 11.7	Acrux	173 03.3	S 63 12.6
Schedir	349 34.8	N 56 39.3	Gacrux	171 55.0	S 57 13.4
Diphda	348 50.7	S 17 52.6	Alioth	166 15.9	N 55 50.5
Achernar	335 22.8	S 57 08.2	Spica	158 25.7	S 11 16.1
Hamal	327 54.8	N 23 33.7	Alkaid	152 54.6	N 49 12.3
Polaris	315 19.9	N 89 21.4	Hadar	148 40.5	S 60 28.1
Acamar	315 14.1	S 40 13.6	Menkent	148 01.1	S 36 27.9
Menkar	314 09.4	N 04 10.2	Arcturus	145 50.6	N 19 05.0
Mirfak	308 32.6	N 49 56.2	Rigel Kentaurus	139 42.3	S 60 55.1
Aldebaran	290 43.1	N 16 33.1	Zubenelgenubi	136 59.6	S 16 07.6
Capella	280 26.3	N 46 01.3	Kocab	137 20.3	N 74 03.9
Rigel	281 06.7	S 08 10.8	Alphecca	126 06.7	N 26 38.6
Bellatrix	278 26.0	N 06 22.0	Antares	112 20.1	S 26 28.5
Elnath	278 05.6	N 28 37.5	Atria	107 17.6	S 69 03.6
Alnilam	275 40.7	S 01 11.4	Sabik	102 06.8	S 15 45.0
Betelgeuze	270 55.3	N 07 24.5	Shaula	96 15.1	S 37 07.0
Canopus	263 53.3	S 52 42.6	Rasalhague	96 01.9	N 12 32.7
Sirius	258 28.6	S 16 44.4	Etamin	90 44.2	N 51 29.1
Adhara	255 08.0	S 29 00.1	Kaus Australis	83 37.2	S 34 22.3
Castor	246 00.7	N 31 50.5	Vega	80 35.9	N 38 48.0
Procyon	244 53.7	N 05 10.5	Nunki	75 52.1	S 26 16.2
Pollux	243 20.6	N 27 58.5	Albireo	67 07.0	N 28 00.2
Avior	234 15.3	S 59 34.6	Altair	62 03.6	N 08 55.3
Suhail	222 48.2	S 43 31.0	Peacock	53 11.5	S 56 40.1
Miaplacidus	221 37.7	S 69 48.1	Deneb	49 28.4	N 45 21.3
Alphard	217 50.6	S 08 45.0	Enif	33 42.2	N 09 58.2
Regulus	207 37.5	N 11 51.8	Alnair	27 37.5	S 46 51.7
Dubhe	193 44.6	N 61 38.1	Formalhaut	15 18.5	S 29 30.8
Denebola	182 27.9	N 14 27.3	Markab	13 33.3	N 15 19.1

2021 - First Point of Aries / Selected Stars

UT	day 21 of 365			day 22 of 365			day 23 of 365			day 24 of 365			day 25 of 365			UT		
	<i>January 21</i>			<i>January 22</i>			<i>January 23</i>			<i>January 24</i>			<i>January 25</i>					
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA				
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
00	120	34.7	+02.4	121	33.8	+02.5	122	32.9	+02.5	123	32.1	+02.4	124	31.2	+02.5	00		
01	135	37.1	+02.5	136	36.3	+02.4	137	35.4	+02.5	138	34.5	+02.5	139	33.7	+02.4	01		
02	150	39.6	+02.5	151	38.7	+02.5	152	37.9	+02.4	153	37.0	+02.5	154	36.1	+02.5	02		
03	165	42.1	+02.4	166	41.2	+02.5	167	40.3	+02.5	168	39.5	+02.4	169	38.6	+02.5	03		
04	180	44.5	+02.5	181	43.7	+02.4	182	42.8	+02.5	183	41.9	+02.5	184	41.1	+02.4	04		
05	195	47.0	+02.4	196	46.1	+02.5	197	45.3	+02.4	198	44.4	+02.5	199	43.5	+02.5	05		
06	210	49.4	+02.5	211	48.6	+02.5	212	47.7	+02.5	213	46.9	+02.4	214	46.0	+02.5	06		
07	225	51.9	+02.5	226	51.1	+02.4	227	50.2	+02.5	228	49.3	+02.5	229	48.5	+02.4	07		
08	240	54.4	+02.4	241	53.5	+02.5	242	52.7	+02.4	243	51.8	+02.5	244	50.9	+02.5	08		
09	255	56.8	+02.5	256	56.0	+02.4	257	55.1	+02.5	258	54.3	+02.4	259	53.4	+02.5	09		
10	270	59.3	+02.5	271	58.4	+02.5	272	57.6	+02.4	273	56.7	+02.5	274	55.9	+02.4	10		
11	286	01.8	+02.4	287	00.9	+02.5	288	00.0	+02.5	288	59.2	+02.5	289	58.3	+02.5	11		
12	301	04.2	+02.5	302	03.4	+02.4	303	02.5	+02.5	304	01.7	+02.4	305	00.8	+02.5	12		
13	316	06.7	+02.5	317	05.8	+02.5	318	05.0	+02.4	319	04.1	+02.5	320	03.3	+02.4	13		
14	331	09.2	+02.4	332	08.3	+02.5	333	07.4	+02.5	334	06.6	+02.4	335	05.7	+02.5	14		
15	346	11.6	+02.5	347	10.8	+02.4	348	09.9	+02.5	349	09.0	+02.5	350	08.2	+02.4	15		
16	1	14.1	+02.5	2	13.2	+02.5	3	12.4	+02.4	4	11.5	+02.5	5	10.6	+02.5	16		
17	16	16.6	+02.4	17	15.7	+02.5	18	14.8	+02.5	19	14.0	+02.4	20	13.1	+02.5	17		
18	31	19.0	+02.5	32	18.2	+02.4	33	17.3	+02.5	34	16.4	+02.5	35	15.6	+02.4	18		
19	46	21.5	+02.4	47	20.6	+02.5	48	19.8	+02.4	49	18.9	+02.5	50	18.0	+02.5	19		
20	61	23.9	+02.5	62	23.1	+02.4	63	22.2	+02.5	64	21.4	+02.4	65	20.5	+02.5	20		
21	76	26.4	+02.5	77	25.5	+02.5	78	24.7	+02.5	79	23.8	+02.5	80	23.0	+02.4	21		
22	91	28.9	+02.4	92	28.0	+02.5	93	27.2	+02.4	94	26.3	+02.5	95	25.4	+02.5	22		
23	106	31.3	+02.5	107	30.5	+02.4	108	29.6	+02.5	109	28.8	+02.4	110	27.9	+02.5	23		

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.4	Gienah	175	46.7	S 17	39.4
Ankaa	353	10.7	S 42	11.7	Acrux	173	03.2	S 63	12.6
Schedir	349	34.8	N 56	39.3	Gacrux	171	54.9	S 57	13.4
Diphda	348	50.7	S 17	52.6	Alioth	166	15.9	N 55	50.5
Achernar	335	22.8	S 57	08.2	Spica	158	25.6	S 11	16.1
Hamal	327	54.8	N 23	33.7	Alkaid	152	54.6	N 49	12.3
Polaris	315	22.3	N 89	21.4	Hadar	148	40.5	S 60	28.1
Acamar	315	14.1	S 40	13.6	Menkent	148	01.1	S 36	27.9
Menkar	314	09.4	N 04	10.2	Arcturus	145	50.6	N 19	05.0
Mirfak	308	32.6	N 49	56.2	Rigel Kentaurus	139	42.3	S 60	55.1
Aldebaran	290	43.1	N 16	33.1	Zubenelgenubi	136	59.6	S 16	07.6
Capella	280	26.3	N 46	01.3	Kocab	137	20.2	N 74	03.9
Rigel	281	06.7	S 08	10.8	Alphecca	126	06.7	N 26	38.6
Bellatrix	278	26.0	N 06	22.0	Antares	112	20.1	S 26	28.5
Elnath	278	05.6	N 28	37.5	Atria	107	17.5	S 69	03.6
Alnilam	275	40.7	S 01	11.5	Sabik	102	06.7	S 15	45.0
Betelgeuze	270	55.3	N 07	24.5	Shaula	96	15.1	S 37	07.0
Canopus	263	53.3	S 52	42.6	Rasalhague	96	01.8	N 12	32.7
Sirius	258	28.6	S 16	44.4	Etamin	90	44.1	N 51	29.0
Adhara	255	08.0	S 29	00.2	Kaus Australis	83	37.1	S 34	22.3
Castor	246	00.7	N 31	50.5	Vega	80	35.9	N 38	48.0
Procyon	244	53.7	N 05	10.5	Nunki	75	52.1	S 26	16.2
Pollux	243	20.5	N 27	58.5	Albireo	67	07.0	N 28	00.2
Avior	234	15.3	S 59	34.6	Altair	62	03.6	N 08	55.2
Suhail	222	48.2	S 43	31.0	Peacock	53	11.5	S 56	40.1
Miaplacidus	221	37.7	S 69	48.1	Deneb	49	28.4	N 45	21.3
Alphard	217	50.6	S 08	45.0	Enif	33	42.2	N 09	58.2
Regulus	207	37.5	N 11	51.8	Alnair	27	37.5	S 46	51.7
Dubhe	193	44.5	N 61	38.1	Formalhaut	15	18.5	S 29	30.8
Denebola	182	27.9	N 14	27.3	Markab	13	33.3	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 26 of 365 January 26		day 27 of 365 January 27		day 28 of 365 January 28		day 29 of 365 January 29		day 30 of 365 January 30		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	125 30.4	+02.4	126 29.5	+02.5	127 28.6	+02.5	128 27.8	+02.4	129 26.9	+02.5	00
01	140 32.8	+02.5	141 32.0	+02.4	142 31.1	+02.5	143 30.2	+02.5	144 29.4	+02.4	01
02	155 35.3	+02.5	156 34.4	+02.5	157 33.6	+02.4	158 32.7	+02.5	159 31.8	+02.5	02
03	170 37.8	+02.4	171 36.9	+02.5	172 36.0	+02.5	173 35.2	+02.4	174 34.3	+02.5	03
04	185 40.2	+02.5	186 39.4	+02.4	187 38.5	+02.5	188 37.6	+02.5	189 36.8	+02.4	04
05	200 42.7	+02.4	201 41.8	+02.5	202 41.0	+02.4	203 40.1	+02.5	204 39.2	+02.5	05
06	215 45.1	+02.5	216 44.3	+02.5	217 43.4	+02.5	218 42.6	+02.4	219 41.7	+02.5	06
07	230 47.6	+02.5	231 46.8	+02.4	232 45.9	+02.5	233 45.0	+02.5	234 44.2	+02.4	07
08	245 50.1	+02.4	246 49.2	+02.5	247 48.4	+02.4	248 47.5	+02.5	249 46.6	+02.5	08
09	260 52.5	+02.5	261 51.7	+02.4	262 50.8	+02.5	263 50.0	+02.4	264 49.1	+02.5	09
10	275 55.0	+02.5	276 54.1	+02.5	277 53.3	+02.4	278 52.4	+02.5	279 51.6	+02.4	10
11	290 57.5	+02.4	291 56.6	+02.5	292 55.7	+02.5	293 54.9	+02.5	294 54.0	+02.5	11
12	305 59.9	+02.5	306 59.1	+02.4	307 58.2	+02.5	308 57.4	+02.4	309 56.5	+02.5	12
13	321 02.4	+02.5	322 01.5	+02.5	323 00.7	+02.4	323 59.8	+02.5	324 59.0	+02.4	13
14	336 04.9	+02.4	337 04.0	+02.5	338 03.1	+02.5	339 02.3	+02.4	340 01.4	+02.5	14
15	351 07.3	+02.5	352 06.5	+02.4	353 05.6	+02.5	354 04.7	+02.5	355 03.9	+02.4	15
16	6 09.8	+02.5	7 08.9	+02.5	8 08.1	+02.4	9 07.2	+02.5	10 06.3	+02.5	16
17	21 12.3	+02.4	22 11.4	+02.5	23 10.5	+02.5	24 09.7	+02.4	25 08.8	+02.5	17
18	36 14.7	+02.5	37 13.9	+02.4	38 13.0	+02.5	39 12.1	+02.5	40 11.3	+02.4	18
19	51 17.2	+02.4	52 16.3	+02.5	53 15.5	+02.4	54 14.6	+02.5	55 13.7	+02.5	19
20	66 19.6	+02.5	67 18.8	+02.4	68 17.9	+02.5	69 17.1	+02.4	70 16.2	+02.5	20
21	81 22.1	+02.5	82 21.2	+02.5	83 20.4	+02.5	84 19.5	+02.5	85 18.7	+02.4	21
22	96 24.6	+02.4	97 23.7	+02.5	98 22.9	+02.4	99 22.0	+02.5	100 21.1	+02.5	22
23	111 27.0	+02.5	112 26.2	+02.4	113 25.3	+02.5	114 24.5	+02.4	115 23.6	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.3	N 29 12.4	Gienah	175 46.6	S 17 39.4
Ankaa	353 10.7	S 42 11.7	Acrux	173 03.2	S 63 12.6
Schedir	349 34.8	N 56 39.3	Gacrux	171 54.9	S 57 13.5
Diphda	348 50.7	S 17 52.6	Alioth	166 15.8	N 55 50.5
Achernar	335 22.8	S 57 08.2	Spica	158 25.6	S 11 16.2
Hamal	327 54.9	N 23 33.7	Alkaid	152 54.5	N 49 12.3
Polaris	315 24.4	N 89 21.4	Hadar	148 40.4	S 60 28.1
Acamar	315 14.1	S 40 13.6	Menkent	148 01.0	S 36 27.9
Menkar	314 09.4	N 04 10.2	Arcturus	145 50.5	N 19 05.0
Mirfak	308 32.6	N 49 56.2	Rigel Kentaurus	139 42.2	S 60 55.1
Aldebaran	290 43.1	N 16 33.1	Zubenelgenubi	136 59.6	S 16 07.6
Capella	280 26.3	N 46 01.3	Kocab	137 20.1	N 74 03.9
Rigel	281 06.7	S 08 10.8	Alphecca	126 06.6	N 26 38.5
Bellatrix	278 26.0	N 06 22.0	Antares	112 20.1	S 26 28.5
Elnath	278 05.6	N 28 37.5	Atria	107 17.4	S 69 03.6
Alnilam	275 40.7	S 01 11.5	Sabik	102 06.7	S 15 45.0
Betelgeuze	270 55.3	N 07 24.5	Shaula	96 15.0	S 37 07.0
Canopus	263 53.3	S 52 42.6	Rasalhague	96 01.8	N 12 32.7
Sirius	258 28.6	S 16 44.4	Etamin	90 44.1	N 51 29.0
Adhara	255 08.0	S 29 00.2	Kaus Australis	83 37.1	S 34 22.3
Castor	246 00.7	N 31 50.5	Vega	80 35.8	N 38 48.0
Procyon	244 53.6	N 05 10.5	Nunki	75 52.1	S 26 16.2
Pollux	243 20.5	N 27 58.5	Albireo	67 07.0	N 28 00.1
Avior	234 15.3	S 59 34.6	Altair	62 03.6	N 08 55.2
Suhail	222 48.1	S 43 31.0	Peacock	53 11.4	S 56 40.1
Miaplacidus	221 37.7	S 69 48.1	Deneb	49 28.4	N 45 21.3
Alphard	217 50.6	S 08 45.0	Enif	33 42.2	N 09 58.2
Regulus	207 37.5	N 11 51.8	Alnair	27 37.5	S 46 51.7
Dubhe	193 44.4	N 61 38.1	Formalhaut	15 18.5	S 29 30.8
Denebola	182 27.9	N 14 27.2	Markab	13 33.3	N 15 19.0

2021 - First Point of Aries / Selected Stars

UT	day 31 of 365 January 31			day 32 of 365 February 1			day 33 of 365 February 2			day 34 of 365 February 3			day 35 of 365 February 4			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	130	26.1	+02.4	131	25.2	+02.5	132	24.3	+02.5	133	23.5	+02.4	134	22.6	+02.5	00
01	145	28.5	+02.5	146	27.7	+02.4	147	26.8	+02.5	148	25.9	+02.5	149	25.1	+02.4	01
02	160	31.0	+02.5	161	30.1	+02.5	162	29.3	+02.4	163	28.4	+02.5	164	27.5	+02.5	02
03	175	33.5	+02.4	176	32.6	+02.5	177	31.7	+02.5	178	30.9	+02.4	179	30.0	+02.5	03
04	190	35.9	+02.5	191	35.1	+02.4	192	34.2	+02.5	193	33.3	+02.5	194	32.5	+02.4	04
05	205	38.4	+02.4	206	37.5	+02.5	207	36.7	+02.4	208	35.8	+02.5	209	34.9	+02.5	05
06	220	40.8	+02.5	221	40.0	+02.4	222	39.1	+02.5	223	38.3	+02.4	224	37.4	+02.5	06
07	235	43.3	+02.5	236	42.4	+02.5	237	41.6	+02.4	238	40.7	+02.5	239	39.9	+02.4	07
08	250	45.8	+02.4	251	44.9	+02.5	252	44.0	+02.5	253	43.2	+02.4	254	42.3	+02.5	08
09	265	48.2	+02.5	266	47.4	+02.4	267	46.5	+02.5	268	45.6	+02.5	269	44.8	+02.5	09
10	280	50.7	+02.5	281	49.8	+02.5	282	49.0	+02.4	283	48.1	+02.5	284	47.3	+02.4	10
11	295	53.2	+02.4	296	52.3	+02.5	297	51.4	+02.5	298	50.6	+02.4	299	49.7	+02.5	11
12	310	55.6	+02.5	311	54.8	+02.4	312	53.9	+02.5	313	53.0	+02.5	314	52.2	+02.4	12
13	325	58.1	+02.5	326	57.2	+02.5	327	56.4	+02.4	328	55.5	+02.5	329	54.6	+02.5	13
14	341	00.6	+02.4	341	59.7	+02.5	342	58.8	+02.5	343	58.0	+02.4	344	57.1	+02.5	14
15	356	03.0	+02.5	357	02.2	+02.4	358	01.3	+02.5	359	00.4	+02.5	359	59.6	+02.4	15
16	11	05.5	+02.4	12	04.6	+02.5	13	03.8	+02.4	14	02.9	+02.5	15	02.0	+02.5	16
17	26	07.9	+02.5	27	07.1	+02.4	28	06.2	+02.5	29	05.4	+02.4	30	04.5	+02.5	17
18	41	10.4	+02.5	42	09.5	+02.5	43	08.7	+02.5	44	07.8	+02.5	45	07.0	+02.4	18
19	56	12.9	+02.4	57	12.0	+02.5	58	11.2	+02.4	59	10.3	+02.5	60	09.4	+02.5	19
20	71	15.3	+02.5	72	14.5	+02.4	73	13.6	+02.5	74	12.8	+02.4	75	11.9	+02.5	20
21	86	17.8	+02.5	87	16.9	+02.5	88	16.1	+02.4	89	15.2	+02.5	90	14.4	+02.4	21
22	101	20.3	+02.4	102	19.4	+02.5	103	18.5	+02.5	104	17.7	+02.4	105	16.8	+02.5	22
23	116	22.7	+02.5	117	21.9	+02.4	118	21.0	+02.5	119	20.1	+02.5	120	19.3	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.4	Gienah	175	46.6	S 17	39.4
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Bellatrix	278	26.1	N 06	22.0	Antares	112	20.0	S 26	28.6
Elnath	278	05.6	N 28	37.5	Atria	107	17.3	S 69	03.6
Alnilam	275	40.7	S 01	11.5	Sabik	102	06.7	S 15	45.0
Betelgeuze	270	55.3	N 07	24.5	Shaula	96	15.0	S 37	07.0
Canopus	263	53.3	S 52	42.6	Rasalhague	96	01.8	N 12	32.7
Sirius	258	28.6	S 16	44.4	Etamin	90	44.1	N 51	29.0
Adhara	255	08.0	S 29	00.2	Kaus Australis	83	37.1	S 34	22.3
Castor	246	00.7	N 31	50.5	Vega	80	35.8	N 38	47.9
Procyon	244	53.6	N 05	10.5	Nunki	75	52.0	S 26	16.2
Pollux	243	20.5	N 27	58.5	Albireo	67	07.0	N 28	00.1
Avior	234	15.3	S 59	34.7	Altair	62	03.5	N 08	55.2
Suhail	222	48.1	S 43	31.0	Peacock	53	11.4	S 56	40.0
Miaplacidus	221	37.7	S 69	48.2	Deneb	49	28.4	N 45	21.2
Alphard	217	50.5	S 08	45.0	Enif	33	42.2	N 09	58.2
Regulus	207	37.4	N 11	51.8	Alnair	27	37.5	S 46	51.7
Dubhe	193	44.4	N 61	38.1	Formalhaut	15	18.5	S 29	30.8
Denebola	182	27.8	N 14	27.2	Markab	13	33.3	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 36 of 365 February 5			day 37 of 365 February 6			day 38 of 365 February 7			day 39 of 365 February 8			day 40 of 365 February 9			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	135	21.7	+02.5	136	20.9	+02.5	137	20.0	+02.5	138	19.2	+02.4	139	18.3	+02.5	00
01	150	24.2	+02.5	151	23.4	+02.4	152	22.5	+02.5	153	21.6	+02.5	154	20.8	+02.4	01
02	165	26.7	+02.4	166	25.8	+02.5	167	25.0	+02.4	168	24.1	+02.5	169	23.2	+02.5	02
03	180	29.1	+02.5	181	28.3	+02.4	182	27.4	+02.5	183	26.6	+02.4	184	25.7	+02.5	03
04	195	31.6	+02.5	196	30.7	+02.5	197	29.9	+02.4	198	29.0	+02.5	199	28.2	+02.4	04
05	210	34.1	+02.4	211	33.2	+02.5	212	32.3	+02.5	213	31.5	+02.5	214	30.6	+02.5	05
06	225	36.5	+02.5	226	35.7	+02.4	227	34.8	+02.5	228	34.0	+02.4	229	33.1	+02.5	06
07	240	39.0	+02.5	241	38.1	+02.5	242	37.3	+02.4	243	36.4	+02.5	244	35.6	+02.4	07
08	255	41.5	+02.4	256	40.6	+02.5	257	39.7	+02.5	258	38.9	+02.4	259	38.0	+02.5	08
09	270	43.9	+02.5	271	43.1	+02.4	272	42.2	+02.5	273	41.3	+02.5	274	40.5	+02.5	09
10	285	46.4	+02.5	286	45.5	+02.5	287	44.7	+02.4	288	43.8	+02.5	289	43.0	+02.4	10
11	300	48.9	+02.4	301	48.0	+02.5	302	47.1	+02.5	303	46.3	+02.4	304	45.4	+02.5	11
12	315	51.3	+02.5	316	50.5	+02.4	317	49.6	+02.5	318	48.7	+02.5	319	47.9	+02.4	12
13	330	53.8	+02.4	331	52.9	+02.5	332	52.1	+02.4	333	51.2	+02.5	334	50.3	+02.5	13
14	345	56.2	+02.5	346	55.4	+02.5	347	54.5	+02.5	348	53.7	+02.4	349	52.8	+02.5	14
15	0	58.7	+02.5	1	57.9	+02.4	2	57.0	+02.5	3	56.1	+02.5	4	55.3	+02.4	15
16	16	01.2	+02.4	17	00.3	+02.5	17	59.5	+02.4	18	58.6	+02.5	19	57.7	+02.5	16
17	31	03.6	+02.5	32	02.8	+02.4	33	01.9	+02.5	34	01.1	+02.4	35	00.2	+02.5	17
18	46	06.1	+02.5	47	05.2	+02.5	48	04.4	+02.4	49	03.5	+02.5	50	02.7	+02.4	18
19	61	08.6	+02.4	62	07.7	+02.5	63	06.8	+02.5	64	06.0	+02.5	65	05.1	+02.5	19
20	76	11.0	+02.5	77	10.2	+02.4	78	09.3	+02.5	79	08.5	+02.4	80	07.6	+02.5	20
21	91	13.5	+02.5	92	12.6	+02.5	93	11.8	+02.4	94	10.9	+02.5	95	10.1	+02.4	21
22	106	16.0	+02.4	107	15.1	+02.5	108	14.2	+02.5	109	13.4	+02.4	110	12.5	+02.5	22
23	121	18.4	+02.5	122	17.6	+02.4	123	16.7	+02.5	124	15.8	+02.5	125	15.0	+02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.3	N 29 12.4	Gienah	175 46.6	S 17 39.5
Ankaa	353 10.7	S 42 11.7	Acrux	173 03.1	S 63 12.7
Schedir	349 34.9	N 56 39.3	Gacrux	171 54.8	S 57 13.5
Diphda	348 50.8	S 17 52.6	Alioth	166 15.7	N 55 50.5
Achernar	335 22.9	S 57 08.2	Spica	158 25.5	S 11 16.2
Hamal	327 54.9	N 23 33.7	Alkaid	152 54.4	N 49 12.3
Polaris	315 29.4	N 89 21.4	Hadar	148 40.3	S 60 28.1
Acamar	315 14.2	S 40 13.6	Menkent	148 01.0	S 36 27.9
Menkar	314 09.5	N 04 10.2	Arcturus	145 50.4	N 19 05.0
Mirfak	308 32.7	N 49 56.2	Rigel Kentaurus	139 42.0	S 60 55.1
Aldebaran	290 43.1	N 16 33.1	Zubenelgenubi	136 59.5	S 16 07.6
Capella	280 26.3	N 46 01.3	Kocab	137 19.9	N 74 03.9
Rigel	281 06.7	S 08 10.8	Alphecca	126 06.6	N 26 38.5
Bellatrix	278 26.1	N 06 22.0	Antares	112 20.0	S 26 28.6
Elnath	278 05.7	N 28 37.5	Atria	107 17.2	S 69 03.6
Alnilam	275 40.7	S 01 11.5	Sabik	102 06.6	S 15 45.0
Betelgeuze	270 55.3	N 07 24.5	Shaula	96 14.9	S 37 07.0
Canopus	263 53.4	S 52 42.7	Rasalhague	96 01.7	N 12 32.7
Sirius	258 28.6	S 16 44.5	Etamin	90 44.0	N 51 29.0
Adhara	255 08.0	S 29 00.2	Kaus Australis	83 37.0	S 34 22.3
Castor	246 00.7	N 31 50.5	Vega	80 35.8	N 38 47.9
Procyon	244 53.6	N 05 10.5	Nunki	75 52.0	S 26 16.2
Pollux	243 20.5	N 27 58.5	Albireo	67 07.0	N 28 00.1
Avior	234 15.3	S 59 34.7	Altair	62 03.5	N 08 55.2
Suhail	222 48.1	S 43 31.1	Peacock	53 11.4	S 56 40.0
Miaplacidus	221 37.7	S 69 48.2	Deneb	49 28.4	N 45 21.2
Alphard	217 50.5	S 08 45.1	Enif	33 42.2	N 09 58.2
Regulus	207 37.4	N 11 51.8	Alnair	27 37.5	S 46 51.7
Dubhe	193 44.3	N 61 38.1	Formalhaut	15 18.5	S 29 30.8
Denebola	182 27.8	N 14 27.2	Markab	13 33.3	N 15 19.0

2021 - First Point of Aries / Selected Stars

UT	day 41 of 365 February 10			day 42 of 365 February 11			day 43 of 365 February 12			day 44 of 365 February 13			day 45 of 365 February 14			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	140	17.4	+02.5	141	16.6	+02.5	142	15.7	+02.5	143	14.9	+02.4	144	14.0	+02.5	00
01	155	19.9	+02.5	156	19.1	+02.4	157	18.2	+02.5	158	17.3	+02.5	159	16.5	+02.4	01
02	170	22.4	+02.4	171	21.5	+02.5	172	20.7	+02.4	173	19.8	+02.5	174	18.9	+02.5	02
03	185	24.8	+02.5	186	24.0	+02.4	187	23.1	+02.5	188	22.3	+02.4	189	21.4	+02.5	03
04	200	27.3	+02.5	201	26.4	+02.5	202	25.6	+02.4	203	24.7	+02.5	204	23.9	+02.4	04
05	215	29.8	+02.4	216	28.9	+02.5	217	28.0	+02.5	218	27.2	+02.5	219	26.3	+02.5	05
06	230	32.2	+02.5	231	31.4	+02.4	232	30.5	+02.5	233	29.7	+02.4	234	28.8	+02.5	06
07	245	34.7	+02.5	246	33.8	+02.5	247	33.0	+02.4	248	32.1	+02.5	249	31.3	+02.4	07
08	260	37.2	+02.4	261	36.3	+02.5	262	35.4	+02.5	263	34.6	+02.4	264	33.7	+02.5	08
09	275	39.6	+02.5	276	38.8	+02.4	277	37.9	+02.5	278	37.0	+02.5	279	36.2	+02.4	09
10	290	42.1	+02.5	291	41.2	+02.5	292	40.4	+02.4	293	39.5	+02.5	294	38.6	+02.5	10
11	305	44.6	+02.4	306	43.7	+02.5	307	42.8	+02.5	308	42.0	+02.4	309	41.1	+02.5	11
12	320	47.0	+02.5	321	46.2	+02.4	322	45.3	+02.5	323	44.4	+02.5	324	43.6	+02.4	12
13	335	49.5	+02.4	336	48.6	+02.5	337	47.8	+02.4	338	46.9	+02.5	339	46.0	+02.5	13
14	350	51.9	+02.5	351	51.1	+02.5	352	50.2	+02.5	353	49.4	+02.4	354	48.5	+02.5	14
15	5	54.4	+02.5	6	53.6	+02.4	7	52.7	+02.5	8	51.8	+02.5	9	51.0	+02.4	15
16	20	56.9	+02.4	21	56.0	+02.5	22	55.2	+02.4	23	54.3	+02.5	24	53.4	+02.5	16
17	35	59.3	+02.5	36	58.5	+02.4	37	57.6	+02.5	38	56.8	+02.4	39	55.9	+02.5	17
18	51	01.8	+02.5	52	00.9	+02.5	53	00.1	+02.4	53	59.2	+02.5	54	58.4	+02.4	18
19	66	04.3	+02.4	67	03.4	+02.5	68	02.5	+02.5	69	01.7	+02.4	70	00.8	+02.5	19
20	81	06.7	+02.5	82	05.9	+02.4	83	05.0	+02.5	84	04.1	+02.5	85	03.3	+02.4	20
21	96	09.2	+02.5	97	08.3	+02.5	98	07.5	+02.4	99	06.6	+02.5	100	05.7	+02.5	21
22	111	11.7	+02.4	112	10.8	+02.5	113	09.9	+02.5	114	09.1	+02.4	115	08.2	+02.5	22
23	126	14.1	+02.5	127	13.3	+02.4	128	12.4	+02.5	129	11.5	+02.5	130	10.7	+02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.3	N 29 12.4	Gienah	175 46.5	S 17 39.5
Ankaa	353 10.7	S 42 11.7	Acrux	173 03.0	S 63 12.7
Schedir	349 34.9	N 56 39.2	Gacrux	171 54.7	S 57 13.5
Diphda	348 50.8	S 17 52.5	Alioth	166 15.6	N 55 50.5
Achernar	335 23.0	S 57 08.2	Spica	158 25.5	S 11 16.2
Hamal	327 54.9	N 23 33.7	Alkaid	152 54.3	N 49 12.3
Polaris	315 31.6	N 89 21.4	Hadar	148 40.2	S 60 28.1
Acamar	315 14.2	S 40 13.6	Menkent	148 00.9	S 36 27.9
Menkar	314 09.5	N 04 10.2	Arcturus	145 50.4	N 19 04.9
Mirfak	308 32.7	N 49 56.2	Rigel Kentaurus	139 42.0	S 60 55.1
Aldebaran	290 43.1	N 16 33.1	Zubenelgenubi	136 59.4	S 16 07.6
Capella	280 26.3	N 46 01.3	Kocab	137 19.8	N 74 03.9
Rigel	281 06.7	S 08 10.9	Alphecca	126 06.5	N 26 38.5
Bellatrix	278 26.1	N 06 22.0	Antares	112 19.9	S 26 28.6
Elnath	278 05.7	N 28 37.5	Atria	107 17.1	S 69 03.6
Alnilam	275 40.8	S 01 11.5	Sabik	102 06.6	S 15 45.0
Betelgeuze	270 55.3	N 07 24.5	Shaula	96 14.9	S 37 07.0
Canopus	263 53.4	S 52 42.7	Rasalhague	96 01.7	N 12 32.7
Sirius	258 28.6	S 16 44.5	Etamin	90 44.0	N 51 28.9
Adhara	255 08.0	S 29 00.2	Kaus Australis	83 37.0	S 34 22.3
Castor	246 00.7	N 31 50.5	Vega	80 35.8	N 38 47.9
Procyon	244 53.6	N 05 10.5	Nunki	75 52.0	S 26 16.2
Pollux	243 20.5	N 27 58.5	Albireo	67 06.9	N 28 00.1
Avior	234 15.3	S 59 34.7	Altair	62 03.5	N 08 55.2
Suhail	222 48.1	S 43 31.1	Peacock	53 11.3	S 56 40.0
Miaplacidus	221 37.7	S 69 48.2	Deneb	49 28.4	N 45 21.2
Alphard	217 50.5	S 08 45.1	Enif	33 42.2	N 09 58.2
Regulus	207 37.4	N 11 51.8	Alnair	27 37.5	S 46 51.7
Dubhe	193 44.3	N 61 38.1	Formalhaut	15 18.5	S 29 30.8
Denebola	182 27.8	N 14 27.2	Markab	13 33.3	N 15 19.0

2021 - First Point of Aries / Selected Stars

UT	day 46 of 365			day 47 of 365			day 48 of 365			day 49 of 365			day 50 of 365			UT
	February 15			February 16			February 17			February 18			February 19			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	145	13.1	+02.5	146	12.3	+02.4	147	11.4	+02.5	148	10.6	+02.4	149	09.7	+02.5	00
01	160	15.6	+02.5	161	14.7	+02.5	162	13.9	+02.4	163	13.0	+02.5	164	12.2	+02.4	01
02	175	18.1	+02.4	176	17.2	+02.5	177	16.3	+02.5	178	15.5	+02.4	179	14.6	+02.5	02
03	190	20.5	+02.5	191	19.7	+02.4	192	18.8	+02.5	193	17.9	+02.5	194	17.1	+02.4	03
04	205	23.0	+02.5	206	22.1	+02.5	207	21.3	+02.4	208	20.4	+02.5	209	19.5	+02.5	04
05	220	25.5	+02.4	221	24.6	+02.5	222	23.7	+02.5	223	22.9	+02.4	224	22.0	+02.5	05
06	235	27.9	+02.5	236	27.1	+02.4	237	26.2	+02.5	238	25.3	+02.5	239	24.5	+02.4	06
07	250	30.4	+02.5	251	29.5	+02.5	252	28.7	+02.4	253	27.8	+02.5	254	26.9	+02.5	07
08	265	32.9	+02.4	266	32.0	+02.5	267	31.1	+02.5	268	30.3	+02.4	269	29.4	+02.5	08
09	280	35.3	+02.5	281	34.5	+02.4	282	33.6	+02.5	283	32.7	+02.5	284	31.9	+02.4	09
10	295	37.8	+02.4	296	36.9	+02.5	297	36.1	+02.4	298	35.2	+02.5	299	34.3	+02.5	10
11	310	40.2	+02.5	311	39.4	+02.4	312	38.5	+02.5	313	37.7	+02.4	314	36.8	+02.5	11
12	325	42.7	+02.5	326	41.8	+02.5	327	41.0	+02.4	328	40.1	+02.5	329	39.3	+02.4	12
13	340	45.2	+02.4	341	44.3	+02.5	342	43.4	+02.5	343	42.6	+02.4	344	41.7	+02.5	13
14	355	47.6	+02.5	356	46.8	+02.4	357	45.9	+02.5	358	45.0	+02.5	359	44.2	+02.5	14
15	10	50.1	+02.5	11	49.2	+02.5	12	48.4	+02.4	13	47.5	+02.5	14	46.7	+02.4	15
16	25	52.6	+02.4	26	51.7	+02.5	27	50.8	+02.5	28	50.0	+02.4	29	49.1	+02.5	16
17	40	55.0	+02.5	41	54.2	+02.4	42	53.3	+02.5	43	52.4	+02.5	44	51.6	+02.4	17
18	55	57.5	+02.5	56	56.6	+02.5	57	55.8	+02.4	58	54.9	+02.5	59	54.0	+02.5	18
19	70	60.0	+02.4	71	59.1	+02.5	72	58.2	+02.5	73	57.4	+02.4	74	56.5	+02.5	19
20	86	02.4	+02.5	87	01.6	+02.4	88	00.7	+02.5	88	59.8	+02.5	89	59.0	+02.4	20
21	101	04.9	+02.4	102	04.0	+02.5	103	03.2	+02.4	104	02.3	+02.5	105	01.4	+02.5	21
22	116	07.3	+02.5	117	06.5	+02.5	118	05.6	+02.5	119	04.8	+02.4	120	03.9	+02.5	22
23	131	09.8	+02.5	132	09.0	+02.4	133	08.1	+02.5	134	07.2	+02.5	135	06.4	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.4	Gienah	175	46.5	S 17	39.5
Ankaa	353	10.7	S 42	11.7	Acrux	173	03.0	S 63	12.7
Schedir	349	35.0	N 56	39.2	Gacrux	171	54.7	S 57	13.6
Diphda	348	50.8	S 17	52.5	Alioth	166	15.6	N 55	50.5
Achernar	335	23.0	S 57	08.2	Spica	158	25.4	S 11	16.2
Hamal	327	54.9	N 23	33.7	Alkaid	152	54.3	N 49	12.3
Polaris	315	34.3	N 89	21.4	Hadar	148	40.1	S 60	28.2
Acamar	315	14.3	S 40	13.6	Menkent	148	00.9	S 36	28.0
Menkar	314	09.5	N 04	10.2	Arcturus	145	50.3	N 19	04.9
Mirfak	308	32.8	N 49	56.2	Rigel Kentaurus	139	41.9	S 60	55.2
Aldebaran	290	43.2	N 16	33.1	Zubenelgenubi	136	59.4	S 16	07.6
Capella	280	26.4	N 46	01.3	Kocab	137	19.6	N 74	03.9
Rigel	281	06.8	S 08	10.9	Alphecca	126	06.5	N 26	38.5
Bellatrix	278	26.1	N 06	22.0	Antares	112	19.9	S 26	28.6
Elnath	278	05.7	N 28	37.5	Atria	107	17.0	S 69	03.6
Alnilam	275	40.8	S 01	11.5	Sabik	102	06.5	S 15	45.0
Betelgeuze	270	55.3	N 07	24.5	Shaula	96	14.8	S 37	07.0
Canopus	263	53.4	S 52	42.7	Rasalhague	96	01.7	N 12	32.6
Sirius	258	28.6	S 16	44.5	Etamin	90	43.9	N 51	28.9
Adhara	255	08.0	S 29	00.2	Kaus Australis	83	37.0	S 34	22.3
Castor	246	00.7	N 31	50.5	Vega	80	35.7	N 38	47.9
Procyon	244	53.6	N 05	10.5	Nunki	75	52.0	S 26	16.2
Pollux	243	20.5	N 27	58.5	Albireo	67	06.9	N 28	00.1
Avior	234	15.3	S 59	34.7	Altair	62	03.5	N 08	55.2
Suhail	222	48.1	S 43	31.1	Peacock	53	11.3	S 56	40.0
Miaplacidus	221	37.7	S 69	48.3	Deneb	49	28.4	N 45	21.2
Alphard	217	50.5	S 08	45.1	Enif	33	42.2	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.5	S 46	51.6
Dubhe	193	44.3	N 61	38.1	Formalhaut	15	18.5	S 29	30.8
Denebola	182	27.8	N 14	27.2	Markab	13	33.4	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 51 of 365 February 20		day 52 of 365 February 21		day 53 of 365 February 22		day 54 of 365 February 23		day 55 of 365 February 24		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	150	08.8 +02.5	151	08.0 +02.4	152	07.1 +02.5	153	06.2 +02.5	154	05.4 +02.5	00
01	165	11.3 +02.5	166	10.4 +02.5	167	09.6 +02.4	168	08.7 +02.5	169	07.9 +02.4	01
02	180	13.8 +02.4	181	12.9 +02.5	182	12.0 +02.5	183	11.2 +02.4	184	10.3 +02.5	02
03	195	16.2 +02.5	196	15.4 +02.4	197	14.5 +02.5	198	13.6 +02.5	199	12.8 +02.4	03
04	210	18.7 +02.4	211	17.8 +02.5	212	17.0 +02.4	213	16.1 +02.5	214	15.2 +02.5	04
05	225	21.1 +02.5	226	20.3 +02.5	227	19.4 +02.5	228	18.6 +02.4	229	17.7 +02.5	05
06	240	23.6 +02.5	241	22.8 +02.4	242	21.9 +02.5	243	21.0 +02.5	244	20.2 +02.4	06
07	255	26.1 +02.4	256	25.2 +02.5	257	24.4 +02.4	258	23.5 +02.5	259	22.6 +02.5	07
08	270	28.5 +02.5	271	27.7 +02.4	272	26.8 +02.5	273	26.0 +02.4	274	25.1 +02.5	08
09	285	31.0 +02.5	286	30.1 +02.5	287	29.3 +02.4	288	28.4 +02.5	289	27.6 +02.4	09
10	300	33.5 +02.4	301	32.6 +02.5	302	31.7 +02.5	303	30.9 +02.5	304	30.0 +02.5	10
11	315	35.9 +02.5	316	35.1 +02.4	317	34.2 +02.5	318	33.4 +02.4	319	32.5 +02.5	11
12	330	38.4 +02.5	331	37.5 +02.5	332	36.7 +02.4	333	35.8 +02.5	334	35.0 +02.4	12
13	345	40.9 +02.4	346	40.0 +02.5	347	39.1 +02.5	348	38.3 +02.4	349	37.4 +02.5	13
14	0	43.3 +02.5	1	42.5 +02.4	2	41.6 +02.5	3	40.7 +02.5	4	39.9 +02.4	14
15	15	45.8 +02.5	16	44.9 +02.5	17	44.1 +02.4	18	43.2 +02.5	19	42.3 +02.5	15
16	30	48.3 +02.4	31	47.4 +02.5	32	46.5 +02.5	33	45.7 +02.4	34	44.8 +02.5	16
17	45	50.7 +02.5	46	49.9 +02.4	47	49.0 +02.5	48	48.1 +02.5	49	47.3 +02.4	17
18	60	53.2 +02.4	61	52.3 +02.5	62	51.5 +02.4	63	50.6 +02.5	64	49.7 +02.5	18
19	75	55.6 +02.5	76	54.8 +02.5	77	53.9 +02.5	78	53.1 +02.4	79	52.2 +02.5	19
20	90	58.1 +02.5	91	57.3 +02.4	92	56.4 +02.5	93	55.5 +02.5	94	54.7 +02.4	20
21	106	00.6 +02.4	106	59.7 +02.5	107	58.9 +02.4	108	58.0 +02.5	109	57.1 +02.5	21
22	121	03.0 +02.5	122	02.2 +02.4	123	01.3 +02.5	124	00.5 +02.4	124	59.6 +02.5	22
23	136	05.5 +02.5	137	04.6 +02.5	138	03.8 +02.4	139	02.9 +02.5	140	02.1 +02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 38.3	N 29 12.4	Gienah	175 46.5	S 17 39.5
Ankaa	353 10.8	S 42 11.7	Acrux	173 02.9	S 63 12.7
Schedir	349 35.0	N 56 39.2	Gacrux	171 54.6	S 57 13.6
Diphda	348 50.8	S 17 52.5	Alioth	166 15.5	N 55 50.6
Achernar	335 23.0	S 57 08.1	Spica	158 25.4	S 11 16.2
Hamal	327 54.9	N 23 33.7	Alkaid	152 54.3	N 49 12.3
Polaris	315 36.6	N 89 21.4	Hadar	148 40.1	S 60 28.2
Acamar	315 14.3	S 40 13.6	Menkent	148 00.8	S 36 28.0
Menkar	314 09.5	N 04 10.2	Arcturus	145 50.3	N 19 04.9
Mirfak	308 32.8	N 49 56.2	Rigel Kentaurus	139 41.8	S 60 55.2
Aldebaran	290 43.2	N 16 33.1	Zubenelgenubi	136 59.4	S 16 07.7
Capella	280 26.4	N 46 01.3	Kocab	137 19.5	N 74 03.9
Rigel	281 06.8	S 08 10.9	Alphecca	126 06.4	N 26 38.5
Bellatrix	278 26.1	N 06 22.0	Antares	112 19.9	S 26 28.6
Elnath	278 05.7	N 28 37.5	Atria	107 16.9	S 69 03.6
Alnilam	275 40.8	S 01 11.5	Sabik	102 06.5	S 15 45.0
Betelgeuze	270 55.3	N 07 24.5	Shaula	96 14.8	S 37 07.0
Canopus	263 53.5	S 52 42.7	Rasalhague	96 01.6	N 12 32.6
Sirius	258 28.6	S 16 44.5	Etamin	90 43.9	N 51 28.9
Adhara	255 08.1	S 29 00.3	Kaus Australis	83 36.9	S 34 22.3
Castor	246 00.7	N 31 50.5	Vega	80 35.7	N 38 47.9
Procyon	244 53.7	N 05 10.5	Nunki	75 51.9	S 26 16.2
Pollux	243 20.5	N 27 58.5	Albireo	67 06.9	N 28 00.0
Avior	234 15.4	S 59 34.8	Altair	62 03.5	N 08 55.2
Suhail	222 48.1	S 43 31.1	Peacock	53 11.3	S 56 40.0
Miaplacidus	221 37.7	S 69 48.3	Deneb	49 28.3	N 45 21.1
Alphard	217 50.5	S 08 45.1	Enif	33 42.2	N 09 58.1
Regulus	207 37.4	N 11 51.8	Alnair	27 37.4	S 46 51.6
Dubhe	193 44.2	N 61 38.2	Formalhaut	15 18.5	S 29 30.8
Denebola	182 27.7	N 14 27.2	Markab	13 33.4	N 15 19.0

2021 - First Point of Aries / Selected Stars

UT	day 56 of 365 February 25		day 57 of 365 February 26		day 58 of 365 February 27		day 59 of 365 February 28		day 60 of 365 March 1		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	155 04.5	+02.5	156 03.7	+02.4	157 02.8	+02.5	158 01.9	+02.5	159 01.1	+02.4	00
01	170 07.0	+02.5	171 06.1	+02.5	172 05.3	+02.4	173 04.4	+02.5	174 03.5	+02.5	01
02	185 09.5	+02.4	186 08.6	+02.5	187 07.7	+02.5	188 06.9	+02.4	189 06.0	+02.5	02
03	200 11.9	+02.5	201 11.1	+02.4	202 10.2	+02.5	203 09.3	+02.5	204 08.5	+02.4	03
04	215 14.4	+02.4	216 13.5	+02.5	217 12.7	+02.4	218 11.8	+02.5	219 10.9	+02.5	04
05	230 16.8	+02.5	231 16.0	+02.5	232 15.1	+02.5	233 14.3	+02.4	234 13.4	+02.5	05
06	245 19.3	+02.5	246 18.5	+02.4	247 17.6	+02.5	248 16.7	+02.5	249 15.9	+02.4	06
07	260 21.8	+02.4	261 20.9	+02.5	262 20.1	+02.4	263 19.2	+02.5	264 18.3	+02.5	07
08	275 24.2	+02.5	276 23.4	+02.4	277 22.5	+02.5	278 21.7	+02.4	279 20.8	+02.5	08
09	290 26.7	+02.5	291 25.8	+02.5	292 25.0	+02.4	293 24.1	+02.5	294 23.3	+02.4	09
10	305 29.2	+02.4	306 28.3	+02.5	307 27.4	+02.5	308 26.6	+02.4	309 25.7	+02.5	10
11	320 31.6	+02.5	321 30.8	+02.4	322 29.9	+02.5	323 29.0	+02.5	324 28.2	+02.4	11
12	335 34.1	+02.5	336 33.2	+02.5	337 32.4	+02.4	338 31.5	+02.5	339 30.6	+02.5	12
13	350 36.6	+02.4	351 35.7	+02.5	352 34.8	+02.5	353 34.0	+02.4	354 33.1	+02.5	13
14	5 39.0	+02.5	6 38.2	+02.4	7 37.3	+02.5	8 36.4	+02.5	9 35.6	+02.4	14
15	20 41.5	+02.5	21 40.6	+02.5	22 39.8	+02.4	23 38.9	+02.5	24 38.0	+02.5	15
16	35 44.0	+02.4	36 43.1	+02.5	37 42.2	+02.5	38 41.4	+02.4	39 40.5	+02.5	16
17	50 46.4	+02.5	51 45.6	+02.4	52 44.7	+02.5	53 43.8	+02.5	54 43.0	+02.4	17
18	65 48.9	+02.4	66 48.0	+02.5	67 47.2	+02.4	68 46.3	+02.5	69 45.4	+02.5	18
19	80 51.3	+02.5	81 50.5	+02.4	82 49.6	+02.5	83 48.8	+02.4	84 47.9	+02.5	19
20	95 53.8	+02.5	96 52.9	+02.5	97 52.1	+02.4	98 51.2	+02.5	99 50.4	+02.4	20
21	110 56.3	+02.4	111 55.4	+02.5	112 54.5	+02.5	113 53.7	+02.4	114 52.8	+02.5	21
22	125 58.7	+02.5	126 57.9	+02.4	127 57.0	+02.5	128 56.1	+02.5	129 55.3	+02.5	22
23	141 01.2	+02.5	142 00.3	+02.5	142 59.5	+02.4	143 58.6	+02.5	144 57.8	+02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.3	N 29 12.4	Gienah	175 46.5	S 17 39.5
Ankaa	353 10.8	S 42 11.6	Acrux	173 02.9	S 63 12.8
Schedir	349 35.0	N 56 39.2	Gacrux	171 54.6	S 57 13.6
Diphda	348 50.8	S 17 52.5	Alioth	166 15.5	N 55 50.6
Achernar	335 23.1	S 57 08.1	Spica	158 25.4	S 11 16.3
Hamal	327 55.0	N 23 33.7	Alkaid	152 54.2	N 49 12.3
Polaris	315 38.8	N 89 21.4	Hadar	148 40.0	S 60 28.2
Acamar	315 14.3	S 40 13.6	Menkent	148 00.8	S 36 28.0
Menkar	314 09.5	N 04 10.2	Arcturus	145 50.3	N 19 04.9
Mirfak	308 32.8	N 49 56.2	Rigel Kentaurus	139 41.8	S 60 55.2
Aldebaran	290 43.2	N 16 33.1	Zubenelgenubi	136 59.3	S 16 07.7
Capella	280 26.4	N 46 01.3	Kocab	137 19.4	N 74 03.9
Rigel	281 06.8	S 08 10.9	Alphecca	126 06.4	N 26 38.5
Bellatrix	278 26.1	N 06 22.0	Antares	112 19.8	S 26 28.6
Elnath	278 05.7	N 28 37.5	Atria	107 16.8	S 69 03.6
Alnilam	275 40.8	S 01 11.5	Sabik	102 06.5	S 15 45.1
Betelgeuze	270 55.4	N 07 24.5	Shaula	96 14.7	S 37 07.0
Canopus	263 53.5	S 52 42.7	Rasalhague	96 01.6	N 12 32.6
Sirius	258 28.6	S 16 44.5	Etamin	90 43.9	N 51 28.9
Adhara	255 08.1	S 29 00.3	Kaus Australis	83 36.9	S 34 22.3
Castor	246 00.7	N 31 50.5	Vega	80 35.6	N 38 47.8
Procyon	244 53.7	N 05 10.5	Nunki	75 51.9	S 26 16.2
Pollux	243 20.5	N 27 58.5	Albireo	67 06.8	N 28 00.0
Avior	234 15.4	S 59 34.8	Altair	62 03.4	N 08 55.2
Suhail	222 48.1	S 43 31.2	Peacock	53 11.2	S 56 39.9
Miaplacidus	221 37.7	S 69 48.3	Deneb	49 28.3	N 45 21.1
Alphard	217 50.5	S 08 45.1	Enif	33 42.2	N 09 58.1
Regulus	207 37.4	N 11 51.8	Alnair	27 37.4	S 46 51.6
Dubhe	193 44.2	N 61 38.2	Formalhaut	15 18.5	S 29 30.8
Denebola	182 27.7	N 14 27.2	Markab	13 33.3	N 15 19.0

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UT	day 61 of 365		day 62 of 365		day 63 of 365		day 64 of 365		day 65 of 365		UT					
	March 2		March 3		March 4		March 5		March 6							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	160	00.2	+02.5	160	59.4	+02.4	161	58.5	+02.5	162	57.6	+02.5	163	56.8	+02.4	00
01	175	02.7	+02.4	176	01.8	+02.5	177	01.0	+02.4	178	00.1	+02.5	178	59.2	+02.5	01
02	190	05.1	+02.5	191	04.3	+02.4	192	03.4	+02.5	193	02.6	+02.4	194	01.7	+02.5	02
03	205	07.6	+02.5	206	06.7	+02.5	207	05.9	+02.4	208	05.0	+02.5	209	04.2	+02.4	03
04	220	10.1	+02.4	221	09.2	+02.5	222	08.3	+02.5	223	07.5	+02.4	224	06.6	+02.5	04
05	235	12.5	+02.5	236	11.7	+02.4	237	10.8	+02.5	238	09.9	+02.5	239	09.1	+02.5	05
06	250	15.0	+02.5	251	14.1	+02.5	252	13.3	+02.4	253	12.4	+02.5	254	11.6	+02.4	06
07	265	17.5	+02.4	266	16.6	+02.5	267	15.7	+02.5	268	14.9	+02.4	269	14.0	+02.5	07
08	280	19.9	+02.5	281	19.1	+02.4	282	18.2	+02.5	283	17.3	+02.5	284	16.5	+02.4	08
09	295	22.4	+02.5	296	21.5	+02.5	297	20.7	+02.4	298	19.8	+02.5	299	18.9	+02.5	09
10	310	24.9	+02.4	311	24.0	+02.5	312	23.1	+02.5	313	22.3	+02.4	314	21.4	+02.5	10
11	325	27.3	+02.5	326	26.5	+02.4	327	25.6	+02.5	328	24.7	+02.5	329	23.9	+02.4	11
12	340	29.8	+02.4	341	28.9	+02.5	342	28.1	+02.4	343	27.2	+02.5	344	26.3	+02.5	12
13	355	32.2	+02.5	356	31.4	+02.4	357	30.5	+02.5	358	29.7	+02.4	359	28.8	+02.5	13
14	10	34.7	+02.5	11	33.8	+02.5	12	33.0	+02.5	13	32.1	+02.5	14	31.3	+02.4	14
15	25	37.2	+02.4	26	36.3	+02.5	27	35.5	+02.4	28	34.6	+02.5	29	33.7	+02.5	15
16	40	39.6	+02.5	41	38.8	+02.4	42	37.9	+02.5	43	37.1	+02.4	44	36.2	+02.5	16
17	55	42.1	+02.5	56	41.2	+02.5	57	40.4	+02.4	58	39.5	+02.5	59	38.7	+02.4	17
18	70	44.6	+02.4	71	43.7	+02.5	72	42.8	+02.5	73	42.0	+02.4	74	41.1	+02.5	18
19	85	47.0	+02.5	86	46.2	+02.4	87	45.3	+02.5	88	44.4	+02.5	89	43.6	+02.5	19
20	100	49.5	+02.5	101	48.6	+02.5	102	47.8	+02.4	103	46.9	+02.5	104	46.1	+02.4	20
21	115	52.0	+02.4	116	51.1	+02.5	117	50.2	+02.5	118	49.4	+02.4	119	48.5	+02.5	21
22	130	54.4	+02.5	131	53.6	+02.4	132	52.7	+02.5	133	51.8	+02.5	134	51.0	+02.4	22
23	145	56.9	+02.5	146	56.0	+02.5	147	55.2	+02.4	148	54.3	+02.5	149	53.4	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.4	N 29	12.3	Gienah	175	46.4	S 17	39.5
Ankaa	353	10.8	S 42	11.6	Acrux	173	02.8	S 63	12.8
Schedir	349	35.0	N 56	39.2	Gacrux	171	54.6	S 57	13.6
Diphda	348	50.8	S 17	52.5	Alioth	166	15.4	N 55	50.6
Achernar	335	23.1	S 57	08.1	Spica	158	25.3	S 11	16.3
Hamal	327	55.0	N 23	33.7	Alkaid	152	54.2	N 49	12.3
Polaris	315	41.3	N 89	21.4	Hadar	148	40.0	S 60	28.2
Acamar	315	14.3	S 40	13.6	Menkent	148	00.8	S 36	28.0
Menkar	314	09.5	N 04	10.2	Arcturus	145	50.2	N 19	04.9
Mirfak	308	32.9	N 49	56.2	Rigel Kentaurus	139	41.7	S 60	55.2
Aldebaran	290	43.2	N 16	33.1	Zubenelgenubi	136	59.3	S 16	07.7
Capella	280	26.5	N 46	01.3	Kocab	137	19.3	N 74	03.9
Rigel	281	06.8	S 08	10.9	Alphecca	126	06.4	N 26	38.5
Bellatrix	278	26.2	N 06	22.0	Antares	112	19.8	S 26	28.6
Elnath	278	05.8	N 28	37.5	Atria	107	16.7	S 69	03.6
Alnilam	275	40.8	S 01	11.5	Sabik	102	06.4	S 15	45.1
Betelgeuze	270	55.4	N 07	24.5	Shaula	96	14.7	S 37	07.0
Canopus	263	53.6	S 52	42.7	Rasalhague	96	01.6	N 12	32.6
Sirius	258	28.7	S 16	44.5	Etamin	90	43.8	N 51	28.9
Adhara	255	08.1	S 29	00.3	Kaus Australis	83	36.8	S 34	22.3
Castor	246	00.7	N 31	50.5	Vega	80	35.6	N 38	47.8
Procyon	244	53.7	N 05	10.5	Nunki	75	51.8	S 26	16.2
Pollux	243	20.6	N 27	58.5	Albireo	67	06.8	N 28	00.0
Avior	234	15.4	S 59	34.8	Altair	62	03.4	N 08	55.1
Suhail	222	48.1	S 43	31.2	Peacock	53	11.2	S 56	39.9
Miaplacidus	221	37.8	S 69	48.4	Deneb	49	28.3	N 45	21.1
Alphard	217	50.5	S 08	45.1	Enif	33	42.2	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.4	S 46	51.6
Dubhe	193	44.2	N 61	38.2	Formalhaut	15	18.5	S 29	30.8
Denebola	182	27.7	N 14	27.2	Markab	13	33.3	N 15	19.0

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UT	day 66 of 365		day 67 of 365		day 68 of 365		day 69 of 365		day 70 of 365		UT					
	March 7		March 8		March 9		March 10		March 11							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	164	55.9	+02.5	165	55.0	+02.5	166	54.2	+02.5	167	53.3	+02.5	168	52.5	+02.4	00
01	179	58.4	+02.4	180	57.5	+02.5	181	56.7	+02.4	182	55.8	+02.5	183	54.9	+02.5	01
02	195	00.8	+02.5	195	60.0	+02.4	196	59.1	+02.5	197	58.3	+02.4	198	57.4	+02.5	02
03	210	03.3	+02.5	211	02.4	+02.5	212	01.6	+02.4	213	00.7	+02.5	213	59.9	+02.4	03
04	225	05.8	+02.4	226	04.9	+02.5	227	04.0	+02.5	228	03.2	+02.4	229	02.3	+02.5	04
05	240	08.2	+02.5	241	07.4	+02.4	242	06.5	+02.5	243	05.6	+02.5	244	04.8	+02.5	05
06	255	10.7	+02.5	256	09.8	+02.5	257	09.0	+02.4	258	08.1	+02.5	259	07.3	+02.4	06
07	270	13.2	+02.4	271	12.3	+02.5	272	11.4	+02.5	273	10.6	+02.4	274	09.7	+02.5	07
08	285	15.6	+02.5	286	14.8	+02.4	287	13.9	+02.5	288	13.0	+02.5	289	12.2	+02.4	08
09	300	18.1	+02.5	301	17.2	+02.5	302	16.4	+02.4	303	15.5	+02.5	304	14.6	+02.5	09
10	315	20.6	+02.4	316	19.7	+02.5	317	18.8	+02.5	318	18.0	+02.4	319	17.1	+02.5	10
11	330	23.0	+02.5	331	22.2	+02.4	332	21.3	+02.5	333	20.4	+02.5	334	19.6	+02.4	11
12	345	25.5	+02.4	346	24.6	+02.5	347	23.8	+02.4	348	22.9	+02.5	349	22.0	+02.5	12
13	0	27.9	+02.5	1	27.1	+02.4	2	26.2	+02.5	3	25.4	+02.4	4	24.5	+02.5	13
14	15	30.4	+02.5	16	29.5	+02.5	17	28.7	+02.5	18	27.8	+02.5	19	27.0	+02.4	14
15	30	32.9	+02.4	31	32.0	+02.5	32	31.2	+02.4	33	30.3	+02.5	34	29.4	+02.5	15
16	45	35.3	+02.5	46	34.5	+02.4	47	33.6	+02.5	48	32.8	+02.4	49	31.9	+02.5	16
17	60	37.8	+02.5	61	36.9	+02.5	62	36.1	+02.4	63	35.2	+02.5	64	34.4	+02.4	17
18	75	40.3	+02.4	76	39.4	+02.5	77	38.5	+02.5	78	37.7	+02.4	79	36.8	+02.5	18
19	90	42.7	+02.5	91	41.9	+02.4	92	41.0	+02.5	93	40.1	+02.5	94	39.3	+02.4	19
20	105	45.2	+02.5	106	44.3	+02.5	107	43.5	+02.4	108	42.6	+02.5	109	41.7	+02.5	20
21	120	47.7	+02.4	121	46.8	+02.5	122	45.9	+02.5	123	45.1	+02.4	124	44.2	+02.5	21
22	135	50.1	+02.5	136	49.3	+02.4	137	48.4	+02.5	138	47.5	+02.5	139	46.7	+02.4	22
23	150	52.6	+02.4	151	51.7	+02.5	152	50.9	+02.4	153	50.0	+02.5	154	49.1	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.4	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.8	S 42	11.6	Acrux	173	02.8	S 63	12.8
Schedir	349	35.1	N 56	39.1	Gacrux	171	54.5	S 57	13.7
Diphda	348	50.8	S 17	52.5	Alioth	166	15.4	N 55	50.6
Achernar	335	23.1	S 57	08.1	Spica	158	25.3	S 11	16.3
Hamal	327	55.0	N 23	33.7	Alkaid	152	54.1	N 49	12.3
Polaris	315	43.2	N 89	21.4	Hadar	148	39.9	S 60	28.2
Acamar	315	14.4	S 40	13.6	Menkent	148	00.7	S 36	28.0
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.2	N 19	04.9
Mirfak	308	32.9	N 49	56.2	Rigel Kentaurus	139	41.6	S 60	55.2
Aldebaran	290	43.2	N 16	33.0	Zubenelgenubi	136	59.2	S 16	07.7
Capella	280	26.5	N 46	01.3	Kocab	137	19.3	N 74	03.9
Rigel	281	06.9	S 08	10.9	Alphecca	126	06.3	N 26	38.5
Bellatrix	278	26.2	N 06	22.0	Antares	112	19.7	S 26	28.6
Elnath	278	05.8	N 28	37.5	Atria	107	16.6	S 69	03.6
Alnilam	275	40.9	S 01	11.5	Sabik	102	06.4	S 15	45.1
Betelgeuze	270	55.4	N 07	24.5	Shaula	96	14.7	S 37	07.0
Canopus	263	53.6	S 52	42.7	Rasalhague	96	01.5	N 12	32.6
Sirius	258	28.7	S 16	44.5	Etamin	90	43.8	N 51	28.9
Adhara	255	08.1	S 29	00.3	Kaus Australis	83	36.8	S 34	22.3
Castor	246	00.8	N 31	50.5	Vega	80	35.6	N 38	47.8
Procyon	244	53.7	N 05	10.5	Nunki	75	51.8	S 26	16.2
Pollux	243	20.6	N 27	58.5	Albireo	67	06.8	N 27	60.0
Avior	234	15.4	S 59	34.8	Altair	62	03.4	N 08	55.1
Suhail	222	48.2	S 43	31.2	Peacock	53	11.1	S 56	39.9
Miaplacidus	221	37.8	S 69	48.4	Deneb	49	28.3	N 45	21.1
Alphard	217	50.5	S 08	45.1	Enif	33	42.2	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.4	S 46	51.6
Dubhe	193	44.2	N 61	38.2	Formalhaut	15	18.5	S 29	30.7
Denebola	182	27.7	N 14	27.2	Markab	13	33.3	N 15	19.0

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UT	day 71 of 365		day 72 of 365		day 73 of 365		day 74 of 365		day 75 of 365		UT					
	March 12		March 13		March 14		March 15		March 16							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	169	51.6	+02.5	170	50.7	+02.5	171	49.9	+02.4	172	49.0	+02.5	173	48.2	+02.4	00
01	184	54.1	+02.4	185	53.2	+02.5	186	52.3	+02.5	187	51.5	+02.4	188	50.6	+02.5	01
02	199	56.5	+02.5	200	55.7	+02.4	201	54.8	+02.5	202	53.9	+02.5	203	53.1	+02.4	02
03	214	59.0	+02.5	215	58.1	+02.5	216	57.3	+02.4	217	56.4	+02.5	218	55.5	+02.5	03
04	230	01.5	+02.4	231	00.6	+02.5	231	59.7	+02.5	232	58.9	+02.4	233	58.0	+02.5	04
05	245	03.9	+02.5	246	03.1	+02.4	247	02.2	+02.5	248	01.3	+02.5	249	00.5	+02.4	05
06	260	06.4	+02.5	261	05.5	+02.5	262	04.7	+02.4	263	03.8	+02.5	264	02.9	+02.5	06
07	275	08.9	+02.4	276	08.0	+02.5	277	07.1	+02.5	278	06.3	+02.4	279	05.4	+02.5	07
08	290	11.3	+02.5	291	10.5	+02.4	292	09.6	+02.5	293	08.7	+02.5	294	07.9	+02.4	08
09	305	13.8	+02.4	306	12.9	+02.5	307	12.1	+02.4	308	11.2	+02.5	309	10.3	+02.5	09
10	320	16.2	+02.5	321	15.4	+02.4	322	14.5	+02.5	323	13.7	+02.4	324	12.8	+02.5	10
11	335	18.7	+02.5	336	17.8	+02.5	337	17.0	+02.4	338	16.1	+02.5	339	15.3	+02.4	11
12	350	21.2	+02.4	351	20.3	+02.5	352	19.4	+02.5	353	18.6	+02.4	354	17.7	+02.5	12
13	5	23.6	+02.5	6	22.8	+02.4	7	21.9	+02.5	8	21.0	+02.5	9	20.2	+02.4	13
14	20	26.1	+02.5	21	25.2	+02.5	22	24.4	+02.4	23	23.5	+02.5	24	22.6	+02.5	14
15	35	28.6	+02.4	36	27.7	+02.5	37	26.8	+02.5	38	26.0	+02.4	39	25.1	+02.5	15
16	50	31.0	+02.5	51	30.2	+02.4	52	29.3	+02.5	53	28.4	+02.5	54	27.6	+02.4	16
17	65	33.5	+02.5	66	32.6	+02.5	67	31.8	+02.4	68	30.9	+02.5	69	30.0	+02.5	17
18	80	36.0	+02.4	81	35.1	+02.5	82	34.2	+02.5	83	33.4	+02.4	84	32.5	+02.5	18
19	95	38.4	+02.5	96	37.6	+02.4	97	36.7	+02.5	98	35.8	+02.5	99	35.0	+02.4	19
20	110	40.9	+02.4	111	40.0	+02.5	112	39.2	+02.4	113	38.3	+02.5	114	37.4	+02.5	20
21	125	43.3	+02.5	126	42.5	+02.4	127	41.6	+02.5	128	40.8	+02.4	129	39.9	+02.5	21
22	140	45.8	+02.5	141	44.9	+02.5	142	44.1	+02.4	143	43.2	+02.5	144	42.4	+02.4	22
23	155	48.3	+02.4	156	47.4	+02.5	157	46.5	+02.5	158	45.7	+02.5	159	44.8	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.4	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.8	S 42	11.6	Acrux	173	02.8	S 63	12.9
Schedir	349	35.1	N 56	39.1	Gacrux	171	54.5	S 57	13.7
Diphda	348	50.8	S 17	52.5	Alioth	166	15.4	N 55	50.6
Achernar	335	23.1	S 57	08.1	Spica	158	25.3	S 11	16.3
Hamal	327	55.0	N 23	33.7	Alkaid	152	54.1	N 49	12.3
Polaris	315	45.2	N 89	21.4	Hadar	148	39.8	S 60	28.3
Acamar	315	14.4	S 40	13.6	Menkent	148	00.7	S 36	28.1
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.2	N 19	04.9
Mirfak	308	32.9	N 49	56.2	Rigel Kentaurus	139	41.6	S 60	55.3
Aldebaran	290	43.3	N 16	33.0	Zubenelgenubi	136	59.2	S 16	07.7
Capella	280	26.5	N 46	01.3	Kocab	137	19.2	N 74	03.9
Rigel	281	06.9	S 08	10.9	Alphecca	126	06.3	N 26	38.5
Bellatrix	278	26.2	N 06	22.0	Antares	112	19.7	S 26	28.6
Elnath	278	05.8	N 28	37.5	Atria	107	16.5	S 69	03.6
Alnilam	275	40.9	S 01	11.5	Sabik	102	06.3	S 15	45.1
Betelgeuze	270	55.4	N 07	24.5	Shaula	96	14.6	S 37	07.0
Canopus	263	53.6	S 52	42.7	Rasalhague	96	01.5	N 12	32.6
Sirius	258	28.7	S 16	44.5	Etamin	90	43.7	N 51	28.9
Adhara	255	08.1	S 29	00.3	Kaus Australis	83	36.7	S 34	22.3
Castor	246	00.8	N 31	50.6	Vega	80	35.5	N 38	47.8
Procyon	244	53.7	N 05	10.5	Nunki	75	51.8	S 26	16.2
Pollux	243	20.6	N 27	58.5	Albireo	67	06.7	N 27	60.0
Avior	234	15.5	S 59	34.9	Altair	62	03.3	N 08	55.1
Suhail	222	48.2	S 43	31.2	Peacock	53	11.1	S 56	39.9
Miaplacidus	221	37.9	S 69	48.4	Deneb	49	28.2	N 45	21.1
Alphard	217	50.5	S 08	45.1	Enif	33	42.1	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.4	S 46	51.5
Dubhe	193	44.2	N 61	38.2	Formalhaut	15	18.5	S 29	30.7
Denebola	182	27.7	N 14	27.2	Markab	13	33.3	N 15	18.9

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UT	day 76 of 365		day 77 of 365		day 78 of 365		day 79 of 365		day 80 of 365		UT					
	March 17		March 18		March 19		March 20		March 21							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	174	47.3	+02.5	175	46.4	+02.5	176	45.6	+02.4	177	44.7	+02.5	178	43.8	+02.5	00
01	189	49.8	+02.4	190	48.9	+02.5	191	48.0	+02.5	192	47.2	+02.4	193	46.3	+02.5	01
02	204	52.2	+02.5	205	51.4	+02.4	206	50.5	+02.5	207	49.6	+02.5	208	48.8	+02.4	02
03	219	54.7	+02.4	220	53.8	+02.5	221	53.0	+02.4	222	52.1	+02.5	223	51.2	+02.5	03
04	234	57.1	+02.5	235	56.3	+02.4	236	55.4	+02.5	237	54.6	+02.4	238	53.7	+02.5	04
05	249	59.6	+02.5	250	58.7	+02.5	251	57.9	+02.4	252	57.0	+02.5	253	56.2	+02.4	05
06	265	02.1	+02.4	266	01.2	+02.5	267	00.3	+02.5	267	59.5	+02.5	268	58.6	+02.5	06
07	280	04.5	+02.5	281	03.7	+02.4	282	02.8	+02.5	283	02.0	+02.4	284	01.1	+02.5	07
08	295	07.0	+02.5	296	06.1	+02.5	297	05.3	+02.4	298	04.4	+02.5	299	03.6	+02.4	08
09	310	09.5	+02.4	311	08.6	+02.5	312	07.7	+02.5	313	06.9	+02.4	314	06.0	+02.5	09
10	325	11.9	+02.5	326	11.1	+02.4	327	10.2	+02.5	328	09.3	+02.5	329	08.5	+02.4	10
11	340	14.4	+02.5	341	13.5	+02.5	342	12.7	+02.4	343	11.8	+02.5	344	10.9	+02.5	11
12	355	16.9	+02.4	356	16.0	+02.5	357	15.1	+02.5	358	14.3	+02.4	359	13.4	+02.5	12
13	10	19.3	+02.5	11	18.5	+02.4	12	17.6	+02.5	13	16.7	+02.5	14	15.9	+02.4	13
14	25	21.8	+02.4	26	20.9	+02.5	27	20.1	+02.4	28	19.2	+02.5	29	18.3	+02.5	14
15	40	24.2	+02.5	41	23.4	+02.5	42	22.5	+02.5	43	21.7	+02.4	44	20.8	+02.5	15
16	55	26.7	+02.5	56	25.9	+02.4	57	25.0	+02.5	58	24.1	+02.5	59	23.3	+02.4	16
17	70	29.2	+02.4	71	28.3	+02.5	72	27.5	+02.4	73	26.6	+02.5	74	25.7	+02.5	17
18	85	31.6	+02.5	86	30.8	+02.4	87	29.9	+02.5	88	29.1	+02.4	89	28.2	+02.5	18
19	100	34.1	+02.5	101	33.2	+02.5	102	32.4	+02.4	103	31.5	+02.5	104	30.7	+02.4	19
20	115	36.6	+02.4	116	35.7	+02.5	117	34.8	+02.5	118	34.0	+02.4	119	33.1	+02.5	20
21	130	39.0	+02.5	131	38.2	+02.4	132	37.3	+02.5	133	36.4	+02.5	134	35.6	+02.5	21
22	145	41.5	+02.5	146	40.6	+02.5	147	39.8	+02.4	148	38.9	+02.5	149	38.1	+02.4	22
23	160	44.0	+02.4	161	43.1	+02.5	162	42.2	+02.5	163	41.4	+02.4	164	40.5	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.4	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.8	S 42	11.6	Acrux	173	02.8	S 63	12.9
Schedir	349	35.1	N 56	39.1	Gacrux	171	54.5	S 57	13.7
Diphda	348	50.8	S 17	52.5	Alioth	166	15.4	N 55	50.6
Achernar	335	23.2	S 57	08.0	Spica	158	25.3	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	54.1	N 49	12.3
Polaris	315	47.3	N 89	21.4	Hadar	148	39.8	S 60	28.3
Acamar	315	14.4	S 40	13.5	Menkent	148	00.7	S 36	28.1
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.2	N 19	04.9
Mirfak	308	32.9	N 49	56.2	Rigel Kentaurus	139	41.5	S 60	55.3
Aldebaran	290	43.3	N 16	33.0	Zubenelgenubi	136	59.2	S 16	07.7
Capella	280	26.6	N 46	01.3	Kocab	137	19.1	N 74	03.9
Rigel	281	06.9	S 08	10.9	Alphecca	126	06.3	N 26	38.5
Bellatrix	278	26.2	N 06	22.0	Antares	112	19.6	S 26	28.6
Elnath	278	05.8	N 28	37.5	Atria	107	16.5	S 69	03.6
Alnilam	275	40.9	S 01	11.5	Sabik	102	06.3	S 15	45.1
Betelgeuze	270	55.4	N 07	24.5	Shaula	96	14.6	S 37	07.0
Canopus	263	53.7	S 52	42.8	Rasalhague	96	01.5	N 12	32.6
Sirius	258	28.7	S 16	44.5	Etamin	90	43.7	N 51	28.9
Adhara	255	08.2	S 29	00.3	Kaus Australis	83	36.7	S 34	22.3
Castor	246	00.8	N 31	50.6	Vega	80	35.5	N 38	47.8
Procyon	244	53.7	N 05	10.5	Nunki	75	51.7	S 26	16.2
Pollux	243	20.6	N 27	58.5	Albireo	67	06.7	N 27	60.0
Avior	234	15.5	S 59	34.9	Altair	62	03.3	N 08	55.1
Suhail	222	48.2	S 43	31.3	Peacock	53	11.0	S 56	39.9
Miaplacidus	221	37.9	S 69	48.4	Deneb	49	28.2	N 45	21.0
Alphard	217	50.5	S 08	45.1	Enif	33	42.1	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.3	S 46	51.5
Dubhe	193	44.2	N 61	38.3	Formalhaut	15	18.4	S 29	30.7
Denebola	182	27.7	N 14	27.2	Markab	13	33.3	N 15	18.9

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UT	day 81 of 365		day 82 of 365		day 83 of 365		day 84 of 365		day 85 of 365		UT					
	March 22		March 23		March 24		March 25		March 26							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	179	43.0	+02.4	180	42.1	+02.5	181	41.3	+02.4	182	40.4	+02.5	183	39.5	+02.5	00
01	194	45.4	+02.5	195	44.6	+02.4	196	43.7	+02.5	197	42.9	+02.4	198	42.0	+02.5	01
02	209	47.9	+02.5	210	47.0	+02.5	211	46.2	+02.5	212	45.3	+02.5	213	44.5	+02.4	02
03	224	50.4	+02.4	225	49.5	+02.5	226	48.7	+02.4	227	47.8	+02.5	228	46.9	+02.5	03
04	239	52.8	+02.5	240	52.0	+02.4	241	51.1	+02.5	242	50.3	+02.4	243	49.4	+02.5	04
05	254	55.3	+02.5	255	54.4	+02.5	256	53.6	+02.4	257	52.7	+02.5	258	51.9	+02.4	05
06	269	57.8	+02.4	270	56.9	+02.5	271	56.0	+02.5	272	55.2	+02.4	273	54.3	+02.5	06
07	285	00.2	+02.5	285	59.4	+02.4	286	58.5	+02.5	287	57.6	+02.5	288	56.8	+02.4	07
08	300	02.7	+02.5	301	01.8	+02.5	302	01.0	+02.4	303	00.1	+02.5	303	59.2	+02.5	08
09	315	05.2	+02.4	316	04.3	+02.5	317	03.4	+02.5	318	02.6	+02.4	319	01.7	+02.5	09
10	330	07.6	+02.5	331	06.8	+02.4	332	05.9	+02.5	333	05.0	+02.5	334	04.2	+02.4	10
11	345	10.1	+02.5	346	09.2	+02.5	347	08.4	+02.4	348	07.5	+02.5	349	06.6	+02.5	11
12	0	12.6	+02.4	1	11.7	+02.5	2	10.8	+02.5	3	10.0	+02.4	4	09.1	+02.5	12
13	15	15.0	+02.5	16	14.2	+02.4	17	13.3	+02.5	18	12.4	+02.5	19	11.6	+02.4	13
14	30	17.5	+02.4	31	16.6	+02.5	32	15.8	+02.4	33	14.9	+02.5	34	14.0	+02.5	14
15	45	19.9	+02.5	46	19.1	+02.4	47	18.2	+02.5	48	17.4	+02.4	49	16.5	+02.5	15
16	60	22.4	+02.5	61	21.5	+02.5	62	20.7	+02.5	63	19.8	+02.5	64	19.0	+02.4	16
17	75	24.9	+02.4	76	24.0	+02.5	77	23.2	+02.4	78	22.3	+02.5	79	21.4	+02.5	17
18	90	27.3	+02.5	91	26.5	+02.4	92	25.6	+02.5	93	24.8	+02.4	94	23.9	+02.5	18
19	105	29.8	+02.5	106	28.9	+02.5	107	28.1	+02.4	108	27.2	+02.5	109	26.4	+02.4	19
20	120	32.3	+02.4	121	31.4	+02.5	122	30.5	+02.5	123	29.7	+02.4	124	28.8	+02.5	20
21	135	34.7	+02.5	136	33.9	+02.4	137	33.0	+02.5	138	32.1	+02.5	139	31.3	+02.4	21
22	150	37.2	+02.5	151	36.3	+02.5	152	35.5	+02.4	153	34.6	+02.5	154	33.7	+02.5	22
23	165	39.7	+02.4	166	38.8	+02.5	167	37.9	+02.5	168	37.1	+02.4	169	36.2	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.4	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.8	S 42	11.5	Acrux	173	02.7	S 63	12.9
Schedir	349	35.1	N 56	39.1	Gacrux	171	54.5	S 57	13.8
Diphda	348	50.8	S 17	52.5	Alioth	166	15.3	N 55	50.7
Achernar	335	23.2	S 57	08.0	Spica	158	25.2	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	54.0	N 49	12.4
Polaris	315	48.8	N 89	21.4	Hadar	148	39.8	S 60	28.3
Acamar	315	14.4	S 40	13.5	Menkent	148	00.6	S 36	28.1
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.1	N 19	04.9
Mirfak	308	33.0	N 49	56.2	Rigel Kentaurus	139	41.5	S 60	55.3
Aldebaran	290	43.3	N 16	33.0	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.6	N 46	01.3	Kocab	137	19.0	N 74	03.9
Rigel	281	06.9	S 08	10.9	Alphecca	126	06.2	N 26	38.5
Bellatrix	278	26.2	N 06	22.0	Antares	112	19.6	S 26	28.6
Elnath	278	05.9	N 28	37.5	Atria	107	16.4	S 69	03.6
Alnilam	275	40.9	S 01	11.5	Sabik	102	06.3	S 15	45.1
Betelgeuze	270	55.5	N 07	24.5	Shaula	96	14.5	S 37	07.0
Canopus	263	53.7	S 52	42.8	Rasalhague	96	01.4	N 12	32.6
Sirius	258	28.7	S 16	44.5	Etamin	90	43.6	N 51	28.9
Adhara	255	08.2	S 29	00.3	Kaus Australis	83	36.6	S 34	22.3
Castor	246	00.8	N 31	50.6	Vega	80	35.4	N 38	47.8
Procyon	244	53.7	N 05	10.5	Nunki	75	51.7	S 26	16.2
Pollux	243	20.6	N 27	58.5	Albireo	67	06.7	N 27	60.0
Avior	234	15.6	S 59	34.9	Altair	62	03.3	N 08	55.1
Suhail	222	48.2	S 43	31.3	Peacock	53	11.0	S 56	39.8
Miaplacidus	221	38.0	S 69	48.5	Deneb	49	28.2	N 45	21.0
Alphard	217	50.5	S 08	45.2	Enif	33	42.1	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.3	S 46	51.5
Dubhe	193	44.2	N 61	38.3	Formalhaut	15	18.4	S 29	30.7
Denebola	182	27.7	N 14	27.2	Markab	13	33.3	N 15	18.9

2021 - First Point of Aries / Selected Stars

UT	day 86 of 365			day 87 of 365			day 88 of 365			day 89 of 365			day 90 of 365			UT		
	March 27			March 28			March 29			March 30			March 31					
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA				
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
00	184	38.7	+02.4	185	37.8	+02.5	186	36.9	+02.5	187	36.1	+02.4	188	35.2	+02.5	00		
01	199	41.1	+02.5	200	40.3	+02.4	201	39.4	+02.5	202	38.5	+02.5	203	37.7	+02.5	01		
02	214	43.6	+02.5	215	42.7	+02.5	216	41.9	+02.4	217	41.0	+02.5	218	40.2	+02.4	02		
03	229	46.1	+02.4	230	45.2	+02.5	231	44.3	+02.5	232	43.5	+02.4	233	42.6	+02.5	03		
04	244	48.5	+02.5	245	47.7	+02.4	246	46.8	+02.5	247	45.9	+02.5	248	45.1	+02.4	04		
05	259	51.0	+02.5	260	50.1	+02.5	261	49.3	+02.4	262	48.4	+02.5	263	47.5	+02.5	05		
06	274	53.5	+02.4	275	52.6	+02.5	276	51.7	+02.5	277	50.9	+02.4	278	50.0	+02.5	06		
07	289	55.9	+02.5	290	55.1	+02.4	291	54.2	+02.5	292	53.3	+02.5	293	52.5	+02.4	07		
08	304	58.4	+02.5	305	57.5	+02.5	306	56.7	+02.4	307	55.8	+02.5	308	54.9	+02.5	08		
09	320	00.9	+02.4	320	60.0	+02.5	321	59.1	+02.5	322	58.3	+02.4	323	57.4	+02.5	09		
10	335	03.3	+02.5	336	02.5	+02.4	337	01.6	+02.5	338	00.7	+02.5	338	59.9	+02.4	10		
11	350	05.8	+02.4	351	04.9	+02.5	352	04.1	+02.4	353	03.2	+02.5	354	02.3	+02.5	11		
12	5	08.2	+02.5	6	07.4	+02.4	7	06.5	+02.5	8	05.7	+02.4	9	04.8	+02.5	12		
13	20	10.7	+02.5	21	09.8	+02.5	22	09.0	+02.4	23	08.1	+02.5	24	07.3	+02.4	13		
14	35	13.2	+02.4	36	12.3	+02.5	37	11.4	+02.5	38	10.6	+02.4	39	09.7	+02.5	14		
15	50	15.6	+02.5	51	14.8	+02.4	52	13.9	+02.5	53	13.0	+02.5	54	12.2	+02.4	15		
16	65	18.1	+02.5	66	17.2	+02.5	67	16.4	+02.4	68	15.5	+02.5	69	14.6	+02.5	16		
17	80	20.6	+02.4	81	19.7	+02.5	82	18.8	+02.5	83	18.0	+02.4	84	17.1	+02.5	17		
18	95	23.0	+02.5	96	22.2	+02.4	97	21.3	+02.5	98	20.4	+02.5	99	19.6	+02.4	18		
19	110	25.5	+02.5	111	24.6	+02.5	112	23.8	+02.4	113	22.9	+02.5	114	22.0	+02.5	19		
20	125	28.0	+02.4	126	27.1	+02.5	127	26.2	+02.5	128	25.4	+02.4	129	24.5	+02.5	20		
21	140	30.4	+02.5	141	29.6	+02.4	142	28.7	+02.5	143	27.8	+02.5	144	27.0	+02.4	21		
22	155	32.9	+02.4	156	32.0	+02.5	157	31.2	+02.4	158	30.3	+02.5	159	29.4	+02.5	22		
23	170	35.3	+02.5	171	34.5	+02.4	172	33.6	+02.5	173	32.8	+02.4	174	31.9	+02.5	23		

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.8	S 42	11.5	Acrux	173	02.7	S 63	12.9
Schedir	349	35.1	N 56	39.1	Gacrux	171	54.5	S 57	13.8
Diphda	348	50.8	S 17	52.5	Alioth	166	15.3	N 55	50.7
Achernar	335	23.2	S 57	08.0	Spica	158	25.2	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	54.0	N 49	12.4
Polaris	315	50.4	N 89	21.3	Hadar	148	39.7	S 60	28.3
Acamar	315	14.5	S 40	13.5	Menkent	148	00.6	S 36	28.1
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.1	N 19	04.9
Mirfak	308	33.0	N 49	56.2	Rigel Kentaurus	139	41.4	S 60	55.3
Aldebaran	290	43.3	N 16	33.0	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.6	N 46	01.3	Kocab	137	18.9	N 74	03.9
Rigel	281	06.9	S 08	10.9	Alphecca	126	06.2	N 26	38.5
Bellatrix	278	26.3	N 06	22.0	Antares	112	19.6	S 26	28.6
Elnath	278	05.9	N 28	37.5	Atria	107	16.3	S 69	03.6
Alnilam	275	40.9	S 01	11.5	Sabik	102	06.2	S 15	45.1
Betelgeuze	270	55.5	N 07	24.5	Shaula	96	14.5	S 37	07.0
Canopus	263	53.8	S 52	42.8	Rasalhague	96	01.4	N 12	32.6
Sirius	258	28.8	S 16	44.5	Etamin	90	43.5	N 51	28.9
Adhara	255	08.2	S 29	00.3	Kaus Australis	83	36.6	S 34	22.3
Castor	246	00.8	N 31	50.6	Vega	80	35.4	N 38	47.8
Procyon	244	53.8	N 05	10.5	Nunki	75	51.6	S 26	16.2
Pollux	243	20.7	N 27	58.5	Albireo	67	06.6	N 27	60.0
Avior	234	15.6	S 59	34.9	Altair	62	03.2	N 08	55.1
Suhail	222	48.2	S 43	31.3	Peacock	53	10.9	S 56	39.8
Miaplacidus	221	38.0	S 69	48.5	Deneb	49	28.1	N 45	21.0
Alphard	217	50.6	S 08	45.2	Enif	33	42.1	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.3	S 46	51.5
Dubhe	193	44.2	N 61	38.3	Formalhaut	15	18.4	S 29	30.7
Denebola	182	27.6	N 14	27.2	Markab	13	33.3	N 15	18.9

2021 - First Point of Aries / Selected Stars

UT	day 91 of 365		day 92 of 365		day 93 of 365		day 94 of 365		day 95 of 365		UT					
	<i>April 1</i>		<i>April 2</i>		<i>April 3</i>		<i>April 4</i>		<i>April 5</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	189	34.4	+02.4	190	33.5	+02.5	191	32.6	+02.5	192	31.8	+02.4	193	30.9	+02.5	00
01	204	36.8	+02.5	205	36.0	+02.4	206	35.1	+02.5	207	34.2	+02.5	208	33.4	+02.4	01
02	219	39.3	+02.5	220	38.4	+02.5	221	37.6	+02.4	222	36.7	+02.5	223	35.8	+02.5	02
03	234	41.8	+02.4	235	40.9	+02.5	236	40.0	+02.5	237	39.2	+02.4	238	38.3	+02.5	03
04	249	44.2	+02.5	250	43.4	+02.4	251	42.5	+02.5	252	41.6	+02.5	253	40.8	+02.4	04
05	264	46.7	+02.4	265	45.8	+02.5	266	45.0	+02.4	267	44.1	+02.5	268	43.2	+02.5	05
06	279	49.1	+02.5	280	48.3	+02.4	281	47.4	+02.5	282	46.6	+02.4	283	45.7	+02.5	06
07	294	51.6	+02.5	295	50.7	+02.5	296	49.9	+02.5	297	49.0	+02.5	298	48.2	+02.4	07
08	309	54.1	+02.4	310	53.2	+02.5	311	52.4	+02.4	312	51.5	+02.5	313	50.6	+02.5	08
09	324	56.5	+02.5	325	55.7	+02.4	326	54.8	+02.5	327	54.0	+02.4	328	53.1	+02.5	09
10	339	59.0	+02.5	340	58.1	+02.5	341	57.3	+02.4	342	56.4	+02.5	343	55.6	+02.4	10
11	355	01.5	+02.4	356	00.6	+02.5	356	59.7	+02.5	357	58.9	+02.5	358	58.0	+02.5	11
12	10	03.9	+02.5	11	03.1	+02.4	12	02.2	+02.5	13	01.4	+02.4	14	00.5	+02.5	12
13	25	06.4	+02.5	26	05.5	+02.5	27	04.7	+02.4	28	03.8	+02.5	29	03.0	+02.4	13
14	40	08.9	+02.4	41	08.0	+02.5	42	07.1	+02.5	43	06.3	+02.4	44	05.4	+02.5	14
15	55	11.3	+02.5	56	10.5	+02.4	57	09.6	+02.5	58	08.7	+02.5	59	07.9	+02.4	15
16	70	13.8	+02.5	71	12.9	+02.5	72	12.1	+02.4	73	11.2	+02.5	74	10.3	+02.5	16
17	85	16.3	+02.4	86	15.4	+02.5	87	14.5	+02.5	88	13.7	+02.4	89	12.8	+02.5	17
18	100	18.7	+02.5	101	17.9	+02.4	102	17.0	+02.5	103	16.1	+02.5	104	15.3	+02.4	18
19	115	21.2	+02.4	116	20.3	+02.5	117	19.5	+02.4	118	18.6	+02.5	119	17.7	+02.5	19
20	130	23.6	+02.5	131	22.8	+02.4	132	21.9	+02.5	133	21.1	+02.4	134	20.2	+02.5	20
21	145	26.1	+02.5	146	25.2	+02.5	147	24.4	+02.5	148	23.5	+02.5	149	22.7	+02.4	21
22	160	28.6	+02.4	161	27.7	+02.5	162	26.9	+02.4	163	26.0	+02.5	164	25.1	+02.5	22
23	175	31.0	+02.5	176	30.2	+02.4	177	29.3	+02.5	178	28.5	+02.4	179	27.6	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.8	S 42	11.5	Acrux	173	02.7	S 63	13.0
Schedir	349	35.1	N 56	39.0	Gacrux	171	54.5	S 57	13.8
Diphda	348	50.8	S 17	52.5	Alioth	166	15.3	N 55	50.7
Achernar	335	23.2	S 57	08.0	Spica	158	25.2	S 11	16.3
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Acamar	315	14.5	S 40	13.5	Menkent	148	00.6	S 36	28.1
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.1	N 19	04.9
Mirfak	308	33.0	N 49	56.1	Rigel Kentaurus	139	41.4	S 60	55.4
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.7	N 46	01.3	Kocab	137	18.9	N 74	04.0
Rigel	281	07.0	S 08	10.9	Alphecca	126	06.2	N 26	38.5
Bellatrix	278	26.3	N 06	22.0	Antares	112	19.5	S 26	28.6
Elnath	278	05.9	N 28	37.5	Atria	107	16.2	S 69	03.6
Alnilam	275	41.0	S 01	11.5	Sabik	102	06.2	S 15	45.1
Betelgeuze	270	55.5	N 07	24.5	Shaula	96	14.4	S 37	07.0
Canopus	263	53.8	S 52	42.8	Rasalhague	96	01.3	N 12	32.6
Sirius	258	28.8	S 16	44.5	Etamin	90	43.5	N 51	28.9
Adhara	255	08.3	S 29	00.3	Kaus Australis	83	36.6	S 34	22.3
Castor	246	00.9	N 31	50.6	Vega	80	35.4	N 38	47.8
Procyon	244	53.8	N 05	10.5	Nunki	75	51.6	S 26	16.1
Pollux	243	20.7	N 27	58.5	Albireo	67	06.6	N 27	60.0
Avior	234	15.7	S 59	34.9	Altair	62	03.2	N 08	55.1
Suhail	222	48.3	S 43	31.3	Peacock	53	10.9	S 56	39.8
Miaplacidus	221	38.1	S 69	48.5	Deneb	49	28.1	N 45	21.0
Alphard	217	50.6	S 08	45.2	Enif	33	42.0	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.2	S 46	51.4
Dubhe	193	44.2	N 61	38.3	Formalhaut	15	18.4	S 29	30.7
Denebola	182	27.6	N 14	27.2	Markab	13	33.3	N 15	18.9

2021 - First Point of Aries / Selected Stars

UT	day 96 of 365			day 97 of 365			day 98 of 365			day 99 of 365			day 100 of 365			UT
	April 6			April 7			April 8			April 9			April 10			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	194	30.1	+02.4	195	29.2	+02.5	196	28.3	+02.5	197	27.5	+02.4	198	26.6	+02.5	00
01	209	32.5	+02.5	210	31.7	+02.4	211	30.8	+02.5	212	29.9	+02.5	213	29.1	+02.4	01
02	224	35.0	+02.5	225	34.1	+02.5	226	33.3	+02.4	227	32.4	+02.5	228	31.5	+02.5	02
03	239	37.5	+02.4	240	36.6	+02.5	241	35.7	+02.5	242	34.9	+02.4	243	34.0	+02.5	03
04	254	39.9	+02.5	255	39.1	+02.4	256	38.2	+02.5	257	37.3	+02.5	258	36.5	+02.4	04
05	269	42.4	+02.4	270	41.5	+02.5	271	40.7	+02.4	272	39.8	+02.5	273	38.9	+02.5	05
06	284	44.8	+02.5	285	44.0	+02.4	286	43.1	+02.5	287	42.3	+02.4	288	41.4	+02.5	06
07	299	47.3	+02.5	300	46.4	+02.5	301	45.6	+02.4	302	44.7	+02.5	303	43.9	+02.4	07
08	314	49.8	+02.4	315	48.9	+02.5	316	48.0	+02.5	317	47.2	+02.5	318	46.3	+02.5	08
09	329	52.2	+02.5	330	51.4	+02.4	331	50.5	+02.5	332	49.7	+02.4	333	48.8	+02.5	09
10	344	54.7	+02.5	345	53.8	+02.5	346	53.0	+02.4	347	52.1	+02.5	348	51.3	+02.4	10
11	359	57.2	+02.4	0	56.3	+02.5	1	55.4	+02.5	2	54.6	+02.4	3	53.7	+02.5	11
12	14	59.6	+02.5	15	58.8	+02.4	16	57.9	+02.5	17	57.0	+02.5	18	56.2	+02.4	12
13	30	02.1	+02.5	31	01.2	+02.5	32	00.4	+02.4	32	59.5	+02.5	33	58.6	+02.5	13
14	45	04.6	+02.4	46	03.7	+02.5	47	02.8	+02.5	48	02.0	+02.4	49	01.1	+02.5	14
15	60	07.0	+02.5	61	06.2	+02.4	62	05.3	+02.5	63	04.4	+02.5	64	03.6	+02.4	15
16	75	09.5	+02.5	76	08.6	+02.5	77	07.8	+02.4	78	06.9	+02.5	79	06.0	+02.5	16
17	90	12.0	+02.4	91	11.1	+02.5	92	10.2	+02.5	93	09.4	+02.4	94	08.5	+02.5	17
18	105	14.4	+02.5	106	13.6	+02.4	107	12.7	+02.5	108	11.8	+02.5	109	11.0	+02.4	18
19	120	16.9	+02.4	121	16.0	+02.5	122	15.2	+02.4	123	14.3	+02.5	124	13.4	+02.5	19
20	135	19.3	+02.5	136	18.5	+02.4	137	17.6	+02.5	138	16.8	+02.4	139	15.9	+02.5	20
21	150	21.8	+02.5	151	20.9	+02.5	152	20.1	+02.4	153	19.2	+02.5	154	18.4	+02.4	21
22	165	24.3	+02.4	166	23.4	+02.5	167	22.5	+02.5	168	21.7	+02.4	169	20.8	+02.5	22
23	180	26.7	+02.5	181	25.9	+02.4	182	25.0	+02.5	183	24.1	+02.5	184	23.3	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.7	S 42	11.5	Acrux	173	02.7	S 63	13.0
Schedir	349	35.1	N 56	39.0	Gacrux	171	54.4	S 57	13.8
Diphda	348	50.8	S 17	52.4	Alioth	166	15.3	N 55	50.7
Achernar	335	23.2	S 57	07.9	Spica	158	25.2	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	54.0	N 49	12.4
Polaris	315	52.6	N 89	21.3	Hadar	148	39.6	S 60	28.4
Acamar	315	14.5	S 40	13.5	Menkent	148	00.5	S 36	28.1
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.1	N 19	04.9
Mirfak	308	33.0	N 49	56.1	Rigel Kentaurus	139	41.4	S 60	55.4
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.7	N 46	01.3	Kocab	137	18.8	N 74	04.0
Rigel	281	07.0	S 08	10.9	Alphecca	126	06.1	N 26	38.5
Bellatrix	278	26.3	N 06	22.0	Antares	112	19.5	S 26	28.6
Elnath	278	05.9	N 28	37.5	Atria	107	16.1	S 69	03.6
Alnilam	275	41.0	S 01	11.5	Sabik	102	06.2	S 15	45.1
Betelgeuze	270	55.5	N 07	24.5	Shaula	96	14.4	S 37	07.0
Canopus	263	53.9	S 52	42.8	Rasalhague	96	01.3	N 12	32.6
Sirius	258	28.8	S 16	44.5	Etamin	90	43.4	N 51	28.9
Adhara	255	08.3	S 29	00.3	Kaus Australis	83	36.5	S 34	22.3
Castor	246	00.9	N 31	50.6	Vega	80	35.3	N 38	47.8
Procyon	244	53.8	N 05	10.5	Nunki	75	51.6	S 26	16.1
Pollux	243	20.7	N 27	58.5	Albireo	67	06.6	N 27	60.0
Avior	234	15.7	S 59	34.9	Altair	62	03.2	N 08	55.1
Suhail	222	48.3	S 43	31.3	Peacock	53	10.8	S 56	39.8
Miaplacidus	221	38.2	S 69	48.5	Deneb	49	28.0	N 45	21.0
Alphard	217	50.6	S 08	45.2	Enif	33	42.0	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.2	S 46	51.4
Dubhe	193	44.2	N 61	38.4	Formalhaut	15	18.4	S 29	30.6
Denebola	182	27.6	N 14	27.2	Markab	13	33.2	N 15	18.9

2021 - First Point of Aries / Selected Stars

UT	day 101 of 365		day 102 of 365		day 103 of 365		day 104 of 365		day 105 of 365		UT					
	<i>April 11</i>		<i>April 12</i>		<i>April 13</i>		<i>April 14</i>		<i>April 15</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	199	25.7	+02.5	200	24.9	+02.4	201	24.0	+02.5	202	23.2	+02.4	203	22.3	+02.5	00
01	214	28.2	+02.5	215	27.3	+02.5	216	26.5	+02.4	217	25.6	+02.5	218	24.8	+02.4	01
02	229	30.7	+02.4	230	29.8	+02.5	231	28.9	+02.5	232	28.1	+02.5	233	27.2	+02.5	02
03	244	33.1	+02.5	245	32.3	+02.4	246	31.4	+02.5	247	30.6	+02.4	248	29.7	+02.5	03
04	259	35.6	+02.5	260	34.7	+02.5	261	33.9	+02.4	262	33.0	+02.5	263	32.2	+02.4	04
05	274	38.1	+02.4	275	37.2	+02.5	276	36.3	+02.5	277	35.5	+02.4	278	34.6	+02.5	05
06	289	40.5	+02.5	290	39.7	+02.4	291	38.8	+02.5	292	37.9	+02.5	293	37.1	+02.4	06
07	304	43.0	+02.5	305	42.1	+02.5	306	41.3	+02.4	307	40.4	+02.5	308	39.5	+02.5	07
08	319	45.5	+02.4	320	44.6	+02.5	321	43.7	+02.5	322	42.9	+02.4	323	42.0	+02.5	08
09	334	47.9	+02.5	335	47.1	+02.4	336	46.2	+02.5	337	45.3	+02.5	338	44.5	+02.4	09
10	349	50.4	+02.5	350	49.5	+02.5	351	48.7	+02.4	352	47.8	+02.5	353	46.9	+02.5	10
11	4	52.9	+02.4	5	52.0	+02.5	6	51.1	+02.5	7	50.3	+02.4	8	49.4	+02.5	11
12	19	55.3	+02.5	20	54.5	+02.4	21	53.6	+02.5	22	52.7	+02.5	23	51.9	+02.4	12
13	34	57.8	+02.4	35	56.9	+02.5	36	56.1	+02.4	37	55.2	+02.5	38	54.3	+02.5	13
14	50	00.2	+02.5	50	59.4	+02.4	51	58.5	+02.5	52	57.7	+02.4	53	56.8	+02.5	14
15	65	02.7	+02.5	66	01.8	+02.5	67	01.0	+02.4	68	00.1	+02.5	68	59.3	+02.4	15
16	80	05.2	+02.4	81	04.3	+02.5	82	03.4	+02.5	83	02.6	+02.4	84	01.7	+02.5	16
17	95	07.6	+02.5	96	06.8	+02.4	97	05.9	+02.5	98	05.0	+02.5	99	04.2	+02.5	17
18	110	10.1	+02.5	111	09.2	+02.5	112	08.4	+02.4	113	07.5	+02.5	114	06.7	+02.4	18
19	125	12.6	+02.4	126	11.7	+02.5	127	10.8	+02.5	128	10.0	+02.4	129	09.1	+02.5	19
20	140	15.0	+02.5	141	14.2	+02.4	142	13.3	+02.5	143	12.4	+02.5	144	11.6	+02.4	20
21	155	17.5	+02.5	156	16.6	+02.5	157	15.8	+02.4	158	14.9	+02.5	159	14.0	+02.5	21
22	170	20.0	+02.4	171	19.1	+02.5	172	18.2	+02.5	173	17.4	+02.4	174	16.5	+02.5	22
23	185	22.4	+02.5	186	21.6	+02.4	187	20.7	+02.5	188	19.8	+02.5	189	19.0	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.3	Gienah	175	46.4	S 17	39.6
Ankaa	353	10.7	S 42	11.4	Acrux	173	02.7	S 63	13.0
Schedir	349	35.0	N 56	39.0	Gacrux	171	54.4	S 57	13.9
Diphda	348	50.8	S 17	52.4	Alioth	166	15.3	N 55	50.7
Achernar	335	23.2	S 57	07.9	Spica	158	25.2	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	54.0	N 49	12.4
Polaris	315	53.8	N 89	21.3	Hadar	148	39.6	S 60	28.4
Acamar	315	14.5	S 40	13.4	Menkent	148	00.5	S 36	28.2
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.1	N 19	05.0
Mirfak	308	33.0	N 49	56.1	Rigel Kentaurus	139	41.3	S 60	55.4
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	59.0	S 16	07.7
Capella	280	26.7	N 46	01.3	Kocab	137	18.8	N 74	04.0
Rigel	281	07.0	S 08	10.8	Alphecca	126	06.1	N 26	38.5
Bellatrix	278	26.3	N 06	22.0	Antares	112	19.5	S 26	28.7
Elnath	278	05.9	N 28	37.5	Atria	107	16.0	S 69	03.6
Alnilam	275	41.0	S 01	11.5	Sabik	102	06.1	S 15	45.1
Betelgeuze	270	55.5	N 07	24.5	Shaula	96	14.3	S 37	07.0
Canopus	263	53.9	S 52	42.7	Rasalhague	96	01.3	N 12	32.6
Sirius	258	28.8	S 16	44.5	Etamin	90	43.4	N 51	28.9
Adhara	255	08.3	S 29	00.3	Kaus Australis	83	36.5	S 34	22.3
Castor	246	00.9	N 31	50.6	Vega	80	35.3	N 38	47.8
Procyon	244	53.8	N 05	10.5	Nunki	75	51.5	S 26	16.1
Pollux	243	20.7	N 27	58.5	Albireo	67	06.5	N 27	60.0
Avior	234	15.8	S 59	34.9	Altair	62	03.1	N 08	55.1
Suhail	222	48.3	S 43	31.3	Peacock	53	10.7	S 56	39.8
Miaplacidus	221	38.2	S 69	48.5	Deneb	49	28.0	N 45	21.0
Alphard	217	50.6	S 08	45.2	Enif	33	42.0	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.2	S 46	51.4
Dubhe	193	44.2	N 61	38.4	Formalhaut	15	18.3	S 29	30.6
Denebola	182	27.6	N 14	27.2	Markab	13	33.2	N 15	18.9

2021 - First Point of Aries / Selected Stars

UT	day 106 of 365		day 107 of 365		day 108 of 365		day 109 of 365		day 110 of 365		UT					
	April 16		April 17		April 18		April 19		April 20							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	204	21.4	+02.5	205	20.6	+02.4	206	19.7	+02.5	207	18.9	+02.4	208	18.0	+02.5	00
01	219	23.9	+02.5	220	23.0	+02.5	221	22.2	+02.4	222	21.3	+02.5	223	20.5	+02.4	01
02	234	26.4	+02.4	235	25.5	+02.5	236	24.6	+02.5	237	23.8	+02.4	238	22.9	+02.5	02
03	249	28.8	+02.5	250	28.0	+02.4	251	27.1	+02.5	252	26.2	+02.5	253	25.4	+02.5	03
04	264	31.3	+02.5	265	30.4	+02.5	266	29.6	+02.4	267	28.7	+02.5	268	27.9	+02.4	04
05	279	33.8	+02.4	280	32.9	+02.5	281	32.0	+02.5	282	31.2	+02.4	283	30.3	+02.5	05
06	294	36.2	+02.5	295	35.4	+02.4	296	34.5	+02.5	297	33.6	+02.5	298	32.8	+02.4	06
07	309	38.7	+02.4	310	37.8	+02.5	311	37.0	+02.4	312	36.1	+02.5	313	35.2	+02.5	07
08	324	41.1	+02.5	325	40.3	+02.5	326	39.4	+02.5	327	38.6	+02.4	328	37.7	+02.5	08
09	339	43.6	+02.5	340	42.8	+02.4	341	41.9	+02.5	342	41.0	+02.5	343	40.2	+02.4	09
10	354	46.1	+02.4	355	45.2	+02.5	356	44.4	+02.4	357	43.5	+02.5	358	42.6	+02.5	10
11	9	48.5	+02.5	10	47.7	+02.4	11	46.8	+02.5	12	46.0	+02.4	13	45.1	+02.5	11
12	24	51.0	+02.5	25	50.1	+02.5	26	49.3	+02.5	27	48.4	+02.5	28	47.6	+02.4	12
13	39	53.5	+02.4	40	52.6	+02.5	41	51.8	+02.4	42	50.9	+02.5	43	50.0	+02.5	13
14	54	55.9	+02.5	55	55.1	+02.4	56	54.2	+02.5	57	53.4	+02.4	58	52.5	+02.5	14
15	69	58.4	+02.5	70	57.5	+02.5	71	56.7	+02.4	72	55.8	+02.5	73	55.0	+02.4	15
16	85	00.9	+02.4	86	00.0	+02.5	86	59.1	+02.5	87	58.3	+02.4	88	57.4	+02.5	16
17	100	03.3	+02.5	101	02.5	+02.4	102	01.6	+02.5	103	00.7	+02.5	103	59.9	+02.5	17
18	115	05.8	+02.5	116	04.9	+02.5	117	04.1	+02.4	118	03.2	+02.5	119	02.4	+02.4	18
19	130	08.3	+02.4	131	07.4	+02.5	132	06.5	+02.5	133	05.7	+02.4	134	04.8	+02.5	19
20	145	10.7	+02.5	146	09.9	+02.4	147	09.0	+02.5	148	08.1	+02.5	149	07.3	+02.4	20
21	160	13.2	+02.4	161	12.3	+02.5	162	11.5	+02.4	163	10.6	+02.5	164	09.7	+02.5	21
22	175	15.6	+02.5	176	14.8	+02.5	177	13.9	+02.5	178	13.1	+02.4	179	12.2	+02.5	22
23	190	18.1	+02.5	191	17.3	+02.4	192	16.4	+02.5	193	15.5	+02.5	194	14.7	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.3	N 29	12.2	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.7	S 42	11.4	Acrux	173	02.7	S 63	13.1
Schedir	349	35.0	N 56	39.0	Gacrux	171	54.4	S 57	13.9
Diphda	348	50.8	S 17	52.4	Alioth	166	15.3	N 55	50.8
Achernar	335	23.2	S 57	07.9	Spica	158	25.2	S 11	16.3
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Polaris	315	54.4	N 89	21.2	Hadar	148	39.6	S 60	28.4
Acamar	315	14.5	S 40	13.4	Menkent	148	00.5	S 36	28.2
Menkar	314	09.7	N 04	10.2	Arcturus	145	50.0	N 19	05.0
Mirfak	308	33.1	N 49	56.1	Rigel Kentaurus	139	41.3	S 60	55.4
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.7	N 46	01.3	Kocab	137	18.7	N 74	04.0
Rigel	281	07.0	S 08	10.8	Alphecca	126	06.1	N 26	38.5
Bellatrix	278	26.3	N 06	22.0	Antares	112	19.4	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.9	S 69	03.7
Alnilam	275	41.0	S 01	11.5	Sabik	102	06.1	S 15	45.1
Betelgeuze	270	55.6	N 07	24.5	Shaula	96	14.3	S 37	07.0
Canopus	263	54.0	S 52	42.7	Rasalhague	96	01.2	N 12	32.6
Sirius	258	28.9	S 16	44.5	Etamin	90	43.4	N 51	28.9
Adhara	255	08.3	S 29	00.3	Kaus Australis	83	36.4	S 34	22.3
Castor	246	00.9	N 31	50.6	Vega	80	35.2	N 38	47.8
Procyon	244	53.9	N 05	10.5	Nunki	75	51.5	S 26	16.1
Pollux	243	20.7	N 27	58.5	Albireo	67	06.5	N 27	60.0
Avior	234	15.8	S 59	35.0	Altair	62	03.1	N 08	55.2
Suhail	222	48.4	S 43	31.3	Peacock	53	10.7	S 56	39.8
Miaplacidus	221	38.3	S 69	48.5	Deneb	49	27.9	N 45	21.0
Alphard	217	50.6	S 08	45.2	Enif	33	42.0	N 09	58.1
Regulus	207	37.4	N 11	51.8	Alnair	27	37.1	S 46	51.4
Dubhe	193	44.3	N 61	38.4	Formalhaut	15	18.3	S 29	30.6
Denebola	182	27.7	N 14	27.3	Markab	13	33.2	N 15	18.9

2021 - First Point of Aries / Selected Stars

UT	day 111 of 365 April 21		day 112 of 365 April 22		day 113 of 365 April 23		day 114 of 365 April 24		day 115 of 365 April 25		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	209	17.1 +02.5	210	16.3 +02.4	211	15.4 +02.5	212	14.5 +02.5	213	13.7 +02.5	00
01	224	19.6 +02.5	225	18.7 +02.5	226	17.9 +02.4	227	17.0 +02.5	228	16.2 +02.4	01
02	239	22.1 +02.4	240	21.2 +02.5	241	20.3 +02.5	242	19.5 +02.4	243	18.6 +02.5	02
03	254	24.5 +02.5	255	23.7 +02.4	256	22.8 +02.5	257	21.9 +02.5	258	21.1 +02.4	03
04	269	27.0 +02.5	270	26.1 +02.5	271	25.3 +02.4	272	24.4 +02.5	273	23.5 +02.5	04
05	284	29.5 +02.4	285	28.6 +02.5	286	27.7 +02.5	287	26.9 +02.4	288	26.0 +02.5	05
06	299	31.9 +02.5	300	31.1 +02.4	301	30.2 +02.5	302	29.3 +02.5	303	28.5 +02.4	06
07	314	34.4 +02.4	315	33.5 +02.5	316	32.7 +02.4	317	31.8 +02.5	318	30.9 +02.5	07
08	329	36.8 +02.5	330	36.0 +02.5	331	35.1 +02.5	332	34.3 +02.4	333	33.4 +02.5	08
09	344	39.3 +02.5	345	38.5 +02.4	346	37.6 +02.5	347	36.7 +02.5	348	35.9 +02.4	09
10	359	41.8 +02.4	0	40.9 +02.5	1	40.1 +02.4	2	39.2 +02.5	3	38.3 +02.5	10
11	14	44.2 +02.5	15	43.4 +02.4	16	42.5 +02.5	17	41.7 +02.4	18	40.8 +02.5	11
12	29	46.7 +02.5	30	45.8 +02.5	31	45.0 +02.4	32	44.1 +02.5	33	43.3 +02.4	12
13	44	49.2 +02.4	45	48.3 +02.5	46	47.4 +02.5	47	46.6 +02.4	48	45.7 +02.5	13
14	59	51.6 +02.5	60	50.8 +02.4	61	49.9 +02.5	62	49.0 +02.5	63	48.2 +02.4	14
15	74	54.1 +02.5	75	53.2 +02.5	76	52.4 +02.4	77	51.5 +02.5	78	50.6 +02.5	15
16	89	56.6 +02.4	90	55.7 +02.5	91	54.8 +02.5	92	54.0 +02.4	93	53.1 +02.5	16
17	104	59.0 +02.5	105	58.2 +02.4	106	57.3 +02.5	107	56.4 +02.5	108	55.6 +02.4	17
18	120	01.5 +02.5	121	00.6 +02.5	121	59.8 +02.4	122	58.9 +02.5	123	58.0 +02.5	18
19	135	04.0 +02.4	136	03.1 +02.5	137	02.2 +02.5	138	01.4 +02.4	139	00.5 +02.5	19
20	150	06.4 +02.5	151	05.6 +02.4	152	04.7 +02.5	153	03.8 +02.5	154	03.0 +02.4	20
21	165	08.9 +02.4	166	08.0 +02.5	167	07.2 +02.4	168	06.3 +02.5	169	05.4 +02.5	21
22	180	11.3 +02.5	181	10.5 +02.4	182	09.6 +02.5	183	08.8 +02.4	184	07.9 +02.5	22
23	195	13.8 +02.5	196	12.9 +02.5	197	12.1 +02.4	198	11.2 +02.5	199	10.4 +02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.3	N 29 12.2	Gienah	175 46.4	S 17 39.7
Ankaa	353 10.7	S 42 11.4	Acrux	173 02.7	S 63 13.1
Schedir	349 35.0	N 56 39.0	Gacrux	171 54.5	S 57 13.9
Diphda	348 50.8	S 17 52.4	Alioth	166 15.3	N 55 50.8
Achernar	335 23.2	S 57 07.8	Spica	158 25.2	S 11 16.3
Hamal	327 55.0	N 23 33.6	Alkaid	152 53.9	N 49 12.5
Polaris	315 54.8	N 89 21.2	Hadar	148 39.6	S 60 28.5
Acamar	315 14.5	S 40 13.4	Menkent	148 00.5	S 36 28.2
Menkar	314 09.6	N 04 10.2	Arcturus	145 50.0	N 19 05.0
Mirfak	308 33.1	N 49 56.1	Rigel Kentaurus	139 41.3	S 60 55.5
Aldebaran	290 43.4	N 16 33.0	Zubenelgenubi	136 59.0	S 16 07.8
Capella	280 26.7	N 46 01.3	Kocab	137 18.7	N 74 04.1
Rigel	281 07.0	S 08 10.8	Alphecca	126 06.1	N 26 38.5
Bellatrix	278 26.4	N 06 22.0	Antares	112 19.4	S 26 28.7
Elnath	278 06.0	N 28 37.5	Atria	107 15.8	S 69 03.7
Alnilam	275 41.0	S 01 11.5	Sabik	102 06.1	S 15 45.1
Betelgeuze	270 55.6	N 07 24.5	Shaula	96 14.2	S 37 07.0
Canopus	263 54.0	S 52 42.7	Rasalhague	96 01.2	N 12 32.6
Sirius	258 28.9	S 16 44.5	Etamin	90 43.3	N 51 28.9
Adhara	255 08.4	S 29 00.3	Kaus Australis	83 36.4	S 34 22.3
Castor	246 01.0	N 31 50.6	Vega	80 35.2	N 38 47.8
Procyon	244 53.9	N 05 10.5	Nunki	75 51.4	S 26 16.1
Pollux	243 20.8	N 27 58.6	Albireo	67 06.4	N 27 60.0
Avior	234 15.9	S 59 35.0	Altair	62 03.1	N 08 55.2
Suhail	222 48.4	S 43 31.3	Peacock	53 10.6	S 56 39.8
Miaplacidus	221 38.4	S 69 48.6	Deneb	49 27.9	N 45 21.0
Alphard	217 50.6	S 08 45.2	Enif	33 41.9	N 09 58.1
Regulus	207 37.4	N 11 51.8	Alnair	27 37.1	S 46 51.4
Dubhe	193 44.3	N 61 38.4	Formalhaut	15 18.3	S 29 30.6
Denebola	182 27.7	N 14 27.3	Markab	13 33.2	N 15 18.9

2021 - First Point of Aries / Selected Stars

UT	day 116 of 365 April 26			day 117 of 365 April 27			day 118 of 365 April 28			day 119 of 365 April 29			day 120 of 365 April 30			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	214	12.8	+02.5	215	12.0	+02.4	216	11.1	+02.5	217	10.2	+02.5	218	09.4	+02.4	00
01	229	15.3	+02.5	230	14.4	+02.5	231	13.6	+02.4	232	12.7	+02.5	233	11.8	+02.5	01
02	244	17.8	+02.4	245	16.9	+02.5	246	16.0	+02.5	247	15.2	+02.4	248	14.3	+02.5	02
03	259	20.2	+02.5	260	19.4	+02.4	261	18.5	+02.5	262	17.6	+02.5	263	16.8	+02.4	03
04	274	22.7	+02.4	275	21.8	+02.5	276	21.0	+02.4	277	20.1	+02.5	278	19.2	+02.5	04
05	289	25.1	+02.5	290	24.3	+02.4	291	23.4	+02.5	292	22.6	+02.4	293	21.7	+02.5	05
06	304	27.6	+02.5	305	26.7	+02.5	306	25.9	+02.4	307	25.0	+02.5	308	24.2	+02.4	06
07	319	30.1	+02.4	320	29.2	+02.5	321	28.3	+02.5	322	27.5	+02.5	323	26.6	+02.5	07
08	334	32.5	+02.5	335	31.7	+02.4	336	30.8	+02.5	337	30.0	+02.4	338	29.1	+02.5	08
09	349	35.0	+02.5	350	34.1	+02.5	351	33.3	+02.4	352	32.4	+02.5	353	31.6	+02.4	09
10	4	37.5	+02.4	5	36.6	+02.5	6	35.7	+02.5	7	34.9	+02.4	8	34.0	+02.5	10
11	19	39.9	+02.5	20	39.1	+02.4	21	38.2	+02.5	22	37.3	+02.5	23	36.5	+02.5	11
12	34	42.4	+02.5	35	41.5	+02.5	36	40.7	+02.4	37	39.8	+02.5	38	39.0	+02.4	12
13	49	44.9	+02.4	50	44.0	+02.5	51	43.1	+02.5	52	42.3	+02.4	53	41.4	+02.5	13
14	64	47.3	+02.5	65	46.5	+02.4	66	45.6	+02.5	67	44.7	+02.5	68	43.9	+02.4	14
15	79	49.8	+02.4	80	48.9	+02.5	81	48.1	+02.4	82	47.2	+02.5	83	46.3	+02.5	15
16	94	52.2	+02.5	95	51.4	+02.5	96	50.5	+02.5	97	49.7	+02.4	98	48.8	+02.5	16
17	109	54.7	+02.5	110	53.9	+02.4	111	53.0	+02.5	112	52.1	+02.5	113	51.3	+02.4	17
18	124	57.2	+02.4	125	56.3	+02.5	126	55.5	+02.4	127	54.6	+02.5	128	53.7	+02.5	18
19	139	59.6	+02.5	140	58.8	+02.4	141	57.9	+02.5	142	57.1	+02.4	143	56.2	+02.5	19
20	155	02.1	+02.5	156	01.2	+02.5	157	00.4	+02.4	157	59.5	+02.5	158	58.7	+02.4	20
21	170	04.6	+02.4	171	03.7	+02.5	172	02.8	+02.5	173	02.0	+02.5	174	01.1	+02.5	21
22	185	07.0	+02.5	186	06.2	+02.4	187	05.3	+02.5	188	04.5	+02.4	189	03.6	+02.5	22
23	200	09.5	+02.5	201	08.6	+02.5	202	07.8	+02.4	203	06.9	+02.5	204	06.1	+02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.2	N 29 12.2	Gienah	175 46.4	S 17 39.7
Ankaa	353 10.7	S 42 11.4	Acrux	173 02.8	S 63 13.1
Schedir	349 35.0	N 56 39.0	Gacrux	171 54.5	S 57 13.9
Diphda	348 50.7	S 17 52.4	Alioth	166 15.3	N 55 50.8
Achernar	335 23.2	S 57 07.8	Spica	158 25.2	S 11 16.3
Hamal	327 55.0	N 23 33.6	Alkaid	152 53.9	N 49 12.5
Polaris	315 55.3	N 89 21.2	Hadar	148 39.6	S 60 28.5
Acamar	315 14.5	S 40 13.4	Menkent	148 00.5	S 36 28.2
Menkar	314 09.6	N 04 10.2	Arcturus	145 50.0	N 19 05.0
Mirfak	308 33.1	N 49 56.1	Rigel Kentaurus	139 41.3	S 60 55.5
Aldebaran	290 43.4	N 16 33.0	Zubenelgenubi	136 59.0	S 16 07.8
Capella	280 26.8	N 46 01.3	Kocab	137 18.7	N 74 04.1
Rigel	281 07.0	S 08 10.8	Alphecca	126 06.0	N 26 38.6
Bellatrix	278 26.4	N 06 22.0	Antares	112 19.4	S 26 28.7
Elnath	278 06.0	N 28 37.5	Atria	107 15.8	S 69 03.7
Alnilam	275 41.0	S 01 11.5	Sabik	102 06.0	S 15 45.1
Betelgeuze	270 55.6	N 07 24.5	Shaula	96 14.2	S 37 07.0
Canopus	263 54.0	S 52 42.7	Rasalhague	96 01.2	N 12 32.6
Sirius	258 28.9	S 16 44.5	Etamin	90 43.3	N 51 28.9
Adhara	255 08.4	S 29 00.3	Kaus Australis	83 36.3	S 34 22.3
Castor	246 01.0	N 31 50.6	Vega	80 35.2	N 38 47.8
Procyon	244 53.9	N 05 10.5	Nunki	75 51.4	S 26 16.1
Pollux	243 20.8	N 27 58.6	Albireo	67 06.4	N 27 60.0
Avior	234 15.9	S 59 35.0	Altair	62 03.0	N 08 55.2
Suhail	222 48.4	S 43 31.3	Peacock	53 10.6	S 56 39.8
Miaplacidus	221 38.4	S 69 48.6	Deneb	49 27.9	N 45 21.0
Alphard	217 50.7	S 08 45.2	Enif	33 41.9	N 09 58.1
Regulus	207 37.5	N 11 51.8	Alnair	27 37.0	S 46 51.3
Dubhe	193 44.3	N 61 38.4	Formalhaut	15 18.2	S 29 30.6
Denebola	182 27.7	N 14 27.3	Markab	13 33.1	N 15 18.9

2021 - First Point of Aries / Selected Stars

UT	day 121 of 365		day 122 of 365		day 123 of 365		day 124 of 365		day 125 of 365		UT					
	May 1		May 2		May 3		May 4		May 5							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	219	08.5	+02.5	220	07.7	+02.4	221	06.8	+02.5	222	05.9	+02.5	223	05.1	+02.4	00
01	234	11.0	+02.4	235	10.1	+02.5	236	09.3	+02.4	237	08.4	+02.5	238	07.5	+02.5	01
02	249	13.4	+02.5	250	12.6	+02.5	251	11.7	+02.5	252	10.9	+02.4	253	10.0	+02.5	02
03	264	15.9	+02.5	265	15.1	+02.4	266	14.2	+02.5	267	13.3	+02.5	268	12.5	+02.4	03
04	279	18.4	+02.4	280	17.5	+02.5	281	16.7	+02.4	282	15.8	+02.5	283	14.9	+02.5	04
05	294	20.8	+02.5	295	20.0	+02.4	296	19.1	+02.5	297	18.3	+02.4	298	17.4	+02.5	05
06	309	23.3	+02.5	310	22.4	+02.5	311	21.6	+02.5	312	20.7	+02.5	313	19.9	+02.4	06
07	324	25.8	+02.4	325	24.9	+02.5	326	24.1	+02.4	327	23.2	+02.5	328	22.3	+02.5	07
08	339	28.2	+02.5	340	27.4	+02.4	341	26.5	+02.5	342	25.7	+02.4	343	24.8	+02.5	08
09	354	30.7	+02.5	355	29.8	+02.5	356	29.0	+02.4	357	28.1	+02.5	358	27.3	+02.4	09
10	9	33.2	+02.4	10	32.3	+02.5	11	31.4	+02.5	12	30.6	+02.4	13	29.7	+02.5	10
11	24	35.6	+02.5	25	34.8	+02.4	26	33.9	+02.5	27	33.0	+02.5	28	32.2	+02.4	11
12	39	38.1	+02.5	40	37.2	+02.5	41	36.4	+02.4	42	35.5	+02.5	43	34.6	+02.5	12
13	54	40.6	+02.4	55	39.7	+02.5	56	38.8	+02.5	57	38.0	+02.4	58	37.1	+02.5	13
14	69	43.0	+02.5	70	42.2	+02.4	71	41.3	+02.5	72	40.4	+02.5	73	39.6	+02.4	14
15	84	45.5	+02.4	85	44.6	+02.5	86	43.8	+02.4	87	42.9	+02.5	88	42.0	+02.5	15
16	99	47.9	+02.5	100	47.1	+02.5	101	46.2	+02.5	102	45.4	+02.4	103	44.5	+02.5	16
17	114	50.4	+02.5	115	49.6	+02.4	116	48.7	+02.5	117	47.8	+02.5	118	47.0	+02.4	17
18	129	52.9	+02.4	130	52.0	+02.5	131	51.2	+02.4	132	50.3	+02.5	133	49.4	+02.5	18
19	144	55.3	+02.5	145	54.5	+02.4	146	53.6	+02.5	147	52.8	+02.4	148	51.9	+02.5	19
20	159	57.8	+02.5	160	56.9	+02.5	161	56.1	+02.4	162	55.2	+02.5	163	54.4	+02.4	20
21	175	00.3	+02.4	175	59.4	+02.5	176	58.5	+02.5	177	57.7	+02.5	178	56.8	+02.5	21
22	190	02.7	+02.5	191	01.9	+02.4	192	01.0	+02.5	193	00.2	+02.4	193	59.3	+02.5	22
23	205	05.2	+02.5	206	04.3	+02.5	207	03.5	+02.4	208	02.6	+02.5	209	01.8	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.2	N 29	12.2	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.6	S 42	11.3	Acrux	173	02.8	S 63	13.1
Schedir	349	34.9	N 56	38.9	Gacrux	171	54.5	S 57	14.0
Diphda	348	50.7	S 17	52.4	Alioth	166	15.3	N 55	50.8
Achernar	335	23.2	S 57	07.8	Spica	158	25.2	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	53.9	N 49	12.5
Polaris	315	55.0	N 89	21.2	Hadar	148	39.6	S 60	28.5
Acamar	315	14.5	S 40	13.4	Menkent	148	00.5	S 36	28.2
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.0	N 19	05.0
Mirfak	308	33.1	N 49	56.1	Rigel Kentaurus	139	41.2	S 60	55.5
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.8	N 46	01.3	Kocab	137	18.7	N 74	04.1
Rigel	281	07.1	S 08	10.8	Alphecca	126	06.0	N 26	38.6
Bellatrix	278	26.4	N 06	22.0	Antares	112	19.3	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.7	S 69	03.7
Alnilam	275	41.1	S 01	11.5	Sabik	102	06.0	S 15	45.1
Betelgeuze	270	55.6	N 07	24.5	Shaula	96	14.2	S 37	07.0
Canopus	263	54.1	S 52	42.7	Rasalhague	96	01.1	N 12	32.7
Sirius	258	28.9	S 16	44.5	Etamin	90	43.2	N 51	28.9
Adhara	255	08.4	S 29	00.3	Kaus Australis	83	36.3	S 34	22.3
Castor	246	01.0	N 31	50.6	Vega	80	35.1	N 38	47.9
Procyon	244	53.9	N 05	10.5	Nunki	75	51.3	S 26	16.1
Pollux	243	20.8	N 27	58.6	Albireo	67	06.4	N 28	00.0
Avior	234	16.0	S 59	35.0	Altair	62	03.0	N 08	55.2
Suhail	222	48.4	S 43	31.3	Peacock	53	10.5	S 56	39.8
Miaplacidus	221	38.5	S 69	48.6	Deneb	49	27.8	N 45	21.0
Alphard	217	50.7	S 08	45.2	Enif	33	41.8	N 09	58.1
Regulus	207	37.5	N 11	51.8	Alnair	27	37.0	S 46	51.3
Dubhe	193	44.4	N 61	38.4	Formalhaut	15	18.2	S 29	30.5
Denebola	182	27.7	N 14	27.3	Markab	13	33.1	N 15	18.9

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UT	day 126 of 365		day 127 of 365		day 128 of 365		day 129 of 365		day 130 of 365		UT					
	May 6		May 7		May 8		May 9		May 10							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	224	04.2	+02.5	225	03.4	+02.4	226	02.5	+02.5	227	01.6	+02.5	228	00.8	+02.4	00
01	239	06.7	+02.4	240	05.8	+02.5	241	05.0	+02.4	242	04.1	+02.5	243	03.2	+02.5	01
02	254	09.1	+02.5	255	08.3	+02.4	256	07.4	+02.5	257	06.6	+02.4	258	05.7	+02.5	02
03	269	11.6	+02.5	270	10.7	+02.5	271	09.9	+02.4	272	09.0	+02.5	273	08.2	+02.4	03
04	284	14.1	+02.4	285	13.2	+02.5	286	12.3	+02.5	287	11.5	+02.5	288	10.6	+02.5	04
05	299	16.5	+02.5	300	15.7	+02.4	301	14.8	+02.5	302	14.0	+02.4	303	13.1	+02.5	05
06	314	19.0	+02.5	315	18.1	+02.5	316	17.3	+02.4	317	16.4	+02.5	318	15.6	+02.4	06
07	329	21.5	+02.4	330	20.6	+02.5	331	19.7	+02.5	332	18.9	+02.4	333	18.0	+02.5	07
08	344	23.9	+02.5	345	23.1	+02.4	346	22.2	+02.5	347	21.3	+02.5	348	20.5	+02.4	08
09	359	26.4	+02.5	0	25.5	+02.5	1	24.7	+02.4	2	23.8	+02.5	3	22.9	+02.5	09
10	14	28.9	+02.4	15	28.0	+02.5	16	27.1	+02.5	17	26.3	+02.4	18	25.4	+02.5	10
11	29	31.3	+02.5	30	30.5	+02.4	31	29.6	+02.5	32	28.7	+02.5	33	27.9	+02.4	11
12	44	33.8	+02.5	45	32.9	+02.5	46	32.1	+02.4	47	31.2	+02.5	48	30.3	+02.5	12
13	59	36.3	+02.4	60	35.4	+02.5	61	34.5	+02.5	62	33.7	+02.4	63	32.8	+02.5	13
14	74	38.7	+02.5	75	37.9	+02.4	76	37.0	+02.5	77	36.1	+02.5	78	35.3	+02.4	14
15	89	41.2	+02.4	90	40.3	+02.5	91	39.5	+02.4	92	38.6	+02.5	93	37.7	+02.5	15
16	104	43.6	+02.5	105	42.8	+02.4	106	41.9	+02.5	107	41.1	+02.4	108	40.2	+02.5	16
17	119	46.1	+02.5	120	45.2	+02.5	121	44.4	+02.4	122	43.5	+02.5	123	42.7	+02.4	17
18	134	48.6	+02.4	135	47.7	+02.5	136	46.8	+02.5	137	46.0	+02.4	138	45.1	+02.5	18
19	149	51.0	+02.5	150	50.2	+02.4	151	49.3	+02.5	152	48.4	+02.5	153	47.6	+02.4	19
20	164	53.5	+02.5	165	52.6	+02.5	166	51.8	+02.4	167	50.9	+02.5	168	50.0	+02.5	20
21	179	56.0	+02.4	180	55.1	+02.5	181	54.2	+02.5	182	53.4	+02.4	183	52.5	+02.5	21
22	194	58.4	+02.5	195	57.6	+02.4	196	56.7	+02.5	197	55.8	+02.5	198	55.0	+02.4	22
23	210	00.9	+02.5	211	00.0	+02.5	211	59.2	+02.4	212	58.3	+02.5	213	57.4	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.2	N 29	12.2	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.6	S 42	11.3	Acrux	173	02.8	S 63	13.1
Schedir	349	34.9	N 56	38.9	Gacrux	171	54.5	S 57	14.0
Diphda	348	50.7	S 17	52.3	Alioth	166	15.3	N 55	50.9
Achernar	335	23.1	S 57	07.7	Spica	158	25.2	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	53.9	N 49	12.5
Polaris	315	54.9	N 89	21.1	Hadar	148	39.6	S 60	28.5
Acamar	315	14.5	S 40	13.3	Menkent	148	00.5	S 36	28.2
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.0	N 19	05.0
Mirfak	308	33.0	N 49	56.1	Rigel Kentaurus	139	41.2	S 60	55.5
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.8	N 46	01.3	Kocab	137	18.7	N 74	04.1
Rigel	281	07.1	S 08	10.8	Alphecca	126	06.0	N 26	38.6
Bellatrix	278	26.4	N 06	22.0	Antares	112	19.3	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.6	S 69	03.7
Alnilam	275	41.1	S 01	11.5	Sabik	102	06.0	S 15	45.1
Betelgeuze	270	55.6	N 07	24.5	Shaula	96	14.1	S 37	07.0
Canopus	263	54.1	S 52	42.7	Rasalhague	96	01.1	N 12	32.7
Sirius	258	28.9	S 16	44.5	Etamin	90	43.2	N 51	29.0
Adhara	255	08.4	S 29	00.3	Kaus Australis	83	36.2	S 34	22.3
Castor	246	01.0	N 31	50.6	Vega	80	35.1	N 38	47.9
Procyon	244	53.9	N 05	10.5	Nunki	75	51.3	S 26	16.1
Pollux	243	20.8	N 27	58.6	Albireo	67	06.3	N 28	00.0
Avior	234	16.0	S 59	35.0	Altair	62	02.9	N 08	55.2
Suhail	222	48.5	S 43	31.3	Peacock	53	10.4	S 56	39.7
Miaplacidus	221	38.6	S 69	48.6	Deneb	49	27.8	N 45	21.0
Alphard	217	50.7	S 08	45.2	Enif	33	41.8	N 09	58.2
Regulus	207	37.5	N 11	51.8	Alnair	27	36.9	S 46	51.3
Dubhe	193	44.4	N 61	38.5	Formalhaut	15	18.2	S 29	30.5
Denebola	182	27.7	N 14	27.3	Markab	13	33.1	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 131 of 365		day 132 of 365		day 133 of 365		day 134 of 365		day 135 of 365		UT					
	May 11		May 12		May 13		May 14		May 15							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	228	59.9	+02.5	229	59.0	+02.5	230	58.2	+02.4	231	57.3	+02.5	232	56.5	+02.4	00
01	244	02.4	+02.4	245	01.5	+02.5	246	00.6	+02.5	246	59.8	+02.5	247	58.9	+02.5	01
02	259	04.8	+02.5	260	04.0	+02.4	261	03.1	+02.5	262	02.3	+02.4	263	01.4	+02.5	02
03	274	07.3	+02.5	275	06.4	+02.5	276	05.6	+02.4	277	04.7	+02.5	278	03.9	+02.4	03
04	289	09.8	+02.4	290	08.9	+02.5	291	08.0	+02.5	292	07.2	+02.4	293	06.3	+02.5	04
05	304	12.2	+02.5	305	11.4	+02.4	306	10.5	+02.5	307	09.6	+02.5	308	08.8	+02.4	05
06	319	14.7	+02.5	320	13.8	+02.5	321	13.0	+02.4	322	12.1	+02.5	323	11.2	+02.5	06
07	334	17.2	+02.4	335	16.3	+02.5	336	15.4	+02.5	337	14.6	+02.4	338	13.7	+02.5	07
08	349	19.6	+02.5	350	18.8	+02.4	351	17.9	+02.5	352	17.0	+02.5	353	16.2	+02.4	08
09	4	22.1	+02.4	5	21.2	+02.5	6	20.4	+02.4	7	19.5	+02.5	8	18.6	+02.5	09
10	19	24.5	+02.5	20	23.7	+02.5	21	22.8	+02.5	22	22.0	+02.4	23	21.1	+02.5	10
11	34	27.0	+02.5	35	26.2	+02.4	36	25.3	+02.5	37	24.4	+02.5	38	23.6	+02.4	11
12	49	29.5	+02.4	50	28.6	+02.5	51	27.8	+02.4	52	26.9	+02.5	53	26.0	+02.5	12
13	64	31.9	+02.5	65	31.1	+02.4	66	30.2	+02.5	67	29.4	+02.4	68	28.5	+02.5	13
14	79	34.4	+02.5	80	33.5	+02.5	81	32.7	+02.4	82	31.8	+02.5	83	31.0	+02.4	14
15	94	36.9	+02.4	95	36.0	+02.5	96	35.1	+02.5	97	34.3	+02.5	98	33.4	+02.5	15
16	109	39.3	+02.5	110	38.5	+02.4	111	37.6	+02.5	112	36.8	+02.4	113	35.9	+02.5	16
17	124	41.8	+02.5	125	40.9	+02.5	126	40.1	+02.4	127	39.2	+02.5	128	38.4	+02.4	17
18	139	44.3	+02.4	140	43.4	+02.5	141	42.5	+02.5	142	41.7	+02.4	143	40.8	+02.5	18
19	154	46.7	+02.5	155	45.9	+02.4	156	45.0	+02.5	157	44.1	+02.5	158	43.3	+02.4	19
20	169	49.2	+02.5	170	48.3	+02.5	171	47.5	+02.4	172	46.6	+02.5	173	45.7	+02.5	20
21	184	51.7	+02.4	185	50.8	+02.5	186	49.9	+02.5	187	49.1	+02.4	188	48.2	+02.5	21
22	199	54.1	+02.5	200	53.3	+02.4	201	52.4	+02.5	202	51.5	+02.5	203	50.7	+02.4	22
23	214	56.6	+02.4	215	55.7	+02.5	216	54.9	+02.4	217	54.0	+02.5	218	53.1	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.1	N 29	12.2	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.6	S 42	11.3	Acrux	173	02.8	S 63	13.2
Schedir	349	34.9	N 56	38.9	Gacrux	171	54.5	S 57	14.0
Diphda	348	50.7	S 17	52.3	Alioth	166	15.4	N 55	50.9
Achernar	335	23.1	S 57	07.7	Spica	158	25.2	S 11	16.3
Hamal	327	55.0	N 23	33.6	Alkaid	152	54.0	N 49	12.6
Polaris	315	54.6	N 89	21.1	Hadar	148	39.6	S 60	28.6
Acamar	315	14.5	S 40	13.3	Menkent	148	00.5	S 36	28.2
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.0	N 19	05.0
Mirfak	308	33.0	N 49	56.0	Rigel Kentaurus	139	41.2	S 60	55.5
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.8	N 46	01.3	Kocab	137	18.7	N 74	04.2
Rigel	281	07.1	S 08	10.8	Alphecca	126	06.0	N 26	38.6
Bellatrix	278	26.4	N 06	22.0	Antares	112	19.3	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.6	S 69	03.8
Alnilam	275	41.1	S 01	11.4	Sabik	102	05.9	S 15	45.1
Betelgeuze	270	55.6	N 07	24.5	Shaula	96	14.1	S 37	07.0
Canopus	263	54.1	S 52	42.7	Rasalhague	96	01.1	N 12	32.7
Sirius	258	28.9	S 16	44.5	Etamin	90	43.2	N 51	29.0
Adhara	255	08.4	S 29	00.3	Kaus Australis	83	36.2	S 34	22.3
Castor	246	01.0	N 31	50.6	Vega	80	35.0	N 38	47.9
Procyon	244	53.9	N 05	10.5	Nunki	75	51.3	S 26	16.1
Pollux	243	20.8	N 27	58.6	Albireo	67	06.3	N 28	00.0
Avior	234	16.1	S 59	35.0	Altair	62	02.9	N 08	55.2
Suhail	222	48.5	S 43	31.3	Peacock	53	10.4	S 56	39.7
Miaplacidus	221	38.7	S 69	48.6	Deneb	49	27.7	N 45	21.0
Alphard	217	50.7	S 08	45.2	Enif	33	41.8	N 09	58.2
Regulus	207	37.5	N 11	51.8	Alnair	27	36.9	S 46	51.3
Dubhe	193	44.4	N 61	38.5	Formalhaut	15	18.1	S 29	30.5
Denebola	182	27.7	N 14	27.3	Markab	13	33.0	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 136 of 365		day 137 of 365		day 138 of 365		day 139 of 365		day 140 of 365		UT					
	May 16		May 17		May 18		May 19		May 20							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	233	55.6	+02.5	234	54.7	+02.5	235	53.9	+02.4	236	53.0	+02.5	237	52.2	+02.4	00
01	248	58.1	+02.4	249	57.2	+02.5	250	56.3	+02.5	251	55.5	+02.5	252	54.6	+02.5	01
02	264	00.5	+02.5	264	59.7	+02.4	265	58.8	+02.5	266	58.0	+02.4	267	57.1	+02.5	02
03	279	03.0	+02.5	280	02.1	+02.5	281	01.3	+02.4	282	00.4	+02.5	282	59.6	+02.4	03
04	294	05.5	+02.4	295	04.6	+02.5	296	03.7	+02.5	297	02.9	+02.4	298	02.0	+02.5	04
05	309	07.9	+02.5	310	07.1	+02.4	311	06.2	+02.5	312	05.3	+02.5	313	04.5	+02.4	05
06	324	10.4	+02.5	325	09.5	+02.5	326	08.7	+02.4	327	07.8	+02.5	328	06.9	+02.5	06
07	339	12.9	+02.4	340	12.0	+02.5	341	11.1	+02.5	342	10.3	+02.4	343	09.4	+02.5	07
08	354	15.3	+02.5	355	14.5	+02.4	356	13.6	+02.5	357	12.7	+02.5	358	11.9	+02.4	08
09	9	17.8	+02.4	10	16.9	+02.5	11	16.1	+02.4	12	15.2	+02.5	13	14.3	+02.5	09
10	24	20.2	+02.5	25	19.4	+02.5	26	18.5	+02.5	27	17.7	+02.4	28	16.8	+02.5	10
11	39	22.7	+02.5	40	21.9	+02.4	41	21.0	+02.5	42	20.1	+02.5	43	19.3	+02.4	11
12	54	25.2	+02.4	55	24.3	+02.5	56	23.5	+02.4	57	22.6	+02.5	58	21.7	+02.5	12
13	69	27.6	+02.5	70	26.8	+02.4	71	25.9	+02.5	72	25.1	+02.4	73	24.2	+02.5	13
14	84	30.1	+02.5	85	29.2	+02.5	86	28.4	+02.4	87	27.5	+02.5	88	26.7	+02.4	14
15	99	32.6	+02.4	100	31.7	+02.5	101	30.8	+02.5	102	30.0	+02.5	103	29.1	+02.5	15
16	114	35.0	+02.5	115	34.2	+02.4	116	33.3	+02.5	117	32.5	+02.4	118	31.6	+02.5	16
17	129	37.5	+02.5	130	36.6	+02.5	131	35.8	+02.4	132	34.9	+02.5	133	34.1	+02.4	17
18	144	40.0	+02.4	145	39.1	+02.5	146	38.2	+02.5	147	37.4	+02.4	148	36.5	+02.5	18
19	159	42.4	+02.5	160	41.6	+02.4	161	40.7	+02.5	162	39.8	+02.5	163	39.0	+02.4	19
20	174	44.9	+02.5	175	44.0	+02.5	176	43.2	+02.4	177	42.3	+02.5	178	41.4	+02.5	20
21	189	47.4	+02.4	190	46.5	+02.5	191	45.6	+02.5	192	44.8	+02.4	193	43.9	+02.5	21
22	204	49.8	+02.5	205	49.0	+02.4	206	48.1	+02.5	207	47.2	+02.5	208	46.4	+02.4	22
23	219	52.3	+02.4	220	51.4	+02.5	221	50.6	+02.4	222	49.7	+02.5	223	48.8	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.1	N 29	12.2	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.5	S 42	11.3	Acrux	173	02.8	S 63	13.2
Schedir	349	34.8	N 56	38.9	Gacrux	171	54.5	S 57	14.0
Diphda	348	50.6	S 17	52.3	Alioth	166	15.4	N 55	50.9
Achernar	335	23.1	S 57	07.7	Spica	158	25.2	S 11	16.3
Hamal	327	54.9	N 23	33.6	Alkaid	152	54.0	N 49	12.6
Polaris	315	53.7	N 89	21.1	Hadar	148	39.6	S 60	28.6
Acamar	315	14.5	S 40	13.3	Menkent	148	00.5	S 36	28.3
Menkar	314	09.6	N 04	10.2	Arcturus	145	50.0	N 19	05.1
Mirfak	308	33.0	N 49	56.0	Rigel Kentaurus	139	41.2	S 60	55.6
Aldebaran	290	43.4	N 16	33.0	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	26.8	N 46	01.3	Kocab	137	18.7	N 74	04.2
Rigel	281	07.1	S 08	10.8	Alphecca	126	06.0	N 26	38.6
Bellatrix	278	26.4	N 06	22.0	Antares	112	19.3	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.5	S 69	03.8
Alnilam	275	41.1	S 01	11.4	Sabik	102	05.9	S 15	45.1
Betelgeuze	270	55.6	N 07	24.5	Shaula	96	14.1	S 37	07.0
Canopus	263	54.2	S 52	42.6	Rasalhague	96	01.1	N 12	32.7
Sirius	258	29.0	S 16	44.5	Etamin	90	43.1	N 51	29.0
Adhara	255	08.5	S 29	00.2	Kaus Australis	83	36.2	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	35.0	N 38	47.9
Procyon	244	53.9	N 05	10.5	Nunki	75	51.2	S 26	16.1
Pollux	243	20.9	N 27	58.6	Albireo	67	06.3	N 28	00.1
Avior	234	16.1	S 59	34.9	Altair	62	02.9	N 08	55.2
Suhail	222	48.5	S 43	31.3	Peacock	53	10.3	S 56	39.7
Miaplacidus	221	38.7	S 69	48.6	Deneb	49	27.7	N 45	21.1
Alphard	217	50.7	S 08	45.2	Enif	33	41.7	N 09	58.2
Regulus	207	37.5	N 11	51.8	Alnair	27	36.8	S 46	51.3
Dubhe	193	44.5	N 61	38.5	Formalhaut	15	18.1	S 29	30.5
Denebola	182	27.7	N 14	27.3	Markab	13	33.0	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 141 of 365		day 142 of 365		day 143 of 365		day 144 of 365		day 145 of 365		UT					
	May 21		May 22		May 23		May 24		May 25							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	238	51.3	+02.5	239	50.4	+02.5	240	49.6	+02.4	241	48.7	+02.5	242	47.9	+02.4	00
01	253	53.8	+02.4	254	52.9	+02.5	255	52.0	+02.5	256	51.2	+02.4	257	50.3	+02.5	01
02	268	56.2	+02.5	269	55.4	+02.4	270	54.5	+02.5	271	53.6	+02.5	272	52.8	+02.4	02
03	283	58.7	+02.5	284	57.8	+02.5	285	57.0	+02.4	286	56.1	+02.5	287	55.2	+02.5	03
04	299	01.2	+02.4	300	00.3	+02.5	300	59.4	+02.5	301	58.6	+02.4	302	57.7	+02.5	04
05	314	03.6	+02.5	315	02.8	+02.4	316	01.9	+02.5	317	01.0	+02.5	318	00.2	+02.4	05
06	329	06.1	+02.4	330	05.2	+02.5	331	04.4	+02.4	332	03.5	+02.5	333	02.6	+02.5	06
07	344	08.5	+02.5	345	07.7	+02.5	346	06.8	+02.5	347	06.0	+02.4	348	05.1	+02.5	07
08	359	11.0	+02.5	0	10.2	+02.4	1	09.3	+02.5	2	08.4	+02.5	3	07.6	+02.4	08
09	14	13.5	+02.4	15	12.6	+02.5	16	11.8	+02.4	17	10.9	+02.5	18	10.0	+02.5	09
10	29	15.9	+02.5	30	15.1	+02.4	31	14.2	+02.5	32	13.4	+02.4	33	12.5	+02.5	10
11	44	18.4	+02.5	45	17.5	+02.5	46	16.7	+02.4	47	15.8	+02.5	48	15.0	+02.4	11
12	59	20.9	+02.4	60	20.0	+02.5	61	19.1	+02.5	62	18.3	+02.4	63	17.4	+02.5	12
13	74	23.3	+02.5	75	22.5	+02.4	76	21.6	+02.5	77	20.7	+02.5	78	19.9	+02.5	13
14	89	25.8	+02.5	90	24.9	+02.5	91	24.1	+02.4	92	23.2	+02.5	93	22.4	+02.4	14
15	104	28.3	+02.4	105	27.4	+02.5	106	26.5	+02.5	107	25.7	+02.4	108	24.8	+02.5	15
16	119	30.7	+02.5	120	29.9	+02.4	121	29.0	+02.5	122	28.1	+02.5	123	27.3	+02.4	16
17	134	33.2	+02.5	135	32.3	+02.5	136	31.5	+02.4	137	30.6	+02.5	138	29.7	+02.5	17
18	149	35.7	+02.4	150	34.8	+02.5	151	33.9	+02.5	152	33.1	+02.4	153	32.2	+02.5	18
19	164	38.1	+02.5	165	37.3	+02.4	166	36.4	+02.5	167	35.5	+02.5	168	34.7	+02.4	19
20	179	40.6	+02.4	180	39.7	+02.5	181	38.9	+02.4	182	38.0	+02.5	183	37.1	+02.5	20
21	194	43.0	+02.5	195	42.2	+02.4	196	41.3	+02.5	197	40.5	+02.4	198	39.6	+02.5	21
22	209	45.5	+02.5	210	44.6	+02.5	211	43.8	+02.5	212	42.9	+02.5	213	42.1	+02.4	22
23	224	48.0	+02.4	225	47.1	+02.5	226	46.3	+02.4	227	45.4	+02.5	228	44.5	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.1	N 29	12.3	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.5	S 42	11.2	Acrux	173	02.9	S 63	13.2
Schedir	349	34.8	N 56	38.9	Gacrux	171	54.5	S 57	14.0
Diphda	348	50.6	S 17	52.3	Alioth	166	15.4	N 55	50.9
Achernar	335	23.1	S 57	07.7	Spica	158	25.2	S 11	16.3
Hamal	327	54.9	N 23	33.6	Alkaid	152	54.0	N 49	12.6
Polaris	315	53.0	N 89	21.1	Hadar	148	39.6	S 60	28.6
Acamar	315	14.5	S 40	13.2	Menkent	148	00.5	S 36	28.3
Menkar	314	09.6	N 04	10.3	Arcturus	145	50.0	N 19	05.1
Mirfak	308	33.0	N 49	56.0	Rigel Kentaurus	139	41.2	S 60	55.6
Aldebaran	290	43.4	N 16	33.1	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	26.8	N 46	01.2	Kocab	137	18.7	N 74	04.2
Rigel	281	07.1	S 08	10.8	Alphecca	126	06.0	N 26	38.7
Bellatrix	278	26.4	N 06	22.0	Antares	112	19.2	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.5	S 69	03.8
Alnilam	275	41.1	S 01	11.4	Sabik	102	05.9	S 15	45.1
Betelgeuze	270	55.6	N 07	24.6	Shaula	96	14.0	S 37	07.0
Canopus	263	54.2	S 52	42.6	Rasalhague	96	01.0	N 12	32.7
Sirius	258	29.0	S 16	44.4	Etamin	90	43.1	N 51	29.0
Adhara	255	08.5	S 29	00.2	Kaus Australis	83	36.1	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	35.0	N 38	47.9
Procyon	244	54.0	N 05	10.5	Nunki	75	51.2	S 26	16.1
Pollux	243	20.9	N 27	58.6	Albireo	67	06.2	N 28	00.1
Avior	234	16.2	S 59	34.9	Altair	62	02.8	N 08	55.2
Suhail	222	48.6	S 43	31.3	Peacock	53	10.2	S 56	39.7
Miaplacidus	221	38.8	S 69	48.6	Deneb	49	27.6	N 45	21.1
Alphard	217	50.7	S 08	45.1	Enif	33	41.7	N 09	58.2
Regulus	207	37.5	N 11	51.8	Alnair	27	36.8	S 46	51.3
Dubhe	193	44.5	N 61	38.5	Formalhaut	15	18.0	S 29	30.5
Denebola	182	27.7	N 14	27.3	Markab	13	33.0	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 146 of 365		day 147 of 365		day 148 of 365		day 149 of 365		day 150 of 365		UT					
	May 26		May 27		May 28		May 29		May 30							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	243	47.0	+02.5	244	46.1	+02.5	245	45.3	+02.4	246	44.4	+02.5	247	43.6	+02.4	00
01	258	49.5	+02.4	259	48.6	+02.5	260	47.7	+02.5	261	46.9	+02.4	262	46.0	+02.5	01
02	273	51.9	+02.5	274	51.1	+02.4	275	50.2	+02.5	276	49.3	+02.5	277	48.5	+02.5	02
03	288	54.4	+02.4	289	53.5	+02.5	290	52.7	+02.4	291	51.8	+02.5	292	51.0	+02.4	03
04	303	56.8	+02.5	304	56.0	+02.5	305	55.1	+02.5	306	54.3	+02.4	307	53.4	+02.5	04
05	318	59.3	+02.5	319	58.5	+02.4	320	57.6	+02.5	321	56.7	+02.5	322	55.9	+02.4	05
06	334	01.8	+02.4	335	00.9	+02.5	336	00.1	+02.4	336	59.2	+02.5	337	58.3	+02.5	06
07	349	04.2	+02.5	350	03.4	+02.4	351	02.5	+02.5	352	01.7	+02.4	353	00.8	+02.5	07
08	4	06.7	+02.5	5	05.8	+02.5	6	05.0	+02.5	7	04.1	+02.5	8	03.3	+02.4	08
09	19	09.2	+02.4	20	08.3	+02.5	21	07.5	+02.4	22	06.6	+02.5	23	05.7	+02.5	09
10	34	11.6	+02.5	35	10.8	+02.4	36	09.9	+02.5	37	09.1	+02.4	38	08.2	+02.5	10
11	49	14.1	+02.5	50	13.2	+02.5	51	12.4	+02.4	52	11.5	+02.5	53	10.7	+02.4	11
12	64	16.6	+02.4	65	15.7	+02.5	66	14.8	+02.5	67	14.0	+02.5	68	13.1	+02.5	12
13	79	19.0	+02.5	80	18.2	+02.4	81	17.3	+02.5	82	16.5	+02.4	83	15.6	+02.5	13
14	94	21.5	+02.5	95	20.6	+02.5	96	19.8	+02.4	97	18.9	+02.5	98	18.1	+02.4	14
15	109	24.0	+02.4	110	23.1	+02.5	111	22.2	+02.5	112	21.4	+02.4	113	20.5	+02.5	15
16	124	26.4	+02.5	125	25.6	+02.4	126	24.7	+02.5	127	23.8	+02.5	128	23.0	+02.4	16
17	139	28.9	+02.4	140	28.0	+02.5	141	27.2	+02.4	142	26.3	+02.5	143	25.4	+02.5	17
18	154	31.3	+02.5	155	30.5	+02.5	156	29.6	+02.5	157	28.8	+02.4	158	27.9	+02.5	18
19	169	33.8	+02.5	170	33.0	+02.4	171	32.1	+02.5	172	31.2	+02.5	173	30.4	+02.4	19
20	184	36.3	+02.4	185	35.4	+02.5	186	34.6	+02.4	187	33.7	+02.5	188	32.8	+02.5	20
21	199	38.7	+02.5	200	37.9	+02.4	201	37.0	+02.5	202	36.2	+02.4	203	35.3	+02.5	21
22	214	41.2	+02.5	215	40.3	+02.5	216	39.5	+02.5	217	38.6	+02.5	218	37.8	+02.4	22
23	229	43.7	+02.4	230	42.8	+02.5	231	42.0	+02.4	232	41.1	+02.5	233	40.2	+02.5	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 38.0	N 29 12.3	Gienah	175 46.4	S 17 39.7
Ankaa	353 10.5	S 42 11.2	Acrux	173 02.9	S 63 13.2
Schedir	349 34.7	N 56 38.9	Gacrux	171 54.6	S 57 14.0
Diphda	348 50.6	S 17 52.3	Alioth	166 15.4	N 55 50.9
Achernar	335 23.0	S 57 07.6	Spica	158 25.2	S 11 16.3
Hamal	327 54.9	N 23 33.6	Alkaid	152 54.0	N 49 12.6
Polaris	315 52.0	N 89 21.0	Hadar	148 39.6	S 60 28.6
Acamar	315 14.5	S 40 13.2	Menkent	148 00.5	S 36 28.3
Menkar	314 09.6	N 04 10.3	Arcturus	145 50.0	N 19 05.1
Mirfak	308 33.0	N 49 56.0	Rigel Kentaurus	139 41.2	S 60 55.6
Aldebaran	290 43.4	N 16 33.1	Zubenelgenubi	136 58.9	S 16 07.8
Capella	280 26.8	N 46 01.2	Kocab	137 18.8	N 74 04.2
Rigel	281 07.1	S 08 10.8	Alphecca	126 06.0	N 26 38.7
Bellatrix	278 26.4	N 06 22.0	Antares	112 19.2	S 26 28.7
Elnath	278 06.0	N 28 37.5	Atria	107 15.4	S 69 03.8
Alnilam	275 41.1	S 01 11.4	Sabik	102 05.9	S 15 45.1
Betelgeuze	270 55.6	N 07 24.6	Shaula	96 14.0	S 37 07.0
Canopus	263 54.2	S 52 42.6	Rasalhague	96 01.0	N 12 32.7
Sirius	258 29.0	S 16 44.4	Etamin	90 43.1	N 51 29.1
Adhara	255 08.5	S 29 00.2	Kaus Australis	83 36.1	S 34 22.3
Castor	246 01.1	N 31 50.6	Vega	80 34.9	N 38 48.0
Procyon	244 54.0	N 05 10.5	Nunki	75 51.2	S 26 16.1
Pollux	243 20.9	N 27 58.6	Albireo	67 06.2	N 28 00.1
Avior	234 16.2	S 59 34.9	Altair	62 02.8	N 08 55.2
Suhail	222 48.6	S 43 31.3	Peacock	53 10.2	S 56 39.7
Miaplacidus	221 38.9	S 69 48.6	Deneb	49 27.6	N 45 21.1
Alphard	217 50.8	S 08 45.1	Enif	33 41.7	N 09 58.2
Regulus	207 37.6	N 11 51.8	Alnair	27 36.7	S 46 51.3
Dubhe	193 44.6	N 61 38.5	Formalhaut	15 18.0	S 29 30.5
Denebola	182 27.7	N 14 27.3	Markab	13 32.9	N 15 19.0

2021 - First Point of Aries / Selected Stars

UT	day 151 of 365		day 152 of 365		day 153 of 365		day 154 of 365		day 155 of 365		UT					
	May 31		June 1		June 2		June 3		June 4							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	248	42.7	+02.5	249	41.8	+02.5	250	41.0	+02.4	251	40.1	+02.5	252	39.3	+02.4	00
01	263	45.2	+02.4	264	44.3	+02.5	265	43.4	+02.5	266	42.6	+02.4	267	41.7	+02.5	01
02	278	47.6	+02.5	279	46.8	+02.4	280	45.9	+02.5	281	45.0	+02.5	282	44.2	+02.4	02
03	293	50.1	+02.5	294	49.2	+02.5	295	48.4	+02.4	296	47.5	+02.5	297	46.6	+02.5	03
04	308	52.6	+02.4	309	51.7	+02.5	310	50.8	+02.5	311	50.0	+02.4	312	49.1	+02.5	04
05	323	55.0	+02.5	324	54.2	+02.4	325	53.3	+02.5	326	52.4	+02.5	327	51.6	+02.4	05
06	338	57.5	+02.4	339	56.6	+02.5	340	55.8	+02.4	341	54.9	+02.5	342	54.0	+02.5	06
07	353	59.9	+02.5	354	59.1	+02.5	355	58.2	+02.5	356	57.4	+02.4	357	56.5	+02.5	07
08	9	02.4	+02.5	10	01.6	+02.4	11	00.7	+02.5	11	59.8	+02.5	12	59.0	+02.4	08
09	24	04.9	+02.4	25	04.0	+02.5	26	03.2	+02.4	27	02.3	+02.5	28	01.4	+02.5	09
10	39	07.3	+02.5	40	06.5	+02.4	41	05.6	+02.5	42	04.8	+02.4	43	03.9	+02.5	10
11	54	09.8	+02.5	55	08.9	+02.5	56	08.1	+02.4	57	07.2	+02.5	58	06.4	+02.4	11
12	69	12.3	+02.4	70	11.4	+02.5	71	10.5	+02.5	72	09.7	+02.4	73	08.8	+02.5	12
13	84	14.7	+02.5	85	13.9	+02.4	86	13.0	+02.5	87	12.1	+02.5	88	11.3	+02.4	13
14	99	17.2	+02.5	100	16.3	+02.5	101	15.5	+02.4	102	14.6	+02.5	103	13.7	+02.5	14
15	114	19.7	+02.4	115	18.8	+02.5	116	17.9	+02.5	117	17.1	+02.4	118	16.2	+02.5	15
16	129	22.1	+02.5	130	21.3	+02.4	131	20.4	+02.5	132	19.5	+02.5	133	18.7	+02.4	16
17	144	24.6	+02.5	145	23.7	+02.5	146	22.9	+02.4	147	22.0	+02.5	148	21.1	+02.5	17
18	159	27.1	+02.4	160	26.2	+02.5	161	25.3	+02.5	162	24.5	+02.4	163	23.6	+02.5	18
19	174	29.5	+02.5	175	28.7	+02.4	176	27.8	+02.5	177	26.9	+02.5	178	26.1	+02.4	19
20	189	32.0	+02.4	190	31.1	+02.5	191	30.3	+02.4	192	29.4	+02.5	193	28.5	+02.5	20
21	204	34.4	+02.5	205	33.6	+02.4	206	32.7	+02.5	207	31.9	+02.4	208	31.0	+02.5	21
22	219	36.9	+02.5	220	36.0	+02.5	221	35.2	+02.5	222	34.3	+02.5	223	33.5	+02.4	22
23	234	39.4	+02.4	235	38.5	+02.5	236	37.7	+02.4	237	36.8	+02.5	238	35.9	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.0	N 29	12.3	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.4	S 42	11.2	Acrux	173	02.9	S 63	13.2
Schedir	349	34.6	N 56	38.9	Gacrux	171	54.6	S 57	14.1
Diphda	348	50.5	S 17	52.2	Alioth	166	15.5	N 55	50.9
Achernar	335	23.0	S 57	07.6	Spica	158	25.2	S 11	16.3
Hamal	327	54.9	N 23	33.6	Alkaid	152	54.0	N 49	12.6
Polaris	315	50.5	N 89	21.0	Hadar	148	39.6	S 60	28.6
Acamar	315	14.4	S 40	13.2	Menkent	148	00.5	S 36	28.3
Menkar	314	09.5	N 04	10.3	Arcturus	145	50.0	N 19	05.1
Mirfak	308	32.9	N 49	56.0	Rigel Kentaurus	139	41.2	S 60	55.6
Aldebaran	290	43.4	N 16	33.1	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	26.8	N 46	01.2	Kocab	137	18.8	N 74	04.3
Rigel	281	07.1	S 08	10.7	Alphecca	126	06.0	N 26	38.7
Bellatrix	278	26.4	N 06	22.0	Antares	112	19.2	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.4	S 69	03.8
Alnilam	275	41.1	S 01	11.4	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.6	N 07	24.6	Shaula	96	14.0	S 37	07.1
Canopus	263	54.2	S 52	42.6	Rasalhague	96	01.0	N 12	32.7
Sirius	258	29.0	S 16	44.4	Etamin	90	43.0	N 51	29.1
Adhara	255	08.5	S 29	00.2	Kaus Australis	83	36.1	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	34.9	N 38	48.0
Procyon	244	54.0	N 05	10.5	Nunki	75	51.1	S 26	16.1
Pollux	243	20.9	N 27	58.6	Albireo	67	06.1	N 28	00.1
Avior	234	16.2	S 59	34.9	Altair	62	02.8	N 08	55.3
Suhail	222	48.6	S 43	31.3	Peacock	53	10.1	S 56	39.7
Miaplacidus	221	39.0	S 69	48.6	Deneb	49	27.5	N 45	21.1
Alphard	217	50.8	S 08	45.1	Enif	33	41.6	N 09	58.2
Regulus	207	37.6	N 11	51.8	Alnair	27	36.7	S 46	51.2
Dubhe	193	44.6	N 61	38.5	Formalhaut	15	17.9	S 29	30.4
Denebola	182	27.7	N 14	27.3	Markab	13	32.9	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 156 of 365		day 157 of 365		day 158 of 365		day 159 of 365		day 160 of 365		UT		
	<i>June 5</i>		<i>June 6</i>		<i>June 7</i>		<i>June 8</i>		<i>June 9</i>				
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA			
	°	'	°	'	°	'	°	'	°	'			
00	253	38.4	+02.5	254	37.5	+02.5	255	36.7	+02.4	256	35.8	+02.5	00
01	268	40.9	+02.4	269	40.0	+02.5	270	39.1	+02.5	271	38.3	+02.4	01
02	283	43.3	+02.5	284	42.5	+02.4	285	41.6	+02.5	286	40.7	+02.5	02
03	298	45.8	+02.4	299	44.9	+02.5	300	44.1	+02.4	301	43.2	+02.5	03
04	313	48.2	+02.5	314	47.4	+02.4	315	46.5	+02.5	316	45.7	+02.4	04
05	328	50.7	+02.5	329	49.8	+02.5	330	49.0	+02.5	331	48.1	+02.5	05
06	343	53.2	+02.4	344	52.3	+02.5	345	51.5	+02.4	346	50.6	+02.5	06
07	358	55.6	+02.5	359	54.8	+02.4	0	53.9	+02.5	1	53.1	+02.4	07
08	13	58.1	+02.5	14	57.2	+02.5	15	56.4	+02.4	16	55.5	+02.5	08
09	29	00.6	+02.4	29	59.7	+02.5	30	58.8	+02.5	31	58.0	+02.4	09
10	44	03.0	+02.5	45	02.2	+02.4	46	01.3	+02.5	47	00.4	+02.5	10
11	59	05.5	+02.5	60	04.6	+02.5	61	03.8	+02.4	62	02.9	+02.5	11
12	74	08.0	+02.4	75	07.1	+02.5	76	06.2	+02.5	77	05.4	+02.4	12
13	89	10.4	+02.5	90	09.6	+02.4	91	08.7	+02.5	92	07.8	+02.5	13
14	104	12.9	+02.5	105	12.0	+02.5	106	11.2	+02.4	107	10.3	+02.5	14
15	119	15.4	+02.4	120	14.5	+02.5	121	13.6	+02.5	122	12.8	+02.4	15
16	134	17.8	+02.5	135	17.0	+02.4	136	16.1	+02.5	137	15.2	+02.5	16
17	149	20.3	+02.4	150	19.4	+02.5	151	18.6	+02.4	152	17.7	+02.5	17
18	164	22.7	+02.5	165	21.9	+02.4	166	21.0	+02.5	167	20.2	+02.4	18
19	179	25.2	+02.5	180	24.3	+02.5	181	23.5	+02.4	182	22.6	+02.5	19
20	194	27.7	+02.4	195	26.8	+02.5	196	25.9	+02.5	197	25.1	+02.5	20
21	209	30.1	+02.5	210	29.3	+02.4	211	28.4	+02.5	212	27.6	+02.4	21
22	224	32.6	+02.5	225	31.7	+02.5	226	30.9	+02.4	227	30.0	+02.5	22
23	239	35.1	+02.4	240	34.2	+02.5	241	33.3	+02.5	242	32.5	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.9	N 29	12.3	Gienah	175	46.4	S 17	39.7
Ankaa	353	10.4	S 42	11.2	Acrux	173	03.0	S 63	13.2
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Acamar	315	14.4	S 40	13.2	Menkent	148	00.5	S 36	28.3
Menkar	314	09.5	N 04	10.3	Arcturus	145	50.0	N 19	05.1
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Rigel	281	07.0	S 08	10.7	Alphecca	126	06.0	N 26	38.7
Bellatrix	278	26.4	N 06	22.0	Antares	112	19.2	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.4	S 69	03.9
Alnilam	275	41.1	S 01	11.4	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.6	N 07	24.6	Shaula	96	13.9	S 37	07.1
Canopus	263	54.2	S 52	42.6	Rasalhague	96	01.0	N 12	32.8
Sirius	258	29.0	S 16	44.4	Etamin	90	43.0	N 51	29.1
Adhara	255	08.5	S 29	00.2	Kaus Australis	83	36.0	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	34.9	N 38	48.0
Procyon	244	54.0	N 05	10.5	Nunki	75	51.1	S 26	16.1
Pollux	243	20.9	N 27	58.6	Albireo	67	06.1	N 28	00.1
Avior	234	16.3	S 59	34.9	Altair	62	02.7	N 08	55.3
Suhail	222	48.6	S 43	31.3	Peacock	53	10.0	S 56	39.7
Miaplacidus	221	39.0	S 69	48.6	Deneb	49	27.5	N 45	21.1
Alphard	217	50.8	S 08	45.1	Enif	33	41.6	N 09	58.2
Regulus	207	37.6	N 11	51.9	Alnair	27	36.6	S 46	51.2
Dubhe	193	44.6	N 61	38.5	Formalhaut	15	17.9	S 29	30.4
Denebola	182	27.7	N 14	27.3	Markab	13	32.8	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 161 of 365		day 162 of 365		day 163 of 365		day 164 of 365		day 165 of 365		UT					
	<i>June 10</i>		<i>June 11</i>		<i>June 12</i>		<i>June 13</i>		<i>June 14</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	258	34.1	+02.5	259	33.2	+02.5	260	32.4	+02.4	261	31.5	+02.5	262	30.6	+02.5	00
01	273	36.6	+02.4	274	35.7	+02.5	275	34.8	+02.5	276	34.0	+02.4	277	33.1	+02.5	01
02	288	39.0	+02.5	289	38.2	+02.4	290	37.3	+02.5	291	36.4	+02.5	292	35.6	+02.4	02
03	303	41.5	+02.4	304	40.6	+02.5	305	39.8	+02.4	306	38.9	+02.5	307	38.0	+02.5	03
04	318	43.9	+02.5	319	43.1	+02.4	320	42.2	+02.5	321	41.4	+02.4	322	40.5	+02.5	04
05	333	46.4	+02.5	334	45.5	+02.5	335	44.7	+02.5	336	43.8	+02.5	337	43.0	+02.4	05
06	348	48.9	+02.4	349	48.0	+02.5	350	47.2	+02.4	351	46.3	+02.5	352	45.4	+02.5	06
07	3	51.3	+02.5	4	50.5	+02.4	5	49.6	+02.5	6	48.8	+02.4	7	47.9	+02.5	07
08	18	53.8	+02.5	19	52.9	+02.5	20	52.1	+02.4	21	51.2	+02.5	22	50.4	+02.4	08
09	33	56.3	+02.4	34	55.4	+02.5	35	54.5	+02.5	36	53.7	+02.5	37	52.8	+02.5	09
10	48	58.7	+02.5	49	57.9	+02.4	50	57.0	+02.5	51	56.2	+02.4	52	55.3	+02.5	10
11	64	01.2	+02.5	65	00.3	+02.5	65	59.5	+02.4	66	58.6	+02.5	67	57.8	+02.4	11
12	79	03.7	+02.4	80	02.8	+02.5	81	01.9	+02.5	82	01.1	+02.4	83	00.2	+02.5	12
13	94	06.1	+02.5	95	05.3	+02.4	96	04.4	+02.5	97	03.5	+02.5	98	02.7	+02.4	13
14	109	08.6	+02.4	110	07.7	+02.5	111	06.9	+02.4	112	06.0	+02.5	113	05.1	+02.5	14
15	124	11.0	+02.5	125	10.2	+02.5	126	09.3	+02.5	127	08.5	+02.4	128	07.6	+02.5	15
16	139	13.5	+02.5	140	12.7	+02.4	141	11.8	+02.5	142	10.9	+02.5	143	10.1	+02.4	16
17	154	16.0	+02.4	155	15.1	+02.5	156	14.3	+02.4	157	13.4	+02.5	158	12.5	+02.5	17
18	169	18.4	+02.5	170	17.6	+02.4	171	16.7	+02.5	172	15.9	+02.4	173	15.0	+02.5	18
19	184	20.9	+02.5	185	20.0	+02.5	186	19.2	+02.5	187	18.3	+02.5	188	17.5	+02.4	19
20	199	23.4	+02.4	200	22.5	+02.5	201	21.7	+02.4	202	20.8	+02.5	203	19.9	+02.5	20
21	214	25.8	+02.5	215	25.0	+02.4	216	24.1	+02.5	217	23.3	+02.4	218	22.4	+02.5	21
22	229	28.3	+02.5	230	27.4	+02.5	231	26.6	+02.4	232	25.7	+02.5	233	24.9	+02.4	22
23	244	30.8	+02.4	245	29.9	+02.5	246	29.0	+02.5	247	28.2	+02.4	248	27.3	+02.5	23

	SHA	Dec		SHA	Dec				
	° ' "	' "		° ' "	' "				
Alpheratz	357	37.9	N 29	12.3	Gienah	175	46.5	S 17	39.7
Ankaa	353	10.3	S 42	11.2	Acrux	173	03.0	S 63	13.2
Schedir	349	34.5	N 56	38.9	Gacrux	171	54.7	S 57	14.1
Diphda	348	50.5	S 17	52.2	Alioth	166	15.5	N 55	51.0
Achernar	335	22.9	S 57	07.6	Spica	158	25.2	S 11	16.3
Hamal	327	54.8	N 23	33.6	Alkaid	152	54.0	N 49	12.7
Polaris	315	47.6	N 89	21.0	Hadar	148	39.6	S 60	28.7
Acamar	315	14.4	S 40	13.1	Menkent	148	00.5	S 36	28.3
Menkar	314	09.5	N 04	10.3	Arcturus	145	50.0	N 19	05.1
Mirfak	308	32.9	N 49	56.0	Rigel Kentaurus	139	41.2	S 60	55.7
Aldebaran	290	43.4	N 16	33.1	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	26.7	N 46	01.2	Kocab	137	18.9	N 74	04.3
Rigel	281	07.0	S 08	10.7	Alphecca	126	06.0	N 26	38.7
Bellatrix	278	26.4	N 06	22.1	Antares	112	19.2	S 26	28.7
Elnath	278	06.0	N 28	37.5	Atria	107	15.3	S 69	03.9
Alnilam	275	41.1	S 01	11.4	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.6	N 07	24.6	Shaula	96	13.9	S 37	07.1
Canopus	263	54.2	S 52	42.5	Rasalhague	96	01.0	N 12	32.8
Sirius	258	29.0	S 16	44.4	Etamin	90	43.0	N 51	29.1
Adhara	255	08.5	S 29	00.2	Kaus Australis	83	36.0	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	34.9	N 38	48.0
Procyon	244	54.0	N 05	10.5	Nunki	75	51.1	S 26	16.1
Pollux	243	20.9	N 27	58.5	Albireo	67	06.1	N 28	00.2
Avior	234	16.3	S 59	34.9	Altair	62	02.7	N 08	55.3
Suhail	222	48.7	S 43	31.3	Peacock	53	10.0	S 56	39.7
Miaplacidus	221	39.1	S 69	48.5	Deneb	49	27.4	N 45	21.2
Alphard	217	50.8	S 08	45.1	Enif	33	41.5	N 09	58.3
Regulus	207	37.6	N 11	51.9	Alnair	27	36.6	S 46	51.2
Dubhe	193	44.7	N 61	38.5	Formalhaut	15	17.9	S 29	30.4
Denebola	182	27.8	N 14	27.3	Markab	13	32.8	N 15	19.0

2021 - First Point of Aries / Selected Stars

UT	day 166 of 365		day 167 of 365		day 168 of 365		day 169 of 365		day 170 of 365		UT					
	June 15		June 16		June 17		June 18		June 19							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	263	29.8	+02.5	264	28.9	+02.5	265	28.1	+02.4	266	27.2	+02.5	267	26.3	+02.5	00
01	278	32.3	+02.4	279	31.4	+02.5	280	30.5	+02.5	281	29.7	+02.4	282	28.8	+02.5	01
02	293	34.7	+02.5	294	33.9	+02.4	295	33.0	+02.5	296	32.1	+02.5	297	31.3	+02.4	02
03	308	37.2	+02.4	309	36.3	+02.5	310	35.5	+02.4	311	34.6	+02.5	312	33.7	+02.5	03
04	323	39.6	+02.5	324	38.8	+02.4	325	37.9	+02.5	326	37.1	+02.4	327	36.2	+02.5	04
05	338	42.1	+02.5	339	41.2	+02.5	340	40.4	+02.5	341	39.5	+02.5	342	38.7	+02.4	05
06	353	44.6	+02.4	354	43.7	+02.5	355	42.9	+02.4	356	42.0	+02.5	357	41.1	+02.5	06
07	8	47.0	+02.5	9	46.2	+02.4	10	45.3	+02.5	11	44.5	+02.4	12	43.6	+02.5	07
08	23	49.5	+02.5	24	48.6	+02.5	25	47.8	+02.4	26	46.9	+02.5	27	46.1	+02.4	08
09	38	52.0	+02.4	39	51.1	+02.5	40	50.2	+02.5	41	49.4	+02.4	42	48.5	+02.5	09
10	53	54.4	+02.5	54	53.6	+02.4	55	52.7	+02.5	56	51.8	+02.5	57	51.0	+02.4	10
11	68	56.9	+02.5	69	56.0	+02.5	70	55.2	+02.4	71	54.3	+02.5	72	53.4	+02.5	11
12	83	59.4	+02.4	84	58.5	+02.5	85	57.6	+02.5	86	56.8	+02.4	87	55.9	+02.5	12
13	99	01.8	+02.5	100	01.0	+02.4	101	00.1	+02.5	101	59.2	+02.5	102	58.4	+02.4	13
14	114	04.3	+02.5	115	03.4	+02.5	116	02.6	+02.4	117	01.7	+02.5	118	00.8	+02.5	14
15	129	06.8	+02.4	130	05.9	+02.5	131	05.0	+02.5	132	04.2	+02.4	133	03.3	+02.5	15
16	144	09.2	+02.5	145	08.4	+02.4	146	07.5	+02.5	147	06.6	+02.5	148	05.8	+02.4	16
17	159	11.7	+02.4	160	10.8	+02.5	161	10.0	+02.4	162	09.1	+02.5	163	08.2	+02.5	17
18	174	14.1	+02.5	175	13.3	+02.4	176	12.4	+02.5	177	11.6	+02.4	178	10.7	+02.5	18
19	189	16.6	+02.5	190	15.7	+02.5	191	14.9	+02.4	192	14.0	+02.5	193	13.2	+02.4	19
20	204	19.1	+02.4	205	18.2	+02.5	206	17.3	+02.5	207	16.5	+02.5	208	15.6	+02.5	20
21	219	21.5	+02.5	220	20.7	+02.4	221	19.8	+02.5	222	19.0	+02.4	223	18.1	+02.5	21
22	234	24.0	+02.5	235	23.1	+02.5	236	22.3	+02.4	237	21.4	+02.5	238	20.6	+02.4	22
23	249	26.5	+02.4	250	25.6	+02.5	251	24.7	+02.5	252	23.9	+02.4	253	23.0	+02.5	23

	SHA	Dec		SHA	Dec				
	° ' "	' "		° ' "	' "				
Alpheratz	357	37.9	N 29	12.3	Gienah	175	46.5	S 17	39.7
Ankaa	353	10.3	S 42	11.1	Acrux	173	03.1	S 63	13.3
Schedir	349	34.5	N 56	38.9	Gacrux	171	54.7	S 57	14.1
Diphda	348	50.4	S 17	52.2	Alioth	166	15.5	N 55	51.0
Achernar	335	22.8	S 57	07.5	Spica	158	25.2	S 11	16.3
Hamal	327	54.8	N 23	33.6	Alkaid	152	54.1	N 49	12.7
Polaris	315	45.8	N 89	21.0	Hadar	148	39.6	S 60	28.7
Acamar	315	14.3	S 40	13.1	Menkent	148	00.5	S 36	28.3
Menkar	314	09.5	N 04	10.3	Arcturus	145	50.0	N 19	05.1
Mirfak	308	32.8	N 49	56.0	Rigel Kentaurus	139	41.2	S 60	55.7
Aldebaran	290	43.3	N 16	33.1	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	26.7	N 46	01.2	Kocab	137	19.0	N 74	04.3
Rigel	281	07.0	S 08	10.7	Alphecca	126	06.0	N 26	38.7
Bellatrix	278	26.3	N 06	22.1	Antares	112	19.2	S 26	28.7
Elnath	278	05.9	N 28	37.5	Atria	107	15.3	S 69	03.9
Alnilam	275	41.0	S 01	11.4	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.6	N 07	24.6	Shaula	96	13.9	S 37	07.1
Canopus	263	54.2	S 52	42.5	Rasalhague	96	00.9	N 12	32.8
Sirius	258	29.0	S 16	44.4	Etamin	90	43.0	N 51	29.2
Adhara	255	08.5	S 29	00.1	Kaus Australis	83	36.0	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	34.8	N 38	48.1
Procyon	244	54.0	N 05	10.5	Nunki	75	51.0	S 26	16.1
Pollux	243	20.9	N 27	58.5	Albireo	67	06.1	N 28	00.2
Avior	234	16.3	S 59	34.9	Altair	62	02.7	N 08	55.3
Suhail	222	48.7	S 43	31.3	Peacock	53	09.9	S 56	39.7
Miaplacidus	221	39.2	S 69	48.5	Deneb	49	27.4	N 45	21.2
Alphard	217	50.8	S 08	45.1	Enif	33	41.5	N 09	58.3
Regulus	207	37.6	N 11	51.9	Alnair	27	36.5	S 46	51.2
Dubhe	193	44.7	N 61	38.5	Formalhaut	15	17.8	S 29	30.4
Denebola	182	27.8	N 14	27.3	Markab	13	32.8	N 15	19.1

2021 - First Point of Aries / Selected Stars

UT	day 171 of 365		day 172 of 365		day 173 of 365		day 174 of 365		day 175 of 365		UT					
	<i>June 20</i>		<i>June 21</i>		<i>June 22</i>		<i>June 23</i>		<i>June 24</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	268	25.5	+02.4	269	24.6	+02.5	270	23.8	+02.4	271	22.9	+02.5	272	22.0	+02.5	00
01	283	27.9	+02.5	284	27.1	+02.4	285	26.2	+02.5	286	25.4	+02.4	287	24.5	+02.5	01
02	298	30.4	+02.5	299	29.5	+02.5	300	28.7	+02.5	301	27.8	+02.5	302	27.0	+02.4	02
03	313	32.9	+02.4	314	32.0	+02.5	315	31.2	+02.4	316	30.3	+02.5	317	29.4	+02.5	03
04	328	35.3	+02.5	329	34.5	+02.4	330	33.6	+02.5	331	32.8	+02.4	332	31.9	+02.5	04
05	343	37.8	+02.5	344	36.9	+02.5	345	36.1	+02.4	346	35.2	+02.5	347	34.4	+02.4	05
06	358	40.3	+02.4	359	39.4	+02.5	0	38.5	+02.5	1	37.7	+02.4	2	36.8	+02.5	06
07	13	42.7	+02.5	14	41.9	+02.4	15	41.0	+02.5	16	40.1	+02.5	17	39.3	+02.5	07
08	28	45.2	+02.5	29	44.3	+02.5	30	43.5	+02.4	31	42.6	+02.5	32	41.8	+02.4	08
09	43	47.7	+02.4	44	46.8	+02.5	45	45.9	+02.5	46	45.1	+02.4	47	44.2	+02.5	09
10	58	50.1	+02.5	59	49.3	+02.4	60	48.4	+02.5	61	47.5	+02.5	62	46.7	+02.4	10
11	73	52.6	+02.4	74	51.7	+02.5	75	50.9	+02.4	76	50.0	+02.5	77	49.1	+02.5	11
12	88	55.0	+02.5	89	54.2	+02.5	90	53.3	+02.5	91	52.5	+02.4	92	51.6	+02.5	12
13	103	57.5	+02.5	104	56.7	+02.4	105	55.8	+02.5	106	54.9	+02.5	107	54.1	+02.4	13
14	118	60.0	+02.4	119	59.1	+02.5	120	58.3	+02.4	121	57.4	+02.5	122	56.5	+02.5	14
15	134	02.4	+02.5	135	01.6	+02.4	136	00.7	+02.5	136	59.9	+02.4	137	59.0	+02.5	15
16	149	04.9	+02.5	150	04.0	+02.5	151	03.2	+02.4	152	02.3	+02.5	153	01.5	+02.4	16
17	164	07.4	+02.4	165	06.5	+02.5	166	05.6	+02.5	167	04.8	+02.5	168	03.9	+02.5	17
18	179	09.8	+02.5	180	09.0	+02.4	181	08.1	+02.5	182	07.3	+02.4	183	06.4	+02.5	18
19	194	12.3	+02.5	195	11.4	+02.5	196	10.6	+02.4	197	09.7	+02.5	198	08.9	+02.4	19
20	209	14.8	+02.4	210	13.9	+02.5	211	13.0	+02.5	212	12.2	+02.4	213	11.3	+02.5	20
21	224	17.2	+02.5	225	16.4	+02.4	226	15.5	+02.5	227	14.6	+02.5	228	13.8	+02.5	21
22	239	19.7	+02.5	240	18.8	+02.5	241	18.0	+02.4	242	17.1	+02.5	243	16.3	+02.4	22
23	254	22.2	+02.4	255	21.3	+02.5	256	20.4	+02.5	257	19.6	+02.4	258	18.7	+02.5	23

	SHA	Dec		SHA	Dec				
	° ' "	' "		° ' "	' "				
Alpheratz	357	37.8	N 29	12.3	Gienah	175	46.5	S 17	39.7
Ankaa	353	10.2	S 42	11.1	Acrux	173	03.1	S 63	13.3
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Diphda	348	50.4	S 17	52.2	Alioth	166	15.6	N 55	51.0
Achernar	335	22.8	S 57	07.5	Spica	158	25.2	S 11	16.3
Hamal	327	54.7	N 23	33.6	Alkaid	152	54.1	N 49	12.7
Polaris	315	44.1	N 89	21.0	Hadar	148	39.7	S 60	28.7
Acamar	315	14.3	S 40	13.1	Menkent	148	00.5	S 36	28.3
Menkar	314	09.4	N 04	10.3	Arcturus	145	50.0	N 19	05.1
Mirfak	308	32.8	N 49	56.0	Rigel Kentaurus	139	41.3	S 60	55.7
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Capella	280	26.7	N 46	01.2	Kocab	137	19.0	N 74	04.3
Rigel	281	07.0	S 08	10.7	Alphecca	126	06.0	N 26	38.8
Bellatrix	278	26.3	N 06	22.1	Antares	112	19.2	S 26	28.7
Elnath	278	05.9	N 28	37.5	Atria	107	15.3	S 69	03.9
Alnilam	275	41.0	S 01	11.4	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.6	N 07	24.6	Shaula	96	13.9	S 37	07.1
Canopus	263	54.2	S 52	42.5	Rasalhague	96	00.9	N 12	32.8
Sirius	258	29.0	S 16	44.3	Etamin	90	43.0	N 51	29.2
Adhara	255	08.5	S 29	00.1	Kaus Australis	83	36.0	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	34.8	N 38	48.1
Procyon	244	54.0	N 05	10.6	Nunki	75	51.0	S 26	16.1
Pollux	243	20.9	N 27	58.5	Albireo	67	06.0	N 28	00.2
Avior	234	16.4	S 59	34.8	Altair	62	02.6	N 08	55.3
Suhail	222	48.7	S 43	31.3	Peacock	53	09.9	S 56	39.8
Miaplacidus	221	39.2	S 69	48.5	Deneb	49	27.4	N 45	21.2
Alphard	217	50.8	S 08	45.1	Enif	33	41.5	N 09	58.3
Regulus	207	37.6	N 11	51.9	Alnair	27	36.5	S 46	51.2
Dubhe	193	44.7	N 61	38.5	Formalhaut	15	17.8	S 29	30.4
Denebola	182	27.8	N 14	27.4	Markab	13	32.7	N 15	19.1

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UT	day 176 of 365			day 177 of 365			day 178 of 365			day 179 of 365			day 180 of 365			UT
	June 25			June 26			June 27			June 28			June 29			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	273	21.2	+02.4	274	20.3	+02.5	275	19.5	+02.4	276	18.6	+02.5	277	17.7	+02.5	00
01	288	23.6	+02.5	289	22.8	+02.5	290	21.9	+02.5	291	21.1	+02.4	292	20.2	+02.5	01
02	303	26.1	+02.5	304	25.3	+02.4	305	24.4	+02.5	306	23.5	+02.5	307	22.7	+02.4	02
03	318	28.6	+02.4	319	27.7	+02.5	320	26.9	+02.4	321	26.0	+02.5	322	25.1	+02.5	03
04	333	31.0	+02.5	334	30.2	+02.4	335	29.3	+02.5	336	28.5	+02.4	337	27.6	+02.5	04
05	348	33.5	+02.5	349	32.6	+02.5	350	31.8	+02.5	351	30.9	+02.5	352	30.1	+02.4	05
06	3	36.0	+02.4	4	35.1	+02.5	5	34.3	+02.4	6	33.4	+02.5	7	32.5	+02.5	06
07	18	38.4	+02.5	19	37.6	+02.4	20	36.7	+02.5	21	35.9	+02.4	22	35.0	+02.5	07
08	33	40.9	+02.5	34	40.0	+02.5	35	39.2	+02.4	36	38.3	+02.5	37	37.5	+02.4	08
09	48	43.4	+02.4	49	42.5	+02.5	50	41.6	+02.5	51	40.8	+02.4	52	39.9	+02.5	09
10	63	45.8	+02.5	64	45.0	+02.4	65	44.1	+02.5	66	43.2	+02.5	67	42.4	+02.4	10
11	78	48.3	+02.5	79	47.4	+02.5	80	46.6	+02.4	81	45.7	+02.5	82	44.8	+02.5	11
12	93	50.8	+02.4	94	49.9	+02.5	95	49.0	+02.5	96	48.2	+02.4	97	47.3	+02.5	12
13	108	53.2	+02.5	109	52.4	+02.4	110	51.5	+02.5	111	50.6	+02.5	112	49.8	+02.4	13
14	123	55.7	+02.4	124	54.8	+02.5	125	54.0	+02.4	126	53.1	+02.5	127	52.2	+02.5	14
15	138	58.1	+02.5	139	57.3	+02.5	140	56.4	+02.5	141	55.6	+02.4	142	54.7	+02.5	15
16	154	00.6	+02.5	154	59.8	+02.4	155	58.9	+02.5	156	58.0	+02.5	157	57.2	+02.4	16
17	169	03.1	+02.4	170	02.2	+02.5	171	01.4	+02.4	172	00.5	+02.5	172	59.6	+02.5	17
18	184	05.5	+02.5	185	04.7	+02.4	186	03.8	+02.5	187	03.0	+02.4	188	02.1	+02.5	18
19	199	08.0	+02.5	200	07.1	+02.5	201	06.3	+02.4	202	05.4	+02.5	203	04.6	+02.4	19
20	214	10.5	+02.4	215	09.6	+02.5	216	08.7	+02.5	217	07.9	+02.5	218	07.0	+02.5	20
21	229	12.9	+02.5	230	12.1	+02.4	231	11.2	+02.5	232	10.4	+02.4	233	09.5	+02.5	21
22	244	15.4	+02.5	245	14.5	+02.5	246	13.7	+02.4	247	12.8	+02.5	248	12.0	+02.4	22
23	259	17.9	+02.4	260	17.0	+02.5	261	16.1	+02.5	262	15.3	+02.4	263	14.4	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.8	N 29	12.3	Gienah	175	46.5	S 17	39.7
Ankaa	353	10.2	S 42	11.1	Acrux	173	03.1	S 63	13.3
Schedir	349	34.3	N 56	38.9	Gacrux	171	54.8	S 57	14.1
Diphda	348	50.3	S 17	52.1	Alioth	166	15.6	N 55	51.0
Achernar	335	22.7	S 57	07.5	Spica	158	25.2	S 11	16.3
Hamal	327	54.7	N 23	33.7	Alkaid	152	54.1	N 49	12.7
Polaris	315	41.8	N 89	20.9	Hadar	148	39.7	S 60	28.7
Acamar	315	14.3	S 40	13.1	Menkent	148	00.5	S 36	28.3
Menkar	314	09.4	N 04	10.3	Arcturus	145	50.0	N 19	05.1
Mirfak	308	32.7	N 49	56.0	Rigel Kentaurus	139	41.3	S 60	55.7
Aldebaran	290	43.3	N 16	33.1	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	26.7	N 46	01.2	Kocab	137	19.1	N 74	04.4
Rigel	281	07.0	S 08	10.7	Alphecca	126	06.0	N 26	38.8
Bellatrix	278	26.3	N 06	22.1	Antares	112	19.1	S 26	28.7
Elnath	278	05.9	N 28	37.5	Atria	107	15.3	S 69	03.9
Alnilam	275	41.0	S 01	11.3	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.6	N 07	24.6	Shaula	96	13.9	S 37	07.1
Canopus	263	54.2	S 52	42.4	Rasalhague	96	00.9	N 12	32.8
Sirius	258	29.0	S 16	44.3	Etamin	90	43.0	N 51	29.2
Adhara	255	08.5	S 29	00.1	Kaus Australis	83	35.9	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	34.8	N 38	48.1
Procyon	244	54.0	N 05	10.6	Nunki	75	51.0	S 26	16.1
Pollux	243	20.9	N 27	58.5	Albireo	67	06.0	N 28	00.2
Avior	234	16.4	S 59	34.8	Altair	62	02.6	N 08	55.4
Suhail	222	48.7	S 43	31.3	Peacock	53	09.8	S 56	39.8
Miaplacidus	221	39.3	S 69	48.5	Deneb	49	27.3	N 45	21.2
Alphard	217	50.8	S 08	45.1	Enif	33	41.4	N 09	58.3
Regulus	207	37.6	N 11	51.9	Alnair	27	36.4	S 46	51.2
Dubhe	193	44.8	N 61	38.5	Formalhaut	15	17.7	S 29	30.4
Denebola	182	27.8	N 14	27.4	Markab	13	32.7	N 15	19.1

2021 - First Point of Aries / Selected Stars

UT	day 181 of 365		day 182 of 365		day 183 of 365		day 184 of 365		day 185 of 365		UT					
	June 30		July 1		July 2		July 3		July 4							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	278	16.9	+02.4	279	16.0	+02.5	280	15.2	+02.4	281	14.3	+02.5	282	13.4	+02.5	00
01	293	19.3	+02.5	294	18.5	+02.4	295	17.6	+02.5	296	16.8	+02.4	297	15.9	+02.5	01
02	308	21.8	+02.5	309	20.9	+02.5	310	20.1	+02.5	311	19.2	+02.5	312	18.4	+02.4	02
03	323	24.3	+02.4	324	23.4	+02.5	325	22.6	+02.4	326	21.7	+02.5	327	20.8	+02.5	03
04	338	26.7	+02.5	339	25.9	+02.4	340	25.0	+02.5	341	24.2	+02.4	342	23.3	+02.5	04
05	353	29.2	+02.5	354	28.3	+02.5	355	27.5	+02.4	356	26.6	+02.5	357	25.8	+02.4	05
06	8	31.7	+02.4	9	30.8	+02.5	10	29.9	+02.5	11	29.1	+02.4	12	28.2	+02.5	06
07	23	34.1	+02.5	24	33.3	+02.4	25	32.4	+02.5	26	31.5	+02.5	27	30.7	+02.4	07
08	38	36.6	+02.5	39	35.7	+02.5	40	34.9	+02.4	41	34.0	+02.5	42	33.1	+02.5	08
09	53	39.1	+02.4	54	38.2	+02.5	55	37.3	+02.5	56	36.5	+02.4	57	35.6	+02.5	09
10	68	41.5	+02.5	69	40.7	+02.4	70	39.8	+02.5	71	38.9	+02.5	72	38.1	+02.4	10
11	83	44.0	+02.5	84	43.1	+02.5	85	42.3	+02.4	86	41.4	+02.5	87	40.5	+02.5	11
12	98	46.5	+02.4	99	45.6	+02.5	100	44.7	+02.5	101	43.9	+02.4	102	43.0	+02.5	12
13	113	48.9	+02.5	114	48.1	+02.4	115	47.2	+02.5	116	46.3	+02.5	117	45.5	+02.4	13
14	128	51.4	+02.4	129	50.5	+02.5	130	49.7	+02.4	131	48.8	+02.5	132	47.9	+02.5	14
15	143	53.8	+02.5	144	53.0	+02.4	145	52.1	+02.5	146	51.3	+02.4	147	50.4	+02.5	15
16	158	56.3	+02.5	159	55.4	+02.5	160	54.6	+02.4	161	53.7	+02.5	162	52.9	+02.4	16
17	173	58.8	+02.4	174	57.9	+02.5	175	57.0	+02.5	176	56.2	+02.5	177	55.3	+02.5	17
18	189	01.2	+02.5	190	00.4	+02.4	190	59.5	+02.5	191	58.7	+02.4	192	57.8	+02.5	18
19	204	03.7	+02.5	205	02.8	+02.5	206	02.0	+02.4	207	01.1	+02.5	208	00.3	+02.4	19
20	219	06.2	+02.4	220	05.3	+02.5	221	04.4	+02.5	222	03.6	+02.4	223	02.7	+02.5	20
21	234	08.6	+02.5	235	07.8	+02.4	236	06.9	+02.5	237	06.0	+02.5	238	05.2	+02.4	21
22	249	11.1	+02.5	250	10.2	+02.5	251	09.4	+02.4	252	08.5	+02.5	253	07.6	+02.5	22
23	264	13.6	+02.4	265	12.7	+02.5	266	11.8	+02.5	267	11.0	+02.4	268	10.1	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.7	N 29	12.4	Gienah	175	46.5	S 17	39.7
Ankaa	353	10.1	S 42	11.1	Acrux	173	03.2	S 63	13.3
Schedir	349	34.3	N 56	38.9	Gacrux	171	54.8	S 57	14.1
Diphda	348	50.3	S 17	52.1	Alioth	166	15.6	N 55	51.0
Achernar	335	22.7	S 57	07.5	Spica	158	25.2	S 11	16.3
Hamal	327	54.6	N 23	33.7	Alkaid	152	54.1	N 49	12.7
Polaris	315	39.8	N 89	20.9	Hadar	148	39.7	S 60	28.7
Acamar	315	14.2	S 40	13.0	Menkent	148	00.5	S 36	28.3
Menkar	314	09.4	N 04	10.4	Arcturus	145	50.0	N 19	05.2
Mirfak	308	32.7	N 49	56.0	Rigel Kentaurus	139	41.3	S 60	55.7
Aldebaran	290	43.2	N 16	33.1	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	26.6	N 46	01.2	Kocab	137	19.2	N 74	04.4
Rigel	281	07.0	S 08	10.6	Alphecca	126	06.0	N 26	38.8
Bellatrix	278	26.3	N 06	22.1	Antares	112	19.1	S 26	28.7
Elnath	278	05.9	N 28	37.5	Atria	107	15.3	S 69	04.0
Alnilam	275	41.0	S 01	11.3	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.5	N 07	24.6	Shaula	96	13.9	S 37	07.1
Canopus	263	54.2	S 52	42.4	Rasalhague	96	00.9	N 12	32.8
Sirius	258	28.9	S 16	44.3	Etamin	90	43.0	N 51	29.2
Adhara	255	08.5	S 29	00.1	Kaus Australis	83	35.9	S 34	22.3
Castor	246	01.1	N 31	50.6	Vega	80	34.8	N 38	48.1
Procyon	244	54.0	N 05	10.6	Nunki	75	51.0	S 26	16.1
Pollux	243	20.9	N 27	58.5	Albireo	67	06.0	N 28	00.2
Avior	234	16.4	S 59	34.8	Altair	62	02.6	N 08	55.4
Suhail	222	48.7	S 43	31.2	Peacock	53	09.8	S 56	39.8
Miaplacidus	221	39.3	S 69	48.5	Deneb	49	27.3	N 45	21.3
Alphard	217	50.8	S 08	45.1	Enif	33	41.4	N 09	58.3
Regulus	207	37.6	N 11	51.9	Alnair	27	36.3	S 46	51.2
Dubhe	193	44.8	N 61	38.5	Formalhaut	15	17.7	S 29	30.4
Denebola	182	27.8	N 14	27.4	Markab	13	32.6	N 15	19.1

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UT	day 186 of 365		day 187 of 365		day 188 of 365		day 189 of 365		day 190 of 365		UT		
	July 5		July 6		July 7		July 8		July 9				
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA			
	°	'	°	'	°	'	°	'	°	'			
00	283	12.6	+02.4	284	11.7	+02.5	285	10.9	+02.4	286	10.0	+02.5	00
01	298	15.0	+02.5	299	14.2	+02.4	300	13.3	+02.5	301	12.5	+02.4	01
02	313	17.5	+02.5	314	16.6	+02.5	315	15.8	+02.4	316	14.9	+02.5	02
03	328	20.0	+02.4	329	19.1	+02.5	330	18.2	+02.5	331	17.4	+02.5	03
04	343	22.4	+02.5	344	21.6	+02.4	345	20.7	+02.5	346	19.9	+02.4	04
05	358	24.9	+02.5	359	24.0	+02.5	0	23.2	+02.4	1	22.3	+02.5	05
06	13	27.4	+02.4	14	26.5	+02.5	15	25.6	+02.5	16	24.8	+02.4	06
07	28	29.8	+02.5	29	29.0	+02.4	30	28.1	+02.5	31	27.2	+02.5	07
08	43	32.3	+02.5	44	31.4	+02.5	45	30.6	+02.4	46	29.7	+02.5	08
09	58	34.8	+02.4	59	33.9	+02.5	60	33.0	+02.5	61	32.2	+02.4	09
10	73	37.2	+02.5	74	36.4	+02.4	75	35.5	+02.5	76	34.6	+02.5	10
11	88	39.7	+02.4	89	38.8	+02.5	90	38.0	+02.4	91	37.1	+02.5	11
12	103	42.1	+02.5	104	41.3	+02.4	105	40.4	+02.5	106	39.6	+02.4	12
13	118	44.6	+02.5	119	43.7	+02.5	120	42.9	+02.5	121	42.0	+02.5	13
14	133	47.1	+02.4	134	46.2	+02.5	135	45.4	+02.4	136	44.5	+02.5	14
15	148	49.5	+02.5	149	48.7	+02.4	150	47.8	+02.5	151	47.0	+02.4	15
16	163	52.0	+02.5	164	51.1	+02.5	165	50.3	+02.4	166	49.4	+02.5	16
17	178	54.5	+02.4	179	53.6	+02.5	180	52.7	+02.5	181	51.9	+02.4	17
18	193	56.9	+02.5	194	56.1	+02.4	195	55.2	+02.5	196	54.3	+02.5	18
19	208	59.4	+02.5	209	58.5	+02.5	210	57.7	+02.4	211	56.8	+02.5	19
20	224	01.9	+02.4	225	01.0	+02.5	226	00.1	+02.5	227	59.3	+02.4	20
21	239	04.3	+02.5	240	03.5	+02.4	241	02.6	+02.5	242	01.7	+02.5	21
22	254	06.8	+02.4	255	05.9	+02.5	256	05.1	+02.4	257	04.2	+02.5	22
23	269	09.2	+02.5	270	08.4	+02.5	271	07.5	+02.5	272	06.7	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.7	N 29	12.4	Gienah	175	46.5	S 17	39.7
Ankaa	353	10.1	S 42	11.1	Acrux	173	03.2	S 63	13.3
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Diphda	348	50.3	S 17	52.1	Alioth	166	15.7	N 55	51.0
Achernar	335	22.6	S 57	07.5	Spica	158	25.3	S 11	16.3
Hamal	327	54.6	N 23	33.7	Alkaid	152	54.2	N 49	12.7
Polaris	315	37.7	N 89	20.9	Hadar	148	39.8	S 60	28.7
Acamar	315	14.2	S 40	13.0	Menkent	148	00.5	S 36	28.3
Menkar	314	09.3	N 04	10.4	Arcturus	145	50.1	N 19	05.2
Mirfak	308	32.7	N 49	56.0	Rigel Kentaurus	139	41.4	S 60	55.7
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Capella	280	26.6	N 46	01.2	Kocab	137	19.3	N 74	04.4
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Alnilam	275	41.0	S 01	11.3	Sabik	102	05.8	S 15	45.1
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Canopus	263	54.2	S 52	42.4	Rasalhague	96	00.9	N 12	32.8
Sirius	258	28.9	S 16	44.3	Etamin	90	43.0	N 51	29.3
Adhara	255	08.5	S 29	00.1	Kaus Australis	83	35.9	S 34	22.4
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Procyon	244	54.0	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.9	N 27	58.5	Albireo	67	06.0	N 28	00.3
Avior	234	16.4	S 59	34.8	Altair	62	02.6	N 08	55.4
Suhail	222	48.7	S 43	31.2	Peacock	53	09.7	S 56	39.8
Miaplacidus	221	39.4	S 69	48.5	Deneb	49	27.3	N 45	21.3
Alphard	217	50.8	S 08	45.1	Enif	33	41.4	N 09	58.3
Regulus	207	37.6	N 11	51.9	Alnair	27	36.3	S 46	51.2
Dubhe	193	44.8	N 61	38.5	Formalhaut	15	17.6	S 29	30.3
Denebola	182	27.8	N 14	27.4	Markab	13	32.6	N 15	19.1

2021 - First Point of Aries / Selected Stars

UT	day 191 of 365		day 192 of 365		day 193 of 365		day 194 of 365		day 195 of 365		UT					
	<i>July 10</i>		<i>July 11</i>		<i>July 12</i>		<i>July 13</i>		<i>July 14</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	288	08.3	+02.4	289	07.4	+02.5	290	06.6	+02.4	291	05.7	+02.5	292	04.8	+02.5	00
01	303	10.7	+02.5	304	09.9	+02.4	305	09.0	+02.5	306	08.2	+02.4	307	07.3	+02.5	01
02	318	13.2	+02.5	319	12.3	+02.5	320	11.5	+02.4	321	10.6	+02.5	322	09.8	+02.4	02
03	333	15.7	+02.4	334	14.8	+02.5	335	13.9	+02.5	336	13.1	+02.5	337	12.2	+02.5	03
04	348	18.1	+02.5	349	17.3	+02.4	350	16.4	+02.5	351	15.6	+02.4	352	14.7	+02.5	04
05	3	20.6	+02.5	4	19.7	+02.5	5	18.9	+02.4	6	18.0	+02.5	7	17.2	+02.4	05
06	18	23.1	+02.4	19	22.2	+02.5	20	21.3	+02.5	21	20.5	+02.4	22	19.6	+02.5	06
07	33	25.5	+02.5	34	24.7	+02.4	35	23.8	+02.5	36	22.9	+02.5	37	22.1	+02.4	07
08	48	28.0	+02.5	49	27.1	+02.5	50	26.3	+02.4	51	25.4	+02.5	52	24.5	+02.5	08
09	63	30.5	+02.4	64	29.6	+02.5	65	28.7	+02.5	66	27.9	+02.4	67	27.0	+02.5	09
10	78	32.9	+02.5	79	32.1	+02.4	80	31.2	+02.5	81	30.3	+02.5	82	29.5	+02.4	10
11	93	35.4	+02.4	94	34.5	+02.5	95	33.7	+02.4	96	32.8	+02.5	97	31.9	+02.5	11
12	108	37.8	+02.5	109	37.0	+02.4	110	36.1	+02.5	111	35.3	+02.4	112	34.4	+02.5	12
13	123	40.3	+02.5	124	39.4	+02.5	125	38.6	+02.5	126	37.7	+02.5	127	36.9	+02.4	13
14	138	42.8	+02.4	139	41.9	+02.5	140	41.1	+02.4	141	40.2	+02.5	142	39.3	+02.5	14
15	153	45.2	+02.5	154	44.4	+02.4	155	43.5	+02.5	156	42.7	+02.4	157	41.8	+02.5	15
16	168	47.7	+02.5	169	46.8	+02.5	170	46.0	+02.4	171	45.1	+02.5	172	44.3	+02.4	16
17	183	50.2	+02.4	184	49.3	+02.5	185	48.4	+02.5	186	47.6	+02.4	187	46.7	+02.5	17
18	198	52.6	+02.5	199	51.8	+02.4	200	50.9	+02.5	201	50.0	+02.5	202	49.2	+02.5	18
19	213	55.1	+02.5	214	54.2	+02.5	215	53.4	+02.4	216	52.5	+02.5	217	51.7	+02.4	19
20	228	57.6	+02.4	229	56.7	+02.5	230	55.8	+02.5	231	55.0	+02.4	232	54.1	+02.5	20
21	244	00.0	+02.5	244	59.2	+02.4	245	58.3	+02.5	246	57.4	+02.5	247	56.6	+02.4	21
22	259	02.5	+02.5	260	01.6	+02.5	261	00.8	+02.4	261	59.9	+02.5	262	59.0	+02.5	22
23	274	05.0	+02.4	275	04.1	+02.5	276	03.2	+02.5	277	02.4	+02.4	278	01.5	+02.5	23

	SHA	Dec		SHA	Dec				
	° ' "	° ' "		° ' "	° ' "				
Alpheratz	357	37.6	N 29	12.4	Gienah	175	46.5	S 17	39.6
Ankaa	353	10.0	S 42	11.1	Acrux	173	03.3	S 63	13.3
Schedir	349	34.2	N 56	39.0	Gacrux	171	54.9	S 57	14.1
Diphda	348	50.2	S 17	52.1	Alioth	166	15.7	N 55	51.0
Achernar	335	22.5	S 57	07.4	Spica	158	25.3	S 11	16.3
Hamal	327	54.6	N 23	33.7	Alkaid	152	54.2	N 49	12.7
Polaris	315	35.1	N 89	20.9	Hadar	148	39.8	S 60	28.7
Acamar	315	14.2	S 40	13.0	Menkent	148	00.6	S 36	28.3
Menkar	314	09.3	N 04	10.4	Arcturus	145	50.1	N 19	05.2
Mirfak	308	32.6	N 49	56.0	Rigel Kentaurus	139	41.4	S 60	55.7
Aldebaran	290	43.2	N 16	33.1	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.6	N 46	01.2	Kocab	137	19.3	N 74	04.4
Rigel	281	06.9	S 08	10.6	Alphecca	126	06.0	N 26	38.8
Bellatrix	278	26.2	N 06	22.1	Antares	112	19.1	S 26	28.7
Elnath	278	05.8	N 28	37.5	Atria	107	15.3	S 69	04.0
Alnilam	275	40.9	S 01	11.3	Sabik	102	05.8	S 15	45.0
Betelgeuze	270	55.5	N 07	24.6	Shaula	96	13.8	S 37	07.1
Canopus	263	54.2	S 52	42.4	Rasalhague	96	00.9	N 12	32.9
Sirius	258	28.9	S 16	44.3	Etamin	90	43.0	N 51	29.3
Adhara	255	08.5	S 29	00.0	Kaus Australis	83	35.9	S 34	22.4
Castor	246	01.0	N 31	50.5	Vega	80	34.8	N 38	48.2
Procyon	244	53.9	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.9	N 27	58.5	Albireo	67	06.0	N 28	00.3
Avior	234	16.4	S 59	34.8	Altair	62	02.6	N 08	55.4
Suhail	222	48.7	S 43	31.2	Peacock	53	09.7	S 56	39.8
Miaplacidus	221	39.4	S 69	48.4	Deneb	49	27.3	N 45	21.3
Alphard	217	50.8	S 08	45.1	Enif	33	41.3	N 09	58.4
Regulus	207	37.6	N 11	51.9	Alnair	27	36.3	S 46	51.2
Dubhe	193	44.9	N 61	38.5	Formalhaut	15	17.6	S 29	30.3
Denebola	182	27.8	N 14	27.4	Markab	13	32.6	N 15	19.2

2021 - First Point of Aries / Selected Stars

UT	day 196 of 365		day 197 of 365		day 198 of 365		day 199 of 365		day 200 of 365		UT					
	July 15		July 16		July 17		July 18		July 19							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	293	04.0	+02.4	294	03.1	+02.5	295	02.2	+02.5	296	01.4	+02.4	297	00.5	+02.5	00
01	308	06.4	+02.5	309	05.6	+02.4	310	04.7	+02.5	311	03.8	+02.5	312	03.0	+02.5	01
02	323	08.9	+02.5	324	08.0	+02.5	325	07.2	+02.4	326	06.3	+02.5	327	05.5	+02.4	02
03	338	11.4	+02.4	339	10.5	+02.5	340	09.6	+02.5	341	08.8	+02.4	342	07.9	+02.5	03
04	353	13.8	+02.5	354	13.0	+02.4	355	12.1	+02.5	356	11.2	+02.5	357	10.4	+02.4	04
05	8	16.3	+02.5	9	15.4	+02.5	10	14.6	+02.4	11	13.7	+02.5	12	12.8	+02.5	05
06	23	18.8	+02.4	24	17.9	+02.5	25	17.0	+02.5	26	16.2	+02.4	27	15.3	+02.5	06
07	38	21.2	+02.5	39	20.4	+02.4	40	19.5	+02.5	41	18.6	+02.5	42	17.8	+02.4	07
08	53	23.7	+02.4	54	22.8	+02.5	55	22.0	+02.4	56	21.1	+02.5	57	20.2	+02.5	08
09	68	26.1	+02.5	69	25.3	+02.4	70	24.4	+02.5	71	23.6	+02.4	72	22.7	+02.5	09
10	83	28.6	+02.5	84	27.7	+02.5	85	26.9	+02.5	86	26.0	+02.5	87	25.2	+02.4	10
11	98	31.1	+02.4	99	30.2	+02.5	100	29.4	+02.4	101	28.5	+02.5	102	27.6	+02.5	11
12	113	33.5	+02.5	114	32.7	+02.4	115	31.8	+02.5	116	31.0	+02.4	117	30.1	+02.5	12
13	128	36.0	+02.5	129	35.1	+02.5	130	34.3	+02.4	131	33.4	+02.5	132	32.6	+02.4	13
14	143	38.5	+02.4	144	37.6	+02.5	145	36.7	+02.5	146	35.9	+02.4	147	35.0	+02.5	14
15	158	40.9	+02.5	159	40.1	+02.4	160	39.2	+02.5	161	38.3	+02.5	162	37.5	+02.5	15
16	173	43.4	+02.5	174	42.5	+02.5	175	41.7	+02.4	176	40.8	+02.5	177	40.0	+02.4	16
17	188	45.9	+02.4	189	45.0	+02.5	190	44.1	+02.5	191	43.3	+02.4	192	42.4	+02.5	17
18	203	48.3	+02.5	204	47.5	+02.4	205	46.6	+02.5	206	45.7	+02.5	207	44.9	+02.4	18
19	218	50.8	+02.5	219	49.9	+02.5	220	49.1	+02.4	221	48.2	+02.5	222	47.3	+02.5	19
20	233	53.3	+02.4	234	52.4	+02.5	235	51.5	+02.5	236	50.7	+02.4	237	49.8	+02.5	20
21	248	55.7	+02.5	249	54.9	+02.4	250	54.0	+02.5	251	53.1	+02.5	252	52.3	+02.4	21
22	263	58.2	+02.4	264	57.3	+02.5	265	56.5	+02.4	266	55.6	+02.5	267	54.7	+02.5	22
23	279	00.6	+02.5	279	59.8	+02.4	280	58.9	+02.5	281	58.1	+02.4	282	57.2	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.6	N 29	12.4	Gienah	175	46.5	S 17	39.6
Ankaa	353	10.0	S 42	11.1	Acrux	173	03.3	S 63	13.3
Schedir	349	34.1	N 56	39.0	Gacrux	171	54.9	S 57	14.1
Diphda	348	50.2	S 17	52.1	Alioth	166	15.7	N 55	51.0
Achernar	335	22.5	S 57	07.4	Spica	158	25.3	S 11	16.3
Hamal	327	54.5	N 23	33.7	Alkaid	152	54.2	N 49	12.7
Polaris	315	32.9	N 89	20.9	Hadar	148	39.8	S 60	28.7
Acamar	315	14.1	S 40	13.0	Menkent	148	00.6	S 36	28.3
Menkar	314	09.3	N 04	10.4	Arcturus	145	50.1	N 19	05.2
Mirfak	308	32.5	N 49	56.0	Rigel Kentaurus	139	41.4	S 60	55.7
Aldebaran	290	43.2	N 16	33.1	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.5	N 46	01.1	Kocab	137	19.4	N 74	04.4
Rigel	281	06.9	S 08	10.6	Alphecca	126	06.0	N 26	38.8
Bellatrix	278	26.2	N 06	22.1	Antares	112	19.2	S 26	28.7
Elnath	278	05.8	N 28	37.5	Atria	107	15.3	S 69	04.0
Alnilam	275	40.9	S 01	11.3	Sabik	102	05.8	S 15	45.1
Betelgeuze	270	55.5	N 07	24.6	Shaula	96	13.8	S 37	07.1
Canopus	263	54.2	S 52	42.3	Rasalhague	96	00.9	N 12	32.9
Sirius	258	28.9	S 16	44.3	Etamin	90	43.0	N 51	29.3
Adhara	255	08.5	S 29	00.0	Kaus Australis	83	35.9	S 34	22.4
Castor	246	01.0	N 31	50.5	Vega	80	34.8	N 38	48.2
Procyon	244	53.9	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.8	N 27	58.5	Albireo	67	06.0	N 28	00.3
Avior	234	16.5	S 59	34.7	Altair	62	02.5	N 08	55.4
Suhail	222	48.8	S 43	31.2	Peacock	53	09.7	S 56	39.8
Miaplacidus	221	39.4	S 69	48.4	Deneb	49	27.2	N 45	21.3
Alphard	217	50.8	S 08	45.1	Enif	33	41.3	N 09	58.4
Regulus	207	37.6	N 11	51.9	Alnair	27	36.2	S 46	51.2
Dubhe	193	44.9	N 61	38.4	Formalhaut	15	17.6	S 29	30.3
Denebola	182	27.8	N 14	27.4	Markab	13	32.5	N 15	19.2

2021 - First Point of Aries / Selected Stars

UT	day 201 of 365			day 202 of 365			day 203 of 365			day 204 of 365			day 205 of 365			UT
	<i>July 20</i>			<i>July 21</i>			<i>July 22</i>			<i>July 23</i>			<i>July 24</i>			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	297	59.7	+02.4	298	58.8	+02.5	299	57.9	+02.5	300	57.1	+02.5	301	56.2	+02.5	00
01	313	02.1	+02.5	314	01.3	+02.4	315	00.4	+02.5	315	59.6	+02.4	316	58.7	+02.5	01
02	328	04.6	+02.5	329	03.7	+02.5	330	02.9	+02.4	331	02.0	+02.5	332	01.2	+02.4	02
03	343	07.1	+02.4	344	06.2	+02.5	345	05.3	+02.5	346	04.5	+02.4	347	03.6	+02.5	03
04	358	09.5	+02.5	359	08.7	+02.4	0	07.8	+02.5	1	06.9	+02.5	2	06.1	+02.4	04
05	13	12.0	+02.4	14	11.1	+02.5	15	10.3	+02.4	16	09.4	+02.5	17	08.5	+02.5	05
06	28	14.4	+02.5	29	13.6	+02.5	30	12.7	+02.5	31	11.9	+02.4	32	11.0	+02.5	06
07	43	16.9	+02.5	44	16.1	+02.4	45	15.2	+02.5	46	14.3	+02.5	47	13.5	+02.4	07
08	58	19.4	+02.4	59	18.5	+02.5	60	17.7	+02.4	61	16.8	+02.5	62	15.9	+02.5	08
09	73	21.8	+02.5	74	21.0	+02.4	75	20.1	+02.5	76	19.3	+02.4	77	18.4	+02.5	09
10	88	24.3	+02.5	89	23.4	+02.5	90	22.6	+02.5	91	21.7	+02.5	92	20.9	+02.4	10
11	103	26.8	+02.4	104	25.9	+02.5	105	25.1	+02.4	106	24.2	+02.5	107	23.3	+02.5	11
12	118	29.2	+02.5	119	28.4	+02.4	120	27.5	+02.5	121	26.7	+02.4	122	25.8	+02.5	12
13	133	31.7	+02.5	134	30.8	+02.5	135	30.0	+02.4	136	29.1	+02.5	137	28.3	+02.4	13
14	148	34.2	+02.4	149	33.3	+02.5	150	32.4	+02.5	151	31.6	+02.5	152	30.7	+02.5	14
15	163	36.6	+02.5	164	35.8	+02.4	165	34.9	+02.5	166	34.1	+02.4	167	33.2	+02.5	15
16	178	39.1	+02.5	179	38.2	+02.5	180	37.4	+02.4	181	36.5	+02.5	182	35.7	+02.4	16
17	193	41.6	+02.4	194	40.7	+02.5	195	39.8	+02.5	196	39.0	+02.4	197	38.1	+02.5	17
18	208	44.0	+02.5	209	43.2	+02.4	210	42.3	+02.5	211	41.4	+02.5	212	40.6	+02.4	18
19	223	46.5	+02.4	224	45.6	+02.5	225	44.8	+02.4	226	43.9	+02.5	227	43.0	+02.5	19
20	238	48.9	+02.5	239	48.1	+02.5	240	47.2	+02.5	241	46.4	+02.4	242	45.5	+02.5	20
21	253	51.4	+02.5	254	50.6	+02.4	255	49.7	+02.5	256	48.8	+02.5	257	48.0	+02.4	21
22	268	53.9	+02.4	269	53.0	+02.5	270	52.2	+02.4	271	51.3	+02.5	272	50.4	+02.5	22
23	283	56.3	+02.5	284	55.5	+02.4	285	54.6	+02.5	286	53.8	+02.4	287	52.9	+02.5	23

	SHA	Dec		SHA	Dec
	°	'	"	°	'
Alpheratz	357	37.6	N 29 12.4	Gienah	175 46.6 S 17 39.6
Ankaa	353	09.9	S 42 11.0	Acrux	173 03.4 S 63 13.3
Schedir	349	34.0	N 56 39.0	Gacrux	171 54.9 S 57 14.1
Diphda	348	50.1	S 17 52.1	Alioth	166 15.8 N 55 51.0
Achernar	335	22.4	S 57 07.4	Spica	158 25.3 S 11 16.3
Hamal	327	54.5	N 23 33.7	Alkaid	152 54.2 N 49 12.7
Polaris	315	30.4	N 89 20.9	Hadar	148 39.9 S 60 28.7
Acamar	315	14.1	S 40 12.9	Menkent	148 00.6 S 36 28.3
Menkar	314	09.2	N 04 10.4	Arcturus	145 50.1 N 19 05.2
Mirfak	308	32.5	N 49 56.0	Rigel Kentaurus	139 41.5 S 60 55.7
Aldebaran	290	43.1	N 16 33.1	Zubenelgenubi	136 59.0 S 16 07.8
Capella	280	26.5	N 46 01.1	Kocab	137 19.5 N 74 04.4
Rigel	281	06.9	S 08 10.6	Alphecca	126 06.0 N 26 38.8
Bellatrix	278	26.2	N 06 22.1	Antares	112 19.2 S 26 28.7
Elnath	278	05.8	N 28 37.5	Atria	107 15.4 S 69 04.0
Alnilam	275	40.9	S 01 11.3	Sabik	102 05.8 S 15 45.0
Betelgeuze	270	55.5	N 07 24.6	Shaula	96 13.9 S 37 07.1
Canopus	263	54.2	S 52 42.3	Rasalhague	96 00.9 N 12 32.9
Sirius	258	28.9	S 16 44.2	Etamin	90 43.0 N 51 29.3
Adhara	255	08.4	S 28 60.0	Kaus Australis	83 35.9 S 34 22.4
Castor	246	01.0	N 31 50.5	Vega	80 34.8 N 38 48.2
Procyon	244	53.9	N 05 10.6	Nunki	75 50.9 S 26 16.1
Pollux	243	20.8	N 27 58.5	Albireo	67 06.0 N 28 00.3
Avior	234	16.5	S 59 34.7	Altair	62 02.5 N 08 55.4
Suhail	222	48.8	S 43 31.2	Peacock	53 09.6 S 56 39.8
Miaplacidus	221	39.5	S 69 48.4	Deneb	49 27.2 N 45 21.4
Alphard	217	50.8	S 08 45.0	Enif	33 41.3 N 09 58.4
Regulus	207	37.6	N 11 51.9	Alnair	27 36.2 S 46 51.2
Dubhe	193	44.9	N 61 38.4	Formalhaut	15 17.5 S 29 30.3
Denebola	182	27.9	N 14 27.4	Markab	13 32.5 N 15 19.2

2021 - First Point of Aries / Selected Stars

UT	day 206 of 365			day 207 of 365			day 208 of 365			day 209 of 365			day 210 of 365			UT
	<i>July 25</i>			<i>July 26</i>			<i>July 27</i>			<i>July 28</i>			<i>July 29</i>			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	302	55.4	+02.4	303	54.5	+02.5	304	53.6	+02.5	305	52.8	+02.4	306	51.9	+02.5	00
01	317	57.8	+02.5	318	57.0	+02.4	319	56.1	+02.5	320	55.2	+02.5	321	54.4	+02.4	01
02	333	00.3	+02.5	333	59.4	+02.5	334	58.6	+02.4	335	57.7	+02.5	336	56.8	+02.5	02
03	348	02.8	+02.4	349	01.9	+02.5	350	01.0	+02.5	351	00.2	+02.4	351	59.3	+02.5	03
04	3	05.2	+02.5	4	04.4	+02.4	5	03.5	+02.5	6	02.6	+02.5	7	01.8	+02.4	04
05	18	07.7	+02.5	19	06.8	+02.5	20	06.0	+02.4	21	05.1	+02.5	22	04.2	+02.5	05
06	33	10.2	+02.4	34	09.3	+02.5	35	08.4	+02.5	36	07.6	+02.4	37	06.7	+02.5	06
07	48	12.6	+02.5	49	11.8	+02.4	50	10.9	+02.5	51	10.0	+02.5	52	09.2	+02.4	07
08	63	15.1	+02.4	64	14.2	+02.5	65	13.4	+02.4	66	12.5	+02.5	67	11.6	+02.5	08
09	78	17.5	+02.5	79	16.7	+02.4	80	15.8	+02.5	81	15.0	+02.4	82	14.1	+02.5	09
10	93	20.0	+02.5	94	19.1	+02.5	95	18.3	+02.5	96	17.4	+02.5	97	16.6	+02.4	10
11	108	22.5	+02.4	109	21.6	+02.5	110	20.8	+02.4	111	19.9	+02.5	112	19.0	+02.5	11
12	123	24.9	+02.5	124	24.1	+02.4	125	23.2	+02.5	126	22.4	+02.4	127	21.5	+02.5	12
13	138	27.4	+02.5	139	26.5	+02.5	140	25.7	+02.4	141	24.8	+02.5	142	24.0	+02.4	13
14	153	29.9	+02.4	154	29.0	+02.5	155	28.1	+02.5	156	27.3	+02.4	157	26.4	+02.5	14
15	168	32.3	+02.5	169	31.5	+02.4	170	30.6	+02.5	171	29.7	+02.5	172	28.9	+02.4	15
16	183	34.8	+02.5	184	33.9	+02.5	185	33.1	+02.4	186	32.2	+02.5	187	31.3	+02.5	16
17	198	37.3	+02.4	199	36.4	+02.5	200	35.5	+02.5	201	34.7	+02.4	202	33.8	+02.5	17
18	213	39.7	+02.5	214	38.9	+02.4	215	38.0	+02.5	216	37.1	+02.5	217	36.3	+02.4	18
19	228	42.2	+02.5	229	41.3	+02.5	230	40.5	+02.4	231	39.6	+02.5	232	38.7	+02.5	19
20	243	44.7	+02.4	244	43.8	+02.5	245	42.9	+02.5	246	42.1	+02.4	247	41.2	+02.5	20
21	258	47.1	+02.5	259	46.3	+02.4	260	45.4	+02.5	261	44.5	+02.5	262	43.7	+02.4	21
22	273	49.6	+02.4	274	48.7	+02.5	275	47.9	+02.4	276	47.0	+02.5	277	46.1	+02.5	22
23	288	52.0	+02.5	289	51.2	+02.4	290	50.3	+02.5	291	49.5	+02.4	292	48.6	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.5	N 29	12.5	Gienah	175	46.6	S 17	39.6
Ankaa	353	09.9	S 42	11.0	Acrux	173	03.4	S 63	13.2
Schedir	349	34.0	N 56	39.0	Gacrux	171	55.0	S 57	14.1
Diphda	348	50.1	S 17	52.0	Alioth	166	15.8	N 55	51.0
Achernar	335	22.4	S 57	07.4	Spica	158	25.3	S 11	16.3
Hamal	327	54.4	N 23	33.7	Alkaid	152	54.3	N 49	12.7
Polaris	315	27.7	N 89	20.9	Hadar	148	39.9	S 60	28.7
Acamar	315	14.0	S 40	12.9	Menkent	148	00.6	S 36	28.3
Menkar	314	09.2	N 04	10.4	Arcturus	145	50.1	N 19	05.2
Mirfak	308	32.4	N 49	56.0	Rigel Kentaurus	139	41.5	S 60	55.8
Aldebaran	290	43.1	N 16	33.1	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.4	N 46	01.1	Kocab	137	19.6	N 74	04.4
Rigel	281	06.8	S 08	10.6	Alphecca	126	06.0	N 26	38.8
Bellatrix	278	26.1	N 06	22.1	Antares	112	19.2	S 26	28.7
Elnath	278	05.7	N 28	37.5	Atria	107	15.4	S 69	04.1
Alnilam	275	40.9	S 01	11.3	Sabik	102	05.8	S 15	45.0
Betelgeuze	270	55.4	N 07	24.7	Shaula	96	13.8	S 37	07.1
Canopus	263	54.1	S 52	42.3	Rasalhague	96	00.9	N 12	32.9
Sirius	258	28.9	S 16	44.2	Etamin	90	43.0	N 51	29.4
Adhara	255	08.4	S 28	60.0	Kaus Australis	83	35.9	S 34	22.4
Castor	246	01.0	N 31	50.5	Vega	80	34.8	N 38	48.3
Procyon	244	53.9	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.8	N 27	58.5	Albireo	67	05.9	N 28	00.4
Avior	234	16.5	S 59	34.7	Altair	62	02.5	N 08	55.4
Suhail	222	48.8	S 43	31.1	Peacock	53	09.6	S 56	39.8
Miaplacidus	221	39.5	S 69	48.4	Deneb	49	27.2	N 45	21.4
Alphard	217	50.8	S 08	45.0	Enif	33	41.3	N 09	58.4
Regulus	207	37.6	N 11	51.9	Alnair	27	36.1	S 46	51.2
Dubhe	193	44.9	N 61	38.4	Formalhaut	15	17.5	S 29	30.3
Denebola	182	27.9	N 14	27.4	Markab	13	32.5	N 15	19.2

2021 - First Point of Aries / Selected Stars

UT	day 211 of 365 July 30			day 212 of 365 July 31			day 213 of 365 August 1			day 214 of 365 August 2			day 215 of 365 August 3			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	307	51.1	+02.4	308	50.2	+02.5	309	49.3	+02.5	310	48.5	+02.4	311	47.6	+02.5	00
01	322	53.5	+02.5	323	52.7	+02.4	324	51.8	+02.5	325	50.9	+02.5	326	50.1	+02.4	01
02	337	56.0	+02.5	338	55.1	+02.5	339	54.3	+02.4	340	53.4	+02.5	341	52.5	+02.5	02
03	352	58.5	+02.4	353	57.6	+02.5	354	56.7	+02.5	355	55.9	+02.4	356	55.0	+02.5	03
04	8	00.9	+02.5	9	00.1	+02.4	9	59.2	+02.5	10	58.3	+02.5	11	57.5	+02.4	04
05	23	03.4	+02.4	24	02.5	+02.5	25	01.7	+02.4	26	00.8	+02.5	26	59.9	+02.5	05
06	38	05.8	+02.5	39	05.0	+02.4	40	04.1	+02.5	41	03.3	+02.4	42	02.4	+02.5	06
07	53	08.3	+02.5	54	07.4	+02.5	55	06.6	+02.4	56	05.7	+02.5	57	04.9	+02.4	07
08	68	10.8	+02.4	69	09.9	+02.5	70	09.0	+02.5	71	08.2	+02.5	72	07.3	+02.5	08
09	83	13.2	+02.5	84	12.4	+02.4	85	11.5	+02.5	86	10.7	+02.4	87	09.8	+02.5	09
10	98	15.7	+02.5	99	14.8	+02.5	100	14.0	+02.4	101	13.1	+02.5	102	12.3	+02.4	10
11	113	18.2	+02.4	114	17.3	+02.5	115	16.4	+02.5	116	15.6	+02.4	117	14.7	+02.5	11
12	128	20.6	+02.5	129	19.8	+02.4	130	18.9	+02.5	131	18.0	+02.5	132	17.2	+02.4	12
13	143	23.1	+02.5	144	22.2	+02.5	145	21.4	+02.4	146	20.5	+02.5	147	19.6	+02.5	13
14	158	25.6	+02.4	159	24.7	+02.5	160	23.8	+02.5	161	23.0	+02.4	162	22.1	+02.5	14
15	173	28.0	+02.5	174	27.2	+02.4	175	26.3	+02.5	176	25.4	+02.5	177	24.6	+02.4	15
16	188	30.5	+02.4	189	29.6	+02.5	190	28.8	+02.4	191	27.9	+02.5	192	27.0	+02.5	16
17	203	32.9	+02.5	204	32.1	+02.4	205	31.2	+02.5	206	30.4	+02.4	207	29.5	+02.5	17
18	218	35.4	+02.5	219	34.5	+02.5	220	33.7	+02.5	221	32.8	+02.5	222	32.0	+02.4	18
19	233	37.9	+02.4	234	37.0	+02.5	235	36.2	+02.4	236	35.3	+02.5	237	34.4	+02.5	19
20	248	40.3	+02.5	249	39.5	+02.4	250	38.6	+02.5	251	37.8	+02.4	252	36.9	+02.5	20
21	263	42.8	+02.5	264	41.9	+02.5	265	41.1	+02.4	266	40.2	+02.5	267	39.4	+02.4	21
22	278	45.3	+02.4	279	44.4	+02.5	280	43.5	+02.5	281	42.7	+02.4	282	41.8	+02.5	22
23	293	47.7	+02.5	294	46.9	+02.4	295	46.0	+02.5	296	45.1	+02.5	297	44.3	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.5	N 29	12.5	Gienah	175	46.6	S 17	39.6
Ankaa	353	09.9	S 42	11.0	Acrux	173	03.5	S 63	13.2
Schedir	349	33.9	N 56	39.0	Gacrux	171	55.0	S 57	14.1
Diphda	348	50.1	S 17	52.0	Alioth	166	15.8	N 55	51.0
Achernar	335	22.3	S 57	07.4	Spica	158	25.3	S 11	16.3
Hamal	327	54.4	N 23	33.8	Alkaid	152	54.3	N 49	12.7
Polaris	315	25.4	N 89	20.9	Hadar	148	39.9	S 60	28.7
Acamar	315	14.0	S 40	12.9	Menkent	148	00.6	S 36	28.3
Menkar	314	09.1	N 04	10.4	Arcturus	145	50.1	N 19	05.2
Mirfak	308	32.4	N 49	56.0	Rigel Kentaurus	139	41.5	S 60	55.8
Aldebaran	290	43.0	N 16	33.1	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.4	N 46	01.1	Kocab	137	19.7	N 74	04.4
Rigel	281	06.8	S 08	10.5	Alphecca	126	06.1	N 26	38.8
Bellatrix	278	26.1	N 06	22.2	Antares	112	19.2	S 26	28.7
Elnath	278	05.7	N 28	37.5	Atria	107	15.4	S 69	04.1
Alnilam	275	40.8	S 01	11.3	Sabik	102	05.8	S 15	45.0
Betelgeuze	270	55.4	N 07	24.7	Shaula	96	13.9	S 37	07.1
Canopus	263	54.1	S 52	42.3	Rasalhague	96	00.9	N 12	32.9
Sirius	258	28.8	S 16	44.2	Etamin	90	43.1	N 51	29.4
Adhara	255	08.4	S 28	59.9	Kaus Australis	83	35.9	S 34	22.4
Castor	246	01.0	N 31	50.5	Vega	80	34.8	N 38	48.3
Procyon	244	53.9	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.8	N 27	58.5	Albireo	67	05.9	N 28	00.4
Avior	234	16.5	S 59	34.6	Altair	62	02.5	N 08	55.5
Suhail	222	48.8	S 43	31.1	Peacock	53	09.6	S 56	39.9
Miaplacidus	221	39.5	S 69	48.3	Deneb	49	27.2	N 45	21.4
Alphard	217	50.8	S 08	45.0	Enif	33	41.2	N 09	58.4
Regulus	207	37.6	N 11	51.9	Alnair	27	36.1	S 46	51.2
Dubhe	193	45.0	N 61	38.4	Formalhaut	15	17.5	S 29	30.3
Denebola	182	27.9	N 14	27.4	Markab	13	32.4	N 15	19.2

2021 - First Point of Aries / Selected Stars

UT	day 216 of 365			day 217 of 365			day 218 of 365			day 219 of 365			day 220 of 365			UT		
	August 4			August 5			August 6			August 7			August 8					
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA				
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
00	312	46.8	+02.4	313	45.9	+02.5	314	45.0	+02.5	315	44.2	+02.4	316	43.3	+02.5	00		
01	327	49.2	+02.5	328	48.4	+02.4	329	47.5	+02.5	330	46.6	+02.5	331	45.8	+02.4	01		
02	342	51.7	+02.4	343	50.8	+02.5	344	50.0	+02.4	345	49.1	+02.5	346	48.2	+02.5	02		
03	357	54.1	+02.5	358	53.3	+02.4	359	52.4	+02.5	0	51.6	+02.4	1	50.7	+02.5	03		
04	12	56.6	+02.5	13	55.7	+02.5	14	54.9	+02.5	15	54.0	+02.5	16	53.2	+02.4	04		
05	27	59.1	+02.4	28	58.2	+02.5	29	57.4	+02.4	30	56.5	+02.5	31	55.6	+02.5	05		
06	43	01.5	+02.5	44	00.7	+02.4	44	59.8	+02.5	45	59.0	+02.4	46	58.1	+02.5	06		
07	58	04.0	+02.5	59	03.1	+02.5	60	02.3	+02.4	61	01.4	+02.5	62	00.6	+02.4	07		
08	73	06.5	+02.4	74	05.6	+02.5	75	04.7	+02.5	76	03.9	+02.5	77	03.0	+02.5	08		
09	88	08.9	+02.5	89	08.1	+02.4	90	07.2	+02.5	91	06.4	+02.4	92	05.5	+02.5	09		
10	103	11.4	+02.5	104	10.5	+02.5	105	09.7	+02.4	106	08.8	+02.5	107	08.0	+02.4	10		
11	118	13.9	+02.4	119	13.0	+02.5	120	12.1	+02.5	121	11.3	+02.4	122	10.4	+02.5	11		
12	133	16.3	+02.5	134	15.5	+02.4	135	14.6	+02.5	136	13.7	+02.5	137	12.9	+02.4	12		
13	148	18.8	+02.5	149	17.9	+02.5	150	17.1	+02.4	151	16.2	+02.5	152	15.3	+02.5	13		
14	163	21.3	+02.4	164	20.4	+02.5	165	19.5	+02.5	166	18.7	+02.4	167	17.8	+02.5	14		
15	178	23.7	+02.5	179	22.9	+02.4	180	22.0	+02.5	181	21.1	+02.5	182	20.3	+02.4	15		
16	193	26.2	+02.4	194	25.3	+02.5	195	24.5	+02.4	196	23.6	+02.5	197	22.7	+02.5	16		
17	208	28.6	+02.5	209	27.8	+02.4	210	26.9	+02.5	211	26.1	+02.4	212	25.2	+02.5	17		
18	223	31.1	+02.5	224	30.2	+02.5	225	29.4	+02.5	226	28.5	+02.5	227	27.7	+02.4	18		
19	238	33.6	+02.4	239	32.7	+02.5	240	31.9	+02.4	241	31.0	+02.5	242	30.1	+02.5	19		
20	253	36.0	+02.5	254	35.2	+02.4	255	34.3	+02.5	256	33.5	+02.4	257	32.6	+02.5	20		
21	268	38.5	+02.5	269	37.6	+02.5	270	36.8	+02.4	271	35.9	+02.5	272	35.1	+02.4	21		
22	283	41.0	+02.4	284	40.1	+02.5	285	39.2	+02.5	286	38.4	+02.4	287	37.5	+02.5	22		
23	298	43.4	+02.5	299	42.6	+02.4	300	41.7	+02.5	301	40.8	+02.5	302	40.0	+02.5	23		

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.5	N 29	12.5	Gienah	175	46.6	S 17	39.6
Ankaa	353	09.8	S 42	11.0	Acrux	173	03.5	S 63	13.2
Schedir	349	33.9	N 56	39.1	Gacrux	171	55.0	S 57	14.0
Diphda	348	50.0	S 17	52.0	Alioth	166	15.9	N 55	51.0
Achernar	335	22.3	S 57	07.4	Spica	158	25.3	S 11	16.3
Hamal	327	54.3	N 23	33.8	Alkaid	152	54.3	N 49	12.7
Polaris	315	22.7	N 89	20.9	Hadar	148	40.0	S 60	28.7
Acamar	315	13.9	S 40	12.9	Menkent	148	00.7	S 36	28.3
Menkar	314	09.1	N 04	10.5	Arcturus	145	50.2	N 19	05.2
Mirfak	308	32.3	N 49	56.0	Rigel Kentaurus	139	41.6	S 60	55.8
Aldebaran	290	43.0	N 16	33.2	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	26.3	N 46	01.1	Kocab	137	19.8	N 74	04.4
Rigel	281	06.8	S 08	10.5	Alphecca	126	06.1	N 26	38.9
Bellatrix	278	26.1	N 06	22.2	Antares	112	19.2	S 26	28.7
Elnath	278	05.7	N 28	37.5	Atria	107	15.5	S 69	04.1
Alnilam	275	40.8	S 01	11.2	Sabik	102	05.8	S 15	45.0
Betelgeuze	270	55.4	N 07	24.7	Shaula	96	13.9	S 37	07.2
Canopus	263	54.1	S 52	42.2	Rasalhague	96	00.9	N 12	32.9
Sirius	258	28.8	S 16	44.2	Etamin	90	43.1	N 51	29.4
Adhara	255	08.4	S 28	59.9	Kaus Australis	83	35.9	S 34	22.4
Castor	246	00.9	N 31	50.5	Vega	80	34.8	N 38	48.3
Procyon	244	53.9	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.8	N 27	58.5	Albireo	67	05.9	N 28	00.4
Avior	234	16.5	S 59	34.6	Altair	62	02.5	N 08	55.5
Suhail	222	48.8	S 43	31.1	Peacock	53	09.6	S 56	39.9
Miaplacidus	221	39.5	S 69	48.3	Deneb	49	27.2	N 45	21.4
Alphard	217	50.8	S 08	45.0	Enif	33	41.2	N 09	58.5
Regulus	207	37.6	N 11	51.9	Alnair	27	36.1	S 46	51.2
Dubhe	193	45.0	N 61	38.4	Formalhaut	15	17.4	S 29	30.3
Denebola	182	27.9	N 14	27.4	Markab	13	32.4	N 15	19.3

2021 - First Point of Aries / Selected Stars

UT	day 221 of 365 August 9			day 222 of 365 August 10			day 223 of 365 August 11			day 224 of 365 August 12			day 225 of 365 August 13			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	317	42.5	+02.4	318	41.6	+02.5	319	40.7	+02.5	320	39.9	+02.4	321	39.0	+02.5	00
01	332	44.9	+02.5	333	44.1	+02.4	334	43.2	+02.5	335	42.3	+02.5	336	41.5	+02.4	01
02	347	47.4	+02.4	348	46.5	+02.5	349	45.7	+02.4	350	44.8	+02.5	351	43.9	+02.5	02
03	2	49.8	+02.5	3	49.0	+02.4	4	48.1	+02.5	5	47.3	+02.4	6	46.4	+02.5	03
04	17	52.3	+02.5	18	51.4	+02.5	19	50.6	+02.4	20	49.7	+02.5	21	48.9	+02.4	04
05	32	54.8	+02.4	33	53.9	+02.5	34	53.0	+02.5	35	52.2	+02.4	36	51.3	+02.5	05
06	47	57.2	+02.5	48	56.4	+02.4	49	55.5	+02.5	50	54.6	+02.5	51	53.8	+02.5	06
07	62	59.7	+02.5	63	58.8	+02.5	64	58.0	+02.4	65	57.1	+02.5	66	56.3	+02.4	07
08	78	02.2	+02.4	79	01.3	+02.5	80	00.4	+02.5	80	59.6	+02.4	81	58.7	+02.5	08
09	93	04.6	+02.5	94	03.8	+02.4	95	02.9	+02.5	96	02.0	+02.5	97	01.2	+02.4	09
10	108	07.1	+02.5	109	06.2	+02.5	110	05.4	+02.4	111	04.5	+02.5	112	03.6	+02.5	10
11	123	09.6	+02.4	124	08.7	+02.5	125	07.8	+02.5	126	07.0	+02.4	127	06.1	+02.5	11
12	138	12.0	+02.5	139	11.2	+02.4	140	10.3	+02.5	141	09.4	+02.5	142	08.6	+02.4	12
13	153	14.5	+02.4	154	13.6	+02.5	155	12.8	+02.4	156	11.9	+02.5	157	11.0	+02.5	13
14	168	16.9	+02.5	169	16.1	+02.5	170	15.2	+02.5	171	14.4	+02.4	172	13.5	+02.5	14
15	183	19.4	+02.5	184	18.6	+02.4	185	17.7	+02.5	186	16.8	+02.5	187	16.0	+02.4	15
16	198	21.9	+02.4	199	21.0	+02.5	200	20.2	+02.4	201	19.3	+02.5	202	18.4	+02.5	16
17	213	24.3	+02.5	214	23.5	+02.4	215	22.6	+02.5	216	21.8	+02.4	217	20.9	+02.5	17
18	228	26.8	+02.5	229	25.9	+02.5	230	25.1	+02.4	231	24.2	+02.5	232	23.4	+02.4	18
19	243	29.3	+02.4	244	28.4	+02.5	245	27.5	+02.5	246	26.7	+02.4	247	25.8	+02.5	19
20	258	31.7	+02.5	259	30.9	+02.4	260	30.0	+02.5	261	29.1	+02.5	262	28.3	+02.4	20
21	273	34.2	+02.5	274	33.3	+02.5	275	32.5	+02.4	276	31.6	+02.5	277	30.7	+02.5	21
22	288	36.7	+02.4	289	35.8	+02.5	290	34.9	+02.5	291	34.1	+02.4	292	33.2	+02.5	22
23	303	39.1	+02.5	304	38.3	+02.4	305	37.4	+02.5	306	36.5	+02.5	307	35.7	+02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.4	N 29 12.5	Gienah	175 46.6	S 17 39.6
Ankaa	353 09.8	S 42 11.0	Acrux	173 03.5	S 63 13.2
Schedir	349 33.8	N 56 39.1	Gacrux	171 55.1	S 57 14.0
Diphda	348 50.0	S 17 52.0	Alioth	166 15.9	N 55 50.9
Achernar	335 22.2	S 57 07.4	Spica	158 25.3	S 11 16.3
Hamal	327 54.3	N 23 33.8	Alkaid	152 54.4	N 49 12.7
Polaris	315 20.1	N 89 20.9	Hadar	148 40.0	S 60 28.7
Acamar	315 13.9	S 40 12.9	Menkent	148 00.7	S 36 28.3
Menkar	314 09.1	N 04 10.5	Arcturus	145 50.2	N 19 05.2
Mirfak	308 32.3	N 49 56.0	Rigel Kentaurus	139 41.6	S 60 55.8
Aldebaran	290 43.0	N 16 33.2	Zubenelgenubi	136 59.0	S 16 07.8
Capella	280 26.3	N 46 01.1	Kocab	137 19.9	N 74 04.4
Rigel	281 06.7	S 08 10.5	Alphecca	126 06.1	N 26 38.9
Bellatrix	278 26.0	N 06 22.2	Antares	112 19.2	S 26 28.7
Elnath	278 05.6	N 28 37.5	Atria	107 15.5	S 69 04.1
Alnilam	275 40.8	S 01 11.2	Sabik	102 05.8	S 15 45.0
Betelgeuze	270 55.3	N 07 24.7	Shaula	96 13.9	S 37 07.2
Canopus	263 54.1	S 52 42.2	Rasalhague	96 00.9	N 12 32.9
Sirius	258 28.8	S 16 44.2	Etamin	90 43.1	N 51 29.4
Adhara	255 08.4	S 28 59.9	Kaus Australis	83 35.9	S 34 22.4
Castor	246 00.9	N 31 50.5	Vega	80 34.8	N 38 48.3
Procyon	244 53.8	N 05 10.6	Nunki	75 50.9	S 26 16.1
Pollux	243 20.7	N 27 58.5	Albireo	67 05.9	N 28 00.4
Avior	234 16.4	S 59 34.6	Altair	62 02.5	N 08 55.5
Suhail	222 48.7	S 43 31.1	Peacock	53 09.6	S 56 39.9
Miaplacidus	221 39.5	S 69 48.3	Deneb	49 27.2	N 45 21.5
Alphard	217 50.8	S 08 45.0	Enif	33 41.2	N 09 58.5
Regulus	207 37.6	N 11 51.9	Alnair	27 36.0	S 46 51.2
Dubhe	193 45.0	N 61 38.3	Formalhaut	15 17.4	S 29 30.3
Denebola	182 27.9	N 14 27.4	Markab	13 32.4	N 15 19.3

2021 - First Point of Aries / Selected Stars

UT	day 226 of 365		day 227 of 365		day 228 of 365		day 229 of 365		day 230 of 365		UT					
	August 14		August 15		August 16		August 17		August 18							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	322	38.1	+02.5	323	37.3	+02.4	324	36.4	+02.5	325	35.6	+02.4	326	34.7	+02.5	00
01	337	40.6	+02.5	338	39.7	+02.5	339	38.9	+02.4	340	38.0	+02.5	341	37.2	+02.4	01
02	352	43.1	+02.4	353	42.2	+02.5	354	41.3	+02.5	355	40.5	+02.4	356	39.6	+02.5	02
03	7	45.5	+02.5	8	44.7	+02.4	9	43.8	+02.5	10	42.9	+02.5	11	42.1	+02.5	03
04	22	48.0	+02.5	23	47.1	+02.5	24	46.3	+02.4	25	45.4	+02.5	26	44.6	+02.4	04
05	37	50.5	+02.4	38	49.6	+02.5	39	48.7	+02.5	40	47.9	+02.4	41	47.0	+02.5	05
06	52	52.9	+02.5	53	52.1	+02.4	54	51.2	+02.5	55	50.3	+02.5	56	49.5	+02.4	06
07	67	55.4	+02.5	68	54.5	+02.5	69	53.7	+02.4	70	52.8	+02.5	71	51.9	+02.5	07
08	82	57.9	+02.4	83	57.0	+02.5	84	56.1	+02.5	85	55.3	+02.4	86	54.4	+02.5	08
09	98	00.3	+02.5	98	59.5	+02.4	99	58.6	+02.5	100	57.7	+02.5	101	56.9	+02.4	09
10	113	02.8	+02.4	114	01.9	+02.5	115	01.1	+02.4	116	00.2	+02.5	116	59.3	+02.5	10
11	128	05.2	+02.5	129	04.4	+02.4	130	03.5	+02.5	131	02.7	+02.4	132	01.8	+02.5	11
12	143	07.7	+02.5	144	06.8	+02.5	145	06.0	+02.5	146	05.1	+02.5	147	04.3	+02.4	12
13	158	10.2	+02.4	159	09.3	+02.5	160	08.5	+02.4	161	07.6	+02.5	162	06.7	+02.5	13
14	173	12.6	+02.5	174	11.8	+02.4	175	10.9	+02.5	176	10.1	+02.4	177	09.2	+02.5	14
15	188	15.1	+02.5	189	14.2	+02.5	190	13.4	+02.4	191	12.5	+02.5	192	11.7	+02.4	15
16	203	17.6	+02.4	204	16.7	+02.5	205	15.8	+02.5	206	15.0	+02.4	207	14.1	+02.5	16
17	218	20.0	+02.5	219	19.2	+02.4	220	18.3	+02.5	221	17.4	+02.5	222	16.6	+02.5	17
18	233	22.5	+02.5	234	21.6	+02.5	235	20.8	+02.4	236	19.9	+02.5	237	19.1	+02.4	18
19	248	25.0	+02.4	249	24.1	+02.5	250	23.2	+02.5	251	22.4	+02.4	252	21.5	+02.5	19
20	263	27.4	+02.5	264	26.6	+02.4	265	25.7	+02.5	266	24.8	+02.5	267	24.0	+02.4	20
21	278	29.9	+02.4	279	29.0	+02.5	280	28.2	+02.4	281	27.3	+02.5	282	26.4	+02.5	21
22	293	32.3	+02.5	294	31.5	+02.5	295	30.6	+02.5	296	29.8	+02.4	297	28.9	+02.5	22
23	308	34.8	+02.5	309	34.0	+02.4	310	33.1	+02.5	311	32.2	+02.5	312	31.4	+02.4	23

	SHA	Dec		SHA	Dec				
	° ' "	° ' "		° ' "	° ' "				
Alpheratz	357	37.4	N 29	12.5	Gienah	175	46.6	S 17	39.6
Ankaa	353	09.7	S 42	11.0	Acrux	173	03.6	S 63	13.2
Schedir	349	33.8	N 56	39.1	Gacrux	171	55.1	S 57	14.0
Diphda	348	50.0	S 17	52.0	Alioth	166	15.9	N 55	50.9
Achernar	335	22.1	S 57	07.4	Spica	158	25.4	S 11	16.3
Hamal	327	54.3	N 23	33.8	Alkaid	152	54.4	N 49	12.7
Polaris	315	17.8	N 89	20.9	Hadar	148	40.1	S 60	28.7
Acamar	315	13.9	S 40	12.9	Menkent	148	00.7	S 36	28.3
Menkar	314	09.0	N 04	10.5	Arcturus	145	50.2	N 19	05.2
Mirfak	308	32.2	N 49	56.0	Rigel Kentaurus	139	41.7	S 60	55.7
Aldebaran	290	42.9	N 16	33.2	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.3	N 46	01.1	Kocab	137	20.0	N 74	04.4
Rigel	281	06.7	S 08	10.5	Alphecca	126	06.1	N 26	38.9
Bellatrix	278	26.0	N 06	22.2	Antares	112	19.2	S 26	28.7
Elnath	278	05.6	N 28	37.5	Atria	107	15.6	S 69	04.1
Alnilam	275	40.7	S 01	11.2	Sabik	102	05.8	S 15	45.0
Betelgeuze	270	55.3	N 07	24.7	Shaula	96	13.9	S 37	07.2
Canopus	263	54.0	S 52	42.2	Rasalhague	96	01.0	N 12	32.9
Sirius	258	28.8	S 16	44.2	Etamin	90	43.1	N 51	29.4
Adhara	255	08.3	S 28	59.9	Kaus Australis	83	35.9	S 34	22.4
Castor	246	00.9	N 31	50.5	Vega	80	34.9	N 38	48.3
Procyon	244	53.8	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.7	N 27	58.5	Albireo	67	06.0	N 28	00.4
Avior	234	16.4	S 59	34.6	Altair	62	02.5	N 08	55.5
Suhail	222	48.7	S 43	31.0	Peacock	53	09.6	S 56	39.9
Miaplacidus	221	39.5	S 69	48.3	Deneb	49	27.2	N 45	21.5
Alphard	217	50.8	S 08	45.0	Enif	33	41.2	N 09	58.5
Regulus	207	37.6	N 11	51.9	Alnair	27	36.0	S 46	51.3
Dubhe	193	45.0	N 61	38.3	Formalhaut	15	17.4	S 29	30.3
Denebola	182	27.9	N 14	27.4	Markab	13	32.4	N 15	19.3

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UT	day 231 of 365			day 232 of 365			day 233 of 365			day 234 of 365			day 235 of 365			UT		
	August 19			August 20			August 21			August 22			August 23					
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA				
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
00	327	33.8	+02.5	328	33.0	+02.4	329	32.1	+02.5	330	31.3	+02.4	331	30.4	+02.5	00		
01	342	36.3	+02.5	343	35.4	+02.5	344	34.6	+02.4	345	33.7	+02.5	346	32.9	+02.4	01		
02	357	38.8	+02.4	358	37.9	+02.5	359	37.0	+02.5	0	36.2	+02.4	1	35.3	+02.5	02		
03	12	41.2	+02.5	13	40.4	+02.4	14	39.5	+02.5	15	38.6	+02.5	16	37.8	+02.5	03		
04	27	43.7	+02.5	28	42.8	+02.5	29	42.0	+02.4	30	41.1	+02.5	31	40.3	+02.4	04		
05	42	46.2	+02.4	43	45.3	+02.5	44	44.4	+02.5	45	43.6	+02.4	46	42.7	+02.5	05		
06	57	48.6	+02.5	58	47.8	+02.4	59	46.9	+02.5	60	46.0	+02.5	61	45.2	+02.4	06		
07	72	51.1	+02.5	73	50.2	+02.5	74	49.4	+02.4	75	48.5	+02.5	76	47.6	+02.5	07		
08	87	53.6	+02.4	88	52.7	+02.5	89	51.8	+02.5	90	51.0	+02.4	91	50.1	+02.5	08		
09	102	56.0	+02.5	103	55.2	+02.4	104	54.3	+02.5	105	53.4	+02.5	106	52.6	+02.4	09		
10	117	58.5	+02.4	118	57.6	+02.5	119	56.8	+02.4	120	55.9	+02.5	121	55.0	+02.5	10		
11	133	00.9	+02.5	134	00.1	+02.4	134	59.2	+02.5	135	58.4	+02.4	136	57.5	+02.5	11		
12	148	03.4	+02.5	149	02.5	+02.5	150	01.7	+02.5	151	00.8	+02.5	151	60.0	+02.4	12		
13	163	05.9	+02.4	164	05.0	+02.5	165	04.2	+02.4	166	03.3	+02.5	167	02.4	+02.5	13		
14	178	08.3	+02.5	179	07.5	+02.4	180	06.6	+02.5	181	05.8	+02.4	182	04.9	+02.5	14		
15	193	10.8	+02.5	194	09.9	+02.5	195	09.1	+02.4	196	08.2	+02.5	197	07.4	+02.4	15		
16	208	13.3	+02.4	209	12.4	+02.5	210	11.5	+02.5	211	10.7	+02.4	212	09.8	+02.5	16		
17	223	15.7	+02.5	224	14.9	+02.4	225	14.0	+02.5	226	13.1	+02.5	227	12.3	+02.4	17		
18	238	18.2	+02.5	239	17.3	+02.5	240	16.5	+02.4	241	15.6	+02.5	242	14.7	+02.5	18		
19	253	20.7	+02.4	254	19.8	+02.5	255	18.9	+02.5	256	18.1	+02.4	257	17.2	+02.5	19		
20	268	23.1	+02.5	269	22.3	+02.4	270	21.4	+02.5	271	20.5	+02.5	272	19.7	+02.4	20		
21	283	25.6	+02.5	284	24.7	+02.5	285	23.9	+02.4	286	23.0	+02.5	287	22.1	+02.5	21		
22	298	28.1	+02.4	299	27.2	+02.5	300	26.3	+02.5	301	25.5	+02.4	302	24.6	+02.5	22		
23	313	30.5	+02.5	314	29.7	+02.4	315	28.8	+02.5	316	27.9	+02.5	317	27.1	+02.4	23		

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	37.4	N 29	12.6	Gienah	175	46.6	S 17	39.6
Ankaa	353	09.7	S 42	11.0	Acrux	173	03.6	S 63	13.2
Schedir	349	33.7	N 56	39.1	Gacrux	171	55.1	S 57	14.0
Diphda	348	49.9	S 17	52.0	Alioth	166	15.9	N 55	50.9
Achernar	335	22.1	S 57	07.4	Spica	158	25.4	S 11	16.3
Hamal	327	54.2	N 23	33.8	Alkaid	152	54.4	N 49	12.7
Polaris	315	14.9	N 89	20.9	Hadar	148	40.1	S 60	28.7
Acamar	315	13.8	S 40	12.9	Menkent	148	00.7	S 36	28.3
Menkar	314	09.0	N 04	10.5	Arcturus	145	50.2	N 19	05.2
Mirfak	308	32.2	N 49	56.0	Rigel Kentaurus	139	41.7	S 60	55.7
Aldebaran	290	42.9	N 16	33.2	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.2	N 46	01.1	Kocab	137	20.1	N 74	04.4
Rigel	281	06.7	S 08	10.5	Alphecca	126	06.1	N 26	38.9
Bellatrix	278	26.0	N 06	22.2	Antares	112	19.2	S 26	28.7
Elnath	278	05.5	N 28	37.5	Atria	107	15.6	S 69	04.1
Alnilam	275	40.7	S 01	11.2	Sabik	102	05.8	S 15	45.0
Betelgeuze	270	55.3	N 07	24.7	Shaula	96	13.9	S 37	07.2
Canopus	263	54.0	S 52	42.2	Rasalhague	96	01.0	N 12	32.9
Sirius	258	28.7	S 16	44.1	Etamin	90	43.2	N 51	29.4
Adhara	255	08.3	S 28	59.9	Kaus Australis	83	35.9	S 34	22.4
Castor	246	00.9	N 31	50.5	Vega	80	34.9	N 38	48.3
Procyon	244	53.8	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.7	N 27	58.5	Albireo	67	06.0	N 28	00.5
Avior	234	16.4	S 59	34.5	Altair	62	02.5	N 08	55.5
Suhail	222	48.7	S 43	31.0	Peacock	53	09.6	S 56	39.9
Miaplacidus	221	39.5	S 69	48.2	Deneb	49	27.2	N 45	21.5
Alphard	217	50.8	S 08	45.0	Enif	33	41.2	N 09	58.5
Regulus	207	37.6	N 11	51.9	Alnair	27	36.0	S 46	51.3
Dubhe	193	45.0	N 61	38.3	Formalhaut	15	17.4	S 29	30.3
Denebola	182	27.9	N 14	27.4	Markab	13	32.3	N 15	19.3

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UT	day 236 of 365		day 237 of 365		day 238 of 365		day 239 of 365		day 240 of 365		UT					
	August 24		August 25		August 26		August 27		August 28							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	332	29.5	+02.5	333	28.7	+02.4	334	27.8	+02.5	335	26.9	+02.5	336	26.1	+02.4	00
01	347	32.0	+02.5	348	31.1	+02.5	349	30.3	+02.4	350	29.4	+02.5	351	28.5	+02.5	01
02	2	34.5	+02.4	3	33.6	+02.5	4	32.7	+02.5	5	31.9	+02.4	6	31.0	+02.5	02
03	17	36.9	+02.5	18	36.1	+02.4	19	35.2	+02.5	20	34.3	+02.5	21	33.5	+02.4	03
04	32	39.4	+02.5	33	38.5	+02.5	34	37.7	+02.4	35	36.8	+02.5	36	35.9	+02.5	04
05	47	41.9	+02.4	48	41.0	+02.5	49	40.1	+02.5	50	39.3	+02.4	51	38.4	+02.5	05
06	62	44.3	+02.5	63	43.5	+02.4	64	42.6	+02.5	65	41.7	+02.5	66	40.9	+02.4	06
07	77	46.8	+02.4	78	45.9	+02.5	79	45.1	+02.4	80	44.2	+02.5	81	43.3	+02.5	07
08	92	49.2	+02.5	93	48.4	+02.4	94	47.5	+02.5	95	46.7	+02.4	96	45.8	+02.5	08
09	107	51.7	+02.5	108	50.8	+02.5	109	50.0	+02.4	110	49.1	+02.5	111	48.3	+02.4	09
10	122	54.2	+02.4	123	53.3	+02.5	124	52.4	+02.5	125	51.6	+02.4	126	50.7	+02.5	10
11	137	56.6	+02.5	138	55.8	+02.4	139	54.9	+02.5	140	54.0	+02.5	141	53.2	+02.4	11
12	152	59.1	+02.5	153	58.2	+02.5	154	57.4	+02.4	155	56.5	+02.5	156	55.6	+02.5	12
13	168	01.6	+02.4	169	00.7	+02.5	169	59.8	+02.5	170	59.0	+02.4	171	58.1	+02.5	13
14	183	04.0	+02.5	184	03.2	+02.4	185	02.3	+02.5	186	01.4	+02.5	187	00.6	+02.4	14
15	198	06.5	+02.5	199	05.6	+02.5	200	04.8	+02.4	201	03.9	+02.5	202	03.0	+02.5	15
16	213	09.0	+02.4	214	08.1	+02.5	215	07.2	+02.5	216	06.4	+02.4	217	05.5	+02.5	16
17	228	11.4	+02.5	229	10.6	+02.4	230	09.7	+02.5	231	08.8	+02.5	232	08.0	+02.4	17
18	243	13.9	+02.4	244	13.0	+02.5	245	12.2	+02.4	246	11.3	+02.5	247	10.4	+02.5	18
19	258	16.3	+02.5	259	15.5	+02.5	260	14.6	+02.5	261	13.8	+02.4	262	12.9	+02.5	19
20	273	18.8	+02.5	274	18.0	+02.4	275	17.1	+02.5	276	16.2	+02.5	277	15.4	+02.4	20
21	288	21.3	+02.4	289	20.4	+02.5	290	19.6	+02.4	291	18.7	+02.5	292	17.8	+02.5	21
22	303	23.7	+02.5	304	22.9	+02.4	305	22.0	+02.5	306	21.2	+02.4	307	20.3	+02.5	22
23	318	26.2	+02.5	319	25.3	+02.5	320	24.5	+02.4	321	23.6	+02.5	322	22.8	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.3	N 29	12.6	Gienah	175	46.6	S 17	39.6
Ankaa	353	09.7	S 42	11.1	Acrux	173	03.6	S 63	13.2
Schedir	349	33.7	N 56	39.2	Gacrux	171	55.1	S 57	14.0
Diphda	348	49.9	S 17	52.0	Alioth	166	16.0	N 55	50.9
Achernar	335	22.0	S 57	07.4	Spica	158	25.4	S 11	16.3
Hamal	327	54.2	N 23	33.8	Alkaid	152	54.4	N 49	12.7
Polaris	315	12.6	N 89	21.0	Hadar	148	40.1	S 60	28.7
Acamar	315	13.8	S 40	12.9	Menkent	148	00.7	S 36	28.3
Menkar	314	08.9	N 04	10.5	Arcturus	145	50.2	N 19	05.2
Mirfak	308	32.1	N 49	56.0	Rigel Kentaurus	139	41.7	S 60	55.7
Aldebaran	290	42.9	N 16	33.2	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.1	N 46	01.1	Kocab	137	20.2	N 74	04.4
Rigel	281	06.6	S 08	10.5	Alphecca	126	06.2	N 26	38.9
Bellatrix	278	25.9	N 06	22.2	Antares	112	19.3	S 26	28.7
Elnath	278	05.5	N 28	37.5	Atria	107	15.7	S 69	04.1
Alnilam	275	40.7	S 01	11.2	Sabik	102	05.8	S 15	45.0
Betelgeuze	270	55.2	N 07	24.7	Shaula	96	13.9	S 37	07.2
Canopus	263	53.9	S 52	42.1	Rasalhague	96	01.0	N 12	32.9
Sirius	258	28.7	S 16	44.1	Etamin	90	43.2	N 51	29.5
Adhara	255	08.3	S 28	59.9	Kaus Australis	83	35.9	S 34	22.4
Castor	246	00.8	N 31	50.5	Vega	80	34.9	N 38	48.4
Procyon	244	53.8	N 05	10.6	Nunki	75	50.9	S 26	16.1
Pollux	243	20.7	N 27	58.5	Albireo	67	06.0	N 28	00.5
Avior	234	16.4	S 59	34.5	Altair	62	02.5	N 08	55.5
Suhail	222	48.7	S 43	31.0	Peacock	53	09.6	S 56	39.9
Miaplacidus	221	39.5	S 69	48.2	Deneb	49	27.2	N 45	21.5
Alphard	217	50.8	S 08	45.0	Enif	33	41.2	N 09	58.5
Regulus	207	37.6	N 11	51.9	Alnair	27	36.0	S 46	51.3
Dubhe	193	45.0	N 61	38.3	Formalhaut	15	17.3	S 29	30.3
Denebola	182	27.9	N 14	27.4	Markab	13	32.3	N 15	19.3

2021 - First Point of Aries / Selected Stars

UT	day 241 of 365 August 29		day 242 of 365 August 30		day 243 of 365 August 31		day 244 of 365 September 1		day 245 of 365 September 2		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	337 25.2	+02.5	338 24.4	+02.4	339 23.5	+02.5	340 22.6	+02.5	341 21.8	+02.4	00
01	352 27.7	+02.4	353 26.8	+02.5	354 26.0	+02.4	355 25.1	+02.5	356 24.2	+02.5	01
02	7 30.1	+02.5	8 29.3	+02.5	9 28.4	+02.5	10 27.6	+02.4	11 26.7	+02.5	02
03	22 32.6	+02.5	23 31.8	+02.4	24 30.9	+02.5	25 30.0	+02.5	26 29.2	+02.4	03
04	37 35.1	+02.4	38 34.2	+02.5	39 33.4	+02.4	40 32.5	+02.5	41 31.6	+02.5	04
05	52 37.5	+02.5	53 36.7	+02.4	54 35.8	+02.5	55 35.0	+02.4	56 34.1	+02.5	05
06	67 40.0	+02.5	68 39.1	+02.5	69 38.3	+02.4	70 37.4	+02.5	71 36.6	+02.4	06
07	82 42.5	+02.4	83 41.6	+02.5	84 40.7	+02.5	85 39.9	+02.4	86 39.0	+02.5	07
08	97 44.9	+02.5	98 44.1	+02.4	99 43.2	+02.5	100 42.3	+02.5	101 41.5	+02.5	08
09	112 47.4	+02.5	113 46.5	+02.5	114 45.7	+02.4	115 44.8	+02.5	116 44.0	+02.4	09
10	127 49.9	+02.4	128 49.0	+02.5	129 48.1	+02.5	130 47.3	+02.4	131 46.4	+02.5	10
11	142 52.3	+02.5	143 51.5	+02.4	144 50.6	+02.5	145 49.7	+02.5	146 48.9	+02.4	11
12	157 54.8	+02.5	158 53.9	+02.5	159 53.1	+02.4	160 52.2	+02.5	161 51.3	+02.5	12
13	172 57.3	+02.4	173 56.4	+02.5	174 55.5	+02.5	175 54.7	+02.4	176 53.8	+02.5	13
14	187 59.7	+02.5	188 58.9	+02.4	189 58.0	+02.5	190 57.1	+02.5	191 56.3	+02.4	14
15	203 02.2	+02.4	204 01.3	+02.5	205 00.5	+02.4	205 59.6	+02.5	206 58.7	+02.5	15
16	218 04.6	+02.5	219 03.8	+02.4	220 02.9	+02.5	221 02.1	+02.4	222 01.2	+02.5	16
17	233 07.1	+02.5	234 06.2	+02.5	235 05.4	+02.5	236 04.5	+02.5	237 03.7	+02.4	17
18	248 09.6	+02.4	249 08.7	+02.5	250 07.9	+02.4	251 07.0	+02.5	252 06.1	+02.5	18
19	263 12.0	+02.5	264 11.2	+02.4	265 10.3	+02.5	266 09.5	+02.4	267 08.6	+02.5	19
20	278 14.5	+02.5	279 13.6	+02.5	280 12.8	+02.4	281 11.9	+02.5	282 11.1	+02.4	20
21	293 17.0	+02.4	294 16.1	+02.5	295 15.2	+02.5	296 14.4	+02.4	297 13.5	+02.5	21
22	308 19.4	+02.5	309 18.6	+02.4	310 17.7	+02.5	311 16.8	+02.5	312 16.0	+02.5	22
23	323 21.9	+02.5	324 21.0	+02.5	325 20.2	+02.4	326 19.3	+02.5	327 18.5	+02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.3	N 29 12.6	Gienah	175 46.6	S 17 39.6
Ankaa	353 09.6	S 42 11.1	Acrux	173 03.7	S 63 13.1
Schedir	349 33.7	N 56 39.2	Gacrux	171 55.2	S 57 14.0
Diphda	348 49.9	S 17 52.0	Alioth	166 16.0	N 55 50.9
Achernar	335 22.0	S 57 07.4	Spica	158 25.4	S 11 16.3
Hamal	327 54.2	N 23 33.8	Alkaid	152 54.5	N 49 12.7
Polaris	315 10.2	N 89 21.0	Hadar	148 40.2	S 60 28.7
Acamar	315 13.7	S 40 12.9	Menkent	148 00.8	S 36 28.3
Menkar	314 08.9	N 04 10.5	Arcturus	145 50.2	N 19 05.2
Mirfak	308 32.1	N 49 56.0	Rigel Kentaurus	139 41.8	S 60 55.7
Aldebaran	290 42.8	N 16 33.2	Zubenelgenubi	136 59.1	S 16 07.7
Capella	280 26.1	N 46 01.1	Kocab	137 20.3	N 74 04.4
Rigel	281 06.6	S 08 10.5	Alphecca	126 06.2	N 26 38.9
Bellatrix	278 25.9	N 06 22.2	Antares	112 19.3	S 26 28.7
Elnath	278 05.5	N 28 37.5	Atria	107 15.8	S 69 04.1
Alnilam	275 40.6	S 01 11.2	Sabik	102 05.9	S 15 45.0
Betelgeuze	270 55.2	N 07 24.7	Shaula	96 14.0	S 37 07.2
Canopus	263 53.9	S 52 42.1	Rasalhague	96 01.0	N 12 33.0
Sirius	258 28.7	S 16 44.1	Etamin	90 43.2	N 51 29.5
Adhara	255 08.2	S 28 59.8	Kaus Australis	83 35.9	S 34 22.4
Castor	246 00.8	N 31 50.5	Vega	80 34.9	N 38 48.4
Procyon	244 53.7	N 05 10.6	Nunki	75 50.9	S 26 16.1
Pollux	243 20.6	N 27 58.5	Albireo	67 06.0	N 28 00.5
Avior	234 16.3	S 59 34.5	Altair	62 02.5	N 08 55.5
Suhail	222 48.7	S 43 31.0	Peacock	53 09.6	S 56 40.0
Miaplacidus	221 39.5	S 69 48.2	Deneb	49 27.2	N 45 21.6
Alphard	217 50.8	S 08 45.0	Enif	33 41.2	N 09 58.5
Regulus	207 37.6	N 11 51.9	Alnair	27 36.0	S 46 51.3
Dubhe	193 45.0	N 61 38.3	Formalhaut	15 17.3	S 29 30.3
Denebola	182 27.9	N 14 27.3	Markab	13 32.3	N 15 19.3

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UT	day 246 of 365		day 247 of 365		day 248 of 365		day 249 of 365		day 250 of 365		UT					
	September 3		September 4		September 5		September 6		September 7							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	342	20.9	+02.5	343	20.1	+02.4	344	19.2	+02.5	345	18.3	+02.5	346	17.5	+02.4	00
01	357	23.4	+02.4	358	22.5	+02.5	359	21.7	+02.4	0	20.8	+02.5	1	19.9	+02.5	01
02	12	25.8	+02.5	13	25.0	+02.4	14	24.1	+02.5	15	23.3	+02.4	16	22.4	+02.5	02
03	27	28.3	+02.5	28	27.4	+02.5	29	26.6	+02.5	30	25.7	+02.5	31	24.9	+02.4	03
04	42	30.8	+02.4	43	29.9	+02.5	44	29.1	+02.4	45	28.2	+02.5	46	27.3	+02.5	04
05	57	33.2	+02.5	58	32.4	+02.4	59	31.5	+02.5	60	30.7	+02.4	61	29.8	+02.5	05
06	72	35.7	+02.5	73	34.8	+02.5	74	34.0	+02.4	75	33.1	+02.5	76	32.3	+02.4	06
07	87	38.2	+02.4	88	37.3	+02.5	89	36.4	+02.5	90	35.6	+02.4	91	34.7	+02.5	07
08	102	40.6	+02.5	103	39.8	+02.4	104	38.9	+02.5	105	38.0	+02.5	106	37.2	+02.4	08
09	117	43.1	+02.5	118	42.2	+02.5	119	41.4	+02.4	120	40.5	+02.5	121	39.6	+02.5	09
10	132	45.6	+02.4	133	44.7	+02.5	134	43.8	+02.5	135	43.0	+02.4	136	42.1	+02.5	10
11	147	48.0	+02.5	148	47.2	+02.4	149	46.3	+02.5	150	45.4	+02.5	151	44.6	+02.4	11
12	162	50.5	+02.4	163	49.6	+02.5	164	48.8	+02.4	165	47.9	+02.5	166	47.0	+02.5	12
13	177	52.9	+02.5	178	52.1	+02.5	179	51.2	+02.5	180	50.4	+02.4	181	49.5	+02.5	13
14	192	55.4	+02.5	193	54.6	+02.4	194	53.7	+02.5	195	52.8	+02.5	196	52.0	+02.4	14
15	207	57.9	+02.4	208	57.0	+02.5	209	56.2	+02.4	210	55.3	+02.5	211	54.4	+02.5	15
16	223	00.3	+02.5	223	59.5	+02.4	224	58.6	+02.5	225	57.8	+02.4	226	56.9	+02.5	16
17	238	02.8	+02.5	239	01.9	+02.5	240	01.1	+02.4	241	00.2	+02.5	241	59.4	+02.4	17
18	253	05.3	+02.4	254	04.4	+02.5	255	03.5	+02.5	256	02.7	+02.4	257	01.8	+02.5	18
19	268	07.7	+02.5	269	06.9	+02.4	270	06.0	+02.5	271	05.1	+02.5	272	04.3	+02.5	19
20	283	10.2	+02.5	284	09.3	+02.5	285	08.5	+02.4	286	07.6	+02.5	287	06.8	+02.4	20
21	298	12.7	+02.4	299	11.8	+02.5	300	10.9	+02.5	301	10.1	+02.4	302	09.2	+02.5	21
22	313	15.1	+02.5	314	14.3	+02.4	315	13.4	+02.5	316	12.5	+02.5	317	11.7	+02.4	22
23	328	17.6	+02.5	329	16.7	+02.5	330	15.9	+02.4	331	15.0	+02.5	332	14.1	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.3	N 29	12.6	Gienah	175	46.6	S 17	39.6
Ankaa	353	09.6	S 42	11.1	Acrux	173	03.7	S 63	13.1
Schedir	349	33.6	N 56	39.2	Gacrux	171	55.2	S 57	13.9
Diphda	348	49.8	S 17	52.0	Alioth	166	16.0	N 55	50.8
Achernar	335	21.9	S 57	07.4	Spica	158	25.4	S 11	16.3
Hamal	327	54.1	N 23	33.9	Alkaid	152	54.5	N 49	12.7
Polaris	315	07.5	N 89	21.0	Hadar	148	40.2	S 60	28.7
Acamar	315	13.7	S 40	12.9	Menkent	148	00.8	S 36	28.3
Menkar	314	08.9	N 04	10.5	Arcturus	145	50.3	N 19	05.2
Mirfak	308	32.0	N 49	56.0	Rigel Kentaurus	139	41.8	S 60	55.7
Aldebaran	290	42.8	N 16	33.2	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	26.0	N 46	01.1	Kocab	137	20.3	N 74	04.3
Rigel	281	06.6	S 08	10.5	Alphecca	126	06.2	N 26	38.9
Bellatrix	278	25.9	N 06	22.2	Antares	112	19.3	S 26	28.7
Elnath	278	05.4	N 28	37.5	Atria	107	15.8	S 69	04.1
Alnilam	275	40.6	S 01	11.2	Sabik	102	05.9	S 15	45.0
Betelgeuze	270	55.2	N 07	24.7	Shaula	96	14.0	S 37	07.2
Canopus	263	53.8	S 52	42.1	Rasalhague	96	01.0	N 12	33.0
Sirius	258	28.6	S 16	44.1	Etamin	90	43.3	N 51	29.5
Adhara	255	08.2	S 28	59.8	Kaus Australis	83	36.0	S 34	22.4
Castor	246	00.8	N 31	50.5	Vega	80	34.9	N 38	48.4
Procyon	244	53.7	N 05	10.6	Nunki	75	51.0	S 26	16.1
Pollux	243	20.6	N 27	58.5	Albireo	67	06.0	N 28	00.5
Avior	234	16.3	S 59	34.5	Altair	62	02.5	N 08	55.5
Suhail	222	48.7	S 43	31.0	Peacock	53	09.6	S 56	40.0
Miaplacidus	221	39.4	S 69	48.2	Deneb	49	27.2	N 45	21.6
Alphard	217	50.7	S 08	45.0	Enif	33	41.2	N 09	58.5
Regulus	207	37.6	N 11	51.9	Alnair	27	36.0	S 46	51.3
Dubhe	193	45.0	N 61	38.2	Formalhaut	15	17.3	S 29	30.3
Denebola	182	27.9	N 14	27.3	Markab	13	32.3	N 15	19.4

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UT	day 251 of 365 September 8		day 252 of 365 September 9		day 253 of 365 September 10		day 254 of 365 September 11		day 255 of 365 September 12		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	347	16.6 +02.5	348	15.7 +02.5	349	14.9 +02.4	350	14.0 +02.5	351	13.2 +02.4	00
01	2	19.1 +02.4	3	18.2 +02.5	4	17.3 +02.5	5	16.5 +02.4	6	15.6 +02.5	01
02	17	21.5 +02.5	18	20.7 +02.4	19	19.8 +02.5	20	18.9 +02.5	21	18.1 +02.4	02
03	32	24.0 +02.5	33	23.1 +02.5	34	22.3 +02.4	35	21.4 +02.5	36	20.5 +02.5	03
04	47	26.5 +02.4	48	25.6 +02.5	49	24.7 +02.5	50	23.9 +02.4	51	23.0 +02.5	04
05	62	28.9 +02.5	63	28.1 +02.4	64	27.2 +02.5	65	26.3 +02.5	66	25.5 +02.4	05
06	77	31.4 +02.5	78	30.5 +02.5	79	29.7 +02.4	80	28.8 +02.5	81	27.9 +02.5	06
07	92	33.9 +02.4	93	33.0 +02.5	94	32.1 +02.5	95	31.3 +02.4	96	30.4 +02.5	07
08	107	36.3 +02.5	108	35.5 +02.4	109	34.6 +02.5	110	33.7 +02.5	111	32.9 +02.4	08
09	122	38.8 +02.4	123	37.9 +02.5	124	37.1 +02.4	125	36.2 +02.5	126	35.3 +02.5	09
10	137	41.2 +02.5	138	40.4 +02.4	139	39.5 +02.5	140	38.7 +02.4	141	37.8 +02.5	10
11	152	43.7 +02.5	153	42.8 +02.5	154	42.0 +02.4	155	41.1 +02.5	156	40.3 +02.4	11
12	167	46.2 +02.4	168	45.3 +02.5	169	44.4 +02.5	170	43.6 +02.5	171	42.7 +02.5	12
13	182	48.6 +02.5	183	47.8 +02.4	184	46.9 +02.5	185	46.1 +02.4	186	45.2 +02.5	13
14	197	51.1 +02.5	198	50.2 +02.5	199	49.4 +02.4	200	48.5 +02.5	201	47.7 +02.4	14
15	212	53.6 +02.4	213	52.7 +02.5	214	51.8 +02.5	215	51.0 +02.4	216	50.1 +02.5	15
16	227	56.0 +02.5	228	55.2 +02.4	229	54.3 +02.5	230	53.4 +02.5	231	52.6 +02.4	16
17	242	58.5 +02.5	243	57.6 +02.5	244	56.8 +02.4	245	55.9 +02.5	246	55.0 +02.5	17
18	258	01.0 +02.4	259	00.1 +02.5	259	59.2 +02.5	260	58.4 +02.4	261	57.5 +02.5	18
19	273	03.4 +02.5	274	02.6 +02.4	275	01.7 +02.5	276	00.8 +02.5	276	60.0 +02.4	19
20	288	05.9 +02.5	289	05.0 +02.5	290	04.2 +02.4	291	03.3 +02.5	292	02.4 +02.5	20
21	303	08.4 +02.4	304	07.5 +02.5	305	06.6 +02.5	306	05.8 +02.4	307	04.9 +02.5	21
22	318	10.8 +02.5	319	10.0 +02.4	320	09.1 +02.5	321	08.2 +02.5	322	07.4 +02.4	22
23	333	13.3 +02.4	334	12.4 +02.5	335	11.6 +02.4	336	10.7 +02.5	337	09.8 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.3	N 29 12.6	Gienah	175 46.6	S 17 39.6
Ankaa	353 09.6	S 42 11.1	Acrux	173 03.7	S 63 13.1
Schedir	349 33.6	N 56 39.2	Gacrux	171 55.2	S 57 13.9
Diphda	348 49.8	S 17 52.0	Alioth	166 16.0	N 55 50.8
Achernar	335 21.9	S 57 07.4	Spica	158 25.4	S 11 16.3
Hamal	327 54.1	N 23 33.9	Alkaid	152 54.5	N 49 12.6
Polaris	315 05.4	N 89 21.0	Hadar	148 40.3	S 60 28.7
Acamar	315 13.6	S 40 12.9	Menkent	148 00.8	S 36 28.3
Menkar	314 08.8	N 04 10.5	Arcturus	145 50.3	N 19 05.2
Mirfak	308 31.9	N 49 56.1	Rigel Kentaurus	139 41.9	S 60 55.7
Aldebaran	290 42.7	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 26.0	N 46 01.1	Kocab	137 20.4	N 74 04.3
Rigel	281 06.5	S 08 10.5	Alphecca	126 06.2	N 26 38.8
Bellatrix	278 25.8	N 06 22.2	Antares	112 19.3	S 26 28.7
Elnath	278 05.4	N 28 37.5	Atria	107 15.9	S 69 04.1
Alnilam	275 40.6	S 01 11.2	Sabik	102 05.9	S 15 45.0
Betelgeuze	270 55.1	N 07 24.7	Shaula	96 14.0	S 37 07.2
Canopus	263 53.8	S 52 42.1	Rasalhague	96 01.1	N 12 33.0
Sirius	258 28.6	S 16 44.1	Etamin	90 43.3	N 51 29.5
Adhara	255 08.2	S 28 59.8	Kaus Australis	83 36.0	S 34 22.4
Castor	246 00.7	N 31 50.5	Vega	80 35.0	N 38 48.4
Procyon	244 53.7	N 05 10.6	Nunki	75 51.0	S 26 16.2
Pollux	243 20.6	N 27 58.5	Albireo	67 06.0	N 28 00.5
Avior	234 16.3	S 59 34.5	Altair	62 02.6	N 08 55.5
Suhail	222 48.7	S 43 30.9	Peacock	53 09.6	S 56 40.0
Miaplacidus	221 39.4	S 69 48.1	Deneb	49 27.3	N 45 21.6
Alphard	217 50.7	S 08 45.0	Enif	33 41.2	N 09 58.5
Regulus	207 37.6	N 11 51.9	Alnair	27 36.0	S 46 51.3
Dubhe	193 45.0	N 61 38.2	Formalhaut	15 17.3	S 29 30.4
Denebola	182 27.9	N 14 27.3	Markab	13 32.3	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 256 of 365 September 13		day 257 of 365 September 14		day 258 of 365 September 15		day 259 of 365 September 16		day 260 of 365 September 17		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	352	12.3 +02.5	353	11.4 +02.5	354	10.6 +02.4	355	09.7 +02.5	356	08.9 +02.4	00
01	7	14.8 +02.4	8	13.9 +02.5	9	13.0 +02.5	10	12.2 +02.4	11	11.3 +02.5	01
02	22	17.2 +02.5	23	16.4 +02.4	24	15.5 +02.5	25	14.6 +02.5	26	13.8 +02.4	02
03	37	19.7 +02.5	38	18.8 +02.5	39	18.0 +02.4	40	17.1 +02.5	41	16.2 +02.5	03
04	52	22.2 +02.4	53	21.3 +02.5	54	20.4 +02.5	55	19.6 +02.4	56	18.7 +02.5	04
05	67	24.6 +02.5	68	23.8 +02.4	69	22.9 +02.5	70	22.0 +02.5	71	21.2 +02.4	05
06	82	27.1 +02.4	83	26.2 +02.5	84	25.4 +02.4	85	24.5 +02.5	86	23.6 +02.5	06
07	97	29.5 +02.5	98	28.7 +02.4	99	27.8 +02.5	100	27.0 +02.4	101	26.1 +02.5	07
08	112	32.0 +02.5	113	31.1 +02.5	114	30.3 +02.5	115	29.4 +02.5	116	28.6 +02.4	08
09	127	34.5 +02.4	128	33.6 +02.5	129	32.8 +02.4	130	31.9 +02.5	131	31.0 +02.5	09
10	142	36.9 +02.5	143	36.1 +02.4	144	35.2 +02.5	145	34.4 +02.4	146	33.5 +02.5	10
11	157	39.4 +02.5	158	38.5 +02.5	159	37.7 +02.4	160	36.8 +02.5	161	36.0 +02.4	11
12	172	41.9 +02.4	173	41.0 +02.5	174	40.1 +02.5	175	39.3 +02.4	176	38.4 +02.5	12
13	187	44.3 +02.5	188	43.5 +02.4	189	42.6 +02.5	190	41.7 +02.5	191	40.9 +02.5	13
14	202	46.8 +02.5	203	45.9 +02.5	204	45.1 +02.4	205	44.2 +02.5	206	43.4 +02.4	14
15	217	49.3 +02.4	218	48.4 +02.5	219	47.5 +02.5	220	46.7 +02.4	221	45.8 +02.5	15
16	232	51.7 +02.5	233	50.9 +02.4	234	50.0 +02.5	235	49.1 +02.5	236	48.3 +02.4	16
17	247	54.2 +02.4	248	53.3 +02.5	249	52.5 +02.4	250	51.6 +02.5	251	50.7 +02.5	17
18	262	56.6 +02.5	263	55.8 +02.5	264	54.9 +02.5	265	54.1 +02.4	266	53.2 +02.5	18
19	277	59.1 +02.5	278	58.3 +02.4	279	57.4 +02.5	280	56.5 +02.5	281	55.7 +02.4	19
20	293	01.6 +02.4	294	00.7 +02.5	294	59.9 +02.4	295	59.0 +02.5	296	58.1 +02.5	20
21	308	04.0 +02.5	309	03.2 +02.4	310	02.3 +02.5	311	01.5 +02.4	312	00.6 +02.5	21
22	323	06.5 +02.5	324	05.6 +02.5	325	04.8 +02.5	326	03.9 +02.5	327	03.1 +02.4	22
23	338	09.0 +02.4	339	08.1 +02.5	340	07.3 +02.4	341	06.4 +02.5	342	05.5 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.3	N 29 12.7	Gienah	175 46.6	S 17 39.5
Ankaa	353 09.6	S 42 11.1	Acrux	173 03.7	S 63 13.1
Schedir	349 33.6	N 56 39.3	Gacrux	171 55.2	S 57 13.9
Diphda	348 49.8	S 17 52.0	Alioth	166 16.0	N 55 50.8
Achernar	335 21.9	S 57 07.5	Spica	158 25.4	S 11 16.3
Hamal	327 54.1	N 23 33.9	Alkaid	152 54.5	N 49 12.6
Polaris	315 03.1	N 89 21.0	Hadar	148 40.3	S 60 28.6
Acamar	315 13.6	S 40 12.9	Menkent	148 00.8	S 36 28.2
Menkar	314 08.8	N 04 10.5	Arcturus	145 50.3	N 19 05.2
Mirfak	308 31.9	N 49 56.1	Rigel Kentaurus	139 41.9	S 60 55.7
Aldebaran	290 42.7	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.9	N 46 01.1	Kocab	137 20.5	N 74 04.3
Rigel	281 06.5	S 08 10.5	Alphecca	126 06.3	N 26 38.8
Bellatrix	278 25.8	N 06 22.2	Antares	112 19.4	S 26 28.7
Elnath	278 05.3	N 28 37.5	Atria	107 16.0	S 69 04.1
Alnilam	275 40.5	S 01 11.2	Sabik	102 05.9	S 15 45.0
Betelgeuze	270 55.1	N 07 24.7	Shaula	96 14.0	S 37 07.2
Canopus	263 53.8	S 52 42.1	Rasalhague	96 01.1	N 12 33.0
Sirius	258 28.6	S 16 44.1	Etamin	90 43.4	N 51 29.5
Adhara	255 08.1	S 28 59.8	Kaus Australis	83 36.0	S 34 22.4
Castor	246 00.7	N 31 50.5	Vega	80 35.0	N 38 48.4
Procyon	244 53.6	N 05 10.6	Nunki	75 51.0	S 26 16.2
Pollux	243 20.5	N 27 58.5	Albireo	67 06.1	N 28 00.5
Avior	234 16.2	S 59 34.4	Altair	62 02.6	N 08 55.5
Suhail	222 48.6	S 43 30.9	Peacock	53 09.6	S 56 40.0
Miaplacidus	221 39.4	S 69 48.1	Deneb	49 27.3	N 45 21.6
Alphard	217 50.7	S 08 45.0	Enif	33 41.2	N 09 58.6
Regulus	207 37.6	N 11 51.9	Alnair	27 36.0	S 46 51.3
Dubhe	193 45.0	N 61 38.2	Formalhaut	15 17.3	S 29 30.4
Denebola	182 27.9	N 14 27.3	Markab	13 32.3	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 261 of 365		day 262 of 365		day 263 of 365		day 264 of 365		day 265 of 365		UT
	September 18		September 19		September 20		September 21		September 22		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	357	08.0 +02.5	358	07.1 +02.5	359	06.3 +02.4	0	05.4 +02.5	1	04.5 +02.5	00
01	12	10.5 +02.4	13	09.6 +02.5	14	08.7 +02.5	15	07.9 +02.4	16	07.0 +02.5	01
02	27	12.9 +02.5	28	12.1 +02.4	29	11.2 +02.5	30	10.3 +02.5	31	09.5 +02.4	02
03	42	15.4 +02.5	43	14.5 +02.5	44	13.7 +02.4	45	12.8 +02.5	46	11.9 +02.5	03
04	57	17.9 +02.4	58	17.0 +02.5	59	16.1 +02.5	60	15.3 +02.4	61	14.4 +02.5	04
05	72	20.3 +02.5	73	19.5 +02.4	74	18.6 +02.5	75	17.7 +02.5	76	16.9 +02.4	05
06	87	22.8 +02.4	88	21.9 +02.5	89	21.1 +02.4	90	20.2 +02.5	91	19.3 +02.5	06
07	102	25.2 +02.5	103	24.4 +02.4	104	23.5 +02.5	105	22.7 +02.4	106	21.8 +02.5	07
08	117	27.7 +02.5	118	26.8 +02.5	119	26.0 +02.4	120	25.1 +02.5	121	24.3 +02.4	08
09	132	30.2 +02.4	133	29.3 +02.5	134	28.4 +02.5	135	27.6 +02.4	136	26.7 +02.5	09
10	147	32.6 +02.5	148	31.8 +02.4	149	30.9 +02.5	150	30.0 +02.5	151	29.2 +02.4	10
11	162	35.1 +02.5	163	34.2 +02.5	164	33.4 +02.4	165	32.5 +02.5	166	31.6 +02.5	11
12	177	37.6 +02.4	178	36.7 +02.5	179	35.8 +02.5	180	35.0 +02.4	181	34.1 +02.5	12
13	192	40.0 +02.5	193	39.2 +02.4	194	38.3 +02.5	195	37.4 +02.5	196	36.6 +02.4	13
14	207	42.5 +02.5	208	41.6 +02.5	209	40.8 +02.4	210	39.9 +02.5	211	39.0 +02.5	14
15	222	45.0 +02.4	223	44.1 +02.5	224	43.2 +02.5	225	42.4 +02.4	226	41.5 +02.5	15
16	237	47.4 +02.5	238	46.6 +02.4	239	45.7 +02.5	240	44.8 +02.5	241	44.0 +02.4	16
17	252	49.9 +02.4	253	49.0 +02.5	254	48.2 +02.4	255	47.3 +02.5	256	46.4 +02.5	17
18	267	52.3 +02.5	268	51.5 +02.4	269	50.6 +02.5	270	49.8 +02.4	271	48.9 +02.5	18
19	282	54.8 +02.5	283	53.9 +02.5	284	53.1 +02.4	285	52.2 +02.5	286	51.4 +02.4	19
20	297	57.3 +02.4	298	56.4 +02.5	299	55.5 +02.5	300	54.7 +02.5	301	53.8 +02.5	20
21	312	59.7 +02.5	313	58.9 +02.4	314	58.0 +02.5	315	57.2 +02.4	316	56.3 +02.5	21
22	328	02.2 +02.5	329	01.3 +02.5	330	00.5 +02.4	330	59.6 +02.5	331	58.8 +02.4	22
23	343	04.7 +02.4	344	03.8 +02.5	345	02.9 +02.5	346	02.1 +02.4	347	01.2 +02.5	23

	SHA	Dec		SHA	Dec	
	°	'		°	'	
Alpheratz	357	37.2	N 29	12.7	Gienah	175 46.6 S 17 39.5
Ankaa	353	09.5	S 42	11.1	Acrux	173 03.7 S 63 13.0
Schedir	349	33.6	N 56	39.3	Gacrux	171 55.2 S 57 13.9
Diphda	348	49.8	S 17	52.0	Alioth	166 16.0 N 55 50.8
Achernar	335	21.8	S 57	07.5	Spica	158 25.4 S 11 16.3
Hamal	327	54.0	N 23	33.9	Alkaid	152 54.5 N 49 12.6
Polaris	315	00.8	N 89	21.0	Hadar	148 40.3 S 60 28.6
Acamar	315	13.6	S 40	12.9	Menkent	148 00.8 S 36 28.2
Menkar	314	08.8	N 04	10.6	Arcturus	145 50.3 N 19 05.1
Mirfak	308	31.8	N 49	56.1	Rigel Kentaurus	139 41.9 S 60 55.7
Aldebaran	290	42.7	N 16	33.2	Zubenelgenubi	136 59.2 S 16 07.7
Capella	280	25.9	N 46	01.1	Kocab	137 20.6 N 74 04.3
Rigel	281	06.4	S 08	10.5	Alphecca	126 06.3 N 26 38.8
Bellatrix	278	25.8	N 06	22.2	Antares	112 19.4 S 26 28.7
Elnath	278	05.3	N 28	37.5	Atria	107 16.0 S 69 04.1
Alnilam	275	40.5	S 01	11.2	Sabik	102 05.9 S 15 45.0
Betelgeuze	270	55.0	N 07	24.7	Shaula	96 14.1 S 37 07.2
Canopus	263	53.7	S 52	42.1	Rasalhague	96 01.1 N 12 33.0
Sirius	258	28.5	S 16	44.1	Etamin	90 43.4 N 51 29.5
Adhara	255	08.1	S 28	59.8	Kaus Australis	83 36.0 S 34 22.4
Castor	246	00.6	N 31	50.4	Vega	80 35.0 N 38 48.4
Procyon	244	53.6	N 05	10.6	Nunki	75 51.0 S 26 16.2
Pollux	243	20.5	N 27	58.5	Albireo	67 06.1 N 28 00.5
Avior	234	16.2	S 59	34.4	Altair	62 02.6 N 08 55.5
Suhail	222	48.6	S 43	30.9	Peacock	53 09.6 S 56 40.0
Miaplacidus	221	39.3	S 69	48.1	Deneb	49 27.3 N 45 21.7
Alphard	217	50.7	S 08	44.9	Enif	33 41.2 N 09 58.6
Regulus	207	37.5	N 11	51.8	Alnair	27 36.0 S 46 51.4
Dubhe	193	44.9	N 61	38.1	Formalhaut	15 17.3 S 29 30.4
Denebola	182	27.9	N 14	27.3	Markab	13 32.3 N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 266 of 365		day 267 of 365		day 268 of 365		day 269 of 365		day 270 of 365		UT
	September 23		September 24		September 25		September 26		September 27		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	
00	2	03.7 +02.4	3	02.8 +02.5	4	02.0 +02.4	5	01.1 +02.5	6	00.2 +02.5	00
01	17	06.1 +02.5	18	05.3 +02.4	19	04.4 +02.5	20	03.6 +02.4	21	02.7 +02.5	01
02	32	08.6 +02.5	33	07.7 +02.5	34	06.9 +02.4	35	06.0 +02.5	36	05.2 +02.4	02
03	47	11.1 +02.4	48	10.2 +02.5	49	09.3 +02.5	50	08.5 +02.4	51	07.6 +02.5	03
04	62	13.5 +02.5	63	12.7 +02.4	64	11.8 +02.5	65	10.9 +02.5	66	10.1 +02.5	04
05	77	16.0 +02.5	78	15.1 +02.5	79	14.3 +02.4	80	13.4 +02.5	81	12.6 +02.4	05
06	92	18.5 +02.4	93	17.6 +02.5	94	16.7 +02.5	95	15.9 +02.4	96	15.0 +02.5	06
07	107	20.9 +02.5	108	20.1 +02.4	109	19.2 +02.5	110	18.3 +02.5	111	17.5 +02.4	07
08	122	23.4 +02.5	123	22.5 +02.5	124	21.7 +02.4	125	20.8 +02.5	126	19.9 +02.5	08
09	137	25.9 +02.4	138	25.0 +02.5	139	24.1 +02.5	140	23.3 +02.4	141	22.4 +02.5	09
10	152	28.3 +02.5	153	27.5 +02.4	154	26.6 +02.5	155	25.7 +02.5	156	24.9 +02.4	10
11	167	30.8 +02.4	168	29.9 +02.5	169	29.1 +02.4	170	28.2 +02.5	171	27.3 +02.5	11
12	182	33.2 +02.5	183	32.4 +02.4	184	31.5 +02.5	185	30.7 +02.4	186	29.8 +02.5	12
13	197	35.7 +02.5	198	34.8 +02.5	199	34.0 +02.5	200	33.1 +02.5	201	32.3 +02.4	13
14	212	38.2 +02.4	213	37.3 +02.5	214	36.5 +02.4	215	35.6 +02.5	216	34.7 +02.5	14
15	227	40.6 +02.5	228	39.8 +02.4	229	38.9 +02.5	230	38.1 +02.4	231	37.2 +02.5	15
16	242	43.1 +02.5	243	42.2 +02.5	244	41.4 +02.4	245	40.5 +02.5	246	39.7 +02.4	16
17	257	45.6 +02.4	258	44.7 +02.5	259	43.8 +02.5	260	43.0 +02.4	261	42.1 +02.5	17
18	272	48.0 +02.5	273	47.2 +02.4	274	46.3 +02.5	275	45.4 +02.5	276	44.6 +02.4	18
19	287	50.5 +02.5	288	49.6 +02.5	289	48.8 +02.4	290	47.9 +02.5	291	47.0 +02.5	19
20	302	53.0 +02.4	303	52.1 +02.5	304	51.2 +02.5	305	50.4 +02.4	306	49.5 +02.5	20
21	317	55.4 +02.5	318	54.6 +02.4	319	53.7 +02.5	320	52.8 +02.5	321	52.0 +02.4	21
22	332	57.9 +02.5	333	57.0 +02.5	334	56.2 +02.4	335	55.3 +02.5	336	54.4 +02.5	22
23	348	00.4 +02.4	348	59.5 +02.5	349	58.6 +02.5	350	57.8 +02.4	351	56.9 +02.5	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 37.2	N 29 12.7	Gienah	175 46.6	S 17 39.5
Ankaa	353 09.5	S 42 11.1	Acrux	173 03.7	S 63 13.0
Schedir	349 33.5	N 56 39.3	Gacrux	171 55.2	S 57 13.9
Diphda	348 49.8	S 17 52.0	Alioth	166 16.1	N 55 50.8
Achernar	335 21.8	S 57 07.5	Spica	158 25.4	S 11 16.3
Hamal	327 54.0	N 23 33.9	Alkaid	152 54.6	N 49 12.6
Polaris	314 59.0	N 89 21.1	Hadar	148 40.3	S 60 28.6
Acamar	315 13.5	S 40 12.9	Menkent	148 00.8	S 36 28.2
Menkar	314 08.8	N 04 10.6	Arcturus	145 50.3	N 19 05.1
Mirfak	308 31.8	N 49 56.1	Rigel Kentaurus	139 42.0	S 60 55.7
Aldebaran	290 42.6	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.8	N 46 01.1	Kocab	137 20.7	N 74 04.3
Rigel	281 06.4	S 08 10.5	Alphecca	126 06.3	N 26 38.8
Bellatrix	278 25.7	N 06 22.2	Antares	112 19.4	S 26 28.7
Elnath	278 05.2	N 28 37.5	Atria	107 16.1	S 69 04.1
Alnilam	275 40.4	S 01 11.2	Sabik	102 06.0	S 15 45.0
Betelgeuze	270 55.0	N 07 24.7	Shaula	96 14.1	S 37 07.2
Canopus	263 53.7	S 52 42.1	Rasalhague	96 01.1	N 12 33.0
Sirius	258 28.5	S 16 44.1	Etamin	90 43.4	N 51 29.5
Adhara	255 08.1	S 28 59.8	Kaus Australis	83 36.1	S 34 22.4
Castor	246 00.6	N 31 50.4	Vega	80 35.1	N 38 48.4
Procyon	244 53.6	N 05 10.6	Nunki	75 51.0	S 26 16.2
Pollux	243 20.4	N 27 58.4	Albireo	67 06.1	N 28 00.5
Avior	234 16.1	S 59 34.4	Altair	62 02.6	N 08 55.5
Suhail	222 48.6	S 43 30.9	Peacock	53 09.7	S 56 40.0
Miaplacidus	221 39.3	S 69 48.1	Deneb	49 27.3	N 45 21.7
Alphard	217 50.7	S 08 44.9	Enif	33 41.2	N 09 58.6
Regulus	207 37.5	N 11 51.8	Alnair	27 36.0	S 46 51.4
Dubhe	193 44.9	N 61 38.1	Formalhaut	15 17.3	S 29 30.4
Denebola	182 27.9	N 14 27.3	Markab	13 32.3	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 271 of 365 September 28		day 272 of 365 September 29		day 273 of 365 September 30		day 274 of 365 October 1		day 275 of 365 October 2		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	6	59.4 +02.4	7	58.5 +02.5	8	57.6 +02.5	9	56.8 +02.5	10	55.9 +02.5	00
01	22	01.8 +02.5	23	01.0 +02.4	24	00.1 +02.5	24	59.3 +02.4	25	58.4 +02.5	01
02	37	04.3 +02.5	38	03.4 +02.5	39	02.6 +02.4	40	01.7 +02.5	41	00.9 +02.4	02
03	52	06.8 +02.4	53	05.9 +02.5	54	05.0 +02.5	55	04.2 +02.4	56	03.3 +02.5	03
04	67	09.2 +02.5	68	08.4 +02.4	69	07.5 +02.5	70	06.6 +02.5	71	05.8 +02.4	04
05	82	11.7 +02.5	83	10.8 +02.5	84	10.0 +02.4	85	09.1 +02.5	86	08.2 +02.5	05
06	97	14.2 +02.4	98	13.3 +02.5	99	12.4 +02.5	100	11.6 +02.4	101	10.7 +02.5	06
07	112	16.6 +02.5	113	15.8 +02.4	114	14.9 +02.5	115	14.0 +02.5	116	13.2 +02.4	07
08	127	19.1 +02.4	128	18.2 +02.5	129	17.4 +02.4	130	16.5 +02.5	131	15.6 +02.5	08
09	142	21.5 +02.5	143	20.7 +02.5	144	19.8 +02.5	145	19.0 +02.4	146	18.1 +02.5	09
10	157	24.0 +02.5	158	23.2 +02.4	159	22.3 +02.5	160	21.4 +02.5	161	20.6 +02.4	10
11	172	26.5 +02.4	173	25.6 +02.5	174	24.8 +02.4	175	23.9 +02.5	176	23.0 +02.5	11
12	187	28.9 +02.5	188	28.1 +02.4	189	27.2 +02.5	190	26.4 +02.4	191	25.5 +02.5	12
13	202	31.4 +02.5	203	30.5 +02.5	204	29.7 +02.4	205	28.8 +02.5	206	28.0 +02.4	13
14	217	33.9 +02.4	218	33.0 +02.5	219	32.1 +02.5	220	31.3 +02.5	221	30.4 +02.5	14
15	232	36.3 +02.5	233	35.5 +02.4	234	34.6 +02.5	235	33.8 +02.4	236	32.9 +02.5	15
16	247	38.8 +02.5	248	37.9 +02.5	249	37.1 +02.4	250	36.2 +02.5	251	35.4 +02.4	16
17	262	41.3 +02.4	263	40.4 +02.5	264	39.5 +02.5	265	38.7 +02.4	266	37.8 +02.5	17
18	277	43.7 +02.5	278	42.9 +02.4	279	42.0 +02.5	280	41.1 +02.5	281	40.3 +02.4	18
19	292	46.2 +02.5	293	45.3 +02.5	294	44.5 +02.4	295	43.6 +02.5	296	42.7 +02.5	19
20	307	48.7 +02.4	308	47.8 +02.5	309	46.9 +02.5	310	46.1 +02.4	311	45.2 +02.5	20
21	322	51.1 +02.5	323	50.3 +02.4	324	49.4 +02.5	325	48.5 +02.5	326	47.7 +02.4	21
22	337	53.6 +02.4	338	52.7 +02.5	339	51.9 +02.4	340	51.0 +02.5	341	50.1 +02.5	22
23	352	56.0 +02.5	353	55.2 +02.4	354	54.3 +02.5	355	53.5 +02.4	356	52.6 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.2	N 29 12.7	Gienah	175 46.6	S 17 39.5
Ankaa	353 09.5	S 42 11.1	Acrux	173 03.7	S 63 13.0
Schedir	349 33.5	N 56 39.4	Gacrux	171 55.2	S 57 13.8
Diphda	348 49.8	S 17 52.0	Alioth	166 16.1	N 55 50.7
Achernar	335 21.8	S 57 07.5	Spica	158 25.4	S 11 16.3
Hamal	327 54.0	N 23 33.9	Alkaid	152 54.6	N 49 12.6
Polaris	314 56.9	N 89 21.1	Hadar	148 40.3	S 60 28.6
Acamar	315 13.5	S 40 12.9	Menkent	148 00.8	S 36 28.2
Menkar	314 08.7	N 04 10.6	Arcturus	145 50.3	N 19 05.1
Mirfak	308 31.8	N 49 56.1	Rigel Kentaurus	139 42.0	S 60 55.6
Aldebaran	290 42.6	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.8	N 46 01.1	Kocab	137 20.7	N 74 04.2
Rigel	281 06.4	S 08 10.5	Alphecca	126 06.3	N 26 38.8
Bellatrix	278 25.7	N 06 22.2	Antares	112 19.4	S 26 28.7
Elnath	278 05.2	N 28 37.5	Atria	107 16.1	S 69 04.1
Alnilam	275 40.4	S 01 11.2	Sabik	102 06.0	S 15 45.0
Betelgeuze	270 55.0	N 07 24.7	Shaula	96 14.1	S 37 07.2
Canopus	263 53.6	S 52 42.1	Rasalhague	96 01.2	N 12 33.0
Sirius	258 28.5	S 16 44.1	Etamin	90 43.5	N 51 29.5
Adhara	255 08.0	S 28 59.8	Kaus Australis	83 36.1	S 34 22.4
Castor	246 00.6	N 31 50.4	Vega	80 35.1	N 38 48.4
Procyon	244 53.5	N 05 10.6	Nunki	75 51.1	S 26 16.2
Pollux	243 20.4	N 27 58.4	Albireo	67 06.1	N 28 00.5
Avior	234 16.1	S 59 34.4	Altair	62 02.6	N 08 55.6
Suhail	222 48.5	S 43 30.9	Peacock	53 09.7	S 56 40.0
Miaplacidus	221 39.2	S 69 48.1	Deneb	49 27.4	N 45 21.7
Alphard	217 50.6	S 08 44.9	Enif	33 41.2	N 09 58.6
Regulus	207 37.5	N 11 51.8	Alnair	27 36.0	S 46 51.4
Dubhe	193 44.9	N 61 38.1	Formalhaut	15 17.3	S 29 30.4
Denebola	182 27.9	N 14 27.3	Markab	13 32.3	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 276 of 365		day 277 of 365		day 278 of 365		day 279 of 365		day 280 of 365		UT					
	October 3		October 4		October 5		October 6		October 7							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	11	55.1	+02.4	12	54.2	+02.5	13	53.3	+02.5	14	52.5	+02.4	15	51.6	+02.5	00
01	26	57.5	+02.5	27	56.7	+02.4	28	55.8	+02.5	29	54.9	+02.5	30	54.1	+02.4	01
02	41	60.0	+02.5	42	59.1	+02.5	43	58.3	+02.4	44	57.4	+02.5	45	56.5	+02.5	02
03	57	02.5	+02.4	58	01.6	+02.5	59	00.7	+02.5	59	59.9	+02.4	60	59.0	+02.5	03
04	72	04.9	+02.5	73	04.1	+02.4	74	03.2	+02.5	75	02.3	+02.5	76	01.5	+02.4	04
05	87	07.4	+02.5	88	06.5	+02.5	89	05.7	+02.4	90	04.8	+02.5	91	03.9	+02.5	05
06	102	09.9	+02.4	103	09.0	+02.5	104	08.1	+02.5	105	07.3	+02.4	106	06.4	+02.5	06
07	117	12.3	+02.5	118	11.5	+02.4	119	10.6	+02.5	120	09.7	+02.5	121	08.9	+02.4	07
08	132	14.8	+02.4	133	13.9	+02.5	134	13.1	+02.4	135	12.2	+02.5	136	11.3	+02.5	08
09	147	17.2	+02.5	148	16.4	+02.4	149	15.5	+02.5	150	14.7	+02.4	151	13.8	+02.5	09
10	162	19.7	+02.5	163	18.8	+02.5	164	18.0	+02.4	165	17.1	+02.5	166	16.3	+02.4	10
11	177	22.2	+02.4	178	21.3	+02.5	179	20.4	+02.5	180	19.6	+02.4	181	18.7	+02.5	11
12	192	24.6	+02.5	193	23.8	+02.4	194	22.9	+02.5	195	22.0	+02.5	196	21.2	+02.4	12
13	207	27.1	+02.5	208	26.2	+02.5	209	25.4	+02.4	210	24.5	+02.5	211	23.6	+02.5	13
14	222	29.6	+02.4	223	28.7	+02.5	224	27.8	+02.5	225	27.0	+02.4	226	26.1	+02.5	14
15	237	32.0	+02.5	238	31.2	+02.4	239	30.3	+02.5	240	29.4	+02.5	241	28.6	+02.4	15
16	252	34.5	+02.5	253	33.6	+02.5	254	32.8	+02.4	255	31.9	+02.5	256	31.0	+02.5	16
17	267	37.0	+02.4	268	36.1	+02.5	269	35.2	+02.5	270	34.4	+02.4	271	33.5	+02.5	17
18	282	39.4	+02.5	283	38.6	+02.4	284	37.7	+02.5	285	36.8	+02.5	286	36.0	+02.4	18
19	297	41.9	+02.4	298	41.0	+02.5	299	40.2	+02.4	300	39.3	+02.5	301	38.4	+02.5	19
20	312	44.3	+02.5	313	43.5	+02.4	314	42.6	+02.5	315	41.8	+02.4	316	40.9	+02.5	20
21	327	46.8	+02.5	328	45.9	+02.5	329	45.1	+02.4	330	44.2	+02.5	331	43.4	+02.4	21
22	342	49.3	+02.4	343	48.4	+02.5	344	47.5	+02.5	345	46.7	+02.4	346	45.8	+02.5	22
23	357	51.7	+02.5	358	50.9	+02.4	359	50.0	+02.5	0	49.1	+02.5	1	48.3	+02.5	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 37.2	N 29 12.7	Gienah	175 46.6	S 17 39.5
Ankaa	353 09.5	S 42 11.2	Acrux	173 03.7	S 63 13.0
Schedir	349 33.5	N 56 39.4	Gacrux	171 55.2	S 57 13.8
Diphda	348 49.8	S 17 52.0	Alioth	166 16.1	N 55 50.7
Achernar	335 21.7	S 57 07.5	Spica	158 25.4	S 11 16.3
Hamal	327 54.0	N 23 33.9	Alkaid	152 54.6	N 49 12.5
Polaris	314 55.1	N 89 21.1	Hadar	148 40.4	S 60 28.6
Acamar	315 13.5	S 40 12.9	Menkent	148 00.8	S 36 28.2
Menkar	314 08.7	N 04 10.6	Arcturus	145 50.3	N 19 05.1
Mirfak	308 31.7	N 49 56.1	Rigel Kentaurus	139 42.0	S 60 55.6
Aldebaran	290 42.5	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.7	N 46 01.2	Kocab	137 20.8	N 74 04.2
Rigel	281 06.3	S 08 10.5	Alphecca	126 06.3	N 26 38.8
Bellatrix	278 25.6	N 06 22.2	Antares	112 19.4	S 26 28.7
Elnath	278 05.2	N 28 37.5	Atria	107 16.2	S 69 04.1
Alnilam	275 40.4	S 01 11.2	Sabik	102 06.0	S 15 45.0
Betelgeuze	270 54.9	N 07 24.7	Shaula	96 14.1	S 37 07.2
Canopus	263 53.5	S 52 42.1	Rasalhague	96 01.2	N 12 33.0
Sirius	258 28.4	S 16 44.1	Etamin	90 43.5	N 51 29.5
Adhara	255 08.0	S 28 59.8	Kaus Australis	83 36.1	S 34 22.4
Castor	246 00.5	N 31 50.4	Vega	80 35.1	N 38 48.4
Procyon	244 53.5	N 05 10.6	Nunki	75 51.1	S 26 16.2
Pollux	243 20.4	N 27 58.4	Albireo	67 06.1	N 28 00.5
Avior	234 16.0	S 59 34.4	Altair	62 02.7	N 08 55.6
Suhail	222 48.5	S 43 30.9	Peacock	53 09.7	S 56 40.1
Miaplacidus	221 39.1	S 69 48.0	Deneb	49 27.4	N 45 21.7
Alphard	217 50.6	S 08 44.9	Enif	33 41.2	N 09 58.6
Regulus	207 37.5	N 11 51.8	Alnair	27 36.0	S 46 51.4
Dubhe	193 44.9	N 61 38.1	Formalhaut	15 17.3	S 29 30.4
Denebola	182 27.9	N 14 27.3	Markab	13 32.3	N 15 19.4

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UT	day 281 of 365		day 282 of 365		day 283 of 365		day 284 of 365		day 285 of 365		UT
	October 8		October 9		October 10		October 11		October 12		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	16 50.8	+02.4	17 49.9	+02.5	18 49.0	+02.5	19 48.2	+02.4	20 47.3	+02.5	00
01	31 53.2	+02.5	32 52.4	+02.4	33 51.5	+02.5	34 50.6	+02.5	35 49.8	+02.4	01
02	46 55.7	+02.4	47 54.8	+02.5	48 54.0	+02.4	49 53.1	+02.5	50 52.2	+02.5	02
03	61 58.1	+02.5	62 57.3	+02.4	63 56.4	+02.5	64 55.6	+02.4	65 54.7	+02.5	03
04	77 00.6	+02.5	77 59.7	+02.5	78 58.9	+02.4	79 58.0	+02.5	80 57.2	+02.4	04
05	92 03.1	+02.4	93 02.2	+02.5	94 01.3	+02.5	95 00.5	+02.5	95 59.6	+02.5	05
06	107 05.5	+02.5	108 04.7	+02.4	109 03.8	+02.5	110 03.0	+02.4	111 02.1	+02.5	06
07	122 08.0	+02.5	123 07.1	+02.5	124 06.3	+02.4	125 05.4	+02.5	126 04.6	+02.4	07
08	137 10.5	+02.4	138 09.6	+02.5	139 08.7	+02.5	140 07.9	+02.4	141 07.0	+02.5	08
09	152 12.9	+02.5	153 12.1	+02.4	154 11.2	+02.5	155 10.3	+02.5	156 09.5	+02.5	09
10	167 15.4	+02.5	168 14.5	+02.5	169 13.7	+02.4	170 12.8	+02.5	171 12.0	+02.4	10
11	182 17.9	+02.4	183 17.0	+02.5	184 16.1	+02.5	185 15.3	+02.4	186 14.4	+02.5	11
12	197 20.3	+02.5	198 19.5	+02.4	199 18.6	+02.5	200 17.7	+02.5	201 16.9	+02.4	12
13	212 22.8	+02.4	213 21.9	+02.5	214 21.1	+02.4	215 20.2	+02.5	216 19.3	+02.5	13
14	227 25.2	+02.5	228 24.4	+02.5	229 23.5	+02.5	230 22.7	+02.4	231 21.8	+02.5	14
15	242 27.7	+02.5	243 26.9	+02.4	244 26.0	+02.5	245 25.1	+02.5	246 24.3	+02.4	15
16	257 30.2	+02.4	258 29.3	+02.5	259 28.5	+02.4	260 27.6	+02.5	261 26.7	+02.5	16
17	272 32.6	+02.5	273 31.8	+02.4	274 30.9	+02.5	275 30.1	+02.4	276 29.2	+02.5	17
18	287 35.1	+02.5	288 34.2	+02.5	289 33.4	+02.4	290 32.5	+02.5	291 31.7	+02.4	18
19	302 37.6	+02.4	303 36.7	+02.5	304 35.8	+02.5	305 35.0	+02.5	306 34.1	+02.5	19
20	317 40.0	+02.5	318 39.2	+02.4	319 38.3	+02.5	320 37.5	+02.4	321 36.6	+02.5	20
21	332 42.5	+02.5	333 41.6	+02.5	334 40.8	+02.4	335 39.9	+02.5	336 39.1	+02.4	21
22	347 45.0	+02.4	348 44.1	+02.5	349 43.2	+02.5	350 42.4	+02.4	351 41.5	+02.5	22
23	2 47.4	+02.5	3 46.6	+02.4	4 45.7	+02.5	5 44.8	+02.5	6 44.0	+02.4	23

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	37.2	N 29	12.7	Gienah	175	46.6	S 17	39.5
Ankaa	353	09.5	S 42	11.2	Acrux	173	03.7	S 63	13.0
Schedir	349	33.5	N 56	39.4	Gacrux	171	55.2	S 57	13.8
Diphda	348	49.7	S 17	52.0	Alioth	166	16.1	N 55	50.7
Achernar	335	21.7	S 57	07.6	Spica	158	25.4	S 11	16.3
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.6	N 49	12.5
Polaris	314	53.7	N 89	21.1	Hadar	148	40.4	S 60	28.6
Acamar	315	13.4	S 40	12.9	Menkent	148	00.9	S 36	28.2
Menkar	314	08.7	N 04	10.6	Arcturus	145	50.3	N 19	05.1
Mirfak	308	31.7	N 49	56.2	Rigel Kentaurus	139	42.0	S 60	55.6
Aldebaran	290	42.5	N 16	33.2	Zubenelgenubi	136	59.2	S 16	07.7
Capella	280	25.7	N 46	01.2	Kocab	137	20.8	N 74	04.2
Rigel	281	06.3	S 08	10.5	Alphecca	126	06.4	N 26	38.8
Bellatrix	278	25.6	N 06	22.2	Antares	112	19.5	S 26	28.7
Elnath	278	05.1	N 28	37.5	Atria	107	16.3	S 69	04.1
Alnilam	275	40.3	S 01	11.2	Sabik	102	06.0	S 15	45.0
Betelgeuze	270	54.9	N 07	24.7	Shaula	96	14.2	S 37	07.2
Canopus	263	53.5	S 52	42.1	Rasalhague	96	01.2	N 12	32.9
Sirius	258	28.4	S 16	44.1	Etamin	90	43.6	N 51	29.5
Adhara	255	07.9	S 28	59.8	Kaus Australis	83	36.1	S 34	22.4
Castor	246	00.5	N 31	50.4	Vega	80	35.2	N 38	48.4
Procyon	244	53.5	N 05	10.6	Nunki	75	51.1	S 26	16.2
Pollux	243	20.3	N 27	58.4	Albireo	67	06.2	N 28	00.5
Avior	234	16.0	S 59	34.4	Altair	62	02.7	N 08	55.6
Suhail	222	48.5	S 43	30.9	Peacock	53	09.8	S 56	40.1
Miaplacidus	221	39.1	S 69	48.0	Deneb	49	27.4	N 45	21.7
Alphard	217	50.6	S 08	44.9	Enif	33	41.2	N 09	58.6
Regulus	207	37.4	N 11	51.8	Alnair	27	36.0	S 46	51.4
Dubhe	193	44.8	N 61	38.0	Formalhaut	15	17.3	S 29	30.4
Denebola	182	27.9	N 14	27.3	Markab	13	32.3	N 15	19.4

2021 - First Point of Aries / Selected Stars

UT	day 286 of 365		day 287 of 365		day 288 of 365		day 289 of 365		day 290 of 365		UT		
	October 13		October 14		October 15		October 16		October 17				
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA			
	°	'	°	'	°	'	°	'	°	'			
00	21	46.4	+02.5	22	45.6	+02.5	23	44.7	+02.5	24	43.9	+02.4	00
01	36	48.9	+02.5	37	48.1	+02.4	38	47.2	+02.5	39	46.3	+02.5	01
02	51	51.4	+02.4	52	50.5	+02.5	53	49.7	+02.4	54	48.8	+02.5	02
03	66	53.8	+02.5	67	53.0	+02.4	68	52.1	+02.5	69	51.3	+02.4	03
04	81	56.3	+02.5	82	55.4	+02.5	83	54.6	+02.4	84	53.7	+02.5	04
05	96	58.8	+02.4	97	57.9	+02.5	98	57.0	+02.5	99	56.2	+02.5	05
06	112	01.2	+02.5	113	00.4	+02.4	113	59.5	+02.5	114	58.7	+02.4	06
07	127	03.7	+02.5	128	02.8	+02.5	129	02.0	+02.4	130	01.1	+02.5	07
08	142	06.2	+02.4	143	05.3	+02.5	144	04.4	+02.5	145	03.6	+02.4	08
09	157	08.6	+02.5	158	07.8	+02.4	159	06.9	+02.5	160	06.0	+02.5	09
10	172	11.1	+02.5	173	10.2	+02.5	174	09.4	+02.4	175	08.5	+02.5	10
11	187	13.6	+02.4	188	12.7	+02.5	189	11.8	+02.5	190	11.0	+02.4	11
12	202	16.0	+02.5	203	15.2	+02.4	204	14.3	+02.5	205	13.4	+02.5	12
13	217	18.5	+02.4	218	17.6	+02.5	219	16.8	+02.4	220	15.9	+02.5	13
14	232	20.9	+02.5	233	20.1	+02.5	234	19.2	+02.5	235	18.4	+02.4	14
15	247	23.4	+02.5	248	22.6	+02.4	249	21.7	+02.5	250	20.8	+02.5	15
16	262	25.9	+02.4	263	25.0	+02.5	264	24.2	+02.4	265	23.3	+02.5	16
17	277	28.3	+02.5	278	27.5	+02.4	279	26.6	+02.5	280	25.8	+02.4	17
18	292	30.8	+02.5	293	29.9	+02.5	294	29.1	+02.4	295	28.2	+02.5	18
19	307	33.3	+02.4	308	32.4	+02.5	309	31.5	+02.5	310	30.7	+02.4	19
20	322	35.7	+02.5	323	34.9	+02.4	324	34.0	+02.5	325	33.1	+02.5	20
21	337	38.2	+02.5	338	37.3	+02.5	339	36.5	+02.4	340	35.6	+02.5	21
22	352	40.7	+02.4	353	39.8	+02.5	354	38.9	+02.5	355	38.1	+02.4	22
23	7	43.1	+02.5	8	42.3	+02.4	9	41.4	+02.5	10	40.5	+02.5	23

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	37.2	N 29	12.8	Gienah	175	46.6	S 17	39.5
Ankaa	353	09.5	S 42	11.2	Acrux	173	03.7	S 63	12.9
Schedir	349	33.5	N 56	39.4	Gacrux	171	55.2	S 57	13.8
Diphda	348	49.7	S 17	52.0	Alioth	166	16.0	N 55	50.6
Achernar	335	21.7	S 57	07.6	Spica	158	25.4	S 11	16.3
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.6	N 49	12.5
Polaris	314	51.8	N 89	21.2	Hadar	148	40.4	S 60	28.5
Acamar	315	13.4	S 40	13.0	Menkent	148	00.9	S 36	28.2
Menkar	314	08.6	N 04	10.6	Arcturus	145	50.3	N 19	05.1
Mirfak	308	31.6	N 49	56.2	Rigel Kentaurus	139	42.0	S 60	55.6
Aldebaran	290	42.5	N 16	33.2	Zubenelgenubi	136	59.2	S 16	07.7
Capella	280	25.6	N 46	01.2	Kocab	137	20.9	N 74	04.2
Rigel	281	06.3	S 08	10.5	Alphecca	126	06.4	N 26	38.8
Bellatrix	278	25.6	N 06	22.2	Antares	112	19.5	S 26	28.7
Elnath	278	05.1	N 28	37.5	Atria	107	16.3	S 69	04.1
Alnilam	275	40.3	S 01	11.2	Sabik	102	06.0	S 15	45.0
Betelgeuze	270	54.9	N 07	24.7	Shaula	96	14.2	S 37	07.2
Canopus	263	53.4	S 52	42.1	Rasalhague	96	01.2	N 12	32.9
Sirius	258	28.3	S 16	44.1	Etamin	90	43.6	N 51	29.5
Adhara	255	07.9	S 28	59.8	Kaus Australis	83	36.1	S 34	22.4
Castor	246	00.4	N 31	50.4	Vega	80	35.2	N 38	48.4
Procyon	244	53.4	N 05	10.6	Nunki	75	51.1	S 26	16.2
Pollux	243	20.3	N 27	58.4	Albireo	67	06.2	N 28	00.5
Avior	234	15.9	S 59	34.4	Altair	62	02.7	N 08	55.6
Suhail	222	48.4	S 43	30.9	Peacock	53	09.8	S 56	40.1
Miaplacidus	221	39.0	S 69	48.0	Deneb	49	27.5	N 45	21.7
Alphard	217	50.5	S 08	45.0	Enif	33	41.2	N 09	58.6
Regulus	207	37.4	N 11	51.8	Alnair	27	36.1	S 46	51.4
Dubhe	193	44.8	N 61	38.0	Formalhaut	15	17.3	S 29	30.4
Denebola	182	27.8	N 14	27.3	Markab	13	32.3	N 15	19.4

2021 - First Point of Aries / Selected Stars

UT	day 291 of 365 October 18		day 292 of 365 October 19		day 293 of 365 October 20		day 294 of 365 October 21		day 295 of 365 October 22		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	
00	26 42.1	+02.5	27 41.3	+02.4	28 40.4	+02.5	29 39.6	+02.4	30 38.7	+02.5	00
01	41 44.6	+02.5	42 43.7	+02.5	43 42.9	+02.4	44 42.0	+02.5	45 41.2	+02.4	01
02	56 47.1	+02.4	57 46.2	+02.5	58 45.3	+02.5	59 44.5	+02.4	60 43.6	+02.5	02
03	71 49.5	+02.5	72 48.7	+02.4	73 47.8	+02.5	74 46.9	+02.5	75 46.1	+02.4	03
04	86 52.0	+02.5	87 51.1	+02.5	88 50.3	+02.4	89 49.4	+02.5	90 48.5	+02.5	04
05	101 54.5	+02.4	102 53.6	+02.5	103 52.7	+02.5	104 51.9	+02.4	105 51.0	+02.5	05
06	116 56.9	+02.5	117 56.1	+02.4	118 55.2	+02.5	119 54.3	+02.5	120 53.5	+02.4	06
07	131 59.4	+02.5	132 58.5	+02.5	133 57.7	+02.4	134 56.8	+02.5	135 55.9	+02.5	07
08	147 01.9	+02.4	148 01.0	+02.5	149 00.1	+02.5	149 59.3	+02.4	150 58.4	+02.5	08
09	162 04.3	+02.5	163 03.5	+02.4	164 02.6	+02.5	165 01.7	+02.5	166 00.9	+02.4	09
10	177 06.8	+02.4	178 05.9	+02.5	179 05.1	+02.4	180 04.2	+02.5	181 03.3	+02.5	10
11	192 09.2	+02.5	193 08.4	+02.4	194 07.5	+02.5	195 06.7	+02.4	196 05.8	+02.5	11
12	207 11.7	+02.5	208 10.8	+02.5	209 10.0	+02.4	210 09.1	+02.5	211 08.3	+02.4	12
13	222 14.2	+02.4	223 13.3	+02.5	224 12.4	+02.5	225 11.6	+02.4	226 10.7	+02.5	13
14	237 16.6	+02.5	238 15.8	+02.4	239 14.9	+02.5	240 14.0	+02.5	241 13.2	+02.5	14
15	252 19.1	+02.5	253 18.2	+02.5	254 17.4	+02.4	255 16.5	+02.5	256 15.7	+02.4	15
16	267 21.6	+02.4	268 20.7	+02.5	269 19.8	+02.5	270 19.0	+02.4	271 18.1	+02.5	16
17	282 24.0	+02.5	283 23.2	+02.4	284 22.3	+02.5	285 21.4	+02.5	286 20.6	+02.4	17
18	297 26.5	+02.5	298 25.6	+02.5	299 24.8	+02.4	300 23.9	+02.5	301 23.0	+02.5	18
19	312 29.0	+02.4	313 28.1	+02.5	314 27.2	+02.5	315 26.4	+02.4	316 25.5	+02.5	19
20	327 31.4	+02.5	328 30.6	+02.4	329 29.7	+02.5	330 28.8	+02.5	331 28.0	+02.4	20
21	342 33.9	+02.5	343 33.0	+02.5	344 32.2	+02.4	345 31.3	+02.5	346 30.4	+02.5	21
22	357 36.4	+02.4	358 35.5	+02.5	359 34.6	+02.5	0 33.8	+02.4	1 32.9	+02.5	22
23	12 38.8	+02.5	13 38.0	+02.4	14 37.1	+02.5	15 36.2	+02.5	16 35.4	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 37.2	N 29 12.8	Gienah	175 46.6	S 17 39.5
Ankaa	353 09.5	S 42 11.2	Acrux	173 03.7	S 63 12.9
Schedir	349 33.5	N 56 39.5	Gacrux	171 55.2	S 57 13.8
Diphda	348 49.7	S 17 52.1	Alioth	166 16.0	N 55 50.6
Achernar	335 21.7	S 57 07.6	Spica	158 25.4	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.6	N 49 12.5
Polaris	314 50.7	N 89 21.2	Hadar	148 40.4	S 60 28.5
Acamar	315 13.4	S 40 13.0	Menkent	148 00.9	S 36 28.2
Menkar	314 08.6	N 04 10.6	Arcturus	145 50.3	N 19 05.1
Mirfak	308 31.6	N 49 56.2	Rigel Kentaurus	139 42.0	S 60 55.6
Aldebaran	290 42.4	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.6	N 46 01.2	Kocab	137 20.9	N 74 04.1
Rigel	281 06.2	S 08 10.5	Alphecca	126 06.4	N 26 38.8
Bellatrix	278 25.5	N 06 22.2	Antares	112 19.5	S 26 28.7
Elnath	278 05.0	N 28 37.5	Atria	107 16.4	S 69 04.1
Alnilam	275 40.3	S 01 11.2	Sabik	102 06.1	S 15 45.0
Betelgeuze	270 54.8	N 07 24.7	Shaula	96 14.2	S 37 07.2
Canopus	263 53.4	S 52 42.1	Rasalhague	96 01.2	N 12 32.9
Sirius	258 28.3	S 16 44.1	Etamin	90 43.7	N 51 29.5
Adhara	255 07.9	S 28 59.8	Kaus Australis	83 36.2	S 34 22.4
Castor	246 00.4	N 31 50.4	Vega	80 35.2	N 38 48.4
Procyon	244 53.4	N 05 10.6	Nunki	75 51.1	S 26 16.2
Pollux	243 20.2	N 27 58.4	Albireo	67 06.2	N 28 00.5
Avior	234 15.9	S 59 34.4	Altair	62 02.7	N 08 55.6
Suhail	222 48.4	S 43 30.9	Peacock	53 09.9	S 56 40.1
Miaplacidus	221 38.9	S 69 48.0	Deneb	49 27.5	N 45 21.7
Alphard	217 50.5	S 08 45.0	Enif	33 41.3	N 09 58.6
Regulus	207 37.4	N 11 51.8	Alnair	27 36.1	S 46 51.5
Dubhe	193 44.7	N 61 38.0	Formalhaut	15 17.3	S 29 30.4
Denebola	182 27.8	N 14 27.2	Markab	13 32.3	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 296 of 365 October 23		day 297 of 365 October 24		day 298 of 365 October 25		day 299 of 365 October 26		day 300 of 365 October 27		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	31	37.8 +02.5	32	37.0 +02.4	33	36.1 +02.5	34	35.2 +02.5	35	34.4 +02.5	00
01	46	40.3 +02.5	47	39.4 +02.5	48	38.6 +02.4	49	37.7 +02.5	50	36.9 +02.4	01
02	61	42.8 +02.4	62	41.9 +02.5	63	41.0 +02.5	64	40.2 +02.4	65	39.3 +02.5	02
03	76	45.2 +02.5	77	44.4 +02.4	78	43.5 +02.5	79	42.6 +02.5	80	41.8 +02.4	03
04	91	47.7 +02.4	92	46.8 +02.5	93	46.0 +02.4	94	45.1 +02.5	95	44.2 +02.5	04
05	106	50.1 +02.5	107	49.3 +02.5	108	48.4 +02.5	109	47.6 +02.4	110	46.7 +02.5	05
06	121	52.6 +02.5	122	51.8 +02.4	123	50.9 +02.5	124	50.0 +02.5	125	49.2 +02.4	06
07	136	55.1 +02.4	137	54.2 +02.5	138	53.4 +02.4	139	52.5 +02.5	140	51.6 +02.5	07
08	151	57.5 +02.5	152	56.7 +02.4	153	55.8 +02.5	154	55.0 +02.4	155	54.1 +02.5	08
09	167	00.0 +02.5	167	59.1 +02.5	168	58.3 +02.4	169	57.4 +02.5	170	56.6 +02.4	09
10	182	02.5 +02.4	183	01.6 +02.5	184	00.7 +02.5	184	59.9 +02.5	185	59.0 +02.5	10
11	197	04.9 +02.5	198	04.1 +02.4	199	03.2 +02.5	200	02.4 +02.4	201	01.5 +02.5	11
12	212	07.4 +02.5	213	06.5 +02.5	214	05.7 +02.4	215	04.8 +02.5	216	04.0 +02.4	12
13	227	09.9 +02.4	228	09.0 +02.5	229	08.1 +02.5	230	07.3 +02.4	231	06.4 +02.5	13
14	242	12.3 +02.5	243	11.5 +02.4	244	10.6 +02.5	245	09.7 +02.5	246	08.9 +02.4	14
15	257	14.8 +02.5	258	13.9 +02.5	259	13.1 +02.4	260	12.2 +02.5	261	11.3 +02.5	15
16	272	17.3 +02.4	273	16.4 +02.5	274	15.5 +02.5	275	14.7 +02.4	276	13.8 +02.5	16
17	287	19.7 +02.5	288	18.9 +02.4	289	18.0 +02.5	290	17.1 +02.5	291	16.3 +02.4	17
18	302	22.2 +02.4	303	21.3 +02.5	304	20.5 +02.4	305	19.6 +02.5	306	18.7 +02.5	18
19	317	24.6 +02.5	318	23.8 +02.5	319	22.9 +02.5	320	22.1 +02.4	321	21.2 +02.5	19
20	332	27.1 +02.5	333	26.3 +02.4	334	25.4 +02.5	335	24.5 +02.5	336	23.7 +02.4	20
21	347	29.6 +02.4	348	28.7 +02.5	349	27.9 +02.4	350	27.0 +02.5	351	26.1 +02.5	21
22	2	32.0 +02.5	3	31.2 +02.4	4	30.3 +02.5	5	29.5 +02.4	6	28.6 +02.5	22
23	17	34.5 +02.5	18	33.6 +02.5	19	32.8 +02.4	20	31.9 +02.5	21	31.1 +02.4	23

	SHA	Dec		SHA	Dec				
	° ' "	° ' "		° ' "	° ' "				
Alpheratz	357	37.2	N 29	12.8	Gienah	175	46.6	S 17	39.5
Ankaa	353	09.5	S 42	11.2	Acrux	173	03.6	S 63	12.9
Schedir	349	33.5	N 56	39.5	Gacrux	171	55.1	S 57	13.7
Diphda	348	49.7	S 17	52.1	Alioth	166	16.0	N 55	50.6
Achernar	335	21.7	S 57	07.6	Spica	158	25.4	S 11	16.3
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.6	N 49	12.4
Polaris	314	49.5	N 89	21.2	Hadar	148	40.4	S 60	28.5
Acamar	315	13.4	S 40	13.0	Menkent	148	00.8	S 36	28.2
Menkar	314	08.6	N 04	10.6	Arcturus	145	50.3	N 19	05.1
Mirfak	308	31.6	N 49	56.2	Rigel Kentaurus	139	42.0	S 60	55.5
Aldebaran	290	42.4	N 16	33.2	Zubenelgenubi	136	59.2	S 16	07.7
Capella	280	25.5	N 46	01.2	Kocab	137	21.0	N 74	04.1
Rigel	281	06.2	S 08	10.5	Alphecca	126	06.4	N 26	38.7
Bellatrix	278	25.5	N 06	22.2	Antares	112	19.5	S 26	28.7
Elnath	278	05.0	N 28	37.5	Atria	107	16.4	S 69	04.1
Alnilam	275	40.2	S 01	11.2	Sabik	102	06.1	S 15	45.0
Betelgeuze	270	54.8	N 07	24.7	Shaula	96	14.2	S 37	07.2
Canopus	263	53.3	S 52	42.1	Rasalhague	96	01.3	N 12	32.9
Sirius	258	28.3	S 16	44.1	Etamin	90	43.7	N 51	29.4
Adhara	255	07.8	S 28	59.8	Kaus Australis	83	36.2	S 34	22.4
Castor	246	00.3	N 31	50.4	Vega	80	35.3	N 38	48.4
Procyon	244	53.4	N 05	10.6	Nunki	75	51.2	S 26	16.2
Pollux	243	20.2	N 27	58.4	Albireo	67	06.3	N 28	00.5
Avior	234	15.8	S 59	34.4	Altair	62	02.7	N 08	55.5
Suhail	222	48.3	S 43	30.9	Peacock	53	09.9	S 56	40.1
Miaplacidus	221	38.8	S 69	48.0	Deneb	49	27.5	N 45	21.7
Alphard	217	50.5	S 08	45.0	Enif	33	41.3	N 09	58.6
Regulus	207	37.3	N 11	51.8	Alnair	27	36.1	S 46	51.5
Dubhe	193	44.7	N 61	38.0	Formalhaut	15	17.3	S 29	30.5
Denebola	182	27.8	N 14	27.2	Markab	13	32.3	N 15	19.4

2021 - First Point of Aries / Selected Stars

UT	day 301 of 365 October 28		day 302 of 365 October 29		day 303 of 365 October 30		day 304 of 365 October 31		day 305 of 365 November 1		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	36	33.5 +02.5	37	32.7 +02.4	38	31.8 +02.5	39	30.9 +02.5	40	30.1 +02.4	00
01	51	36.0 +02.5	52	35.1 +02.5	53	34.3 +02.4	54	33.4 +02.5	55	32.5 +02.5	01
02	66	38.5 +02.4	67	37.6 +02.5	68	36.7 +02.5	69	35.9 +02.4	70	35.0 +02.5	02
03	81	40.9 +02.5	82	40.1 +02.4	83	39.2 +02.5	84	38.3 +02.5	85	37.5 +02.4	03
04	96	43.4 +02.4	97	42.5 +02.5	98	41.7 +02.4	99	40.8 +02.5	100	39.9 +02.5	04
05	111	45.8 +02.5	112	45.0 +02.5	113	44.1 +02.5	114	43.3 +02.4	115	42.4 +02.5	05
06	126	48.3 +02.5	127	47.5 +02.4	128	46.6 +02.5	129	45.7 +02.5	130	44.9 +02.4	06
07	141	50.8 +02.4	142	49.9 +02.5	143	49.1 +02.4	144	48.2 +02.5	145	47.3 +02.5	07
08	156	53.2 +02.5	157	52.4 +02.4	158	51.5 +02.5	159	50.7 +02.4	160	49.8 +02.5	08
09	171	55.7 +02.5	172	54.8 +02.5	173	54.0 +02.4	174	53.1 +02.5	175	52.3 +02.4	09
10	186	58.2 +02.4	187	57.3 +02.5	188	56.4 +02.5	189	55.6 +02.4	190	54.7 +02.5	10
11	202	00.6 +02.5	202	59.8 +02.4	203	58.9 +02.5	204	58.0 +02.5	205	57.2 +02.4	11
12	217	03.1 +02.5	218	02.2 +02.5	219	01.4 +02.4	220	00.5 +02.5	220	59.6 +02.5	12
13	232	05.6 +02.4	233	04.7 +02.5	234	03.8 +02.5	235	03.0 +02.4	236	02.1 +02.5	13
14	247	08.0 +02.5	248	07.2 +02.4	249	06.3 +02.5	250	05.4 +02.5	251	04.6 +02.4	14
15	262	10.5 +02.5	263	09.6 +02.5	264	08.8 +02.4	265	07.9 +02.5	266	07.0 +02.5	15
16	277	13.0 +02.4	278	12.1 +02.5	279	11.2 +02.5	280	10.4 +02.4	281	09.5 +02.5	16
17	292	15.4 +02.5	293	14.6 +02.4	294	13.7 +02.5	295	12.8 +02.5	296	12.0 +02.4	17
18	307	17.9 +02.4	308	17.0 +02.5	309	16.2 +02.4	310	15.3 +02.5	311	14.4 +02.5	18
19	322	20.3 +02.5	323	19.5 +02.4	324	18.6 +02.5	325	17.8 +02.4	326	16.9 +02.5	19
20	337	22.8 +02.5	338	21.9 +02.5	339	21.1 +02.5	340	20.2 +02.5	341	19.4 +02.4	20
21	352	25.3 +02.4	353	24.4 +02.5	354	23.6 +02.4	355	22.7 +02.5	356	21.8 +02.5	21
22	7	27.7 +02.5	8	26.9 +02.4	9	26.0 +02.5	10	25.2 +02.4	11	24.3 +02.5	22
23	22	30.2 +02.5	23	29.3 +02.5	24	28.5 +02.4	25	27.6 +02.5	26	26.8 +02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.2	N 29 12.8	Gienah	175 46.5	S 17 39.5
Ankaa	353 09.5	S 42 11.3	Acrux	173 03.6	S 63 12.9
Schedir	349 33.5	N 56 39.5	Gacrux	171 55.1	S 57 13.7
Diphda	348 49.7	S 17 52.1	Alioth	166 16.0	N 55 50.5
Achernar	335 21.7	S 57 07.6	Spica	158 25.4	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.6	N 49 12.4
Polaris	314 48.3	N 89 21.3	Hadar	148 40.3	S 60 28.5
Acamar	315 13.4	S 40 13.0	Menkent	148 00.8	S 36 28.2
Menkar	314 08.6	N 04 10.6	Arcturus	145 50.3	N 19 05.0
Mirfak	308 31.5	N 49 56.2	Rigel Kentaurus	139 42.0	S 60 55.5
Aldebaran	290 42.4	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.5	N 46 01.2	Kocab	137 21.0	N 74 04.1
Rigel	281 06.2	S 08 10.5	Alphecca	126 06.4	N 26 38.7
Bellatrix	278 25.5	N 06 22.2	Antares	112 19.5	S 26 28.7
Elnath	278 05.0	N 28 37.5	Atria	107 16.4	S 69 04.0
Alnilam	275 40.2	S 01 11.2	Sabik	102 06.1	S 15 45.0
Betelgeuze	270 54.8	N 07 24.7	Shaula	96 14.2	S 37 07.2
Canopus	263 53.3	S 52 42.1	Rasalhague	96 01.3	N 12 32.9
Sirius	258 28.2	S 16 44.1	Etamin	90 43.7	N 51 29.4
Adhara	255 07.8	S 28 59.8	Kaus Australis	83 36.2	S 34 22.4
Castor	246 00.3	N 31 50.4	Vega	80 35.3	N 38 48.4
Procyon	244 53.3	N 05 10.6	Nunki	75 51.2	S 26 16.2
Pollux	243 20.2	N 27 58.4	Albireo	67 06.3	N 28 00.5
Avior	234 15.7	S 59 34.4	Altair	62 02.8	N 08 55.5
Suhail	222 48.3	S 43 30.9	Peacock	53 09.9	S 56 40.1
Miaplacidus	221 38.7	S 69 48.0	Deneb	49 27.6	N 45 21.7
Alphard	217 50.4	S 08 45.0	Enif	33 41.3	N 09 58.6
Regulus	207 37.3	N 11 51.8	Alnair	27 36.1	S 46 51.5
Dubhe	193 44.6	N 61 37.9	Formalhaut	15 17.4	S 29 30.5
Denebola	182 27.8	N 14 27.2	Markab	13 32.3	N 15 19.5

2021 - First Point of Aries / Selected Stars

UT	day 306 of 365 November 2		day 307 of 365 November 3		day 308 of 365 November 4		day 309 of 365 November 5		day 310 of 365 November 6		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	41	29.2 +02.5	42	28.4 +02.4	43	27.5 +02.5	44	26.6 +02.5	45	25.8 +02.4	00
01	56	31.7 +02.4	57	30.8 +02.5	58	30.0 +02.4	59	29.1 +02.5	60	28.2 +02.5	01
02	71	34.1 +02.5	72	33.3 +02.4	73	32.4 +02.5	74	31.6 +02.4	75	30.7 +02.5	02
03	86	36.6 +02.5	87	35.7 +02.5	88	34.9 +02.4	89	34.0 +02.5	90	33.2 +02.4	03
04	101	39.1 +02.4	102	38.2 +02.5	103	37.3 +02.5	104	36.5 +02.5	105	35.6 +02.5	04
05	116	41.5 +02.5	117	40.7 +02.4	118	39.8 +02.5	119	39.0 +02.4	120	38.1 +02.5	05
06	131	44.0 +02.5	132	43.1 +02.5	133	42.3 +02.4	134	41.4 +02.5	135	40.6 +02.4	06
07	146	46.5 +02.4	147	45.6 +02.5	148	44.7 +02.5	149	43.9 +02.4	150	43.0 +02.5	07
08	161	48.9 +02.5	162	48.1 +02.4	163	47.2 +02.5	164	46.3 +02.5	165	45.5 +02.4	08
09	176	51.4 +02.5	177	50.5 +02.5	178	49.7 +02.4	179	48.8 +02.5	180	47.9 +02.5	09
10	191	53.9 +02.4	192	53.0 +02.5	193	52.1 +02.5	194	51.3 +02.4	195	50.4 +02.5	10
11	206	56.3 +02.5	207	55.5 +02.4	208	54.6 +02.5	209	53.7 +02.5	210	52.9 +02.4	11
12	221	58.8 +02.5	222	57.9 +02.5	223	57.1 +02.4	224	56.2 +02.5	225	55.3 +02.5	12
13	237	01.3 +02.4	238	00.4 +02.5	238	59.5 +02.5	239	58.7 +02.4	240	57.8 +02.5	13
14	252	03.7 +02.5	253	02.9 +02.4	254	02.0 +02.5	255	01.1 +02.5	256	00.3 +02.4	14
15	267	06.2 +02.4	268	05.3 +02.5	269	04.5 +02.4	270	03.6 +02.5	271	02.7 +02.5	15
16	282	08.6 +02.5	283	07.8 +02.4	284	06.9 +02.5	285	06.1 +02.4	286	05.2 +02.5	16
17	297	11.1 +02.5	298	10.2 +02.5	299	09.4 +02.4	300	08.5 +02.5	301	07.7 +02.4	17
18	312	13.6 +02.4	313	12.7 +02.5	314	11.8 +02.5	315	11.0 +02.5	316	10.1 +02.5	18
19	327	16.0 +02.5	328	15.2 +02.4	329	14.3 +02.5	330	13.5 +02.4	331	12.6 +02.5	19
20	342	18.5 +02.5	343	17.6 +02.5	344	16.8 +02.4	345	15.9 +02.5	346	15.1 +02.4	20
21	357	21.0 +02.4	358	20.1 +02.5	359	19.2 +02.5	0	18.4 +02.4	1	17.5 +02.5	21
22	12	23.4 +02.5	13	22.6 +02.4	14	21.7 +02.5	15	20.8 +02.5	16	20.0 +02.4	22
23	27	25.9 +02.5	28	25.0 +02.5	29	24.2 +02.4	30	23.3 +02.5	31	22.4 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.2	N 29 12.8	Gienah	175 46.5	S 17 39.5
Ankaa	353 09.5	S 42 11.3	Acrux	173 03.5	S 63 12.9
Schedir	349 33.5	N 56 39.5	Gacrux	171 55.1	S 57 13.7
Diphda	348 49.7	S 17 52.1	Alioth	166 16.0	N 55 50.5
Achernar	335 21.7	S 57 07.7	Spica	158 25.4	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.6	N 49 12.4
Polaris	314 47.8	N 89 21.3	Hadar	148 40.3	S 60 28.5
Acamar	315 13.3	S 40 13.0	Menkent	148 00.8	S 36 28.1
Menkar	314 08.6	N 04 10.6	Arcturus	145 50.3	N 19 05.0
Mirfak	308 31.5	N 49 56.2	Rigel Kentaurus	139 42.0	S 60 55.5
Aldebaran	290 42.4	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.4	N 46 01.2	Kocab	137 21.0	N 74 04.0
Rigel	281 06.1	S 08 10.5	Alphecca	126 06.4	N 26 38.7
Bellatrix	278 25.4	N 06 22.2	Antares	112 19.5	S 26 28.7
Elnath	278 04.9	N 28 37.6	Atria	107 16.5	S 69 04.0
Alnilam	275 40.2	S 01 11.2	Sabik	102 06.1	S 15 45.0
Betelgeuze	270 54.7	N 07 24.7	Shaula	96 14.3	S 37 07.2
Canopus	263 53.3	S 52 42.2	Rasalhague	96 01.3	N 12 32.9
Sirius	258 28.2	S 16 44.1	Etamin	90 43.8	N 51 29.4
Adhara	255 07.7	S 28 59.8	Kaus Australis	83 36.2	S 34 22.4
Castor	246 00.2	N 31 50.4	Vega	80 35.3	N 38 48.4
Procyon	244 53.3	N 05 10.6	Nunki	75 51.2	S 26 16.2
Pollux	243 20.1	N 27 58.4	Albireo	67 06.3	N 28 00.5
Avior	234 15.7	S 59 34.4	Altair	62 02.8	N 08 55.5
Suhail	222 48.2	S 43 30.9	Peacock	53 10.0	S 56 40.1
Miaplacidus	221 38.7	S 69 48.0	Deneb	49 27.6	N 45 21.7
Alphard	217 50.4	S 08 45.0	Enif	33 41.3	N 09 58.6
Regulus	207 37.3	N 11 51.7	Alnair	27 36.2	S 46 51.5
Dubhe	193 44.6	N 61 37.9	Formalhaut	15 17.4	S 29 30.5
Denebola	182 27.7	N 14 27.2	Markab	13 32.3	N 15 19.5

2021 - First Point of Aries / Selected Stars

UT	day 311 of 365 November 7		day 312 of 365 November 8		day 313 of 365 November 9		day 314 of 365 November 10		day 315 of 365 November 11		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	46	24.9 +02.5	47	24.1 +02.4	48	23.2 +02.5	49	22.3 +02.5	50	21.5 +02.4	00
01	61	27.4 +02.4	62	26.5 +02.5	63	25.7 +02.4	64	24.8 +02.5	65	23.9 +02.5	01
02	76	29.8 +02.5	77	29.0 +02.4	78	28.1 +02.5	79	27.3 +02.4	80	26.4 +02.5	02
03	91	32.3 +02.5	92	31.4 +02.5	93	30.6 +02.5	94	29.7 +02.5	95	28.9 +02.4	03
04	106	34.8 +02.4	107	33.9 +02.5	108	33.1 +02.4	109	32.2 +02.5	110	31.3 +02.5	04
05	121	37.2 +02.5	122	36.4 +02.4	123	35.5 +02.5	124	34.7 +02.4	125	33.8 +02.5	05
06	136	39.7 +02.5	137	38.8 +02.5	138	38.0 +02.4	139	37.1 +02.5	140	36.3 +02.4	06
07	151	42.2 +02.4	152	41.3 +02.5	153	40.4 +02.5	154	39.6 +02.4	155	38.7 +02.5	07
08	166	44.6 +02.5	167	43.8 +02.4	168	42.9 +02.5	169	42.0 +02.5	170	41.2 +02.5	08
09	181	47.1 +02.5	182	46.2 +02.5	183	45.4 +02.4	184	44.5 +02.5	185	43.7 +02.4	09
10	196	49.6 +02.4	197	48.7 +02.5	198	47.8 +02.5	199	47.0 +02.4	200	46.1 +02.5	10
11	211	52.0 +02.5	212	51.2 +02.4	213	50.3 +02.5	214	49.4 +02.5	215	48.6 +02.4	11
12	226	54.5 +02.4	227	53.6 +02.5	228	52.8 +02.4	229	51.9 +02.5	230	51.0 +02.5	12
13	241	56.9 +02.5	242	56.1 +02.5	243	55.2 +02.5	244	54.4 +02.4	245	53.5 +02.5	13
14	256	59.4 +02.5	257	58.6 +02.4	258	57.7 +02.5	259	56.8 +02.5	260	56.0 +02.4	14
15	272	01.9 +02.4	273	01.0 +02.5	274	00.2 +02.4	274	59.3 +02.5	275	58.4 +02.5	15
16	287	04.3 +02.5	288	03.5 +02.4	289	02.6 +02.5	290	01.8 +02.4	291	00.9 +02.5	16
17	302	06.8 +02.5	303	05.9 +02.5	304	05.1 +02.4	305	04.2 +02.5	306	03.4 +02.4	17
18	317	09.3 +02.4	318	08.4 +02.5	319	07.5 +02.5	320	06.7 +02.5	321	05.8 +02.5	18
19	332	11.7 +02.5	333	10.9 +02.4	334	10.0 +02.5	335	09.2 +02.4	336	08.3 +02.5	19
20	347	14.2 +02.5	348	13.3 +02.5	349	12.5 +02.4	350	11.6 +02.5	351	10.8 +02.4	20
21	2	16.7 +02.4	3	15.8 +02.5	4	14.9 +02.5	5	14.1 +02.4	6	13.2 +02.5	21
22	17	19.1 +02.5	18	18.3 +02.4	19	17.4 +02.5	20	16.5 +02.5	21	15.7 +02.5	22
23	32	21.6 +02.5	33	20.7 +02.5	34	19.9 +02.4	35	19.0 +02.5	36	18.2 +02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.3	N 29 12.8	Gienah	175 46.5	S 17 39.5
Ankaa	353 09.5	S 42 11.3	Acrux	173 03.5	S 63 12.9
Schedir	349 33.5	N 56 39.5	Gacrux	171 55.0	S 57 13.7
Diphda	348 49.7	S 17 52.1	Alioth	166 15.9	N 55 50.5
Achernar	335 21.7	S 57 07.7	Spica	158 25.4	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.6	N 49 12.3
Polaris	314 47.0	N 89 21.3	Hadar	148 40.3	S 60 28.4
Acamar	315 13.3	S 40 13.1	Menkent	148 00.8	S 36 28.1
Menkar	314 08.6	N 04 10.6	Arcturus	145 50.3	N 19 05.0
Mirfak	308 31.5	N 49 56.3	Rigel Kentaurus	139 42.0	S 60 55.5
Aldebaran	290 42.3	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.4	N 46 01.2	Kocab	137 21.0	N 74 04.0
Rigel	281 06.1	S 08 10.5	Alphecca	126 06.4	N 26 38.7
Bellatrix	278 25.4	N 06 22.2	Antares	112 19.5	S 26 28.7
Elnath	278 04.9	N 28 37.6	Atria	107 16.5	S 69 04.0
Alnilam	275 40.1	S 01 11.2	Sabik	102 06.1	S 15 45.0
Betelgeuze	270 54.7	N 07 24.7	Shaula	96 14.3	S 37 07.1
Canopus	263 53.2	S 52 42.2	Rasalhague	96 01.3	N 12 32.9
Sirius	258 28.2	S 16 44.2	Etamin	90 43.8	N 51 29.4
Adhara	255 07.7	S 28 59.9	Kaus Australis	83 36.3	S 34 22.4
Castor	246 00.2	N 31 50.4	Vega	80 35.3	N 38 48.4
Procyon	244 53.2	N 05 10.6	Nunki	75 51.2	S 26 16.2
Pollux	243 20.1	N 27 58.4	Albireo	67 06.3	N 28 00.5
Avior	234 15.6	S 59 34.4	Altair	62 02.8	N 08 55.5
Suhail	222 48.2	S 43 30.9	Peacock	53 10.0	S 56 40.1
Miaplacidus	221 38.6	S 69 48.0	Deneb	49 27.6	N 45 21.7
Alphard	217 50.4	S 08 45.0	Enif	33 41.3	N 09 58.6
Regulus	207 37.2	N 11 51.7	Alnair	27 36.2	S 46 51.5
Dubhe	193 44.5	N 61 37.9	Formalhaut	15 17.4	S 29 30.5
Denebola	182 27.7	N 14 27.2	Markab	13 32.4	N 15 19.5

2021 - First Point of Aries / Selected Stars

UT	day 316 of 365		day 317 of 365		day 318 of 365		day 319 of 365		day 320 of 365		UT
	November 12		November 13		November 14		November 15		November 16		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	51	20.6 +02.5	52	19.8 +02.4	53	18.9 +02.5	54	18.0 +02.5	55	17.2 +02.4	00
01	66	23.1 +02.4	67	22.2 +02.5	68	21.4 +02.4	69	20.5 +02.5	70	19.6 +02.5	01
02	81	25.5 +02.5	82	24.7 +02.4	83	23.8 +02.5	84	23.0 +02.4	85	22.1 +02.5	02
03	96	28.0 +02.5	97	27.1 +02.5	98	26.3 +02.4	99	25.4 +02.5	100	24.6 +02.4	03
04	111	30.5 +02.4	112	29.6 +02.5	113	28.7 +02.5	114	27.9 +02.4	115	27.0 +02.5	04
05	126	32.9 +02.5	127	32.1 +02.4	128	31.2 +02.5	129	30.3 +02.5	130	29.5 +02.4	05
06	141	35.4 +02.5	142	34.5 +02.5	143	33.7 +02.4	144	32.8 +02.5	145	31.9 +02.5	06
07	156	37.9 +02.4	157	37.0 +02.5	158	36.1 +02.5	159	35.3 +02.4	160	34.4 +02.5	07
08	171	40.3 +02.5	172	39.5 +02.4	173	38.6 +02.5	174	37.7 +02.5	175	36.9 +02.4	08
09	186	42.8 +02.5	187	41.9 +02.5	188	41.1 +02.4	189	40.2 +02.5	190	39.3 +02.5	09
10	201	45.3 +02.4	202	44.4 +02.5	203	43.5 +02.5	204	42.7 +02.4	205	41.8 +02.5	10
11	216	47.7 +02.5	217	46.9 +02.4	218	46.0 +02.5	219	45.1 +02.5	220	44.3 +02.4	11
12	231	50.2 +02.4	232	49.3 +02.5	233	48.5 +02.4	234	47.6 +02.5	235	46.7 +02.5	12
13	246	52.6 +02.5	247	51.8 +02.4	248	50.9 +02.5	249	50.1 +02.4	250	49.2 +02.5	13
14	261	55.1 +02.5	262	54.2 +02.5	263	53.4 +02.5	264	52.5 +02.5	265	51.7 +02.4	14
15	276	57.6 +02.4	277	56.7 +02.5	278	55.9 +02.4	279	55.0 +02.5	280	54.1 +02.5	15
16	292	00.0 +02.5	292	59.2 +02.4	293	58.3 +02.5	294	57.5 +02.4	295	56.6 +02.5	16
17	307	02.5 +02.5	308	01.6 +02.5	309	00.8 +02.4	309	59.9 +02.5	310	59.1 +02.4	17
18	322	05.0 +02.4	323	04.1 +02.5	324	03.2 +02.5	325	02.4 +02.4	326	01.5 +02.5	18
19	337	07.4 +02.5	338	06.6 +02.4	339	05.7 +02.5	340	04.8 +02.5	341	04.0 +02.4	19
20	352	09.9 +02.5	353	09.0 +02.5	354	08.2 +02.4	355	07.3 +02.5	356	06.4 +02.5	20
21	7	12.4 +02.4	8	11.5 +02.5	9	10.6 +02.5	10	09.8 +02.4	11	08.9 +02.5	21
22	22	14.8 +02.5	23	14.0 +02.4	24	13.1 +02.5	25	12.2 +02.5	26	11.4 +02.4	22
23	37	17.3 +02.5	38	16.4 +02.5	39	15.6 +02.4	40	14.7 +02.5	41	13.8 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.3	N 29 12.8	Gienah	175 46.4	S 17 39.5
Ankaa	353 09.6	S 42 11.3	Acrux	173 03.4	S 63 12.8
Schedir	349 33.5	N 56 39.6	Gacrux	171 55.0	S 57 13.7
Diphda	348 49.7	S 17 52.1	Alioth	166 15.9	N 55 50.5
Achernar	335 21.7	S 57 07.7	Spica	158 25.3	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.5	N 49 12.3
Polaris	314 46.5	N 89 21.4	Hadar	148 40.3	S 60 28.4
Acamar	315 13.3	S 40 13.1	Menkent	148 00.8	S 36 28.1
Menkar	314 08.5	N 04 10.6	Arcturus	145 50.3	N 19 05.0
Mirfak	308 31.5	N 49 56.3	Rigel Kentaurus	139 42.0	S 60 55.5
Aldebaran	290 42.3	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.4	N 46 01.2	Kocab	137 21.0	N 74 04.0
Rigel	281 06.1	S 08 10.5	Alphecca	126 06.4	N 26 38.7
Bellatrix	278 25.4	N 06 22.2	Antares	112 19.5	S 26 28.7
Elnath	278 04.8	N 28 37.6	Atria	107 16.5	S 69 04.0
Alnilam	275 40.1	S 01 11.2	Sabik	102 06.1	S 15 45.0
Betelgeuze	270 54.7	N 07 24.7	Shaula	96 14.3	S 37 07.1
Canopus	263 53.2	S 52 42.2	Rasalhague	96 01.3	N 12 32.9
Sirius	258 28.1	S 16 44.2	Etamin	90 43.8	N 51 29.4
Adhara	255 07.7	S 28 59.9	Kaus Australis	83 36.3	S 34 22.4
Castor	246 00.1	N 31 50.4	Vega	80 35.4	N 38 48.3
Procyon	244 53.2	N 05 10.6	Nunki	75 51.2	S 26 16.2
Pollux	243 20.0	N 27 58.4	Albireo	67 06.3	N 28 00.5
Avior	234 15.6	S 59 34.4	Altair	62 02.8	N 08 55.5
Suhail	222 48.1	S 43 30.9	Peacock	53 10.0	S 56 40.1
Miaplacidus	221 38.5	S 69 48.0	Deneb	49 27.7	N 45 21.7
Alphard	217 50.3	S 08 45.0	Enif	33 41.3	N 09 58.6
Regulus	207 37.2	N 11 51.7	Alnair	27 36.2	S 46 51.5
Dubhe	193 44.5	N 61 37.9	Formalhaut	15 17.4	S 29 30.5
Denebola	182 27.7	N 14 27.2	Markab	13 32.4	N 15 19.5

2021 - First Point of Aries / Selected Stars

UT	day 321 of 365		day 322 of 365		day 323 of 365		day 324 of 365		day 325 of 365		UT
	November 17		November 18		November 19		November 20		November 21		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	56	16.3 +02.5	57	15.4 +02.5	58	14.6 +02.4	59	13.7 +02.5	60	12.9 +02.4	00
01	71	18.8 +02.4	72	17.9 +02.5	73	17.0 +02.5	74	16.2 +02.4	75	15.3 +02.5	01
02	86	21.2 +02.5	87	20.4 +02.4	88	19.5 +02.5	89	18.6 +02.5	90	17.8 +02.5	02
03	101	23.7 +02.5	102	22.8 +02.5	103	22.0 +02.4	104	21.1 +02.5	105	20.3 +02.4	03
04	116	26.2 +02.4	117	25.3 +02.5	118	24.4 +02.5	119	23.6 +02.4	120	22.7 +02.5	04
05	131	28.6 +02.5	132	27.8 +02.4	133	26.9 +02.5	134	26.0 +02.5	135	25.2 +02.4	05
06	146	31.1 +02.5	147	30.2 +02.5	148	29.4 +02.4	149	28.5 +02.5	150	27.6 +02.5	06
07	161	33.6 +02.4	162	32.7 +02.5	163	31.8 +02.5	164	31.0 +02.4	165	30.1 +02.5	07
08	176	36.0 +02.5	177	35.2 +02.4	178	34.3 +02.5	179	33.4 +02.5	180	32.6 +02.4	08
09	191	38.5 +02.4	192	37.6 +02.5	193	36.8 +02.4	194	35.9 +02.5	195	35.0 +02.5	09
10	206	40.9 +02.5	207	40.1 +02.4	208	39.2 +02.5	209	38.4 +02.4	210	37.5 +02.5	10
11	221	43.4 +02.5	222	42.5 +02.5	223	41.7 +02.4	224	40.8 +02.5	225	40.0 +02.4	11
12	236	45.9 +02.4	237	45.0 +02.5	238	44.1 +02.5	239	43.3 +02.5	240	42.4 +02.5	12
13	251	48.3 +02.5	252	47.5 +02.4	253	46.6 +02.5	254	45.8 +02.4	255	44.9 +02.5	13
14	266	50.8 +02.5	267	49.9 +02.5	268	49.1 +02.4	269	48.2 +02.5	270	47.4 +02.4	14
15	281	53.3 +02.4	282	52.4 +02.5	283	51.5 +02.5	284	50.7 +02.4	285	49.8 +02.5	15
16	296	55.7 +02.5	297	54.9 +02.4	298	54.0 +02.5	299	53.1 +02.5	300	52.3 +02.5	16
17	311	58.2 +02.5	312	57.3 +02.5	313	56.5 +02.4	314	55.6 +02.5	315	54.8 +02.4	17
18	327	00.7 +02.4	327	59.8 +02.5	328	58.9 +02.5	329	58.1 +02.4	330	57.2 +02.5	18
19	342	03.1 +02.5	343	02.3 +02.4	344	01.4 +02.5	345	00.5 +02.5	345	59.7 +02.4	19
20	357	05.6 +02.4	358	04.7 +02.5	359	03.9 +02.4	0	03.0 +02.5	1	02.1 +02.5	20
21	12	08.0 +02.5	13	07.2 +02.5	14	06.3 +02.5	15	05.5 +02.4	16	04.6 +02.5	21
22	27	10.5 +02.5	28	09.7 +02.4	29	08.8 +02.5	30	07.9 +02.5	31	07.1 +02.4	22
23	42	13.0 +02.4	43	12.1 +02.5	44	11.3 +02.4	45	10.4 +02.5	46	09.5 +02.5	23

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	37.3	N 29	12.8	Gienah	175	46.4	S 17	39.5
Ankaa	353	09.6	S 42	11.3	Acrux	173	03.4	S 63	12.8
Schedir	349	33.6	N 56	39.6	Gacrux	171	54.9	S 57	13.7
Diphda	348	49.8	S 17	52.1	Alioth	166	15.9	N 55	50.4
Achernar	335	21.7	S 57	07.7	Spica	158	25.3	S 11	16.3
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.5	N 49	12.3
Polaris	314	46.6	N 89	21.4	Hadar	148	40.2	S 60	28.4
Acamar	315	13.3	S 40	13.1	Menkent	148	00.8	S 36	28.1
Menkar	314	08.5	N 04	10.5	Arcturus	145	50.3	N 19	04.9
Mirfak	308	31.4	N 49	56.3	Rigel Kentaurus	139	41.9	S 60	55.5
Aldebaran	290	42.3	N 16	33.2	Zubenelgenubi	136	59.2	S 16	07.7
Capella	280	25.3	N 46	01.2	Kocab	137	21.0	N 74	03.9
Rigel	281	06.1	S 08	10.5	Alphecca	126	06.4	N 26	38.6
Bellatrix	278	25.4	N 06	22.2	Antares	112	19.5	S 26	28.7
Elnath	278	04.8	N 28	37.6	Atria	107	16.5	S 69	04.0
Alnilam	275	40.1	S 01	11.2	Sabik	102	06.1	S 15	45.0
Betelgeuze	270	54.6	N 07	24.7	Shaula	96	14.3	S 37	07.1
Canopus	263	53.1	S 52	42.2	Rasalhague	96	01.3	N 12	32.9
Sirius	258	28.1	S 16	44.2	Etamin	90	43.8	N 51	29.3
Adhara	255	07.6	S 28	59.9	Kaus Australis	83	36.3	S 34	22.4
Castor	246	00.1	N 31	50.4	Vega	80	35.4	N 38	48.3
Procyon	244	53.2	N 05	10.6	Nunki	75	51.3	S 26	16.2
Pollux	243	20.0	N 27	58.4	Albireo	67	06.4	N 28	00.5
Avior	234	15.5	S 59	34.4	Altair	62	02.8	N 08	55.5
Suhail	222	48.1	S 43	30.9	Peacock	53	10.1	S 56	40.1
Miaplacidus	221	38.4	S 69	48.0	Deneb	49	27.7	N 45	21.7
Alphard	217	50.3	S 08	45.0	Enif	33	41.4	N 09	58.6
Regulus	207	37.2	N 11	51.7	Alnair	27	36.2	S 46	51.5
Dubhe	193	44.4	N 61	37.8	Formalhaut	15	17.4	S 29	30.5
Denebola	182	27.6	N 14	27.1	Markab	13	32.4	N 15	19.5

2021 - First Point of Aries / Selected Stars

UT	day 326 of 365 November 22		day 327 of 365 November 23		day 328 of 365 November 24		day 329 of 365 November 25		day 330 of 365 November 26		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	61	12.0 +02.5	62	11.1 +02.5	63	10.3 +02.4	64	09.4 +02.5	65	08.6 +02.4	00
01	76	14.5 +02.4	77	13.6 +02.5	78	12.7 +02.5	79	11.9 +02.4	80	11.0 +02.5	01
02	91	16.9 +02.5	92	16.1 +02.4	93	15.2 +02.5	94	14.3 +02.5	95	13.5 +02.5	02
03	106	19.4 +02.5	107	18.5 +02.5	108	17.7 +02.4	109	16.8 +02.5	110	16.0 +02.4	03
04	121	21.9 +02.4	122	21.0 +02.5	123	20.1 +02.5	124	19.3 +02.4	125	18.4 +02.5	04
05	136	24.3 +02.5	137	23.5 +02.4	138	22.6 +02.5	139	21.7 +02.5	140	20.9 +02.4	05
06	151	26.8 +02.4	152	25.9 +02.5	153	25.1 +02.4	154	24.2 +02.5	155	23.3 +02.5	06
07	166	29.2 +02.5	167	28.4 +02.5	168	27.5 +02.5	169	26.7 +02.4	170	25.8 +02.5	07
08	181	31.7 +02.5	182	30.9 +02.4	183	30.0 +02.5	184	29.1 +02.5	185	28.3 +02.4	08
09	196	34.2 +02.4	197	33.3 +02.5	198	32.5 +02.4	199	31.6 +02.5	200	30.7 +02.5	09
10	211	36.6 +02.5	212	35.8 +02.4	213	34.9 +02.5	214	34.1 +02.4	215	33.2 +02.5	10
11	226	39.1 +02.5	227	38.2 +02.5	228	37.4 +02.5	229	36.5 +02.5	230	35.7 +02.4	11
12	241	41.6 +02.4	242	40.7 +02.5	243	39.9 +02.4	244	39.0 +02.5	245	38.1 +02.5	12
13	256	44.0 +02.5	257	43.2 +02.4	258	42.3 +02.5	259	41.5 +02.4	260	40.6 +02.5	13
14	271	46.5 +02.5	272	45.6 +02.5	273	44.8 +02.4	274	43.9 +02.5	275	43.1 +02.4	14
15	286	49.0 +02.4	287	48.1 +02.5	288	47.2 +02.5	289	46.4 +02.4	290	45.5 +02.5	15
16	301	51.4 +02.5	302	50.6 +02.4	303	49.7 +02.5	304	48.8 +02.5	305	48.0 +02.5	16
17	316	53.9 +02.5	317	53.0 +02.5	318	52.2 +02.4	319	51.3 +02.5	320	50.5 +02.4	17
18	331	56.4 +02.4	332	55.5 +02.5	333	54.6 +02.5	334	53.8 +02.4	335	52.9 +02.5	18
19	346	58.8 +02.5	347	58.0 +02.4	348	57.1 +02.5	349	56.2 +02.5	350	55.4 +02.4	19
20	2	01.3 +02.4	3	00.4 +02.5	3	59.6 +02.4	4	58.7 +02.5	5	57.8 +02.5	20
21	17	03.7 +02.5	18	02.9 +02.5	19	02.0 +02.5	20	01.2 +02.4	21	00.3 +02.5	21
22	32	06.2 +02.5	33	05.4 +02.4	34	04.5 +02.5	35	03.6 +02.5	36	02.8 +02.4	22
23	47	08.7 +02.4	48	07.8 +02.5	49	07.0 +02.4	50	06.1 +02.5	51	05.2 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.3	N 29 12.8	Gienah	175 46.4	S 17 39.6
Ankaa	353 09.6	S 42 11.3	Acrux	173 03.3	S 63 12.8
Schedir	349 33.6	N 56 39.6	Gacrux	171 54.9	S 57 13.7
Diphda	348 49.8	S 17 52.1	Alioth	166 15.8	N 55 50.4
Achernar	335 21.8	S 57 07.8	Spica	158 25.3	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.5	N 49 12.2
Polaris	314 46.4	N 89 21.4	Hadar	148 40.2	S 60 28.4
Acamar	315 13.3	S 40 13.1	Menkent	148 00.7	S 36 28.1
Menkar	314 08.5	N 04 10.5	Arcturus	145 50.2	N 19 04.9
Mirfak	308 31.4	N 49 56.3	Rigel Kentaurus	139 41.9	S 60 55.4
Aldebaran	290 42.3	N 16 33.2	Zubenelgenubi	136 59.2	S 16 07.7
Capella	280 25.3	N 46 01.2	Kocab	137 21.0	N 74 03.9
Rigel	281 06.0	S 08 10.5	Alphecca	126 06.4	N 26 38.6
Bellatrix	278 25.3	N 06 22.2	Antares	112 19.5	S 26 28.7
Elnath	278 04.8	N 28 37.6	Atria	107 16.5	S 69 03.9
Alnilam	275 40.1	S 01 11.2	Sabik	102 06.1	S 15 45.0
Betelgeuze	270 54.6	N 07 24.7	Shaula	96 14.3	S 37 07.1
Canopus	263 53.1	S 52 42.2	Rasalhague	96 01.3	N 12 32.9
Sirius	258 28.1	S 16 44.2	Etamin	90 43.9	N 51 29.3
Adhara	255 07.6	S 28 59.9	Kaus Australis	83 36.3	S 34 22.4
Castor	246 00.1	N 31 50.4	Vega	80 35.4	N 38 48.3
Procyon	244 53.1	N 05 10.5	Nunki	75 51.3	S 26 16.2
Pollux	243 19.9	N 27 58.4	Albireo	67 06.4	N 28 00.5
Avior	234 15.4	S 59 34.4	Altair	62 02.8	N 08 55.5
Suhail	222 48.0	S 43 30.9	Peacock	53 10.1	S 56 40.1
Miaplacidus	221 38.3	S 69 48.0	Deneb	49 27.7	N 45 21.7
Alphard	217 50.2	S 08 45.0	Enif	33 41.4	N 09 58.6
Regulus	207 37.1	N 11 51.7	Alnair	27 36.3	S 46 51.5
Dubhe	193 44.3	N 61 37.8	Formalhaut	15 17.4	S 29 30.5
Denebola	182 27.6	N 14 27.1	Markab	13 32.4	N 15 19.5

2021 - First Point of Aries / Selected Stars

UT	day 331 of 365		day 332 of 365		day 333 of 365		day 334 of 365		day 335 of 365		UT					
	<i>November 27</i>		<i>November 28</i>		<i>November 29</i>		<i>November 30</i>		<i>December 1</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	66	07.7	+02.5	67	06.8	+02.5	68	06.0	+02.4	69	05.1	+02.5	70	04.3	+02.4	00
01	81	10.2	+02.4	82	09.3	+02.5	83	08.4	+02.5	84	07.6	+02.4	85	06.7	+02.5	01
02	96	12.6	+02.5	97	11.8	+02.4	98	10.9	+02.5	99	10.0	+02.5	100	09.2	+02.4	02
03	111	15.1	+02.5	112	14.2	+02.5	113	13.4	+02.4	114	12.5	+02.5	115	11.6	+02.5	03
04	126	17.6	+02.4	127	16.7	+02.5	128	15.8	+02.5	129	15.0	+02.4	130	14.1	+02.5	04
05	141	20.0	+02.5	142	19.2	+02.4	143	18.3	+02.5	144	17.4	+02.5	145	16.6	+02.4	05
06	156	22.5	+02.4	157	21.6	+02.5	158	20.8	+02.4	159	19.9	+02.5	160	19.0	+02.5	06
07	171	24.9	+02.5	172	24.1	+02.5	173	23.2	+02.5	174	22.4	+02.4	175	21.5	+02.5	07
08	186	27.4	+02.5	187	26.6	+02.4	188	25.7	+02.5	189	24.8	+02.5	190	24.0	+02.4	08
09	201	29.9	+02.4	202	29.0	+02.5	203	28.2	+02.4	204	27.3	+02.5	205	26.4	+02.5	09
10	216	32.3	+02.5	217	31.5	+02.4	218	30.6	+02.5	219	29.8	+02.4	220	28.9	+02.5	10
11	231	34.8	+02.5	232	33.9	+02.5	233	33.1	+02.4	234	32.2	+02.5	235	31.4	+02.4	11
12	246	37.3	+02.4	247	36.4	+02.5	248	35.5	+02.5	249	34.7	+02.4	250	33.8	+02.5	12
13	261	39.7	+02.5	262	38.9	+02.4	263	38.0	+02.5	264	37.1	+02.5	265	36.3	+02.4	13
14	276	42.2	+02.5	277	41.3	+02.5	278	40.5	+02.4	279	39.6	+02.5	280	38.7	+02.5	14
15	291	44.7	+02.4	292	43.8	+02.5	293	42.9	+02.5	294	42.1	+02.4	295	41.2	+02.5	15
16	306	47.1	+02.5	307	46.3	+02.4	308	45.4	+02.5	309	44.5	+02.5	310	43.7	+02.4	16
17	321	49.6	+02.5	322	48.7	+02.5	323	47.9	+02.4	324	47.0	+02.5	325	46.1	+02.5	17
18	336	52.1	+02.4	337	51.2	+02.5	338	50.3	+02.5	339	49.5	+02.4	340	48.6	+02.5	18
19	351	54.5	+02.5	352	53.7	+02.4	353	52.8	+02.5	354	51.9	+02.5	355	51.1	+02.4	19
20	6	57.0	+02.4	7	56.1	+02.5	8	55.3	+02.4	9	54.4	+02.5	10	53.5	+02.5	20
21	21	59.4	+02.5	22	58.6	+02.4	23	57.7	+02.5	24	56.9	+02.4	25	56.0	+02.5	21
22	37	01.9	+02.5	38	01.0	+02.5	39	00.2	+02.5	39	59.3	+02.5	40	58.5	+02.4	22
23	52	04.4	+02.4	53	03.5	+02.5	54	02.7	+02.4	55	01.8	+02.5	56	00.9	+02.5	23

	SHA		Dec		SHA		Dec		
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "		
Alpheratz	357	37.3	N 29	12.8	Gienah	175	46.3	S 17	39.6
Ankaa	353	09.6	S 42	11.3	Acrux	173	03.3	S 63	12.8
Schedir	349	33.6	N 56	39.6	Gacrux	171	54.8	S 57	13.7
Diphda	348	49.8	S 17	52.1	Alioth	166	15.8	N 55	50.4
Achernar	335	21.8	S 57	07.8	Spica	158	25.2	S 11	16.3
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.4	N 49	12.2
Polaris	314	46.6	N 89	21.4	Hadar	148	40.1	S 60	28.4
Acamar	315	13.3	S 40	13.1	Menkent	148	00.7	S 36	28.1
Menkar	314	08.5	N 04	10.5	Arcturus	145	50.2	N 19	04.9
Mirfak	308	31.4	N 49	56.3	Rigel Kentaurus	139	41.9	S 60	55.4
Aldebaran	290	42.2	N 16	33.2	Zubenelgenubi	136	59.1	S 16	07.7
Capella	280	25.2	N 46	01.3	Kocab	137	21.0	N 74	03.9
Rigel	281	06.0	S 08	10.6	Alphecca	126	06.4	N 26	38.6
Bellatrix	278	25.3	N 06	22.2	Antares	112	19.5	S 26	28.7
Elnath	278	04.8	N 28	37.6	Atria	107	16.5	S 69	03.9
Alnilam	275	40.0	S 01	11.3	Sabik	102	06.1	S 15	45.1
Betelgeuze	270	54.6	N 07	24.7	Shaula	96	14.3	S 37	07.1
Canopus	263	53.1	S 52	42.3	Rasalhague	96	01.3	N 12	32.8
Sirius	258	28.0	S 16	44.2	Etamin	90	43.9	N 51	29.3
Adhara	255	07.6	S 28	59.9	Kaus Australis	83	36.3	S 34	22.4
Castor	246	00.0	N 31	50.4	Vega	80	35.4	N 38	48.3
Procyon	244	53.1	N 05	10.5	Nunki	75	51.3	S 26	16.2
Pollux	243	19.9	N 27	58.4	Albireo	67	06.4	N 28	00.5
Avior	234	15.4	S 59	34.5	Altair	62	02.8	N 08	55.5
Suhail	222	48.0	S 43	30.9	Peacock	53	10.1	S 56	40.1
Miaplacidus	221	38.2	S 69	48.1	Deneb	49	27.7	N 45	21.7
Alphard	217	50.2	S 08	45.1	Enif	33	41.4	N 09	58.6
Regulus	207	37.1	N 11	51.7	Alnair	27	36.3	S 46	51.5
Dubhe	193	44.3	N 61	37.8	Formalhaut	15	17.4	S 29	30.5
Denebola	182	27.6	N 14	27.1	Markab	13	32.4	N 15	19.5

2021 - First Point of Aries / Selected Stars

UT	day 336 of 365 <i>December 2</i>		day 337 of 365 <i>December 3</i>		day 338 of 365 <i>December 4</i>		day 339 of 365 <i>December 5</i>		day 340 of 365 <i>December 6</i>		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	71	03.4 +02.5	72	02.5 +02.5	73	01.7 +02.4	74	00.8 +02.5	74	60.0 +02.4	00
01	86	05.9 +02.4	87	05.0 +02.5	88	04.1 +02.5	89	03.3 +02.4	90	02.4 +02.5	01
02	101	08.3 +02.5	102	07.5 +02.4	103	06.6 +02.5	104	05.7 +02.5	105	04.9 +02.4	02
03	116	10.8 +02.4	117	09.9 +02.5	118	09.1 +02.4	119	08.2 +02.5	120	07.3 +02.5	03
04	131	13.2 +02.5	132	12.4 +02.5	133	11.5 +02.5	134	10.7 +02.4	135	09.8 +02.5	04
05	146	15.7 +02.5	147	14.9 +02.4	148	14.0 +02.5	149	13.1 +02.5	150	12.3 +02.4	05
06	161	18.2 +02.4	162	17.3 +02.5	163	16.5 +02.4	164	15.6 +02.5	165	14.7 +02.5	06
07	176	20.6 +02.5	177	19.8 +02.4	178	18.9 +02.5	179	18.1 +02.4	180	17.2 +02.5	07
08	191	23.1 +02.5	192	22.2 +02.5	193	21.4 +02.4	194	20.5 +02.5	195	19.7 +02.4	08
09	206	25.6 +02.4	207	24.7 +02.5	208	23.8 +02.5	209	23.0 +02.5	210	22.1 +02.5	09
10	221	28.0 +02.5	222	27.2 +02.4	223	26.3 +02.5	224	25.5 +02.4	225	24.6 +02.5	10
11	236	30.5 +02.5	237	29.6 +02.5	238	28.8 +02.4	239	27.9 +02.5	240	27.1 +02.4	11
12	251	33.0 +02.4	252	32.1 +02.5	253	31.2 +02.5	254	30.4 +02.4	255	29.5 +02.5	12
13	266	35.4 +02.5	267	34.6 +02.4	268	33.7 +02.5	269	32.8 +02.5	270	32.0 +02.5	13
14	281	37.9 +02.5	282	37.0 +02.5	283	36.2 +02.4	284	35.3 +02.5	285	34.5 +02.4	14
15	296	40.4 +02.4	297	39.5 +02.5	298	38.6 +02.5	299	37.8 +02.4	300	36.9 +02.5	15
16	311	42.8 +02.5	312	42.0 +02.4	313	41.1 +02.5	314	40.2 +02.5	315	39.4 +02.4	16
17	326	45.3 +02.4	327	44.4 +02.5	328	43.6 +02.4	329	42.7 +02.5	330	41.8 +02.5	17
18	341	47.7 +02.5	342	46.9 +02.5	343	46.0 +02.5	344	45.2 +02.4	345	44.3 +02.5	18
19	356	50.2 +02.5	357	49.4 +02.4	358	48.5 +02.5	359	47.6 +02.5	0	46.8 +02.4	19
20	11	52.7 +02.4	12	51.8 +02.5	13	51.0 +02.4	14	50.1 +02.5	15	49.2 +02.5	20
21	26	55.1 +02.5	27	54.3 +02.4	28	53.4 +02.5	29	52.6 +02.4	30	51.7 +02.5	21
22	41	57.6 +02.5	42	56.7 +02.5	43	55.9 +02.4	44	55.0 +02.5	45	54.2 +02.4	22
23	57	00.1 +02.4	57	59.2 +02.5	58	58.3 +02.5	59	57.5 +02.5	60	56.6 +02.5	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 37.3	N 29 12.8	Gienah	175 46.3	S 17 39.6
Ankaa	353 09.6	S 42 11.4	Acrux	173 03.2	S 63 12.8
Schedir	349 33.6	N 56 39.6	Gacrux	171 54.8	S 57 13.7
Diphda	348 49.8	S 17 52.2	Alioth	166 15.7	N 55 50.3
Achernar	335 21.8	S 57 07.8	Spica	158 25.2	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.4	N 49 12.2
Polaris	314 47.3	N 89 21.5	Hadar	148 40.1	S 60 28.4
Acamar	315 13.3	S 40 13.2	Menkent	148 00.7	S 36 28.1
Menkar	314 08.5	N 04 10.5	Arcturus	145 50.2	N 19 04.9
Mirfak	308 31.4	N 49 56.4	Rigel Kentaurus	139 41.8	S 60 55.4
Aldebaran	290 42.2	N 16 33.2	Zubenelgenubi	136 59.1	S 16 07.7
Capella	280 25.2	N 46 01.3	Kocab	137 20.9	N 74 03.8
Rigel	281 06.0	S 08 10.6	Alphecca	126 06.3	N 26 38.6
Bellatrix	278 25.3	N 06 22.2	Antares	112 19.5	S 26 28.7
Elnath	278 04.7	N 28 37.6	Atria	107 16.5	S 69 03.9
Alnilam	275 40.0	S 01 11.3	Sabik	102 06.1	S 15 45.1
Betelgeuze	270 54.5	N 07 24.7	Shaula	96 14.3	S 37 07.1
Canopus	263 53.0	S 52 42.3	Rasalhague	96 01.3	N 12 32.8
Sirius	258 28.0	S 16 44.2	Etamin	90 43.9	N 51 29.3
Adhara	255 07.5	S 28 60.0	Kaus Australis	83 36.3	S 34 22.4
Castor	245 60.0	N 31 50.4	Vega	80 35.4	N 38 48.3
Procyon	244 53.1	N 05 10.5	Nunki	75 51.3	S 26 16.2
Pollux	243 19.9	N 27 58.4	Albireo	67 06.4	N 28 00.5
Avior	234 15.3	S 59 34.5	Altair	62 02.9	N 08 55.5
Suhail	222 48.0	S 43 30.9	Peacock	53 10.2	S 56 40.1
Miaplacidus	221 38.2	S 69 48.1	Deneb	49 27.8	N 45 21.7
Alphard	217 50.2	S 08 45.1	Enif	33 41.4	N 09 58.6
Regulus	207 37.0	N 11 51.7	Alnair	27 36.3	S 46 51.5
Dubhe	193 44.2	N 61 37.8	Formalhaut	15 17.5	S 29 30.5
Denebola	182 27.5	N 14 27.1	Markab	13 32.4	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 341 of 365 December 7		day 342 of 365 December 8		day 343 of 365 December 9		day 344 of 365 December 10		day 345 of 365 December 11		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	75	59.1 +02.5	76	58.2 +02.5	77	57.4 +02.4	78	56.5 +02.5	79	55.7 +02.4	00
01	91	01.6 +02.4	92	00.7 +02.5	92	59.8 +02.5	93	59.0 +02.4	94	58.1 +02.5	01
02	106	04.0 +02.5	107	03.2 +02.4	108	02.3 +02.5	109	01.4 +02.5	110	00.6 +02.4	02
03	121	06.5 +02.5	122	05.6 +02.5	123	04.8 +02.4	124	03.9 +02.5	125	03.0 +02.5	03
04	136	09.0 +02.4	137	08.1 +02.5	138	07.2 +02.5	139	06.4 +02.4	140	05.5 +02.5	04
05	151	11.4 +02.5	152	10.6 +02.4	153	09.7 +02.5	154	08.8 +02.5	155	08.0 +02.4	05
06	166	13.9 +02.4	167	13.0 +02.5	168	12.2 +02.4	169	11.3 +02.5	170	10.4 +02.5	06
07	181	16.3 +02.5	182	15.5 +02.5	183	14.6 +02.5	184	13.8 +02.4	185	12.9 +02.5	07
08	196	18.8 +02.5	197	18.0 +02.4	198	17.1 +02.5	199	16.2 +02.5	200	15.4 +02.4	08
09	211	21.3 +02.4	212	20.4 +02.5	213	19.6 +02.4	214	18.7 +02.5	215	17.8 +02.5	09
10	226	23.7 +02.5	227	22.9 +02.4	228	22.0 +02.5	229	21.2 +02.4	230	20.3 +02.5	10
11	241	26.2 +02.5	242	25.3 +02.5	243	24.5 +02.4	244	23.6 +02.5	245	22.8 +02.4	11
12	256	28.7 +02.4	257	27.8 +02.5	258	26.9 +02.5	259	26.1 +02.5	260	25.2 +02.5	12
13	271	31.1 +02.5	272	30.3 +02.4	273	29.4 +02.5	274	28.6 +02.4	275	27.7 +02.5	13
14	286	33.6 +02.5	287	32.7 +02.5	288	31.9 +02.4	289	31.0 +02.5	290	30.2 +02.4	14
15	301	36.1 +02.4	302	35.2 +02.5	303	34.3 +02.5	304	33.5 +02.4	305	32.6 +02.5	15
16	316	38.5 +02.5	317	37.7 +02.4	318	36.8 +02.5	319	35.9 +02.5	320	35.1 +02.4	16
17	331	41.0 +02.5	332	40.1 +02.5	333	39.3 +02.4	334	38.4 +02.5	335	37.5 +02.5	17
18	346	43.5 +02.4	347	42.6 +02.5	348	41.7 +02.5	349	40.9 +02.4	350	40.0 +02.5	18
19	1	45.9 +02.5	2	45.1 +02.4	3	44.2 +02.5	4	43.3 +02.5	5	42.5 +02.4	19
20	16	48.4 +02.4	17	47.5 +02.5	18	46.7 +02.4	19	45.8 +02.5	20	44.9 +02.5	20
21	31	50.8 +02.5	32	50.0 +02.5	33	49.1 +02.5	34	48.3 +02.4	35	47.4 +02.5	21
22	46	53.3 +02.5	47	52.5 +02.4	48	51.6 +02.5	49	50.7 +02.5	50	49.9 +02.4	22
23	61	55.8 +02.4	62	54.9 +02.5	63	54.1 +02.4	64	53.2 +02.5	65	52.3 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 37.3	N 29 12.8	Gienah	175 46.3	S 17 39.6
Ankaa	353 09.6	S 42 11.4	Acrux	173 03.1	S 63 12.8
Schedir	349 33.7	N 56 39.6	Gacrux	171 54.7	S 57 13.7
Diphda	348 49.8	S 17 52.2	Alioth	166 15.7	N 55 50.3
Achernar	335 21.8	S 57 07.8	Spica	158 25.2	S 11 16.3
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.4	N 49 12.2
Polaris	314 47.6	N 89 21.5	Hadar	148 40.0	S 60 28.4
Acamar	315 13.3	S 40 13.2	Menkent	148 00.6	S 36 28.1
Menkar	314 08.5	N 04 10.5	Arcturus	145 50.2	N 19 04.9
Mirfak	308 31.4	N 49 56.4	Rigel Kentaurus	139 41.7	S 60 55.4
Aldebaran	290 42.2	N 16 33.2	Zubenelgenubi	136 59.1	S 16 07.8
Capella	280 25.2	N 46 01.3	Kocab	137 20.9	N 74 03.8
Rigel	281 06.0	S 08 10.6	Alphecca	126 06.3	N 26 38.5
Bellatrix	278 25.3	N 06 22.2	Antares	112 19.4	S 26 28.7
Elnath	278 04.7	N 28 37.6	Atria	107 16.4	S 69 03.9
Alnilam	275 40.0	S 01 11.3	Sabik	102 06.1	S 15 45.1
Betelgeuze	270 54.5	N 07 24.6	Shaula	96 14.2	S 37 07.1
Canopus	263 53.0	S 52 42.3	Rasalhague	96 01.3	N 12 32.8
Sirius	258 28.0	S 16 44.3	Etamin	90 43.9	N 51 29.2
Adhara	255 07.5	S 28 60.0	Kaus Australis	83 36.3	S 34 22.4
Castor	245 59.9	N 31 50.4	Vega	80 35.4	N 38 48.2
Procyon	244 53.0	N 05 10.5	Nunki	75 51.3	S 26 16.2
Pollux	243 19.8	N 27 58.3	Albireo	67 06.4	N 28 00.4
Avior	234 15.3	S 59 34.5	Altair	62 02.9	N 08 55.5
Suhail	222 47.9	S 43 31.0	Peacock	53 10.2	S 56 40.1
Miaplacidus	221 38.1	S 69 48.1	Deneb	49 27.8	N 45 21.7
Alphard	217 50.1	S 08 45.1	Enif	33 41.4	N 09 58.6
Regulus	207 37.0	N 11 51.6	Alnair	27 36.3	S 46 51.5
Dubhe	193 44.1	N 61 37.8	Formalhaut	15 17.5	S 29 30.5
Denebola	182 27.5	N 14 27.1	Markab	13 32.4	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 346 of 365		day 347 of 365		day 348 of 365		day 349 of 365		day 350 of 365		UT					
	<i>December 12</i>		<i>December 13</i>		<i>December 14</i>		<i>December 15</i>		<i>December 16</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	80	54.8	+02.5	81	53.9	+02.5	82	53.1	+02.4	83	52.2	+02.5	84	51.3	+02.5	00
01	95	57.3	+02.4	96	56.4	+02.5	97	55.5	+02.5	98	54.7	+02.4	99	53.8	+02.5	01
02	110	59.7	+02.5	111	58.9	+02.4	112	58.0	+02.5	113	57.1	+02.5	114	56.3	+02.4	02
03	126	02.2	+02.5	127	01.3	+02.5	128	00.5	+02.4	128	59.6	+02.5	129	58.7	+02.5	03
04	141	04.7	+02.4	142	03.8	+02.5	143	02.9	+02.5	144	02.1	+02.4	145	01.2	+02.5	04
05	156	07.1	+02.5	157	06.3	+02.4	158	05.4	+02.5	159	04.5	+02.5	160	03.7	+02.4	05
06	171	09.6	+02.4	172	08.7	+02.5	173	07.9	+02.4	174	07.0	+02.5	175	06.1	+02.5	06
07	186	12.0	+02.5	187	11.2	+02.4	188	10.3	+02.5	189	09.5	+02.4	190	08.6	+02.5	07
08	201	14.5	+02.5	202	13.6	+02.5	203	12.8	+02.4	204	11.9	+02.5	205	11.1	+02.4	08
09	216	17.0	+02.4	217	16.1	+02.5	218	15.2	+02.5	219	14.4	+02.5	220	13.5	+02.5	09
10	231	19.4	+02.5	232	18.6	+02.4	233	17.7	+02.5	234	16.9	+02.4	235	16.0	+02.5	10
11	246	21.9	+02.5	247	21.0	+02.5	248	20.2	+02.4	249	19.3	+02.5	250	18.5	+02.4	11
12	261	24.4	+02.4	262	23.5	+02.5	263	22.6	+02.5	264	21.8	+02.4	265	20.9	+02.5	12
13	276	26.8	+02.5	277	26.0	+02.4	278	25.1	+02.5	279	24.2	+02.5	280	23.4	+02.4	13
14	291	29.3	+02.5	292	28.4	+02.5	293	27.6	+02.4	294	26.7	+02.5	295	25.8	+02.5	14
15	306	31.8	+02.4	307	30.9	+02.5	308	30.0	+02.5	309	29.2	+02.4	310	28.3	+02.5	15
16	321	34.2	+02.5	322	33.4	+02.4	323	32.5	+02.5	324	31.6	+02.5	325	30.8	+02.4	16
17	336	36.7	+02.4	337	35.8	+02.5	338	35.0	+02.4	339	34.1	+02.5	340	33.2	+02.5	17
18	351	39.1	+02.5	352	38.3	+02.4	353	37.4	+02.5	354	36.6	+02.4	355	35.7	+02.5	18
19	6	41.6	+02.5	7	40.7	+02.5	8	39.9	+02.5	9	39.0	+02.5	10	38.2	+02.4	19
20	21	44.1	+02.4	22	43.2	+02.5	23	42.4	+02.4	24	41.5	+02.5	25	40.6	+02.5	20
21	36	46.5	+02.5	37	45.7	+02.4	38	44.8	+02.5	39	44.0	+02.4	40	43.1	+02.5	21
22	51	49.0	+02.5	52	48.1	+02.5	53	47.3	+02.4	54	46.4	+02.5	55	45.6	+02.4	22
23	66	51.5	+02.4	67	50.6	+02.5	68	49.7	+02.5	69	48.9	+02.4	70	48.0	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.3	N 29	12.8	Gienah	175	46.2	S 17	39.6
Ankaa	353	09.7	S 42	11.4	Acrux	173	03.0	S 63	12.8
Schedir	349	33.7	N 56	39.7	Gacrux	171	54.6	S 57	13.7
Diphda	348	49.8	S 17	52.2	Alioth	166	15.6	N 55	50.3
Achernar	335	21.9	S 57	07.8	Spica	158	25.1	S 11	16.4
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.3	N 49	12.1
Polaris	314	48.7	N 89	21.5	Hadar	148	40.0	S 60	28.4
Acamar	315	13.3	S 40	13.2	Menkent	148	00.6	S 36	28.1
Menkar	314	08.5	N 04	10.5	Arcturus	145	50.1	N 19	04.8
Mirfak	308	31.4	N 49	56.4	Rigel Kentaurus	139	41.7	S 60	55.4
Aldebaran	290	42.2	N 16	33.2	Zubenelgenubi	136	59.1	S 16	07.8
Capella	280	25.2	N 46	01.3	Kocab	137	20.8	N 74	03.8
Rigel	281	06.0	S 08	10.6	Alphecca	126	06.3	N 26	38.5
Bellatrix	278	25.2	N 06	22.2	Antares	112	19.4	S 26	28.7
Elnath	278	04.7	N 28	37.6	Atria	107	16.4	S 69	03.9
Alnilam	275	40.0	S 01	11.3	Sabik	102	06.1	S 15	45.1
Betelgeuze	270	54.5	N 07	24.6	Shaula	96	14.2	S 37	07.1
Canopus	263	53.0	S 52	42.3	Rasalhague	96	01.3	N 12	32.8
Sirius	258	28.0	S 16	44.3	Etamin	90	43.9	N 51	29.2
Adhara	255	07.5	S 29	00.0	Kaus Australis	83	36.3	S 34	22.4
Castor	245	59.9	N 31	50.4	Vega	80	35.4	N 38	48.2
Procyon	244	53.0	N 05	10.5	Nunki	75	51.3	S 26	16.2
Pollux	243	19.8	N 27	58.3	Albireo	67	06.4	N 28	00.4
Avior	234	15.2	S 59	34.5	Altair	62	02.9	N 08	55.5
Suhail	222	47.9	S 43	31.0	Peacock	53	10.2	S 56	40.0
Miaplacidus	221	38.0	S 69	48.1	Deneb	49	27.8	N 45	21.7
Alphard	217	50.1	S 08	45.1	Enif	33	41.4	N 09	58.5
Regulus	207	36.9	N 11	51.6	Alnair	27	36.4	S 46	51.5
Dubhe	193	44.0	N 61	37.8	Formalhaut	15	17.5	S 29	30.5
Denebola	182	27.4	N 14	27.0	Markab	13	32.5	N 15	19.4

2021 - First Point of Aries / Selected Stars

UT	day 351 of 365 December 17		day 352 of 365 December 18		day 353 of 365 December 19		day 354 of 365 December 20		day 355 of 365 December 21		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' ''	° ' ''	° ' ''	° ' ''	° ' ''	° ' ''	° ' ''	° ' ''	° ' ''	° ' ''	
00	85	50.5 +02.5	86	49.6 +02.5	87	48.8 +02.4	88	47.9 +02.5	89	47.1 +02.4	00
01	100	53.0 +02.4	101	52.1 +02.5	102	51.2 +02.5	103	50.4 +02.4	104	49.5 +02.5	01
02	115	55.4 +02.5	116	54.6 +02.4	117	53.7 +02.5	118	52.8 +02.5	119	52.0 +02.4	02
03	130	57.9 +02.4	131	57.0 +02.5	132	56.2 +02.4	133	55.3 +02.5	134	54.4 +02.5	03
04	146	00.3 +02.5	146	59.5 +02.4	147	58.6 +02.5	148	57.8 +02.4	149	56.9 +02.5	04
05	161	02.8 +02.5	162	01.9 +02.5	163	01.1 +02.5	164	00.2 +02.5	164	59.4 +02.4	05
06	176	05.3 +02.4	177	04.4 +02.5	178	03.6 +02.4	179	02.7 +02.5	180	01.8 +02.5	06
07	191	07.7 +02.5	192	06.9 +02.4	193	06.0 +02.5	194	05.2 +02.4	195	04.3 +02.5	07
08	206	10.2 +02.5	207	09.3 +02.5	208	08.5 +02.4	209	07.6 +02.5	210	06.8 +02.4	08
09	221	12.7 +02.4	222	11.8 +02.5	223	10.9 +02.5	224	10.1 +02.5	225	09.2 +02.5	09
10	236	15.1 +02.5	237	14.3 +02.4	238	13.4 +02.5	239	12.6 +02.4	240	11.7 +02.5	10
11	251	17.6 +02.5	252	16.7 +02.5	253	15.9 +02.4	254	15.0 +02.5	255	14.2 +02.4	11
12	266	20.1 +02.4	267	19.2 +02.5	268	18.3 +02.5	269	17.5 +02.4	270	16.6 +02.5	12
13	281	22.5 +02.5	282	21.7 +02.4	283	20.8 +02.5	284	19.9 +02.5	285	19.1 +02.4	13
14	296	25.0 +02.5	297	24.1 +02.5	298	23.3 +02.4	299	22.4 +02.5	300	21.5 +02.5	14
15	311	27.5 +02.4	312	26.6 +02.5	313	25.7 +02.5	314	24.9 +02.4	315	24.0 +02.5	15
16	326	29.9 +02.5	327	29.1 +02.4	328	28.2 +02.5	329	27.3 +02.5	330	26.5 +02.4	16
17	341	32.4 +02.4	342	31.5 +02.5	343	30.7 +02.4	344	29.8 +02.5	345	28.9 +02.5	17
18	356	34.8 +02.5	357	34.0 +02.4	358	33.1 +02.5	359	32.3 +02.4	0	31.4 +02.5	18
19	11	37.3 +02.5	12	36.4 +02.5	13	35.6 +02.5	14	34.7 +02.5	15	33.9 +02.4	19
20	26	39.8 +02.4	27	38.9 +02.5	28	38.1 +02.4	29	37.2 +02.5	30	36.3 +02.5	20
21	41	42.2 +02.5	42	41.4 +02.4	43	40.5 +02.5	44	39.7 +02.4	45	38.8 +02.5	21
22	56	44.7 +02.5	57	43.8 +02.5	58	43.0 +02.4	59	42.1 +02.5	60	41.3 +02.4	22
23	71	47.2 +02.4	72	46.3 +02.5	73	45.4 +02.5	74	44.6 +02.5	75	43.7 +02.5	23

	SHA		Dec			SHA		Dec	
	° ' ''	° ' ''	° ' ''	° ' ''		° ' ''	° ' ''	° ' ''	° ' ''
Alpheratz	357	37.4	N 29	12.8	Gienah	175	46.2	S 17	39.6
Ankaa	353	09.7	S 42	11.4	Acrux	173	03.0	S 63	12.8
Schedir	349	33.7	N 56	39.7	Gacrux	171	54.6	S 57	13.7
Diphda	348	49.8	S 17	52.2	Alioth	166	15.6	N 55	50.3
Achernar	335	21.9	S 57	07.8	Spica	158	25.1	S 11	16.4
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.3	N 49	12.1
Polaris	314	49.8	N 89	21.6	Hadar	148	39.9	S 60	28.4
Acamar	315	13.4	S 40	13.2	Menkent	148	00.5	S 36	28.1
Menkar	314	08.5	N 04	10.5	Arcturus	145	50.1	N 19	04.8
Mirfak	308	31.4	N 49	56.4	Rigel Kentaurus	139	41.6	S 60	55.4
Aldebaran	290	42.2	N 16	33.2	Zubenelgenubi	136	59.0	S 16	07.8
Capella	280	25.2	N 46	01.3	Kocab	137	20.8	N 74	03.7
Rigel	281	06.0	S 08	10.6	Alphecca	126	06.3	N 26	38.5
Bellatrix	278	25.2	N 06	22.1	Antares	112	19.4	S 26	28.7
Elnath	278	04.7	N 28	37.6	Atria	107	16.4	S 69	03.8
Alnilam	275	40.0	S 01	11.3	Sabik	102	06.0	S 15	45.1
Betelgeuze	270	54.5	N 07	24.6	Shaula	96	14.2	S 37	07.1
Canopus	263	53.0	S 52	42.4	Rasalhague	96	01.3	N 12	32.8
Sirius	258	27.9	S 16	44.3	Etamin	90	43.9	N 51	29.2
Adhara	255	07.5	S 29	00.0	Kaus Australis	83	36.3	S 34	22.4
Castor	245	59.9	N 31	50.4	Vega	80	35.4	N 38	48.2
Procyon	244	53.0	N 05	10.5	Nunki	75	51.3	S 26	16.2
Pollux	243	19.7	N 27	58.3	Albireo	67	06.4	N 28	00.4
Avior	234	15.2	S 59	34.6	Altair	62	02.9	N 08	55.5
Suhail	222	47.8	S 43	31.0	Peacock	53	10.2	S 56	40.0
Miaplacidus	221	37.9	S 69	48.1	Deneb	49	27.8	N 45	21.6
Alphard	217	50.0	S 08	45.1	Enif	33	41.4	N 09	58.5
Regulus	207	36.9	N 11	51.6	Alnair	27	36.4	S 46	51.5
Dubhe	193	44.0	N 61	37.7	Formalhaut	15	17.5	S 29	30.5
Denebola	182	27.4	N 14	27.0	Markab	13	32.5	N 15	19.4

2021 - First Point of Aries / Selected Stars

UT	day 356 of 365		day 357 of 365		day 358 of 365		day 359 of 365		day 360 of 365		UT		
	<i>December 22</i>		<i>December 23</i>		<i>December 24</i>		<i>December 25</i>		<i>December 26</i>				
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA			
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "			
00	90	46.2	+02.5	91	45.3	+02.5	92	44.5	+02.4	93	43.6	+02.5	00
01	105	48.7	+02.4	106	47.8	+02.5	107	46.9	+02.5	108	46.1	+02.4	01
02	120	51.1	+02.5	121	50.3	+02.4	122	49.4	+02.5	123	48.5	+02.5	02
03	135	53.6	+02.4	136	52.7	+02.5	137	51.9	+02.4	138	51.0	+02.5	03
04	150	56.0	+02.5	151	55.2	+02.5	152	54.3	+02.5	153	53.5	+02.4	04
05	165	58.5	+02.5	166	57.7	+02.4	167	56.8	+02.5	168	55.9	+02.5	05
06	181	01.0	+02.4	182	00.1	+02.5	182	59.3	+02.4	183	58.4	+02.5	06
07	196	03.4	+02.5	197	02.6	+02.4	198	01.7	+02.5	199	00.9	+02.4	07
08	211	05.9	+02.5	212	05.0	+02.5	213	04.2	+02.4	214	03.3	+02.5	08
09	226	08.4	+02.4	227	07.5	+02.5	228	06.6	+02.5	229	05.8	+02.5	09
10	241	10.8	+02.5	242	10.0	+02.4	243	09.1	+02.5	244	08.3	+02.4	10
11	256	13.3	+02.5	257	12.4	+02.5	258	11.6	+02.4	259	10.7	+02.5	11
12	271	15.8	+02.4	272	14.9	+02.5	273	14.0	+02.5	274	13.2	+02.4	12
13	286	18.2	+02.5	287	17.4	+02.4	288	16.5	+02.5	289	15.6	+02.5	13
14	301	20.7	+02.5	302	19.8	+02.5	303	19.0	+02.4	304	18.1	+02.5	14
15	316	23.2	+02.4	317	22.3	+02.5	318	21.4	+02.5	319	20.6	+02.4	15
16	331	25.6	+02.5	332	24.8	+02.4	333	23.9	+02.5	334	23.0	+02.5	16
17	346	28.1	+02.4	347	27.2	+02.5	348	26.4	+02.4	349	25.5	+02.5	17
18	1	30.5	+02.5	2	29.7	+02.5	3	28.8	+02.5	4	28.0	+02.4	18
19	16	33.0	+02.5	17	32.2	+02.4	18	31.3	+02.5	19	30.4	+02.5	19
20	31	35.5	+02.4	32	34.6	+02.5	33	33.8	+02.4	34	32.9	+02.5	20
21	46	37.9	+02.5	47	37.1	+02.4	48	36.2	+02.5	49	35.4	+02.4	21
22	61	40.4	+02.5	62	39.5	+02.5	63	38.7	+02.4	64	37.8	+02.5	22
23	76	42.9	+02.4	77	42.0	+02.5	78	41.1	+02.5	79	40.3	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 37.4	N 29 12.8	Gienah	175 46.1	S 17 39.6
Ankaa	353 09.7	S 42 11.4	Acrux	173 02.9	S 63 12.8
Schedir	349 33.7	N 56 39.7	Gacrux	171 54.5	S 57 13.7
Diphda	348 49.8	S 17 52.2	Alioth	166 15.5	N 55 50.3
Achernar	335 21.9	S 57 07.9	Spica	158 25.1	S 11 16.4
Hamal	327 53.9	N 23 34.0	Alkaid	152 54.2	N 49 12.1
Polaris	314 50.9	N 89 21.6	Hadar	148 39.8	S 60 28.4
Acamar	315 13.4	S 40 13.2	Menkent	148 00.5	S 36 28.1
Menkar	314 08.5	N 04 10.5	Arcturus	145 50.1	N 19 04.8
Mirfak	308 31.4	N 49 56.4	Rigel Kentaurus	139 41.6	S 60 55.4
Aldebaran	290 42.2	N 16 33.2	Zubenelgenubi	136 59.0	S 16 07.8
Capella	280 25.1	N 46 01.3	Kocab	137 20.7	N 74 03.7
Rigel	281 05.9	S 08 10.6	Alphecca	126 06.2	N 26 38.5
Bellatrix	278 25.2	N 06 22.1	Antares	112 19.4	S 26 28.7
Elnath	278 04.7	N 28 37.6	Atria	107 16.3	S 69 03.8
Alnilam	275 39.9	S 01 11.3	Sabik	102 06.0	S 15 45.1
Betelgeuze	270 54.5	N 07 24.6	Shaula	96 14.2	S 37 07.1
Canopus	263 52.9	S 52 42.4	Rasalhague	96 01.3	N 12 32.7
Sirius	258 27.9	S 16 44.3	Etamin	90 43.9	N 51 29.2
Adhara	255 07.4	S 29 00.1	Kaus Australis	83 36.2	S 34 22.4
Castor	245 59.8	N 31 50.4	Vega	80 35.4	N 38 48.2
Procyon	244 52.9	N 05 10.5	Nunki	75 51.2	S 26 16.2
Pollux	243 19.7	N 27 58.3	Albireo	67 06.4	N 28 00.4
Avior	234 15.1	S 59 34.6	Altair	62 02.9	N 08 55.4
Suhail	222 47.8	S 43 31.0	Peacock	53 10.2	S 56 40.0
Miaplacidus	221 37.9	S 69 48.2	Deneb	49 27.9	N 45 21.6
Alphard	217 50.0	S 08 45.1	Enif	33 41.5	N 09 58.5
Regulus	207 36.9	N 11 51.6	Alnair	27 36.4	S 46 51.5
Dubhe	193 43.9	N 61 37.7	Formalhaut	15 17.5	S 29 30.5
Denebola	182 27.3	N 14 27.0	Markab	13 32.5	N 15 19.4

2021 - First Point of Aries / Selected Stars

UT	day 361 of 365		day 362 of 365		day 363 of 365		day 364 of 365		day 365 of 365		UT					
	<i>December 27</i>		<i>December 28</i>		<i>December 29</i>		<i>December 30</i>		<i>December 31</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	95	41.9	+02.5	96	41.0	+02.5	97	40.2	+02.4	98	39.3	+02.5	99	38.4	+02.5	00
01	110	44.4	+02.4	111	43.5	+02.5	112	42.6	+02.5	113	41.8	+02.4	114	40.9	+02.5	01
02	125	46.8	+02.5	126	46.0	+02.4	127	45.1	+02.5	128	44.2	+02.5	129	43.4	+02.4	02
03	140	49.3	+02.4	141	48.4	+02.5	142	47.6	+02.4	143	46.7	+02.5	144	45.8	+02.5	03
04	155	51.7	+02.5	156	50.9	+02.4	157	50.0	+02.5	158	49.2	+02.4	159	48.3	+02.5	04
05	170	54.2	+02.5	171	53.3	+02.5	172	52.5	+02.4	173	51.6	+02.5	174	50.8	+02.4	05
06	185	56.7	+02.4	186	55.8	+02.5	187	54.9	+02.5	188	54.1	+02.5	189	53.2	+02.5	06
07	200	59.1	+02.5	201	58.3	+02.4	202	57.4	+02.5	203	56.6	+02.4	204	55.7	+02.5	07
08	216	01.6	+02.5	217	00.7	+02.5	217	59.9	+02.4	218	59.0	+02.5	219	58.2	+02.4	08
09	231	04.1	+02.4	232	03.2	+02.5	233	02.3	+02.5	234	01.5	+02.4	235	00.6	+02.5	09
10	246	06.5	+02.5	247	05.7	+02.4	248	04.8	+02.5	249	03.9	+02.5	250	03.1	+02.4	10
11	261	09.0	+02.5	262	08.1	+02.5	263	07.3	+02.4	264	06.4	+02.5	265	05.5	+02.5	11
12	276	11.5	+02.4	277	10.6	+02.5	278	09.7	+02.5	279	08.9	+02.4	280	08.0	+02.5	12
13	291	13.9	+02.5	292	13.1	+02.4	293	12.2	+02.5	294	11.3	+02.5	295	10.5	+02.4	13
14	306	16.4	+02.4	307	15.5	+02.5	308	14.7	+02.4	309	13.8	+02.5	310	12.9	+02.5	14
15	321	18.8	+02.5	322	18.0	+02.4	323	17.1	+02.5	324	16.3	+02.4	325	15.4	+02.5	15
16	336	21.3	+02.5	337	20.4	+02.5	338	19.6	+02.5	339	18.7	+02.5	340	17.9	+02.4	16
17	351	23.8	+02.4	352	22.9	+02.5	353	22.1	+02.4	354	21.2	+02.5	355	20.3	+02.5	17
18	6	26.2	+02.5	7	25.4	+02.4	8	24.5	+02.5	9	23.7	+02.4	10	22.8	+02.5	18
19	21	28.7	+02.5	22	27.8	+02.5	23	27.0	+02.4	24	26.1	+02.5	25	25.3	+02.4	19
20	36	31.2	+02.4	37	30.3	+02.5	38	29.4	+02.5	39	28.6	+02.4	40	27.7	+02.5	20
21	51	33.6	+02.5	52	32.8	+02.4	53	31.9	+02.5	54	31.0	+02.5	55	30.2	+02.5	21
22	66	36.1	+02.5	67	35.2	+02.5	68	34.4	+02.4	69	33.5	+02.5	70	32.7	+02.4	22
23	81	38.6	+02.4	82	37.7	+02.5	83	36.8	+02.5	84	36.0	+02.4	85	35.1	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	37.4	N 29	12.8	Gienah	175	46.1	S 17	39.7
Ankaa	353	09.7	S 42	11.4	Acrux	173	02.8	S 63	12.8
Schedir	349	33.8	N 56	39.7	Gacrux	171	54.4	S 57	13.7
Diphda	348	49.9	S 17	52.2	Alioth	166	15.4	N 55	50.2
Achernar	335	22.0	S 57	07.9	Spica	158	25.0	S 11	16.4
Hamal	327	53.9	N 23	34.0	Alkaid	152	54.2	N 49	12.1
Polaris	314	52.6	N 89	21.6	Hadar	148	39.8	S 60	28.4
Acamar	315	13.4	S 40	13.3	Menkent	148	00.4	S 36	28.1
Menkar	314	08.5	N 04	10.5	Arcturus	145	50.0	N 19	04.8
Mirfak	308	31.4	N 49	56.4	Rigel Kentaurus	139	41.5	S 60	55.4
Aldebaran	290	42.2	N 16	33.2	Zubenelgenubi	136	58.9	S 16	07.8
Capella	280	25.1	N 46	01.3	Kocab	137	20.6	N 74	03.7
Rigel	281	05.9	S 08	10.6	Alphecca	126	06.2	N 26	38.4
Bellatrix	278	25.2	N 06	22.1	Antares	112	19.3	S 26	28.7
Elnath	278	04.6	N 28	37.6	Atria	107	16.3	S 69	03.8
Alnilam	275	39.9	S 01	11.3	Sabik	102	06.0	S 15	45.1
Betelgeuze	270	54.5	N 07	24.6	Shaula	96	14.2	S 37	07.1
Canopus	263	52.9	S 52	42.4	Rasalhague	96	01.2	N 12	32.7
Sirius	258	27.9	S 16	44.3	Etamin	90	43.9	N 51	29.1
Adhara	255	07.4	S 29	00.1	Kaus Australis	83	36.2	S 34	22.4
Castor	245	59.8	N 31	50.4	Vega	80	35.4	N 38	48.1
Procyon	244	52.9	N 05	10.5	Nunki	75	51.2	S 26	16.2
Pollux	243	19.7	N 27	58.3	Albireo	67	06.4	N 28	00.4
Avior	234	15.1	S 59	34.6	Altair	62	02.9	N 08	55.4
Suhail	222	47.7	S 43	31.1	Peacock	53	10.2	S 56	40.0
Miaplacidus	221	37.8	S 69	48.2	Deneb	49	27.9	N 45	21.6
Alphard	217	50.0	S 08	45.2	Enif	33	41.5	N 09	58.5
Regulus	207	36.8	N 11	51.6	Alnair	27	36.4	S 46	51.5
Dubhe	193	43.8	N 61	37.7	Formalhaut	15	17.5	S 29	30.5
Denebola	182	27.3	N 14	27.0	Markab	13	32.5	N 15	19.4

Polaris (Pole Star) Tables, 2021

For determining Latitude from Sextant Altitude and for Azimuth

LHA ARIES	000° - 009°	010° - 019°	020° - 029°	030° - 039°	040° - 049°	050° - 059°	060° - 069°	070° - 079°	080° - 089°	090° - 099°	100° - 109°	110° - 119°
	a0	a0	a0	a0	a0	a0	a0	a0	a0	a0	a0	a0
	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,
0	0 31.4	0 27.1	0 23.7	0 21.5	0 20.3	0 20.4	0 21.6	0 24.0	0 27.4	0 31.8	0 37.0	0 42.8
1	0 30.9	0 26.7	0 23.5	0 21.3	0 20.3	0 20.4	0 21.8	0 24.2	0 27.8	0 32.2	0 37.5	0 43.5
2	0 30.5	0 26.3	0 23.2	0 21.1	0 20.2	0 20.5	0 22.0	0 24.6	0 28.2	0 32.7	0 38.1	0 44.1
3	0 30.0	0 26.0	0 22.9	0 21.0	0 20.2	0 20.6	0 22.2	0 24.9	0 28.6	0 33.2	0 38.7	0 44.7
4	0 29.6	0 25.6	0 22.7	0 20.9	0 20.2	0 20.7	0 22.4	0 25.2	0 29.0	0 33.7	0 39.2	0 45.3
5	0 29.1	0 25.3	0 22.5	0 20.8	0 20.2	0 20.8	0 22.6	0 25.5	0 29.4	0 34.3	0 39.8	0 46.0
6	0 28.7	0 24.9	0 22.2	0 20.6	0 20.2	0 21.0	0 22.9	0 25.9	0 29.9	0 34.8	0 40.4	0 46.6
7	0 28.3	0 24.6	0 22.0	0 20.6	0 20.2	0 21.1	0 23.1	0 26.2	0 30.3	0 35.3	0 41.0	0 47.3
8	0 27.9	0 24.3	0 21.8	0 20.5	0 20.3	0 21.3	0 23.4	0 26.6	0 30.8	0 35.9	0 41.6	0 47.9
9	0 27.5	0 24.0	0 21.6	0 20.4	0 20.3	0 21.4	0 23.7	0 27.0	0 31.3	0 36.4	0 42.2	0 48.6
Lat.	a1	a1	a1	a1	a1	a1	a1	a1	a1	a1	a1	a1
	,	,	,	,	,	,	,	,	,	,	,	,
10	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.8
20	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.9
30	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.9
40	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0
45	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.9	0.9	1.0
50	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.0
55	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.1
60	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8	1.0	1.1	1.1
62	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.9	1.0	1.1	1.2
64	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.9	1.0	1.1	1.2
66	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9	1.0	1.1	1.2
68	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9	1.1	1.2	1.3
70	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9	1.1	1.2	1.3
Month	a2	a2	a2	a2	a2	a2	a2	a2	a2	a2	a2	a2
	,	,	,	,	,	,	,	,	,	,	,	,
Jan	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3
Feb	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4
Mar	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6
Apr	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7
May	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8
Jun	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7
Jul	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6
Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5
Sep	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Oct	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Nov	0.7	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1
Dec	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.1
Lat.	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo
	°	°	°	°	°	°	°	°	°	°	°	°
10	0.4	0.3	0.2	0.1	360.0	359.9	359.8	359.7	359.6	359.5	359.4	359.4
20	0.4	0.3	0.2	0.1	360.0	359.9	359.8	359.7	359.6	359.5	359.4	359.4
30	0.5	0.4	0.3	0.1	360.0	359.9	359.7	359.6	359.5	359.4	359.3	359.3
40	0.5	0.4	0.3	0.1	360.0	359.8	359.7	359.6	359.4	359.3	359.3	359.2
45	0.6	0.5	0.3	0.2	360.0	359.8	359.7	359.5	359.4	359.3	359.2	359.1
50	0.6	0.5	0.3	0.2	360.0	359.8	359.6	359.5	359.3	359.2	359.1	359.0
55	0.7	0.6	0.4	0.2	360.0	359.8	359.6	359.4	359.3	359.1	359.0	358.9
60	0.8	0.7	0.4	0.2	360.0	359.8	359.5	359.3	359.1	359.0	358.9	358.8
62	0.9	0.7	0.5	0.2	360.0	359.7	359.5	359.3	359.1	358.9	358.8	358.7
64	1.0	0.7	0.5	0.3	360.0	359.7	359.5	359.2	359.0	358.8	358.7	358.6
66	1.0	0.8	0.5	0.3	360.0	359.7	359.4	359.2	359.0	358.8	358.6	358.5
68	1.1	0.9	0.6	0.3	360.0	359.7	359.4	359.1	358.9	358.6	358.5	358.4
70	1.2	1.0	0.7	0.3	360.0	359.6	359.3	359.0	358.7	358.5	358.3	358.2

Latitude = Apparent Altitude (corrected for refraction and dip) - 1° + a0 + a1 + a2

To determine Latitude, the table is entered with LHA Aries, which is obtained by addition of the observer's Longitude and the GHA Aries from the daily pages of this Almanac. The value of LHA Aries determines which column of the Polaris Tables to be used. Each column refers to a range of 10° of LHA. The value a0 is taken with mental interpolation (taking into account the fractional part of LHA Aries), from the upper table with the units of LHA Aries in degrees as argument. The values of a1 and a2 are taken, without interpolation, from the second and third table with arguments Latitude and Month respectively. The correction terms a0, a1 and a2 are always positive. The final table gives the Azimuth of Polaris.

Polaris (Pole Star) Tables, 2021

For determining Latitude from Sextant Altitude and for Azimuth

LHA ARIES	120° - 129°	130° - 139°	140° - 149°	150° - 159°	160° - 169°	170° - 179°	180° - 189°	190° - 199°	200° - 209°	210° - 219°	220° - 229°	230° - 239°
	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '	a0 , '
0	0 49.2	0 55.9	1 02.6	1 09.3	1 15.6	1 21.5	1 26.6	1 30.9	1 34.3	1 36.5	1 37.7	1 37.6
1	0 49.9	0 56.5	1 03.3	1 09.9	1 16.2	1 22.0	1 27.1	1 31.3	1 34.5	1 36.7	1 37.7	1 37.6
2	0 50.5	0 57.2	1 04.0	1 10.6	1 16.8	1 22.5	1 27.5	1 31.7	1 34.8	1 36.9	1 37.8	1 37.5
3	0 51.2	0 57.9	1 04.7	1 11.2	1 17.4	1 23.1	1 28.0	1 32.0	1 35.1	1 37.0	1 37.8	1 37.4
4	0 51.8	0 58.6	1 05.3	1 11.9	1 18.0	1 23.6	1 28.4	1 32.4	1 35.3	1 37.1	1 37.8	1 37.3
5	0 52.5	0 59.3	1 06.0	1 12.5	1 18.6	1 24.1	1 28.9	1 32.7	1 35.5	1 37.2	1 37.8	1 37.2
6	0 53.2	0 59.9	1 06.7	1 13.1	1 19.2	1 24.6	1 29.3	1 33.1	1 35.8	1 37.4	1 37.8	1 37.0
7	0 53.9	1 00.6	1 07.3	1 13.8	1 19.8	1 25.1	1 29.7	1 33.4	1 36.0	1 37.4	1 37.8	1 36.9
8	0 54.5	1 01.3	1 08.0	1 14.4	1 20.3	1 25.6	1 30.1	1 33.7	1 36.2	1 37.5	1 37.7	1 36.7
9	0 55.2	1 02.0	1 08.6	1 15.0	1 20.9	1 26.1	1 30.5	1 34.0	1 36.4	1 37.6	1 37.7	1 36.6
Lat.	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '	a1 , '
10	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.5
20	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.5	0.5
30	0.9	1.0	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.5	0.5
40	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.6	0.5	0.5
45	1.0	1.1	1.1	1.0	1.0	0.9	0.8	0.8	0.7	0.6	0.5	0.5
50	1.1	1.1	1.1	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.5	0.5
55	1.1	1.2	1.1	1.1	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.5
60	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.5
62	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.5
64	1.3	1.3	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.5
66	1.3	1.3	1.3	1.3	1.2	1.1	1.0	0.8	0.7	0.6	0.5	0.5
68	1.4	1.4	1.4	1.3	1.2	1.1	1.0	0.8	0.7	0.6	0.5	0.5
70	1.4	1.4	1.4	1.4	1.3	1.1	1.0	0.9	0.7	0.6	0.5	0.5
Month	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '	a2 , '
Jan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5
Feb	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Mar	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
Apr	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3
May	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.4
Jun	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5
Jul	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
Aug	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Sep	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8
Oct	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7
Nov	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.6
Dec	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.4
Lat.	Zo °	Zo °	Zo °	Zo °	Zo °	Zo °	Zo °	Zo °	Zo °	Zo °	Zo °	Zo °
10	359.4	359.3	359.4	359.4	359.4	359.5	359.6	359.7	359.8	359.9	0.0	0.1
20	359.3	359.3	359.3	359.4	359.4	359.5	359.6	359.7	359.8	359.9	0.0	0.1
30	359.3	359.3	359.3	359.3	359.4	359.4	359.5	359.6	359.8	359.9	0.0	0.1
40	359.2	359.2	359.2	359.2	359.3	359.4	359.5	359.6	359.7	359.9	0.0	0.2
45	359.1	359.1	359.1	359.1	359.2	359.3	359.4	359.6	359.7	359.8	0.0	0.2
50	359.0	359.0	359.0	359.1	359.1	359.2	359.4	359.5	359.7	359.8	0.0	0.2
55	358.9	358.9	358.9	358.9	359.0	359.2	359.3	359.5	359.6	359.8	0.0	0.2
60	358.7	358.7	358.7	358.8	358.9	359.0	359.2	359.4	359.6	359.8	0.0	0.2
62	358.6	358.6	358.7	358.7	358.8	359.0	359.1	359.3	359.5	359.8	0.0	0.2
64	358.5	358.5	358.6	358.6	358.7	358.9	359.1	359.3	359.5	359.8	0.0	0.3
66	358.4	358.4	358.4	358.5	358.6	358.8	359.0	359.2	359.5	359.7	0.0	0.3
68	358.3	358.3	358.3	358.4	358.5	358.7	358.9	359.2	359.4	359.7	0.0	0.3
70	358.1	358.1	358.2	358.2	358.4	358.6	358.8	359.1	359.4	359.7	0.0	0.3

Latitude = Apparent Altitude (corrected for refraction and dip) - 1° + a0 + a1 + a2

To determine Latitude, the table is entered with LHA Aries, which is obtained by addition of the observer's Longitude and the GHA Aries from the daily pages of this Almanac. The value of LHA Aries determines which column of the Polaris Tables to be used. Each column refers to a range of 10° of LHA. The value a0 is taken with mental interpolation (taking into account the fractional part of LHA Aries), from the upper table with the units of LHA Aries in degrees as argument. The values of a1 and a2 are taken, without interpolation, from the second and third table with arguments Latitude and Month respectively. The correction terms a0, a1 and a2 are always positive. The final table gives the Azimuth of Polaris.

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Polaris (Pole Star) Tables, 2021

For determining Latitude from Sextant Altitude and for Azimuth

LHA ARIES	240° - 249°	250° - 259°	260° - 269°	270° - 279°	280° - 289°	290° - 299°	300° - 309°	310° - 319°	320° - 329°	330° - 339°	340° - 349°	350° - 359°
	a0	a0	a0	a0	a0	a0	a0	a0	a0	a0	a0	a0
	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,
0	1 36.4	1 34.0	1 30.6	1 26.2	1 21.0	1 15.2	1 08.8	1 02.1	0 55.4	0 48.7	0 42.4	0 36.5
1	1 36.2	1 33.8	1 30.2	1 25.8	1 20.5	1 14.5	1 08.1	1 01.5	0 54.7	0 48.1	0 41.8	0 36.0
2	1 36.0	1 33.4	1 29.8	1 25.3	1 19.9	1 13.9	1 07.5	1 00.8	0 54.0	0 47.4	0 41.2	0 35.5
3	1 35.8	1 33.1	1 29.4	1 24.8	1 19.3	1 13.3	1 06.8	1 00.1	0 53.3	0 46.8	0 40.6	0 34.9
4	1 35.6	1 32.8	1 29.0	1 24.3	1 18.8	1 12.7	1 06.2	0 59.4	0 52.7	0 46.1	0 40.0	0 34.4
5	1 35.4	1 32.5	1 28.6	1 23.7	1 18.2	1 12.0	1 05.5	0 58.7	0 52.0	0 45.5	0 39.4	0 33.9
6	1 35.1	1 32.1	1 28.1	1 23.2	1 17.6	1 11.4	1 04.8	0 58.1	0 51.3	0 44.9	0 38.8	0 33.4
7	1 34.9	1 31.8	1 27.7	1 22.7	1 17.0	1 10.7	1 04.1	0 57.4	0 50.7	0 44.2	0 38.2	0 32.9
8	1 34.6	1 31.4	1 27.2	1 22.1	1 16.4	1 10.1	1 03.5	0 56.7	0 50.0	0 43.6	0 37.7	0 32.4
9	1 34.3	1 31.0	1 26.7	1 21.6	1 15.8	1 09.4	1 02.8	0 56.0	0 49.4	0 43.0	0 37.1	0 31.9
Lat.	a1	a1	a1	a1	a1	a1	a1	a1	a1	a1	a1	a1
	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,
10	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
20	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3
30	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
40	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
45	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3
50	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
55	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
60	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
62	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5
64	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5
66	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5
68	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.5
70	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.6
Month	a2	a2	a2	a2	a2	a2	a2	a2	a2	a2	a2	a2
	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,	° ,
Jan	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Feb	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6
Mar	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5
Apr	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
May	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Jun	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Jul	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Aug	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2
Sep	0.8	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3
Oct	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5
Nov	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7
Dec	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Lat.	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo	Zo
	°	°	°	°	°	°	°	°	°	°	°	°
10	0.2	0.3	0.4	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.5
20	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.5
30	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6
40	0.3	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6
45	0.3	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.7
50	0.3	0.5	0.6	0.8	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.8
55	0.4	0.6	0.7	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.0	0.9
60	0.4	0.6	0.8	1.0	1.1	1.2	1.3	1.3	1.3	1.2	1.1	1.0
62	0.5	0.7	0.9	1.0	1.2	1.3	1.4	1.4	1.4	1.3	1.2	1.1
64	0.5	0.7	0.9	1.1	1.3	1.4	1.4	1.5	1.5	1.4	1.3	1.1
66	0.5	0.8	1.0	1.2	1.4	1.5	1.6	1.6	1.6	1.5	1.4	1.2
68	0.6	0.9	1.1	1.3	1.5	1.6	1.7	1.7	1.7	1.6	1.5	1.3
70	0.6	0.9	1.2	1.4	1.6	1.8	1.9	1.9	1.9	1.8	1.7	1.5

Latitude = Apparent Altitude (corrected for refraction and dip) - 1° + a0 + a1 + a2

To determine Latitude, the table is entered with LHA Aries, which is obtained by addition of the observer's Longitude and the GHA Aries from the daily pages of this Almanac. The value of LHA Aries determines which column of the Polaris Tables to be used. Each column refers to a range of 10° of LHA. The value a0 is taken with mental interpolation (taking into account the fractional part of LHA Aries), from the upper table with the units of LHA Aries in degrees as argument. The values of a1 and a2 are taken, without interpolation, from the second and third table with arguments Latitude and Month respectively. The correction terms a0, a1 and a2 are always positive. The final table gives the Azimuth of Polaris.

