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The Nautical Almanac 2019 (Selected Stars)

Revision V0.5 - Nov 2017

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 Tue Oct 23 20:05:36 2018

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.

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 : 69.5 s	Apr : 69.7 s	Jul : 69.8 s	Oct : 69.9 s
Feb : 69.6 s	May : 69.7 s	Aug : 69.8 s	Nov : 70.0 s
Mar : 69.6 s	Jun : 69.8 s	Sep : 69.9 s	Dec : 70.0 s

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/>"

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

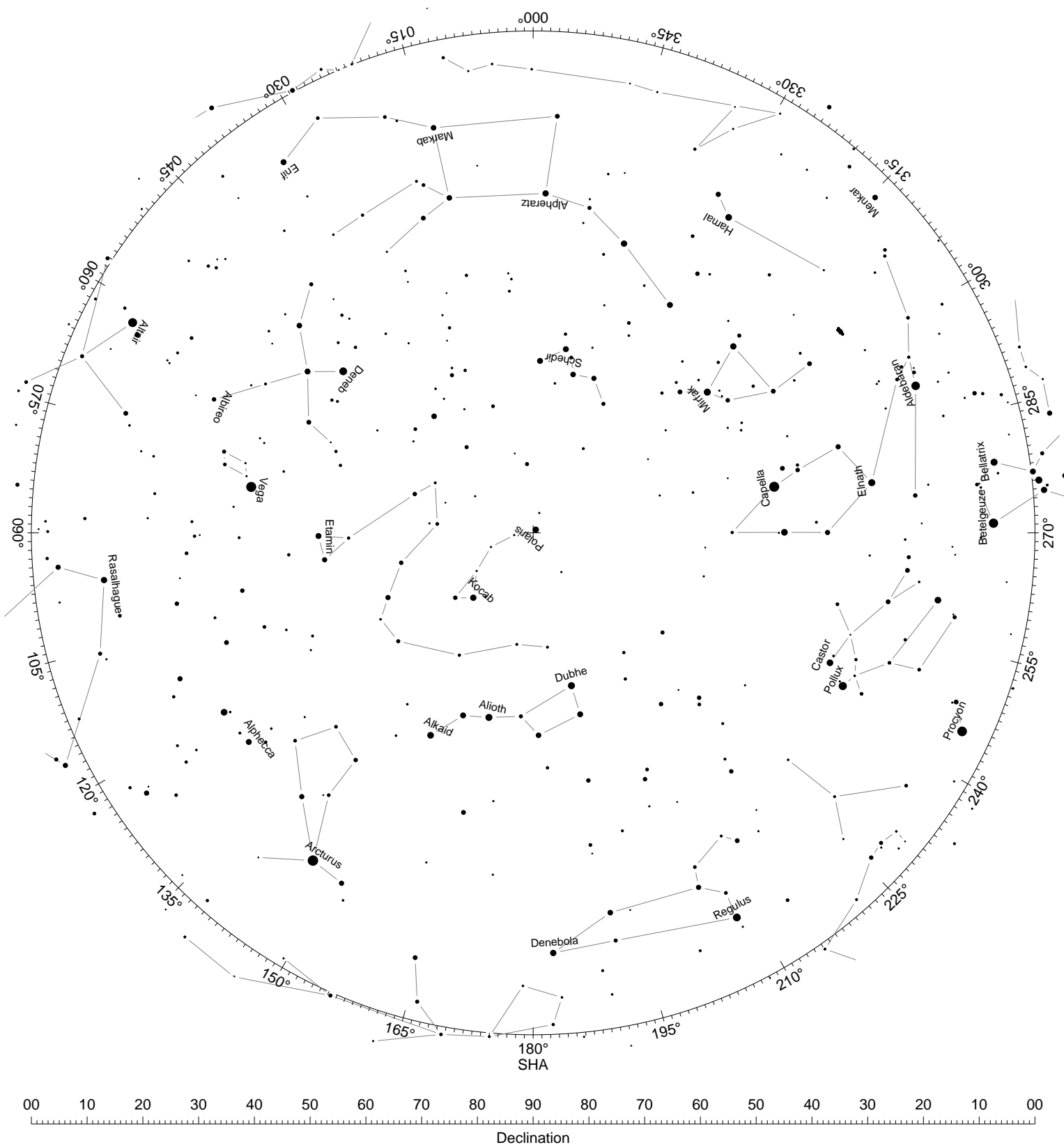
Position of the Stars on the local hemisphere

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.

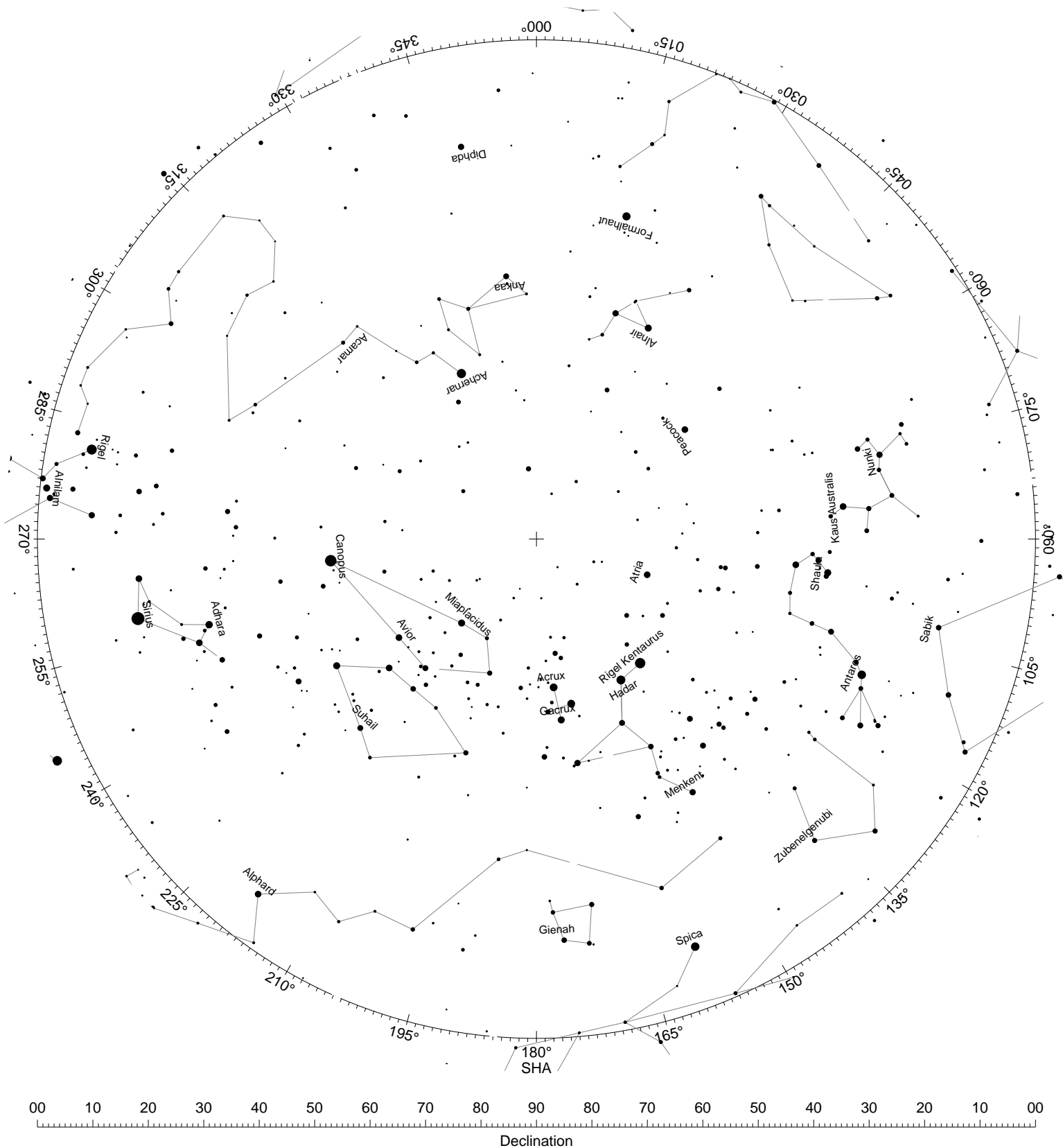
The following eight maps show the star constellations on the local hemisphere for locations on the Equator. These maps can be used for observations at locations in lower latitudes.

Map of bright Stars of the Northern Celestial Sphere



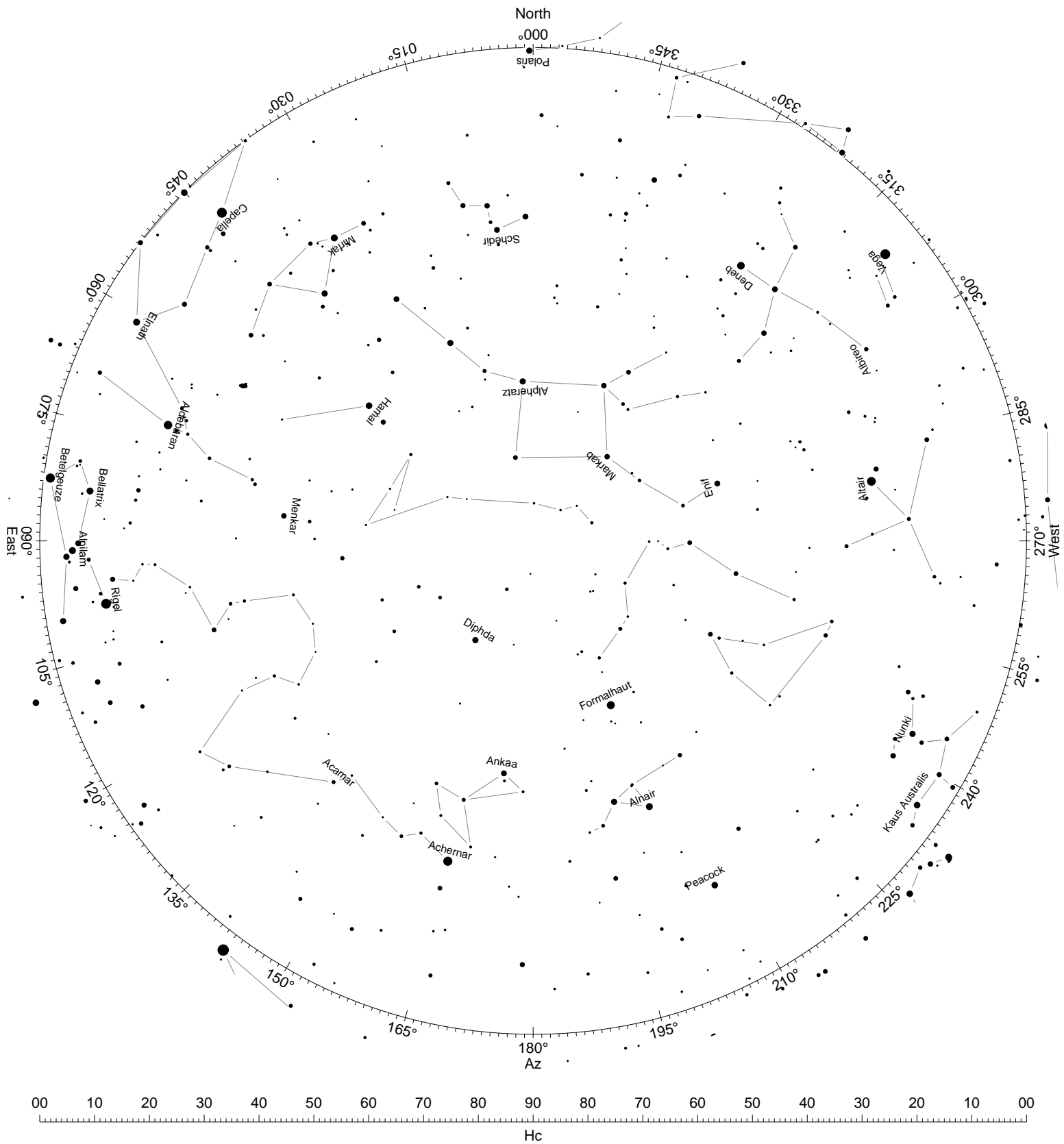
The map is centered on the celestial north pole and shows the brightest stars (up to magnitude 4.5) of the northern celestial hemisphere. The circle of constant declination is shown at 00° (Celestial Equator). The Sidereal Hour Angle of a specific star can be directly read from the SHA scale plotted 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.

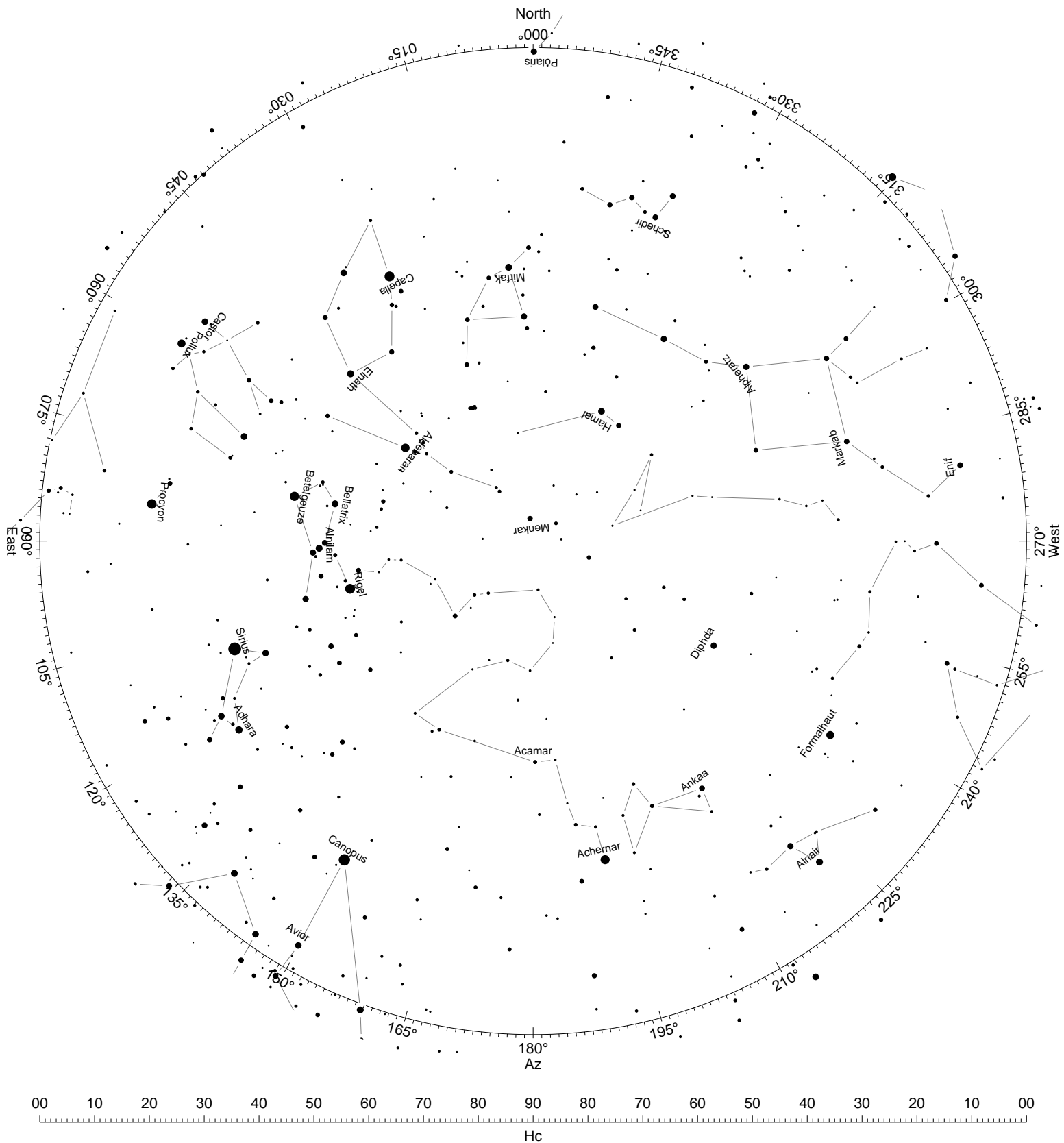
Horizontal-Coordinate-System Map of bright Stars - Part I



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.

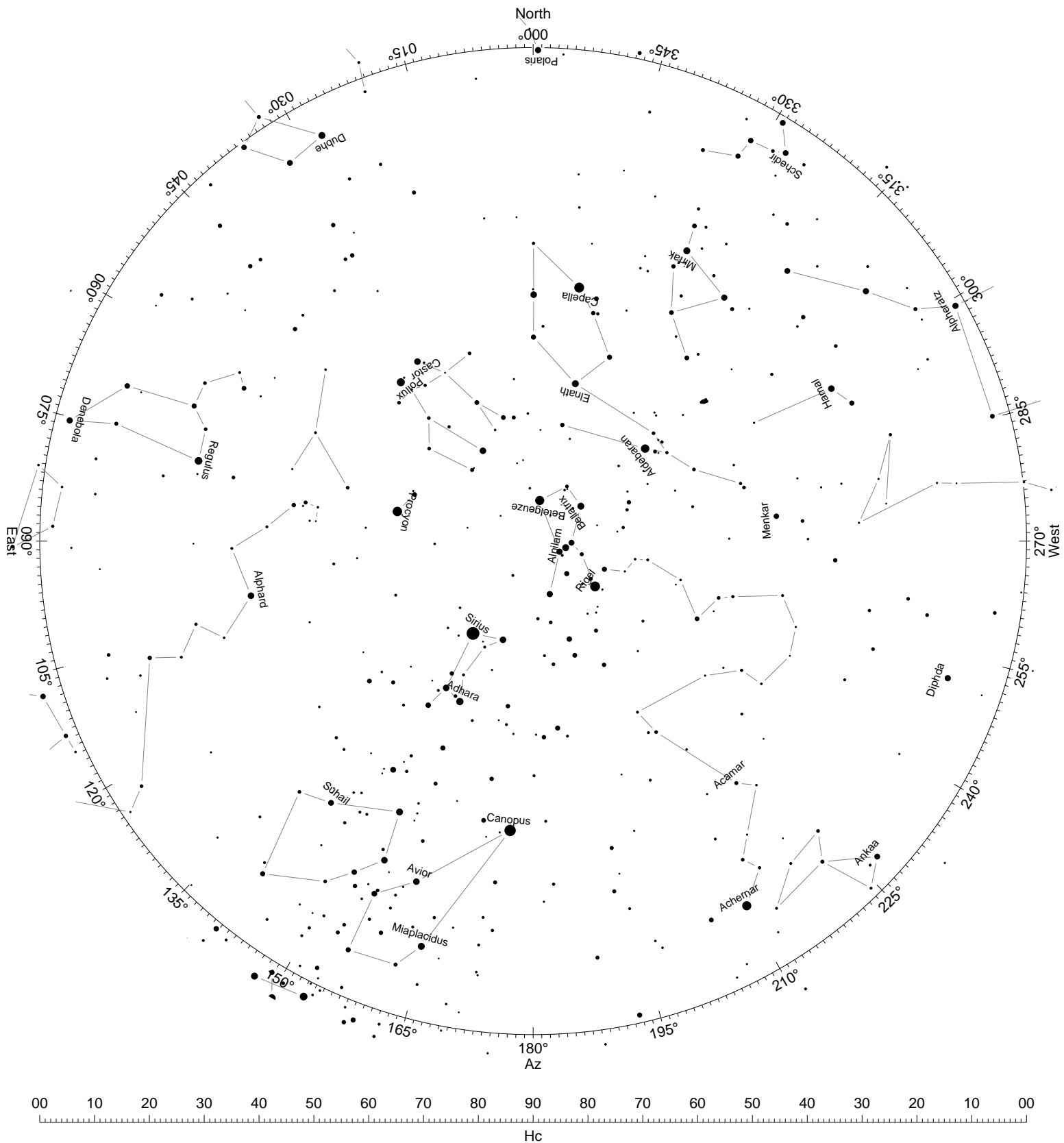
Horizontal-Coordinate-System Map of bright Stars - Part II



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.

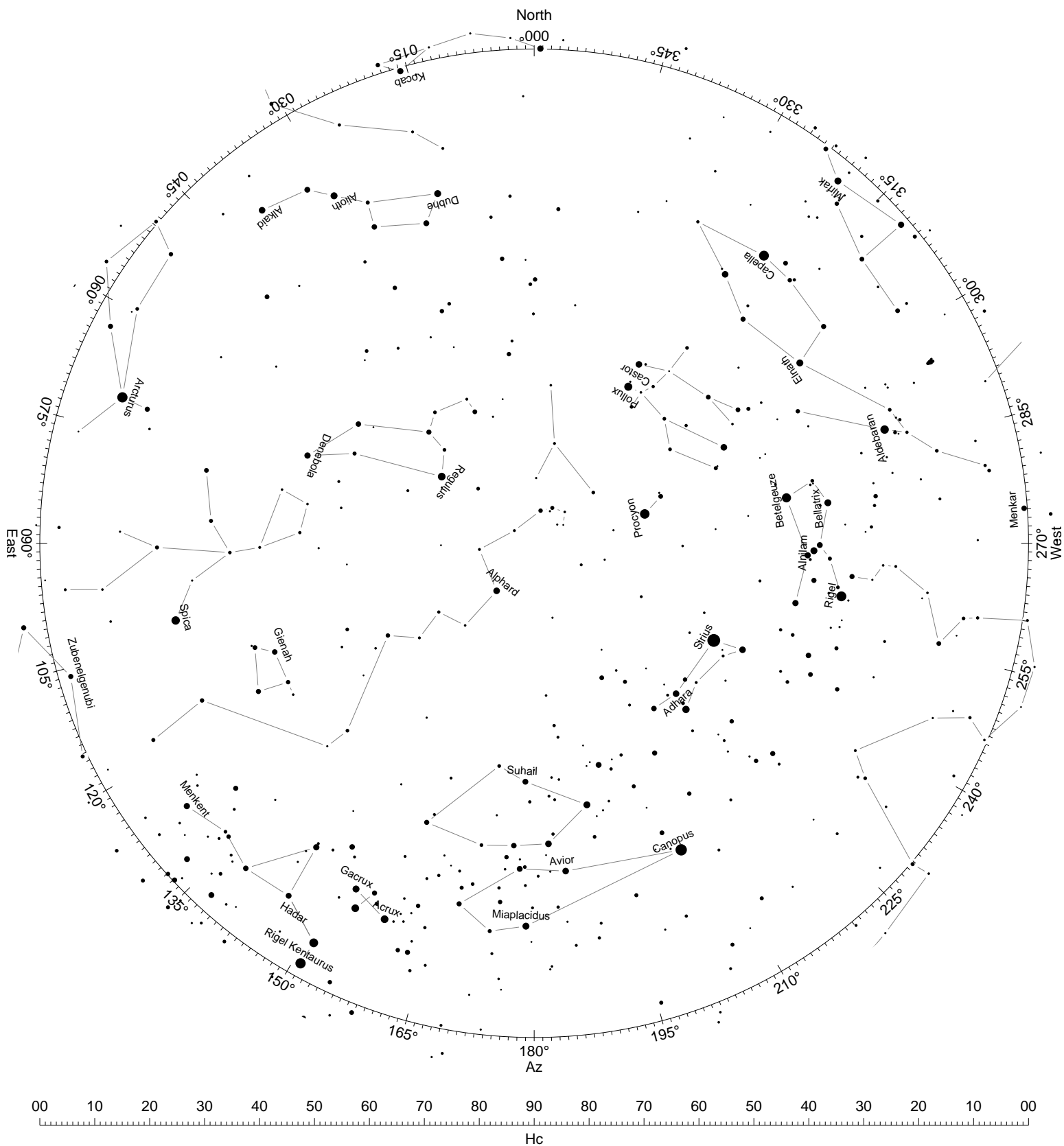
Horizontal-Coordinate-System Map of bright Stars - Part III



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.

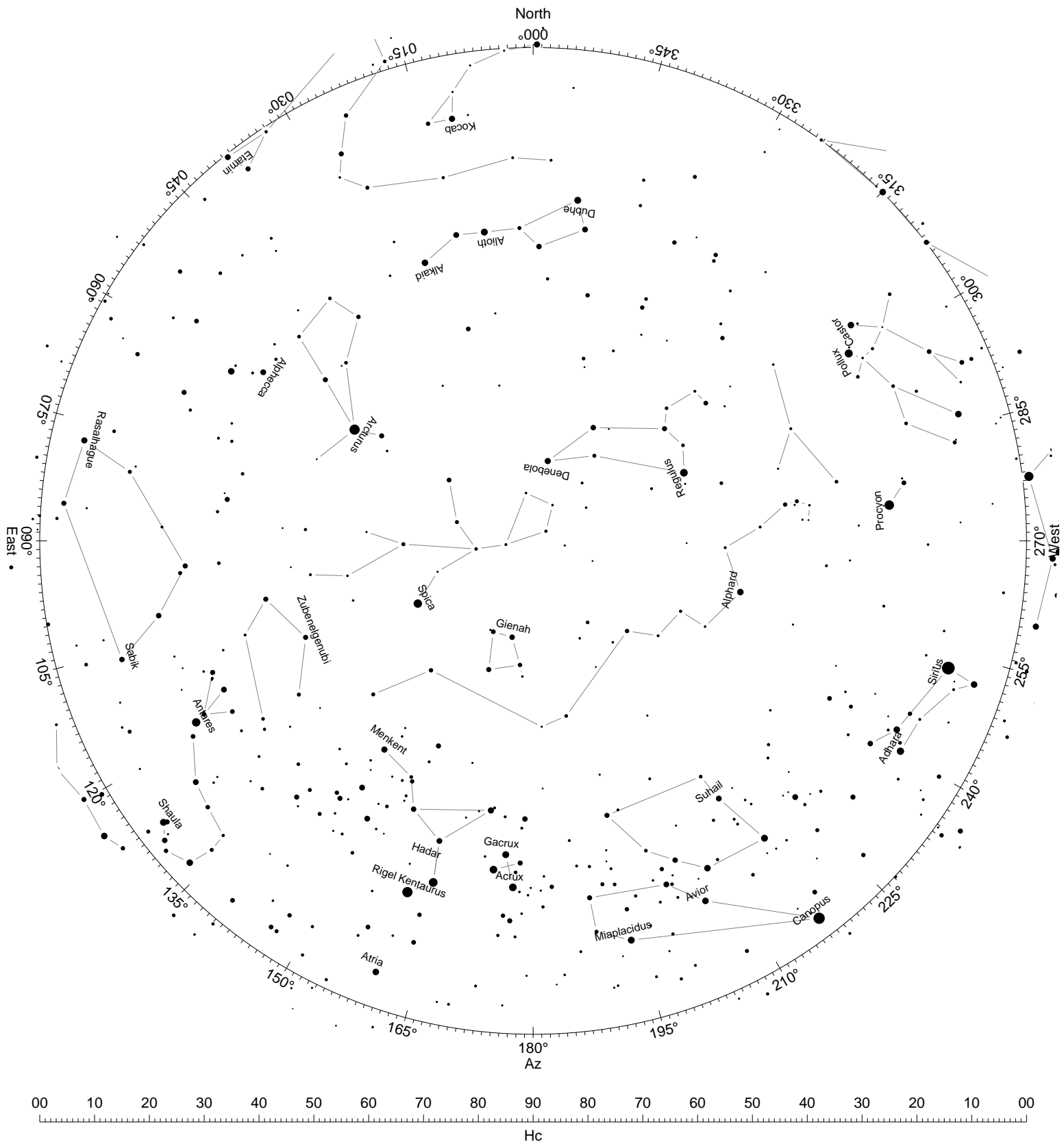
Horizontal-Coordinate-System Map of bright Stars - Part IV



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.

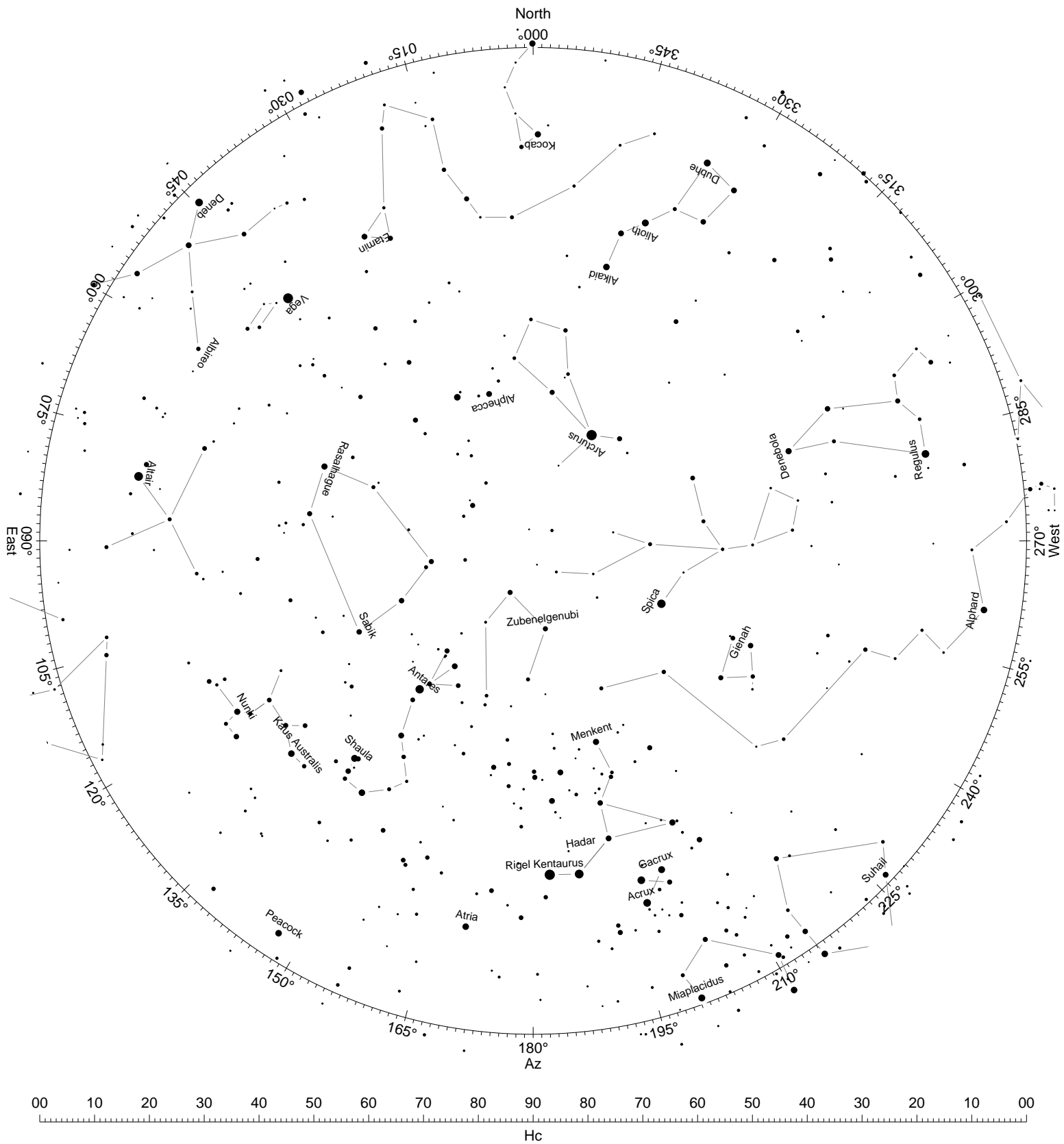
Each of these maps is valid for a location on the equator at a specific time of the day.

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



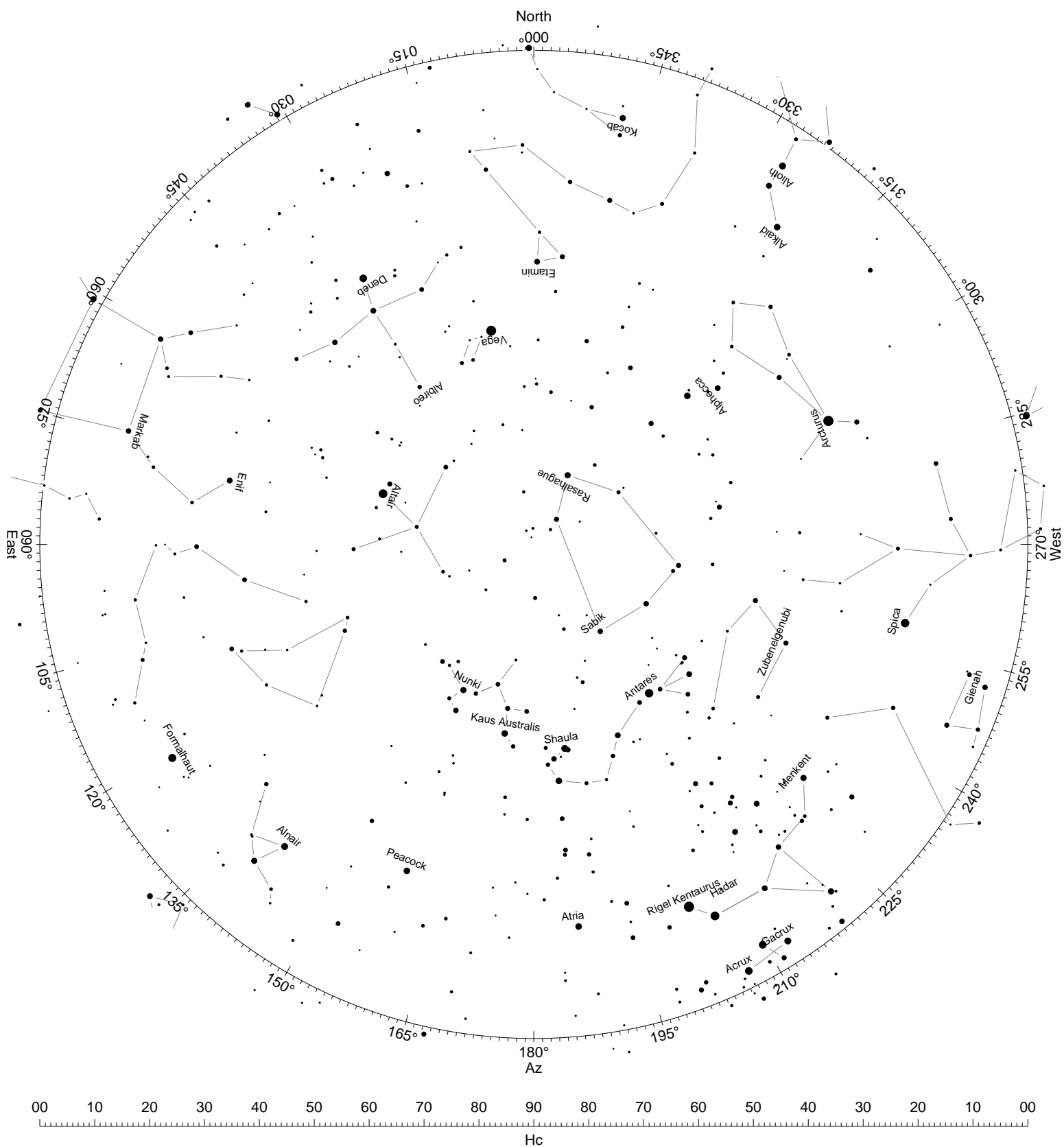
The Horizontal-Coordinate-System map shows the brightest stars (up to magnitude 4.5) of the local hemisphere for a location on the Equator. The stars are plotted with their Altitude (Hc) and Azimuth (Az) coordinates. The Azimuth scale is plotted on the circle of 0°-Altitude (local horizon). The Azimuth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

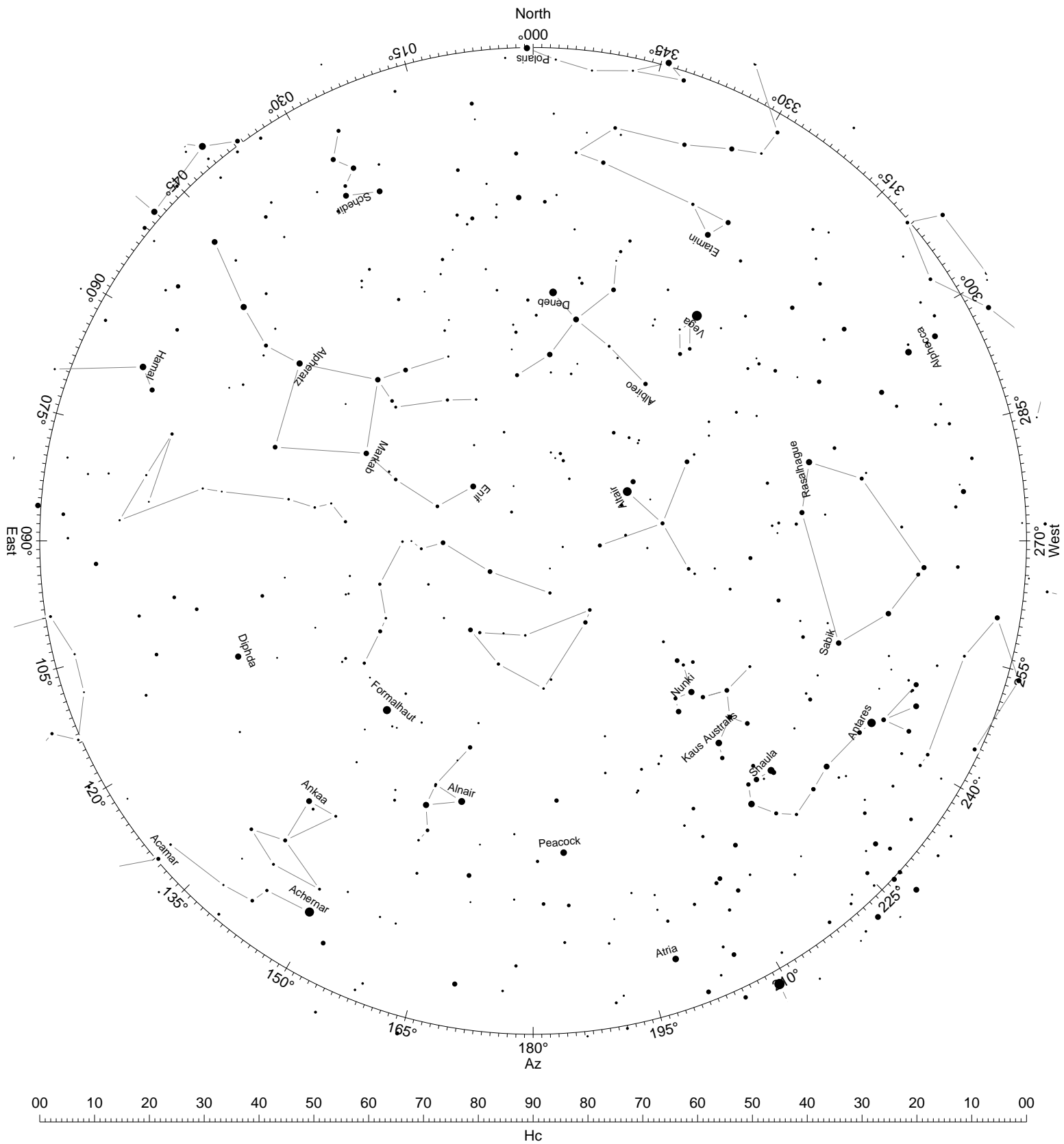
Horizontal-Coordinate-System Map of bright Stars - Part VII



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 Azimuth (Hc) and Altitude (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]

2019 - First Point of Aries / Selected Stars

UT	day 1 of 365 <i>January 1</i>		day 2 of 365 <i>January 2</i>		day 3 of 365 <i>January 3</i>		day 4 of 365 <i>January 4</i>		day 5 of 365 <i>January 5</i>		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	100	21.4 +02.5	101	20.5 +02.5	102	19.7 +02.4	103	18.8 +02.5	104	18.0 +02.4	00
01	115	23.9 +02.4	116	23.0 +02.5	117	22.1 +02.5	118	21.3 +02.4	119	20.4 +02.5	01
02	130	26.3 +02.5	131	25.5 +02.4	132	24.6 +02.5	133	23.7 +02.5	134	22.9 +02.5	02
03	145	28.8 +02.5	146	27.9 +02.5	147	27.1 +02.4	148	26.2 +02.5	149	25.4 +02.4	03
04	160	31.3 +02.4	161	30.4 +02.5	162	29.5 +02.5	163	28.7 +02.4	164	27.8 +02.5	04
05	175	33.7 +02.5	176	32.9 +02.4	177	32.0 +02.5	178	31.1 +02.5	179	30.3 +02.4	05
06	190	36.2 +02.5	191	35.3 +02.5	192	34.5 +02.4	193	33.6 +02.5	194	32.7 +02.5	06
07	205	38.7 +02.4	206	37.8 +02.5	207	36.9 +02.5	208	36.1 +02.4	209	35.2 +02.5	07
08	220	41.1 +02.5	221	40.3 +02.4	222	39.4 +02.5	223	38.5 +02.5	224	37.7 +02.4	08
09	235	43.6 +02.4	236	42.7 +02.5	237	41.9 +02.4	238	41.0 +02.5	239	40.1 +02.5	09
10	250	46.0 +02.5	251	45.2 +02.4	252	44.3 +02.5	253	43.5 +02.4	254	42.6 +02.5	10
11	265	48.5 +02.5	266	47.6 +02.5	267	46.8 +02.5	268	45.9 +02.5	269	45.1 +02.4	11
12	280	51.0 +02.4	281	50.1 +02.5	282	49.3 +02.4	283	48.4 +02.5	284	47.5 +02.5	12
13	295	53.4 +02.5	296	52.6 +02.4	297	51.7 +02.5	298	50.9 +02.4	299	50.0 +02.5	13
14	310	55.9 +02.5	311	55.0 +02.5	312	54.2 +02.4	313	53.3 +02.5	314	52.5 +02.4	14
15	325	58.4 +02.4	326	57.5 +02.5	327	56.6 +02.5	328	55.8 +02.4	329	54.9 +02.5	15
16	341	00.8 +02.5	341	60.0 +02.4	342	59.1 +02.5	343	58.2 +02.5	344	57.4 +02.5	16
17	356	03.3 +02.5	357	02.4 +02.5	358	01.6 +02.4	359	00.7 +02.5	359	59.9 +02.4	17
18	11	05.8 +02.4	12	04.9 +02.5	13	04.0 +02.5	14	03.2 +02.4	15	02.3 +02.5	18
19	26	08.2 +02.5	27	07.4 +02.4	28	06.5 +02.5	29	05.6 +02.5	30	04.8 +02.4	19
20	41	10.7 +02.4	42	09.8 +02.5	43	09.0 +02.4	44	08.1 +02.5	45	07.2 +02.5	20
21	56	13.1 +02.5	57	12.3 +02.5	58	11.4 +02.5	59	10.6 +02.4	60	09.7 +02.5	21
22	71	15.6 +02.5	72	14.8 +02.4	73	13.9 +02.5	74	13.0 +02.5	75	12.2 +02.4	22
23	86	18.1 +02.4	87	17.2 +02.5	88	16.4 +02.4	89	15.5 +02.5	90	14.6 +02.5	23

	SHA	Dec		SHA	Dec				
	° ' "	° ' "		° ' "	° ' "				
Alpheratz	357	39.7	N 29	11.8	Gienah	175	48.3	S 17	38.7
Ankaa	353	12.1	S 42	12.4	Acrux	173	05.0	S 63	11.8
Schedir	349	36.2	N 56	38.6	Gacrux	171	56.7	S 57	12.7
Diphda	348	52.2	S 17	53.2	Alioth	166	17.5	N 55	51.2
Achernar	335	23.9	S 57	08.8	Spica	158	27.3	S 11	15.4
Hamal	327	56.4	N 23	33.1	Alkaid	152	56.1	N 49	13.0
Polaris	315	49.8	N 89	20.8	Hadar	148	42.7	S 60	27.4
Acamar	315	15.2	S 40	14.1	Menkent	148	03.0	S 36	27.2
Menkar	314	10.9	N 04	09.7	Arcturus	145	52.1	N 19	05.7
Mirfak	308	34.6	N 49	55.7	Rigel Kentaurus	139	44.7	S 60	54.5
Aldebaran	290	44.8	N 16	32.7	Zubenelgenubi	137	01.4	S 16	07.0
Capella	280	28.4	N 46	01.0	Kocab	137	20.8	N 74	04.5
Rigel	281	08.1	S 08	11.0	Alphecca	126	08.1	N 26	39.1
Bellatrix	278	27.6	N 06	21.8	Antares	112	22.1	S 26	28.2
Elnath	278	07.5	N 28	37.3	Atria	107	20.9	S 69	03.3
Alnilam	275	42.2	S 01	11.6	Sabik	102	08.6	S 15	44.7
Betelgeuze	270	56.9	N 07	24.4	Shaula	96	17.2	S 37	06.8
Canopus	263	53.9	S 52	42.5	Rasalhague	96	03.3	N 12	33.0
Sirius	258	29.9	S 16	44.3	Etamin	90	44.9	N 51	29.3
Adhara	255	09.2	S 28	60.0	Kaus Australis	83	39.2	S 34	22.3
Castor	246	02.7	N 31	50.6	Vega	80	36.9	N 38	48.1
Procyon	244	55.3	N 05	10.7	Nunki	75	54.0	S 26	16.3
Pollux	243	22.5	N 27	58.7	Albireo	67	08.2	N 28	00.1
Avior	234	15.9	S 59	34.2	Altair	62	05.0	N 08	55.1
Suhail	222	49.3	S 43	30.5	Peacock	53	13.9	S 56	40.5
Miaplacidus	221	38.0	S 69	47.6	Deneb	49	29.3	N 45	21.0
Alphard	217	52.1	S 08	44.5	Enif	33	43.7	N 09	57.8
Regulus	207	39.2	N 11	52.4	Alnair	27	39.4	S 46	52.3
Dubhe	193	46.8	N 61	38.7	Formalhaut	15	20.1	S 29	31.5
Denebola	182	29.6	N 14	28.0	Markab	13	34.7	N 15	18.5

2019 - First Point of Aries / Selected Stars

UT	day 6 of 365 January 6		day 7 of 365 January 7		day 8 of 365 January 8		day 9 of 365 January 9		day 10 of 365 January 10		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	105	17.1 +02.5	106	16.2 +02.5	107	15.4 +02.4	108	14.5 +02.5	109	13.7 +02.4	00
01	120	19.6 +02.4	121	18.7 +02.5	122	17.8 +02.5	123	17.0 +02.4	124	16.1 +02.5	01
02	135	22.0 +02.5	136	21.2 +02.4	137	20.3 +02.5	138	19.4 +02.5	139	18.6 +02.5	02
03	150	24.5 +02.5	151	23.6 +02.5	152	22.8 +02.4	153	21.9 +02.5	154	21.1 +02.4	03
04	165	27.0 +02.4	166	26.1 +02.5	167	25.2 +02.5	168	24.4 +02.4	169	23.5 +02.5	04
05	180	29.4 +02.5	181	28.6 +02.4	182	27.7 +02.5	183	26.8 +02.5	184	26.0 +02.4	05
06	195	31.9 +02.5	196	31.0 +02.5	197	30.2 +02.4	198	29.3 +02.5	199	28.4 +02.5	06
07	210	34.4 +02.4	211	33.5 +02.5	212	32.6 +02.5	213	31.8 +02.4	214	30.9 +02.5	07
08	225	36.8 +02.5	226	36.0 +02.4	227	35.1 +02.5	228	34.2 +02.5	229	33.4 +02.4	08
09	240	39.3 +02.4	241	38.4 +02.5	242	37.6 +02.4	243	36.7 +02.5	244	35.8 +02.5	09
10	255	41.7 +02.5	256	40.9 +02.4	257	40.0 +02.5	258	39.2 +02.4	259	38.3 +02.5	10
11	270	44.2 +02.5	271	43.3 +02.5	272	42.5 +02.5	273	41.6 +02.5	274	40.8 +02.4	11
12	285	46.7 +02.4	286	45.8 +02.5	287	45.0 +02.4	288	44.1 +02.5	289	43.2 +02.5	12
13	300	49.1 +02.5	301	48.3 +02.4	302	47.4 +02.5	303	46.6 +02.4	304	45.7 +02.5	13
14	315	51.6 +02.5	316	50.7 +02.5	317	49.9 +02.4	318	49.0 +02.5	319	48.2 +02.4	14
15	330	54.1 +02.4	331	53.2 +02.5	332	52.3 +02.5	333	51.5 +02.4	334	50.6 +02.5	15
16	345	56.5 +02.5	346	55.7 +02.4	347	54.8 +02.5	348	53.9 +02.5	349	53.1 +02.5	16
17	0	59.0 +02.5	1	58.1 +02.5	2	57.3 +02.4	3	56.4 +02.5	4	55.6 +02.4	17
18	16	01.5 +02.4	17	00.6 +02.5	17	59.7 +02.5	18	58.9 +02.4	19	58.0 +02.5	18
19	31	03.9 +02.5	32	03.1 +02.4	33	02.2 +02.5	34	01.3 +02.5	35	00.5 +02.4	19
20	46	06.4 +02.4	47	05.5 +02.5	48	04.7 +02.4	49	03.8 +02.5	50	02.9 +02.5	20
21	61	08.8 +02.5	62	08.0 +02.5	63	07.1 +02.5	64	06.3 +02.4	65	05.4 +02.5	21
22	76	11.3 +02.5	77	10.5 +02.4	78	09.6 +02.5	79	08.7 +02.5	80	07.9 +02.4	22
23	91	13.8 +02.4	92	12.9 +02.5	93	12.1 +02.4	94	11.2 +02.5	95	10.3 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.7	N 29 11.8	Gienah	175 48.3	S 17 38.7
Ankaa	353 12.1	S 42 12.4	Acrux	173 04.9	S 63 11.9
Schedir	349 36.2	N 56 38.6	Gacrux	171 56.6	S 57 12.7
Diphda	348 52.2	S 17 53.2	Alioth	166 17.5	N 55 51.2
Achernar	335 23.9	S 57 08.9	Spica	158 27.3	S 11 15.4
Hamal	327 56.4	N 23 33.1	Alkaid	152 56.0	N 49 13.0
Polaris	315 51.4	N 89 20.8	Hadar	148 42.7	S 60 27.4
Acamar	315 15.2	S 40 14.1	Menkent	148 03.0	S 36 27.2
Menkar	314 10.9	N 04 09.7	Arcturus	145 52.1	N 19 05.6
Mirfak	308 34.6	N 49 55.7	Rigel Kentaurus	139 44.6	S 60 54.5
Aldebaran	290 44.8	N 16 32.7	Zubenelgenubi	137 01.3	S 16 07.0
Capella	280 28.4	N 46 01.0	Kocab	137 20.7	N 74 04.5
Rigel	281 08.1	S 08 11.0	Alphecca	126 08.1	N 26 39.1
Bellatrix	278 27.6	N 06 21.8	Antares	112 22.0	S 26 28.2
Elnath	278 07.5	N 28 37.3	Atria	107 20.8	S 69 03.3
Alnilam	275 42.2	S 01 11.6	Sabik	102 08.5	S 15 44.7
Betelgeuze	270 56.9	N 07 24.4	Shaula	96 17.2	S 37 06.8
Canopus	263 53.9	S 52 42.5	Rasalhague	96 03.3	N 12 32.9
Sirius	258 29.9	S 16 44.3	Etamin	90 44.9	N 51 29.2
Adhara	255 09.2	S 29 00.0	Kaus Australis	83 39.2	S 34 22.3
Castor	246 02.7	N 31 50.6	Vega	80 36.9	N 38 48.1
Procyon	244 55.3	N 05 10.7	Nunki	75 54.0	S 26 16.3
Pollux	243 22.4	N 27 58.7	Albireo	67 08.2	N 28 00.1
Avior	234 15.8	S 59 34.2	Altair	62 05.0	N 08 55.1
Suhail	222 49.2	S 43 30.5	Peacock	53 13.9	S 56 40.4
Miaplacidus	221 37.9	S 69 47.6	Deneb	49 29.3	N 45 21.0
Alphard	217 52.1	S 08 44.5	Enif	33 43.7	N 09 57.7
Regulus	207 39.2	N 11 52.4	Alnair	27 39.4	S 46 52.3
Dubhe	193 46.7	N 61 38.7	Formalhaut	15 20.1	S 29 31.5
Denebola	182 29.6	N 14 28.0	Markab	13 34.7	N 15 18.5

2019 - First Point of Aries / Selected Stars

UT	day 11 of 365		day 12 of 365		day 13 of 365		day 14 of 365		day 15 of 365		UT					
	<i>January 11</i>		<i>January 12</i>		<i>January 13</i>		<i>January 14</i>		<i>January 15</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	110	12.8	+02.5	111	11.9	+02.5	112	11.1	+02.4	113	10.2	+02.5	114	09.4	+02.4	00
01	125	15.3	+02.4	126	14.4	+02.5	127	13.5	+02.5	128	12.7	+02.4	129	11.8	+02.5	01
02	140	17.7	+02.5	141	16.9	+02.4	142	16.0	+02.5	143	15.1	+02.5	144	14.3	+02.4	02
03	155	20.2	+02.5	156	19.3	+02.5	157	18.5	+02.4	158	17.6	+02.5	159	16.7	+02.5	03
04	170	22.7	+02.4	171	21.8	+02.5	172	20.9	+02.5	173	20.1	+02.4	174	19.2	+02.5	04
05	185	25.1	+02.5	186	24.3	+02.4	187	23.4	+02.5	188	22.5	+02.5	189	21.7	+02.4	05
06	200	27.6	+02.4	201	26.7	+02.5	202	25.9	+02.4	203	25.0	+02.5	204	24.1	+02.5	06
07	215	30.0	+02.5	216	29.2	+02.4	217	28.3	+02.5	218	27.5	+02.4	219	26.6	+02.5	07
08	230	32.5	+02.5	231	31.6	+02.5	232	30.8	+02.5	233	29.9	+02.5	234	29.1	+02.4	08
09	245	35.0	+02.4	246	34.1	+02.5	247	33.3	+02.4	248	32.4	+02.5	249	31.5	+02.5	09
10	260	37.4	+02.5	261	36.6	+02.4	262	35.7	+02.5	263	34.9	+02.4	264	34.0	+02.5	10
11	275	39.9	+02.5	276	39.0	+02.5	277	38.2	+02.4	278	37.3	+02.5	279	36.5	+02.4	11
12	290	42.4	+02.4	291	41.5	+02.5	292	40.6	+02.5	293	39.8	+02.4	294	38.9	+02.5	12
13	305	44.8	+02.5	306	44.0	+02.4	307	43.1	+02.5	308	42.2	+02.5	309	41.4	+02.4	13
14	320	47.3	+02.5	321	46.4	+02.5	322	45.6	+02.4	323	44.7	+02.5	324	43.8	+02.5	14
15	335	49.8	+02.4	336	48.9	+02.5	337	48.0	+02.5	338	47.2	+02.4	339	46.3	+02.5	15
16	350	52.2	+02.5	351	51.4	+02.4	352	50.5	+02.5	353	49.6	+02.5	354	48.8	+02.4	16
17	5	54.7	+02.5	6	53.8	+02.5	7	53.0	+02.4	8	52.1	+02.5	9	51.2	+02.5	17
18	20	57.2	+02.4	21	56.3	+02.5	22	55.4	+02.5	23	54.6	+02.4	24	53.7	+02.5	18
19	35	59.6	+02.5	36	58.8	+02.4	37	57.9	+02.5	38	57.0	+02.5	39	56.2	+02.4	19
20	51	02.1	+02.4	52	01.2	+02.5	53	00.4	+02.4	53	59.5	+02.5	54	58.6	+02.5	20
21	66	04.5	+02.5	67	03.7	+02.4	68	02.8	+02.5	69	02.0	+02.4	70	01.1	+02.5	21
22	81	07.0	+02.5	82	06.1	+02.5	83	05.3	+02.4	84	04.4	+02.5	85	03.6	+02.4	22
23	96	09.5	+02.4	97	08.6	+02.5	98	07.7	+02.5	99	06.9	+02.5	100	06.0	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.7	N 29	11.8	Gienah	175	48.3	S 17	38.7
Ankaa	353	12.1	S 42	12.4	Acrux	173	04.9	S 63	11.9
Schedir	349	36.3	N 56	38.6	Gacrux	171	56.5	S 57	12.7
Diphda	348	52.2	S 17	53.2	Alioth	166	17.4	N 55	51.2
Achernar	335	23.9	S 57	08.9	Spica	158	27.3	S 11	15.5
Hamal	327	56.4	N 23	33.1	Alkaid	152	56.0	N 49	13.0
Polaris	315	53.6	N 89	20.8	Hadar	148	42.6	S 60	27.4
Acamar	315	15.2	S 40	14.1	Menkent	148	02.9	S 36	27.2
Menkar	314	10.9	N 04	09.7	Arcturus	145	52.1	N 19	05.6
Mirfak	308	34.6	N 49	55.7	Rigel Kentaurus	139	44.5	S 60	54.5
Aldebaran	290	44.8	N 16	32.7	Zubenelgenubi	137	01.3	S 16	07.0
Capella	280	28.4	N 46	01.0	Kocab	137	20.6	N 74	04.5
Rigel	281	08.1	S 08	11.0	Alphecca	126	08.1	N 26	39.1
Bellatrix	278	27.6	N 06	21.8	Antares	112	22.0	S 26	28.2
Elnath	278	07.5	N 28	37.3	Atria	107	20.8	S 69	03.3
Alnilam	275	42.2	S 01	11.6	Sabik	102	08.5	S 15	44.7
Betelgeuze	270	56.9	N 07	24.4	Shaula	96	17.1	S 37	06.8
Canopus	263	53.9	S 52	42.6	Rasalhague	96	03.3	N 12	32.9
Sirius	258	29.9	S 16	44.3	Etamin	90	44.9	N 51	29.2
Adhara	255	09.1	S 29	00.0	Kaus Australis	83	39.2	S 34	22.3
Castor	246	02.7	N 31	50.6	Vega	80	36.9	N 38	48.0
Procyon	244	55.2	N 05	10.7	Nunki	75	54.0	S 26	16.3
Pollux	243	22.4	N 27	58.7	Albireo	67	08.2	N 28	00.0
Avior	234	15.8	S 59	34.2	Altair	62	05.0	N 08	55.0
Suhail	222	49.2	S 43	30.5	Peacock	53	13.9	S 56	40.4
Miaplacidus	221	37.9	S 69	47.6	Deneb	49	29.3	N 45	21.0
Alphard	217	52.1	S 08	44.5	Enif	33	43.7	N 09	57.7
Regulus	207	39.2	N 11	52.4	Alnair	27	39.4	S 46	52.3
Dubhe	193	46.6	N 61	38.7	Formalhaut	15	20.1	S 29	31.5
Denebola	182	29.5	N 14	27.9	Markab	13	34.8	N 15	18.4

2019 - First Point of Aries / Selected Stars

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 08.5	+02.5	116 07.6	+02.5	117 06.8	+02.4	118 05.9	+02.5	119 05.1	+02.4	00
01	130 11.0	+02.4	131 10.1	+02.5	132 09.2	+02.5	133 08.4	+02.4	134 07.5	+02.5	01
02	145 13.4	+02.5	146 12.6	+02.4	147 11.7	+02.5	148 10.8	+02.5	149 10.0	+02.4	02
03	160 15.9	+02.4	161 15.0	+02.5	162 14.2	+02.4	163 13.3	+02.5	164 12.4	+02.5	03
04	175 18.3	+02.5	176 17.5	+02.4	177 16.6	+02.5	178 15.8	+02.4	179 14.9	+02.5	04
05	190 20.8	+02.5	191 19.9	+02.5	192 19.1	+02.5	193 18.2	+02.5	194 17.4	+02.4	05
06	205 23.3	+02.4	206 22.4	+02.5	207 21.6	+02.4	208 20.7	+02.5	209 19.8	+02.5	06
07	220 25.7	+02.5	221 24.9	+02.4	222 24.0	+02.5	223 23.2	+02.4	224 22.3	+02.5	07
08	235 28.2	+02.5	236 27.3	+02.5	237 26.5	+02.4	238 25.6	+02.5	239 24.8	+02.4	08
09	250 30.7	+02.4	251 29.8	+02.5	252 28.9	+02.5	253 28.1	+02.5	254 27.2	+02.5	09
10	265 33.1	+02.5	266 32.3	+02.4	267 31.4	+02.5	268 30.6	+02.4	269 29.7	+02.5	10
11	280 35.6	+02.5	281 34.7	+02.5	282 33.9	+02.4	283 33.0	+02.5	284 32.2	+02.4	11
12	295 38.1	+02.4	296 37.2	+02.5	297 36.3	+02.5	298 35.5	+02.4	299 34.6	+02.5	12
13	310 40.5	+02.5	311 39.7	+02.4	312 38.8	+02.5	313 37.9	+02.5	314 37.1	+02.4	13
14	325 43.0	+02.5	326 42.1	+02.5	327 41.3	+02.4	328 40.4	+02.5	329 39.5	+02.5	14
15	340 45.5	+02.4	341 44.6	+02.5	342 43.7	+02.5	343 42.9	+02.4	344 42.0	+02.5	15
16	355 47.9	+02.5	356 47.1	+02.4	357 46.2	+02.5	358 45.3	+02.5	359 44.5	+02.4	16
17	10 50.4	+02.4	11 49.5	+02.5	12 48.7	+02.4	13 47.8	+02.5	14 46.9	+02.5	17
18	25 52.8	+02.5	26 52.0	+02.4	27 51.1	+02.5	28 50.3	+02.4	29 49.4	+02.5	18
19	40 55.3	+02.5	41 54.4	+02.5	42 53.6	+02.5	43 52.7	+02.5	44 51.9	+02.4	19
20	55 57.8	+02.4	56 56.9	+02.5	57 56.1	+02.4	58 55.2	+02.5	59 54.3	+02.5	20
21	71 00.2	+02.5	71 59.4	+02.4	72 58.5	+02.5	73 57.7	+02.4	74 56.8	+02.5	21
22	86 02.7	+02.5	87 01.8	+02.5	88 01.0	+02.4	89 00.1	+02.5	89 59.3	+02.4	22
23	101 05.2	+02.4	102 04.3	+02.5	103 03.4	+02.5	104 02.6	+02.5	105 01.7	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.7	N 29 11.8	Gienah	175 48.2	S 17 38.7
Ankaa	353 12.2	S 42 12.4	Acrux	173 04.8	S 63 11.9
Schedir	349 36.3	N 56 38.6	Gacrux	171 56.5	S 57 12.7
Diphda	348 52.2	S 17 53.2	Alioth	166 17.4	N 55 51.2
Achernar	335 24.0	S 57 08.9	Spica	158 27.2	S 11 15.5
Hamal	327 56.5	N 23 33.1	Alkaid	152 55.9	N 49 13.0
Polaris	315 55.8	N 89 20.9	Hadar	148 42.5	S 60 27.4
Acamar	315 15.3	S 40 14.1	Menkent	148 02.9	S 36 27.3
Menkar	314 10.9	N 04 09.7	Arcturus	145 52.0	N 19 05.6
Mirfak	308 34.6	N 49 55.7	Rigel Kentaurus	139 44.5	S 60 54.5
Aldebaran	290 44.8	N 16 32.7	Zubenelgenubi	137 01.3	S 16 07.0
Capella	280 28.4	N 46 01.1	Kocab	137 20.5	N 74 04.5
Rigel	281 08.1	S 08 11.0	Alphecca	126 08.0	N 26 39.1
Bellatrix	278 27.6	N 06 21.8	Antares	112 22.0	S 26 28.2
Elnath	278 07.5	N 28 37.3	Atria	107 20.7	S 69 03.3
Alnilam	275 42.2	S 01 11.6	Sabik	102 08.5	S 15 44.8
Betelgeuze	270 56.9	N 07 24.4	Shaula	96 17.1	S 37 06.8
Canopus	263 53.9	S 52 42.6	Rasalhague	96 03.2	N 12 32.9
Sirius	258 29.9	S 16 44.4	Etamin	90 44.9	N 51 29.2
Adhara	255 09.1	S 29 00.1	Kaus Australis	83 39.2	S 34 22.3
Castor	246 02.7	N 31 50.7	Vega	80 36.9	N 38 48.0
Procyon	244 55.2	N 05 10.7	Nunki	75 54.0	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.2	N 28 00.0
Avior	234 15.8	S 59 34.3	Altair	62 05.0	N 08 55.0
Suhail	222 49.2	S 43 30.5	Peacock	53 13.9	S 56 40.4
Miaplacidus	221 37.8	S 69 47.6	Deneb	49 29.3	N 45 21.0
Alphard	217 52.1	S 08 44.5	Enif	33 43.7	N 09 57.7
Regulus	207 39.1	N 11 52.4	Alnair	27 39.4	S 46 52.3
Dubhe	193 46.6	N 61 38.7	Formalhaut	15 20.2	S 29 31.5
Denebola	182 29.5	N 14 27.9	Markab	13 34.8	N 15 18.4

2019 - 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	04.2	+02.5	121	03.3	+02.5	122	02.5	+02.4	123	01.6	+02.5	124	00.7	+02.5	00
01	135	06.7	+02.4	136	05.8	+02.5	137	04.9	+02.5	138	04.1	+02.4	139	03.2	+02.5	01
02	150	09.1	+02.5	151	08.3	+02.4	152	07.4	+02.5	153	06.5	+02.5	154	05.7	+02.4	02
03	165	11.6	+02.4	166	10.7	+02.5	167	09.9	+02.4	168	09.0	+02.5	169	08.1	+02.5	03
04	180	14.0	+02.5	181	13.2	+02.5	182	12.3	+02.5	183	11.5	+02.4	184	10.6	+02.5	04
05	195	16.5	+02.5	196	15.7	+02.4	197	14.8	+02.5	198	13.9	+02.5	199	13.1	+02.4	05
06	210	19.0	+02.4	211	18.1	+02.5	212	17.3	+02.4	213	16.4	+02.5	214	15.5	+02.5	06
07	225	21.4	+02.5	226	20.6	+02.4	227	19.7	+02.5	228	18.9	+02.4	229	18.0	+02.5	07
08	240	23.9	+02.5	241	23.0	+02.5	242	22.2	+02.4	243	21.3	+02.5	244	20.5	+02.4	08
09	255	26.4	+02.4	256	25.5	+02.5	257	24.6	+02.5	258	23.8	+02.5	259	22.9	+02.5	09
10	270	28.8	+02.5	271	28.0	+02.4	272	27.1	+02.5	273	26.3	+02.4	274	25.4	+02.5	10
11	285	31.3	+02.5	286	30.4	+02.5	287	29.6	+02.4	288	28.7	+02.5	289	27.9	+02.4	11
12	300	33.8	+02.4	301	32.9	+02.5	302	32.0	+02.5	303	31.2	+02.4	304	30.3	+02.5	12
13	315	36.2	+02.5	316	35.4	+02.4	317	34.5	+02.5	318	33.6	+02.5	319	32.8	+02.4	13
14	330	38.7	+02.5	331	37.8	+02.5	332	37.0	+02.4	333	36.1	+02.5	334	35.2	+02.5	14
15	345	41.2	+02.4	346	40.3	+02.5	347	39.4	+02.5	348	38.6	+02.4	349	37.7	+02.5	15
16	0	43.6	+02.5	1	42.8	+02.4	2	41.9	+02.5	3	41.0	+02.5	4	40.2	+02.4	16
17	15	46.1	+02.4	16	45.2	+02.5	17	44.4	+02.4	18	43.5	+02.5	19	42.6	+02.5	17
18	30	48.5	+02.5	31	47.7	+02.5	32	46.8	+02.5	33	46.0	+02.4	34	45.1	+02.5	18
19	45	51.0	+02.5	46	50.2	+02.4	47	49.3	+02.5	48	48.4	+02.5	49	47.6	+02.4	19
20	60	53.5	+02.4	61	52.6	+02.5	62	51.8	+02.4	63	50.9	+02.5	64	50.0	+02.5	20
21	75	55.9	+02.5	76	55.1	+02.4	77	54.2	+02.5	78	53.4	+02.4	79	52.5	+02.5	21
22	90	58.4	+02.5	91	57.5	+02.5	92	56.7	+02.4	93	55.8	+02.5	94	55.0	+02.4	22
23	106	00.9	+02.4	107	00.0	+02.5	107	59.1	+02.5	108	58.3	+02.4	109	57.4	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.7	N 29	11.8	Gienah	175	48.2	S 17	38.7
Ankaa	353	12.2	S 42	12.4	Acrux	173	04.7	S 63	11.9
Schedir	349	36.3	N 56	38.6	Gacrux	171	56.4	S 57	12.8
Diphda	348	52.2	S 17	53.2	Alioth	166	17.3	N 55	51.2
Achernar	335	24.0	S 57	08.9	Spica	158	27.2	S 11	15.5
Hamal	327	56.5	N 23	33.1	Alkaid	152	55.8	N 49	12.9
Polaris	315	57.7	N 89	20.9	Hadar	148	42.4	S 60	27.5
Acamar	315	15.3	S 40	14.1	Menkent	148	02.8	S 36	27.3
Menkar	314	10.9	N 04	09.7	Arcturus	145	52.0	N 19	05.6
Mirfak	308	34.6	N 49	55.7	Rigel Kentaurus	139	44.4	S 60	54.5
Aldebaran	290	44.8	N 16	32.7	Zubenelgenubi	137	01.2	S 16	07.0
Capella	280	28.4	N 46	01.1	Kocab	137	20.4	N 74	04.4
Rigel	281	08.1	S 08	11.0	Alphecca	126	08.0	N 26	39.0
Bellatrix	278	27.6	N 06	21.8	Antares	112	21.9	S 26	28.2
Elnath	278	07.5	N 28	37.3	Atria	107	20.6	S 69	03.3
Alnilam	275	42.2	S 01	11.6	Sabik	102	08.4	S 15	44.8
Betelgeuze	270	56.9	N 07	24.4	Shaula	96	17.1	S 37	06.8
Canopus	263	53.9	S 52	42.6	Rasalhague	96	03.2	N 12	32.9
Sirius	258	29.9	S 16	44.4	Etamin	90	44.8	N 51	29.1
Adhara	255	09.1	S 29	00.1	Kaus Australis	83	39.1	S 34	22.3
Castor	246	02.6	N 31	50.7	Vega	80	36.9	N 38	48.0
Procyon	244	55.2	N 05	10.7	Nunki	75	54.0	S 26	16.2
Pollux	243	22.4	N 27	58.7	Albireo	67	08.2	N 27	60.0
Avior	234	15.8	S 59	34.3	Altair	62	05.0	N 08	55.0
Suhail	222	49.2	S 43	30.6	Peacock	53	13.9	S 56	40.4
Miaplacidus	221	37.8	S 69	47.7	Deneb	49	29.3	N 45	20.9
Alphard	217	52.0	S 08	44.6	Enif	33	43.7	N 09	57.7
Regulus	207	39.1	N 11	52.3	Alnair	27	39.4	S 46	52.3
Dubhe	193	46.5	N 61	38.7	Formalhaut	15	20.2	S 29	31.5
Denebola	182	29.5	N 14	27.9	Markab	13	34.8	N 15	18.4

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UT	day 26 of 365			day 27 of 365			day 28 of 365			day 29 of 365			day 30 of 365			UT
	<i>January 26</i>			<i>January 27</i>			<i>January 28</i>			<i>January 29</i>			<i>January 30</i>			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	124	59.9	+02.4	125	59.0	+02.5	126	58.2	+02.4	127	57.3	+02.5	128	56.4	+02.5	00
01	140	02.3	+02.5	141	01.5	+02.5	142	00.6	+02.5	142	59.8	+02.4	143	58.9	+02.5	01
02	155	04.8	+02.5	156	04.0	+02.4	157	03.1	+02.5	158	02.2	+02.5	159	01.4	+02.4	02
03	170	07.3	+02.4	171	06.4	+02.5	172	05.6	+02.4	173	04.7	+02.5	174	03.8	+02.5	03
04	185	09.7	+02.5	186	08.9	+02.4	187	08.0	+02.5	188	07.2	+02.4	189	06.3	+02.5	04
05	200	12.2	+02.5	201	11.3	+02.5	202	10.5	+02.4	203	09.6	+02.5	204	08.8	+02.4	05
06	215	14.7	+02.4	216	13.8	+02.5	217	12.9	+02.5	218	12.1	+02.4	219	11.2	+02.5	06
07	230	17.1	+02.5	231	16.3	+02.4	232	15.4	+02.5	233	14.5	+02.5	234	13.7	+02.5	07
08	245	19.6	+02.5	246	18.7	+02.5	247	17.9	+02.4	248	17.0	+02.5	249	16.2	+02.4	08
09	260	22.1	+02.4	261	21.2	+02.5	262	20.3	+02.5	263	19.5	+02.4	264	18.6	+02.5	09
10	275	24.5	+02.5	276	23.7	+02.4	277	22.8	+02.5	278	21.9	+02.5	279	21.1	+02.4	10
11	290	27.0	+02.5	291	26.1	+02.5	292	25.3	+02.4	293	24.4	+02.5	294	23.5	+02.5	11
12	305	29.5	+02.4	306	28.6	+02.5	307	27.7	+02.5	308	26.9	+02.4	309	26.0	+02.5	12
13	320	31.9	+02.5	321	31.1	+02.4	322	30.2	+02.5	323	29.3	+02.5	324	28.5	+02.4	13
14	335	34.4	+02.4	336	33.5	+02.5	337	32.7	+02.4	338	31.8	+02.5	339	30.9	+02.5	14
15	350	36.8	+02.5	351	36.0	+02.4	352	35.1	+02.5	353	34.3	+02.4	354	33.4	+02.5	15
16	5	39.3	+02.5	6	38.4	+02.5	7	37.6	+02.5	8	36.7	+02.5	9	35.9	+02.4	16
17	20	41.8	+02.4	21	40.9	+02.5	22	40.1	+02.4	23	39.2	+02.5	24	38.3	+02.5	17
18	35	44.2	+02.5	36	43.4	+02.4	37	42.5	+02.5	38	41.7	+02.4	39	40.8	+02.5	18
19	50	46.7	+02.5	51	45.8	+02.5	52	45.0	+02.4	53	44.1	+02.5	54	43.3	+02.4	19
20	65	49.2	+02.4	66	48.3	+02.5	67	47.4	+02.5	68	46.6	+02.4	69	45.7	+02.5	20
21	80	51.6	+02.5	81	50.8	+02.4	82	49.9	+02.5	83	49.0	+02.5	84	48.2	+02.5	21
22	95	54.1	+02.5	96	53.2	+02.5	97	52.4	+02.4	98	51.5	+02.5	99	50.7	+02.4	22
23	110	56.6	+02.4	111	55.7	+02.5	112	54.8	+02.5	113	54.0	+02.4	114	53.1	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.8	N 29 11.8	Gienah	175 48.1	S 17 38.8
Ankaa	353 12.2	S 42 12.4	Acrux	173 04.7	S 63 11.9
Schedir	349 36.4	N 56 38.6	Gacrux	171 56.4	S 57 12.8
Diphda	348 52.2	S 17 53.2	Alioth	166 17.2	N 55 51.2
Achernar	335 24.1	S 57 08.8	Spica	158 27.1	S 11 15.5
Hamal	327 56.5	N 23 33.1	Alkaid	152 55.8	N 49 12.9
Polaris	316 00.3	N 89 20.9	Hadar	148 42.4	S 60 27.5
Acamar	315 15.3	S 40 14.1	Menkent	148 02.8	S 36 27.3
Menkar	314 11.0	N 04 09.7	Arcturus	145 51.9	N 19 05.6
Mirfak	308 34.7	N 49 55.7	Rigel Kentaurus	139 44.3	S 60 54.5
Aldebaran	290 44.8	N 16 32.7	Zubenelgenubi	137 01.2	S 16 07.0
Capella	280 28.5	N 46 01.1	Kocab	137 20.3	N 74 04.4
Rigel	281 08.1	S 08 11.1	Alphecca	126 07.9	N 26 39.0
Bellatrix	278 27.6	N 06 21.8	Antares	112 21.9	S 26 28.2
Elnath	278 07.5	N 28 37.3	Atria	107 20.5	S 69 03.3
Alnilam	275 42.2	S 01 11.6	Sabik	102 08.4	S 15 44.8
Betelgeuze	270 56.9	N 07 24.4	Shaula	96 17.0	S 37 06.8
Canopus	263 54.0	S 52 42.6	Rasalhague	96 03.2	N 12 32.9
Sirius	258 29.9	S 16 44.4	Etamin	90 44.8	N 51 29.1
Adhara	255 09.1	S 29 00.1	Kaus Australis	83 39.1	S 34 22.3
Castor	246 02.6	N 31 50.7	Vega	80 36.8	N 38 48.0
Procyon	244 55.2	N 05 10.7	Nunki	75 53.9	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.2	N 27 60.0
Avior	234 15.8	S 59 34.3	Altair	62 05.0	N 08 55.0
Suhail	222 49.2	S 43 30.6	Peacock	53 13.8	S 56 40.4
Miaplacidus	221 37.8	S 69 47.7	Deneb	49 29.3	N 45 20.9
Alphard	217 52.0	S 08 44.6	Enif	33 43.7	N 09 57.7
Regulus	207 39.1	N 11 52.3	Alnair	27 39.4	S 46 52.3
Dubhe	193 46.4	N 61 38.7	Formalhaut	15 20.2	S 29 31.4
Denebola	182 29.4	N 14 27.9	Markab	13 34.8	N 15 18.4

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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	129 55.6	+02.4	130 54.7	+02.5	131 53.9	+02.4	132 53.0	+02.5	133 52.1	+02.5	00
01	144 58.0	+02.5	145 57.2	+02.4	146 56.3	+02.5	147 55.5	+02.4	148 54.6	+02.5	01
02	160 00.5	+02.5	160 59.6	+02.5	161 58.8	+02.5	162 57.9	+02.5	163 57.1	+02.4	02
03	175 03.0	+02.4	176 02.1	+02.5	177 01.3	+02.4	178 00.4	+02.5	178 59.5	+02.5	03
04	190 05.4	+02.5	191 04.6	+02.4	192 03.7	+02.5	193 02.9	+02.4	194 02.0	+02.5	04
05	205 07.9	+02.5	206 07.0	+02.5	207 06.2	+02.4	208 05.3	+02.5	209 04.5	+02.4	05
06	220 10.4	+02.4	221 09.5	+02.5	222 08.6	+02.5	223 07.8	+02.4	224 06.9	+02.5	06
07	235 12.8	+02.5	236 12.0	+02.4	237 11.1	+02.5	238 10.2	+02.5	239 09.4	+02.5	07
08	250 15.3	+02.5	251 14.4	+02.5	252 13.6	+02.4	253 12.7	+02.5	254 11.9	+02.4	08
09	265 17.8	+02.4	266 16.9	+02.5	267 16.0	+02.5	268 15.2	+02.4	269 14.3	+02.5	09
10	280 20.2	+02.5	281 19.4	+02.4	282 18.5	+02.5	283 17.6	+02.5	284 16.8	+02.4	10
11	295 22.7	+02.4	296 21.8	+02.5	297 21.0	+02.4	298 20.1	+02.5	299 19.2	+02.5	11
12	310 25.1	+02.5	311 24.3	+02.5	312 23.4	+02.5	313 22.6	+02.4	314 21.7	+02.5	12
13	325 27.6	+02.5	326 26.8	+02.4	327 25.9	+02.5	328 25.0	+02.5	329 24.2	+02.4	13
14	340 30.1	+02.4	341 29.2	+02.5	342 28.4	+02.4	343 27.5	+02.5	344 26.6	+02.5	14
15	355 32.5	+02.5	356 31.7	+02.4	357 30.8	+02.5	358 30.0	+02.4	359 29.1	+02.5	15
16	10 35.0	+02.5	11 34.1	+02.5	12 33.3	+02.4	13 32.4	+02.5	14 31.6	+02.4	16
17	25 37.5	+02.4	26 36.6	+02.5	27 35.7	+02.5	28 34.9	+02.5	29 34.0	+02.5	17
18	40 39.9	+02.5	41 39.1	+02.4	42 38.2	+02.5	43 37.4	+02.4	44 36.5	+02.5	18
19	55 42.4	+02.5	56 41.5	+02.5	57 40.7	+02.4	58 39.8	+02.5	59 39.0	+02.4	19
20	70 44.9	+02.4	71 44.0	+02.5	72 43.1	+02.5	73 42.3	+02.4	74 41.4	+02.5	20
21	85 47.3	+02.5	86 46.5	+02.4	87 45.6	+02.5	88 44.7	+02.5	89 43.9	+02.4	21
22	100 49.8	+02.5	101 48.9	+02.5	102 48.1	+02.4	103 47.2	+02.5	104 46.3	+02.5	22
23	115 52.3	+02.4	116 51.4	+02.5	117 50.5	+02.5	118 49.7	+02.4	119 48.8	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.8	N 29 11.8	Gienah	175 48.1	S 17 38.8
Ankaa	353 12.2	S 42 12.4	Acrux	173 04.6	S 63 12.0
Schedir	349 36.4	N 56 38.6	Gacrux	171 56.3	S 57 12.8
Diphda	348 52.3	S 17 53.2	Alioth	166 17.2	N 55 51.2
Achernar	335 24.1	S 57 08.8	Spica	158 27.1	S 11 15.5
Hamal	327 56.5	N 23 33.1	Alkaid	152 55.7	N 49 12.9
Polaris	316 02.5	N 89 20.9	Hadar	148 42.3	S 60 27.5
Acamar	315 15.4	S 40 14.1	Menkent	148 02.7	S 36 27.3
Menkar	314 11.0	N 04 09.7	Arcturus	145 51.9	N 19 05.6
Mirfak	308 34.7	N 49 55.7	Rigel Kentaurus	139 44.3	S 60 54.6
Aldebaran	290 44.8	N 16 32.7	Zubenelgenubi	137 01.1	S 16 07.0
Capella	280 28.5	N 46 01.1	Kocab	137 20.2	N 74 04.4
Rigel	281 08.1	S 08 11.1	Alphecca	126 07.9	N 26 39.0
Bellatrix	278 27.6	N 06 21.8	Antares	112 21.8	S 26 28.2
Elnath	278 07.5	N 28 37.3	Atria	107 20.4	S 69 03.3
Alnilam	275 42.2	S 01 11.6	Sabik	102 08.4	S 15 44.8
Betelgeuze	270 56.9	N 07 24.4	Shaula	96 17.0	S 37 06.8
Canopus	263 54.0	S 52 42.7	Rasalhague	96 03.2	N 12 32.9
Sirius	258 29.9	S 16 44.4	Etamin	90 44.8	N 51 29.1
Adhara	255 09.2	S 29 00.1	Kaus Australis	83 39.1	S 34 22.3
Castor	246 02.6	N 31 50.7	Vega	80 36.8	N 38 47.9
Procyon	244 55.2	N 05 10.7	Nunki	75 53.9	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.2	N 27 60.0
Avior	234 15.8	S 59 34.4	Altair	62 05.0	N 08 55.0
Suhail	222 49.1	S 43 30.6	Peacock	53 13.8	S 56 40.4
Miaplacidus	221 37.8	S 69 47.7	Deneb	49 29.3	N 45 20.9
Alphard	217 52.0	S 08 44.6	Enif	33 43.7	N 09 57.7
Regulus	207 39.0	N 11 52.3	Alnair	27 39.4	S 46 52.2
Dubhe	193 46.4	N 61 38.7	Formalhaut	15 20.2	S 29 31.4
Denebola	182 29.4	N 14 27.9	Markab	13 34.8	N 15 18.4

2019 - 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	134	51.3	+02.4	135	50.4	+02.5	136	49.6	+02.4	137	48.7	+02.5	138	47.8	+02.5	00
01	149	53.7	+02.5	150	52.9	+02.4	151	52.0	+02.5	152	51.2	+02.4	153	50.3	+02.5	01
02	164	56.2	+02.5	165	55.3	+02.5	166	54.5	+02.4	167	53.6	+02.5	168	52.8	+02.4	02
03	179	58.7	+02.4	180	57.8	+02.5	181	56.9	+02.5	182	56.1	+02.4	183	55.2	+02.5	03
04	195	01.1	+02.5	196	00.3	+02.4	196	59.4	+02.5	197	58.5	+02.5	198	57.7	+02.4	04
05	210	03.6	+02.5	211	02.7	+02.5	212	01.9	+02.4	213	01.0	+02.5	214	00.1	+02.5	05
06	225	06.1	+02.4	226	05.2	+02.5	227	04.3	+02.5	228	03.5	+02.4	229	02.6	+02.5	06
07	240	08.5	+02.5	241	07.7	+02.4	242	06.8	+02.5	243	05.9	+02.5	244	05.1	+02.4	07
08	255	11.0	+02.5	256	10.1	+02.5	257	09.3	+02.4	258	08.4	+02.5	259	07.5	+02.5	08
09	270	13.5	+02.4	271	12.6	+02.5	272	11.7	+02.5	273	10.9	+02.4	274	10.0	+02.5	09
10	285	15.9	+02.5	286	15.1	+02.4	287	14.2	+02.5	288	13.3	+02.5	289	12.5	+02.4	10
11	300	18.4	+02.4	301	17.5	+02.5	302	16.7	+02.4	303	15.8	+02.5	304	14.9	+02.5	11
12	315	20.8	+02.5	316	20.0	+02.4	317	19.1	+02.5	318	18.3	+02.4	319	17.4	+02.5	12
13	330	23.3	+02.5	331	22.4	+02.5	332	21.6	+02.4	333	20.7	+02.5	334	19.9	+02.4	13
14	345	25.8	+02.4	346	24.9	+02.5	347	24.0	+02.5	348	23.2	+02.5	349	22.3	+02.5	14
15	0	28.2	+02.5	1	27.4	+02.4	2	26.5	+02.5	3	25.7	+02.4	4	24.8	+02.5	15
16	15	30.7	+02.5	16	29.8	+02.5	17	29.0	+02.4	18	28.1	+02.5	19	27.3	+02.4	16
17	30	33.2	+02.4	31	32.3	+02.5	32	31.4	+02.5	33	30.6	+02.4	34	29.7	+02.5	17
18	45	35.6	+02.5	46	34.8	+02.4	47	33.9	+02.5	48	33.0	+02.5	49	32.2	+02.4	18
19	60	38.1	+02.5	61	37.2	+02.5	62	36.4	+02.4	63	35.5	+02.5	64	34.6	+02.5	19
20	75	40.6	+02.4	76	39.7	+02.5	77	38.8	+02.5	78	38.0	+02.4	79	37.1	+02.5	20
21	90	43.0	+02.5	91	42.2	+02.4	92	41.3	+02.5	93	40.4	+02.5	94	39.6	+02.4	21
22	105	45.5	+02.5	106	44.6	+02.5	107	43.8	+02.4	108	42.9	+02.5	109	42.0	+02.5	22
23	120	48.0	+02.4	121	47.1	+02.5	122	46.2	+02.5	123	45.4	+02.4	124	44.5	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.8	N 29 11.7	Gienah	175 48.1	S 17 38.8
Ankaa	353 12.2	S 42 12.4	Acrux	173 04.5	S 63 12.0
Schedir	349 36.5	N 56 38.6	Gacrux	171 56.3	S 57 12.8
Diphda	348 52.3	S 17 53.2	Alioth	166 17.1	N 55 51.2
Achernar	335 24.1	S 57 08.8	Spica	158 27.1	S 11 15.5
Hamal	327 56.5	N 23 33.1	Alkaid	152 55.7	N 49 12.9
Polaris	316 04.9	N 89 20.9	Hadar	148 42.2	S 60 27.5
Acamar	315 15.4	S 40 14.1	Menkent	148 02.7	S 36 27.3
Menkar	314 11.0	N 04 09.7	Arcturus	145 51.8	N 19 05.6
Mirfak	308 34.7	N 49 55.7	Rigel Kentaurus	139 44.2	S 60 54.6
Aldebaran	290 44.8	N 16 32.7	Zubenelgenubi	137 01.1	S 16 07.1
Capella	280 28.5	N 46 01.1	Kocab	137 20.1	N 74 04.4
Rigel	281 08.2	S 08 11.1	Alphecca	126 07.8	N 26 39.0
Bellatrix	278 27.7	N 06 21.8	Antares	112 21.8	S 26 28.2
Elnath	278 07.5	N 28 37.3	Atria	107 20.3	S 69 03.3
Alnilam	275 42.2	S 01 11.6	Sabik	102 08.3	S 15 44.8
Betelgeuze	270 56.9	N 07 24.4	Shaula	96 16.9	S 37 06.8
Canopus	263 54.0	S 52 42.7	Rasalhague	96 03.1	N 12 32.8
Sirius	258 29.9	S 16 44.4	Etamin	90 44.7	N 51 29.1
Adhara	255 09.2	S 29 00.1	Kaus Australis	83 39.0	S 34 22.3
Castor	246 02.6	N 31 50.7	Vega	80 36.8	N 38 47.9
Procyon	244 55.2	N 05 10.7	Nunki	75 53.9	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.1	N 27 59.9
Avior	234 15.8	S 59 34.4	Altair	62 04.9	N 08 55.0
Suhail	222 49.1	S 43 30.7	Peacock	53 13.8	S 56 40.3
Miaplacidus	221 37.8	S 69 47.8	Deneb	49 29.3	N 45 20.9
Alphard	217 52.0	S 08 44.6	Enif	33 43.7	N 09 57.7
Regulus	207 39.0	N 11 52.3	Alnair	27 39.4	S 46 52.2
Dubhe	193 46.3	N 61 38.7	Formalhaut	15 20.2	S 29 31.4
Denebola	182 29.4	N 14 27.9	Markab	13 34.8	N 15 18.4

2019 - 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	139	47.0	+02.4	140	46.1	+02.5	141	45.2	+02.5	142	44.4	+02.4	143	43.5	+02.5	00
01	154	49.4	+02.5	155	48.6	+02.4	156	47.7	+02.5	157	46.8	+02.5	158	46.0	+02.4	01
02	169	51.9	+02.5	170	51.0	+02.5	171	50.2	+02.4	172	49.3	+02.5	173	48.4	+02.5	02
03	184	54.4	+02.4	185	53.5	+02.5	186	52.6	+02.5	187	51.8	+02.4	188	50.9	+02.5	03
04	199	56.8	+02.5	200	56.0	+02.4	201	55.1	+02.5	202	54.2	+02.5	203	53.4	+02.4	04
05	214	59.3	+02.4	215	58.4	+02.5	216	57.6	+02.4	217	56.7	+02.5	218	55.8	+02.5	05
06	230	01.7	+02.5	231	00.9	+02.5	232	00.0	+02.5	232	59.2	+02.4	233	58.3	+02.5	06
07	245	04.2	+02.5	246	03.4	+02.4	247	02.5	+02.5	248	01.6	+02.5	249	00.8	+02.4	07
08	260	06.7	+02.4	261	05.8	+02.5	262	05.0	+02.4	263	04.1	+02.5	264	03.2	+02.5	08
09	275	09.1	+02.5	276	08.3	+02.4	277	07.4	+02.5	278	06.6	+02.4	279	05.7	+02.5	09
10	290	11.6	+02.5	291	10.7	+02.5	292	09.9	+02.4	293	09.0	+02.5	294	08.2	+02.4	10
11	305	14.1	+02.4	306	13.2	+02.5	307	12.3	+02.5	308	11.5	+02.4	309	10.6	+02.5	11
12	320	16.5	+02.5	321	15.7	+02.4	322	14.8	+02.5	323	13.9	+02.5	324	13.1	+02.5	12
13	335	19.0	+02.5	336	18.1	+02.5	337	17.3	+02.4	338	16.4	+02.5	339	15.6	+02.4	13
14	350	21.5	+02.4	351	20.6	+02.5	352	19.7	+02.5	353	18.9	+02.4	354	18.0	+02.5	14
15	5	23.9	+02.5	6	23.1	+02.4	7	22.2	+02.5	8	21.3	+02.5	9	20.5	+02.4	15
16	20	26.4	+02.5	21	25.5	+02.5	22	24.7	+02.4	23	23.8	+02.5	24	22.9	+02.5	16
17	35	28.9	+02.4	36	28.0	+02.5	37	27.1	+02.5	38	26.3	+02.4	39	25.4	+02.5	17
18	50	31.3	+02.5	51	30.5	+02.4	52	29.6	+02.5	53	28.7	+02.5	54	27.9	+02.4	18
19	65	33.8	+02.4	66	32.9	+02.5	67	32.1	+02.4	68	31.2	+02.5	69	30.3	+02.5	19
20	80	36.2	+02.5	81	35.4	+02.4	82	34.5	+02.5	83	33.7	+02.4	84	32.8	+02.5	20
21	95	38.7	+02.5	96	37.8	+02.5	97	37.0	+02.5	98	36.1	+02.5	99	35.3	+02.4	21
22	110	41.2	+02.4	111	40.3	+02.5	112	39.5	+02.4	113	38.6	+02.5	114	37.7	+02.5	22
23	125	43.6	+02.5	126	42.8	+02.4	127	41.9	+02.5	128	41.1	+02.4	129	40.2	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.8	N 29	11.7	Gienah	175	48.0	S 17	38.8
Ankaa	353	12.3	S 42	12.4	Acrux	173	04.5	S 63	12.0
Schedir	349	36.5	N 56	38.6	Gacrux	171	56.2	S 57	12.9
Diphda	348	52.3	S 17	53.2	Alioth	166	17.1	N 55	51.2
Achernar	335	24.2	S 57	08.8	Spica	158	27.0	S 11	15.6
Hamal	327	56.5	N 23	33.1	Alkaid	152	55.6	N 49	12.9
Polaris	316	07.5	N 89	20.9	Hadar	148	42.2	S 60	27.5
Acamar	315	15.4	S 40	14.1	Menkent	148	02.6	S 36	27.3
Menkar	314	11.0	N 04	09.7	Arcturus	145	51.8	N 19	05.5
Mirfak	308	34.8	N 49	55.7	Rigel Kentaurus	139	44.1	S 60	54.6
Aldebaran	290	44.8	N 16	32.7	Zubenelgenubi	137	01.1	S 16	07.1
Capella	280	28.5	N 46	01.1	Kocab	137	20.0	N 74	04.4
Rigel	281	08.2	S 08	11.1	Alphecca	126	07.8	N 26	39.0
Bellatrix	278	27.7	N 06	21.8	Antares	112	21.8	S 26	28.2
Elnath	278	07.5	N 28	37.3	Atria	107	20.2	S 69	03.3
Alnilam	275	42.3	S 01	11.6	Sabik	102	08.3	S 15	44.8
Betelgeuze	270	56.9	N 07	24.4	Shaula	96	16.9	S 37	06.8
Canopus	263	54.0	S 52	42.7	Rasalhague	96	03.1	N 12	32.8
Sirius	258	29.9	S 16	44.4	Etamin	90	44.7	N 51	29.0
Adhara	255	09.2	S 29	00.2	Kaus Australis	83	39.0	S 34	22.3
Castor	246	02.6	N 31	50.7	Vega	80	36.7	N 38	47.9
Procyon	244	55.2	N 05	10.7	Nunki	75	53.8	S 26	16.2
Pollux	243	22.4	N 27	58.7	Albireo	67	08.1	N 27	59.9
Avior	234	15.8	S 59	34.4	Altair	62	04.9	N 08	55.0
Suhail	222	49.1	S 43	30.7	Peacock	53	13.8	S 56	40.3
Miaplacidus	221	37.8	S 69	47.8	Deneb	49	29.3	N 45	20.8
Alphard	217	52.0	S 08	44.6	Enif	33	43.7	N 09	57.7
Regulus	207	39.0	N 11	52.3	Alnair	27	39.4	S 46	52.2
Dubhe	193	46.3	N 61	38.7	Formalhaut	15	20.2	S 29	31.4
Denebola	182	29.3	N 14	27.9	Markab	13	34.8	N 15	18.4

2019 - First Point of Aries / Selected Stars

UT	day 46 of 365 February 15			day 47 of 365 February 16			day 48 of 365 February 17			day 49 of 365 February 18			day 50 of 365 February 19			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	144	42.7	+02.4	145	41.8	+02.5	146	40.9	+02.5	147	40.1	+02.4	148	39.2	+02.5	00
01	159	45.1	+02.5	160	44.3	+02.4	161	43.4	+02.5	162	42.5	+02.5	163	41.7	+02.4	01
02	174	47.6	+02.4	175	46.7	+02.5	176	45.9	+02.4	177	45.0	+02.5	178	44.1	+02.5	02
03	189	50.0	+02.5	190	49.2	+02.5	191	48.3	+02.5	192	47.5	+02.4	193	46.6	+02.5	03
04	204	52.5	+02.5	205	51.7	+02.4	206	50.8	+02.5	207	49.9	+02.5	208	49.1	+02.4	04
05	219	55.0	+02.4	220	54.1	+02.5	221	53.3	+02.4	222	52.4	+02.5	223	51.5	+02.5	05
06	234	57.4	+02.5	235	56.6	+02.4	236	55.7	+02.5	237	54.9	+02.4	238	54.0	+02.5	06
07	249	59.9	+02.5	250	59.0	+02.5	251	58.2	+02.5	252	57.3	+02.5	253	56.5	+02.4	07
08	265	02.4	+02.4	266	01.5	+02.5	267	00.7	+02.4	267	59.8	+02.5	268	58.9	+02.5	08
09	280	04.8	+02.5	281	04.0	+02.4	282	03.1	+02.5	283	02.3	+02.4	284	01.4	+02.5	09
10	295	07.3	+02.5	296	06.4	+02.5	297	05.6	+02.4	298	04.7	+02.5	299	03.9	+02.4	10
11	310	09.8	+02.4	311	08.9	+02.5	312	08.0	+02.5	313	07.2	+02.4	314	06.3	+02.5	11
12	325	12.2	+02.5	326	11.4	+02.4	327	10.5	+02.5	328	09.6	+02.5	329	08.8	+02.5	12
13	340	14.7	+02.5	341	13.8	+02.5	342	13.0	+02.4	343	12.1	+02.5	344	11.3	+02.4	13
14	355	17.2	+02.4	356	16.3	+02.5	357	15.4	+02.5	358	14.6	+02.4	359	13.7	+02.5	14
15	10	19.6	+02.5	11	18.8	+02.4	12	17.9	+02.5	13	17.0	+02.5	14	16.2	+02.4	15
16	25	22.1	+02.4	26	21.2	+02.5	27	20.4	+02.4	28	19.5	+02.5	29	18.6	+02.5	16
17	40	24.5	+02.5	41	23.7	+02.5	42	22.8	+02.5	43	22.0	+02.4	44	21.1	+02.5	17
18	55	27.0	+02.5	56	26.2	+02.4	57	25.3	+02.5	58	24.4	+02.5	59	23.6	+02.4	18
19	70	29.5	+02.4	71	28.6	+02.5	72	27.8	+02.4	73	26.9	+02.5	74	26.0	+02.5	19
20	85	31.9	+02.5	86	31.1	+02.4	87	30.2	+02.5	88	29.4	+02.4	89	28.5	+02.5	20
21	100	34.4	+02.5	101	33.5	+02.5	102	32.7	+02.4	103	31.8	+02.5	104	31.0	+02.4	21
22	115	36.9	+02.4	116	36.0	+02.5	117	35.1	+02.5	118	34.3	+02.5	119	33.4	+02.5	22
23	130	39.3	+02.5	131	38.5	+02.4	132	37.6	+02.5	133	36.8	+02.4	134	35.9	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.8	N 29 11.7	Gienah	175 48.0	S 17 38.8
Ankaa	353 12.3	S 42 12.4	Acrux	173 04.4	S 63 12.0
Schedir	349 36.5	N 56 38.6	Gacrux	171 56.2	S 57 12.9
Diphda	348 52.3	S 17 53.2	Alioth	166 17.0	N 55 51.2
Achernar	335 24.2	S 57 08.8	Spica	158 27.0	S 11 15.6
Hamal	327 56.6	N 23 33.1	Alkaid	152 55.6	N 49 12.9
Polaris	316 09.8	N 89 20.9	Hadar	148 42.1	S 60 27.5
Acamar	315 15.4	S 40 14.1	Menkent	148 02.6	S 36 27.3
Menkar	314 11.0	N 04 09.6	Arcturus	145 51.8	N 19 05.5
Mirfak	308 34.8	N 49 55.7	Rigel Kentaurus	139 44.0	S 60 54.6
Aldebaran	290 44.9	N 16 32.7	Zubenelgenubi	137 01.0	S 16 07.1
Capella	280 28.6	N 46 01.1	Kocab	137 19.9	N 74 04.4
Rigel	281 08.2	S 08 11.1	Alphecca	126 07.8	N 26 39.0
Bellatrix	278 27.7	N 06 21.8	Antares	112 21.7	S 26 28.2
Elnath	278 07.6	N 28 37.3	Atria	107 20.1	S 69 03.3
Alnilam	275 42.3	S 01 11.7	Sabik	102 08.3	S 15 44.8
Betelgeuze	270 56.9	N 07 24.4	Shaula	96 16.9	S 37 06.8
Canopus	263 54.1	S 52 42.7	Rasalhague	96 03.1	N 12 32.8
Sirius	258 29.9	S 16 44.4	Etamin	90 44.6	N 51 29.0
Adhara	255 09.2	S 29 00.2	Kaus Australis	83 38.9	S 34 22.3
Castor	246 02.6	N 31 50.7	Vega	80 36.7	N 38 47.9
Procyon	244 55.2	N 05 10.7	Nunki	75 53.8	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.1	N 27 59.9
Avior	234 15.8	S 59 34.4	Altair	62 04.9	N 08 55.0
Suhail	222 49.1	S 43 30.7	Peacock	53 13.7	S 56 40.3
Miaplacidus	221 37.8	S 69 47.8	Deneb	49 29.3	N 45 20.8
Alphard	217 52.0	S 08 44.6	Enif	33 43.7	N 09 57.7
Regulus	207 39.0	N 11 52.3	Alnair	27 39.4	S 46 52.2
Dubhe	193 46.3	N 61 38.8	Formalhaut	15 20.2	S 29 31.4
Denebola	182 29.3	N 14 27.9	Markab	13 34.8	N 15 18.4

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UT	day 51 of 365 <i>February 20</i>			day 52 of 365 <i>February 21</i>			day 53 of 365 <i>February 22</i>			day 54 of 365 <i>February 23</i>			day 55 of 365 <i>February 24</i>			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
	° ' "	' "	' "	° ' "	' "	' "	° ' "	' "	' "	° ' "	' "	' "	° ' "	' "	' "	
00	149	38.4	+02.4	150	37.5	+02.5	151	36.6	+02.5	152	35.8	+02.4	153	34.9	+02.5	00
01	164	40.8	+02.5	165	40.0	+02.4	166	39.1	+02.5	167	38.2	+02.5	168	37.4	+02.4	01
02	179	43.3	+02.4	180	42.4	+02.5	181	41.6	+02.4	182	40.7	+02.5	183	39.8	+02.5	02
03	194	45.7	+02.5	195	44.9	+02.4	196	44.0	+02.5	197	43.2	+02.4	198	42.3	+02.5	03
04	209	48.2	+02.5	210	47.3	+02.5	211	46.5	+02.4	212	45.6	+02.5	213	44.8	+02.4	04
05	224	50.7	+02.4	225	49.8	+02.5	226	48.9	+02.5	227	48.1	+02.5	228	47.2	+02.5	05
06	239	53.1	+02.5	240	52.3	+02.4	241	51.4	+02.5	242	50.6	+02.4	243	49.7	+02.5	06
07	254	55.6	+02.5	255	54.7	+02.5	256	53.9	+02.4	257	53.0	+02.5	258	52.2	+02.4	07
08	269	58.1	+02.4	270	57.2	+02.5	271	56.3	+02.5	272	55.5	+02.4	273	54.6	+02.5	08
09	285	00.5	+02.5	285	59.7	+02.4	286	58.8	+02.5	287	57.9	+02.5	288	57.1	+02.4	09
10	300	03.0	+02.5	301	02.1	+02.5	302	01.3	+02.4	303	00.4	+02.5	303	59.5	+02.5	10
11	315	05.5	+02.4	316	04.6	+02.5	317	03.7	+02.5	318	02.9	+02.4	319	02.0	+02.5	11
12	330	07.9	+02.5	331	07.1	+02.4	332	06.2	+02.5	333	05.3	+02.5	334	04.5	+02.4	12
13	345	10.4	+02.5	346	09.5	+02.5	347	08.7	+02.4	348	07.8	+02.5	349	06.9	+02.5	13
14	0	12.9	+02.4	1	12.0	+02.5	2	11.1	+02.5	3	10.3	+02.4	4	09.4	+02.5	14
15	15	15.3	+02.5	16	14.5	+02.4	17	13.6	+02.5	18	12.7	+02.5	19	11.9	+02.4	15
16	30	17.8	+02.4	31	16.9	+02.5	32	16.1	+02.4	33	15.2	+02.5	34	14.3	+02.5	16
17	45	20.2	+02.5	46	19.4	+02.4	47	18.5	+02.5	48	17.7	+02.4	49	16.8	+02.5	17
18	60	22.7	+02.5	61	21.8	+02.5	62	21.0	+02.4	63	20.1	+02.5	64	19.3	+02.4	18
19	75	25.2	+02.4	76	24.3	+02.5	77	23.4	+02.5	78	22.6	+02.4	79	21.7	+02.5	19
20	90	27.6	+02.5	91	26.8	+02.4	92	25.9	+02.5	93	25.0	+02.5	94	24.2	+02.4	20
21	105	30.1	+02.5	106	29.2	+02.5	107	28.4	+02.4	108	27.5	+02.5	109	26.6	+02.5	21
22	120	32.6	+02.4	121	31.7	+02.5	122	30.8	+02.5	123	30.0	+02.4	124	29.1	+02.5	22
23	135	35.0	+02.5	136	34.2	+02.4	137	33.3	+02.5	138	32.4	+02.5	139	31.6	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 39.8	N 29 11.7	Gienah	175 48.0	S 17 38.8
Ankaa	353 12.3	S 42 12.3	Acrux	173 04.4	S 63 12.1
Schedir	349 36.5	N 56 38.5	Gacrux	171 56.1	S 57 12.9
Diphda	348 52.3	S 17 53.2	Alioth	166 17.0	N 55 51.2
Achernar	335 24.3	S 57 08.8	Spica	158 27.0	S 11 15.6
Hamal	327 56.6	N 23 33.1	Alkaid	152 55.5	N 49 12.9
Polaris	316 12.1	N 89 20.9	Hadar	148 42.0	S 60 27.6
Acamar	315 15.5	S 40 14.1	Menkent	148 02.5	S 36 27.4
Menkar	314 11.1	N 04 09.6	Arcturus	145 51.7	N 19 05.5
Mirfak	308 34.8	N 49 55.7	Rigel Kentaurus	139 44.0	S 60 54.6
Aldebaran	290 44.9	N 16 32.7	Zubenelgenubi	137 01.0	S 16 07.1
Capella	280 28.6	N 46 01.1	Kocab	137 19.8	N 74 04.4
Rigel	281 08.2	S 08 11.1	Alphecca	126 07.7	N 26 39.0
Bellatrix	278 27.7	N 06 21.8	Antares	112 21.7	S 26 28.2
Elnath	278 07.6	N 28 37.3	Atria	107 20.0	S 69 03.3
Alnilam	275 42.3	S 01 11.7	Sabik	102 08.2	S 15 44.8
Betelgeuze	270 56.9	N 07 24.4	Shaula	96 16.8	S 37 06.8
Canopus	263 54.1	S 52 42.7	Rasalhague	96 03.0	N 12 32.8
Sirius	258 29.9	S 16 44.5	Etamin	90 44.6	N 51 29.0
Adhara	255 09.2	S 29 00.2	Kaus Australis	83 38.9	S 34 22.3
Castor	246 02.6	N 31 50.7	Vega	80 36.7	N 38 47.9
Procyon	244 55.2	N 05 10.7	Nunki	75 53.8	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.1	N 27 59.9
Avior	234 15.9	S 59 34.5	Altair	62 04.9	N 08 54.9
Suhail	222 49.1	S 43 30.7	Peacock	53 13.7	S 56 40.3
Miaplacidus	221 37.8	S 69 47.9	Deneb	49 29.3	N 45 20.8
Alphard	217 52.0	S 08 44.6	Enif	33 43.6	N 09 57.6
Regulus	207 39.0	N 11 52.3	Alnair	27 39.4	S 46 52.2
Dubhe	193 46.2	N 61 38.8	Formalhaut	15 20.2	S 29 31.4
Denebola	182 29.3	N 14 27.9	Markab	13 34.8	N 15 18.4

2019 - First Point of Aries / Selected Stars

UT	day 56 of 365 <i>February 25</i>		day 57 of 365 <i>February 26</i>		day 58 of 365 <i>February 27</i>		day 59 of 365 <i>February 28</i>		day 60 of 365 <i>March 1</i>		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	154	34.0 +02.5	155	33.2 +02.4	156	32.3 +02.5	157	31.5 +02.4	158	30.6 +02.5	00
01	169	36.5 +02.5	170	35.6 +02.5	171	34.8 +02.4	172	33.9 +02.5	173	33.1 +02.4	01
02	184	39.0 +02.4	185	38.1 +02.5	186	37.2 +02.5	187	36.4 +02.5	188	35.5 +02.5	02
03	199	41.4 +02.5	200	40.6 +02.4	201	39.7 +02.5	202	38.9 +02.4	203	38.0 +02.5	03
04	214	43.9 +02.5	215	43.0 +02.5	216	42.2 +02.4	217	41.3 +02.5	218	40.5 +02.4	04
05	229	46.4 +02.4	230	45.5 +02.5	231	44.6 +02.5	232	43.8 +02.4	233	42.9 +02.5	05
06	244	48.8 +02.5	245	48.0 +02.4	246	47.1 +02.5	247	46.2 +02.5	248	45.4 +02.4	06
07	259	51.3 +02.5	260	50.4 +02.5	261	49.6 +02.4	262	48.7 +02.5	263	47.8 +02.5	07
08	274	53.8 +02.4	275	52.9 +02.5	276	52.0 +02.5	277	51.2 +02.4	278	50.3 +02.5	08
09	289	56.2 +02.5	290	55.4 +02.4	291	54.5 +02.5	292	53.6 +02.5	293	52.8 +02.4	09
10	304	58.7 +02.4	305	57.8 +02.5	306	57.0 +02.4	307	56.1 +02.5	308	55.2 +02.5	10
11	320	01.1 +02.5	321	00.3 +02.4	321	59.4 +02.5	322	58.6 +02.4	323	57.7 +02.5	11
12	335	03.6 +02.5	336	02.7 +02.5	337	01.9 +02.5	338	01.0 +02.5	339	00.2 +02.4	12
13	350	06.1 +02.4	351	05.2 +02.5	352	04.4 +02.4	353	03.5 +02.5	354	02.6 +02.5	13
14	5	08.5 +02.5	6	07.7 +02.4	7	06.8 +02.5	8	06.0 +02.4	9	05.1 +02.5	14
15	20	11.0 +02.5	21	10.1 +02.5	22	09.3 +02.4	23	08.4 +02.5	24	07.6 +02.4	15
16	35	13.5 +02.4	36	12.6 +02.5	37	11.7 +02.5	38	10.9 +02.4	39	10.0 +02.5	16
17	50	15.9 +02.5	51	15.1 +02.4	52	14.2 +02.5	53	13.3 +02.5	54	12.5 +02.5	17
18	65	18.4 +02.5	66	17.5 +02.5	67	16.7 +02.4	68	15.8 +02.5	69	15.0 +02.4	18
19	80	20.9 +02.4	81	20.0 +02.5	82	19.1 +02.5	83	18.3 +02.4	84	17.4 +02.5	19
20	95	23.3 +02.5	96	22.5 +02.4	97	21.6 +02.5	98	20.7 +02.5	99	19.9 +02.4	20
21	110	25.8 +02.5	111	24.9 +02.5	112	24.1 +02.4	113	23.2 +02.5	114	22.3 +02.5	21
22	125	28.3 +02.4	126	27.4 +02.5	127	26.5 +02.5	128	25.7 +02.4	129	24.8 +02.5	22
23	140	30.7 +02.5	141	29.9 +02.4	142	29.0 +02.5	143	28.1 +02.5	144	27.3 +02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 39.8	N 29 11.7	Gienah	175 48.0	S 17 38.9
Ankaa	353 12.3	S 42 12.3	Acrux	173 04.4	S 63 12.1
Schedir	349 36.6	N 56 38.5	Gacrux	171 56.1	S 57 12.9
Diphda	348 52.3	S 17 53.2	Alioth	166 16.9	N 55 51.2
Achernar	335 24.3	S 57 08.8	Spica	158 26.9	S 11 15.6
Hamal	327 56.6	N 23 33.1	Alkaid	152 55.5	N 49 12.9
Polaris	316 14.6	N 89 20.9	Hadar	148 42.0	S 60 27.6
Acamar	315 15.5	S 40 14.1	Menkent	148 02.5	S 36 27.4
Menkar	314 11.1	N 04 09.6	Arcturus	145 51.7	N 19 05.5
Mirfak	308 34.9	N 49 55.7	Rigel Kentaurus	139 43.9	S 60 54.6
Aldebaran	290 44.9	N 16 32.7	Zubenelgenubi	137 01.0	S 16 07.1
Capella	280 28.6	N 46 01.1	Kocab	137 19.7	N 74 04.4
Rigel	281 08.2	S 08 11.1	Alphecca	126 07.7	N 26 39.0
Bellatrix	278 27.7	N 06 21.8	Antares	112 21.6	S 26 28.2
Elnath	278 07.6	N 28 37.3	Atria	107 20.0	S 69 03.3
Alnilam	275 42.3	S 01 11.7	Sabik	102 08.2	S 15 44.8
Betelgeuze	270 57.0	N 07 24.4	Shaula	96 16.8	S 37 06.8
Canopus	263 54.2	S 52 42.7	Rasalhague	96 03.0	N 12 32.8
Sirius	258 30.0	S 16 44.5	Etamin	90 44.6	N 51 29.0
Adhara	255 09.2	S 29 00.2	Kaus Australis	83 38.9	S 34 22.3
Castor	246 02.7	N 31 50.7	Vega	80 36.6	N 38 47.8
Procyon	244 55.2	N 05 10.7	Nunki	75 53.7	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.0	N 27 59.9
Avior	234 15.9	S 59 34.5	Altair	62 04.9	N 08 54.9
Suhail	222 49.2	S 43 30.8	Peacock	53 13.7	S 56 40.3
Miaplacidus	221 37.9	S 69 47.9	Deneb	49 29.3	N 45 20.8
Alphard	217 52.0	S 08 44.6	Enif	33 43.6	N 09 57.6
Regulus	207 39.0	N 11 52.3	Alnair	27 39.4	S 46 52.1
Dubhe	193 46.2	N 61 38.8	Formalhaut	15 20.2	S 29 31.4
Denebola	182 29.3	N 14 27.9	Markab	13 34.8	N 15 18.3

2019 - First Point of Aries / Selected Stars

UT	day 61 of 365 March 2		day 62 of 365 March 3		day 63 of 365 March 4		day 64 of 365 March 5		day 65 of 365 March 6		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	159 29.7	+02.5	160 28.9	+02.4	161 28.0	+02.5	162 27.2	+02.4	163 26.3	+02.5	00
01	174 32.2	+02.5	175 31.3	+02.5	176 30.5	+02.4	177 29.6	+02.5	178 28.8	+02.4	01
02	189 34.7	+02.4	190 33.8	+02.5	191 32.9	+02.5	192 32.1	+02.4	193 31.2	+02.5	02
03	204 37.1	+02.5	205 36.3	+02.4	206 35.4	+02.5	207 34.5	+02.5	208 33.7	+02.4	03
04	219 39.6	+02.5	220 38.7	+02.5	221 37.9	+02.4	222 37.0	+02.5	223 36.1	+02.5	04
05	234 42.1	+02.4	235 41.2	+02.5	236 40.3	+02.5	237 39.5	+02.4	238 38.6	+02.5	05
06	249 44.5	+02.5	250 43.7	+02.4	251 42.8	+02.5	252 41.9	+02.5	253 41.1	+02.4	06
07	264 47.0	+02.5	265 46.1	+02.5	266 45.3	+02.4	267 44.4	+02.5	268 43.5	+02.5	07
08	279 49.5	+02.4	280 48.6	+02.5	281 47.7	+02.5	282 46.9	+02.4	283 46.0	+02.5	08
09	294 51.9	+02.5	295 51.1	+02.4	296 50.2	+02.5	297 49.3	+02.5	298 48.5	+02.4	09
10	309 54.4	+02.4	310 53.5	+02.5	311 52.7	+02.4	312 51.8	+02.5	313 50.9	+02.5	10
11	324 56.8	+02.5	325 56.0	+02.4	326 55.1	+02.5	327 54.3	+02.4	328 53.4	+02.5	11
12	339 59.3	+02.5	340 58.4	+02.5	341 57.6	+02.4	342 56.7	+02.5	343 55.9	+02.4	12
13	355 01.8	+02.4	356 00.9	+02.5	357 00.0	+02.5	357 59.2	+02.4	358 58.3	+02.5	13
14	10 04.2	+02.5	11 03.4	+02.4	12 02.5	+02.5	13 01.6	+02.5	14 00.8	+02.5	14
15	25 06.7	+02.5	26 05.8	+02.5	27 05.0	+02.4	28 04.1	+02.5	29 03.3	+02.4	15
16	40 09.2	+02.4	41 08.3	+02.5	42 07.4	+02.5	43 06.6	+02.4	44 05.7	+02.5	16
17	55 11.6	+02.5	56 10.8	+02.4	57 09.9	+02.5	58 09.0	+02.5	59 08.2	+02.4	17
18	70 14.1	+02.5	71 13.2	+02.5	72 12.4	+02.4	73 11.5	+02.5	74 10.6	+02.5	18
19	85 16.6	+02.4	86 15.7	+02.5	87 14.8	+02.5	88 14.0	+02.4	89 13.1	+02.5	19
20	100 19.0	+02.5	101 18.2	+02.4	102 17.3	+02.5	103 16.4	+02.5	104 15.6	+02.4	20
21	115 21.5	+02.4	116 20.6	+02.5	117 19.8	+02.4	118 18.9	+02.5	119 18.0	+02.5	21
22	130 23.9	+02.5	131 23.1	+02.5	132 22.2	+02.5	133 21.4	+02.4	134 20.5	+02.5	22
23	145 26.4	+02.5	146 25.6	+02.4	147 24.7	+02.5	148 23.8	+02.5	149 23.0	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 39.8	N 29 11.7	Gienah	175 47.9	S 17 38.9
Ankaa	353 12.3	S 42 12.3	Acrux	173 04.3	S 63 12.1
Schedir	349 36.6	N 56 38.5	Gacrux	171 56.1	S 57 13.0
Diphda	348 52.3	S 17 53.2	Alioth	166 16.9	N 55 51.3
Achernar	335 24.3	S 57 08.8	Spica	158 26.9	S 11 15.6
Hamal	327 56.6	N 23 33.0	Alkaid	152 55.5	N 49 12.9
Polaris	316 16.6	N 89 20.9	Hadar	148 41.9	S 60 27.6
Acamar	315 15.5	S 40 14.1	Menkent	148 02.5	S 36 27.4
Menkar	314 11.1	N 04 09.6	Arcturus	145 51.7	N 19 05.5
Mirfak	308 34.9	N 49 55.7	Rigel Kentaurus	139 43.9	S 60 54.6
Aldebaran	290 44.9	N 16 32.7	Zubenelgenubi	137 00.9	S 16 07.1
Capella	280 28.6	N 46 01.1	Kocab	137 19.6	N 74 04.4
Rigel	281 08.3	S 08 11.1	Alphecca	126 07.7	N 26 38.9
Bellatrix	278 27.8	N 06 21.8	Antares	112 21.6	S 26 28.3
Elnath	278 07.6	N 28 37.3	Atria	107 19.8	S 69 03.3
Alnilam	275 42.3	S 01 11.7	Sabik	102 08.1	S 15 44.8
Betelgeuze	270 57.0	N 07 24.4	Shaula	96 16.7	S 37 06.8
Canopus	263 54.2	S 52 42.8	Rasalhague	96 02.9	N 12 32.8
Sirius	258 30.0	S 16 44.5	Etamin	90 44.5	N 51 29.0
Adhara	255 09.2	S 29 00.2	Kaus Australis	83 38.8	S 34 22.3
Castor	246 02.7	N 31 50.7	Vega	80 36.6	N 38 47.8
Procyon	244 55.3	N 05 10.7	Nunki	75 53.7	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.0	N 27 59.8
Avior	234 15.9	S 59 34.5	Altair	62 04.8	N 08 54.9
Suhail	222 49.2	S 43 30.8	Peacock	53 13.6	S 56 40.2
Miaplacidus	221 37.9	S 69 47.9	Deneb	49 29.2	N 45 20.7
Alphard	217 52.0	S 08 44.7	Enif	33 43.6	N 09 57.6
Regulus	207 39.0	N 11 52.3	Alnair	27 39.4	S 46 52.1
Dubhe	193 46.2	N 61 38.8	Formalhaut	15 20.2	S 29 31.4
Denebola	182 29.2	N 14 27.9	Markab	13 34.8	N 15 18.3

2019 - First Point of Aries / Selected Stars

UT	day 66 of 365 March 7		day 67 of 365 March 8		day 68 of 365 March 9		day 69 of 365 March 10		day 70 of 365 March 11		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	164	25.4 +02.5	165	24.6 +02.4	166	23.7 +02.5	167	22.8 +02.5	168	22.0 +02.4	00
01	179	27.9 +02.5	180	27.0 +02.5	181	26.2 +02.4	182	25.3 +02.5	183	24.4 +02.5	01
02	194	30.4 +02.4	195	29.5 +02.5	196	28.6 +02.5	197	27.8 +02.4	198	26.9 +02.5	02
03	209	32.8 +02.5	210	32.0 +02.4	211	31.1 +02.5	212	30.2 +02.5	213	29.4 +02.4	03
04	224	35.3 +02.4	225	34.4 +02.5	226	33.6 +02.4	227	32.7 +02.5	228	31.8 +02.5	04
05	239	37.7 +02.5	240	36.9 +02.4	241	36.0 +02.5	242	35.2 +02.4	243	34.3 +02.5	05
06	254	40.2 +02.5	255	39.3 +02.5	256	38.5 +02.4	257	37.6 +02.5	258	36.8 +02.4	06
07	269	42.7 +02.4	270	41.8 +02.5	271	40.9 +02.5	272	40.1 +02.4	273	39.2 +02.5	07
08	284	45.1 +02.5	285	44.3 +02.4	286	43.4 +02.5	287	42.5 +02.5	288	41.7 +02.5	08
09	299	47.6 +02.5	300	46.7 +02.5	301	45.9 +02.4	302	45.0 +02.5	303	44.2 +02.4	09
10	314	50.1 +02.4	315	49.2 +02.5	316	48.3 +02.5	317	47.5 +02.4	318	46.6 +02.5	10
11	329	52.5 +02.5	330	51.7 +02.4	331	50.8 +02.5	332	49.9 +02.5	333	49.1 +02.4	11
12	344	55.0 +02.5	345	54.1 +02.5	346	53.3 +02.4	347	52.4 +02.5	348	51.5 +02.5	12
13	359	57.5 +02.4	0	56.6 +02.5	1	55.7 +02.5	2	54.9 +02.4	3	54.0 +02.5	13
14	14	59.9 +02.5	15	59.1 +02.4	16	58.2 +02.5	17	57.3 +02.5	18	56.5 +02.4	14
15	30	02.4 +02.5	31	01.5 +02.5	32	00.7 +02.4	32	59.8 +02.5	33	58.9 +02.5	15
16	45	04.9 +02.4	46	04.0 +02.5	47	03.1 +02.5	48	02.3 +02.4	49	01.4 +02.5	16
17	60	07.3 +02.5	61	06.5 +02.4	62	05.6 +02.5	63	04.7 +02.5	64	03.9 +02.4	17
18	75	09.8 +02.4	76	08.9 +02.5	77	08.1 +02.4	78	07.2 +02.5	79	06.3 +02.5	18
19	90	12.2 +02.5	91	11.4 +02.4	92	10.5 +02.5	93	09.7 +02.4	94	08.8 +02.5	19
20	105	14.7 +02.5	106	13.8 +02.5	107	13.0 +02.4	108	12.1 +02.5	109	11.3 +02.4	20
21	120	17.2 +02.4	121	16.3 +02.5	122	15.4 +02.5	123	14.6 +02.4	124	13.7 +02.5	21
22	135	19.6 +02.5	136	18.8 +02.4	137	17.9 +02.5	138	17.0 +02.5	139	16.2 +02.4	22
23	150	22.1 +02.5	151	21.2 +02.5	152	20.4 +02.4	153	19.5 +02.5	154	18.6 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.8	N 29 11.7	Gienah	175 47.9	S 17 38.9
Ankaa	353 12.3	S 42 12.3	Acrux	173 04.3	S 63 12.2
Schedir	349 36.6	N 56 38.5	Gacrux	171 56.0	S 57 13.0
Diphda	348 52.3	S 17 53.2	Alioth	166 16.9	N 55 51.3
Achernar	335 24.3	S 57 08.7	Spica	158 26.9	S 11 15.6
Hamal	327 56.6	N 23 33.0	Alkaid	152 55.4	N 49 13.0
Polaris	316 18.9	N 89 20.9	Hadar	148 41.9	S 60 27.6
Acamar	315 15.6	S 40 14.1	Menkent	148 02.4	S 36 27.4
Menkar	314 11.1	N 04 09.6	Arcturus	145 51.6	N 19 05.5
Mirfak	308 34.9	N 49 55.7	Rigel Kentaurus	139 43.8	S 60 54.7
Aldebaran	290 44.9	N 16 32.7	Zubenelgenubi	137 00.9	S 16 07.1
Capella	280 28.7	N 46 01.1	Kocab	137 19.5	N 74 04.4
Rigel	281 08.3	S 08 11.1	Alphecca	126 07.6	N 26 38.9
Bellatrix	278 27.8	N 06 21.8	Antares	112 21.5	S 26 28.3
Elnath	278 07.7	N 28 37.3	Atria	107 19.8	S 69 03.3
Alnilam	275 42.4	S 01 11.7	Sabik	102 08.1	S 15 44.8
Betelgeuze	270 57.0	N 07 24.4	Shaula	96 16.7	S 37 06.8
Canopus	263 54.2	S 52 42.8	Rasalhague	96 02.9	N 12 32.8
Sirius	258 30.0	S 16 44.5	Etamin	90 44.5	N 51 29.0
Adhara	255 09.3	S 29 00.2	Kaus Australis	83 38.8	S 34 22.3
Castor	246 02.7	N 31 50.7	Vega	80 36.6	N 38 47.8
Procyon	244 55.3	N 05 10.7	Nunki	75 53.7	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 08.0	N 27 59.8
Avior	234 16.0	S 59 34.5	Altair	62 04.8	N 08 54.9
Suhail	222 49.2	S 43 30.8	Peacock	53 13.6	S 56 40.2
Miaplacidus	221 37.9	S 69 48.0	Deneb	49 29.2	N 45 20.7
Alphard	217 52.0	S 08 44.7	Enif	33 43.6	N 09 57.6
Regulus	207 39.0	N 11 52.3	Alnair	27 39.3	S 46 52.1
Dubhe	193 46.2	N 61 38.8	Formalhaut	15 20.1	S 29 31.4
Denebola	182 29.2	N 14 27.9	Markab	13 34.8	N 15 18.3

2019 - First Point of Aries / Selected Stars

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	21.1 +02.5	170	20.3 +02.4	171	19.4 +02.5	172	18.5 +02.5	173	17.7 +02.4	00
01	184	23.6 +02.4	185	22.7 +02.5	186	21.9 +02.4	187	21.0 +02.5	188	20.1 +02.5	01
02	199	26.0 +02.5	200	25.2 +02.4	201	24.3 +02.5	202	23.5 +02.4	203	22.6 +02.5	02
03	214	28.5 +02.5	215	27.6 +02.5	216	26.8 +02.4	217	25.9 +02.5	218	25.1 +02.4	03
04	229	31.0 +02.4	230	30.1 +02.5	231	29.2 +02.5	232	28.4 +02.4	233	27.5 +02.5	04
05	244	33.4 +02.5	245	32.6 +02.4	246	31.7 +02.5	247	30.8 +02.5	248	30.0 +02.5	05
06	259	35.9 +02.5	260	35.0 +02.5	261	34.2 +02.4	262	33.3 +02.5	263	32.5 +02.4	06
07	274	38.4 +02.4	275	37.5 +02.5	276	36.6 +02.5	277	35.8 +02.4	278	34.9 +02.5	07
08	289	40.8 +02.5	290	40.0 +02.4	291	39.1 +02.5	292	38.2 +02.5	293	37.4 +02.4	08
09	304	43.3 +02.5	305	42.4 +02.5	306	41.6 +02.4	307	40.7 +02.5	308	39.8 +02.5	09
10	319	45.8 +02.4	320	44.9 +02.5	321	44.0 +02.5	322	43.2 +02.4	323	42.3 +02.5	10
11	334	48.2 +02.5	335	47.4 +02.4	336	46.5 +02.5	337	45.6 +02.5	338	44.8 +02.4	11
12	349	50.7 +02.4	350	49.8 +02.5	351	49.0 +02.4	352	48.1 +02.5	353	47.2 +02.5	12
13	4	53.1 +02.5	5	52.3 +02.4	6	51.4 +02.5	7	50.6 +02.4	8	49.7 +02.5	13
14	19	55.6 +02.5	20	54.7 +02.5	21	53.9 +02.5	22	53.0 +02.5	23	52.2 +02.4	14
15	34	58.1 +02.4	35	57.2 +02.5	36	56.4 +02.4	37	55.5 +02.5	38	54.6 +02.5	15
16	50	00.5 +02.5	50	59.7 +02.4	51	58.8 +02.5	52	58.0 +02.4	53	57.1 +02.5	16
17	65	03.0 +02.5	66	02.1 +02.5	67	01.3 +02.4	68	00.4 +02.5	68	59.6 +02.4	17
18	80	05.5 +02.4	81	04.6 +02.5	82	03.7 +02.5	83	02.9 +02.4	84	02.0 +02.5	18
19	95	07.9 +02.5	96	07.1 +02.4	97	06.2 +02.5	98	05.3 +02.5	99	04.5 +02.5	19
20	110	10.4 +02.5	111	09.5 +02.5	112	08.7 +02.4	113	07.8 +02.5	114	07.0 +02.4	20
21	125	12.9 +02.4	126	12.0 +02.5	127	11.1 +02.5	128	10.3 +02.4	129	09.4 +02.5	21
22	140	15.3 +02.5	141	14.5 +02.4	142	13.6 +02.5	143	12.7 +02.5	144	11.9 +02.4	22
23	155	17.8 +02.5	156	16.9 +02.5	157	16.1 +02.4	158	15.2 +02.5	159	14.3 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.9	N 29 11.6	Gienah	175 47.9	S 17 38.9
Ankaa	353 12.3	S 42 12.3	Acrux	173 04.3	S 63 12.2
Schedir	349 36.6	N 56 38.5	Gacrux	171 56.0	S 57 13.0
Diphda	348 52.3	S 17 53.2	Alioth	166 16.8	N 55 51.3
Achernar	335 24.4	S 57 08.7	Spica	158 26.9	S 11 15.6
Hamal	327 56.7	N 23 33.0	Alkaid	152 55.4	N 49 13.0
Polaris	316 21.0	N 89 20.8	Hadar	148 41.8	S 60 27.6
Acamar	315 15.6	S 40 14.1	Menkent	148 02.4	S 36 27.4
Menkar	314 11.1	N 04 09.6	Arcturus	145 51.6	N 19 05.5
Mirfak	308 35.0	N 49 55.7	Rigel Kentaurus	139 43.7	S 60 54.7
Aldebaran	290 45.0	N 16 32.7	Zubenelgenubi	137 00.9	S 16 07.1
Capella	280 28.7	N 46 01.1	Kocab	137 19.4	N 74 04.5
Rigel	281 08.3	S 08 11.1	Alphecca	126 07.6	N 26 38.9
Bellatrix	278 27.8	N 06 21.8	Antares	112 21.5	S 26 28.3
Elnath	278 07.7	N 28 37.3	Atria	107 19.7	S 69 03.3
Alnilam	275 42.4	S 01 11.7	Sabik	102 08.1	S 15 44.8
Betelgeuze	270 57.0	N 07 24.4	Shaula	96 16.6	S 37 06.8
Canopus	263 54.3	S 52 42.8	Rasalhague	96 02.9	N 12 32.8
Sirius	258 30.0	S 16 44.5	Etamin	90 44.4	N 51 29.0
Adhara	255 09.3	S 29 00.2	Kaus Australis	83 38.7	S 34 22.3
Castor	246 02.7	N 31 50.7	Vega	80 36.5	N 38 47.8
Procyon	244 55.3	N 05 10.7	Nunki	75 53.6	S 26 16.2
Pollux	243 22.5	N 27 58.7	Albireo	67 07.9	N 27 59.8
Avior	234 16.0	S 59 34.6	Altair	62 04.8	N 08 54.9
Suhail	222 49.2	S 43 30.8	Peacock	53 13.5	S 56 40.2
Miaplacidus	221 38.0	S 69 48.0	Deneb	49 29.2	N 45 20.7
Alphard	217 52.0	S 08 44.7	Enif	33 43.6	N 09 57.6
Regulus	207 39.0	N 11 52.3	Alnair	27 39.3	S 46 52.1
Dubhe	193 46.2	N 61 38.9	Formalhaut	15 20.1	S 29 31.3
Denebola	182 29.2	N 14 27.9	Markab	13 34.8	N 15 18.3

2019 - First Point of Aries / Selected Stars

UT	day 76 of 365		day 77 of 365		day 78 of 365		day 79 of 365		day 80 of 365		UT					
	<i>March 17</i>		<i>March 18</i>		<i>March 19</i>		<i>March 20</i>		<i>March 21</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	174	16.8	+02.5	175	15.9	+02.5	176	15.1	+02.5	177	14.2	+02.5	178	13.4	+02.4	00
01	189	19.3	+02.4	190	18.4	+02.5	191	17.6	+02.4	192	16.7	+02.5	193	15.8	+02.5	01
02	204	21.7	+02.5	205	20.9	+02.4	206	20.0	+02.5	207	19.2	+02.4	208	18.3	+02.5	02
03	219	24.2	+02.5	220	23.3	+02.5	221	22.5	+02.4	222	21.6	+02.5	223	20.8	+02.4	03
04	234	26.7	+02.4	235	25.8	+02.5	236	24.9	+02.5	237	24.1	+02.4	238	23.2	+02.5	04
05	249	29.1	+02.5	250	28.3	+02.4	251	27.4	+02.5	252	26.5	+02.5	253	25.7	+02.4	05
06	264	31.6	+02.5	265	30.7	+02.5	266	29.9	+02.4	267	29.0	+02.5	268	28.1	+02.5	06
07	279	34.1	+02.4	280	33.2	+02.5	281	32.3	+02.5	282	31.5	+02.4	283	30.6	+02.5	07
08	294	36.5	+02.5	295	35.7	+02.4	296	34.8	+02.5	297	33.9	+02.5	298	33.1	+02.4	08
09	309	39.0	+02.5	310	38.1	+02.5	311	37.3	+02.4	312	36.4	+02.5	313	35.5	+02.5	09
10	324	41.5	+02.4	325	40.6	+02.5	326	39.7	+02.5	327	38.9	+02.4	328	38.0	+02.5	10
11	339	43.9	+02.5	340	43.1	+02.4	341	42.2	+02.5	342	41.3	+02.5	343	40.5	+02.4	11
12	354	46.4	+02.4	355	45.5	+02.5	356	44.7	+02.4	357	43.8	+02.5	358	42.9	+02.5	12
13	9	48.8	+02.5	10	48.0	+02.4	11	47.1	+02.5	12	46.3	+02.4	13	45.4	+02.5	13
14	24	51.3	+02.5	25	50.4	+02.5	26	49.6	+02.4	27	48.7	+02.5	28	47.9	+02.4	14
15	39	53.8	+02.4	40	52.9	+02.5	41	52.0	+02.5	42	51.2	+02.4	43	50.3	+02.5	15
16	54	56.2	+02.5	55	55.4	+02.4	56	54.5	+02.5	57	53.6	+02.5	58	52.8	+02.4	16
17	69	58.7	+02.5	70	57.8	+02.5	71	57.0	+02.4	72	56.1	+02.5	73	55.2	+02.5	17
18	85	01.2	+02.4	86	00.3	+02.5	86	59.4	+02.5	87	58.6	+02.4	88	57.7	+02.5	18
19	100	03.6	+02.5	101	02.8	+02.4	102	01.9	+02.5	103	01.0	+02.5	104	00.2	+02.4	19
20	115	06.1	+02.5	116	05.2	+02.5	117	04.4	+02.4	118	03.5	+02.5	119	02.6	+02.5	20
21	130	08.6	+02.4	131	07.7	+02.5	132	06.8	+02.5	133	06.0	+02.4	134	05.1	+02.5	21
22	145	11.0	+02.5	146	10.2	+02.4	147	09.3	+02.5	148	08.4	+02.5	149	07.6	+02.4	22
23	160	13.5	+02.4	161	12.6	+02.5	162	11.8	+02.4	163	10.9	+02.5	164	10.0	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.8	N 29	11.6	Gienah	175	47.9	S 17	38.9
Ankaa	353	12.3	S 42	12.2	Acrux	173	04.2	S 63	12.2
Schedir	349	36.6	N 56	38.4	Gacrux	171	56.0	S 57	13.1
Diphda	348	52.3	S 17	53.2	Alioth	166	16.8	N 55	51.3
Achernar	335	24.4	S 57	08.7	Spica	158	26.8	S 11	15.6
Hamal	327	56.7	N 23	33.0	Alkaid	152	55.3	N 49	13.0
Polaris	316	22.6	N 89	20.8	Hadar	148	41.8	S 60	27.7
Acamar	315	15.6	S 40	14.1	Menkent	148	02.4	S 36	27.5
Menkar	314	11.1	N 04	09.6	Arcturus	145	51.6	N 19	05.5
Mirfak	308	35.0	N 49	55.7	Rigel Kentaurus	139	43.7	S 60	54.7
Aldebaran	290	45.0	N 16	32.7	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	28.7	N 46	01.1	Kocab	137	19.3	N 74	04.5
Rigel	281	08.3	S 08	11.1	Alphecca	126	07.5	N 26	38.9
Bellatrix	278	27.8	N 06	21.8	Antares	112	21.5	S 26	28.3
Elnath	278	07.7	N 28	37.3	Atria	107	19.6	S 69	03.3
Alnilam	275	42.4	S 01	11.7	Sabik	102	08.0	S 15	44.8
Betelgeuze	270	57.1	N 07	24.4	Shaula	96	16.6	S 37	06.8
Canopus	263	54.3	S 52	42.8	Rasalhague	96	02.8	N 12	32.8
Sirius	258	30.0	S 16	44.5	Etamin	90	44.4	N 51	29.0
Adhara	255	09.3	S 29	00.2	Kaus Australis	83	38.7	S 34	22.3
Castor	246	02.7	N 31	50.7	Vega	80	36.5	N 38	47.8
Procyon	244	55.3	N 05	10.7	Nunki	75	53.6	S 26	16.2
Pollux	243	22.5	N 27	58.7	Albireo	67	07.9	N 27	59.8
Avior	234	16.0	S 59	34.6	Altair	62	04.7	N 08	54.9
Suhail	222	49.2	S 43	30.8	Peacock	53	13.5	S 56	40.2
Miaplacidus	221	38.0	S 69	48.0	Deneb	49	29.1	N 45	20.7
Alphard	217	52.0	S 08	44.7	Enif	33	43.6	N 09	57.6
Regulus	207	39.0	N 11	52.3	Alnair	27	39.3	S 46	52.1
Dubhe	193	46.2	N 61	38.9	Formalhaut	15	20.1	S 29	31.3
Denebola	182	29.2	N 14	27.9	Markab	13	34.8	N 15	18.3

2019 - First Point of Aries / Selected Stars

UT	day 81 of 365 March 22			day 82 of 365 March 23			day 83 of 365 March 24			day 84 of 365 March 25			day 85 of 365 March 26			UT
	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	179	12.5	+02.5	180	11.6	+02.5	181	10.8	+02.4	182	09.9	+02.5	183	09.0	+02.5	00
01	194	15.0	+02.4	195	14.1	+02.5	196	13.2	+02.5	197	12.4	+02.4	198	11.5	+02.5	01
02	209	17.4	+02.5	210	16.6	+02.4	211	15.7	+02.5	212	14.8	+02.5	213	14.0	+02.4	02
03	224	19.9	+02.5	225	19.0	+02.5	226	18.2	+02.4	227	17.3	+02.5	228	16.4	+02.5	03
04	239	22.4	+02.4	240	21.5	+02.5	241	20.6	+02.5	242	19.8	+02.4	243	18.9	+02.5	04
05	254	24.8	+02.5	255	24.0	+02.4	256	23.1	+02.5	257	22.2	+02.5	258	21.4	+02.4	05
06	269	27.3	+02.4	270	26.4	+02.5	271	25.6	+02.4	272	24.7	+02.5	273	23.8	+02.5	06
07	284	29.7	+02.5	285	28.9	+02.4	286	28.0	+02.5	287	27.2	+02.4	288	26.3	+02.5	07
08	299	32.2	+02.5	300	31.3	+02.5	301	30.5	+02.4	302	29.6	+02.5	303	28.8	+02.4	08
09	314	34.7	+02.4	315	33.8	+02.5	316	32.9	+02.5	317	32.1	+02.4	318	31.2	+02.5	09
10	329	37.1	+02.5	330	36.3	+02.4	331	35.4	+02.5	332	34.5	+02.5	333	33.7	+02.5	10
11	344	39.6	+02.5	345	38.7	+02.5	346	37.9	+02.4	347	37.0	+02.5	348	36.2	+02.4	11
12	359	42.1	+02.4	0	41.2	+02.5	1	40.3	+02.5	2	39.5	+02.4	3	38.6	+02.5	12
13	14	44.5	+02.5	15	43.7	+02.4	16	42.8	+02.5	17	41.9	+02.5	18	41.1	+02.4	13
14	29	47.0	+02.5	30	46.1	+02.5	31	45.3	+02.4	32	44.4	+02.5	33	43.5	+02.5	14
15	44	49.5	+02.4	45	48.6	+02.5	46	47.7	+02.5	47	46.9	+02.4	48	46.0	+02.5	15
16	59	51.9	+02.5	60	51.1	+02.4	61	50.2	+02.5	62	49.3	+02.5	63	48.5	+02.4	16
17	74	54.4	+02.4	75	53.5	+02.5	76	52.7	+02.4	77	51.8	+02.5	78	50.9	+02.5	17
18	89	56.8	+02.5	90	56.0	+02.5	91	55.1	+02.5	92	54.3	+02.4	93	53.4	+02.5	18
19	104	59.3	+02.5	105	58.5	+02.4	106	57.6	+02.5	107	56.7	+02.5	108	55.9	+02.4	19
20	120	01.8	+02.4	121	00.9	+02.5	122	00.1	+02.4	122	59.2	+02.5	123	58.3	+02.5	20
21	135	04.2	+02.5	136	03.4	+02.4	137	02.5	+02.5	138	01.7	+02.4	139	00.8	+02.5	21
22	150	06.7	+02.5	151	05.8	+02.5	152	05.0	+02.4	153	04.1	+02.5	154	03.3	+02.4	22
23	165	09.2	+02.4	166	08.3	+02.5	167	07.4	+02.5	168	06.6	+02.4	169	05.7	+02.5	23

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	39.8	N 29	11.6	Gienah	175	47.9	S 17	38.9
Ankaa	353	12.3	S 42	12.2	Acrux	173	04.2	S 63	12.2
Schedir	349	36.6	N 56	38.4	Gacrux	171	56.0	S 57	13.1
Diphda	348	52.3	S 17	53.2	Alioth	166	16.8	N 55	51.3
Achernar	335	24.4	S 57	08.7	Spica	158	26.8	S 11	15.7
Hamal	327	56.7	N 23	33.0	Alkaid	152	55.3	N 49	13.0
Polaris	316	24.5	N 89	20.8	Hadar	148	41.8	S 60	27.7
Acamar	315	15.6	S 40	14.1	Menkent	148	02.3	S 36	27.5
Menkar	314	11.2	N 04	09.6	Arcturus	145	51.6	N 19	05.5
Mirfak	308	35.0	N 49	55.7	Rigel Kentaurus	139	43.6	S 60	54.7
Aldebaran	290	45.0	N 16	32.7	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	28.8	N 46	01.1	Kocab	137	19.2	N 74	04.5
Rigel	281	08.4	S 08	11.1	Alphecca	126	07.5	N 26	39.0
Bellatrix	278	27.8	N 06	21.8	Antares	112	21.4	S 26	28.3
Elnath	278	07.7	N 28	37.3	Atria	107	19.5	S 69	03.3
Alnilam	275	42.4	S 01	11.7	Sabik	102	08.0	S 15	44.8
Betelgeuze	270	57.1	N 07	24.4	Shaula	96	16.5	S 37	06.8
Canopus	263	54.4	S 52	42.8	Rasalhague	96	02.8	N 12	32.8
Sirius	258	30.1	S 16	44.5	Etamin	90	44.3	N 51	29.0
Adhara	255	09.4	S 29	00.2	Kaus Australis	83	38.6	S 34	22.3
Castor	246	02.7	N 31	50.7	Vega	80	36.4	N 38	47.8
Procyon	244	55.3	N 05	10.7	Nunki	75	53.5	S 26	16.2
Pollux	243	22.5	N 27	58.7	Albireo	67	07.9	N 27	59.8
Avior	234	16.1	S 59	34.6	Altair	62	04.7	N 08	54.9
Suhail	222	49.2	S 43	30.9	Peacock	53	13.4	S 56	40.2
Miaplacidus	221	38.1	S 69	48.0	Deneb	49	29.1	N 45	20.7
Alphard	217	52.0	S 08	44.7	Enif	33	43.5	N 09	57.6
Regulus	207	39.0	N 11	52.3	Alnair	27	39.3	S 46	52.0
Dubhe	193	46.2	N 61	38.9	Formalhaut	15	20.1	S 29	31.3
Denebola	182	29.2	N 14	27.9	Markab	13	34.8	N 15	18.3

2019 - 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
	<i>March 27</i>		<i>March 28</i>		<i>March 29</i>		<i>March 30</i>		<i>March 31</i>		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	184	08.2 +02.5	185	07.3 +02.5	186	06.5 +02.4	187	05.6 +02.5	188	04.7 +02.5	00
01	199	10.7 +02.4	200	09.8 +02.5	201	08.9 +02.5	202	08.1 +02.4	203	07.2 +02.5	01
02	214	13.1 +02.5	215	12.3 +02.4	216	11.4 +02.5	217	10.5 +02.5	218	09.7 +02.4	02
03	229	15.6 +02.4	230	14.7 +02.5	231	13.9 +02.4	232	13.0 +02.5	233	12.1 +02.5	03
04	244	18.0 +02.5	245	17.2 +02.4	246	16.3 +02.5	247	15.5 +02.4	248	14.6 +02.5	04
05	259	20.5 +02.5	260	19.6 +02.5	261	18.8 +02.5	262	17.9 +02.5	263	17.1 +02.4	05
06	274	23.0 +02.4	275	22.1 +02.5	276	21.3 +02.4	277	20.4 +02.5	278	19.5 +02.5	06
07	289	25.4 +02.5	290	24.6 +02.4	291	23.7 +02.5	292	22.9 +02.4	293	22.0 +02.5	07
08	304	27.9 +02.5	305	27.0 +02.5	306	26.2 +02.4	307	25.3 +02.5	308	24.5 +02.4	08
09	319	30.4 +02.4	320	29.5 +02.5	321	28.6 +02.5	322	27.8 +02.4	323	26.9 +02.5	09
10	334	32.8 +02.5	335	32.0 +02.4	336	31.1 +02.5	337	30.2 +02.5	338	29.4 +02.4	10
11	349	35.3 +02.5	350	34.4 +02.5	351	33.6 +02.4	352	32.7 +02.5	353	31.8 +02.5	11
12	4	37.8 +02.4	5	36.9 +02.5	6	36.0 +02.5	7	35.2 +02.4	8	34.3 +02.5	12
13	19	40.2 +02.5	20	39.4 +02.4	21	38.5 +02.5	22	37.6 +02.5	23	36.8 +02.4	13
14	34	42.7 +02.4	35	41.8 +02.5	36	41.0 +02.4	37	40.1 +02.5	38	39.2 +02.5	14
15	49	45.1 +02.5	50	44.3 +02.5	51	43.4 +02.5	52	42.6 +02.4	53	41.7 +02.5	15
16	64	47.6 +02.5	65	46.8 +02.4	66	45.9 +02.5	67	45.0 +02.5	68	44.2 +02.4	16
17	79	50.1 +02.4	80	49.2 +02.5	81	48.4 +02.4	82	47.5 +02.5	83	46.6 +02.5	17
18	94	52.5 +02.5	95	51.7 +02.4	96	50.8 +02.5	97	50.0 +02.4	98	49.1 +02.5	18
19	109	55.0 +02.5	110	54.1 +02.5	111	53.3 +02.4	112	52.4 +02.5	113	51.6 +02.4	19
20	124	57.5 +02.4	125	56.6 +02.5	126	55.7 +02.5	127	54.9 +02.5	128	54.0 +02.5	20
21	139	59.9 +02.5	140	59.1 +02.4	141	58.2 +02.5	142	57.4 +02.4	143	56.5 +02.5	21
22	155	02.4 +02.5	156	01.5 +02.5	157	00.7 +02.4	157	59.8 +02.5	158	59.0 +02.4	22
23	170	04.9 +02.4	171	04.0 +02.5	172	03.1 +02.5	173	02.3 +02.4	174	01.4 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 39.8	N 29 11.6	Gienah	175 47.9	S 17 38.9
Ankaa	353 12.3	S 42 12.2	Acrux	173 04.2	S 63 12.3
Schedir	349 36.6	N 56 38.4	Gacrux	171 56.0	S 57 13.1
Diphda	348 52.3	S 17 53.1	Alioth	166 16.8	N 55 51.3
Achernar	335 24.4	S 57 08.6	Spica	158 26.8	S 11 15.7
Hamal	327 56.7	N 23 33.0	Alkaid	152 55.3	N 49 13.0
Polaris	316 25.9	N 89 20.8	Hadar	148 41.7	S 60 27.7
Acamar	315 15.6	S 40 14.1	Menkent	148 02.3	S 36 27.5
Menkar	314 11.2	N 04 09.6	Arcturus	145 51.5	N 19 05.5
Mirfak	308 35.1	N 49 55.7	Rigel Kentaurus	139 43.6	S 60 54.8
Aldebaran	290 45.0	N 16 32.7	Zubenelgenubi	137 00.8	S 16 07.2
Capella	280 28.8	N 46 01.1	Kocab	137 19.2	N 74 04.5
Rigel	281 08.4	S 08 11.1	Alphecca	126 07.5	N 26 39.0
Bellatrix	278 27.9	N 06 21.8	Antares	112 21.4	S 26 28.3
Elnath	278 07.8	N 28 37.3	Atria	107 19.4	S 69 03.3
Alnilam	275 42.5	S 01 11.7	Sabik	102 07.9	S 15 44.8
Betelgeuze	270 57.1	N 07 24.4	Shaula	96 16.5	S 37 06.8
Canopus	263 54.4	S 52 42.8	Rasalhague	96 02.8	N 12 32.8
Sirius	258 30.1	S 16 44.5	Etamin	90 44.3	N 51 29.0
Adhara	255 09.4	S 29 00.2	Kaus Australis	83 38.6	S 34 22.3
Castor	246 02.8	N 31 50.7	Vega	80 36.4	N 38 47.8
Procyon	244 55.3	N 05 10.7	Nunki	75 53.5	S 26 16.2
Pollux	243 22.5	N 27 58.7	Albireo	67 07.8	N 27 59.8
Avior	234 16.1	S 59 34.6	Altair	62 04.7	N 08 54.9
Suhail	222 49.3	S 43 30.9	Peacock	53 13.4	S 56 40.1
Miaplacidus	221 38.1	S 69 48.0	Deneb	49 29.1	N 45 20.7
Alphard	217 52.0	S 08 44.7	Enif	33 43.5	N 09 57.6
Regulus	207 39.0	N 11 52.3	Alnair	27 39.2	S 46 52.0
Dubhe	193 46.2	N 61 38.9	Formalhaut	15 20.1	S 29 31.3
Denebola	182 29.2	N 14 27.9	Markab	13 34.7	N 15 18.3

2019 - 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	03.9	+02.4	190	03.0	+02.5	191	02.2	+02.4	192	01.3	+02.5	00
01	204	06.3	+02.5	205	05.5	+02.4	206	04.6	+02.5	207	03.8	+02.4	01
02	219	08.8	+02.5	220	07.9	+02.5	221	07.1	+02.4	222	06.2	+02.5	02
03	234	11.3	+02.4	235	10.4	+02.5	236	09.5	+02.5	237	08.7	+02.4	03
04	249	13.7	+02.5	250	12.9	+02.4	251	12.0	+02.5	252	11.1	+02.5	04
05	264	16.2	+02.5	265	15.3	+02.5	266	14.5	+02.4	267	13.6	+02.5	05
06	279	18.7	+02.4	280	17.8	+02.5	281	16.9	+02.5	282	16.1	+02.4	06
07	294	21.1	+02.5	295	20.3	+02.4	296	19.4	+02.5	297	18.5	+02.5	07
08	309	23.6	+02.5	310	22.7	+02.5	311	21.9	+02.4	312	21.0	+02.5	08
09	324	26.1	+02.4	325	25.2	+02.5	326	24.3	+02.5	327	23.5	+02.4	09
10	339	28.5	+02.5	340	27.7	+02.4	341	26.8	+02.5	342	25.9	+02.5	10
11	354	31.0	+02.4	355	30.1	+02.5	356	29.3	+02.4	357	28.4	+02.5	11
12	9	33.4	+02.5	10	32.6	+02.5	11	31.7	+02.5	12	30.9	+02.4	12
13	24	35.9	+02.5	25	35.1	+02.4	26	34.2	+02.5	27	33.3	+02.5	13
14	39	38.4	+02.4	40	37.5	+02.5	41	36.7	+02.4	42	35.8	+02.5	14
15	54	40.8	+02.5	55	40.0	+02.4	56	39.1	+02.5	57	38.3	+02.4	15
16	69	43.3	+02.5	70	42.4	+02.5	71	41.6	+02.4	72	40.7	+02.5	16
17	84	45.8	+02.4	85	44.9	+02.5	86	44.0	+02.5	87	43.2	+02.4	17
18	99	48.2	+02.5	100	47.4	+02.4	101	46.5	+02.5	102	45.6	+02.5	18
19	114	50.7	+02.5	115	49.8	+02.5	116	49.0	+02.4	117	48.1	+02.5	19
20	129	53.2	+02.4	130	52.3	+02.5	131	51.4	+02.5	132	50.6	+02.4	20
21	144	55.6	+02.5	145	54.8	+02.4	146	53.9	+02.5	147	53.0	+02.5	21
22	159	58.1	+02.5	160	57.2	+02.5	161	56.4	+02.4	162	55.5	+02.5	22
23	175	00.6	+02.4	175	59.7	+02.5	176	58.8	+02.5	177	58.0	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.8	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.3	S 42	12.2	Acrux	173	04.2	S 63	12.3
Schedir	349	36.6	N 56	38.4	Gacrux	171	56.0	S 57	13.1
Diphda	348	52.3	S 17	53.1	Alioth	166	16.8	N 55	51.4
Achernar	335	24.4	S 57	08.6	Spica	158	26.8	S 11	15.7
Hamal	327	56.7	N 23	33.0	Alkaid	152	55.3	N 49	13.0
Polaris	316	27.2	N 89	20.8	Hadar	148	41.7	S 60	27.7
Acamar	315	15.7	S 40	14.0	Menkent	148	02.3	S 36	27.5
Menkar	314	11.2	N 04	09.6	Arcturus	145	51.5	N 19	05.5
Mirfak	308	35.1	N 49	55.7	Rigel Kentaurus	139	43.6	S 60	54.8
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	28.8	N 46	01.1	Kocab	137	19.1	N 74	04.5
Rigel	281	08.4	S 08	11.1	Alphecca	126	07.4	N 26	39.0
Bellatrix	278	27.9	N 06	21.8	Antares	112	21.3	S 26	28.3
Elnath	278	07.8	N 28	37.3	Atria	107	19.3	S 69	03.3
Alnilam	275	42.5	S 01	11.7	Sabik	102	07.9	S 15	44.8
Betelgeuze	270	57.1	N 07	24.4	Shaula	96	16.4	S 37	06.8
Canopus	263	54.5	S 52	42.8	Rasalhague	96	02.7	N 12	32.8
Sirius	258	30.1	S 16	44.5	Etamin	90	44.2	N 51	29.0
Adhara	255	09.4	S 29	00.2	Kaus Australis	83	38.5	S 34	22.3
Castor	246	02.8	N 31	50.8	Vega	80	36.4	N 38	47.8
Procyon	244	55.4	N 05	10.7	Nunki	75	53.5	S 26	16.2
Pollux	243	22.5	N 27	58.7	Albireo	67	07.8	N 27	59.8
Avior	234	16.2	S 59	34.6	Altair	62	04.6	N 08	54.9
Suhail	222	49.3	S 43	30.9	Peacock	53	13.3	S 56	40.1
Miaplacidus	221	38.2	S 69	48.1	Deneb	49	29.0	N 45	20.7
Alphard	217	52.0	S 08	44.7	Enif	33	43.5	N 09	57.6
Regulus	207	39.0	N 11	52.3	Alnair	27	39.2	S 46	52.0
Dubhe	193	46.2	N 61	39.0	Formalhaut	15	20.1	S 29	31.3
Denebola	182	29.2	N 14	27.9	Markab	13	34.7	N 15	18.3

2019 - 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					
	<i>April 6</i>		<i>April 7</i>		<i>April 8</i>		<i>April 9</i>		<i>April 10</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	193	59.6	+02.4	194	58.7	+02.5	195	57.8	+02.5	196	57.0	+02.4	197	56.1	+02.5	00
01	209	02.0	+02.5	210	01.2	+02.4	211	00.3	+02.5	211	59.4	+02.5	212	58.6	+02.4	01
02	224	04.5	+02.5	225	03.6	+02.5	226	02.8	+02.4	227	01.9	+02.5	228	01.0	+02.5	02
03	239	07.0	+02.4	240	06.1	+02.5	241	05.2	+02.5	242	04.4	+02.4	243	03.5	+02.5	03
04	254	09.4	+02.5	255	08.6	+02.4	256	07.7	+02.5	257	06.8	+02.5	258	06.0	+02.4	04
05	269	11.9	+02.4	270	11.0	+02.5	271	10.2	+02.4	272	09.3	+02.5	273	08.4	+02.5	05
06	284	14.3	+02.5	285	13.5	+02.5	286	12.6	+02.5	287	11.8	+02.4	288	10.9	+02.5	06
07	299	16.8	+02.5	300	16.0	+02.4	301	15.1	+02.5	302	14.2	+02.5	303	13.4	+02.4	07
08	314	19.3	+02.4	315	18.4	+02.5	316	17.6	+02.4	317	16.7	+02.5	318	15.8	+02.5	08
09	329	21.7	+02.5	330	20.9	+02.4	331	20.0	+02.5	332	19.2	+02.4	333	18.3	+02.5	09
10	344	24.2	+02.5	345	23.3	+02.5	346	22.5	+02.4	347	21.6	+02.5	348	20.8	+02.4	10
11	359	26.7	+02.4	0	25.8	+02.5	1	24.9	+02.5	2	24.1	+02.4	3	23.2	+02.5	11
12	14	29.1	+02.5	15	28.3	+02.4	16	27.4	+02.5	17	26.5	+02.5	18	25.7	+02.5	12
13	29	31.6	+02.5	30	30.7	+02.5	31	29.9	+02.4	32	29.0	+02.5	33	28.2	+02.4	13
14	44	34.1	+02.4	45	33.2	+02.5	46	32.3	+02.5	47	31.5	+02.4	48	30.6	+02.5	14
15	59	36.5	+02.5	60	35.7	+02.4	61	34.8	+02.5	62	33.9	+02.5	63	33.1	+02.4	15
16	74	39.0	+02.5	75	38.1	+02.5	76	37.3	+02.4	77	36.4	+02.5	78	35.5	+02.5	16
17	89	41.5	+02.4	90	40.6	+02.5	91	39.7	+02.5	92	38.9	+02.4	93	38.0	+02.5	17
18	104	43.9	+02.5	105	43.1	+02.4	106	42.2	+02.5	107	41.3	+02.5	108	40.5	+02.4	18
19	119	46.4	+02.4	120	45.5	+02.5	121	44.7	+02.4	122	43.8	+02.5	123	42.9	+02.5	19
20	134	48.8	+02.5	135	48.0	+02.4	136	47.1	+02.5	137	46.3	+02.4	138	45.4	+02.5	20
21	149	51.3	+02.5	150	50.4	+02.5	151	49.6	+02.5	152	48.7	+02.5	153	47.9	+02.4	21
22	164	53.8	+02.4	165	52.9	+02.5	166	52.1	+02.4	167	51.2	+02.5	168	50.3	+02.5	22
23	179	56.2	+02.5	180	55.4	+02.4	181	54.5	+02.5	182	53.7	+02.4	183	52.8	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.8	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.3	S 42	12.1	Acrux	173	04.2	S 63	12.3
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Diphda	348	52.3	S 17	53.1	Alioth	166	16.8	N 55	51.4
Achernar	335	24.4	S 57	08.6	Spica	158	26.8	S 11	15.7
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Acamar	315	15.7	S 40	14.0	Menkent	148	02.3	S 36	27.5
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Mirfak	308	35.1	N 49	55.6	Rigel Kentaurus	139	43.5	S 60	54.8
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Capella	280	28.9	N 46	01.1	Kocab	137	19.0	N 74	04.5
Rigel	281	08.4	S 08	11.1	Alphecca	126	07.4	N 26	39.0
Bellatrix	278	27.9	N 06	21.8	Antares	112	21.3	S 26	28.3
Elnath	278	07.8	N 28	37.3	Atria	107	19.2	S 69	03.3
Alnilam	275	42.5	S 01	11.7	Sabik	102	07.9	S 15	44.8
Betelgeuze	270	57.1	N 07	24.4	Shaula	96	16.4	S 37	06.8
Canopus	263	54.5	S 52	42.8	Rasalhague	96	02.7	N 12	32.8
Sirius	258	30.1	S 16	44.5	Etamin	90	44.2	N 51	29.0
Adhara	255	09.4	S 29	00.2	Kaus Australis	83	38.5	S 34	22.3
Castor	246	02.8	N 31	50.8	Vega	80	36.3	N 38	47.8
Procyon	244	55.4	N 05	10.7	Nunki	75	53.4	S 26	16.2
Pollux	243	22.6	N 27	58.8	Albireo	67	07.8	N 27	59.8
Avior	234	16.2	S 59	34.6	Altair	62	04.6	N 08	54.9
Suhail	222	49.3	S 43	30.9	Peacock	53	13.3	S 56	40.1
Miaplacidus	221	38.3	S 69	48.1	Deneb	49	29.0	N 45	20.7
Alphard	217	52.0	S 08	44.7	Enif	33	43.5	N 09	57.6
Regulus	207	39.0	N 11	52.3	Alnair	27	39.2	S 46	52.0
Dubhe	193	46.2	N 61	39.0	Formalhaut	15	20.1	S 29	31.3
Denebola	182	29.2	N 14	27.9	Markab	13	34.7	N 15	18.3

2019 - 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	198	55.3	+02.4	199	54.4	+02.5	200	53.5	+02.5	201	52.7	+02.4	202	51.8	+02.5	00
01	213	57.7	+02.5	214	56.9	+02.4	215	56.0	+02.5	216	55.1	+02.5	217	54.3	+02.4	01
02	229	00.2	+02.5	229	59.3	+02.5	230	58.5	+02.4	231	57.6	+02.5	232	56.7	+02.5	02
03	244	02.7	+02.4	245	01.8	+02.5	246	00.9	+02.5	247	00.1	+02.4	247	59.2	+02.5	03
04	259	05.1	+02.5	260	04.3	+02.4	261	03.4	+02.5	262	02.5	+02.5	263	01.7	+02.4	04
05	274	07.6	+02.4	275	06.7	+02.5	276	05.9	+02.4	277	05.0	+02.5	278	04.1	+02.5	05
06	289	10.0	+02.5	290	09.2	+02.4	291	08.3	+02.5	292	07.5	+02.4	293	06.6	+02.5	06
07	304	12.5	+02.5	305	11.6	+02.5	306	10.8	+02.5	307	09.9	+02.5	308	09.1	+02.4	07
08	319	15.0	+02.4	320	14.1	+02.5	321	13.3	+02.4	322	12.4	+02.5	323	11.5	+02.5	08
09	334	17.4	+02.5	335	16.6	+02.4	336	15.7	+02.5	337	14.9	+02.4	338	14.0	+02.5	09
10	349	19.9	+02.5	350	19.0	+02.5	351	18.2	+02.4	352	17.3	+02.5	353	16.5	+02.4	10
11	4	22.4	+02.4	5	21.5	+02.5	6	20.6	+02.5	7	19.8	+02.4	8	18.9	+02.5	11
12	19	24.8	+02.5	20	24.0	+02.4	21	23.1	+02.5	22	22.2	+02.5	23	21.4	+02.4	12
13	34	27.3	+02.5	35	26.4	+02.5	36	25.6	+02.4	37	24.7	+02.5	38	23.8	+02.5	13
14	49	29.8	+02.4	50	28.9	+02.5	51	28.0	+02.5	52	27.2	+02.4	53	26.3	+02.5	14
15	64	32.2	+02.5	65	31.4	+02.4	66	30.5	+02.5	67	29.6	+02.5	68	28.8	+02.4	15
16	79	34.7	+02.4	80	33.8	+02.5	81	33.0	+02.4	82	32.1	+02.5	83	31.2	+02.5	16
17	94	37.1	+02.5	95	36.3	+02.5	96	35.4	+02.5	97	34.6	+02.4	98	33.7	+02.5	17
18	109	39.6	+02.5	110	38.8	+02.4	111	37.9	+02.5	112	37.0	+02.5	113	36.2	+02.4	18
19	124	42.1	+02.4	125	41.2	+02.5	126	40.4	+02.4	127	39.5	+02.5	128	38.6	+02.5	19
20	139	44.5	+02.5	140	43.7	+02.4	141	42.8	+02.5	142	42.0	+02.4	143	41.1	+02.5	20
21	154	47.0	+02.5	155	46.1	+02.5	156	45.3	+02.4	157	44.4	+02.5	158	43.6	+02.4	21
22	169	49.5	+02.4	170	48.6	+02.5	171	47.7	+02.5	172	46.9	+02.5	173	46.0	+02.5	22
23	184	51.9	+02.5	185	51.1	+02.4	186	50.2	+02.5	187	49.4	+02.4	188	48.5	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.8	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.3	S 42	12.1	Acrux	173	04.2	S 63	12.3
Schedir	349	36.6	N 56	38.3	Gacrux	171	56.0	S 57	13.2
Diphda	348	52.3	S 17	53.1	Alioth	166	16.8	N 55	51.4
Achernar	335	24.5	S 57	08.6	Spica	158	26.8	S 11	15.7
Hamal	327	56.7	N 23	33.0	Alkaid	152	55.3	N 49	13.1
Polaris	316	29.3	N 89	20.7	Hadar	148	41.6	S 60	27.8
Acamar	315	15.7	S 40	14.0	Menkent	148	02.3	S 36	27.5
Menkar	314	11.2	N 04	09.6	Arcturus	145	51.5	N 19	05.6
Mirfak	308	35.1	N 49	55.6	Rigel Kentaurus	139	43.5	S 60	54.8
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	28.9	N 46	01.1	Kocab	137	19.0	N 74	04.6
Rigel	281	08.4	S 08	11.1	Alphecca	126	07.4	N 26	39.0
Bellatrix	278	27.9	N 06	21.8	Antares	112	21.3	S 26	28.3
Elnath	278	07.8	N 28	37.3	Atria	107	19.1	S 69	03.3
Alnilam	275	42.5	S 01	11.7	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	57.2	N 07	24.4	Shaula	96	16.4	S 37	06.8
Canopus	263	54.6	S 52	42.8	Rasalhague	96	02.7	N 12	32.8
Sirius	258	30.2	S 16	44.5	Etamin	90	44.1	N 51	29.0
Adhara	255	09.5	S 29	00.2	Kaus Australis	83	38.5	S 34	22.3
Castor	246	02.9	N 31	50.8	Vega	80	36.3	N 38	47.8
Procyon	244	55.4	N 05	10.7	Nunki	75	53.4	S 26	16.2
Pollux	243	22.6	N 27	58.8	Albireo	67	07.7	N 27	59.8
Avior	234	16.3	S 59	34.6	Altair	62	04.6	N 08	54.9
Suhail	222	49.4	S 43	30.9	Peacock	53	13.2	S 56	40.1
Miaplacidus	221	38.3	S 69	48.1	Deneb	49	28.9	N 45	20.7
Alphard	217	52.1	S 08	44.7	Enif	33	43.4	N 09	57.6
Regulus	207	39.0	N 11	52.3	Alnair	27	39.1	S 46	52.0
Dubhe	193	46.2	N 61	39.0	Formalhaut	15	20.0	S 29	31.2
Denebola	182	29.2	N 14	27.9	Markab	13	34.7	N 15	18.3

2019 - 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
	<i>April 16</i>			<i>April 17</i>			<i>April 18</i>			<i>April 19</i>			<i>April 20</i>			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	203	51.0	+02.4	204	50.1	+02.5	205	49.2	+02.5	206	48.4	+02.4	207	47.5	+02.5	00
01	218	53.4	+02.5	219	52.6	+02.4	220	51.7	+02.5	221	50.8	+02.5	222	50.0	+02.4	01
02	233	55.9	+02.4	234	55.0	+02.5	235	54.2	+02.4	236	53.3	+02.5	237	52.4	+02.5	02
03	248	58.3	+02.5	249	57.5	+02.4	250	56.6	+02.5	251	55.8	+02.4	252	54.9	+02.5	03
04	264	00.8	+02.5	264	59.9	+02.5	265	59.1	+02.4	266	58.2	+02.5	267	57.4	+02.4	04
05	279	03.3	+02.4	280	02.4	+02.5	281	01.5	+02.5	282	00.7	+02.4	282	59.8	+02.5	05
06	294	05.7	+02.5	295	04.9	+02.4	296	04.0	+02.5	297	03.1	+02.5	298	02.3	+02.5	06
07	309	08.2	+02.5	310	07.3	+02.5	311	06.5	+02.4	312	05.6	+02.5	313	04.8	+02.4	07
08	324	10.7	+02.4	325	09.8	+02.5	326	08.9	+02.5	327	08.1	+02.4	328	07.2	+02.5	08
09	339	13.1	+02.5	340	12.3	+02.4	341	11.4	+02.5	342	10.5	+02.5	343	09.7	+02.4	09
10	354	15.6	+02.5	355	14.7	+02.5	356	13.9	+02.4	357	13.0	+02.5	358	12.1	+02.5	10
11	9	18.1	+02.4	10	17.2	+02.5	11	16.3	+02.5	12	15.5	+02.4	13	14.6	+02.5	11
12	24	20.5	+02.5	25	19.7	+02.4	26	18.8	+02.5	27	17.9	+02.5	28	17.1	+02.4	12
13	39	23.0	+02.5	40	22.1	+02.5	41	21.3	+02.4	42	20.4	+02.5	43	19.5	+02.5	13
14	54	25.5	+02.4	55	24.6	+02.5	56	23.7	+02.5	57	22.9	+02.4	58	22.0	+02.5	14
15	69	27.9	+02.5	70	27.1	+02.4	71	26.2	+02.5	72	25.3	+02.5	73	24.5	+02.4	15
16	84	30.4	+02.4	85	29.5	+02.5	86	28.7	+02.4	87	27.8	+02.5	88	26.9	+02.5	16
17	99	32.8	+02.5	100	32.0	+02.4	101	31.1	+02.5	102	30.3	+02.4	103	29.4	+02.5	17
18	114	35.3	+02.5	115	34.4	+02.5	116	33.6	+02.4	117	32.7	+02.5	118	31.9	+02.4	18
19	129	37.8	+02.4	130	36.9	+02.5	131	36.0	+02.5	132	35.2	+02.4	133	34.3	+02.5	19
20	144	40.2	+02.5	145	39.4	+02.4	146	38.5	+02.5	147	37.6	+02.5	148	36.8	+02.4	20
21	159	42.7	+02.5	160	41.8	+02.5	161	41.0	+02.4	162	40.1	+02.5	163	39.2	+02.5	21
22	174	45.2	+02.4	175	44.3	+02.5	176	43.4	+02.5	177	42.6	+02.4	178	41.7	+02.5	22
23	189	47.6	+02.5	190	46.8	+02.4	191	45.9	+02.5	192	45.0	+02.5	193	44.2	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.8	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.3	S 42	12.1	Acrux	173	04.2	S 63	12.4
Schedir	349	36.6	N 56	38.3	Gacrux	171	56.0	S 57	13.2
Diphda	348	52.3	S 17	53.1	Alioth	166	16.7	N 55	51.4
Achernar	335	24.4	S 57	08.5	Spica	158	26.7	S 11	15.7
Hamal	327	56.7	N 23	33.0	Alkaid	152	55.2	N 49	13.1
Polaris	316	30.0	N 89	20.7	Hadar	148	41.6	S 60	27.8
Acamar	315	15.7	S 40	14.0	Menkent	148	02.2	S 36	27.6
Menkar	314	11.2	N 04	09.7	Arcturus	145	51.5	N 19	05.6
Mirfak	308	35.1	N 49	55.6	Rigel Kentaurus	139	43.5	S 60	54.9
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	28.9	N 46	01.1	Kocab	137	19.0	N 74	04.6
Rigel	281	08.5	S 08	11.1	Alphecca	126	07.4	N 26	39.0
Bellatrix	278	27.9	N 06	21.8	Antares	112	21.2	S 26	28.3
Elnath	278	07.8	N 28	37.3	Atria	107	19.0	S 69	03.4
Alnilam	275	42.5	S 01	11.6	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	57.2	N 07	24.4	Shaula	96	16.3	S 37	06.8
Canopus	263	54.6	S 52	42.8	Rasalhague	96	02.6	N 12	32.8
Sirius	258	30.2	S 16	44.5	Etamin	90	44.1	N 51	29.0
Adhara	255	09.5	S 29	00.2	Kaus Australis	83	38.4	S 34	22.3
Castor	246	02.9	N 31	50.8	Vega	80	36.2	N 38	47.8
Procyon	244	55.4	N 05	10.7	Nunki	75	53.3	S 26	16.2
Pollux	243	22.6	N 27	58.8	Albireo	67	07.7	N 27	59.8
Avior	234	16.3	S 59	34.6	Altair	62	04.5	N 08	54.9
Suhail	222	49.4	S 43	30.9	Peacock	53	13.1	S 56	40.1
Miaplacidus	221	38.4	S 69	48.1	Deneb	49	28.9	N 45	20.7
Alphard	217	52.1	S 08	44.7	Enif	33	43.4	N 09	57.6
Regulus	207	39.0	N 11	52.3	Alnair	27	39.1	S 46	51.9
Dubhe	193	46.3	N 61	39.0	Formalhaut	15	20.0	S 29	31.2
Denebola	182	29.2	N 14	27.9	Markab	13	34.7	N 15	18.3

2019 - First Point of Aries / Selected Stars

UT	day 111 of 365		day 112 of 365		day 113 of 365		day 114 of 365		day 115 of 365		UT					
	<i>April 21</i>		<i>April 22</i>		<i>April 23</i>		<i>April 24</i>		<i>April 25</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	208	46.6	+02.5	209	45.8	+02.4	210	44.9	+02.5	211	44.1	+02.4	212	43.2	+02.5	00
01	223	49.1	+02.5	224	48.2	+02.5	225	47.4	+02.4	226	46.5	+02.5	227	45.7	+02.4	01
02	238	51.6	+02.4	239	50.7	+02.5	240	49.8	+02.5	241	49.0	+02.5	242	48.1	+02.5	02
03	253	54.0	+02.5	254	53.2	+02.4	255	52.3	+02.5	256	51.5	+02.4	257	50.6	+02.5	03
04	268	56.5	+02.5	269	55.6	+02.5	270	54.8	+02.4	271	53.9	+02.5	272	53.1	+02.4	04
05	283	59.0	+02.4	284	58.1	+02.5	285	57.2	+02.5	286	56.4	+02.4	287	55.5	+02.5	05
06	299	01.4	+02.5	300	00.6	+02.4	300	59.7	+02.5	301	58.8	+02.5	302	58.0	+02.4	06
07	314	03.9	+02.5	315	03.0	+02.5	316	02.2	+02.4	317	01.3	+02.5	318	00.4	+02.5	07
08	329	06.4	+02.4	330	05.5	+02.5	331	04.6	+02.5	332	03.8	+02.4	333	02.9	+02.5	08
09	344	08.8	+02.5	345	08.0	+02.4	346	07.1	+02.5	347	06.2	+02.5	348	05.4	+02.4	09
10	359	11.3	+02.4	0	10.4	+02.5	1	09.6	+02.4	2	08.7	+02.5	3	07.8	+02.5	10
11	14	13.7	+02.5	15	12.9	+02.4	16	12.0	+02.5	17	11.2	+02.4	18	10.3	+02.5	11
12	29	16.2	+02.5	30	15.3	+02.5	31	14.5	+02.5	32	13.6	+02.5	33	12.8	+02.4	12
13	44	18.7	+02.4	45	17.8	+02.5	46	17.0	+02.4	47	16.1	+02.5	48	15.2	+02.5	13
14	59	21.1	+02.5	60	20.3	+02.4	61	19.4	+02.5	62	18.6	+02.4	63	17.7	+02.5	14
15	74	23.6	+02.5	75	22.7	+02.5	76	21.9	+02.4	77	21.0	+02.5	78	20.2	+02.4	15
16	89	26.1	+02.4	90	25.2	+02.5	91	24.3	+02.5	92	23.5	+02.4	93	22.6	+02.5	16
17	104	28.5	+02.5	105	27.7	+02.4	106	26.8	+02.5	107	25.9	+02.5	108	25.1	+02.5	17
18	119	31.0	+02.5	120	30.1	+02.5	121	29.3	+02.4	122	28.4	+02.5	123	27.6	+02.4	18
19	134	33.5	+02.4	135	32.6	+02.5	136	31.7	+02.5	137	30.9	+02.4	138	30.0	+02.5	19
20	149	35.9	+02.5	150	35.1	+02.4	151	34.2	+02.5	152	33.3	+02.5	153	32.5	+02.4	20
21	164	38.4	+02.5	165	37.5	+02.5	166	36.7	+02.4	167	35.8	+02.5	168	34.9	+02.5	21
22	179	40.9	+02.4	180	40.0	+02.5	181	39.1	+02.5	182	38.3	+02.4	183	37.4	+02.5	22
23	194	43.3	+02.5	195	42.5	+02.4	196	41.6	+02.5	197	40.7	+02.5	198	39.9	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
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Ankaa	353	12.3	S 42	12.1	Acrux	173	04.2	S 63	12.4
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Capella	280	28.9	N 46	01.1	Kocab	137	18.9	N 74	04.6
Rigel	281	08.5	S 08	11.1	Alphecca	126	07.4	N 26	39.0
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.2	S 26	28.3
Elnath	278	07.9	N 28	37.3	Atria	107	19.0	S 69	03.4
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	57.2	N 07	24.4	Shaula	96	16.3	S 37	06.8
Canopus	263	54.6	S 52	42.8	Rasalhague	96	02.6	N 12	32.8
Sirius	258	30.2	S 16	44.5	Etamin	90	44.0	N 51	29.0
Adhara	255	09.5	S 29	00.2	Kaus Australis	83	38.4	S 34	22.3
Castor	246	02.9	N 31	50.8	Vega	80	36.2	N 38	47.8
Procyon	244	55.5	N 05	10.7	Nunki	75	53.3	S 26	16.2
Pollux	243	22.6	N 27	58.8	Albireo	67	07.6	N 27	59.8
Avior	234	16.4	S 59	34.7	Altair	62	04.5	N 08	54.9
Suhail	222	49.4	S 43	30.9	Peacock	53	13.1	S 56	40.1
Miaplacidus	221	38.5	S 69	48.1	Deneb	49	28.9	N 45	20.7
Alphard	217	52.1	S 08	44.7	Enif	33	43.4	N 09	57.6
Regulus	207	39.1	N 11	52.3	Alnair	27	39.0	S 46	51.9
Dubhe	193	46.3	N 61	39.0	Formalhaut	15	20.0	S 29	31.2
Denebola	182	29.2	N 14	27.9	Markab	13	34.6	N 15	18.3

2019 - First Point of Aries / Selected Stars

UT	day 116 of 365		day 117 of 365		day 118 of 365		day 119 of 365		day 120 of 365		UT					
	<i>April 26</i>		<i>April 27</i>		<i>April 28</i>		<i>April 29</i>		<i>April 30</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	213	42.3	+02.5	214	41.5	+02.4	215	40.6	+02.5	216	39.8	+02.4	217	38.9	+02.5	00
01	228	44.8	+02.5	229	43.9	+02.5	230	43.1	+02.4	231	42.2	+02.5	232	41.4	+02.4	01
02	243	47.3	+02.4	244	46.4	+02.5	245	45.5	+02.5	246	44.7	+02.4	247	43.8	+02.5	02
03	258	49.7	+02.5	259	48.9	+02.4	260	48.0	+02.5	261	47.1	+02.5	262	46.3	+02.4	03
04	273	52.2	+02.5	274	51.3	+02.5	275	50.5	+02.4	276	49.6	+02.5	277	48.7	+02.5	04
05	288	54.7	+02.4	289	53.8	+02.5	290	52.9	+02.5	291	52.1	+02.4	292	51.2	+02.5	05
06	303	57.1	+02.5	304	56.3	+02.4	305	55.4	+02.5	306	54.5	+02.5	307	53.7	+02.4	06
07	318	59.6	+02.5	319	58.7	+02.5	320	57.9	+02.4	321	57.0	+02.5	322	56.1	+02.5	07
08	334	02.1	+02.4	335	01.2	+02.5	336	00.3	+02.5	336	59.5	+02.4	337	58.6	+02.5	08
09	349	04.5	+02.5	350	03.7	+02.4	351	02.8	+02.5	352	01.9	+02.5	353	01.1	+02.4	09
10	4	07.0	+02.4	5	06.1	+02.5	6	05.3	+02.4	7	04.4	+02.5	8	03.5	+02.5	10
11	19	09.4	+02.5	20	08.6	+02.4	21	07.7	+02.5	22	06.9	+02.4	23	06.0	+02.5	11
12	34	11.9	+02.5	35	11.0	+02.5	36	10.2	+02.4	37	09.3	+02.5	38	08.5	+02.4	12
13	49	14.4	+02.4	50	13.5	+02.5	51	12.6	+02.5	52	11.8	+02.5	53	10.9	+02.5	13
14	64	16.8	+02.5	65	16.0	+02.4	66	15.1	+02.5	67	14.3	+02.4	68	13.4	+02.5	14
15	79	19.3	+02.5	80	18.4	+02.5	81	17.6	+02.4	82	16.7	+02.5	83	15.9	+02.4	15
16	94	21.8	+02.4	95	20.9	+02.5	96	20.0	+02.5	97	19.2	+02.4	98	18.3	+02.5	16
17	109	24.2	+02.5	110	23.4	+02.4	111	22.5	+02.5	112	21.6	+02.5	113	20.8	+02.4	17
18	124	26.7	+02.5	125	25.8	+02.5	126	25.0	+02.4	127	24.1	+02.5	128	23.2	+02.5	18
19	139	29.2	+02.4	140	28.3	+02.5	141	27.4	+02.5	142	26.6	+02.4	143	25.7	+02.5	19
20	154	31.6	+02.5	155	30.8	+02.4	156	29.9	+02.5	157	29.0	+02.5	158	28.2	+02.4	20
21	169	34.1	+02.4	170	33.2	+02.5	171	32.4	+02.4	172	31.5	+02.5	173	30.6	+02.5	21
22	184	36.5	+02.5	185	35.7	+02.5	186	34.8	+02.5	187	34.0	+02.4	188	33.1	+02.5	22
23	199	39.0	+02.5	200	38.2	+02.4	201	37.3	+02.5	202	36.4	+02.5	203	35.6	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.7	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.2	S 42	12.0	Acrux	173	04.2	S 63	12.4
Schedir	349	36.5	N 56	38.3	Gacrux	171	56.0	S 57	13.3
Diphda	348	52.3	S 17	53.0	Alioth	166	16.8	N 55	51.5
Achernar	335	24.4	S 57	08.5	Spica	158	26.7	S 11	15.7
Hamal	327	56.7	N 23	33.0	Alkaid	152	55.2	N 49	13.1
Polaris	316	30.6	N 89	20.6	Hadar	148	41.6	S 60	27.9
Acamar	315	15.7	S 40	13.9	Menkent	148	02.2	S 36	27.6
Menkar	314	11.2	N 04	09.7	Arcturus	145	51.4	N 19	05.6
Mirfak	308	35.1	N 49	55.6	Rigel Kentaurus	139	43.4	S 60	54.9
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.9	N 46	01.1	Kocab	137	18.9	N 74	04.6
Rigel	281	08.5	S 08	11.1	Alphecca	126	07.3	N 26	39.0
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.2	S 26	28.3
Elnath	278	07.9	N 28	37.3	Atria	107	18.9	S 69	03.4
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.7	S 15	44.8
Betelgeuze	270	57.2	N 07	24.4	Shaula	96	16.2	S 37	06.8
Canopus	263	54.7	S 52	42.7	Rasalhague	96	02.6	N 12	32.8
Sirius	258	30.2	S 16	44.5	Etamin	90	44.0	N 51	29.0
Adhara	255	09.5	S 29	00.2	Kaus Australis	83	38.3	S 34	22.3
Castor	246	02.9	N 31	50.8	Vega	80	36.1	N 38	47.8
Procyon	244	55.5	N 05	10.7	Nunki	75	53.3	S 26	16.2
Pollux	243	22.7	N 27	58.8	Albireo	67	07.6	N 27	59.8
Avior	234	16.4	S 59	34.7	Altair	62	04.5	N 08	54.9
Suhail	222	49.4	S 43	30.9	Peacock	53	13.0	S 56	40.1
Miaplacidus	221	38.6	S 69	48.1	Deneb	49	28.8	N 45	20.7
Alphard	217	52.1	S 08	44.7	Enif	33	43.3	N 09	57.6
Regulus	207	39.1	N 11	52.4	Alnair	27	39.0	S 46	51.9
Dubhe	193	46.3	N 61	39.1	Formalhaut	15	19.9	S 29	31.2
Denebola	182	29.2	N 14	27.9	Markab	13	34.6	N 15	18.3

2019 - 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					
	<i>May 1</i>		<i>May 2</i>		<i>May 3</i>		<i>May 4</i>		<i>May 5</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	218	38.0	+02.5	219	37.2	+02.4	220	36.3	+02.5	221	35.4	+02.5	222	34.6	+02.4	00
01	233	40.5	+02.5	234	39.6	+02.5	235	38.8	+02.4	236	37.9	+02.5	237	37.0	+02.5	01
02	248	43.0	+02.4	249	42.1	+02.5	250	41.2	+02.5	251	40.4	+02.4	252	39.5	+02.5	02
03	263	45.4	+02.5	264	44.6	+02.4	265	43.7	+02.5	266	42.8	+02.5	267	42.0	+02.4	03
04	278	47.9	+02.4	279	47.0	+02.5	280	46.2	+02.4	281	45.3	+02.5	282	44.4	+02.5	04
05	293	50.3	+02.5	294	49.5	+02.4	295	48.6	+02.5	296	47.8	+02.4	297	46.9	+02.5	05
06	308	52.8	+02.5	309	51.9	+02.5	310	51.1	+02.5	311	50.2	+02.5	312	49.4	+02.4	06
07	323	55.3	+02.4	324	54.4	+02.5	325	53.6	+02.4	326	52.7	+02.5	327	51.8	+02.5	07
08	338	57.7	+02.5	339	56.9	+02.4	340	56.0	+02.5	341	55.2	+02.4	342	54.3	+02.5	08
09	354	00.2	+02.5	354	59.3	+02.5	355	58.5	+02.4	356	57.6	+02.5	357	56.8	+02.4	09
10	9	02.7	+02.4	10	01.8	+02.5	11	00.9	+02.5	12	00.1	+02.4	12	59.2	+02.5	10
11	24	05.1	+02.5	25	04.3	+02.4	26	03.4	+02.5	27	02.5	+02.5	28	01.7	+02.4	11
12	39	07.6	+02.5	40	06.7	+02.5	41	05.9	+02.4	42	05.0	+02.5	43	04.1	+02.5	12
13	54	10.1	+02.4	55	09.2	+02.5	56	08.3	+02.5	57	07.5	+02.4	58	06.6	+02.5	13
14	69	12.5	+02.5	70	11.7	+02.4	71	10.8	+02.5	72	09.9	+02.5	73	09.1	+02.4	14
15	84	15.0	+02.5	85	14.1	+02.5	86	13.3	+02.4	87	12.4	+02.5	88	11.5	+02.5	15
16	99	17.5	+02.4	100	16.6	+02.5	101	15.7	+02.5	102	14.9	+02.4	103	14.0	+02.5	16
17	114	19.9	+02.5	115	19.1	+02.4	116	18.2	+02.5	117	17.3	+02.5	118	16.5	+02.4	17
18	129	22.4	+02.4	130	21.5	+02.5	131	20.7	+02.4	132	19.8	+02.5	133	18.9	+02.5	18
19	144	24.8	+02.5	145	24.0	+02.4	146	23.1	+02.5	147	22.3	+02.4	148	21.4	+02.5	19
20	159	27.3	+02.5	160	26.4	+02.5	161	25.6	+02.4	162	24.7	+02.5	163	23.9	+02.4	20
21	174	29.8	+02.4	175	28.9	+02.5	176	28.0	+02.5	177	27.2	+02.5	178	26.3	+02.5	21
22	189	32.2	+02.5	190	31.4	+02.4	191	30.5	+02.5	192	29.7	+02.4	193	28.8	+02.5	22
23	204	34.7	+02.5	205	33.8	+02.5	206	33.0	+02.4	207	32.1	+02.5	208	31.3	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 39.7	N 29 11.6	Gienah	175 47.9	S 17 39.0
Ankaa	353 12.2	S 42 12.0	Acrux	173 04.3	S 63 12.4
Schedir	349 36.5	N 56 38.3	Gacrux	171 56.0	S 57 13.3
Diphda	348 52.3	S 17 53.0	Alioth	166 16.8	N 55 51.5
Achernar	335 24.4	S 57 08.4	Spica	158 26.7	S 11 15.7
Hamal	327 56.7	N 23 33.0	Alkaid	152 55.2	N 49 13.2
Polaris	316 30.9	N 89 20.6	Hadar	148 41.6	S 60 27.9
Acamar	315 15.7	S 40 13.9	Menkent	148 02.2	S 36 27.6
Menkar	314 11.2	N 04 09.7	Arcturus	145 51.4	N 19 05.6
Mirfak	308 35.1	N 49 55.6	Rigel Kentaurus	139 43.4	S 60 54.9
Aldebaran	290 45.1	N 16 32.7	Zubenelgenubi	137 00.6	S 16 07.2
Capella	280 29.0	N 46 01.1	Kocab	137 18.9	N 74 04.7
Rigel	281 08.5	S 08 11.0	Alphecca	126 07.3	N 26 39.1
Bellatrix	278 28.0	N 06 21.8	Antares	112 21.2	S 26 28.3
Elnath	278 07.9	N 28 37.3	Atria	107 18.8	S 69 03.4
Alnilam	275 42.6	S 01 11.6	Sabik	102 07.7	S 15 44.8
Betelgeuze	270 57.2	N 07 24.4	Shaula	96 16.2	S 37 06.8
Canopus	263 54.7	S 52 42.7	Rasalhague	96 02.5	N 12 32.8
Sirius	258 30.2	S 16 44.5	Etamin	90 43.9	N 51 29.0
Adhara	255 09.6	S 29 00.2	Kaus Australis	83 38.3	S 34 22.3
Castor	246 02.9	N 31 50.8	Vega	80 36.1	N 38 47.8
Procyon	244 55.5	N 05 10.7	Nunki	75 53.2	S 26 16.2
Pollux	243 22.7	N 27 58.8	Albireo	67 07.6	N 27 59.8
Avior	234 16.5	S 59 34.7	Altair	62 04.4	N 08 55.0
Suhail	222 49.5	S 43 30.9	Peacock	53 12.9	S 56 40.1
Miaplacidus	221 38.6	S 69 48.1	Deneb	49 28.8	N 45 20.7
Alphard	217 52.1	S 08 44.7	Enif	33 43.3	N 09 57.6
Regulus	207 39.1	N 11 52.4	Alnair	27 39.0	S 46 51.9
Dubhe	193 46.4	N 61 39.1	Formalhaut	15 19.9	S 29 31.2
Denebola	182 29.2	N 14 27.9	Markab	13 34.6	N 15 18.3

2019 - First Point of Aries / Selected Stars

UT	day 126 of 365		day 127 of 365		day 128 of 365		day 129 of 365		day 130 of 365		UT					
	<i>May 6</i>		<i>May 7</i>		<i>May 8</i>		<i>May 9</i>		<i>May 10</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	223	33.7	+02.5	224	32.9	+02.4	225	32.0	+02.5	226	31.1	+02.5	227	30.3	+02.4	00
01	238	36.2	+02.4	239	35.3	+02.5	240	34.5	+02.4	241	33.6	+02.5	242	32.7	+02.5	01
02	253	38.6	+02.5	254	37.8	+02.4	255	36.9	+02.5	256	36.1	+02.4	257	35.2	+02.5	02
03	268	41.1	+02.5	269	40.2	+02.5	270	39.4	+02.5	271	38.5	+02.5	272	37.7	+02.4	03
04	283	43.6	+02.4	284	42.7	+02.5	285	41.9	+02.4	286	41.0	+02.5	287	40.1	+02.5	04
05	298	46.0	+02.5	299	45.2	+02.4	300	44.3	+02.5	301	43.5	+02.4	302	42.6	+02.5	05
06	313	48.5	+02.5	314	47.6	+02.5	315	46.8	+02.4	316	45.9	+02.5	317	45.1	+02.4	06
07	328	51.0	+02.4	329	50.1	+02.5	330	49.2	+02.5	331	48.4	+02.5	332	47.5	+02.5	07
08	343	53.4	+02.5	344	52.6	+02.4	345	51.7	+02.5	346	50.9	+02.4	347	50.0	+02.5	08
09	358	55.9	+02.5	359	55.0	+02.5	0	54.2	+02.4	1	53.3	+02.5	2	52.5	+02.4	09
10	13	58.4	+02.4	14	57.5	+02.5	15	56.6	+02.5	16	55.8	+02.4	17	54.9	+02.5	10
11	29	00.8	+02.5	29	60.0	+02.4	30	59.1	+02.5	31	58.2	+02.5	32	57.4	+02.4	11
12	44	03.3	+02.5	45	02.4	+02.5	46	01.6	+02.4	47	00.7	+02.5	47	59.8	+02.5	12
13	59	05.8	+02.4	60	04.9	+02.5	61	04.0	+02.5	62	03.2	+02.4	63	02.3	+02.5	13
14	74	08.2	+02.5	75	07.4	+02.4	76	06.5	+02.5	77	05.6	+02.5	78	04.8	+02.4	14
15	89	10.7	+02.4	90	09.8	+02.5	91	09.0	+02.4	92	08.1	+02.5	93	07.2	+02.5	15
16	104	13.1	+02.5	105	12.3	+02.4	106	11.4	+02.5	107	10.6	+02.4	108	09.7	+02.5	16
17	119	15.6	+02.5	120	14.7	+02.5	121	13.9	+02.5	122	13.0	+02.5	123	12.2	+02.4	17
18	134	18.1	+02.4	135	17.2	+02.5	136	16.4	+02.4	137	15.5	+02.5	138	14.6	+02.5	18
19	149	20.5	+02.5	150	19.7	+02.4	151	18.8	+02.5	152	18.0	+02.4	153	17.1	+02.5	19
20	164	23.0	+02.5	165	22.1	+02.5	166	21.3	+02.4	167	20.4	+02.5	168	19.6	+02.4	20
21	179	25.5	+02.4	180	24.6	+02.5	181	23.7	+02.5	182	22.9	+02.4	183	22.0	+02.5	21
22	194	27.9	+02.5	195	27.1	+02.4	196	26.2	+02.5	197	25.3	+02.5	198	24.5	+02.5	22
23	209	30.4	+02.5	210	29.5	+02.5	211	28.7	+02.4	212	27.8	+02.5	213	27.0	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.7	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.2	S 42	12.0	Acrux	173	04.3	S 63	12.5
Schedir	349	36.5	N 56	38.3	Gacrux	171	56.0	S 57	13.3
Diphda	348	52.2	S 17	53.0	Alioth	166	16.8	N 55	51.5
Achernar	335	24.4	S 57	08.4	Spica	158	26.7	S 11	15.7
Hamal	327	56.7	N 23	33.0	Alkaid	152	55.2	N 49	13.2
Polaris	316	30.7	N 89	20.6	Hadar	148	41.6	S 60	27.9
Acamar	315	15.7	S 40	13.9	Menkent	148	02.2	S 36	27.6
Menkar	314	11.2	N 04	09.7	Arcturus	145	51.4	N 19	05.6
Mirfak	308	35.1	N 49	55.6	Rigel Kentaurus	139	43.4	S 60	54.9
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	29.0	N 46	01.1	Kocab	137	18.9	N 74	04.7
Rigel	281	08.5	S 08	11.0	Alphecca	126	07.3	N 26	39.1
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.1	S 26	28.3
Elnath	278	07.9	N 28	37.3	Atria	107	18.8	S 69	03.4
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.7	S 15	44.8
Betelgeuze	270	57.2	N 07	24.4	Shaula	96	16.2	S 37	06.8
Canopus	263	54.7	S 52	42.7	Rasalhague	96	02.5	N 12	32.8
Sirius	258	30.3	S 16	44.4	Etamin	90	43.9	N 51	29.1
Adhara	255	09.6	S 29	00.2	Kaus Australis	83	38.3	S 34	22.3
Castor	246	03.0	N 31	50.8	Vega	80	36.1	N 38	47.9
Procyon	244	55.5	N 05	10.7	Nunki	75	53.2	S 26	16.2
Pollux	243	22.7	N 27	58.8	Albireo	67	07.5	N 27	59.9
Avior	234	16.5	S 59	34.7	Altair	62	04.4	N 08	55.0
Suhail	222	49.5	S 43	30.9	Peacock	53	12.9	S 56	40.1
Miaplacidus	221	38.7	S 69	48.1	Deneb	49	28.7	N 45	20.7
Alphard	217	52.2	S 08	44.7	Enif	33	43.3	N 09	57.6
Regulus	207	39.1	N 11	52.4	Alnair	27	38.9	S 46	51.9
Dubhe	193	46.4	N 61	39.1	Formalhaut	15	19.9	S 29	31.1
Denebola	182	29.3	N 14	28.0	Markab	13	34.5	N 15	18.3

2019 - 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					
	<i>May 11</i>		<i>May 12</i>		<i>May 13</i>		<i>May 14</i>		<i>May 15</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	228	29.4	+02.5	229	28.6	+02.4	230	27.7	+02.5	231	26.8	+02.5	232	26.0	+02.4	00
01	243	31.9	+02.4	244	31.0	+02.5	245	30.2	+02.4	246	29.3	+02.5	247	28.4	+02.5	01
02	258	34.3	+02.5	259	33.5	+02.4	260	32.6	+02.5	261	31.8	+02.4	262	30.9	+02.5	02
03	273	36.8	+02.5	274	35.9	+02.5	275	35.1	+02.5	276	34.2	+02.5	277	33.4	+02.4	03
04	288	39.3	+02.4	289	38.4	+02.5	290	37.6	+02.4	291	36.7	+02.5	292	35.8	+02.5	04
05	303	41.7	+02.5	304	40.9	+02.4	305	40.0	+02.5	306	39.2	+02.4	307	38.3	+02.5	05
06	318	44.2	+02.5	319	43.3	+02.5	320	42.5	+02.4	321	41.6	+02.5	322	40.8	+02.4	06
07	333	46.7	+02.4	334	45.8	+02.5	335	44.9	+02.5	336	44.1	+02.4	337	43.2	+02.5	07
08	348	49.1	+02.5	349	48.3	+02.4	350	47.4	+02.5	351	46.5	+02.5	352	45.7	+02.4	08
09	3	51.6	+02.5	4	50.7	+02.5	5	49.9	+02.4	6	49.0	+02.5	7	48.1	+02.5	09
10	18	54.1	+02.4	19	53.2	+02.5	20	52.3	+02.5	21	51.5	+02.4	22	50.6	+02.5	10
11	33	56.5	+02.5	34	55.7	+02.4	35	54.8	+02.5	36	53.9	+02.5	37	53.1	+02.4	11
12	48	59.0	+02.5	49	58.1	+02.5	50	57.3	+02.4	51	56.4	+02.5	52	55.5	+02.5	12
13	64	01.5	+02.4	65	00.6	+02.5	65	59.7	+02.5	66	58.9	+02.4	67	58.0	+02.5	13
14	79	03.9	+02.5	80	03.1	+02.4	81	02.2	+02.5	82	01.3	+02.5	83	00.5	+02.4	14
15	94	06.4	+02.4	95	05.5	+02.5	96	04.7	+02.4	97	03.8	+02.5	98	02.9	+02.5	15
16	109	08.8	+02.5	110	08.0	+02.4	111	07.1	+02.5	112	06.3	+02.4	113	05.4	+02.5	16
17	124	11.3	+02.5	125	10.4	+02.5	126	09.6	+02.4	127	08.7	+02.5	128	07.9	+02.4	17
18	139	13.8	+02.4	140	12.9	+02.5	141	12.0	+02.5	142	11.2	+02.5	143	10.3	+02.5	18
19	154	16.2	+02.5	155	15.4	+02.4	156	14.5	+02.5	157	13.7	+02.4	158	12.8	+02.5	19
20	169	18.7	+02.5	170	17.8	+02.5	171	17.0	+02.4	172	16.1	+02.5	173	15.3	+02.4	20
21	184	21.2	+02.4	185	20.3	+02.5	186	19.4	+02.5	187	18.6	+02.4	188	17.7	+02.5	21
22	199	23.6	+02.5	200	22.8	+02.4	201	21.9	+02.5	202	21.0	+02.5	203	20.2	+02.4	22
23	214	26.1	+02.5	215	25.2	+02.5	216	24.4	+02.4	217	23.5	+02.5	218	22.6	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.6	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.1	S 42	12.0	Acrux	173	04.3	S 63	12.5
Schedir	349	36.4	N 56	38.3	Gacrux	171	56.0	S 57	13.3
Diphda	348	52.2	S 17	53.0	Alioth	166	16.8	N 55	51.5
Achernar	335	24.4	S 57	08.4	Spica	158	26.7	S 11	15.7
Hamal	327	56.6	N 23	33.0	Alkaid	152	55.2	N 49	13.2
Polaris	316	30.1	N 89	20.6	Hadar	148	41.5	S 60	27.9
Acamar	315	15.7	S 40	13.8	Menkent	148	02.2	S 36	27.6
Menkar	314	11.2	N 04	09.7	Arcturus	145	51.4	N 19	05.6
Mirfak	308	35.1	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.0
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	29.0	N 46	01.0	Kocab	137	18.9	N 74	04.7
Rigel	281	08.5	S 08	11.0	Alphecca	126	07.3	N 26	39.1
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.1	S 26	28.3
Elnath	278	07.9	N 28	37.3	Atria	107	18.7	S 69	03.5
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	57.2	N 07	24.4	Shaula	96	16.1	S 37	06.9
Canopus	263	54.8	S 52	42.7	Rasalhague	96	02.5	N 12	32.9
Sirius	258	30.3	S 16	44.4	Etamin	90	43.9	N 51	29.1
Adhara	255	09.6	S 29	00.2	Kaus Australis	83	38.2	S 34	22.3
Castor	246	03.0	N 31	50.8	Vega	80	36.0	N 38	47.9
Procyon	244	55.5	N 05	10.7	Nunki	75	53.1	S 26	16.2
Pollux	243	22.7	N 27	58.8	Albireo	67	07.5	N 27	59.9
Avior	234	16.6	S 59	34.6	Altair	62	04.3	N 08	55.0
Suhail	222	49.5	S 43	30.9	Peacock	53	12.8	S 56	40.1
Miaplacidus	221	38.8	S 69	48.2	Deneb	49	28.7	N 45	20.7
Alphard	217	52.2	S 08	44.7	Enif	33	43.2	N 09	57.7
Regulus	207	39.1	N 11	52.4	Alnair	27	38.9	S 46	51.8
Dubhe	193	46.4	N 61	39.1	Formalhaut	15	19.8	S 29	31.1
Denebola	182	29.3	N 14	28.0	Markab	13	34.5	N 15	18.3

2019 - 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	25.1	+02.5	234	24.2	+02.5	235	23.4	+02.4	236	22.5	+02.5	237	21.7	+02.4	00
01	248	27.6	+02.4	249	26.7	+02.5	250	25.8	+02.5	251	25.0	+02.5	252	24.1	+02.5	01
02	263	30.0	+02.5	264	29.2	+02.4	265	28.3	+02.5	266	27.5	+02.4	267	26.6	+02.5	02
03	278	32.5	+02.5	279	31.6	+02.5	280	30.8	+02.4	281	29.9	+02.5	282	29.1	+02.4	03
04	293	35.0	+02.4	294	34.1	+02.5	295	33.2	+02.5	296	32.4	+02.4	297	31.5	+02.5	04
05	308	37.4	+02.5	309	36.6	+02.4	310	35.7	+02.5	311	34.8	+02.5	312	34.0	+02.4	05
06	323	39.9	+02.5	324	39.0	+02.5	325	38.2	+02.4	326	37.3	+02.5	327	36.4	+02.5	06
07	338	42.4	+02.4	339	41.5	+02.5	340	40.6	+02.5	341	39.8	+02.4	342	38.9	+02.5	07
08	353	44.8	+02.5	354	44.0	+02.4	355	43.1	+02.5	356	42.2	+02.5	357	41.4	+02.4	08
09	8	47.3	+02.4	9	46.4	+02.5	10	45.6	+02.4	11	44.7	+02.5	12	43.8	+02.5	09
10	23	49.7	+02.5	24	48.9	+02.5	25	48.0	+02.5	26	47.2	+02.4	27	46.3	+02.5	10
11	38	52.2	+02.5	39	51.4	+02.4	40	50.5	+02.5	41	49.6	+02.5	42	48.8	+02.4	11
12	53	54.7	+02.4	54	53.8	+02.5	55	53.0	+02.4	56	52.1	+02.5	57	51.2	+02.5	12
13	68	57.1	+02.5	69	56.3	+02.4	70	55.4	+02.5	71	54.6	+02.4	72	53.7	+02.5	13
14	83	59.6	+02.5	84	58.7	+02.5	85	57.9	+02.4	86	57.0	+02.5	87	56.2	+02.4	14
15	99	02.1	+02.4	100	01.2	+02.5	101	00.3	+02.5	101	59.5	+02.5	102	58.6	+02.5	15
16	114	04.5	+02.5	115	03.7	+02.4	116	02.8	+02.5	117	02.0	+02.4	118	01.1	+02.5	16
17	129	07.0	+02.5	130	06.1	+02.5	131	05.3	+02.4	132	04.4	+02.5	133	03.6	+02.4	17
18	144	09.5	+02.4	145	08.6	+02.5	146	07.7	+02.5	147	06.9	+02.4	148	06.0	+02.5	18
19	159	11.9	+02.5	160	11.1	+02.4	161	10.2	+02.5	162	09.3	+02.5	163	08.5	+02.4	19
20	174	14.4	+02.5	175	13.5	+02.5	176	12.7	+02.4	177	11.8	+02.5	178	10.9	+02.5	20
21	189	16.9	+02.4	190	16.0	+02.5	191	15.1	+02.5	192	14.3	+02.4	193	13.4	+02.5	21
22	204	19.3	+02.5	205	18.5	+02.4	206	17.6	+02.5	207	16.7	+02.5	208	15.9	+02.4	22
23	219	21.8	+02.4	220	20.9	+02.5	221	20.1	+02.4	222	19.2	+02.5	223	18.3	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.6	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.1	S 42	11.9	Acrux	173	04.3	S 63	12.5
Schedir	349	36.4	N 56	38.2	Gacrux	171	56.1	S 57	13.3
Diphda	348	52.2	S 17	53.0	Alioth	166	16.8	N 55	51.6
Achernar	335	24.3	S 57	08.3	Spica	158	26.7	S 11	15.7
Hamal	327	56.6	N 23	33.0	Alkaid	152	55.2	N 49	13.2
Polaris	316	29.7	N 89	20.5	Hadar	148	41.6	S 60	28.0
Acamar	315	15.7	S 40	13.8	Menkent	148	02.2	S 36	27.6
Menkar	314	11.2	N 04	09.7	Arcturus	145	51.4	N 19	05.7
Mirfak	308	35.1	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.0
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	29.0	N 46	01.0	Kocab	137	18.9	N 74	04.8
Rigel	281	08.5	S 08	11.0	Alphecca	126	07.3	N 26	39.1
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.1	S 26	28.3
Elnath	278	07.9	N 28	37.3	Atria	107	18.7	S 69	03.5
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	57.3	N 07	24.4	Shaula	96	16.1	S 37	06.9
Canopus	263	54.8	S 52	42.7	Rasalhague	96	02.5	N 12	32.9
Sirius	258	30.3	S 16	44.4	Etamin	90	43.8	N 51	29.1
Adhara	255	09.6	S 29	00.2	Kaus Australis	83	38.2	S 34	22.3
Castor	246	03.0	N 31	50.8	Vega	80	36.0	N 38	47.9
Procyon	244	55.5	N 05	10.7	Nunki	75	53.1	S 26	16.2
Pollux	243	22.7	N 27	58.8	Albireo	67	07.4	N 27	59.9
Avior	234	16.6	S 59	34.6	Altair	62	04.3	N 08	55.0
Suhail	222	49.6	S 43	30.9	Peacock	53	12.7	S 56	40.1
Miaplacidus	221	38.9	S 69	48.1	Deneb	49	28.6	N 45	20.7
Alphard	217	52.2	S 08	44.7	Enif	33	43.2	N 09	57.7
Regulus	207	39.1	N 11	52.4	Alnair	27	38.8	S 46	51.8
Dubhe	193	46.5	N 61	39.1	Formalhaut	15	19.8	S 29	31.1
Denebola	182	29.3	N 14	28.0	Markab	13	34.5	N 15	18.3

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UT	day 141 of 365		day 142 of 365		day 143 of 365		day 144 of 365		day 145 of 365		UT					
	<i>May 21</i>		<i>May 22</i>		<i>May 23</i>		<i>May 24</i>		<i>May 25</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	238	20.8	+02.5	239	19.9	+02.5	240	19.1	+02.4	241	18.2	+02.5	242	17.4	+02.4	00
01	253	23.3	+02.4	254	22.4	+02.5	255	21.5	+02.5	256	20.7	+02.5	257	19.8	+02.5	01
02	268	25.7	+02.5	269	24.9	+02.4	270	24.0	+02.5	271	23.2	+02.4	272	22.3	+02.5	02
03	283	28.2	+02.5	284	27.3	+02.5	285	26.5	+02.4	286	25.6	+02.5	287	24.8	+02.4	03
04	298	30.7	+02.4	299	29.8	+02.5	300	28.9	+02.5	301	28.1	+02.4	302	27.2	+02.5	04
05	313	33.1	+02.5	314	32.3	+02.4	315	31.4	+02.5	316	30.5	+02.5	317	29.7	+02.4	05
06	328	35.6	+02.5	329	34.7	+02.5	330	33.9	+02.4	331	33.0	+02.5	332	32.1	+02.5	06
07	343	38.1	+02.4	344	37.2	+02.5	345	36.3	+02.5	346	35.5	+02.4	347	34.6	+02.5	07
08	358	40.5	+02.5	359	39.7	+02.4	0	38.8	+02.5	1	37.9	+02.5	2	37.1	+02.4	08
09	13	43.0	+02.4	14	42.1	+02.5	15	41.3	+02.4	16	40.4	+02.5	17	39.5	+02.5	09
10	28	45.4	+02.5	29	44.6	+02.5	30	43.7	+02.5	31	42.9	+02.4	32	42.0	+02.5	10
11	43	47.9	+02.5	44	47.1	+02.4	45	46.2	+02.5	46	45.3	+02.5	47	44.5	+02.4	11
12	58	50.4	+02.4	59	49.5	+02.5	60	48.7	+02.4	61	47.8	+02.5	62	46.9	+02.5	12
13	73	52.8	+02.5	74	52.0	+02.4	75	51.1	+02.5	76	50.3	+02.4	77	49.4	+02.5	13
14	88	55.3	+02.5	89	54.4	+02.5	90	53.6	+02.4	91	52.7	+02.5	92	51.9	+02.4	14
15	103	57.8	+02.4	104	56.9	+02.5	105	56.0	+02.5	106	55.2	+02.5	107	54.3	+02.5	15
16	119	00.2	+02.5	119	59.4	+02.4	120	58.5	+02.5	121	57.7	+02.4	122	56.8	+02.5	16
17	134	02.7	+02.5	135	01.8	+02.5	136	01.0	+02.4	137	00.1	+02.5	137	59.3	+02.4	17
18	149	05.2	+02.4	150	04.3	+02.5	151	03.4	+02.5	152	02.6	+02.4	153	01.7	+02.5	18
19	164	07.6	+02.5	165	06.8	+02.4	166	05.9	+02.5	167	05.0	+02.5	168	04.2	+02.4	19
20	179	10.1	+02.5	180	09.2	+02.5	181	08.4	+02.4	182	07.5	+02.5	183	06.6	+02.5	20
21	194	12.6	+02.4	195	11.7	+02.5	196	10.8	+02.5	197	10.0	+02.4	198	09.1	+02.5	21
22	209	15.0	+02.5	210	14.2	+02.4	211	13.3	+02.5	212	12.4	+02.5	213	11.6	+02.4	22
23	224	17.5	+02.4	225	16.6	+02.5	226	15.8	+02.4	227	14.9	+02.5	228	14.0	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.6	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.1	S 42	11.9	Acrux	173	04.4	S 63	12.5
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Polaris	316	28.7	N 89	20.5	Hadar	148	41.6	S 60	28.0
Acamar	315	15.7	S 40	13.8	Menkent	148	02.2	S 36	27.6
Menkar	314	11.2	N 04	09.7	Arcturus	145	51.4	N 19	05.7
Mirfak	308	35.1	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.0
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Capella	280	29.0	N 46	01.0	Kocab	137	18.9	N 74	04.8
Rigel	281	08.5	S 08	11.0	Alphecca	126	07.3	N 26	39.1
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.1	S 26	28.3
Elnath	278	07.9	N 28	37.3	Atria	107	18.6	S 69	03.5
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	57.3	N 07	24.4	Shaula	96	16.1	S 37	06.9
Canopus	263	54.8	S 52	42.7	Rasalhague	96	02.4	N 12	32.9
Sirius	258	30.3	S 16	44.4	Etamin	90	43.8	N 51	29.1
Adhara	255	09.6	S 29	00.2	Kaus Australis	83	38.1	S 34	22.3
Castor	246	03.0	N 31	50.8	Vega	80	36.0	N 38	47.9
Procyon	244	55.5	N 05	10.7	Nunki	75	53.1	S 26	16.2
Pollux	243	22.7	N 27	58.8	Albireo	67	07.4	N 27	59.9
Avior	234	16.7	S 59	34.6	Altair	62	04.3	N 08	55.0
Suhail	222	49.6	S 43	30.9	Peacock	53	12.7	S 56	40.1
Miaplacidus	221	38.9	S 69	48.1	Deneb	49	28.6	N 45	20.7
Alphard	217	52.2	S 08	44.7	Enif	33	43.2	N 09	57.7
Regulus	207	39.2	N 11	52.4	Alnair	27	38.8	S 46	51.8
Dubhe	193	46.5	N 61	39.1	Formalhaut	15	19.7	S 29	31.1
Denebola	182	29.3	N 14	28.0	Markab	13	34.4	N 15	18.4

2019 - 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					
	<i>May 26</i>		<i>May 27</i>		<i>May 28</i>		<i>May 29</i>		<i>May 30</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	243	16.5	+02.5	244	15.6	+02.5	245	14.8	+02.4	246	13.9	+02.5	247	13.1	+02.4	00
01	258	19.0	+02.4	259	18.1	+02.5	260	17.2	+02.5	261	16.4	+02.4	262	15.5	+02.5	01
02	273	21.4	+02.5	274	20.6	+02.4	275	19.7	+02.5	276	18.8	+02.5	277	18.0	+02.4	02
03	288	23.9	+02.5	289	23.0	+02.5	290	22.2	+02.4	291	21.3	+02.5	292	20.4	+02.5	03
04	303	26.4	+02.4	304	25.5	+02.5	305	24.6	+02.5	306	23.8	+02.4	307	22.9	+02.5	04
05	318	28.8	+02.5	319	28.0	+02.4	320	27.1	+02.5	321	26.2	+02.5	322	25.4	+02.4	05
06	333	31.3	+02.5	334	30.4	+02.5	335	29.6	+02.4	336	28.7	+02.5	337	27.8	+02.5	06
07	348	33.8	+02.4	349	32.9	+02.5	350	32.0	+02.5	351	31.2	+02.4	352	30.3	+02.5	07
08	3	36.2	+02.5	4	35.4	+02.4	5	34.5	+02.5	6	33.6	+02.5	7	32.8	+02.4	08
09	18	38.7	+02.4	19	37.8	+02.5	20	37.0	+02.4	21	36.1	+02.5	22	35.2	+02.5	09
10	33	41.1	+02.5	34	40.3	+02.4	35	39.4	+02.5	36	38.6	+02.4	37	37.7	+02.5	10
11	48	43.6	+02.5	49	42.7	+02.5	50	41.9	+02.4	51	41.0	+02.5	52	40.2	+02.4	11
12	63	46.1	+02.4	64	45.2	+02.5	65	44.3	+02.5	66	43.5	+02.5	67	42.6	+02.5	12
13	78	48.5	+02.5	79	47.7	+02.4	80	46.8	+02.5	81	46.0	+02.4	82	45.1	+02.5	13
14	93	51.0	+02.5	94	50.1	+02.5	95	49.3	+02.4	96	48.4	+02.5	97	47.6	+02.4	14
15	108	53.5	+02.4	109	52.6	+02.5	110	51.7	+02.5	111	50.9	+02.4	112	50.0	+02.5	15
16	123	55.9	+02.5	124	55.1	+02.4	125	54.2	+02.5	126	53.3	+02.5	127	52.5	+02.4	16
17	138	58.4	+02.5	139	57.5	+02.5	140	56.7	+02.4	141	55.8	+02.5	142	54.9	+02.5	17
18	154	00.9	+02.4	154	60.0	+02.5	155	59.1	+02.5	156	58.3	+02.4	157	57.4	+02.5	18
19	169	03.3	+02.5	170	02.5	+02.4	171	01.6	+02.5	172	00.7	+02.5	172	59.9	+02.4	19
20	184	05.8	+02.4	185	04.9	+02.5	186	04.1	+02.4	187	03.2	+02.5	188	02.3	+02.5	20
21	199	08.2	+02.5	200	07.4	+02.5	201	06.5	+02.5	202	05.7	+02.4	203	04.8	+02.5	21
22	214	10.7	+02.5	215	09.9	+02.4	216	09.0	+02.5	217	08.1	+02.5	218	07.3	+02.4	22
23	229	13.2	+02.4	230	12.3	+02.5	231	11.5	+02.4	232	10.6	+02.5	233	09.7	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.5	N 29	11.6	Gienah	175	47.9	S 17	39.0
Ankaa	353	12.0	S 42	11.9	Acrux	173	04.4	S 63	12.5
Schedir	349	36.3	N 56	38.2	Gacrux	171	56.1	S 57	13.4
Diphda	348	52.1	S 17	52.9	Alioth	166	16.9	N 55	51.6
Achernar	335	24.3	S 57	08.3	Spica	158	26.7	S 11	15.7
Hamal	327	56.6	N 23	33.0	Alkaid	152	55.3	N 49	13.3
Polaris	316	27.7	N 89	20.5	Hadar	148	41.6	S 60	28.0
Acamar	315	15.7	S 40	13.8	Menkent	148	02.2	S 36	27.7
Menkar	314	11.1	N 04	09.7	Arcturus	145	51.4	N 19	05.7
Mirfak	308	35.1	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.0
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	29.0	N 46	01.0	Kocab	137	19.0	N 74	04.8
Rigel	281	08.5	S 08	11.0	Alphecca	126	07.3	N 26	39.1
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.0	S 26	28.3
Elnath	278	07.9	N 28	37.3	Atria	107	18.6	S 69	03.5
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	57.3	N 07	24.4	Shaula	96	16.0	S 37	06.9
Canopus	263	54.8	S 52	42.6	Rasalhague	96	02.4	N 12	32.9
Sirius	258	30.3	S 16	44.4	Etamin	90	43.8	N 51	29.2
Adhara	255	09.6	S 29	00.1	Kaus Australis	83	38.1	S 34	22.3
Castor	246	03.0	N 31	50.8	Vega	80	35.9	N 38	47.9
Procyon	244	55.6	N 05	10.7	Nunki	75	53.0	S 26	16.2
Pollux	243	22.8	N 27	58.8	Albireo	67	07.4	N 27	59.9
Avior	234	16.7	S 59	34.6	Altair	62	04.2	N 08	55.0
Suhail	222	49.6	S 43	30.9	Peacock	53	12.6	S 56	40.1
Miaplacidus	221	39.0	S 69	48.1	Deneb	49	28.5	N 45	20.7
Alphard	217	52.2	S 08	44.7	Enif	33	43.1	N 09	57.7
Regulus	207	39.2	N 11	52.4	Alnair	27	38.7	S 46	51.8
Dubhe	193	46.6	N 61	39.1	Formalhaut	15	19.7	S 29	31.1
Denebola	182	29.3	N 14	28.0	Markab	13	34.4	N 15	18.4

2019 - 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					
	<i>May 31</i>		<i>June 1</i>		<i>June 2</i>		<i>June 3</i>		<i>June 4</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	248	12.2	+02.5	249	11.3	+02.5	250	10.5	+02.4	251	09.6	+02.5	252	08.8	+02.4	00
01	263	14.7	+02.4	264	13.8	+02.5	265	12.9	+02.5	266	12.1	+02.4	267	11.2	+02.5	01
02	278	17.1	+02.5	279	16.3	+02.4	280	15.4	+02.5	281	14.5	+02.5	282	13.7	+02.4	02
03	293	19.6	+02.4	294	18.7	+02.5	295	17.9	+02.4	296	17.0	+02.5	297	16.1	+02.5	03
04	308	22.0	+02.5	309	21.2	+02.5	310	20.3	+02.5	311	19.5	+02.4	312	18.6	+02.5	04
05	323	24.5	+02.5	324	23.7	+02.4	325	22.8	+02.5	326	21.9	+02.5	327	21.1	+02.4	05
06	338	27.0	+02.4	339	26.1	+02.5	340	25.3	+02.4	341	24.4	+02.5	342	23.5	+02.5	06
07	353	29.4	+02.5	354	28.6	+02.4	355	27.7	+02.5	356	26.9	+02.4	357	26.0	+02.5	07
08	8	31.9	+02.5	9	31.0	+02.5	10	30.2	+02.4	11	29.3	+02.5	12	28.5	+02.4	08
09	23	34.4	+02.4	24	33.5	+02.5	25	32.6	+02.5	26	31.8	+02.5	27	30.9	+02.5	09
10	38	36.8	+02.5	39	36.0	+02.4	40	35.1	+02.5	41	34.3	+02.4	42	33.4	+02.5	10
11	53	39.3	+02.5	54	38.4	+02.5	55	37.6	+02.4	56	36.7	+02.5	57	35.9	+02.4	11
12	68	41.8	+02.4	69	40.9	+02.5	70	40.0	+02.5	71	39.2	+02.4	72	38.3	+02.5	12
13	83	44.2	+02.5	84	43.4	+02.4	85	42.5	+02.5	86	41.6	+02.5	87	40.8	+02.5	13
14	98	46.7	+02.5	99	45.8	+02.5	100	45.0	+02.4	101	44.1	+02.5	102	43.3	+02.4	14
15	113	49.2	+02.4	114	48.3	+02.5	115	47.4	+02.5	116	46.6	+02.4	117	45.7	+02.5	15
16	128	51.6	+02.5	129	50.8	+02.4	130	49.9	+02.5	131	49.0	+02.5	132	48.2	+02.4	16
17	143	54.1	+02.4	144	53.2	+02.5	145	52.4	+02.4	146	51.5	+02.5	147	50.6	+02.5	17
18	158	56.5	+02.5	159	55.7	+02.5	160	54.8	+02.5	161	54.0	+02.4	162	53.1	+02.5	18
19	173	59.0	+02.5	174	58.2	+02.4	175	57.3	+02.5	176	56.4	+02.5	177	55.6	+02.4	19
20	189	01.5	+02.4	190	00.6	+02.5	190	59.8	+02.4	191	58.9	+02.5	192	58.0	+02.5	20
21	204	03.9	+02.5	205	03.1	+02.4	206	02.2	+02.5	207	01.4	+02.4	208	00.5	+02.5	21
22	219	06.4	+02.5	220	05.5	+02.5	221	04.7	+02.4	222	03.8	+02.5	223	03.0	+02.4	22
23	234	08.9	+02.4	235	08.0	+02.5	236	07.1	+02.5	237	06.3	+02.5	238	05.4	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.5	N 29	11.6	Gienah	175	48.0	S 17	39.0
Ankaa	353	12.0	S 42	11.9	Acrux	173	04.4	S 63	12.6
Schedir	349	36.2	N 56	38.2	Gacrux	171	56.1	S 57	13.4
Diphda	348	52.1	S 17	52.9	Alioth	166	16.9	N 55	51.6
Achernar	335	24.2	S 57	08.3	Spica	158	26.8	S 11	15.7
Hamal	327	56.5	N 23	33.0	Alkaid	152	55.3	N 49	13.3
Polaris	316	26.7	N 89	20.5	Hadar	148	41.6	S 60	28.0
Acamar	315	15.6	S 40	13.7	Menkent	148	02.2	S 36	27.7
Menkar	314	11.1	N 04	09.7	Arcturus	145	51.4	N 19	05.7
Mirfak	308	35.0	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.0
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	29.0	N 46	01.0	Kocab	137	19.0	N 74	04.8
Rigel	281	08.5	S 08	11.0	Alphecca	126	07.3	N 26	39.2
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.0	S 26	28.4
Elnath	278	07.9	N 28	37.3	Atria	107	18.5	S 69	03.5
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	57.3	N 07	24.5	Shaula	96	16.0	S 37	06.9
Canopus	263	54.9	S 52	42.6	Rasalhague	96	02.4	N 12	32.9
Sirius	258	30.3	S 16	44.4	Etamin	90	43.7	N 51	29.2
Adhara	255	09.7	S 29	00.1	Kaus Australis	83	38.1	S 34	22.3
Castor	246	03.0	N 31	50.8	Vega	80	35.9	N 38	48.0
Procyon	244	55.6	N 05	10.7	Nunki	75	53.0	S 26	16.2
Pollux	243	22.8	N 27	58.8	Albireo	67	07.3	N 27	59.9
Avior	234	16.8	S 59	34.6	Altair	62	04.2	N 08	55.0
Suhail	222	49.6	S 43	30.9	Peacock	53	12.6	S 56	40.1
Miaplacidus	221	39.1	S 69	48.1	Deneb	49	28.5	N 45	20.8
Alphard	217	52.2	S 08	44.7	Enif	33	43.1	N 09	57.7
Regulus	207	39.2	N 11	52.4	Alnair	27	38.6	S 46	51.8
Dubhe	193	46.6	N 61	39.1	Formalhaut	15	19.7	S 29	31.1
Denebola	182	29.3	N 14	28.0	Markab	13	34.4	N 15	18.4

2019 - 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	07.9	+02.5	254	07.0	+02.5	255	06.2	+02.4	256	05.3	+02.5	257	04.5	+02.4	00
01	268	10.4	+02.4	269	09.5	+02.5	270	08.6	+02.5	271	07.8	+02.4	272	06.9	+02.5	01
02	283	12.8	+02.5	284	12.0	+02.4	285	11.1	+02.5	286	10.2	+02.5	287	09.4	+02.4	02
03	298	15.3	+02.4	299	14.4	+02.5	300	13.6	+02.4	301	12.7	+02.5	302	11.8	+02.5	03
04	313	17.7	+02.5	314	16.9	+02.5	315	16.0	+02.5	316	15.2	+02.4	317	14.3	+02.5	04
05	328	20.2	+02.5	329	19.4	+02.4	330	18.5	+02.5	331	17.6	+02.5	332	16.8	+02.4	05
06	343	22.7	+02.4	344	21.8	+02.5	345	21.0	+02.4	346	20.1	+02.5	347	19.2	+02.5	06
07	358	25.1	+02.5	359	24.3	+02.4	0	23.4	+02.5	1	22.6	+02.4	2	21.7	+02.5	07
08	13	27.6	+02.5	14	26.7	+02.5	15	25.9	+02.5	16	25.0	+02.5	17	24.2	+02.4	08
09	28	30.1	+02.4	29	29.2	+02.5	30	28.4	+02.4	31	27.5	+02.5	32	26.6	+02.5	09
10	43	32.5	+02.5	44	31.7	+02.4	45	30.8	+02.5	46	30.0	+02.4	47	29.1	+02.5	10
11	58	35.0	+02.5	59	34.1	+02.5	60	33.3	+02.4	61	32.4	+02.5	62	31.6	+02.4	11
12	73	37.5	+02.4	74	36.6	+02.5	75	35.7	+02.5	76	34.9	+02.4	77	34.0	+02.5	12
13	88	39.9	+02.5	89	39.1	+02.4	90	38.2	+02.5	91	37.3	+02.5	92	36.5	+02.5	13
14	103	42.4	+02.5	104	41.5	+02.5	105	40.7	+02.4	106	39.8	+02.5	107	39.0	+02.4	14
15	118	44.9	+02.4	119	44.0	+02.5	120	43.1	+02.5	121	42.3	+02.4	122	41.4	+02.5	15
16	133	47.3	+02.5	134	46.5	+02.4	135	45.6	+02.5	136	44.7	+02.5	137	43.9	+02.4	16
17	148	49.8	+02.4	149	48.9	+02.5	150	48.1	+02.4	151	47.2	+02.5	152	46.3	+02.5	17
18	163	52.2	+02.5	164	51.4	+02.5	165	50.5	+02.5	166	49.7	+02.4	167	48.8	+02.5	18
19	178	54.7	+02.5	179	53.9	+02.4	180	53.0	+02.5	181	52.1	+02.5	182	51.3	+02.4	19
20	193	57.2	+02.4	194	56.3	+02.5	195	55.5	+02.4	196	54.6	+02.5	197	53.7	+02.5	20
21	208	59.6	+02.5	209	58.8	+02.4	210	57.9	+02.5	211	57.1	+02.4	212	56.2	+02.5	21
22	224	02.1	+02.5	225	01.2	+02.5	226	00.4	+02.5	226	59.5	+02.5	227	58.7	+02.4	22
23	239	04.6	+02.4	240	03.7	+02.5	241	02.9	+02.4	242	02.0	+02.5	243	01.1	+02.5	23

	SHA		Dec			SHA		Dec	
	° ' "	' "	° ' "	' "		° ' "	' "	° ' "	' "
Alpheratz	357	39.4	N 29	11.6	Gienah	175	48.0	S 17	39.0
Ankaa	353	11.9	S 42	11.9	Acrux	173	04.5	S 63	12.6
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Menkar	314	11.1	N 04	09.7	Arcturus	145	51.4	N 19	05.7
Mirfak	308	35.0	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.1
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Capella	280	29.0	N 46	01.0	Kocab	137	19.1	N 74	04.8
Rigel	281	08.5	S 08	11.0	Alphecca	126	07.3	N 26	39.2
Bellatrix	278	28.0	N 06	21.8	Antares	112	21.0	S 26	28.4
Elnath	278	07.9	N 28	37.3	Atria	107	18.5	S 69	03.6
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.2	N 07	24.5	Shaula	96	16.0	S 37	06.9
Canopus	263	54.9	S 52	42.6	Rasalhague	96	02.4	N 12	32.9
Sirius	258	30.3	S 16	44.4	Etamin	90	43.7	N 51	29.2
Adhara	255	09.7	S 29	00.1	Kaus Australis	83	38.0	S 34	22.3
Castor	246	03.0	N 31	50.8	Vega	80	35.9	N 38	48.0
Procyon	244	55.6	N 05	10.7	Nunki	75	53.0	S 26	16.2
Pollux	243	22.8	N 27	58.8	Albireo	67	07.3	N 27	60.0
Avior	234	16.8	S 59	34.6	Altair	62	04.2	N 08	55.1
Suhail	222	49.7	S 43	30.9	Peacock	53	12.5	S 56	40.1
Miaplacidus	221	39.1	S 69	48.1	Deneb	49	28.5	N 45	20.8
Alphard	217	52.2	S 08	44.7	Enif	33	43.0	N 09	57.7
Regulus	207	39.2	N 11	52.4	Alnair	27	38.6	S 46	51.8
Dubhe	193	46.7	N 61	39.1	Formalhaut	15	19.6	S 29	31.0
Denebola	182	29.3	N 14	28.0	Markab	13	34.3	N 15	18.4

2019 - 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	03.6	+02.5	259	02.7	+02.5	260	01.9	+02.4	261	01.0	+02.5	00
01	273	06.1	+02.4	274	05.2	+02.5	275	04.3	+02.5	276	03.5	+02.4	01
02	288	08.5	+02.5	289	07.7	+02.4	290	06.8	+02.5	291	05.9	+02.5	02
03	303	11.0	+02.4	304	10.1	+02.5	305	09.3	+02.4	306	08.4	+02.5	03
04	318	13.4	+02.5	319	12.6	+02.5	320	11.7	+02.5	321	10.9	+02.4	04
05	333	15.9	+02.5	334	15.1	+02.4	335	14.2	+02.5	336	13.3	+02.5	05
06	348	18.4	+02.4	349	17.5	+02.5	350	16.7	+02.4	351	15.8	+02.5	06
07	3	20.8	+02.5	4	20.0	+02.4	5	19.1	+02.5	6	18.3	+02.4	07
08	18	23.3	+02.5	19	22.4	+02.5	20	21.6	+02.4	21	20.7	+02.5	08
09	33	25.8	+02.4	34	24.9	+02.5	35	24.0	+02.5	36	23.2	+02.4	09
10	48	28.2	+02.5	49	27.4	+02.4	50	26.5	+02.5	51	25.6	+02.5	10
11	63	30.7	+02.5	64	29.8	+02.5	65	29.0	+02.4	66	28.1	+02.5	11
12	78	33.2	+02.4	79	32.3	+02.5	80	31.4	+02.5	81	30.6	+02.4	12
13	93	35.6	+02.5	94	34.8	+02.4	95	33.9	+02.5	96	33.0	+02.5	13
14	108	38.1	+02.5	109	37.2	+02.5	110	36.4	+02.4	111	35.5	+02.5	14
15	123	40.6	+02.4	124	39.7	+02.5	125	38.8	+02.5	126	38.0	+02.4	15
16	138	43.0	+02.5	139	42.2	+02.4	140	41.3	+02.5	141	40.4	+02.5	16
17	153	45.5	+02.4	154	44.6	+02.5	155	43.8	+02.4	156	42.9	+02.5	17
18	168	47.9	+02.5	169	47.1	+02.4	170	46.2	+02.5	171	45.4	+02.4	18
19	183	50.4	+02.5	184	49.5	+02.5	185	48.7	+02.4	186	47.8	+02.5	19
20	198	52.9	+02.4	199	52.0	+02.5	200	51.1	+02.5	201	50.3	+02.5	20
21	213	55.3	+02.5	214	54.5	+02.4	215	53.6	+02.5	216	52.8	+02.4	21
22	228	57.8	+02.5	229	56.9	+02.5	230	56.1	+02.4	231	55.2	+02.5	22
23	244	00.3	+02.4	244	59.4	+02.5	245	58.5	+02.5	246	57.7	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.4	N 29	11.6	Gienah	175	48.0	S 17	39.0
Ankaa	353	11.9	S 42	11.8	Acrux	173	04.5	S 63	12.6
Schedir	349	36.1	N 56	38.2	Gacrux	171	56.2	S 57	13.4
Diphda	348	52.0	S 17	52.9	Alioth	166	17.0	N 55	51.6
Achernar	335	24.1	S 57	08.2	Spica	158	26.8	S 11	15.7
Hamal	327	56.5	N 23	33.0	Alkaid	152	55.3	N 49	13.3
Polaris	316	23.6	N 89	20.4	Hadar	148	41.6	S 60	28.0
Acamar	315	15.6	S 40	13.7	Menkent	148	02.2	S 36	27.7
Menkar	314	11.1	N 04	09.8	Arcturus	145	51.4	N 19	05.7
Mirfak	308	35.0	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.1
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.9	N 46	01.0	Kocab	137	19.1	N 74	04.9
Rigel	281	08.5	S 08	10.9	Alphecca	126	07.3	N 26	39.2
Bellatrix	278	28.0	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.9	N 28	37.3	Atria	107	18.5	S 69	03.6
Alnilam	275	42.6	S 01	11.6	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.2	N 07	24.5	Shaula	96	16.0	S 37	06.9
Canopus	263	54.9	S 52	42.6	Rasalhague	96	02.4	N 12	32.9
Sirius	258	30.3	S 16	44.3	Etamin	90	43.7	N 51	29.2
Adhara	255	09.7	S 29	00.1	Kaus Australis	83	38.0	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.9	N 38	48.0
Procyon	244	55.6	N 05	10.7	Nunki	75	52.9	S 26	16.2
Pollux	243	22.8	N 27	58.8	Albireo	67	07.3	N 27	60.0
Avior	234	16.8	S 59	34.6	Altair	62	04.1	N 08	55.1
Suhail	222	49.7	S 43	30.9	Peacock	53	12.4	S 56	40.1
Miaplacidus	221	39.2	S 69	48.1	Deneb	49	28.4	N 45	20.8
Alphard	217	52.3	S 08	44.7	Enif	33	43.0	N 09	57.8
Regulus	207	39.2	N 11	52.4	Alnair	27	38.5	S 46	51.8
Dubhe	193	46.7	N 61	39.1	Formalhaut	15	19.6	S 29	31.0
Denebola	182	29.3	N 14	28.0	Markab	13	34.3	N 15	18.4

2019 - 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	262	59.3	+02.4	263	58.4	+02.5	264	57.6	+02.4	265	56.7	+02.5	00
01	278	01.7	+02.5	279	00.9	+02.5	280	00.0	+02.5	280	59.2	+02.4	01
02	293	04.2	+02.5	294	03.4	+02.4	295	02.5	+02.5	296	01.6	+02.5	02
03	308	06.7	+02.4	309	05.8	+02.5	310	05.0	+02.4	311	04.1	+02.5	03
04	323	09.1	+02.5	324	08.3	+02.4	325	07.4	+02.5	326	06.6	+02.4	04
05	338	11.6	+02.5	339	10.7	+02.5	340	09.9	+02.4	341	09.0	+02.5	05
06	353	14.1	+02.4	354	13.2	+02.5	355	12.3	+02.5	356	11.5	+02.5	06
07	8	16.5	+02.5	9	15.7	+02.4	10	14.8	+02.5	11	14.0	+02.4	07
08	23	19.0	+02.5	24	18.1	+02.5	25	17.3	+02.4	26	16.4	+02.5	08
09	38	21.5	+02.4	39	20.6	+02.5	40	19.7	+02.5	41	18.9	+02.4	09
10	53	23.9	+02.5	54	23.1	+02.4	55	22.2	+02.5	56	21.3	+02.5	10
11	68	26.4	+02.5	69	25.5	+02.5	70	24.7	+02.4	71	23.8	+02.5	11
12	83	28.9	+02.4	84	28.0	+02.5	85	27.1	+02.5	86	26.3	+02.4	12
13	98	31.3	+02.5	99	30.5	+02.4	100	29.6	+02.5	101	28.7	+02.5	13
14	113	33.8	+02.4	114	32.9	+02.5	115	32.1	+02.4	116	31.2	+02.5	14
15	128	36.2	+02.5	129	35.4	+02.5	130	34.5	+02.5	131	33.7	+02.4	15
16	143	38.7	+02.5	144	37.9	+02.4	145	37.0	+02.5	146	36.1	+02.5	16
17	158	41.2	+02.4	159	40.3	+02.5	160	39.5	+02.4	161	38.6	+02.5	17
18	173	43.6	+02.5	174	42.8	+02.4	175	41.9	+02.5	176	41.1	+02.4	18
19	188	46.1	+02.5	189	45.2	+02.5	190	44.4	+02.4	191	43.5	+02.5	19
20	203	48.6	+02.4	204	47.7	+02.5	205	46.8	+02.5	206	46.0	+02.5	20
21	218	51.0	+02.5	219	50.2	+02.4	220	49.3	+02.5	221	48.5	+02.4	21
22	233	53.5	+02.5	234	52.6	+02.5	235	51.8	+02.4	236	50.9	+02.5	22
23	248	56.0	+02.4	249	55.1	+02.5	250	54.2	+02.5	251	53.4	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.4	N 29	11.6	Gienah	175	48.0	S 17	39.0
Ankaa	353	11.9	S 42	11.8	Acrux	173	04.6	S 63	12.6
Schedir	349	36.1	N 56	38.2	Gacrux	171	56.2	S 57	13.4
Diphda	348	52.0	S 17	52.9	Alioth	166	17.0	N 55	51.6
Achernar	335	24.1	S 57	08.2	Spica	158	26.8	S 11	15.7
Hamal	327	56.4	N 23	33.0	Alkaid	152	55.4	N 49	13.3
Polaris	316	21.9	N 89	20.4	Hadar	148	41.6	S 60	28.1
Acamar	315	15.6	S 40	13.7	Menkent	148	02.2	S 36	27.7
Menkar	314	11.0	N 04	09.8	Arcturus	145	51.5	N 19	05.7
Mirfak	308	34.9	N 49	55.5	Rigel Kentaurus	139	43.4	S 60	55.1
Aldebaran	290	45.1	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.9	N 46	01.0	Kocab	137	19.2	N 74	04.9
Rigel	281	08.5	S 08	10.9	Alphecca	126	07.3	N 26	39.2
Bellatrix	278	28.0	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.9	N 28	37.3	Atria	107	18.5	S 69	03.6
Alnilam	275	42.6	S 01	11.5	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.2	N 07	24.5	Shaula	96	15.9	S 37	06.9
Canopus	263	54.9	S 52	42.5	Rasalhague	96	02.3	N 12	33.0
Sirius	258	30.3	S 16	44.3	Etamin	90	43.7	N 51	29.3
Adhara	255	09.7	S 29	00.1	Kaus Australis	83	38.0	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.9	N 38	48.0
Procyon	244	55.6	N 05	10.7	Nunki	75	52.9	S 26	16.2
Pollux	243	22.8	N 27	58.8	Albireo	67	07.3	N 28	00.0
Avior	234	16.9	S 59	34.6	Altair	62	04.1	N 08	55.1
Suhail	222	49.7	S 43	30.9	Peacock	53	12.4	S 56	40.1
Miaplacidus	221	39.3	S 69	48.1	Deneb	49	28.4	N 45	20.8
Alphard	217	52.3	S 08	44.6	Enif	33	43.0	N 09	57.8
Regulus	207	39.2	N 11	52.4	Alnair	27	38.5	S 46	51.8
Dubhe	193	46.7	N 61	39.1	Formalhaut	15	19.5	S 29	31.0
Denebola	182	29.4	N 14	28.0	Markab	13	34.2	N 15	18.4

2019 - 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	267	55.0	+02.5	268	54.1	+02.5	269	53.3	+02.4	270	52.4	+02.5	00
01	282	57.5	+02.4	283	56.6	+02.5	284	55.7	+02.5	285	54.9	+02.4	01
02	297	59.9	+02.5	298	59.1	+02.4	299	58.2	+02.5	300	57.3	+02.5	02
03	313	02.4	+02.4	314	01.5	+02.5	315	00.7	+02.4	315	59.8	+02.5	03
04	328	04.8	+02.5	329	04.0	+02.4	330	03.1	+02.5	331	02.3	+02.4	04
05	343	07.3	+02.5	344	06.4	+02.5	345	05.6	+02.5	346	04.7	+02.5	05
06	358	09.8	+02.4	359	08.9	+02.5	0	08.1	+02.4	1	07.2	+02.5	06
07	13	12.2	+02.5	14	11.4	+02.4	15	10.5	+02.5	16	09.7	+02.4	07
08	28	14.7	+02.5	29	13.8	+02.5	30	13.0	+02.4	31	12.1	+02.5	08
09	43	17.2	+02.4	44	16.3	+02.5	45	15.4	+02.5	46	14.6	+02.4	09
10	58	19.6	+02.5	59	18.8	+02.4	60	17.9	+02.5	61	17.0	+02.5	10
11	73	22.1	+02.5	74	21.2	+02.5	75	20.4	+02.4	76	19.5	+02.5	11
12	88	24.6	+02.4	89	23.7	+02.5	90	22.8	+02.5	91	22.0	+02.4	12
13	103	27.0	+02.5	104	26.2	+02.4	105	25.3	+02.5	106	24.4	+02.5	13
14	118	29.5	+02.4	119	28.6	+02.5	120	27.8	+02.4	121	26.9	+02.5	14
15	133	31.9	+02.5	134	31.1	+02.5	135	30.2	+02.5	136	29.4	+02.4	15
16	148	34.4	+02.5	149	33.6	+02.4	150	32.7	+02.5	151	31.8	+02.5	16
17	163	36.9	+02.4	164	36.0	+02.5	165	35.2	+02.4	166	34.3	+02.5	17
18	178	39.3	+02.5	179	38.5	+02.4	180	37.6	+02.5	181	36.8	+02.4	18
19	193	41.8	+02.5	194	40.9	+02.5	195	40.1	+02.4	196	39.2	+02.5	19
20	208	44.3	+02.4	209	43.4	+02.5	210	42.5	+02.5	211	41.7	+02.5	20
21	223	46.7	+02.5	224	45.9	+02.4	225	45.0	+02.5	226	44.2	+02.4	21
22	238	49.2	+02.5	239	48.3	+02.5	240	47.5	+02.4	241	46.6	+02.5	22
23	253	51.7	+02.4	254	50.8	+02.5	255	49.9	+02.5	256	49.1	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.3	N 29	11.6	Gienah	175	48.0	S 17	39.0
Ankaa	353	11.8	S 42	11.8	Acrux	173	04.6	S 63	12.6
Schedir	349	36.0	N 56	38.2	Gacrux	171	56.2	S 57	13.4
Diphda	348	51.9	S 17	52.8	Alioth	166	17.0	N 55	51.7
Achernar	335	24.0	S 57	08.2	Spica	158	26.8	S 11	15.7
Hamal	327	56.4	N 23	33.0	Alkaid	152	55.4	N 49	13.3
Polaris	316	19.9	N 89	20.4	Hadar	148	41.7	S 60	28.1
Acamar	315	15.5	S 40	13.6	Menkent	148	02.2	S 36	27.7
Menkar	314	11.0	N 04	09.8	Arcturus	145	51.5	N 19	05.7
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Aldebaran	290	45.0	N 16	32.7	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.9	N 46	01.0	Kocab	137	19.2	N 74	04.9
Rigel	281	08.5	S 08	10.9	Alphecca	126	07.3	N 26	39.2
Bellatrix	278	27.9	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.8	N 28	37.3	Atria	107	18.4	S 69	03.6
Alnilam	275	42.6	S 01	11.5	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.2	N 07	24.5	Shaula	96	15.9	S 37	06.9
Canopus	263	54.9	S 52	42.5	Rasalhague	96	02.3	N 12	33.0
Sirius	258	30.3	S 16	44.3	Etamin	90	43.7	N 51	29.3
Adhara	255	09.7	S 29	00.1	Kaus Australis	83	38.0	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.8	N 38	48.1
Procyon	244	55.6	N 05	10.7	Nunki	75	52.9	S 26	16.2
Pollux	243	22.8	N 27	58.8	Albireo	67	07.2	N 28	00.0
Avior	234	16.9	S 59	34.5	Altair	62	04.1	N 08	55.1
Suhail	222	49.7	S 43	30.8	Peacock	53	12.3	S 56	40.1
Miaplacidus	221	39.3	S 69	48.1	Deneb	49	28.3	N 45	20.8
Alphard	217	52.3	S 08	44.6	Enif	33	42.9	N 09	57.8
Regulus	207	39.2	N 11	52.4	Alnair	27	38.4	S 46	51.8
Dubhe	193	46.8	N 61	39.1	Formalhaut	15	19.5	S 29	31.0
Denebola	182	29.4	N 14	28.0	Markab	13	34.2	N 15	18.5

2019 - First Point of Aries / Selected Stars

UT	day 176 of 365		day 177 of 365		day 178 of 365		day 179 of 365		day 180 of 365		UT					
	<i>June 25</i>		<i>June 26</i>		<i>June 27</i>		<i>June 28</i>		<i>June 29</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	272	50.7	+02.4	273	49.8	+02.5	274	49.0	+02.4	275	48.1	+02.5	276	47.2	+02.5	00
01	287	53.1	+02.5	288	52.3	+02.4	289	51.4	+02.5	290	50.6	+02.4	291	49.7	+02.5	01
02	302	55.6	+02.5	303	54.7	+02.5	304	53.9	+02.4	305	53.0	+02.5	306	52.2	+02.4	02
03	317	58.1	+02.4	318	57.2	+02.5	319	56.3	+02.5	320	55.5	+02.5	321	54.6	+02.5	03
04	333	00.5	+02.5	333	59.7	+02.4	334	58.8	+02.5	335	58.0	+02.4	336	57.1	+02.5	04
05	348	03.0	+02.5	349	02.1	+02.5	350	01.3	+02.4	351	00.4	+02.5	351	59.6	+02.4	05
06	3	05.5	+02.4	4	04.6	+02.5	5	03.7	+02.5	6	02.9	+02.4	7	02.0	+02.5	06
07	18	07.9	+02.5	19	07.1	+02.4	20	06.2	+02.5	21	05.3	+02.5	22	04.5	+02.4	07
08	33	10.4	+02.5	34	09.5	+02.5	35	08.7	+02.4	36	07.8	+02.5	37	06.9	+02.5	08
09	48	12.9	+02.4	49	12.0	+02.5	50	11.1	+02.5	51	10.3	+02.4	52	09.4	+02.5	09
10	63	15.3	+02.5	64	14.5	+02.4	65	13.6	+02.5	66	12.7	+02.5	67	11.9	+02.4	10
11	78	17.8	+02.4	79	16.9	+02.5	80	16.1	+02.4	81	15.2	+02.5	82	14.3	+02.5	11
12	93	20.2	+02.5	94	19.4	+02.5	95	18.5	+02.5	96	17.7	+02.4	97	16.8	+02.5	12
13	108	22.7	+02.5	109	21.9	+02.4	110	21.0	+02.5	111	20.1	+02.5	112	19.3	+02.4	13
14	123	25.2	+02.4	124	24.3	+02.5	125	23.5	+02.4	126	22.6	+02.5	127	21.7	+02.5	14
15	138	27.6	+02.5	139	26.8	+02.4	140	25.9	+02.5	141	25.1	+02.4	142	24.2	+02.5	15
16	153	30.1	+02.5	154	29.2	+02.5	155	28.4	+02.4	156	27.5	+02.5	157	26.7	+02.4	16
17	168	32.6	+02.4	169	31.7	+02.5	170	30.8	+02.5	171	30.0	+02.4	172	29.1	+02.5	17
18	183	35.0	+02.5	184	34.2	+02.4	185	33.3	+02.5	186	32.4	+02.5	187	31.6	+02.5	18
19	198	37.5	+02.5	199	36.6	+02.5	200	35.8	+02.4	201	34.9	+02.5	202	34.1	+02.4	19
20	213	40.0	+02.4	214	39.1	+02.5	215	38.2	+02.5	216	37.4	+02.4	217	36.5	+02.5	20
21	228	42.4	+02.5	229	41.6	+02.4	230	40.7	+02.5	231	39.8	+02.5	232	39.0	+02.4	21
22	243	44.9	+02.5	244	44.0	+02.5	245	43.2	+02.4	246	42.3	+02.5	247	41.4	+02.5	22
23	258	47.4	+02.4	259	46.5	+02.5	260	45.6	+02.5	261	44.8	+02.4	262	43.9	+02.5	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 39.3	N 29 11.7	Gienah	175 48.0	S 17 39.0
Ankaa	353 11.8	S 42 11.8	Acrux	173 04.6	S 63 12.6
Schedir	349 35.9	N 56 38.3	Gacrux	171 56.3	S 57 13.4
Diphda	348 51.9	S 17 52.8	Alioth	166 17.1	N 55 51.7
Achernar	335 24.0	S 57 08.1	Spica	158 26.8	S 11 15.7
Hamal	327 56.3	N 23 33.0	Alkaid	152 55.4	N 49 13.4
Polaris	316 18.1	N 89 20.4	Hadar	148 41.7	S 60 28.1
Acamar	315 15.5	S 40 13.6	Menkent	148 02.2	S 36 27.7
Menkar	314 11.0	N 04 09.8	Arcturus	145 51.5	N 19 05.8
Mirfak	308 34.8	N 49 55.5	Rigel Kentaurus	139 43.5	S 60 55.1
Aldebaran	290 45.0	N 16 32.8	Zubenelgenubi	137 00.6	S 16 07.2
Capella	280 28.9	N 46 01.0	Kocab	137 19.3	N 74 04.9
Rigel	281 08.4	S 08 10.9	Alphecca	126 07.3	N 26 39.2
Bellatrix	278 27.9	N 06 21.9	Antares	112 21.0	S 26 28.4
Elnath	278 07.8	N 28 37.3	Atria	107 18.4	S 69 03.7
Alnilam	275 42.5	S 01 11.5	Sabik	102 07.5	S 15 44.8
Betelgeuze	270 57.2	N 07 24.5	Shaula	96 15.9	S 37 06.9
Canopus	263 54.9	S 52 42.5	Rasalhague	96 02.3	N 12 33.0
Sirius	258 30.3	S 16 44.3	Etamin	90 43.7	N 51 29.3
Adhara	255 09.7	S 29 00.0	Kaus Australis	83 37.9	S 34 22.3
Castor	246 03.0	N 31 50.7	Vega	80 35.8	N 38 48.1
Procyon	244 55.6	N 05 10.8	Nunki	75 52.9	S 26 16.2
Pollux	243 22.8	N 27 58.8	Albireo	67 07.2	N 28 00.1
Avior	234 16.9	S 59 34.5	Altair	62 04.1	N 08 55.1
Suhail	222 49.7	S 43 30.8	Peacock	53 12.3	S 56 40.1
Miaplacidus	221 39.4	S 69 48.1	Deneb	49 28.3	N 45 20.9
Alphard	217 52.3	S 08 44.6	Enif	33 42.9	N 09 57.8
Regulus	207 39.2	N 11 52.4	Alnair	27 38.4	S 46 51.8
Dubhe	193 46.8	N 61 39.1	Formalhaut	15 19.4	S 29 31.0
Denebola	182 29.4	N 14 28.0	Markab	13 34.2	N 15 18.5

2019 - 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	277	46.4	+02.4	278	45.5	+02.5	279	44.7	+02.4	280	43.8	+02.5	281	42.9	+02.5	00
01	292	48.8	+02.5	293	48.0	+02.4	294	47.1	+02.5	295	46.3	+02.4	296	45.4	+02.5	01
02	307	51.3	+02.5	308	50.4	+02.5	309	49.6	+02.4	310	48.7	+02.5	311	47.9	+02.4	02
03	322	53.8	+02.4	323	52.9	+02.5	324	52.0	+02.5	325	51.2	+02.5	326	50.3	+02.5	03
04	337	56.2	+02.5	338	55.4	+02.4	339	54.5	+02.5	340	53.7	+02.4	341	52.8	+02.5	04
05	352	58.7	+02.5	353	57.8	+02.5	354	57.0	+02.4	355	56.1	+02.5	356	55.3	+02.4	05
06	8	01.2	+02.4	9	00.3	+02.5	9	59.4	+02.5	10	58.6	+02.4	11	57.7	+02.5	06
07	23	03.6	+02.5	24	02.8	+02.4	25	01.9	+02.5	26	01.0	+02.5	27	00.2	+02.5	07
08	38	06.1	+02.5	39	05.2	+02.5	40	04.4	+02.4	41	03.5	+02.5	42	02.7	+02.4	08
09	53	08.6	+02.4	54	07.7	+02.5	55	06.8	+02.5	56	06.0	+02.4	57	05.1	+02.5	09
10	68	11.0	+02.5	69	10.2	+02.4	70	09.3	+02.5	71	08.4	+02.5	72	07.6	+02.4	10
11	83	13.5	+02.4	84	12.6	+02.5	85	11.8	+02.4	86	10.9	+02.5	87	10.0	+02.5	11
12	98	15.9	+02.5	99	15.1	+02.4	100	14.2	+02.5	101	13.4	+02.4	102	12.5	+02.5	12
13	113	18.4	+02.5	114	17.5	+02.5	115	16.7	+02.5	116	15.8	+02.5	117	15.0	+02.4	13
14	128	20.9	+02.4	129	20.0	+02.5	130	19.2	+02.4	131	18.3	+02.5	132	17.4	+02.5	14
15	143	23.3	+02.5	144	22.5	+02.4	145	21.6	+02.5	146	20.8	+02.4	147	19.9	+02.5	15
16	158	25.8	+02.5	159	24.9	+02.5	160	24.1	+02.4	161	23.2	+02.5	162	22.4	+02.4	16
17	173	28.3	+02.4	174	27.4	+02.5	175	26.5	+02.5	176	25.7	+02.5	177	24.8	+02.5	17
18	188	30.7	+02.5	189	29.9	+02.4	190	29.0	+02.5	191	28.2	+02.4	192	27.3	+02.5	18
19	203	33.2	+02.5	204	32.3	+02.5	205	31.5	+02.4	206	30.6	+02.5	207	29.8	+02.4	19
20	218	35.7	+02.4	219	34.8	+02.5	220	33.9	+02.5	221	33.1	+02.4	222	32.2	+02.5	20
21	233	38.1	+02.5	234	37.3	+02.4	235	36.4	+02.5	236	35.5	+02.5	237	34.7	+02.4	21
22	248	40.6	+02.4	249	39.7	+02.5	250	38.9	+02.4	251	38.0	+02.5	252	37.1	+02.5	22
23	263	43.0	+02.5	264	42.2	+02.5	265	41.3	+02.5	266	40.5	+02.4	267	39.6	+02.5	23

	SHA	Dec		SHA	Dec				
	° ' "	' "		° ' "	' "				
Alpheratz	357	39.2	N 29	11.7	Gienah	175	48.0	S 17	39.0
Ankaa	353	11.7	S 42	11.8	Acrux	173	04.7	S 63	12.6
Schedir	349	35.9	N 56	38.3	Gacrux	171	56.3	S 57	13.4
Diphda	348	51.8	S 17	52.8	Alioth	166	17.1	N 55	51.7
Achernar	335	23.9	S 57	08.1	Spica	158	26.8	S 11	15.7
Hamal	327	56.3	N 23	33.0	Alkaid	152	55.4	N 49	13.4
Polaris	316	16.0	N 89	20.4	Hadar	148	41.7	S 60	28.1
Acamar	315	15.5	S 40	13.6	Menkent	148	02.3	S 36	27.7
Menkar	314	10.9	N 04	09.8	Arcturus	145	51.5	N 19	05.8
Mirfak	308	34.8	N 49	55.5	Rigel Kentaurus	139	43.5	S 60	55.1
Aldebaran	290	45.0	N 16	32.8	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.9	N 46	00.9	Kocab	137	19.4	N 74	04.9
Rigel	281	08.4	S 08	10.9	Alphecca	126	07.3	N 26	39.3
Bellatrix	278	27.9	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.8	N 28	37.3	Atria	107	18.5	S 69	03.7
Alnilam	275	42.5	S 01	11.5	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.2	N 07	24.5	Shaula	96	15.9	S 37	06.9
Canopus	263	54.9	S 52	42.5	Rasalhague	96	02.3	N 12	33.0
Sirius	258	30.3	S 16	44.3	Etamin	90	43.7	N 51	29.3
Adhara	255	09.7	S 29	00.0	Kaus Australis	83	37.9	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.8	N 38	48.1
Procyon	244	55.6	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.8	N 27	58.7	Albireo	67	07.2	N 28	00.1
Avior	234	16.9	S 59	34.5	Altair	62	04.1	N 08	55.1
Suhail	222	49.8	S 43	30.8	Peacock	53	12.2	S 56	40.1
Miaplacidus	221	39.4	S 69	48.1	Deneb	49	28.3	N 45	20.9
Alphard	217	52.3	S 08	44.6	Enif	33	42.9	N 09	57.8
Regulus	207	39.3	N 11	52.4	Alnair	27	38.3	S 46	51.8
Dubhe	193	46.8	N 61	39.1	Formalhaut	15	19.4	S 29	31.0
Denebola	182	29.4	N 14	28.0	Markab	13	34.1	N 15	18.5

2019 - First Point of Aries / Selected Stars

UT	day 186 of 365		day 187 of 365		day 188 of 365		day 189 of 365		day 190 of 365		UT		
	<i>July 5</i>		<i>July 6</i>		<i>July 7</i>		<i>July 8</i>		<i>July 9</i>				
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA			
	°	'	°	'	°	'	°	'	°	'			
00	282	42.1	+02.4	283	41.2	+02.5	284	40.4	+02.4	285	39.5	+02.5	00
01	297	44.5	+02.5	298	43.7	+02.4	299	42.8	+02.5	300	42.0	+02.4	01
02	312	47.0	+02.5	313	46.1	+02.5	314	45.3	+02.4	315	44.4	+02.5	02
03	327	49.5	+02.4	328	48.6	+02.5	329	47.7	+02.5	330	46.9	+02.4	03
04	342	51.9	+02.5	343	51.1	+02.4	344	50.2	+02.5	345	49.3	+02.5	04
05	357	54.4	+02.5	358	53.5	+02.5	359	52.7	+02.4	0	51.8	+02.5	05
06	12	56.9	+02.4	13	56.0	+02.5	14	55.1	+02.5	15	54.3	+02.4	06
07	27	59.3	+02.5	28	58.5	+02.4	29	57.6	+02.5	30	56.7	+02.5	07
08	43	01.8	+02.5	44	00.9	+02.5	45	00.1	+02.4	45	59.2	+02.5	08
09	58	04.3	+02.4	59	03.4	+02.5	60	02.5	+02.5	61	01.7	+02.4	09
10	73	06.7	+02.5	74	05.9	+02.4	75	05.0	+02.5	76	04.1	+02.5	10
11	88	09.2	+02.4	89	08.3	+02.5	90	07.5	+02.4	91	06.6	+02.5	11
12	103	11.6	+02.5	104	10.8	+02.5	105	09.9	+02.5	106	09.1	+02.4	12
13	118	14.1	+02.5	119	13.3	+02.4	120	12.4	+02.5	121	11.5	+02.5	13
14	133	16.6	+02.4	134	15.7	+02.5	135	14.9	+02.4	136	14.0	+02.5	14
15	148	19.0	+02.5	149	18.2	+02.4	150	17.3	+02.5	151	16.5	+02.4	15
16	163	21.5	+02.5	164	20.6	+02.5	165	19.8	+02.4	166	18.9	+02.5	16
17	178	24.0	+02.4	179	23.1	+02.5	180	22.2	+02.5	181	21.4	+02.4	17
18	193	26.4	+02.5	194	25.6	+02.4	195	24.7	+02.5	196	23.8	+02.5	18
19	208	28.9	+02.5	209	28.0	+02.5	210	27.2	+02.4	211	26.3	+02.5	19
20	223	31.4	+02.4	224	30.5	+02.5	225	29.6	+02.5	226	28.8	+02.4	20
21	238	33.8	+02.5	239	33.0	+02.4	240	32.1	+02.5	241	31.2	+02.5	21
22	253	36.3	+02.5	254	35.4	+02.5	255	34.6	+02.4	256	33.7	+02.5	22
23	268	38.8	+02.4	269	37.9	+02.5	270	37.0	+02.5	271	36.2	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.2	N 29	11.7	Gienah	175	48.0	S 17	39.0
Ankaa	353	11.7	S 42	11.8	Acrux	173	04.7	S 63	12.6
Schedir	349	35.8	N 56	38.3	Gacrux	171	56.4	S 57	13.4
Diphda	348	51.8	S 17	52.8	Alioth	166	17.1	N 55	51.7
Achernar	335	23.9	S 57	08.1	Spica	158	26.8	S 11	15.7
Hamal	327	56.3	N 23	33.1	Alkaid	152	55.4	N 49	13.4
Polaris	316	13.6	N 89	20.4	Hadar	148	41.7	S 60	28.1
Acamar	315	15.4	S 40	13.6	Menkent	148	02.3	S 36	27.7
Menkar	314	10.9	N 04	09.8	Arcturus	145	51.5	N 19	05.8
Mirfak	308	34.7	N 49	55.5	Rigel Kentaurus	139	43.5	S 60	55.2
Aldebaran	290	44.9	N 16	32.8	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.8	N 46	00.9	Kocab	137	19.5	N 74	04.9
Rigel	281	08.4	S 08	10.9	Alphecca	126	07.3	N 26	39.3
Bellatrix	278	27.9	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.8	N 28	37.3	Atria	107	18.4	S 69	03.7
Alnilam	275	42.5	S 01	11.5	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.2	N 07	24.5	Shaula	96	15.9	S 37	06.9
Canopus	263	54.9	S 52	42.4	Rasalhague	96	02.3	N 12	33.0
Sirius	258	30.3	S 16	44.3	Etamin	90	43.7	N 51	29.4
Adhara	255	09.7	S 28	60.0	Kaus Australis	83	37.9	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.8	N 38	48.1
Procyon	244	55.6	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.8	N 27	58.7	Albireo	67	07.2	N 28	00.1
Avior	234	17.0	S 59	34.5	Altair	62	04.0	N 08	55.2
Suhail	222	49.8	S 43	30.8	Peacock	53	12.2	S 56	40.1
Miaplacidus	221	39.5	S 69	48.0	Deneb	49	28.2	N 45	20.9
Alphard	217	52.3	S 08	44.6	Enif	33	42.8	N 09	57.8
Regulus	207	39.3	N 11	52.4	Alnair	27	38.3	S 46	51.8
Dubhe	193	46.9	N 61	39.1	Formalhaut	15	19.4	S 29	31.0
Denebola	182	29.4	N 14	28.0	Markab	13	34.1	N 15	18.5

2019 - 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	287	37.8	+02.4	288	36.9	+02.5	289	36.0	+02.5	290	35.2	+02.5	291	34.3	+02.5	00
01	302	40.2	+02.5	303	39.4	+02.4	304	38.5	+02.5	305	37.7	+02.4	306	36.8	+02.5	01
02	317	42.7	+02.5	318	41.8	+02.5	319	41.0	+02.4	320	40.1	+02.5	321	39.3	+02.4	02
03	332	45.2	+02.4	333	44.3	+02.5	334	43.4	+02.5	335	42.6	+02.4	336	41.7	+02.5	03
04	347	47.6	+02.5	348	46.8	+02.4	349	45.9	+02.5	350	45.0	+02.5	351	44.2	+02.4	04
05	2	50.1	+02.5	3	49.2	+02.5	4	48.4	+02.4	5	47.5	+02.5	6	46.6	+02.5	05
06	17	52.6	+02.4	18	51.7	+02.5	19	50.8	+02.5	20	50.0	+02.4	21	49.1	+02.5	06
07	32	55.0	+02.5	33	54.2	+02.4	34	53.3	+02.5	35	52.4	+02.5	36	51.6	+02.4	07
08	47	57.5	+02.4	48	56.6	+02.5	49	55.8	+02.4	50	54.9	+02.5	51	54.0	+02.5	08
09	62	59.9	+02.5	63	59.1	+02.4	64	58.2	+02.5	65	57.4	+02.4	66	56.5	+02.5	09
10	78	02.4	+02.5	79	01.5	+02.5	80	00.7	+02.5	80	59.8	+02.5	81	59.0	+02.4	10
11	93	04.9	+02.4	94	04.0	+02.5	95	03.2	+02.4	96	02.3	+02.5	97	01.4	+02.5	11
12	108	07.3	+02.5	109	06.5	+02.4	110	05.6	+02.5	111	04.8	+02.4	112	03.9	+02.5	12
13	123	09.8	+02.5	124	08.9	+02.5	125	08.1	+02.4	126	07.2	+02.5	127	06.4	+02.4	13
14	138	12.3	+02.4	139	11.4	+02.5	140	10.5	+02.5	141	09.7	+02.4	142	08.8	+02.5	14
15	153	14.7	+02.5	154	13.9	+02.4	155	13.0	+02.5	156	12.1	+02.5	157	11.3	+02.5	15
16	168	17.2	+02.5	169	16.3	+02.5	170	15.5	+02.4	171	14.6	+02.5	172	13.8	+02.4	16
17	183	19.7	+02.4	184	18.8	+02.5	185	17.9	+02.5	186	17.1	+02.4	187	16.2	+02.5	17
18	198	22.1	+02.5	199	21.3	+02.4	200	20.4	+02.5	201	19.5	+02.5	202	18.7	+02.4	18
19	213	24.6	+02.5	214	23.7	+02.5	215	22.9	+02.4	216	22.0	+02.5	217	21.1	+02.5	19
20	228	27.1	+02.4	229	26.2	+02.5	230	25.3	+02.5	231	24.5	+02.4	232	23.6	+02.5	20
21	243	29.5	+02.5	244	28.7	+02.4	245	27.8	+02.5	246	26.9	+02.5	247	26.1	+02.4	21
22	258	32.0	+02.4	259	31.1	+02.5	260	30.3	+02.4	261	29.4	+02.5	262	28.5	+02.5	22
23	273	34.4	+02.5	274	33.6	+02.4	275	32.7	+02.5	276	31.9	+02.4	277	31.0	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.2	N 29	11.7	Gienah	175	48.1	S 17	39.0
Ankaa	353	11.6	S 42	11.7	Acrux	173	04.8	S 63	12.6
Schedir	349	35.8	N 56	38.3	Gacrux	171	56.4	S 57	13.4
Diphda	348	51.8	S 17	52.8	Alioth	166	17.2	N 55	51.7
Achernar	335	23.8	S 57	08.1	Spica	158	26.8	S 11	15.7
Hamal	327	56.2	N 23	33.1	Alkaid	152	55.5	N 49	13.4
Polaris	316	11.6	N 89	20.4	Hadar	148	41.8	S 60	28.1
Acamar	315	15.4	S 40	13.5	Menkent	148	02.3	S 36	27.7
Menkar	314	10.9	N 04	09.8	Arcturus	145	51.5	N 19	05.8
Mirfak	308	34.7	N 49	55.5	Rigel Kentaurus	139	43.6	S 60	55.2
Aldebaran	290	44.9	N 16	32.8	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.8	N 46	00.9	Kocab	137	19.5	N 74	04.9
Rigel	281	08.4	S 08	10.8	Alphecca	126	07.3	N 26	39.3
Bellatrix	278	27.9	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.7	N 28	37.3	Atria	107	18.5	S 69	03.7
Alnilam	275	42.5	S 01	11.5	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.1	N 07	24.5	Shaula	96	15.9	S 37	06.9
Canopus	263	54.9	S 52	42.4	Rasalhague	96	02.3	N 12	33.0
Sirius	258	30.3	S 16	44.2	Etamin	90	43.7	N 51	29.4
Adhara	255	09.6	S 28	60.0	Kaus Australis	83	37.9	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.8	N 38	48.2
Procyon	244	55.5	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.7	N 27	58.7	Albireo	67	07.2	N 28	00.1
Avior	234	17.0	S 59	34.4	Altair	62	04.0	N 08	55.2
Suhail	222	49.8	S 43	30.8	Peacock	53	12.2	S 56	40.1
Miaplacidus	221	39.5	S 69	48.0	Deneb	49	28.2	N 45	20.9
Alphard	217	52.3	S 08	44.6	Enif	33	42.8	N 09	57.9
Regulus	207	39.3	N 11	52.4	Alnair	27	38.2	S 46	51.8
Dubhe	193	46.9	N 61	39.1	Formalhaut	15	19.3	S 29	31.0
Denebola	182	29.4	N 14	28.0	Markab	13	34.0	N 15	18.5

2019 - 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	292	33.5	+02.4	293	32.6	+02.5	294	31.7	+02.5	295	30.9	+02.5	00
01	307	35.9	+02.5	308	35.1	+02.4	309	34.2	+02.5	310	33.4	+02.4	01
02	322	38.4	+02.5	323	37.5	+02.5	324	36.7	+02.4	325	35.8	+02.5	02
03	337	40.9	+02.4	338	40.0	+02.5	339	39.1	+02.5	340	38.3	+02.4	03
04	352	43.3	+02.5	353	42.5	+02.4	354	41.6	+02.5	355	40.7	+02.5	04
05	7	45.8	+02.5	8	44.9	+02.5	9	44.1	+02.4	10	43.2	+02.5	05
06	22	48.3	+02.4	23	47.4	+02.5	24	46.5	+02.5	25	45.7	+02.4	06
07	37	50.7	+02.5	38	49.9	+02.4	39	49.0	+02.5	40	48.1	+02.5	07
08	52	53.2	+02.4	53	52.3	+02.5	54	51.5	+02.4	55	50.6	+02.5	08
09	67	55.6	+02.5	68	54.8	+02.4	69	53.9	+02.5	70	53.1	+02.4	09
10	82	58.1	+02.5	83	57.2	+02.5	84	56.4	+02.5	85	55.5	+02.5	10
11	98	00.6	+02.4	98	59.7	+02.5	99	58.9	+02.4	100	58.0	+02.5	11
12	113	03.0	+02.5	114	02.2	+02.4	115	01.3	+02.5	116	00.5	+02.4	12
13	128	05.5	+02.5	129	04.6	+02.5	130	03.8	+02.4	131	02.9	+02.5	13
14	143	08.0	+02.4	144	07.1	+02.5	145	06.2	+02.5	146	05.4	+02.4	14
15	158	10.4	+02.5	159	09.6	+02.4	160	08.7	+02.5	161	07.8	+02.5	15
16	173	12.9	+02.5	174	12.0	+02.5	175	11.2	+02.4	176	10.3	+02.5	16
17	188	15.4	+02.4	189	14.5	+02.5	190	13.6	+02.5	191	12.8	+02.4	17
18	203	17.8	+02.5	204	17.0	+02.4	205	16.1	+02.5	206	15.2	+02.5	18
19	218	20.3	+02.5	219	19.4	+02.5	220	18.6	+02.4	221	17.7	+02.5	19
20	233	22.8	+02.4	234	21.9	+02.5	235	21.0	+02.5	236	20.2	+02.4	20
21	248	25.2	+02.5	249	24.4	+02.4	250	23.5	+02.5	251	22.6	+02.5	21
22	263	27.7	+02.4	264	26.8	+02.5	265	26.0	+02.4	266	25.1	+02.5	22
23	278	30.1	+02.5	279	29.3	+02.4	280	28.4	+02.5	281	27.6	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.1	N 29	11.7	Gienah	175	48.1	S 17	39.0
Ankaa	353	11.6	S 42	11.7	Acrux	173	04.8	S 63	12.6
Schedir	349	35.7	N 56	38.3	Gacrux	171	56.4	S 57	13.4
Diphda	348	51.7	S 17	52.8	Alioth	166	17.2	N 55	51.7
Achernar	335	23.8	S 57	08.1	Spica	158	26.9	S 11	15.7
Hamal	327	56.2	N 23	33.1	Alkaid	152	55.5	N 49	13.4
Polaris	316	09.0	N 89	20.4	Hadar	148	41.8	S 60	28.1
Acamar	315	15.3	S 40	13.5	Menkent	148	02.3	S 36	27.7
Menkar	314	10.8	N 04	09.9	Arcturus	145	51.5	N 19	05.8
Mirfak	308	34.6	N 49	55.5	Rigel Kentaurus	139	43.6	S 60	55.2
Aldebaran	290	44.9	N 16	32.8	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.7	N 46	00.9	Kocab	137	19.6	N 74	05.0
Rigel	281	08.3	S 08	10.8	Alphecca	126	07.3	N 26	39.3
Bellatrix	278	27.8	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.7	N 28	37.3	Atria	107	18.5	S 69	03.7
Alnilam	275	42.5	S 01	11.5	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.1	N 07	24.5	Shaula	96	15.9	S 37	06.9
Canopus	263	54.8	S 52	42.4	Rasalhague	96	02.3	N 12	33.0
Sirius	258	30.2	S 16	44.2	Etamin	90	43.7	N 51	29.4
Adhara	255	09.6	S 28	59.9	Kaus Australis	83	37.9	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.8	N 38	48.2
Procyon	244	55.5	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.7	N 27	58.7	Albireo	67	07.2	N 28	00.2
Avior	234	17.0	S 59	34.4	Altair	62	04.0	N 08	55.2
Suhail	222	49.8	S 43	30.8	Peacock	53	12.1	S 56	40.1
Miaplacidus	221	39.6	S 69	48.0	Deneb	49	28.2	N 45	21.0
Alphard	217	52.3	S 08	44.6	Enif	33	42.8	N 09	57.9
Regulus	207	39.3	N 11	52.4	Alnair	27	38.2	S 46	51.8
Dubhe	193	46.9	N 61	39.1	Formalhaut	15	19.3	S 29	31.0
Denebola	182	29.4	N 14	28.0	Markab	13	34.0	N 15	18.5

2019 - 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	29.2	+02.4	298	28.3	+02.5	299	27.4	+02.5	300	26.6	+02.4	301	25.7	+02.5	00
01	312	31.6	+02.5	313	30.8	+02.4	314	29.9	+02.5	315	29.0	+02.5	316	28.2	+02.4	01
02	327	34.1	+02.5	328	33.2	+02.5	329	32.4	+02.4	330	31.5	+02.5	331	30.6	+02.5	02
03	342	36.6	+02.4	343	35.7	+02.5	344	34.8	+02.5	345	34.0	+02.4	346	33.1	+02.5	03
04	357	39.0	+02.5	358	38.2	+02.4	359	37.3	+02.5	0	36.4	+02.5	1	35.6	+02.4	04
05	12	41.5	+02.5	13	40.6	+02.5	14	39.8	+02.4	15	38.9	+02.5	16	38.0	+02.5	05
06	27	44.0	+02.4	28	43.1	+02.5	29	42.2	+02.5	30	41.4	+02.4	31	40.5	+02.5	06
07	42	46.4	+02.5	43	45.6	+02.4	44	44.7	+02.5	45	43.8	+02.5	46	43.0	+02.4	07
08	57	48.9	+02.4	58	48.0	+02.5	59	47.2	+02.4	60	46.3	+02.5	61	45.4	+02.5	08
09	72	51.3	+02.5	73	50.5	+02.4	74	49.6	+02.5	75	48.8	+02.4	76	47.9	+02.5	09
10	87	53.8	+02.5	88	52.9	+02.5	89	52.1	+02.4	90	51.2	+02.5	91	50.4	+02.4	10
11	102	56.3	+02.4	103	55.4	+02.5	104	54.5	+02.5	105	53.7	+02.4	106	52.8	+02.5	11
12	117	58.7	+02.5	118	57.9	+02.4	119	57.0	+02.5	120	56.1	+02.5	121	55.3	+02.4	12
13	133	01.2	+02.5	134	00.3	+02.5	134	59.5	+02.4	135	58.6	+02.5	136	57.7	+02.5	13
14	148	03.7	+02.4	149	02.8	+02.5	150	01.9	+02.5	151	01.1	+02.4	152	00.2	+02.5	14
15	163	06.1	+02.5	164	05.3	+02.4	165	04.4	+02.5	166	03.5	+02.5	167	02.7	+02.4	15
16	178	08.6	+02.5	179	07.7	+02.5	180	06.9	+02.4	181	06.0	+02.5	182	05.1	+02.5	16
17	193	11.1	+02.4	194	10.2	+02.5	195	09.3	+02.5	196	08.5	+02.4	197	07.6	+02.5	17
18	208	13.5	+02.5	209	12.7	+02.4	210	11.8	+02.5	211	10.9	+02.5	212	10.1	+02.4	18
19	223	16.0	+02.4	224	15.1	+02.5	225	14.3	+02.4	226	13.4	+02.5	227	12.5	+02.5	19
20	238	18.4	+02.5	239	17.6	+02.4	240	16.7	+02.5	241	15.9	+02.4	242	15.0	+02.5	20
21	253	20.9	+02.5	254	20.0	+02.5	255	19.2	+02.5	256	18.3	+02.5	257	17.5	+02.4	21
22	268	23.4	+02.4	269	22.5	+02.5	270	21.7	+02.4	271	20.8	+02.5	272	19.9	+02.5	22
23	283	25.8	+02.5	284	25.0	+02.4	285	24.1	+02.5	286	23.3	+02.4	287	22.4	+02.5	23

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	39.1	N 29	11.8	Gienah	175	48.1	S 17	39.0
Ankaa	353	11.5	S 42	11.7	Acrux	173	04.9	S 63	12.6
Schedir	349	35.6	N 56	38.3	Gacrux	171	56.5	S 57	13.4
Diphda	348	51.7	S 17	52.7	Alioth	166	17.2	N 55	51.7
Achernar	335	23.7	S 57	08.1	Spica	158	26.9	S 11	15.6
Hamal	327	56.1	N 23	33.1	Alkaid	152	55.5	N 49	13.4
Polaris	316	06.7	N 89	20.4	Hadar	148	41.9	S 60	28.1
Acamar	315	15.3	S 40	13.5	Menkent	148	02.3	S 36	27.7
Menkar	314	10.8	N 04	09.9	Arcturus	145	51.5	N 19	05.8
Mirfak	308	34.6	N 49	55.5	Rigel Kentaurus	139	43.6	S 60	55.2
Aldebaran	290	44.8	N 16	32.8	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	28.7	N 46	00.9	Kocab	137	19.7	N 74	05.0
Rigel	281	08.3	S 08	10.8	Alphecca	126	07.3	N 26	39.3
Bellatrix	278	27.8	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.7	N 28	37.3	Atria	107	18.5	S 69	03.7
Alnilam	275	42.4	S 01	11.4	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.1	N 07	24.5	Shaula	96	15.9	S 37	07.0
Canopus	263	54.8	S 52	42.3	Rasalhague	96	02.3	N 12	33.1
Sirius	258	30.2	S 16	44.2	Etamin	90	43.7	N 51	29.4
Adhara	255	09.6	S 28	59.9	Kaus Australis	83	37.9	S 34	22.3
Castor	246	03.0	N 31	50.7	Vega	80	35.8	N 38	48.2
Procyon	244	55.5	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.7	N 27	58.7	Albireo	67	07.1	N 28	00.2
Avior	234	17.0	S 59	34.4	Altair	62	04.0	N 08	55.2
Suhail	222	49.8	S 43	30.7	Peacock	53	12.1	S 56	40.1
Miaplacidus	221	39.6	S 69	48.0	Deneb	49	28.2	N 45	21.0
Alphard	217	52.3	S 08	44.6	Enif	33	42.7	N 09	57.9
Regulus	207	39.3	N 11	52.4	Alnair	27	38.2	S 46	51.8
Dubhe	193	46.9	N 61	39.1	Formalhaut	15	19.2	S 29	31.0
Denebola	182	29.4	N 14	28.0	Markab	13	34.0	N 15	18.6

2019 - 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	24.9	+02.4	303	24.0	+02.5	304	23.1	+02.5	305	22.3	+02.4	306	21.4	+02.5	00
01	317	27.3	+02.5	318	26.5	+02.4	319	25.6	+02.5	320	24.7	+02.5	321	23.9	+02.4	01
02	332	29.8	+02.4	333	28.9	+02.5	334	28.1	+02.4	335	27.2	+02.5	336	26.3	+02.5	02
03	347	32.2	+02.5	348	31.4	+02.4	349	30.5	+02.5	350	29.7	+02.4	351	28.8	+02.5	03
04	2	34.7	+02.5	3	33.8	+02.5	4	33.0	+02.5	5	32.1	+02.5	6	31.3	+02.4	04
05	17	37.2	+02.4	18	36.3	+02.5	19	35.5	+02.4	20	34.6	+02.5	21	33.7	+02.5	05
06	32	39.6	+02.5	33	38.8	+02.4	34	37.9	+02.5	35	37.1	+02.4	36	36.2	+02.5	06
07	47	42.1	+02.5	48	41.2	+02.5	49	40.4	+02.4	50	39.5	+02.5	51	38.7	+02.4	07
08	62	44.6	+02.4	63	43.7	+02.5	64	42.8	+02.5	65	42.0	+02.4	66	41.1	+02.5	08
09	77	47.0	+02.5	78	46.2	+02.4	79	45.3	+02.5	80	44.4	+02.5	81	43.6	+02.5	09
10	92	49.5	+02.5	93	48.6	+02.5	94	47.8	+02.4	95	46.9	+02.5	96	46.1	+02.4	10
11	107	52.0	+02.4	108	51.1	+02.5	109	50.2	+02.5	110	49.4	+02.4	111	48.5	+02.5	11
12	122	54.4	+02.5	123	53.6	+02.4	124	52.7	+02.5	125	51.8	+02.5	126	51.0	+02.4	12
13	137	56.9	+02.5	138	56.0	+02.5	139	55.2	+02.4	140	54.3	+02.5	141	53.4	+02.5	13
14	152	59.4	+02.4	153	58.5	+02.5	154	57.6	+02.5	155	56.8	+02.4	156	55.9	+02.5	14
15	168	01.8	+02.5	169	01.0	+02.4	170	00.1	+02.5	170	59.2	+02.5	171	58.4	+02.4	15
16	183	04.3	+02.4	184	03.4	+02.5	185	02.6	+02.4	186	01.7	+02.5	187	00.8	+02.5	16
17	198	06.7	+02.5	199	05.9	+02.4	200	05.0	+02.5	201	04.2	+02.4	202	03.3	+02.5	17
18	213	09.2	+02.5	214	08.3	+02.5	215	07.5	+02.5	216	06.6	+02.5	217	05.8	+02.4	18
19	228	11.7	+02.4	229	10.8	+02.5	230	10.0	+02.4	231	09.1	+02.5	232	08.2	+02.5	19
20	243	14.1	+02.5	244	13.3	+02.4	245	12.4	+02.5	246	11.6	+02.4	247	10.7	+02.5	20
21	258	16.6	+02.5	259	15.7	+02.5	260	14.9	+02.4	261	14.0	+02.5	262	13.2	+02.4	21
22	273	19.1	+02.4	274	18.2	+02.5	275	17.3	+02.5	276	16.5	+02.4	277	15.6	+02.5	22
23	288	21.5	+02.5	289	20.7	+02.4	290	19.8	+02.5	291	18.9	+02.5	292	18.1	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.0	N 29	11.8	Gienah	175	48.1	S 17	38.9
Ankaa	353	11.5	S 42	11.7	Acrux	173	04.9	S 63	12.6
Schedir	349	35.6	N 56	38.3	Gacrux	171	56.5	S 57	13.4
Diphda	348	51.6	S 17	52.7	Alioth	166	17.3	N 55	51.7
Achernar	335	23.6	S 57	08.1	Spica	158	26.9	S 11	15.6
Hamal	327	56.1	N 23	33.1	Alkaid	152	55.6	N 49	13.4
Polaris	316	04.5	N 89	20.4	Hadar	148	41.9	S 60	28.1
Acamar	315	15.2	S 40	13.5	Menkent	148	02.4	S 36	27.7
Menkar	314	10.8	N 04	09.9	Arcturus	145	51.6	N 19	05.8
Mirfak	308	34.5	N 49	55.5	Rigel Kentaurus	139	43.7	S 60	55.2
Aldebaran	290	44.8	N 16	32.8	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	28.7	N 46	00.9	Kocab	137	19.8	N 74	05.0
Rigel	281	08.3	S 08	10.8	Alphecca	126	07.4	N 26	39.3
Bellatrix	278	27.8	N 06	21.9	Antares	112	21.0	S 26	28.4
Elnath	278	07.6	N 28	37.3	Atria	107	18.6	S 69	03.8
Alnilam	275	42.4	S 01	11.4	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.1	N 07	24.5	Shaula	96	15.9	S 37	07.0
Canopus	263	54.8	S 52	42.3	Rasalhague	96	02.3	N 12	33.1
Sirius	258	30.2	S 16	44.2	Etamin	90	43.7	N 51	29.5
Adhara	255	09.6	S 28	59.9	Kaus Australis	83	37.9	S 34	22.4
Castor	246	03.0	N 31	50.7	Vega	80	35.8	N 38	48.2
Procyon	244	55.5	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.7	N 27	58.7	Albireo	67	07.1	N 28	00.2
Avior	234	17.0	S 59	34.4	Altair	62	04.0	N 08	55.2
Suhail	222	49.8	S 43	30.7	Peacock	53	12.1	S 56	40.2
Miaplacidus	221	39.6	S 69	47.9	Deneb	49	28.2	N 45	21.0
Alphard	217	52.3	S 08	44.6	Enif	33	42.7	N 09	57.9
Regulus	207	39.3	N 11	52.4	Alnair	27	38.1	S 46	51.8
Dubhe	193	47.0	N 61	39.0	Formalhaut	15	19.2	S 29	30.9
Denebola	182	29.5	N 14	28.0	Markab	13	34.0	N 15	18.6

2019 - First Point of Aries / Selected Stars

UT	day 211 of 365		day 212 of 365		day 213 of 365		day 214 of 365		day 215 of 365		UT					
	<i>July 30</i>		<i>July 31</i>		<i>August 1</i>		<i>August 2</i>		<i>August 3</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	307	20.6	+02.4	308	19.7	+02.5	309	18.8	+02.5	310	18.0	+02.4	311	17.1	+02.5	00
01	322	23.0	+02.5	323	22.2	+02.4	324	21.3	+02.5	325	20.4	+02.5	326	19.6	+02.4	01
02	337	25.5	+02.4	338	24.6	+02.5	339	23.8	+02.4	340	22.9	+02.5	341	22.0	+02.5	02
03	352	27.9	+02.5	353	27.1	+02.4	354	26.2	+02.5	355	25.4	+02.4	356	24.5	+02.5	03
04	7	30.4	+02.5	8	29.5	+02.5	9	28.7	+02.5	10	27.8	+02.5	11	27.0	+02.4	04
05	22	32.9	+02.4	23	32.0	+02.5	24	31.2	+02.4	25	30.3	+02.5	26	29.4	+02.5	05
06	37	35.3	+02.5	38	34.5	+02.4	39	33.6	+02.5	40	32.8	+02.4	41	31.9	+02.5	06
07	52	37.8	+02.5	53	36.9	+02.5	54	36.1	+02.4	55	35.2	+02.5	56	34.4	+02.4	07
08	67	40.3	+02.4	68	39.4	+02.5	69	38.5	+02.5	70	37.7	+02.5	71	36.8	+02.5	08
09	82	42.7	+02.5	83	41.9	+02.4	84	41.0	+02.5	85	40.2	+02.4	86	39.3	+02.5	09
10	97	45.2	+02.5	98	44.3	+02.5	99	43.5	+02.4	100	42.6	+02.5	101	41.8	+02.4	10
11	112	47.7	+02.4	113	46.8	+02.5	114	45.9	+02.5	115	45.1	+02.4	116	44.2	+02.5	11
12	127	50.1	+02.5	128	49.3	+02.4	129	48.4	+02.5	130	47.5	+02.5	131	46.7	+02.4	12
13	142	52.6	+02.5	143	51.7	+02.5	144	50.9	+02.4	145	50.0	+02.5	146	49.1	+02.5	13
14	157	55.1	+02.4	158	54.2	+02.5	159	53.3	+02.5	160	52.5	+02.4	161	51.6	+02.5	14
15	172	57.5	+02.5	173	56.7	+02.4	174	55.8	+02.5	175	54.9	+02.5	176	54.1	+02.4	15
16	187	60.0	+02.4	188	59.1	+02.5	189	58.3	+02.4	190	57.4	+02.5	191	56.5	+02.5	16
17	203	02.4	+02.5	204	01.6	+02.4	205	00.7	+02.5	205	59.9	+02.4	206	59.0	+02.5	17
18	218	04.9	+02.5	219	04.0	+02.5	220	03.2	+02.5	221	02.3	+02.5	222	01.5	+02.4	18
19	233	07.4	+02.4	234	06.5	+02.5	235	05.7	+02.4	236	04.8	+02.5	237	03.9	+02.5	19
20	248	09.8	+02.5	249	09.0	+02.4	250	08.1	+02.5	251	07.3	+02.4	252	06.4	+02.5	20
21	263	12.3	+02.5	264	11.4	+02.5	265	10.6	+02.4	266	09.7	+02.5	267	08.9	+02.4	21
22	278	14.8	+02.4	279	13.9	+02.5	280	13.0	+02.5	281	12.2	+02.4	282	11.3	+02.5	22
23	293	17.2	+02.5	294	16.4	+02.4	295	15.5	+02.5	296	14.6	+02.5	297	13.8	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.0	N 29	11.8	Gienah	175	48.1	S 17	38.9
Ankaa	353	11.4	S 42	11.7	Acrux	173	05.0	S 63	12.6
Schedir	349	35.5	N 56	38.4	Gacrux	171	56.5	S 57	13.4
Diphda	348	51.6	S 17	52.7	Alioth	166	17.3	N 55	51.6
Achernar	335	23.6	S 57	08.1	Spica	158	26.9	S 11	15.6
Hamal	327	56.1	N 23	33.1	Alkaid	152	55.6	N 49	13.4
Polaris	316	01.7	N 89	20.4	Hadar	148	41.9	S 60	28.1
Acamar	315	15.2	S 40	13.5	Menkent	148	02.4	S 36	27.7
Menkar	314	10.7	N 04	09.9	Arcturus	145	51.6	N 19	05.8
Mirfak	308	34.5	N 49	55.5	Rigel Kentaurus	139	43.7	S 60	55.2
Aldebaran	290	44.8	N 16	32.8	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	28.6	N 46	00.9	Kocab	137	19.9	N 74	05.0
Rigel	281	08.3	S 08	10.8	Alphecca	126	07.4	N 26	39.3
Bellatrix	278	27.7	N 06	22.0	Antares	112	21.0	S 26	28.4
Elnath	278	07.6	N 28	37.3	Atria	107	18.6	S 69	03.8
Alnilam	275	42.4	S 01	11.4	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.0	N 07	24.6	Shaula	96	15.9	S 37	07.0
Canopus	263	54.8	S 52	42.3	Rasalhague	96	02.3	N 12	33.1
Sirius	258	30.2	S 16	44.2	Etamin	90	43.8	N 51	29.5
Adhara	255	09.6	S 28	59.9	Kaus Australis	83	37.9	S 34	22.4
Castor	246	02.9	N 31	50.7	Vega	80	35.8	N 38	48.3
Procyon	244	55.5	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.7	N 27	58.7	Albireo	67	07.1	N 28	00.2
Avior	234	17.0	S 59	34.3	Altair	62	04.0	N 08	55.2
Suhail	222	49.8	S 43	30.7	Peacock	53	12.1	S 56	40.2
Miaplacidus	221	39.6	S 69	47.9	Deneb	49	28.2	N 45	21.1
Alphard	217	52.3	S 08	44.6	Enif	33	42.7	N 09	57.9
Regulus	207	39.3	N 11	52.4	Alnair	27	38.1	S 46	51.8
Dubhe	193	47.0	N 61	39.0	Formalhaut	15	19.2	S 29	30.9
Denebola	182	29.5	N 14	28.0	Markab	13	33.9	N 15	18.6

2019 - 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	16.2	+02.5	313	15.4	+02.5	314	14.5	+02.5	315	13.7	+02.4	316	12.8	+02.5	00		
01	327	18.7	+02.5	328	17.9	+02.4	329	17.0	+02.5	330	16.1	+02.5	331	15.3	+02.4	01		
02	342	21.2	+02.4	343	20.3	+02.5	344	19.5	+02.4	345	18.6	+02.5	346	17.7	+02.5	02		
03	357	23.6	+02.5	358	22.8	+02.4	359	21.9	+02.5	0	21.1	+02.4	1	20.2	+02.5	03		
04	12	26.1	+02.5	13	25.2	+02.5	14	24.4	+02.4	15	23.5	+02.5	16	22.7	+02.4	04		
05	27	28.6	+02.4	28	27.7	+02.5	29	26.8	+02.5	30	26.0	+02.4	31	25.1	+02.5	05		
06	42	31.0	+02.5	43	30.2	+02.4	44	29.3	+02.5	45	28.4	+02.5	46	27.6	+02.4	06		
07	57	33.5	+02.5	58	32.6	+02.5	59	31.8	+02.4	60	30.9	+02.5	61	30.0	+02.5	07		
08	72	36.0	+02.4	73	35.1	+02.5	74	34.2	+02.5	75	33.4	+02.4	76	32.5	+02.5	08		
09	87	38.4	+02.5	88	37.6	+02.4	89	36.7	+02.5	90	35.8	+02.5	91	35.0	+02.4	09		
10	102	40.9	+02.5	103	40.0	+02.5	104	39.2	+02.4	105	38.3	+02.5	106	37.4	+02.5	10		
11	117	43.4	+02.4	118	42.5	+02.5	119	41.6	+02.5	120	40.8	+02.4	121	39.9	+02.5	11		
12	132	45.8	+02.5	133	45.0	+02.4	134	44.1	+02.5	135	43.2	+02.5	136	42.4	+02.4	12		
13	147	48.3	+02.4	148	47.4	+02.5	149	46.6	+02.4	150	45.7	+02.5	151	44.8	+02.5	13		
14	162	50.7	+02.5	163	49.9	+02.4	164	49.0	+02.5	165	48.2	+02.4	166	47.3	+02.5	14		
15	177	53.2	+02.5	178	52.3	+02.5	179	51.5	+02.4	180	50.6	+02.5	181	49.8	+02.4	15		
16	192	55.7	+02.4	193	54.8	+02.5	194	53.9	+02.5	195	53.1	+02.5	196	52.2	+02.5	16		
17	207	58.1	+02.5	208	57.3	+02.4	209	56.4	+02.5	210	55.6	+02.4	211	54.7	+02.5	17		
18	223	00.6	+02.5	223	59.7	+02.5	224	58.9	+02.4	225	58.0	+02.5	226	57.2	+02.4	18		
19	238	03.1	+02.4	239	02.2	+02.5	240	01.3	+02.5	241	00.5	+02.4	241	59.6	+02.5	19		
20	253	05.5	+02.5	254	04.7	+02.4	255	03.8	+02.5	256	02.9	+02.5	257	02.1	+02.4	20		
21	268	08.0	+02.5	269	07.1	+02.5	270	06.3	+02.4	271	05.4	+02.5	272	04.5	+02.5	21		
22	283	10.5	+02.4	284	09.6	+02.5	285	08.7	+02.5	286	07.9	+02.4	287	07.0	+02.5	22		
23	298	12.9	+02.5	299	12.1	+02.4	300	11.2	+02.5	301	10.3	+02.5	302	09.5	+02.4	23		

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	39.0	N 29	11.8	Gienah	175	48.1	S 17	38.9
Ankaa	353	11.4	S 42	11.7	Acrux	173	05.0	S 63	12.5
Schedir	349	35.5	N 56	38.4	Gacrux	171	56.6	S 57	13.4
Diphda	348	51.6	S 17	52.7	Alioth	166	17.3	N 55	51.6
Achernar	335	23.5	S 57	08.0	Spica	158	26.9	S 11	15.6
Hamal	327	56.0	N 23	33.1	Alkaid	152	55.6	N 49	13.4
Polaris	315	59.3	N 89	20.4	Hadar	148	42.0	S 60	28.1
Acamar	315	15.2	S 40	13.5	Menkent	148	02.4	S 36	27.7
Menkar	314	10.7	N 04	09.9	Arcturus	145	51.6	N 19	05.8
Mirfak	308	34.4	N 49	55.5	Rigel Kentaurus	139	43.7	S 60	55.2
Aldebaran	290	44.7	N 16	32.8	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	28.6	N 46	00.9	Kocab	137	20.0	N 74	05.0
Rigel	281	08.2	S 08	10.8	Alphecca	126	07.4	N 26	39.3
Bellatrix	278	27.7	N 06	22.0	Antares	112	21.0	S 26	28.4
Elnath	278	07.6	N 28	37.3	Atria	107	18.6	S 69	03.8
Alnilam	275	42.3	S 01	11.4	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.0	N 07	24.6	Shaula	96	15.9	S 37	07.0
Canopus	263	54.7	S 52	42.3	Rasalhague	96	02.3	N 12	33.1
Sirius	258	30.2	S 16	44.2	Etamin	90	43.8	N 51	29.5
Adhara	255	09.6	S 28	59.9	Kaus Australis	83	37.9	S 34	22.4
Castor	246	02.9	N 31	50.7	Vega	80	35.8	N 38	48.3
Procyon	244	55.5	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.7	N 27	58.7	Albireo	67	07.1	N 28	00.2
Avior	234	17.0	S 59	34.3	Altair	62	04.0	N 08	55.2
Suhail	222	49.8	S 43	30.7	Peacock	53	12.0	S 56	40.2
Miaplacidus	221	39.6	S 69	47.9	Deneb	49	28.2	N 45	21.1
Alphard	217	52.3	S 08	44.5	Enif	33	42.7	N 09	57.9
Regulus	207	39.3	N 11	52.4	Alnair	27	38.1	S 46	51.8
Dubhe	193	47.0	N 61	39.0	Formalhaut	15	19.1	S 29	30.9
Denebola	182	29.5	N 14	28.0	Markab	13	33.9	N 15	18.6

2019 - First Point of Aries / Selected Stars

UT	day 221 of 365		day 222 of 365		day 223 of 365		day 224 of 365		day 225 of 365		UT					
	August 9		August 10		August 11		August 12		August 13							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	317	11.9	+02.5	318	11.1	+02.4	319	10.2	+02.5	320	09.4	+02.4	321	08.5	+02.5	00
01	332	14.4	+02.5	333	13.5	+02.5	334	12.7	+02.4	335	11.8	+02.5	336	11.0	+02.4	01
02	347	16.9	+02.4	348	16.0	+02.5	349	15.1	+02.5	350	14.3	+02.5	351	13.4	+02.5	02
03	2	19.3	+02.5	3	18.5	+02.4	4	17.6	+02.5	5	16.8	+02.4	6	15.9	+02.5	03
04	17	21.8	+02.5	18	20.9	+02.5	19	20.1	+02.4	20	19.2	+02.5	21	18.4	+02.4	04
05	32	24.3	+02.4	33	23.4	+02.5	34	22.5	+02.5	35	21.7	+02.4	36	20.8	+02.5	05
06	47	26.7	+02.5	48	25.9	+02.4	49	25.0	+02.5	50	24.1	+02.5	51	23.3	+02.4	06
07	62	29.2	+02.5	63	28.3	+02.5	64	27.5	+02.4	65	26.6	+02.5	66	25.7	+02.5	07
08	77	31.7	+02.4	78	30.8	+02.5	79	29.9	+02.5	80	29.1	+02.4	81	28.2	+02.5	08
09	92	34.1	+02.5	93	33.3	+02.4	94	32.4	+02.5	95	31.5	+02.5	96	30.7	+02.4	09
10	107	36.6	+02.4	108	35.7	+02.5	109	34.9	+02.4	110	34.0	+02.5	111	33.1	+02.5	10
11	122	39.0	+02.5	123	38.2	+02.4	124	37.3	+02.5	125	36.5	+02.4	126	35.6	+02.5	11
12	137	41.5	+02.5	138	40.6	+02.5	139	39.8	+02.5	140	38.9	+02.5	141	38.1	+02.4	12
13	152	44.0	+02.4	153	43.1	+02.5	154	42.3	+02.4	155	41.4	+02.5	156	40.5	+02.5	13
14	167	46.4	+02.5	168	45.6	+02.4	169	44.7	+02.5	170	43.9	+02.4	171	43.0	+02.5	14
15	182	48.9	+02.5	183	48.0	+02.5	184	47.2	+02.4	185	46.3	+02.5	186	45.5	+02.4	15
16	197	51.4	+02.4	198	50.5	+02.5	199	49.6	+02.5	200	48.8	+02.4	201	47.9	+02.5	16
17	212	53.8	+02.5	213	53.0	+02.4	214	52.1	+02.5	215	51.2	+02.5	216	50.4	+02.5	17
18	227	56.3	+02.5	228	55.4	+02.5	229	54.6	+02.4	230	53.7	+02.5	231	52.9	+02.4	18
19	242	58.8	+02.4	243	57.9	+02.5	244	57.0	+02.5	245	56.2	+02.4	246	55.3	+02.5	19
20	258	01.2	+02.5	259	00.4	+02.4	259	59.5	+02.5	260	58.6	+02.5	261	57.8	+02.4	20
21	273	03.7	+02.5	274	02.8	+02.5	275	02.0	+02.4	276	01.1	+02.5	277	00.2	+02.5	21
22	288	06.2	+02.4	289	05.3	+02.5	290	04.4	+02.5	291	03.6	+02.4	292	02.7	+02.5	22
23	303	08.6	+02.5	304	07.8	+02.4	305	06.9	+02.5	306	06.0	+02.5	307	05.2	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.9	N 29	11.8	Gienah	175	48.1	S 17	38.9
Ankaa	353	11.3	S 42	11.7	Acrux	173	05.0	S 63	12.5
Schedir	349	35.4	N 56	38.4	Gacrux	171	56.6	S 57	13.3
Diphda	348	51.5	S 17	52.7	Alioth	166	17.4	N 55	51.6
Achernar	335	23.5	S 57	08.1	Spica	158	26.9	S 11	15.6
Hamal	327	56.0	N 23	33.2	Alkaid	152	55.7	N 49	13.4
Polaris	315	56.8	N 89	20.4	Hadar	148	42.0	S 60	28.1
Acamar	315	15.1	S 40	13.4	Menkent	148	02.4	S 36	27.7
Menkar	314	10.7	N 04	09.9	Arcturus	145	51.6	N 19	05.8
Mirfak	308	34.4	N 49	55.5	Rigel Kentaurus	139	43.8	S 60	55.2
Aldebaran	290	44.7	N 16	32.8	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	28.5	N 46	00.9	Kocab	137	20.1	N 74	05.0
Rigel	281	08.2	S 08	10.7	Alphecca	126	07.4	N 26	39.3
Bellatrix	278	27.7	N 06	22.0	Antares	112	21.1	S 26	28.4
Elnath	278	07.5	N 28	37.3	Atria	107	18.7	S 69	03.8
Alnilam	275	42.3	S 01	11.4	Sabik	102	07.5	S 15	44.8
Betelgeuze	270	57.0	N 07	24.6	Shaula	96	15.9	S 37	07.0
Canopus	263	54.7	S 52	42.2	Rasalhague	96	02.4	N 12	33.1
Sirius	258	30.1	S 16	44.1	Etamin	90	43.8	N 51	29.5
Adhara	255	09.5	S 28	59.8	Kaus Australis	83	37.9	S 34	22.4
Castor	246	02.9	N 31	50.7	Vega	80	35.8	N 38	48.3
Procyon	244	55.5	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.6	N 27	58.7	Albireo	67	07.2	N 28	00.3
Avior	234	17.0	S 59	34.3	Altair	62	04.0	N 08	55.3
Suhail	222	49.8	S 43	30.6	Peacock	53	12.0	S 56	40.2
Miaplacidus	221	39.6	S 69	47.9	Deneb	49	28.2	N 45	21.1
Alphard	217	52.3	S 08	44.5	Enif	33	42.7	N 09	58.0
Regulus	207	39.3	N 11	52.4	Alnair	27	38.0	S 46	51.8
Dubhe	193	47.0	N 61	39.0	Formalhaut	15	19.1	S 29	30.9
Denebola	182	29.5	N 14	28.0	Markab	13	33.9	N 15	18.6

2019 - 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	07.6	+02.5	323	06.8	+02.4	324	05.9	+02.5	325	05.1	+02.4	326	04.2	+02.5	00
01	337	10.1	+02.5	338	09.2	+02.5	339	08.4	+02.4	340	07.5	+02.5	341	06.7	+02.4	01
02	352	12.6	+02.4	353	11.7	+02.5	354	10.8	+02.5	355	10.0	+02.4	356	09.1	+02.5	02
03	7	15.0	+02.5	8	14.2	+02.4	9	13.3	+02.5	10	12.4	+02.5	11	11.6	+02.4	03
04	22	17.5	+02.5	23	16.6	+02.5	24	15.8	+02.4	25	14.9	+02.5	26	14.0	+02.5	04
05	37	20.0	+02.4	38	19.1	+02.5	39	18.2	+02.5	40	17.4	+02.4	41	16.5	+02.5	05
06	52	22.4	+02.5	53	21.6	+02.4	54	20.7	+02.5	55	19.8	+02.5	56	19.0	+02.4	06
07	67	24.9	+02.5	68	24.0	+02.5	69	23.2	+02.4	70	22.3	+02.5	71	21.4	+02.5	07
08	82	27.4	+02.4	83	26.5	+02.5	84	25.6	+02.5	85	24.8	+02.4	86	23.9	+02.5	08
09	97	29.8	+02.5	98	29.0	+02.4	99	28.1	+02.5	100	27.2	+02.5	101	26.4	+02.4	09
10	112	32.3	+02.4	113	31.4	+02.5	114	30.6	+02.4	115	29.7	+02.5	116	28.8	+02.5	10
11	127	34.7	+02.5	128	33.9	+02.4	129	33.0	+02.5	130	32.2	+02.4	131	31.3	+02.5	11
12	142	37.2	+02.5	143	36.3	+02.5	144	35.5	+02.4	145	34.6	+02.5	146	33.8	+02.4	12
13	157	39.7	+02.4	158	38.8	+02.5	159	37.9	+02.5	160	37.1	+02.4	161	36.2	+02.5	13
14	172	42.1	+02.5	173	41.3	+02.4	174	40.4	+02.5	175	39.5	+02.5	176	38.7	+02.5	14
15	187	44.6	+02.5	188	43.7	+02.5	189	42.9	+02.4	190	42.0	+02.5	191	41.2	+02.4	15
16	202	47.1	+02.4	203	46.2	+02.5	204	45.3	+02.5	205	44.5	+02.4	206	43.6	+02.5	16
17	217	49.5	+02.5	218	48.7	+02.4	219	47.8	+02.5	220	46.9	+02.5	221	46.1	+02.4	17
18	232	52.0	+02.5	233	51.1	+02.5	234	50.3	+02.4	235	49.4	+02.5	236	48.5	+02.5	18
19	247	54.5	+02.4	248	53.6	+02.5	249	52.7	+02.5	250	51.9	+02.4	251	51.0	+02.5	19
20	262	56.9	+02.5	263	56.1	+02.4	264	55.2	+02.5	265	54.3	+02.5	266	53.5	+02.4	20
21	277	59.4	+02.4	278	58.5	+02.5	279	57.7	+02.4	280	56.8	+02.5	281	55.9	+02.5	21
22	293	01.8	+02.5	294	01.0	+02.5	295	00.1	+02.5	295	59.3	+02.4	296	58.4	+02.5	22
23	308	04.3	+02.5	309	03.5	+02.4	310	02.6	+02.5	311	01.7	+02.5	312	00.9	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 38.9	N 29 11.9	Gienah	175 48.1	S 17 38.9
Ankaa	353 11.3	S 42 11.7	Acrux	173 05.1	S 63 12.5
Schedir	349 35.4	N 56 38.4	Gacrux	171 56.6	S 57 13.3
Diphda	348 51.5	S 17 52.7	Alioth	166 17.4	N 55 51.6
Achernar	335 23.4	S 57 08.1	Spica	158 26.9	S 11 15.6
Hamal	327 55.9	N 23 33.2	Alkaid	152 55.7	N 49 13.4
Polaris	315 54.2	N 89 20.4	Hadar	148 42.1	S 60 28.1
Acamar	315 15.1	S 40 13.4	Menkent	148 02.4	S 36 27.7
Menkar	314 10.6	N 04 09.9	Arcturus	145 51.6	N 19 05.8
Mirfak	308 34.3	N 49 55.5	Rigel Kentaurus	139 43.8	S 60 55.2
Aldebaran	290 44.7	N 16 32.8	Zubenelgenubi	137 00.7	S 16 07.2
Capella	280 28.5	N 46 00.9	Kocab	137 20.2	N 74 05.0
Rigel	281 08.2	S 08 10.7	Alphecca	126 07.4	N 26 39.3
Bellatrix	278 27.6	N 06 22.0	Antares	112 21.1	S 26 28.4
Elnath	278 07.5	N 28 37.3	Atria	107 18.7	S 69 03.8
Alnilam	275 42.3	S 01 11.4	Sabik	102 07.5	S 15 44.8
Betelgeuze	270 56.9	N 07 24.6	Shaula	96 15.9	S 37 07.0
Canopus	263 54.7	S 52 42.2	Rasalhague	96 02.4	N 12 33.1
Sirius	258 30.1	S 16 44.1	Etamin	90 43.8	N 51 29.5
Adhara	255 09.5	S 28 59.8	Kaus Australis	83 37.9	S 34 22.4
Castor	246 02.8	N 31 50.7	Vega	80 35.9	N 38 48.3
Procyon	244 55.4	N 05 10.8	Nunki	75 52.8	S 26 16.2
Pollux	243 22.6	N 27 58.7	Albireo	67 07.2	N 28 00.3
Avior	234 16.9	S 59 34.3	Altair	62 04.0	N 08 55.3
Suhail	222 49.8	S 43 30.6	Peacock	53 12.0	S 56 40.2
Miaplacidus	221 39.6	S 69 47.8	Deneb	49 28.2	N 45 21.1
Alphard	217 52.3	S 08 44.5	Enif	33 42.7	N 09 58.0
Regulus	207 39.3	N 11 52.4	Alnair	27 38.0	S 46 51.8
Dubhe	193 47.0	N 61 39.0	Formalhaut	15 19.1	S 29 30.9
Denebola	182 29.5	N 14 28.0	Markab	13 33.8	N 15 18.7

2019 - First Point of Aries / Selected Stars

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	03.3	+02.5	328	02.5	+02.4	329	01.6	+02.5	330	00.7	+02.5	330	59.9	+02.4	00		
01	342	05.8	+02.5	343	04.9	+02.5	344	04.1	+02.4	345	03.2	+02.5	346	02.3	+02.5	01		
02	357	08.3	+02.4	358	07.4	+02.5	359	06.5	+02.5	0	05.7	+02.4	1	04.8	+02.5	02		
03	12	10.7	+02.5	13	09.9	+02.4	14	09.0	+02.5	15	08.1	+02.5	16	07.3	+02.4	03		
04	27	13.2	+02.4	28	12.3	+02.5	29	11.5	+02.4	30	10.6	+02.5	31	09.7	+02.5	04		
05	42	15.6	+02.5	43	14.8	+02.4	44	13.9	+02.5	45	13.1	+02.4	46	12.2	+02.5	05		
06	57	18.1	+02.5	58	17.2	+02.5	59	16.4	+02.4	60	15.5	+02.5	61	14.7	+02.4	06		
07	72	20.6	+02.4	73	19.7	+02.5	74	18.8	+02.5	75	18.0	+02.5	76	17.1	+02.5	07		
08	87	23.0	+02.5	88	22.2	+02.4	89	21.3	+02.5	90	20.5	+02.4	91	19.6	+02.5	08		
09	102	25.5	+02.5	103	24.6	+02.5	104	23.8	+02.4	105	22.9	+02.5	106	22.1	+02.4	09		
10	117	28.0	+02.4	118	27.1	+02.5	119	26.2	+02.5	120	25.4	+02.4	121	24.5	+02.5	10		
11	132	30.4	+02.5	133	29.6	+02.4	134	28.7	+02.5	135	27.8	+02.5	136	27.0	+02.4	11		
12	147	32.9	+02.5	148	32.0	+02.5	149	31.2	+02.4	150	30.3	+02.5	151	29.4	+02.5	12		
13	162	35.4	+02.4	163	34.5	+02.5	164	33.6	+02.5	165	32.8	+02.4	166	31.9	+02.5	13		
14	177	37.8	+02.5	178	37.0	+02.4	179	36.1	+02.5	180	35.2	+02.5	181	34.4	+02.4	14		
15	192	40.3	+02.5	193	39.4	+02.5	194	38.6	+02.4	195	37.7	+02.5	196	36.8	+02.5	15		
16	207	42.8	+02.4	208	41.9	+02.5	209	41.0	+02.5	210	40.2	+02.4	211	39.3	+02.5	16		
17	222	45.2	+02.5	223	44.4	+02.4	224	43.5	+02.5	225	42.6	+02.5	226	41.8	+02.4	17		
18	237	47.7	+02.4	238	46.8	+02.5	239	46.0	+02.4	240	45.1	+02.5	241	44.2	+02.5	18		
19	252	50.1	+02.5	253	49.3	+02.4	254	48.4	+02.5	255	47.6	+02.4	256	46.7	+02.5	19		
20	267	52.6	+02.5	268	51.7	+02.5	269	50.9	+02.4	270	50.0	+02.5	271	49.2	+02.4	20		
21	282	55.1	+02.4	283	54.2	+02.5	284	53.3	+02.5	285	52.5	+02.4	286	51.6	+02.5	21		
22	297	57.5	+02.5	298	56.7	+02.4	299	55.8	+02.5	300	54.9	+02.5	301	54.1	+02.5	22		
23	312	60.0	+02.5	313	59.1	+02.5	314	58.3	+02.4	315	57.4	+02.5	316	56.6	+02.4	23		

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	38.9	N 29	11.9	Gienah	175	48.2	S 17	38.9
Ankaa	353	11.3	S 42	11.7	Acrux	173	05.1	S 63	12.5
Schedir	349	35.3	N 56	38.5	Gacrux	171	56.7	S 57	13.3
Diphda	348	51.5	S 17	52.7	Alioth	166	17.4	N 55	51.6
Achernar	335	23.3	S 57	08.1	Spica	158	27.0	S 11	15.6
Hamal	327	55.9	N 23	33.2	Alkaid	152	55.7	N 49	13.4
Polaris	315	51.9	N 89	20.4	Hadar	148	42.1	S 60	28.1
Acamar	315	15.0	S 40	13.4	Menkent	148	02.5	S 36	27.7
Menkar	314	10.6	N 04	10.0	Arcturus	145	51.7	N 19	05.8
Mirfak	308	34.3	N 49	55.5	Rigel Kentaurus	139	43.9	S 60	55.2
Aldebaran	290	44.6	N 16	32.8	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	28.4	N 46	00.9	Kocab	137	20.3	N 74	04.9
Rigel	281	08.1	S 08	10.7	Alphecca	126	07.5	N 26	39.3
Bellatrix	278	27.6	N 06	22.0	Antares	112	21.1	S 26	28.4
Elnath	278	07.5	N 28	37.3	Atria	107	18.8	S 69	03.8
Alnilam	275	42.2	S 01	11.4	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	56.9	N 07	24.6	Shaula	96	16.0	S 37	07.0
Canopus	263	54.6	S 52	42.2	Rasalhague	96	02.4	N 12	33.1
Sirius	258	30.1	S 16	44.1	Etamin	90	43.9	N 51	29.6
Adhara	255	09.5	S 28	59.8	Kaus Australis	83	37.9	S 34	22.4
Castor	246	02.8	N 31	50.7	Vega	80	35.9	N 38	48.3
Procyon	244	55.4	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.6	N 27	58.7	Albireo	67	07.2	N 28	00.3
Avior	234	16.9	S 59	34.2	Altair	62	04.0	N 08	55.3
Suhail	222	49.8	S 43	30.6	Peacock	53	12.0	S 56	40.2
Miaplacidus	221	39.6	S 69	47.8	Deneb	49	28.2	N 45	21.2
Alphard	217	52.3	S 08	44.5	Enif	33	42.7	N 09	58.0
Regulus	207	39.3	N 11	52.4	Alnair	27	38.0	S 46	51.8
Dubhe	193	47.0	N 61	38.9	Formalhaut	15	19.1	S 29	31.0
Denebola	182	29.5	N 14	28.0	Markab	13	33.8	N 15	18.7

2019 - First Point of Aries / Selected Stars

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	331	59.0	+02.5	332	58.2	+02.4	333	57.3	+02.5	334	56.4	+02.5	00	
01	347	01.5	+02.4	348	00.6	+02.5	348	59.8	+02.4	349	58.9	+02.5	01	
02		2	03.9	+02.5	3	03.1	+02.4	4	02.2	+02.5	5	01.4	+02.4	02
03	17	06.4	+02.5	18	05.5	+02.5	19	04.7	+02.5	20	03.8	+02.5	03	
04	32	08.9	+02.4	33	08.0	+02.5	34	07.2	+02.4	35	06.3	+02.5	04	
05	47	11.3	+02.5	48	10.5	+02.4	49	09.6	+02.5	50	08.8	+02.4	05	
06	62	13.8	+02.5	63	12.9	+02.5	64	12.1	+02.4	65	11.2	+02.5	06	
07	77	16.3	+02.4	78	15.4	+02.5	79	14.5	+02.5	80	13.7	+02.4	07	
08	92	18.7	+02.5	93	17.9	+02.4	94	17.0	+02.5	95	16.1	+02.5	08	
09	107	21.2	+02.5	108	20.3	+02.5	109	19.5	+02.4	110	18.6	+02.5	09	
10	122	23.7	+02.4	123	22.8	+02.5	124	21.9	+02.5	125	21.1	+02.4	10	
11	137	26.1	+02.5	138	25.3	+02.4	139	24.4	+02.5	140	23.5	+02.5	11	
12	152	28.6	+02.4	153	27.7	+02.5	154	26.9	+02.4	155	26.0	+02.5	12	
13	167	31.0	+02.5	168	30.2	+02.5	169	29.3	+02.5	170	28.5	+02.4	13	
14	182	33.5	+02.5	183	32.7	+02.4	184	31.8	+02.5	185	30.9	+02.5	14	
15	197	36.0	+02.4	198	35.1	+02.5	199	34.3	+02.4	200	33.4	+02.5	15	
16	212	38.4	+02.5	213	37.6	+02.4	214	36.7	+02.5	215	35.9	+02.4	16	
17	227	40.9	+02.5	228	40.0	+02.5	229	39.2	+02.4	230	38.3	+02.5	17	
18	242	43.4	+02.4	243	42.5	+02.5	244	41.6	+02.5	245	40.8	+02.5	18	
19	257	45.8	+02.5	258	45.0	+02.4	259	44.1	+02.5	260	43.3	+02.4	19	
20	272	48.3	+02.5	273	47.4	+02.5	274	46.6	+02.4	275	45.7	+02.5	20	
21	287	50.8	+02.4	288	49.9	+02.5	289	49.0	+02.5	290	48.2	+02.4	21	
22	302	53.2	+02.5	303	52.4	+02.4	304	51.5	+02.5	305	50.6	+02.5	22	
23	317	55.7	+02.5	318	54.8	+02.5	319	54.0	+02.4	320	53.1	+02.5	23	

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.9	N 29	11.9	Gienah	175	48.2	S 17	38.9
Ankaa	353	11.2	S 42	11.7	Acrux	173	05.2	S 63	12.5
Schedir	349	35.3	N 56	38.5	Gacrux	171	56.7	S 57	13.3
Diphda	348	51.5	S 17	52.7	Alioth	166	17.4	N 55	51.6
Achernar	335	23.3	S 57	08.1	Spica	158	27.0	S 11	15.6
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Polaris	315	49.5	N 89	20.4	Hadar	148	42.2	S 60	28.1
Acamar	315	15.0	S 40	13.4	Menkent	148	02.5	S 36	27.7
Menkar	314	10.5	N 04	10.0	Arcturus	145	51.7	N 19	05.8
Mirfak	308	34.2	N 49	55.5	Rigel Kentaurus	139	43.9	S 60	55.2
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Capella	280	28.4	N 46	00.9	Kocab	137	20.4	N 74	04.9
Rigel	281	08.1	S 08	10.7	Alphecca	126	07.5	N 26	39.3
Bellatrix	278	27.6	N 06	22.0	Antares	112	21.1	S 26	28.4
Elnath	278	07.4	N 28	37.3	Atria	107	18.9	S 69	03.8
Alnilam	275	42.2	S 01	11.4	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	56.9	N 07	24.6	Shaula	96	16.0	S 37	07.0
Canopus	263	54.6	S 52	42.2	Rasalhague	96	02.4	N 12	33.1
Sirius	258	30.1	S 16	44.1	Etamin	90	43.9	N 51	29.6
Adhara	255	09.5	S 28	59.8	Kaus Australis	83	37.9	S 34	22.4
Castor	246	02.8	N 31	50.7	Vega	80	35.9	N 38	48.3
Procyon	244	55.4	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.6	N 27	58.7	Albireo	67	07.2	N 28	00.3
Avior	234	16.9	S 59	34.2	Altair	62	04.0	N 08	55.3
Suhail	222	49.8	S 43	30.6	Peacock	53	12.0	S 56	40.3
Miaplacidus	221	39.6	S 69	47.8	Deneb	49	28.2	N 45	21.2
Alphard	217	52.3	S 08	44.5	Enif	33	42.7	N 09	58.0
Regulus	207	39.3	N 11	52.4	Alnair	27	38.0	S 46	51.8
Dubhe	193	47.0	N 61	38.9	Formalhaut	15	19.1	S 29	31.0
Denebola	182	29.5	N 14	28.0	Markab	13	33.8	N 15	18.7

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UT	day 241 of 365 <i>August 29</i>			day 242 of 365 <i>August 30</i>			day 243 of 365 <i>August 31</i>			day 244 of 365 <i>September 1</i>			day 245 of 365 <i>September 2</i>			UT
	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	336	54.7	+02.5	337	53.9	+02.4	338	53.0	+02.5	339	52.1	+02.5	340	51.3	+02.4	00
01	351	57.2	+02.4	352	56.3	+02.5	353	55.5	+02.4	354	54.6	+02.5	355	53.7	+02.5	01
02	6	59.6	+02.5	7	58.8	+02.4	8	57.9	+02.5	9	57.1	+02.4	10	56.2	+02.5	02
03	22	02.1	+02.5	23	01.2	+02.5	24	00.4	+02.4	24	59.5	+02.5	25	58.7	+02.4	03
04	37	04.6	+02.4	38	03.7	+02.5	39	02.8	+02.5	40	02.0	+02.4	41	01.1	+02.5	04
05	52	07.0	+02.5	53	06.2	+02.4	54	05.3	+02.5	55	04.4	+02.5	56	03.6	+02.4	05
06	67	09.5	+02.5	68	08.6	+02.5	69	07.8	+02.4	70	06.9	+02.5	71	06.0	+02.5	06
07	82	12.0	+02.4	83	11.1	+02.5	84	10.2	+02.5	85	09.4	+02.4	86	08.5	+02.5	07
08	97	14.4	+02.5	98	13.6	+02.4	99	12.7	+02.5	100	11.8	+02.5	101	11.0	+02.4	08
09	112	16.9	+02.5	113	16.0	+02.5	114	15.2	+02.4	115	14.3	+02.5	116	13.4	+02.5	09
10	127	19.4	+02.4	128	18.5	+02.5	129	17.6	+02.5	130	16.8	+02.4	131	15.9	+02.5	10
11	142	21.8	+02.5	143	21.0	+02.4	144	20.1	+02.5	145	19.2	+02.5	146	18.4	+02.4	11
12	157	24.3	+02.4	158	23.4	+02.5	159	22.6	+02.4	160	21.7	+02.5	161	20.8	+02.5	12
13	172	26.7	+02.5	173	25.9	+02.4	174	25.0	+02.5	175	24.2	+02.4	176	23.3	+02.5	13
14	187	29.2	+02.5	188	28.3	+02.5	189	27.5	+02.5	190	26.6	+02.5	191	25.8	+02.4	14
15	202	31.7	+02.4	203	30.8	+02.5	204	30.0	+02.4	205	29.1	+02.5	206	28.2	+02.5	15
16	217	34.1	+02.5	218	33.3	+02.4	219	32.4	+02.5	220	31.6	+02.4	221	30.7	+02.5	16
17	232	36.6	+02.5	233	35.7	+02.5	234	34.9	+02.4	235	34.0	+02.5	236	33.2	+02.4	17
18	247	39.1	+02.4	248	38.2	+02.5	249	37.3	+02.5	250	36.5	+02.4	251	35.6	+02.5	18
19	262	41.5	+02.5	263	40.7	+02.4	264	39.8	+02.5	265	38.9	+02.5	266	38.1	+02.4	19
20	277	44.0	+02.5	278	43.1	+02.5	279	42.3	+02.4	280	41.4	+02.5	281	40.5	+02.5	20
21	292	46.5	+02.4	293	45.6	+02.5	294	44.7	+02.5	295	43.9	+02.4	296	43.0	+02.5	21
22	307	48.9	+02.5	308	48.1	+02.4	309	47.2	+02.5	310	46.3	+02.5	311	45.5	+02.4	22
23	322	51.4	+02.5	323	50.5	+02.5	324	49.7	+02.4	325	48.8	+02.5	326	47.9	+02.5	23

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	38.8	N 29	11.9	Gienah	175	48.2	S 17	38.9
Ankaa	353	11.2	S 42	11.7	Acrux	173	05.2	S 63	12.5
Schedir	349	35.3	N 56	38.5	Gacrux	171	56.7	S 57	13.3
Diphda	348	51.4	S 17	52.7	Alioth	166	17.4	N 55	51.6
Achernar	335	23.2	S 57	08.1	Spica	158	27.0	S 11	15.6
Hamal	327	55.8	N 23	33.2	Alkaid	152	55.8	N 49	13.3
Polaris	315	46.9	N 89	20.4	Hadar	148	42.2	S 60	28.1
Acamar	315	14.9	S 40	13.4	Menkent	148	02.5	S 36	27.7
Menkar	314	10.5	N 04	10.0	Arcturus	145	51.7	N 19	05.8
Mirfak	308	34.2	N 49	55.5	Rigel Kentaurus	139	44.0	S 60	55.1
Aldebaran	290	44.5	N 16	32.9	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	28.3	N 46	00.9	Kocab	137	20.5	N 74	04.9
Rigel	281	08.1	S 08	10.7	Alphecca	126	07.5	N 26	39.3
Bellatrix	278	27.5	N 06	22.0	Antares	112	21.1	S 26	28.4
Elnath	278	07.4	N 28	37.3	Atria	107	18.9	S 69	03.8
Alnilam	275	42.2	S 01	11.4	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	56.8	N 07	24.6	Shaula	96	16.0	S 37	07.0
Canopus	263	54.6	S 52	42.2	Rasalhague	96	02.4	N 12	33.1
Sirius	258	30.0	S 16	44.1	Etamin	90	43.9	N 51	29.6
Adhara	255	09.4	S 28	59.8	Kaus Australis	83	38.0	S 34	22.4
Castor	246	02.8	N 31	50.7	Vega	80	35.9	N 38	48.4
Procyon	244	55.3	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.5	N 27	58.7	Albireo	67	07.2	N 28	00.3
Avior	234	16.9	S 59	34.2	Altair	62	04.0	N 08	55.3
Suhail	222	49.7	S 43	30.6	Peacock	53	12.0	S 56	40.3
Miaplacidus	221	39.6	S 69	47.8	Deneb	49	28.2	N 45	21.2
Alphard	217	52.2	S 08	44.5	Enif	33	42.6	N 09	58.0
Regulus	207	39.2	N 11	52.4	Alnair	27	38.0	S 46	51.9
Dubhe	193	47.0	N 61	38.9	Formalhaut	15	19.0	S 29	31.0
Denebola	182	29.5	N 14	28.0	Markab	13	33.8	N 15	18.7

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UT	day 246 of 365 September 3			day 247 of 365 September 4			day 248 of 365 September 5			day 249 of 365 September 6			day 250 of 365 September 7			UT
	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	GHA		ddGHA	
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	
00	341	50.4	+02.5	342	49.5	+02.5	343	48.7	+02.4	344	47.8	+02.5	345	47.0	+02.4	00
01	356	52.9	+02.4	357	52.0	+02.5	358	51.1	+02.5	359	50.3	+02.4	0	49.4	+02.5	01
02	11	55.3	+02.5	12	54.5	+02.4	13	53.6	+02.5	14	52.7	+02.5	15	51.9	+02.4	02
03	26	57.8	+02.5	27	56.9	+02.5	28	56.1	+02.4	29	55.2	+02.5	30	54.3	+02.5	03
04	42	00.3	+02.4	42	59.4	+02.5	43	58.5	+02.5	44	57.7	+02.4	45	56.8	+02.5	04
05	57	02.7	+02.5	58	01.9	+02.4	59	01.0	+02.5	60	00.1	+02.5	60	59.3	+02.4	05
06	72	05.2	+02.4	73	04.3	+02.5	74	03.5	+02.4	75	02.6	+02.5	76	01.7	+02.5	06
07	87	07.6	+02.5	88	06.8	+02.5	89	05.9	+02.5	90	05.1	+02.4	91	04.2	+02.5	07
08	102	10.1	+02.5	103	09.3	+02.4	104	08.4	+02.5	105	07.5	+02.5	106	06.7	+02.4	08
09	117	12.6	+02.4	118	11.7	+02.5	119	10.9	+02.4	120	10.0	+02.5	121	09.1	+02.5	09
10	132	15.0	+02.5	133	14.2	+02.4	134	13.3	+02.5	135	12.5	+02.4	136	11.6	+02.5	10
11	147	17.5	+02.5	148	16.6	+02.5	149	15.8	+02.4	150	14.9	+02.5	151	14.1	+02.4	11
12	162	20.0	+02.4	163	19.1	+02.5	164	18.2	+02.5	165	17.4	+02.4	166	16.5	+02.5	12
13	177	22.4	+02.5	178	21.6	+02.4	179	20.7	+02.5	180	19.8	+02.5	181	19.0	+02.5	13
14	192	24.9	+02.5	193	24.0	+02.5	194	23.2	+02.4	195	22.3	+02.5	196	21.5	+02.4	14
15	207	27.4	+02.4	208	26.5	+02.5	209	25.6	+02.5	210	24.8	+02.4	211	23.9	+02.5	15
16	222	29.8	+02.5	223	29.0	+02.4	224	28.1	+02.5	225	27.2	+02.5	226	26.4	+02.4	16
17	237	32.3	+02.5	238	31.4	+02.5	239	30.6	+02.4	240	29.7	+02.5	241	28.8	+02.5	17
18	252	34.8	+02.4	253	33.9	+02.5	254	33.0	+02.5	255	32.2	+02.4	256	31.3	+02.5	18
19	267	37.2	+02.5	268	36.4	+02.4	269	35.5	+02.5	270	34.6	+02.5	271	33.8	+02.4	19
20	282	39.7	+02.4	283	38.8	+02.5	284	38.0	+02.4	285	37.1	+02.5	286	36.2	+02.5	20
21	297	42.1	+02.5	298	41.3	+02.4	299	40.4	+02.5	300	39.6	+02.4	301	38.7	+02.5	21
22	312	44.6	+02.5	313	43.7	+02.5	314	42.9	+02.5	315	42.0	+02.5	316	41.2	+02.4	22
23	327	47.1	+02.4	328	46.2	+02.5	329	45.4	+02.4	330	44.5	+02.5	331	43.6	+02.5	23

	SHA		Dec			SHA		Dec	
	°	'	°	'		°	'	°	'
Alpheratz	357	38.8	N 29	11.9	Gienah	175	48.2	S 17	38.9
Ankaa	353	11.2	S 42	11.8	Acrux	173	05.2	S 63	12.4
Schedir	349	35.2	N 56	38.5	Gacrux	171	56.7	S 57	13.3
Diphda	348	51.4	S 17	52.7	Alioth	166	17.5	N 55	51.5
Achernar	335	23.2	S 57	08.1	Spica	158	27.0	S 11	15.6
Hamal	327	55.8	N 23	33.2	Alkaid	152	55.8	N 49	13.3
Polaris	315	44.8	N 89	20.4	Hadar	148	42.2	S 60	28.1
Acamar	315	14.9	S 40	13.4	Menkent	148	02.5	S 36	27.6
Menkar	314	10.5	N 04	10.0	Arcturus	145	51.7	N 19	05.8
Mirfak	308	34.1	N 49	55.5	Rigel Kentaurus	139	44.0	S 60	55.1
Aldebaran	290	44.5	N 16	32.9	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	28.3	N 46	00.9	Kocab	137	20.5	N 74	04.9
Rigel	281	08.0	S 08	10.7	Alphecca	126	07.5	N 26	39.3
Bellatrix	278	27.5	N 06	22.0	Antares	112	21.2	S 26	28.4
Elnath	278	07.3	N 28	37.3	Atria	107	19.0	S 69	03.8
Alnilam	275	42.1	S 01	11.4	Sabik	102	07.6	S 15	44.8
Betelgeuze	270	56.8	N 07	24.6	Shaula	96	16.0	S 37	07.0
Canopus	263	54.5	S 52	42.1	Rasalhague	96	02.4	N 12	33.1
Sirius	258	30.0	S 16	44.1	Etamin	90	44.0	N 51	29.6
Adhara	255	09.4	S 28	59.8	Kaus Australis	83	38.0	S 34	22.4
Castor	246	02.7	N 31	50.7	Vega	80	36.0	N 38	48.4
Procyon	244	55.3	N 05	10.8	Nunki	75	52.8	S 26	16.2
Pollux	243	22.5	N 27	58.7	Albireo	67	07.2	N 28	00.3
Avior	234	16.8	S 59	34.2	Altair	62	04.0	N 08	55.3
Suhail	222	49.7	S 43	30.5	Peacock	53	12.1	S 56	40.3
Miaplacidus	221	39.6	S 69	47.7	Deneb	49	28.2	N 45	21.2
Alphard	217	52.2	S 08	44.5	Enif	33	42.6	N 09	58.0
Regulus	207	39.2	N 11	52.4	Alnair	27	38.0	S 46	51.9
Dubhe	193	47.0	N 61	38.9	Formalhaut	15	19.0	S 29	31.0
Denebola	182	29.5	N 14	28.0	Markab	13	33.8	N 15	18.7

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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	346	46.1 +02.5	347	45.2 +02.5	348	44.4 +02.4	349	43.5 +02.5	350	42.6 +02.5	00
01	1	48.6 +02.4	2	47.7 +02.5	3	46.8 +02.5	4	46.0 +02.4	5	45.1 +02.5	01
02	16	51.0 +02.5	17	50.2 +02.4	18	49.3 +02.5	19	48.4 +02.5	20	47.6 +02.4	02
03	31	53.5 +02.5	32	52.6 +02.5	33	51.8 +02.4	34	50.9 +02.5	35	50.0 +02.5	03
04	46	56.0 +02.4	47	55.1 +02.5	48	54.2 +02.5	49	53.4 +02.4	50	52.5 +02.5	04
05	61	58.4 +02.5	62	57.6 +02.4	63	56.7 +02.5	64	55.8 +02.5	65	55.0 +02.4	05
06	77	00.9 +02.4	78	00.0 +02.5	78	59.2 +02.4	79	58.3 +02.5	80	57.4 +02.5	06
07	92	03.3 +02.5	93	02.5 +02.4	94	01.6 +02.5	95	00.8 +02.4	95	59.9 +02.5	07
08	107	05.8 +02.5	108	04.9 +02.5	109	04.1 +02.5	110	03.2 +02.5	111	02.4 +02.4	08
09	122	08.3 +02.4	123	07.4 +02.5	124	06.6 +02.4	125	05.7 +02.5	126	04.8 +02.5	09
10	137	10.7 +02.5	138	09.9 +02.4	139	09.0 +02.5	140	08.2 +02.4	141	07.3 +02.5	10
11	152	13.2 +02.5	153	12.3 +02.5	154	11.5 +02.4	155	10.6 +02.5	156	09.8 +02.4	11
12	167	15.7 +02.4	168	14.8 +02.5	169	13.9 +02.5	170	13.1 +02.4	171	12.2 +02.5	12
13	182	18.1 +02.5	183	17.3 +02.4	184	16.4 +02.5	185	15.5 +02.5	186	14.7 +02.4	13
14	197	20.6 +02.5	198	19.7 +02.5	199	18.9 +02.4	200	18.0 +02.5	201	17.1 +02.5	14
15	212	23.1 +02.4	213	22.2 +02.5	214	21.3 +02.5	215	20.5 +02.4	216	19.6 +02.5	15
16	227	25.5 +02.5	228	24.7 +02.4	229	23.8 +02.5	230	22.9 +02.5	231	22.1 +02.4	16
17	242	28.0 +02.4	243	27.1 +02.5	244	26.3 +02.4	245	25.4 +02.5	246	24.5 +02.5	17
18	257	30.4 +02.5	258	29.6 +02.5	259	28.7 +02.5	260	27.9 +02.4	261	27.0 +02.5	18
19	272	32.9 +02.5	273	32.1 +02.4	274	31.2 +02.5	275	30.3 +02.5	276	29.5 +02.4	19
20	287	35.4 +02.4	288	34.5 +02.5	289	33.7 +02.4	290	32.8 +02.5	291	31.9 +02.5	20
21	302	37.8 +02.5	303	37.0 +02.4	304	36.1 +02.5	305	35.3 +02.4	306	34.4 +02.5	21
22	317	40.3 +02.5	318	39.4 +02.5	319	38.6 +02.4	320	37.7 +02.5	321	36.9 +02.4	22
23	332	42.8 +02.4	333	41.9 +02.5	334	41.0 +02.5	335	40.2 +02.4	336	39.3 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.8	N 29 12.0	Gienah	175 48.2	S 17 38.9
Ankaa	353 11.2	S 42 11.8	Acrux	173 05.2	S 63 12.4
Schedir	349 35.2	N 56 38.6	Gacrux	171 56.7	S 57 13.2
Diphda	348 51.4	S 17 52.7	Alioth	166 17.5	N 55 51.5
Achernar	335 23.2	S 57 08.1	Spica	158 27.0	S 11 15.6
Hamal	327 55.8	N 23 33.2	Alkaid	152 55.8	N 49 13.3
Polaris	315 42.3	N 89 20.4	Hadar	148 42.3	S 60 28.0
Acamar	315 14.9	S 40 13.4	Menkent	148 02.5	S 36 27.6
Menkar	314 10.4	N 04 10.0	Arcturus	145 51.7	N 19 05.8
Mirfak	308 34.1	N 49 55.6	Rigel Kentaurus	139 44.0	S 60 55.1
Aldebaran	290 44.5	N 16 32.9	Zubenelgenubi	137 00.8	S 16 07.2
Capella	280 28.2	N 46 00.9	Kocab	137 20.6	N 74 04.9
Rigel	281 08.0	S 08 10.7	Alphecca	126 07.5	N 26 39.3
Bellatrix	278 27.5	N 06 22.0	Antares	112 21.2	S 26 28.4
Elnath	278 07.3	N 28 37.3	Atria	107 19.0	S 69 03.8
Alnilam	275 42.1	S 01 11.4	Sabik	102 07.6	S 15 44.8
Betelgeuze	270 56.8	N 07 24.6	Shaula	96 16.1	S 37 07.0
Canopus	263 54.5	S 52 42.1	Rasalhague	96 02.5	N 12 33.1
Sirius	258 30.0	S 16 44.1	Etamin	90 44.0	N 51 29.6
Adhara	255 09.4	S 28 59.7	Kaus Australis	83 38.0	S 34 22.4
Castor	246 02.7	N 31 50.6	Vega	80 36.0	N 38 48.4
Procyon	244 55.3	N 05 10.8	Nunki	75 52.9	S 26 16.2
Pollux	243 22.5	N 27 58.7	Albireo	67 07.2	N 28 00.3
Avior	234 16.8	S 59 34.1	Altair	62 04.0	N 08 55.3
Suhail	222 49.7	S 43 30.5	Peacock	53 12.1	S 56 40.3
Miaplacidus	221 39.5	S 69 47.7	Deneb	49 28.2	N 45 21.3
Alphard	217 52.2	S 08 44.5	Enif	33 42.6	N 09 58.0
Regulus	207 39.2	N 11 52.4	Alnair	27 38.0	S 46 51.9
Dubhe	193 47.0	N 61 38.8	Formalhaut	15 19.0	S 29 31.0
Denebola	182 29.5	N 14 28.0	Markab	13 33.8	N 15 18.7

2019 - First Point of Aries / Selected Stars

UT	day 256 of 365			day 257 of 365			day 258 of 365			day 259 of 365			day 260 of 365			UT		
	September 13			September 14			September 15			September 16			September 17					
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA				
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
00	351	41.8	+02.5	352	40.9	+02.5	353	40.1	+02.4	354	39.2	+02.5	355	38.3	+02.5	00		
01	6	44.3	+02.4	7	43.4	+02.5	8	42.5	+02.5	9	41.7	+02.4	10	40.8	+02.5	01		
02	21	46.7	+02.5	22	45.9	+02.4	23	45.0	+02.5	24	44.1	+02.5	25	43.3	+02.4	02		
03	36	49.2	+02.4	37	48.3	+02.5	38	47.5	+02.4	39	46.6	+02.5	40	45.7	+02.5	03		
04	51	51.6	+02.5	52	50.8	+02.4	53	49.9	+02.5	54	49.1	+02.4	55	48.2	+02.5	04		
05	66	54.1	+02.5	67	53.2	+02.5	68	52.4	+02.4	69	51.5	+02.5	70	50.7	+02.4	05		
06	81	56.6	+02.4	82	55.7	+02.5	83	54.8	+02.5	84	54.0	+02.4	85	53.1	+02.5	06		
07	96	59.0	+02.5	97	58.2	+02.4	98	57.3	+02.5	99	56.4	+02.5	100	55.6	+02.4	07		
08	112	01.5	+02.5	113	00.6	+02.5	113	59.8	+02.4	114	58.9	+02.5	115	58.0	+02.5	08		
09	127	04.0	+02.4	128	03.1	+02.5	129	02.2	+02.5	130	01.4	+02.4	131	00.5	+02.5	09		
10	142	06.4	+02.5	143	05.6	+02.4	144	04.7	+02.5	145	03.8	+02.5	146	03.0	+02.4	10		
11	157	08.9	+02.5	158	08.0	+02.5	159	07.2	+02.4	160	06.3	+02.5	161	05.4	+02.5	11		
12	172	11.4	+02.4	173	10.5	+02.5	174	09.6	+02.5	175	08.8	+02.4	176	07.9	+02.5	12		
13	187	13.8	+02.5	188	13.0	+02.4	189	12.1	+02.5	190	11.2	+02.5	191	10.4	+02.4	13		
14	202	16.3	+02.4	203	15.4	+02.5	204	14.6	+02.4	205	13.7	+02.5	206	12.8	+02.5	14		
15	217	18.7	+02.5	218	17.9	+02.4	219	17.0	+02.5	220	16.2	+02.4	221	15.3	+02.5	15		
16	232	21.2	+02.5	233	20.3	+02.5	234	19.5	+02.4	235	18.6	+02.5	236	17.8	+02.4	16		
17	247	23.7	+02.4	248	22.8	+02.5	249	21.9	+02.5	250	21.1	+02.4	251	20.2	+02.5	17		
18	262	26.1	+02.5	263	25.3	+02.4	264	24.4	+02.5	265	23.5	+02.5	266	22.7	+02.5	18		
19	277	28.6	+02.5	278	27.7	+02.5	279	26.9	+02.4	280	26.0	+02.5	281	25.2	+02.4	19		
20	292	31.1	+02.4	293	30.2	+02.5	294	29.3	+02.5	295	28.5	+02.4	296	27.6	+02.5	20		
21	307	33.5	+02.5	308	32.7	+02.4	309	31.8	+02.5	310	30.9	+02.5	311	30.1	+02.4	21		
22	322	36.0	+02.5	323	35.1	+02.5	324	34.3	+02.4	325	33.4	+02.5	326	32.5	+02.5	22		
23	337	38.5	+02.4	338	37.6	+02.5	339	36.7	+02.5	340	35.9	+02.4	341	35.0	+02.5	23		

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.8	N 29	12.0	Gienah	175	48.2	S 17	38.9
Ankaa	353	11.1	S 42	11.8	Acrux	173	05.2	S 63	12.4
Schedir	349	35.2	N 56	38.6	Gacrux	171	56.8	S 57	13.2
Diphda	348	51.4	S 17	52.7	Alioth	166	17.5	N 55	51.5
Achernar	335	23.1	S 57	08.1	Spica	158	27.0	S 11	15.6
Hamal	327	55.7	N 23	33.3	Alkaid	152	55.8	N 49	13.3
Polaris	315	40.2	N 89	20.5	Hadar	148	42.3	S 60	28.0
Acamar	315	14.8	S 40	13.4	Menkent	148	02.6	S 36	27.6
Menkar	314	10.4	N 04	10.0	Arcturus	145	51.7	N 19	05.8
Mirfak	308	34.0	N 49	55.6	Rigel Kentaurus	139	44.1	S 60	55.1
Aldebaran	290	44.4	N 16	32.9	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	28.2	N 46	00.9	Kocab	137	20.7	N 74	04.9
Rigel	281	07.9	S 08	10.7	Alphecca	126	07.6	N 26	39.3
Bellatrix	278	27.4	N 06	22.0	Antares	112	21.2	S 26	28.4
Elnath	278	07.2	N 28	37.3	Atria	107	19.1	S 69	03.8
Alnilam	275	42.1	S 01	11.3	Sabik	102	07.7	S 15	44.8
Betelgeuze	270	56.7	N 07	24.6	Shaula	96	16.1	S 37	07.0
Canopus	263	54.4	S 52	42.1	Rasalhague	96	02.5	N 12	33.1
Sirius	258	29.9	S 16	44.1	Etamin	90	44.1	N 51	29.6
Adhara	255	09.3	S 28	59.7	Kaus Australis	83	38.0	S 34	22.4
Castor	246	02.6	N 31	50.6	Vega	80	36.0	N 38	48.4
Procyon	244	55.3	N 05	10.8	Nunki	75	52.9	S 26	16.2
Pollux	243	22.4	N 27	58.7	Albireo	67	07.3	N 28	00.3
Avior	234	16.8	S 59	34.1	Altair	62	04.0	N 08	55.3
Suhail	222	49.7	S 43	30.5	Peacock	53	12.1	S 56	40.3
Miaplacidus	221	39.5	S 69	47.7	Deneb	49	28.3	N 45	21.3
Alphard	217	52.2	S 08	44.5	Enif	33	42.7	N 09	58.0
Regulus	207	39.2	N 11	52.4	Alnair	27	38.0	S 46	51.9
Dubhe	193	47.0	N 61	38.8	Formalhaut	15	19.0	S 29	31.0
Denebola	182	29.5	N 14	28.0	Markab	13	33.8	N 15	18.7

2019 - 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
	<i>September 18</i>		<i>September 19</i>		<i>September 20</i>		<i>September 21</i>		<i>September 22</i>		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	356	37.5 +02.4	357	36.6 +02.5	358	35.7 +02.5	359	34.9 +02.5	0	34.0 +02.5	00
01	11	39.9 +02.5	12	39.1 +02.4	13	38.2 +02.5	14	37.4 +02.4	15	36.5 +02.5	01
02	26	42.4 +02.5	27	41.5 +02.5	28	40.7 +02.4	29	39.8 +02.5	30	39.0 +02.4	02
03	41	44.9 +02.4	42	44.0 +02.5	43	43.1 +02.5	44	42.3 +02.4	45	41.4 +02.5	03
04	56	47.3 +02.5	57	46.5 +02.4	58	45.6 +02.5	59	44.7 +02.5	60	43.9 +02.4	04
05	71	49.8 +02.5	72	48.9 +02.5	73	48.1 +02.4	74	47.2 +02.5	75	46.3 +02.5	05
06	86	52.3 +02.4	87	51.4 +02.5	88	50.5 +02.5	89	49.7 +02.4	90	48.8 +02.5	06
07	101	54.7 +02.5	102	53.9 +02.4	103	53.0 +02.5	104	52.1 +02.5	105	51.3 +02.4	07
08	116	57.2 +02.4	117	56.3 +02.5	118	55.5 +02.4	119	54.6 +02.5	120	53.7 +02.5	08
09	131	59.6 +02.5	132	58.8 +02.4	133	57.9 +02.5	134	57.1 +02.4	135	56.2 +02.5	09
10	147	02.1 +02.5	148	01.2 +02.5	149	00.4 +02.5	149	59.5 +02.5	150	58.7 +02.4	10
11	162	04.6 +02.4	163	03.7 +02.5	164	02.9 +02.4	165	02.0 +02.5	166	01.1 +02.5	11
12	177	07.0 +02.5	178	06.2 +02.4	179	05.3 +02.5	180	04.5 +02.4	181	03.6 +02.5	12
13	192	09.5 +02.5	193	08.6 +02.5	194	07.8 +02.4	195	06.9 +02.5	196	06.1 +02.4	13
14	207	12.0 +02.4	208	11.1 +02.5	209	10.2 +02.5	210	09.4 +02.4	211	08.5 +02.5	14
15	222	14.4 +02.5	223	13.6 +02.4	224	12.7 +02.5	225	11.8 +02.5	226	11.0 +02.5	15
16	237	16.9 +02.5	238	16.0 +02.5	239	15.2 +02.4	240	14.3 +02.5	241	13.5 +02.4	16
17	252	19.4 +02.4	253	18.5 +02.5	254	17.6 +02.5	255	16.8 +02.4	256	15.9 +02.5	17
18	267	21.8 +02.5	268	21.0 +02.4	269	20.1 +02.5	270	19.2 +02.5	271	18.4 +02.4	18
19	282	24.3 +02.5	283	23.4 +02.5	284	22.6 +02.4	285	21.7 +02.5	286	20.8 +02.5	19
20	297	26.8 +02.4	298	25.9 +02.5	299	25.0 +02.5	300	24.2 +02.4	301	23.3 +02.5	20
21	312	29.2 +02.5	313	28.4 +02.4	314	27.5 +02.5	315	26.6 +02.5	316	25.8 +02.4	21
22	327	31.7 +02.4	328	30.8 +02.5	329	30.0 +02.4	330	29.1 +02.5	331	28.2 +02.5	22
23	342	34.1 +02.5	343	33.3 +02.4	344	32.4 +02.5	345	31.6 +02.4	346	30.7 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.8	N 29 12.0	Gienah	175 48.2	S 17 38.9
Ankaa	353 11.1	S 42 11.8	Acrux	173 05.3	S 63 12.4
Schedir	349 35.2	N 56 38.6	Gacrux	171 56.8	S 57 13.2
Diphda	348 51.3	S 17 52.7	Alioth	166 17.5	N 55 51.5
Achernar	335 23.1	S 57 08.1	Spica	158 27.0	S 11 15.6
Hamal	327 55.7	N 23 33.3	Alkaid	152 55.9	N 49 13.3
Polaris	315 38.3	N 89 20.5	Hadar	148 42.3	S 60 28.0
Acamar	315 14.8	S 40 13.4	Menkent	148 02.6	S 36 27.6
Menkar	314 10.4	N 04 10.0	Arcturus	145 51.8	N 19 05.8
Mirfak	308 34.0	N 49 55.6	Rigel Kentaurus	139 44.1	S 60 55.1
Aldebaran	290 44.4	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.2
Capella	280 28.1	N 46 00.9	Kocab	137 20.8	N 74 04.8
Rigel	281 07.9	S 08 10.7	Alphecca	126 07.6	N 26 39.3
Bellatrix	278 27.4	N 06 22.0	Antares	112 21.2	S 26 28.4
Elnath	278 07.2	N 28 37.3	Atria	107 19.2	S 69 03.8
Alnilam	275 42.0	S 01 11.3	Sabik	102 07.7	S 15 44.8
Betelgeuze	270 56.7	N 07 24.6	Shaula	96 16.1	S 37 07.0
Canopus	263 54.4	S 52 42.1	Rasalhague	96 02.5	N 12 33.1
Sirius	258 29.9	S 16 44.1	Etamin	90 44.1	N 51 29.6
Adhara	255 09.3	S 28 59.7	Kaus Australis	83 38.1	S 34 22.4
Castor	246 02.6	N 31 50.6	Vega	80 36.0	N 38 48.4
Procyon	244 55.2	N 05 10.8	Nunki	75 52.9	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 07.3	N 28 00.4
Avior	234 16.7	S 59 34.1	Altair	62 04.1	N 08 55.3
Suhail	222 49.7	S 43 30.5	Peacock	53 12.1	S 56 40.3
Miaplacidus	221 39.5	S 69 47.7	Deneb	49 28.3	N 45 21.3
Alphard	217 52.2	S 08 44.5	Enif	33 42.7	N 09 58.0
Regulus	207 39.2	N 11 52.4	Alnair	27 38.0	S 46 51.9
Dubhe	193 47.0	N 61 38.8	Formalhaut	15 19.0	S 29 31.0
Denebola	182 29.5	N 14 28.0	Markab	13 33.8	N 15 18.8

2019 - First Point of Aries / Selected Stars

UT	day 266 of 365 September 23		day 267 of 365 September 24		day 268 of 365 September 25		day 269 of 365 September 26		day 270 of 365 September 27		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	1 33.2	+02.4	2 32.3	+02.5	3 31.4	+02.5	4 30.6	+02.4	5 29.7	+02.5	00
01	16 35.6	+02.5	17 34.8	+02.4	18 33.9	+02.5	19 33.0	+02.5	20 32.2	+02.4	01
02	31 38.1	+02.5	32 37.2	+02.5	33 36.4	+02.4	34 35.5	+02.5	35 34.6	+02.5	02
03	46 40.6	+02.4	47 39.7	+02.5	48 38.8	+02.5	49 38.0	+02.4	50 37.1	+02.5	03
04	61 43.0	+02.5	62 42.2	+02.4	63 41.3	+02.5	64 40.4	+02.5	65 39.6	+02.4	04
05	76 45.5	+02.5	77 44.6	+02.5	78 43.8	+02.4	79 42.9	+02.5	80 42.0	+02.5	05
06	91 48.0	+02.4	92 47.1	+02.5	93 46.2	+02.5	94 45.4	+02.4	95 44.5	+02.5	06
07	106 50.4	+02.5	107 49.6	+02.4	108 48.7	+02.5	109 47.8	+02.5	110 47.0	+02.4	07
08	121 52.9	+02.4	122 52.0	+02.5	123 51.2	+02.4	124 50.3	+02.5	125 49.4	+02.5	08
09	136 55.3	+02.5	137 54.5	+02.4	138 53.6	+02.5	139 52.8	+02.4	140 51.9	+02.5	09
10	151 57.8	+02.5	152 56.9	+02.5	153 56.1	+02.4	154 55.2	+02.5	155 54.4	+02.4	10
11	167 00.3	+02.4	167 59.4	+02.5	168 58.5	+02.5	169 57.7	+02.5	170 56.8	+02.5	11
12	182 02.7	+02.5	183 01.9	+02.4	184 01.0	+02.5	185 00.2	+02.4	185 59.3	+02.5	12
13	197 05.2	+02.5	198 04.3	+02.5	199 03.5	+02.4	200 02.6	+02.5	201 01.8	+02.4	13
14	212 07.7	+02.4	213 06.8	+02.5	214 05.9	+02.5	215 05.1	+02.4	216 04.2	+02.5	14
15	227 10.1	+02.5	228 09.3	+02.4	229 08.4	+02.5	230 07.5	+02.5	231 06.7	+02.4	15
16	242 12.6	+02.5	243 11.7	+02.5	244 10.9	+02.4	245 10.0	+02.5	246 09.1	+02.5	16
17	257 15.1	+02.4	258 14.2	+02.5	259 13.3	+02.5	260 12.5	+02.4	261 11.6	+02.5	17
18	272 17.5	+02.5	273 16.7	+02.4	274 15.8	+02.5	275 14.9	+02.5	276 14.1	+02.4	18
19	287 20.0	+02.4	288 19.1	+02.5	289 18.3	+02.4	290 17.4	+02.5	291 16.5	+02.5	19
20	302 22.4	+02.5	303 21.6	+02.5	304 20.7	+02.5	305 19.9	+02.4	306 19.0	+02.5	20
21	317 24.9	+02.5	318 24.1	+02.4	319 23.2	+02.5	320 22.3	+02.5	321 21.5	+02.4	21
22	332 27.4	+02.4	333 26.5	+02.5	334 25.7	+02.4	335 24.8	+02.5	336 23.9	+02.5	22
23	347 29.8	+02.5	348 29.0	+02.4	349 28.1	+02.5	350 27.3	+02.4	351 26.4	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.8	N 29 12.0	Gienah	175 48.2	S 17 38.9
Ankaa	353 11.1	S 42 11.8	Acrux	173 05.2	S 63 12.3
Schedir	349 35.1	N 56 38.6	Gacrux	171 56.8	S 57 13.2
Diphda	348 51.3	S 17 52.7	Alioth	166 17.5	N 55 51.4
Achernar	335 23.1	S 57 08.1	Spica	158 27.0	S 11 15.6
Hamal	327 55.7	N 23 33.3	Alkaid	152 55.9	N 49 13.2
Polaris	315 36.0	N 89 20.5	Hadar	148 42.4	S 60 28.0
Acamar	315 14.8	S 40 13.5	Menkent	148 02.6	S 36 27.6
Menkar	314 10.3	N 04 10.0	Arcturus	145 51.8	N 19 05.8
Mirfak	308 33.9	N 49 55.6	Rigel Kentaurus	139 44.1	S 60 55.1
Aldebaran	290 44.4	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.2
Capella	280 28.1	N 46 00.9	Kocab	137 20.9	N 74 04.8
Rigel	281 07.9	S 08 10.7	Alphecca	126 07.6	N 26 39.3
Bellatrix	278 27.4	N 06 22.0	Antares	112 21.3	S 26 28.4
Elnath	278 07.2	N 28 37.3	Atria	107 19.2	S 69 03.8
Alnilam	275 42.0	S 01 11.3	Sabik	102 07.7	S 15 44.8
Betelgeuze	270 56.7	N 07 24.6	Shaula	96 16.1	S 37 07.0
Canopus	263 54.3	S 52 42.1	Rasalhague	96 02.5	N 12 33.1
Sirius	258 29.9	S 16 44.1	Etamin	90 44.2	N 51 29.6
Adhara	255 09.2	S 28 59.7	Kaus Australis	83 38.1	S 34 22.4
Castor	246 02.6	N 31 50.6	Vega	80 36.1	N 38 48.4
Procyon	244 55.2	N 05 10.8	Nunki	75 52.9	S 26 16.2
Pollux	243 22.4	N 27 58.7	Albireo	67 07.3	N 28 00.4
Avior	234 16.7	S 59 34.1	Altair	62 04.1	N 08 55.3
Suhail	222 49.6	S 43 30.5	Peacock	53 12.2	S 56 40.4
Miaplacidus	221 39.4	S 69 47.6	Deneb	49 28.3	N 45 21.3
Alphard	217 52.1	S 08 44.5	Enif	33 42.7	N 09 58.1
Regulus	207 39.2	N 11 52.4	Alnair	27 38.0	S 46 51.9
Dubhe	193 47.0	N 61 38.8	Formalhaut	15 19.0	S 29 31.0
Denebola	182 29.5	N 14 28.0	Markab	13 33.8	N 15 18.8

2019 - 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	28.9	+02.4	7	28.0	+02.5	8	27.1	+02.5	9	26.3	+02.4	10	25.4	+02.5	00
01	21	31.3	+02.5	22	30.5	+02.4	23	29.6	+02.5	24	28.7	+02.5	25	27.9	+02.4	01
02	36	33.8	+02.4	37	32.9	+02.5	38	32.1	+02.4	39	31.2	+02.5	40	30.3	+02.5	02
03	51	36.2	+02.5	52	35.4	+02.5	53	34.5	+02.5	54	33.7	+02.4	55	32.8	+02.5	03
04	66	38.7	+02.5	67	37.9	+02.4	68	37.0	+02.5	69	36.1	+02.5	70	35.3	+02.4	04
05	81	41.2	+02.4	82	40.3	+02.5	83	39.5	+02.4	84	38.6	+02.5	85	37.7	+02.5	05
06	96	43.6	+02.5	97	42.8	+02.4	98	41.9	+02.5	99	41.1	+02.4	100	40.2	+02.5	06
07	111	46.1	+02.5	112	45.2	+02.5	113	44.4	+02.4	114	43.5	+02.5	115	42.7	+02.4	07
08	126	48.6	+02.4	127	47.7	+02.5	128	46.8	+02.5	129	46.0	+02.4	130	45.1	+02.5	08
09	141	51.0	+02.5	142	50.2	+02.4	143	49.3	+02.5	144	48.4	+02.5	145	47.6	+02.4	09
10	156	53.5	+02.5	157	52.6	+02.5	158	51.8	+02.4	159	50.9	+02.5	160	50.0	+02.5	10
11	171	56.0	+02.4	172	55.1	+02.5	173	54.2	+02.5	174	53.4	+02.4	175	52.5	+02.5	11
12	186	58.4	+02.5	187	57.6	+02.4	188	56.7	+02.5	189	55.8	+02.5	190	55.0	+02.4	12
13	202	00.9	+02.5	203	00.0	+02.5	203	59.2	+02.4	204	58.3	+02.5	205	57.4	+02.5	13
14	217	03.4	+02.4	218	02.5	+02.5	219	01.6	+02.5	220	00.8	+02.4	220	59.9	+02.5	14
15	232	05.8	+02.5	233	05.0	+02.4	234	04.1	+02.5	235	03.2	+02.5	236	02.4	+02.4	15
16	247	08.3	+02.4	248	07.4	+02.5	249	06.6	+02.4	250	05.7	+02.5	251	04.8	+02.5	16
17	262	10.7	+02.5	263	09.9	+02.4	264	09.0	+02.5	265	08.2	+02.4	266	07.3	+02.5	17
18	277	13.2	+02.5	278	12.3	+02.5	279	11.5	+02.4	280	10.6	+02.5	281	09.8	+02.4	18
19	292	15.7	+02.4	293	14.8	+02.5	294	13.9	+02.5	295	13.1	+02.4	296	12.2	+02.5	19
20	307	18.1	+02.5	308	17.3	+02.4	309	16.4	+02.5	310	15.5	+02.5	311	14.7	+02.5	20
21	322	20.6	+02.5	323	19.7	+02.5	324	18.9	+02.4	325	18.0	+02.5	326	17.2	+02.4	21
22	337	23.1	+02.4	338	22.2	+02.5	339	21.3	+02.5	340	20.5	+02.4	341	19.6	+02.5	22
23	352	25.5	+02.5	353	24.7	+02.4	354	23.8	+02.5	355	22.9	+02.5	356	22.1	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 38.8	N 29 12.0	Gienah	175 48.2	S 17 38.8
Ankaa	353 11.1	S 42 11.8	Acrux	173 05.3	S 63 12.3
Schedir	349 35.1	N 56 38.7	Gacrux	171 56.8	S 57 13.2
Diphda	348 51.3	S 17 52.7	Alioth	166 17.5	N 55 51.4
Achernar	335 23.0	S 57 08.2	Spica	158 27.0	S 11 15.6
Hamal	327 55.7	N 23 33.3	Alkaid	152 55.9	N 49 13.2
Polaris	315 34.3	N 89 20.5	Hadar	148 42.4	S 60 28.0
Acamar	315 14.7	S 40 13.5	Menkent	148 02.6	S 36 27.6
Menkar	314 10.3	N 04 10.0	Arcturus	145 51.8	N 19 05.7
Mirfak	308 33.9	N 49 55.6	Rigel Kentaurus	139 44.2	S 60 55.1
Aldebaran	290 44.3	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.2
Capella	280 28.0	N 46 00.9	Kocab	137 20.9	N 74 04.8
Rigel	281 07.8	S 08 10.7	Alphecca	126 07.6	N 26 39.3
Bellatrix	278 27.3	N 06 22.0	Antares	112 21.3	S 26 28.4
Elnath	278 07.1	N 28 37.3	Atria	107 19.3	S 69 03.8
Alnilam	275 42.0	S 01 11.3	Sabik	102 07.7	S 15 44.8
Betelgeuze	270 56.6	N 07 24.6	Shaula	96 16.2	S 37 07.0
Canopus	263 54.3	S 52 42.1	Rasalhague	96 02.6	N 12 33.1
Sirius	258 29.8	S 16 44.1	Etamin	90 44.2	N 51 29.6
Adhara	255 09.2	S 28 59.7	Kaus Australis	83 38.1	S 34 22.4
Castor	246 02.5	N 31 50.6	Vega	80 36.1	N 38 48.4
Procyon	244 55.2	N 05 10.8	Nunki	75 53.0	S 26 16.2
Pollux	243 22.3	N 27 58.7	Albireo	67 07.3	N 28 00.4
Avior	234 16.6	S 59 34.1	Altair	62 04.1	N 08 55.3
Suhail	222 49.6	S 43 30.5	Peacock	53 12.2	S 56 40.4
Miaplacidus	221 39.3	S 69 47.6	Deneb	49 28.3	N 45 21.3
Alphard	217 52.1	S 08 44.5	Enif	33 42.7	N 09 58.1
Regulus	207 39.1	N 11 52.4	Alnair	27 38.0	S 46 52.0
Dubhe	193 46.9	N 61 38.7	Formalhaut	15 19.0	S 29 31.0
Denebola	182 29.5	N 14 28.0	Markab	13 33.8	N 15 18.8

2019 - 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	24.5	+02.5	12	23.7	+02.4	13	22.8	+02.5	14	22.0	+02.4	15	21.1	+02.5	00
01	26	27.0	+02.5	27	26.1	+02.5	28	25.3	+02.5	29	24.4	+02.5	30	23.6	+02.4	01
02	41	29.5	+02.4	42	28.6	+02.5	43	27.8	+02.4	44	26.9	+02.5	45	26.0	+02.5	02
03	56	31.9	+02.5	57	31.1	+02.4	58	30.2	+02.5	59	29.4	+02.4	60	28.5	+02.5	03
04	71	34.4	+02.5	72	33.5	+02.5	73	32.7	+02.4	74	31.8	+02.5	75	31.0	+02.4	04
05	86	36.9	+02.4	87	36.0	+02.5	88	35.1	+02.5	89	34.3	+02.4	90	33.4	+02.5	05
06	101	39.3	+02.5	102	38.5	+02.4	103	37.6	+02.5	104	36.7	+02.5	105	35.9	+02.5	06
07	116	41.8	+02.5	117	40.9	+02.5	118	40.1	+02.4	119	39.2	+02.5	120	38.4	+02.4	07
08	131	44.3	+02.4	132	43.4	+02.5	133	42.5	+02.5	134	41.7	+02.4	135	40.8	+02.5	08
09	146	46.7	+02.5	147	45.9	+02.4	148	45.0	+02.5	149	44.1	+02.5	150	43.3	+02.4	09
10	161	49.2	+02.5	162	48.3	+02.5	163	47.5	+02.4	164	46.6	+02.5	165	45.7	+02.5	10
11	176	51.7	+02.4	177	50.8	+02.5	178	49.9	+02.5	179	49.1	+02.4	180	48.2	+02.5	11
12	191	54.1	+02.5	192	53.3	+02.4	193	52.4	+02.5	194	51.5	+02.5	195	50.7	+02.4	12
13	206	56.6	+02.4	207	55.7	+02.5	208	54.9	+02.4	209	54.0	+02.5	210	53.1	+02.5	13
14	221	59.0	+02.5	222	58.2	+02.4	223	57.3	+02.5	224	56.5	+02.4	225	55.6	+02.5	14
15	237	01.5	+02.5	238	00.6	+02.5	238	59.8	+02.5	239	58.9	+02.5	240	58.1	+02.4	15
16	252	04.0	+02.4	253	03.1	+02.5	254	02.3	+02.4	255	01.4	+02.5	256	00.5	+02.5	16
17	267	06.4	+02.5	268	05.6	+02.4	269	04.7	+02.5	270	03.9	+02.4	271	03.0	+02.5	17
18	282	08.9	+02.5	283	08.0	+02.5	284	07.2	+02.4	285	06.3	+02.5	286	05.5	+02.4	18
19	297	11.4	+02.4	298	10.5	+02.5	299	09.6	+02.5	300	08.8	+02.4	301	07.9	+02.5	19
20	312	13.8	+02.5	313	13.0	+02.4	314	12.1	+02.5	315	11.2	+02.5	316	10.4	+02.4	20
21	327	16.3	+02.5	328	15.4	+02.5	329	14.6	+02.4	330	13.7	+02.5	331	12.8	+02.5	21
22	342	18.8	+02.4	343	17.9	+02.5	344	17.0	+02.5	345	16.2	+02.4	346	15.3	+02.5	22
23	357	21.2	+02.5	358	20.4	+02.4	359	19.5	+02.5	0	18.6	+02.5	1	17.8	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.8	N 29	12.0	Gienah	175	48.2	S 17	38.8
Ankaa	353	11.1	S 42	11.8	Acrux	173	05.2	S 63	12.3
Schedir	349	35.1	N 56	38.7	Gacrux	171	56.8	S 57	13.1
Diphda	348	51.3	S 17	52.7	Alioth	166	17.5	N 55	51.4
Achernar	335	23.0	S 57	08.2	Spica	158	27.0	S 11	15.6
Hamal	327	55.7	N 23	33.3	Alkaid	152	55.9	N 49	13.2
Polaris	315	32.5	N 89	20.6	Hadar	148	42.4	S 60	27.9
Acamar	315	14.7	S 40	13.5	Menkent	148	02.6	S 36	27.6
Menkar	314	10.3	N 04	10.0	Arcturus	145	51.8	N 19	05.7
Mirfak	308	33.8	N 49	55.6	Rigel Kentaurus	139	44.2	S 60	55.0
Aldebaran	290	44.3	N 16	32.9	Zubenelgenubi	137	00.9	S 16	07.1
Capella	280	28.0	N 46	00.9	Kocab	137	21.0	N 74	04.8
Rigel	281	07.8	S 08	10.7	Alphecca	126	07.7	N 26	39.3
Bellatrix	278	27.3	N 06	22.0	Antares	112	21.3	S 26	28.4
Elnath	278	07.1	N 28	37.3	Atria	107	19.4	S 69	03.8
Alnilam	275	41.9	S 01	11.3	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.6	N 07	24.6	Shaula	96	16.2	S 37	07.0
Canopus	263	54.2	S 52	42.1	Rasalhague	96	02.6	N 12	33.1
Sirius	258	29.8	S 16	44.1	Etamin	90	44.2	N 51	29.6
Adhara	255	09.2	S 28	59.7	Kaus Australis	83	38.1	S 34	22.4
Castor	246	02.5	N 31	50.6	Vega	80	36.1	N 38	48.4
Procyon	244	55.1	N 05	10.8	Nunki	75	53.0	S 26	16.2
Pollux	243	22.3	N 27	58.6	Albireo	67	07.4	N 28	00.4
Avior	234	16.6	S 59	34.1	Altair	62	04.1	N 08	55.3
Suhail	222	49.6	S 43	30.4	Peacock	53	12.2	S 56	40.4
Miaplacidus	221	39.3	S 69	47.6	Deneb	49	28.4	N 45	21.3
Alphard	217	52.1	S 08	44.5	Enif	33	42.7	N 09	58.1
Regulus	207	39.1	N 11	52.4	Alnair	27	38.0	S 46	52.0
Dubhe	193	46.9	N 61	38.7	Formalhaut	15	19.0	S 29	31.0
Denebola	182	29.5	N 14	28.0	Markab	13	33.8	N 15	18.8

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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	20.2	+02.5	17	19.4	+02.4	18	18.5	+02.5	19	17.7	+02.4	20	16.8	+02.5	00
01	31	22.7	+02.5	32	21.8	+02.5	33	21.0	+02.4	34	20.1	+02.5	35	19.3	+02.4	01
02	46	25.2	+02.4	47	24.3	+02.5	48	23.4	+02.5	49	22.6	+02.4	50	21.7	+02.5	02
03	61	27.6	+02.5	62	26.8	+02.4	63	25.9	+02.5	64	25.0	+02.5	65	24.2	+02.4	03
04	76	30.1	+02.5	77	29.2	+02.5	78	28.4	+02.4	79	27.5	+02.5	80	26.6	+02.5	04
05	91	32.6	+02.4	92	31.7	+02.5	93	30.8	+02.5	94	30.0	+02.4	95	29.1	+02.5	05
06	106	35.0	+02.5	107	34.2	+02.4	108	33.3	+02.5	109	32.4	+02.5	110	31.6	+02.4	06
07	121	37.5	+02.5	122	36.6	+02.5	123	35.8	+02.4	124	34.9	+02.5	125	34.0	+02.5	07
08	136	40.0	+02.4	137	39.1	+02.5	138	38.2	+02.5	139	37.4	+02.4	140	36.5	+02.5	08
09	151	42.4	+02.5	152	41.6	+02.4	153	40.7	+02.5	154	39.8	+02.5	155	39.0	+02.4	09
10	166	44.9	+02.4	167	44.0	+02.5	168	43.2	+02.4	169	42.3	+02.5	170	41.4	+02.5	10
11	181	47.3	+02.5	182	46.5	+02.4	183	45.6	+02.5	184	44.8	+02.4	185	43.9	+02.5	11
12	196	49.8	+02.5	197	48.9	+02.5	198	48.1	+02.4	199	47.2	+02.5	200	46.4	+02.4	12
13	211	52.3	+02.4	212	51.4	+02.5	213	50.5	+02.5	214	49.7	+02.5	215	48.8	+02.5	13
14	226	54.7	+02.5	227	53.9	+02.4	228	53.0	+02.5	229	52.2	+02.4	230	51.3	+02.5	14
15	241	57.2	+02.5	242	56.3	+02.5	243	55.5	+02.4	244	54.6	+02.5	245	53.8	+02.4	15
16	256	59.7	+02.4	257	58.8	+02.5	258	57.9	+02.5	259	57.1	+02.4	260	56.2	+02.5	16
17	272	02.1	+02.5	273	01.3	+02.4	274	00.4	+02.5	274	59.5	+02.5	275	58.7	+02.4	17
18	287	04.6	+02.5	288	03.7	+02.5	289	02.9	+02.4	290	02.0	+02.5	291	01.1	+02.5	18
19	302	07.1	+02.4	303	06.2	+02.5	304	05.3	+02.5	305	04.5	+02.4	306	03.6	+02.5	19
20	317	09.5	+02.5	318	08.7	+02.4	319	07.8	+02.5	320	06.9	+02.5	321	06.1	+02.4	20
21	332	12.0	+02.5	333	11.1	+02.5	334	10.3	+02.4	335	09.4	+02.5	336	08.5	+02.5	21
22	347	14.5	+02.4	348	13.6	+02.5	349	12.7	+02.5	350	11.9	+02.4	351	11.0	+02.5	22
23	2	16.9	+02.5	3	16.1	+02.4	4	15.2	+02.5	5	14.3	+02.5	6	13.5	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.7	N 29	12.1	Gienah	175	48.2	S 17	38.8
Ankaa	353	11.1	S 42	11.9	Acrux	173	05.2	S 63	12.3
Schedir	349	35.1	N 56	38.7	Gacrux	171	56.7	S 57	13.1
Diphda	348	51.3	S 17	52.7	Alioth	166	17.5	N 55	51.4
Achernar	335	23.0	S 57	08.2	Spica	158	27.0	S 11	15.6
Hamal	327	55.6	N 23	33.3	Alkaid	152	55.9	N 49	13.2
Polaris	315	30.8	N 89	20.6	Hadar	148	42.4	S 60	27.9
Acamar	315	14.7	S 40	13.5	Menkent	148	02.6	S 36	27.6
Menkar	314	10.3	N 04	10.0	Arcturus	145	51.8	N 19	05.7
Mirfak	308	33.8	N 49	55.7	Rigel Kentaurus	139	44.2	S 60	55.0
Aldebaran	290	44.3	N 16	32.9	Zubenelgenubi	137	00.9	S 16	07.1
Capella	280	27.9	N 46	00.9	Kocab	137	21.0	N 74	04.7
Rigel	281	07.8	S 08	10.7	Alphecca	126	07.7	N 26	39.3
Bellatrix	278	27.2	N 06	22.0	Antares	112	21.3	S 26	28.4
Elnath	278	07.0	N 28	37.3	Atria	107	19.4	S 69	03.8
Alnilam	275	41.9	S 01	11.3	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.6	N 07	24.6	Shaula	96	16.2	S 37	07.0
Canopus	263	54.2	S 52	42.1	Rasalhague	96	02.6	N 12	33.1
Sirius	258	29.7	S 16	44.1	Etamin	90	44.3	N 51	29.6
Adhara	255	09.1	S 28	59.7	Kaus Australis	83	38.2	S 34	22.4
Castor	246	02.4	N 31	50.6	Vega	80	36.2	N 38	48.4
Procyon	244	55.1	N 05	10.8	Nunki	75	53.0	S 26	16.2
Pollux	243	22.2	N 27	58.6	Albireo	67	07.4	N 28	00.4
Avior	234	16.5	S 59	34.1	Altair	62	04.1	N 08	55.3
Suhail	222	49.5	S 43	30.4	Peacock	53	12.3	S 56	40.4
Miaplacidus	221	39.2	S 69	47.6	Deneb	49	28.4	N 45	21.3
Alphard	217	52.1	S 08	44.5	Enif	33	42.7	N 09	58.1
Regulus	207	39.1	N 11	52.4	Alnair	27	38.0	S 46	52.0
Dubhe	193	46.9	N 61	38.7	Formalhaut	15	19.0	S 29	31.0
Denebola	182	29.4	N 14	27.9	Markab	13	33.8	N 15	18.8

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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	15.9	+02.5	22	15.1	+02.4	23	14.2	+02.5	24	13.3	+02.5	25	12.5	+02.4	00
01	36	18.4	+02.5	37	17.5	+02.5	38	16.7	+02.4	39	15.8	+02.5	40	14.9	+02.5	01
02	51	20.9	+02.4	52	20.0	+02.5	53	19.1	+02.5	54	18.3	+02.4	55	17.4	+02.5	02
03	66	23.3	+02.5	67	22.5	+02.4	68	21.6	+02.5	69	20.7	+02.5	70	19.9	+02.4	03
04	81	25.8	+02.4	82	24.9	+02.5	83	24.1	+02.4	84	23.2	+02.5	85	22.3	+02.5	04
05	96	28.2	+02.5	97	27.4	+02.4	98	26.5	+02.5	99	25.7	+02.4	100	24.8	+02.5	05
06	111	30.7	+02.5	112	29.8	+02.5	113	29.0	+02.5	114	28.1	+02.5	115	27.3	+02.4	06
07	126	33.2	+02.4	127	32.3	+02.5	128	31.5	+02.4	129	30.6	+02.5	130	29.7	+02.5	07
08	141	35.6	+02.5	142	34.8	+02.4	143	33.9	+02.5	144	33.1	+02.4	145	32.2	+02.5	08
09	156	38.1	+02.5	157	37.2	+02.5	158	36.4	+02.4	159	35.5	+02.5	160	34.7	+02.4	09
10	171	40.6	+02.4	172	39.7	+02.5	173	38.8	+02.5	174	38.0	+02.4	175	37.1	+02.5	10
11	186	43.0	+02.5	187	42.2	+02.4	188	41.3	+02.5	189	40.4	+02.5	190	39.6	+02.4	11
12	201	45.5	+02.5	202	44.6	+02.5	203	43.8	+02.4	204	42.9	+02.5	205	42.0	+02.5	12
13	216	48.0	+02.4	217	47.1	+02.5	218	46.2	+02.5	219	45.4	+02.4	220	44.5	+02.5	13
14	231	50.4	+02.5	232	49.6	+02.4	233	48.7	+02.5	234	47.8	+02.5	235	47.0	+02.4	14
15	246	52.9	+02.5	247	52.0	+02.5	248	51.2	+02.4	249	50.3	+02.5	250	49.4	+02.5	15
16	261	55.4	+02.4	262	54.5	+02.5	263	53.6	+02.5	264	52.8	+02.4	265	51.9	+02.5	16
17	276	57.8	+02.5	277	57.0	+02.4	278	56.1	+02.5	279	55.2	+02.5	280	54.4	+02.4	17
18	292	00.3	+02.4	292	59.4	+02.5	293	58.6	+02.4	294	57.7	+02.5	295	56.8	+02.5	18
19	307	02.7	+02.5	308	01.9	+02.4	309	01.0	+02.5	310	00.2	+02.4	310	59.3	+02.5	19
20	322	05.2	+02.5	323	04.3	+02.5	324	03.5	+02.4	325	02.6	+02.5	326	01.8	+02.4	20
21	337	07.7	+02.4	338	06.8	+02.5	339	05.9	+02.5	340	05.1	+02.4	341	04.2	+02.5	21
22	352	10.1	+02.5	353	09.3	+02.4	354	08.4	+02.5	355	07.5	+02.5	356	06.7	+02.5	22
23	7	12.6	+02.5	8	11.7	+02.5	9	10.9	+02.4	10	10.0	+02.5	11	09.2	+02.4	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 38.8	N 29 12.1	Gienah	175 48.1	S 17 38.8
Ankaa	353 11.1	S 42 11.9	Acrux	173 05.2	S 63 12.3
Schedir	349 35.1	N 56 38.7	Gacrux	171 56.7	S 57 13.1
Diphda	348 51.3	S 17 52.7	Alioth	166 17.5	N 55 51.3
Achernar	335 23.0	S 57 08.2	Spica	158 27.0	S 11 15.6
Hamal	327 55.6	N 23 33.3	Alkaid	152 55.9	N 49 13.1
Polaris	315 29.6	N 89 20.6	Hadar	148 42.4	S 60 27.9
Acamar	315 14.6	S 40 13.5	Menkent	148 02.6	S 36 27.6
Menkar	314 10.2	N 04 10.0	Arcturus	145 51.8	N 19 05.7
Mirfak	308 33.8	N 49 55.7	Rigel Kentaurus	139 44.2	S 60 55.0
Aldebaran	290 44.2	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.1
Capella	280 27.9	N 46 01.0	Kocab	137 21.1	N 74 04.7
Rigel	281 07.7	S 08 10.7	Alphecca	126 07.7	N 26 39.3
Bellatrix	278 27.2	N 06 22.0	Antares	112 21.3	S 26 28.4
Elnath	278 07.0	N 28 37.3	Atria	107 19.5	S 69 03.8
Alnilam	275 41.9	S 01 11.3	Sabik	102 07.8	S 15 44.8
Betelgeuze	270 56.5	N 07 24.6	Shaula	96 16.2	S 37 07.0
Canopus	263 54.1	S 52 42.1	Rasalhague	96 02.6	N 12 33.1
Sirius	258 29.7	S 16 44.1	Etamin	90 44.3	N 51 29.6
Adhara	255 09.1	S 28 59.7	Kaus Australis	83 38.2	S 34 22.4
Castor	246 02.4	N 31 50.6	Vega	80 36.2	N 38 48.4
Procyon	244 55.1	N 05 10.8	Nunki	75 53.0	S 26 16.2
Pollux	243 22.2	N 27 58.6	Albireo	67 07.4	N 28 00.4
Avior	234 16.5	S 59 34.1	Altair	62 04.2	N 08 55.3
Suhail	222 49.5	S 43 30.4	Peacock	53 12.3	S 56 40.4
Miaplacidus	221 39.1	S 69 47.6	Deneb	49 28.4	N 45 21.3
Alphard	217 52.0	S 08 44.5	Enif	33 42.7	N 09 58.1
Regulus	207 39.1	N 11 52.4	Alnair	27 38.0	S 46 52.0
Dubhe	193 46.8	N 61 38.6	Formalhaut	15 19.0	S 29 31.1
Denebola	182 29.4	N 14 27.9	Markab	13 33.8	N 15 18.8

2019 - 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	11.6 +02.5	27	10.8 +02.4	28	09.9 +02.5	29	09.0 +02.5	30	08.2 +02.4	00
01	41	14.1 +02.4	42	13.2 +02.5	43	12.4 +02.4	44	11.5 +02.5	45	10.6 +02.5	01
02	56	16.5 +02.5	57	15.7 +02.4	58	14.8 +02.5	59	14.0 +02.4	60	13.1 +02.5	02
03	71	19.0 +02.5	72	18.1 +02.5	73	17.3 +02.5	74	16.4 +02.5	75	15.6 +02.4	03
04	86	21.5 +02.4	87	20.6 +02.5	88	19.8 +02.4	89	18.9 +02.5	90	18.0 +02.5	04
05	101	23.9 +02.5	102	23.1 +02.4	103	22.2 +02.5	104	21.4 +02.4	105	20.5 +02.5	05
06	116	26.4 +02.5	117	25.5 +02.5	118	24.7 +02.4	119	23.8 +02.5	120	23.0 +02.4	06
07	131	28.9 +02.4	132	28.0 +02.5	133	27.1 +02.5	134	26.3 +02.4	135	25.4 +02.5	07
08	146	31.3 +02.5	147	30.5 +02.4	148	29.6 +02.5	149	28.7 +02.5	150	27.9 +02.5	08
09	161	33.8 +02.5	162	32.9 +02.5	163	32.1 +02.4	164	31.2 +02.5	165	30.4 +02.4	09
10	176	36.3 +02.4	177	35.4 +02.5	178	34.5 +02.5	179	33.7 +02.4	180	32.8 +02.5	10
11	191	38.7 +02.5	192	37.9 +02.4	193	37.0 +02.5	194	36.1 +02.5	195	35.3 +02.4	11
12	206	41.2 +02.5	207	40.3 +02.5	208	39.5 +02.4	209	38.6 +02.5	210	37.7 +02.5	12
13	221	43.7 +02.4	222	42.8 +02.5	223	41.9 +02.5	224	41.1 +02.4	225	40.2 +02.5	13
14	236	46.1 +02.5	237	45.3 +02.4	238	44.4 +02.5	239	43.5 +02.5	240	42.7 +02.4	14
15	251	48.6 +02.4	252	47.7 +02.5	253	46.9 +02.4	254	46.0 +02.5	255	45.1 +02.5	15
16	266	51.0 +02.5	267	50.2 +02.4	268	49.3 +02.5	269	48.5 +02.4	270	47.6 +02.5	16
17	281	53.5 +02.5	282	52.6 +02.5	283	51.8 +02.5	284	50.9 +02.5	285	50.1 +02.4	17
18	296	56.0 +02.4	297	55.1 +02.5	298	54.3 +02.4	299	53.4 +02.5	300	52.5 +02.5	18
19	311	58.4 +02.5	312	57.6 +02.4	313	56.7 +02.5	314	55.9 +02.4	315	55.0 +02.5	19
20	327	00.9 +02.5	328	00.0 +02.5	328	59.2 +02.4	329	58.3 +02.5	330	57.5 +02.4	20
21	342	03.4 +02.4	343	02.5 +02.5	344	01.6 +02.5	345	00.8 +02.4	345	59.9 +02.5	21
22	357	05.8 +02.5	358	05.0 +02.4	359	04.1 +02.5	0	03.2 +02.5	1	02.4 +02.5	22
23	12	08.3 +02.5	13	07.4 +02.5	14	06.6 +02.4	15	05.7 +02.5	16	04.9 +02.4	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.8	N 29 12.1	Gienah	175 48.1	S 17 38.8
Ankaa	353 11.1	S 42 11.9	Acrux	173 05.2	S 63 12.2
Schedir	349 35.1	N 56 38.8	Gacrux	171 56.7	S 57 13.1
Diphda	348 51.3	S 17 52.7	Alioth	166 17.5	N 55 51.3
Achernar	335 23.0	S 57 08.3	Spica	158 27.0	S 11 15.6
Hamal	327 55.6	N 23 33.3	Alkaid	152 55.9	N 49 13.1
Polaris	315 28.2	N 89 20.6	Hadar	148 42.4	S 60 27.9
Acamar	315 14.6	S 40 13.5	Menkent	148 02.6	S 36 27.5
Menkar	314 10.2	N 04 10.0	Arcturus	145 51.8	N 19 05.7
Mirfak	308 33.7	N 49 55.7	Rigel Kentaurus	139 44.2	S 60 55.0
Aldebaran	290 44.2	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.1
Capella	280 27.8	N 46 01.0	Kocab	137 21.1	N 74 04.7
Rigel	281 07.7	S 08 10.7	Alphecca	126 07.7	N 26 39.2
Bellatrix	278 27.2	N 06 22.0	Antares	112 21.3	S 26 28.4
Elnath	278 07.0	N 28 37.3	Atria	107 19.5	S 69 03.8
Alnilam	275 41.8	S 01 11.4	Sabik	102 07.8	S 15 44.8
Betelgeuze	270 56.5	N 07 24.6	Shaula	96 16.3	S 37 07.0
Canopus	263 54.1	S 52 42.1	Rasalhague	96 02.7	N 12 33.1
Sirius	258 29.7	S 16 44.1	Etamin	90 44.4	N 51 29.6
Adhara	255 09.1	S 28 59.7	Kaus Australis	83 38.2	S 34 22.4
Castor	246 02.4	N 31 50.6	Vega	80 36.2	N 38 48.4
Procyon	244 55.0	N 05 10.8	Nunki	75 53.1	S 26 16.2
Pollux	243 22.2	N 27 58.6	Albireo	67 07.4	N 28 00.4
Avior	234 16.4	S 59 34.1	Altair	62 04.2	N 08 55.3
Suhail	222 49.4	S 43 30.4	Peacock	53 12.3	S 56 40.4
Miaplacidus	221 39.1	S 69 47.6	Deneb	49 28.5	N 45 21.4
Alphard	217 52.0	S 08 44.5	Enif	33 42.7	N 09 58.1
Regulus	207 39.0	N 11 52.3	Alnair	27 38.1	S 46 52.0
Dubhe	193 46.8	N 61 38.6	Formalhaut	15 19.0	S 29 31.1
Denebola	182 29.4	N 14 27.9	Markab	13 33.8	N 15 18.8

2019 - First Point of Aries / Selected Stars

UT	day 296 of 365		day 297 of 365		day 298 of 365		day 299 of 365		day 300 of 365		UT					
	October 23		October 24		October 25		October 26		October 27							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	31	07.3	+02.5	32	06.5	+02.4	33	05.6	+02.5	34	04.7	+02.5	35	03.9	+02.4	00
01	46	09.8	+02.4	47	08.9	+02.5	48	08.1	+02.4	49	07.2	+02.5	50	06.3	+02.5	01
02	61	12.2	+02.5	62	11.4	+02.4	63	10.5	+02.5	64	09.7	+02.4	65	08.8	+02.5	02
03	76	14.7	+02.5	77	13.8	+02.5	78	13.0	+02.4	79	12.1	+02.5	80	11.3	+02.4	03
04	91	17.2	+02.4	92	16.3	+02.5	93	15.4	+02.5	94	14.6	+02.4	95	13.7	+02.5	04
05	106	19.6	+02.5	107	18.8	+02.4	108	17.9	+02.5	109	17.0	+02.5	110	16.2	+02.4	05
06	121	22.1	+02.5	122	21.2	+02.5	123	20.4	+02.4	124	19.5	+02.5	125	18.6	+02.5	06
07	136	24.6	+02.4	137	23.7	+02.5	138	22.8	+02.5	139	22.0	+02.4	140	21.1	+02.5	07
08	151	27.0	+02.5	152	26.2	+02.4	153	25.3	+02.5	154	24.4	+02.5	155	23.6	+02.4	08
09	166	29.5	+02.5	167	28.6	+02.5	168	27.8	+02.4	169	26.9	+02.5	170	26.0	+02.5	09
10	181	32.0	+02.4	182	31.1	+02.5	183	30.2	+02.5	184	29.4	+02.4	185	28.5	+02.5	10
11	196	34.4	+02.5	197	33.6	+02.4	198	32.7	+02.5	199	31.8	+02.5	200	31.0	+02.4	11
12	211	36.9	+02.4	212	36.0	+02.5	213	35.2	+02.4	214	34.3	+02.5	215	33.4	+02.5	12
13	226	39.3	+02.5	227	38.5	+02.5	228	37.6	+02.5	229	36.8	+02.4	230	35.9	+02.5	13
14	241	41.8	+02.5	242	41.0	+02.4	243	40.1	+02.5	244	39.2	+02.5	245	38.4	+02.4	14
15	256	44.3	+02.4	257	43.4	+02.5	258	42.6	+02.4	259	41.7	+02.5	260	40.8	+02.5	15
16	271	46.7	+02.5	272	45.9	+02.4	273	45.0	+02.5	274	44.2	+02.4	275	43.3	+02.5	16
17	286	49.2	+02.5	287	48.3	+02.5	288	47.5	+02.4	289	46.6	+02.5	290	45.8	+02.4	17
18	301	51.7	+02.4	302	50.8	+02.5	303	49.9	+02.5	304	49.1	+02.4	305	48.2	+02.5	18
19	316	54.1	+02.5	317	53.3	+02.4	318	52.4	+02.5	319	51.5	+02.5	320	50.7	+02.4	19
20	331	56.6	+02.5	332	55.7	+02.5	333	54.9	+02.4	334	54.0	+02.5	335	53.1	+02.5	20
21	346	59.1	+02.4	347	58.2	+02.5	348	57.3	+02.5	349	56.5	+02.4	350	55.6	+02.5	21
22	2	01.5	+02.5	3	00.7	+02.4	3	59.8	+02.5	4	58.9	+02.5	5	58.1	+02.4	22
23	17	04.0	+02.5	18	03.1	+02.5	19	02.3	+02.4	20	01.4	+02.5	21	00.5	+02.5	23

	SHA	Dec		SHA	Dec
	° ' "	° ' "		° ' "	° ' "
Alpheratz	357 38.8	N 29 12.1	Gienah	175 48.1	S 17 38.8
Ankaa	353 11.1	S 42 11.9	Acrux	173 05.2	S 63 12.2
Schedir	349 35.1	N 56 38.8	Gacrux	171 56.7	S 57 13.1
Diphda	348 51.3	S 17 52.7	Alioth	166 17.5	N 55 51.3
Achernar	335 23.0	S 57 08.3	Spica	158 27.0	S 11 15.6
Hamal	327 55.6	N 23 33.4	Alkaid	152 55.9	N 49 13.1
Polaris	315 27.0	N 89 20.7	Hadar	148 42.4	S 60 27.9
Acamar	315 14.6	S 40 13.5	Menkent	148 02.6	S 36 27.5
Menkar	314 10.2	N 04 10.0	Arcturus	145 51.8	N 19 05.7
Mirfak	308 33.7	N 49 55.7	Rigel Kentaurus	139 44.2	S 60 55.0
Aldebaran	290 44.2	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.1
Capella	280 27.8	N 46 01.0	Kocab	137 21.2	N 74 04.7
Rigel	281 07.7	S 08 10.7	Alphecca	126 07.7	N 26 39.2
Bellatrix	278 27.1	N 06 22.0	Antares	112 21.4	S 26 28.4
Elnath	278 06.9	N 28 37.4	Atria	107 19.6	S 69 03.8
Alnilam	275 41.8	S 01 11.4	Sabik	102 07.8	S 15 44.8
Betelgeuze	270 56.4	N 07 24.6	Shaula	96 16.3	S 37 07.0
Canopus	263 54.0	S 52 42.1	Rasalhague	96 02.7	N 12 33.1
Sirius	258 29.6	S 16 44.1	Etamin	90 44.4	N 51 29.6
Adhara	255 09.0	S 28 59.7	Kaus Australis	83 38.2	S 34 22.4
Castor	246 02.3	N 31 50.6	Vega	80 36.3	N 38 48.4
Procyon	244 55.0	N 05 10.8	Nunki	75 53.1	S 26 16.2
Pollux	243 22.1	N 27 58.6	Albireo	67 07.5	N 28 00.4
Avior	234 16.3	S 59 34.1	Altair	62 04.2	N 08 55.3
Suhail	222 49.4	S 43 30.4	Peacock	53 12.4	S 56 40.4
Miaplacidus	221 39.0	S 69 47.6	Deneb	49 28.5	N 45 21.4
Alphard	217 52.0	S 08 44.5	Enif	33 42.8	N 09 58.1
Regulus	207 39.0	N 11 52.3	Alnair	27 38.1	S 46 52.0
Dubhe	193 46.7	N 61 38.6	Formalhaut	15 19.1	S 29 31.1
Denebola	182 29.4	N 14 27.9	Markab	13 33.8	N 15 18.8

2019 - First Point of Aries / Selected Stars

UT	day 301 of 365		day 302 of 365		day 303 of 365		day 304 of 365		day 305 of 365		UT					
	October 28		October 29		October 30		October 31		November 1							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	36	03.0	+02.5	37	02.1	+02.5	38	01.3	+02.4	39	00.4	+02.5	39	59.6	+02.4	00
01	51	05.5	+02.4	52	04.6	+02.5	53	03.7	+02.5	54	02.9	+02.4	55	02.0	+02.5	01
02	66	07.9	+02.5	67	07.1	+02.4	68	06.2	+02.5	69	05.3	+02.5	70	04.5	+02.5	02
03	81	10.4	+02.5	82	09.5	+02.5	83	08.7	+02.4	84	07.8	+02.5	85	07.0	+02.4	03
04	96	12.9	+02.4	97	12.0	+02.5	98	11.1	+02.5	99	10.3	+02.4	100	09.4	+02.5	04
05	111	15.3	+02.5	112	14.5	+02.4	113	13.6	+02.5	114	12.7	+02.5	115	11.9	+02.4	05
06	126	17.8	+02.5	127	16.9	+02.5	128	16.1	+02.4	129	15.2	+02.5	130	14.3	+02.5	06
07	141	20.3	+02.4	142	19.4	+02.5	143	18.5	+02.5	144	17.7	+02.4	145	16.8	+02.5	07
08	156	22.7	+02.5	157	21.9	+02.4	158	21.0	+02.5	159	20.1	+02.5	160	19.3	+02.4	08
09	171	25.2	+02.4	172	24.3	+02.5	173	23.5	+02.4	174	22.6	+02.5	175	21.7	+02.5	09
10	186	27.6	+02.5	187	26.8	+02.4	188	25.9	+02.5	189	25.1	+02.4	190	24.2	+02.5	10
11	201	30.1	+02.5	202	29.2	+02.5	203	28.4	+02.4	204	27.5	+02.5	205	26.7	+02.4	11
12	216	32.6	+02.4	217	31.7	+02.5	218	30.8	+02.5	219	30.0	+02.5	220	29.1	+02.5	12
13	231	35.0	+02.5	232	34.2	+02.4	233	33.3	+02.5	234	32.5	+02.4	235	31.6	+02.5	13
14	246	37.5	+02.5	247	36.6	+02.5	248	35.8	+02.4	249	34.9	+02.5	250	34.1	+02.4	14
15	261	40.0	+02.4	262	39.1	+02.5	263	38.2	+02.5	264	37.4	+02.4	265	36.5	+02.5	15
16	276	42.4	+02.5	277	41.6	+02.4	278	40.7	+02.5	279	39.8	+02.5	280	39.0	+02.5	16
17	291	44.9	+02.5	292	44.0	+02.5	293	43.2	+02.4	294	42.3	+02.5	295	41.5	+02.4	17
18	306	47.4	+02.4	307	46.5	+02.5	308	45.6	+02.5	309	44.8	+02.4	310	43.9	+02.5	18
19	321	49.8	+02.5	322	49.0	+02.4	323	48.1	+02.5	324	47.2	+02.5	325	46.4	+02.4	19
20	336	52.3	+02.4	337	51.4	+02.5	338	50.6	+02.4	339	49.7	+02.5	340	48.8	+02.5	20
21	351	54.7	+02.5	352	53.9	+02.5	353	53.0	+02.5	354	52.2	+02.4	355	51.3	+02.5	21
22	6	57.2	+02.5	7	56.4	+02.4	8	55.5	+02.5	9	54.6	+02.5	10	53.8	+02.4	22
23	21	59.7	+02.4	22	58.8	+02.5	23	58.0	+02.4	24	57.1	+02.5	25	56.2	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.8	N 29	12.1	Gienah	175	48.1	S 17	38.8
Ankaa	353	11.1	S 42	11.9	Acrux	173	05.1	S 63	12.2
Schedir	349	35.1	N 56	38.8	Gacrux	171	56.7	S 57	13.0
Diphda	348	51.3	S 17	52.8	Alioth	166	17.5	N 55	51.2
Achernar	335	23.0	S 57	08.3	Spica	158	27.0	S 11	15.6
Hamal	327	55.6	N 23	33.4	Alkaid	152	55.9	N 49	13.0
Polaris	315	26.2	N 89	20.7	Hadar	148	42.4	S 60	27.8
Acamar	315	14.6	S 40	13.6	Menkent	148	02.6	S 36	27.5
Menkar	314	10.2	N 04	10.0	Arcturus	145	51.8	N 19	05.7
Mirfak	308	33.7	N 49	55.7	Rigel Kentaurus	139	44.2	S 60	54.9
Aldebaran	290	44.1	N 16	32.9	Zubenelgenubi	137	00.9	S 16	07.1
Capella	280	27.7	N 46	01.0	Kocab	137	21.2	N 74	04.6
Rigel	281	07.6	S 08	10.7	Alphecca	126	07.7	N 26	39.2
Bellatrix	278	27.1	N 06	22.0	Antares	112	21.4	S 26	28.4
Elnath	278	06.9	N 28	37.4	Atria	107	19.6	S 69	03.7
Alnilam	275	41.8	S 01	11.4	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.4	N 07	24.6	Shaula	96	16.3	S 37	07.0
Canopus	263	54.0	S 52	42.2	Rasalhague	96	02.7	N 12	33.1
Sirius	258	29.6	S 16	44.1	Etamin	90	44.4	N 51	29.5
Adhara	255	09.0	S 28	59.8	Kaus Australis	83	38.3	S 34	22.4
Castor	246	02.3	N 31	50.6	Vega	80	36.3	N 38	48.4
Procyon	244	54.9	N 05	10.8	Nunki	75	53.1	S 26	16.2
Pollux	243	22.1	N 27	58.6	Albireo	67	07.5	N 28	00.4
Avior	234	16.3	S 59	34.1	Altair	62	04.2	N 08	55.3
Suhail	222	49.3	S 43	30.4	Peacock	53	12.4	S 56	40.4
Miaplacidus	221	38.9	S 69	47.6	Deneb	49	28.5	N 45	21.4
Alphard	217	51.9	S 08	44.5	Enif	33	42.8	N 09	58.1
Regulus	207	39.0	N 11	52.3	Alnair	27	38.1	S 46	52.0
Dubhe	193	46.7	N 61	38.6	Formalhaut	15	19.1	S 29	31.1
Denebola	182	29.4	N 14	27.9	Markab	13	33.8	N 15	18.8

2019 - First Point of Aries / Selected Stars

UT	day 306 of 365		day 307 of 365		day 308 of 365		day 309 of 365		day 310 of 365		UT					
	<i>November 2</i>		<i>November 3</i>		<i>November 4</i>		<i>November 5</i>		<i>November 6</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "						
00	40	58.7	+02.5	41	57.8	+02.5	42	57.0	+02.4	43	56.1	+02.5	44	55.3	+02.4	00
01	56	01.2	+02.4	57	00.3	+02.5	57	59.4	+02.5	58	58.6	+02.4	59	57.7	+02.5	01
02	71	03.6	+02.5	72	02.8	+02.4	73	01.9	+02.5	74	01.0	+02.5	75	00.2	+02.4	02
03	86	06.1	+02.5	87	05.2	+02.5	88	04.4	+02.4	89	03.5	+02.5	90	02.6	+02.5	03
04	101	08.6	+02.4	102	07.7	+02.5	103	06.8	+02.5	104	06.0	+02.4	105	05.1	+02.5	04
05	116	11.0	+02.5	117	10.2	+02.4	118	09.3	+02.5	119	08.4	+02.5	120	07.6	+02.4	05
06	131	13.5	+02.4	132	12.6	+02.5	133	11.8	+02.4	134	10.9	+02.5	135	10.0	+02.5	06
07	146	15.9	+02.5	147	15.1	+02.5	148	14.2	+02.5	149	13.4	+02.4	150	12.5	+02.5	07
08	161	18.4	+02.5	162	17.6	+02.4	163	16.7	+02.5	164	15.8	+02.5	165	15.0	+02.4	08
09	176	20.9	+02.4	177	20.0	+02.5	178	19.2	+02.4	179	18.3	+02.5	180	17.4	+02.5	09
10	191	23.3	+02.5	192	22.5	+02.4	193	21.6	+02.5	194	20.8	+02.4	195	19.9	+02.5	10
11	206	25.8	+02.5	207	24.9	+02.5	208	24.1	+02.4	209	23.2	+02.5	210	22.4	+02.4	11
12	221	28.3	+02.4	222	27.4	+02.5	223	26.5	+02.5	224	25.7	+02.5	225	24.8	+02.5	12
13	236	30.7	+02.5	237	29.9	+02.4	238	29.0	+02.5	239	28.2	+02.4	240	27.3	+02.5	13
14	251	33.2	+02.5	252	32.3	+02.5	253	31.5	+02.4	254	30.6	+02.5	255	29.8	+02.4	14
15	266	35.7	+02.4	267	34.8	+02.5	268	33.9	+02.5	269	33.1	+02.4	270	32.2	+02.5	15
16	281	38.1	+02.5	282	37.3	+02.4	283	36.4	+02.5	284	35.5	+02.5	285	34.7	+02.4	16
17	296	40.6	+02.5	297	39.7	+02.5	298	38.9	+02.4	299	38.0	+02.5	300	37.1	+02.5	17
18	311	43.1	+02.4	312	42.2	+02.5	313	41.3	+02.5	314	40.5	+02.4	315	39.6	+02.5	18
19	326	45.5	+02.5	327	44.7	+02.4	328	43.8	+02.5	329	42.9	+02.5	330	42.1	+02.4	19
20	341	48.0	+02.4	342	47.1	+02.5	343	46.3	+02.4	344	45.4	+02.5	345	44.5	+02.5	20
21	356	50.4	+02.5	357	49.6	+02.5	358	48.7	+02.5	359	47.9	+02.4	0	47.0	+02.5	21
22	11	52.9	+02.5	12	52.1	+02.4	13	51.2	+02.5	14	50.3	+02.5	15	49.5	+02.4	22
23	26	55.4	+02.4	27	54.5	+02.5	28	53.7	+02.4	29	52.8	+02.5	30	51.9	+02.5	23

	SHA	Dec		SHA	Dec				
	° ' "	' "		° ' "	' "				
Alpheratz	357	38.8	N 29	12.1	Gienah	175	48.1	S 17	38.8
Ankaa	353	11.1	S 42	12.0	Acrux	173	05.1	S 63	12.2
Schedir	349	35.1	N 56	38.8	Gacrux	171	56.6	S 57	13.0
Diphda	348	51.3	S 17	52.8	Alioth	166	17.4	N 55	51.2
Achernar	335	23.0	S 57	08.3	Spica	158	27.0	S 11	15.6
Hamal	327	55.6	N 23	33.4	Alkaid	152	55.9	N 49	13.0
Polaris	315	25.2	N 89	20.7	Hadar	148	42.4	S 60	27.8
Acamar	315	14.6	S 40	13.6	Menkent	148	02.6	S 36	27.5
Menkar	314	10.2	N 04	10.0	Arcturus	145	51.8	N 19	05.6
Mirfak	308	33.6	N 49	55.7	Rigel Kentaurus	139	44.2	S 60	54.9
Aldebaran	290	44.1	N 16	32.9	Zubenelgenubi	137	00.9	S 16	07.1
Capella	280	27.7	N 46	01.0	Kocab	137	21.2	N 74	04.6
Rigel	281	07.6	S 08	10.7	Alphecca	126	07.7	N 26	39.2
Bellatrix	278	27.1	N 06	22.0	Antares	112	21.4	S 26	28.3
Elnath	278	06.8	N 28	37.4	Atria	107	19.6	S 69	03.7
Alnilam	275	41.7	S 01	11.4	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.4	N 07	24.6	Shaula	96	16.3	S 37	07.0
Canopus	263	53.9	S 52	42.2	Rasalhague	96	02.7	N 12	33.1
Sirius	258	29.6	S 16	44.1	Etamin	90	44.5	N 51	29.5
Adhara	255	08.9	S 28	59.8	Kaus Australis	83	38.3	S 34	22.4
Castor	246	02.2	N 31	50.6	Vega	80	36.3	N 38	48.4
Procyon	244	54.9	N 05	10.8	Nunki	75	53.1	S 26	16.2
Pollux	243	22.0	N 27	58.6	Albireo	67	07.5	N 28	00.4
Avior	234	16.2	S 59	34.1	Altair	62	04.2	N 08	55.3
Suhail	222	49.3	S 43	30.4	Peacock	53	12.5	S 56	40.4
Miaplacidus	221	38.8	S 69	47.6	Deneb	49	28.6	N 45	21.4
Alphard	217	51.9	S 08	44.5	Enif	33	42.8	N 09	58.1
Regulus	207	38.9	N 11	52.3	Alnair	27	38.1	S 46	52.0
Dubhe	193	46.6	N 61	38.5	Formalhaut	15	19.1	S 29	31.1
Denebola	182	29.3	N 14	27.9	Markab	13	33.8	N 15	18.8

2019 - First Point of Aries / Selected Stars

UT	day 311 of 365		day 312 of 365		day 313 of 365		day 314 of 365		day 315 of 365		UT					
	<i>November 7</i>		<i>November 8</i>		<i>November 9</i>		<i>November 10</i>		<i>November 11</i>							
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA						
	°	'	°	'	°	'	°	'	°	'						
00	45	54.4	+02.5	46	53.5	+02.5	47	52.7	+02.4	48	51.8	+02.5	49	50.9	+02.5	00
01	60	56.9	+02.4	61	56.0	+02.5	62	55.1	+02.5	63	54.3	+02.4	64	53.4	+02.5	01
02	75	59.3	+02.5	76	58.5	+02.4	77	57.6	+02.5	78	56.7	+02.5	79	55.9	+02.4	02
03	91	01.8	+02.5	92	00.9	+02.5	93	00.1	+02.4	93	59.2	+02.5	94	58.3	+02.5	03
04	106	04.3	+02.4	107	03.4	+02.5	108	02.5	+02.5	109	01.7	+02.4	110	00.8	+02.5	04
05	121	06.7	+02.5	122	05.9	+02.4	123	05.0	+02.5	124	04.1	+02.5	125	03.3	+02.4	05
06	136	09.2	+02.4	137	08.3	+02.5	138	07.5	+02.4	139	06.6	+02.5	140	05.7	+02.5	06
07	151	11.6	+02.5	152	10.8	+02.4	153	09.9	+02.5	154	09.1	+02.4	155	08.2	+02.5	07
08	166	14.1	+02.5	167	13.2	+02.5	168	12.4	+02.4	169	11.5	+02.5	170	10.7	+02.4	08
09	181	16.6	+02.4	182	15.7	+02.5	183	14.8	+02.5	184	14.0	+02.4	185	13.1	+02.5	09
10	196	19.0	+02.5	197	18.2	+02.4	198	17.3	+02.5	199	16.4	+02.5	200	15.6	+02.4	10
11	211	21.5	+02.5	212	20.6	+02.5	213	19.8	+02.4	214	18.9	+02.5	215	18.0	+02.5	11
12	226	24.0	+02.4	227	23.1	+02.5	228	22.2	+02.5	229	21.4	+02.4	230	20.5	+02.5	12
13	241	26.4	+02.5	242	25.6	+02.4	243	24.7	+02.5	244	23.8	+02.5	245	23.0	+02.4	13
14	256	28.9	+02.5	257	28.0	+02.5	258	27.2	+02.4	259	26.3	+02.5	260	25.4	+02.5	14
15	271	31.4	+02.4	272	30.5	+02.5	273	29.6	+02.5	274	28.8	+02.4	275	27.9	+02.5	15
16	286	33.8	+02.5	287	33.0	+02.4	288	32.1	+02.5	289	31.2	+02.5	290	30.4	+02.4	16
17	301	36.3	+02.4	302	35.4	+02.5	303	34.6	+02.4	304	33.7	+02.5	305	32.8	+02.5	17
18	316	38.7	+02.5	317	37.9	+02.4	318	37.0	+02.5	319	36.2	+02.4	320	35.3	+02.5	18
19	331	41.2	+02.5	332	40.3	+02.5	333	39.5	+02.4	334	38.6	+02.5	335	37.8	+02.4	19
20	346	43.7	+02.4	347	42.8	+02.5	348	41.9	+02.5	349	41.1	+02.5	350	40.2	+02.5	20
21	1	46.1	+02.5	2	45.3	+02.4	3	44.4	+02.5	4	43.6	+02.4	5	42.7	+02.5	21
22	16	48.6	+02.5	17	47.7	+02.5	18	46.9	+02.4	19	46.0	+02.5	20	45.2	+02.4	22
23	31	51.1	+02.4	32	50.2	+02.5	33	49.3	+02.5	34	48.5	+02.4	35	47.6	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.8	N 29	12.1	Gienah	175	48.0	S 17	38.8
Ankaa	353	11.1	S 42	12.0	Acrux	173	05.0	S 63	12.2
Schedir	349	35.1	N 56	38.9	Gacrux	171	56.6	S 57	13.0
Diphda	348	51.3	S 17	52.8	Alioth	166	17.4	N 55	51.2
Achernar	335	23.0	S 57	08.4	Spica	158	27.0	S 11	15.6
Hamal	327	55.6	N 23	33.4	Alkaid	152	55.9	N 49	13.0
Polaris	315	24.8	N 89	20.8	Hadar	148	42.3	S 60	27.8
Acamar	315	14.6	S 40	13.6	Menkent	148	02.6	S 36	27.5
Menkar	314	10.2	N 04	10.0	Arcturus	145	51.8	N 19	05.6
Mirfak	308	33.6	N 49	55.8	Rigel Kentaurus	139	44.2	S 60	54.9
Aldebaran	290	44.1	N 16	32.9	Zubenelgenubi	137	00.9	S 16	07.1
Capella	280	27.6	N 46	01.0	Kocab	137	21.2	N 74	04.6
Rigel	281	07.6	S 08	10.7	Alphecca	126	07.7	N 26	39.2
Bellatrix	278	27.1	N 06	22.0	Antares	112	21.4	S 26	28.3
Elnath	278	06.8	N 28	37.4	Atria	107	19.7	S 69	03.7
Alnilam	275	41.7	S 01	11.4	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.3	N 07	24.6	Shaula	96	16.3	S 37	07.0
Canopus	263	53.9	S 52	42.2	Rasalhague	96	02.7	N 12	33.1
Sirius	258	29.5	S 16	44.1	Etamin	90	44.5	N 51	29.5
Adhara	255	08.9	S 28	59.8	Kaus Australis	83	38.3	S 34	22.4
Castor	246	02.2	N 31	50.6	Vega	80	36.4	N 38	48.3
Procyon	244	54.9	N 05	10.8	Nunki	75	53.1	S 26	16.2
Pollux	243	22.0	N 27	58.6	Albireo	67	07.5	N 28	00.3
Avior	234	16.2	S 59	34.1	Altair	62	04.3	N 08	55.3
Suhail	222	49.3	S 43	30.4	Peacock	53	12.5	S 56	40.4
Miaplacidus	221	38.7	S 69	47.6	Deneb	49	28.6	N 45	21.4
Alphard	217	51.8	S 08	44.5	Enif	33	42.8	N 09	58.1
Regulus	207	38.9	N 11	52.3	Alnair	27	38.2	S 46	52.1
Dubhe	193	46.6	N 61	38.5	Formalhaut	15	19.1	S 29	31.1
Denebola	182	29.3	N 14	27.8	Markab	13	33.9	N 15	18.8

2019 - 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
	<i>November 12</i>			<i>November 13</i>			<i>November 14</i>			<i>November 15</i>			<i>November 16</i>			
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
00	50	50.1	+02.4	51	49.2	+02.5	52	48.4	+02.4	53	47.5	+02.5	54	46.6	+02.5	00
01	65	52.5	+02.5	66	51.7	+02.4	67	50.8	+02.5	68	50.0	+02.4	69	49.1	+02.5	01
02	80	55.0	+02.5	81	54.1	+02.5	82	53.3	+02.5	83	52.4	+02.5	84	51.6	+02.4	02
03	95	57.5	+02.4	96	56.6	+02.5	97	55.8	+02.4	98	54.9	+02.5	99	54.0	+02.5	03
04	110	59.9	+02.5	111	59.1	+02.4	112	58.2	+02.5	113	57.4	+02.4	114	56.5	+02.5	04
05	126	02.4	+02.5	127	01.5	+02.5	128	00.7	+02.4	128	59.8	+02.5	129	59.0	+02.4	05
06	141	04.9	+02.4	142	04.0	+02.5	143	03.1	+02.5	144	02.3	+02.4	145	01.4	+02.5	06
07	156	07.3	+02.5	157	06.5	+02.4	158	05.6	+02.5	159	04.7	+02.5	160	03.9	+02.5	07
08	171	09.8	+02.5	172	08.9	+02.5	173	08.1	+02.4	174	07.2	+02.5	175	06.4	+02.4	08
09	186	12.3	+02.4	187	11.4	+02.5	188	10.5	+02.5	189	09.7	+02.4	190	08.8	+02.5	09
10	201	14.7	+02.5	202	13.9	+02.4	203	13.0	+02.5	204	12.1	+02.5	205	11.3	+02.4	10
11	216	17.2	+02.5	217	16.3	+02.5	218	15.5	+02.4	219	14.6	+02.5	220	13.7	+02.5	11
12	231	19.7	+02.4	232	18.8	+02.5	233	17.9	+02.5	234	17.1	+02.4	235	16.2	+02.5	12
13	246	22.1	+02.5	247	21.3	+02.4	248	20.4	+02.5	249	19.5	+02.5	250	18.7	+02.4	13
14	261	24.6	+02.4	262	23.7	+02.5	263	22.9	+02.4	264	22.0	+02.5	265	21.1	+02.5	14
15	276	27.0	+02.5	277	26.2	+02.4	278	25.3	+02.5	279	24.5	+02.4	280	23.6	+02.5	15
16	291	29.5	+02.5	292	28.6	+02.5	293	27.8	+02.5	294	26.9	+02.5	295	26.1	+02.4	16
17	306	32.0	+02.4	307	31.1	+02.5	308	30.3	+02.4	309	29.4	+02.5	310	28.5	+02.5	17
18	321	34.4	+02.5	322	33.6	+02.4	323	32.7	+02.5	324	31.9	+02.4	325	31.0	+02.5	18
19	336	36.9	+02.5	337	36.0	+02.5	338	35.2	+02.4	339	34.3	+02.5	340	33.5	+02.4	19
20	351	39.4	+02.4	352	38.5	+02.5	353	37.6	+02.5	354	36.8	+02.4	355	35.9	+02.5	20
21	6	41.8	+02.5	7	41.0	+02.4	8	40.1	+02.5	9	39.2	+02.5	10	38.4	+02.5	21
22	21	44.3	+02.5	22	43.4	+02.5	23	42.6	+02.4	24	41.7	+02.5	25	40.9	+02.4	22
23	36	46.8	+02.4	37	45.9	+02.5	38	45.0	+02.5	39	44.2	+02.4	40	43.3	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.8	N 29 12.1	Gienah	175 48.0	S 17 38.8
Ankaa	353 11.1	S 42 12.0	Acrux	173 05.0	S 63 12.2
Schedir	349 35.2	N 56 38.9	Gacrux	171 56.5	S 57 13.0
Diphda	348 51.3	S 17 52.8	Alioth	166 17.4	N 55 51.1
Achernar	335 23.0	S 57 08.4	Spica	158 26.9	S 11 15.6
Hamal	327 55.6	N 23 33.4	Alkaid	152 55.8	N 49 13.0
Polaris	315 24.5	N 89 20.8	Hadar	148 42.3	S 60 27.8
Acamar	315 14.6	S 40 13.6	Menkent	148 02.6	S 36 27.5
Menkar	314 10.2	N 04 10.0	Arcturus	145 51.8	N 19 05.6
Mirfak	308 33.6	N 49 55.8	Rigel Kentaurus	139 44.2	S 60 54.9
Aldebaran	290 44.1	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.1
Capella	280 27.6	N 46 01.0	Kocab	137 21.2	N 74 04.5
Rigel	281 07.6	S 08 10.7	Alphecca	126 07.7	N 26 39.1
Bellatrix	278 27.0	N 06 22.0	Antares	112 21.4	S 26 28.3
Elnath	278 06.8	N 28 37.4	Atria	107 19.7	S 69 03.7
Alnilam	275 41.7	S 01 11.4	Sabik	102 07.9	S 15 44.8
Betelgeuze	270 56.3	N 07 24.6	Shaula	96 16.3	S 37 07.0
Canopus	263 53.8	S 52 42.2	Rasalhague	96 02.7	N 12 33.1
Sirius	258 29.5	S 16 44.1	Etamin	90 44.5	N 51 29.5
Adhara	255 08.9	S 28 59.8	Kaus Australis	83 38.3	S 34 22.4
Castor	246 02.1	N 31 50.6	Vega	80 36.4	N 38 48.3
Procyon	244 54.8	N 05 10.8	Nunki	75 53.1	S 26 16.2
Pollux	243 21.9	N 27 58.6	Albireo	67 07.6	N 28 00.3
Avior	234 16.1	S 59 34.1	Altair	62 04.3	N 08 55.3
Suhail	222 49.2	S 43 30.4	Peacock	53 12.5	S 56 40.4
Miaplacidus	221 38.6	S 69 47.6	Deneb	49 28.6	N 45 21.4
Alphard	217 51.8	S 08 44.5	Enif	33 42.8	N 09 58.1
Regulus	207 38.9	N 11 52.3	Alnair	27 38.2	S 46 52.1
Dubhe	193 46.5	N 61 38.5	Formalhaut	15 19.1	S 29 31.1
Denebola	182 29.3	N 14 27.8	Markab	13 33.9	N 15 18.8

2019 - First Point of Aries / Selected Stars

UT	day 321 of 365 <i>November 17</i>		day 322 of 365 <i>November 18</i>		day 323 of 365 <i>November 19</i>		day 324 of 365 <i>November 20</i>		day 325 of 365 <i>November 21</i>		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	55 45.8	+02.4	56 44.9	+02.5	57 44.1	+02.4	58 43.2	+02.5	59 42.3	+02.5	00
01	70 48.2	+02.5	71 47.4	+02.5	72 46.5	+02.5	73 45.7	+02.4	74 44.8	+02.5	01
02	85 50.7	+02.5	86 49.9	+02.4	87 49.0	+02.5	88 48.1	+02.5	89 47.3	+02.4	02
03	100 53.2	+02.4	101 52.3	+02.5	102 51.5	+02.4	103 50.6	+02.5	104 49.7	+02.5	03
04	115 55.6	+02.5	116 54.8	+02.4	117 53.9	+02.5	118 53.1	+02.4	119 52.2	+02.5	04
05	130 58.1	+02.5	131 57.2	+02.5	132 56.4	+02.4	133 55.5	+02.5	134 54.7	+02.4	05
06	146 00.6	+02.4	146 59.7	+02.5	147 58.8	+02.5	148 58.0	+02.4	149 57.1	+02.5	06
07	161 03.0	+02.5	162 02.2	+02.4	163 01.3	+02.5	164 00.4	+02.5	164 59.6	+02.5	07
08	176 05.5	+02.5	177 04.6	+02.5	178 03.8	+02.4	179 02.9	+02.5	180 02.1	+02.4	08
09	191 08.0	+02.4	192 07.1	+02.5	193 06.2	+02.5	194 05.4	+02.4	195 04.5	+02.5	09
10	206 10.4	+02.5	207 09.6	+02.4	208 08.7	+02.5	209 07.8	+02.5	210 07.0	+02.4	10
11	221 12.9	+02.5	222 12.0	+02.5	223 11.2	+02.4	224 10.3	+02.5	225 09.4	+02.5	11
12	236 15.4	+02.4	237 14.5	+02.5	238 13.6	+02.5	239 12.8	+02.4	240 11.9	+02.5	12
13	251 17.8	+02.5	252 17.0	+02.4	253 16.1	+02.5	254 15.2	+02.5	255 14.4	+02.4	13
14	266 20.3	+02.4	267 19.4	+02.5	268 18.6	+02.4	269 17.7	+02.5	270 16.8	+02.5	14
15	281 22.7	+02.5	282 21.9	+02.4	283 21.0	+02.5	284 20.2	+02.4	285 19.3	+02.5	15
16	296 25.2	+02.5	297 24.3	+02.5	298 23.5	+02.5	299 22.6	+02.5	300 21.8	+02.4	16
17	311 27.7	+02.4	312 26.8	+02.5	313 26.0	+02.4	314 25.1	+02.5	315 24.2	+02.5	17
18	326 30.1	+02.5	327 29.3	+02.4	328 28.4	+02.5	329 27.6	+02.4	330 26.7	+02.5	18
19	341 32.6	+02.5	342 31.7	+02.5	343 30.9	+02.4	344 30.0	+02.5	345 29.2	+02.4	19
20	356 35.1	+02.4	357 34.2	+02.5	358 33.3	+02.5	359 32.5	+02.4	0 31.6	+02.5	20
21	11 37.5	+02.5	12 36.7	+02.4	13 35.8	+02.5	14 34.9	+02.5	15 34.1	+02.4	21
22	26 40.0	+02.5	27 39.1	+02.5	28 38.3	+02.4	29 37.4	+02.5	30 36.5	+02.5	22
23	41 42.5	+02.4	42 41.6	+02.5	43 40.7	+02.5	44 39.9	+02.4	45 39.0	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.8	N 29 12.1	Gienah	175 48.0	S 17 38.9
Ankaa	353 11.2	S 42 12.0	Acrux	173 04.9	S 63 12.1
Schedir	349 35.2	N 56 38.9	Gacrux	171 56.5	S 57 13.0
Diphda	348 51.3	S 17 52.8	Alioth	166 17.3	N 55 51.1
Achernar	335 23.0	S 57 08.4	Spica	158 26.9	S 11 15.6
Hamal	327 55.5	N 23 33.4	Alkaid	152 55.8	N 49 12.9
Polaris	315 24.1	N 89 20.8	Hadar	148 42.3	S 60 27.8
Acamar	315 14.5	S 40 13.7	Menkent	148 02.5	S 36 27.5
Menkar	314 10.1	N 04 10.0	Arcturus	145 51.7	N 19 05.6
Mirfak	308 33.6	N 49 55.8	Rigel Kentaurus	139 44.1	S 60 54.9
Aldebaran	290 44.0	N 16 32.9	Zubenelgenubi	137 00.9	S 16 07.2
Capella	280 27.6	N 46 01.0	Kocab	137 21.2	N 74 04.5
Rigel	281 07.5	S 08 10.8	Alphecca	126 07.7	N 26 39.1
Bellatrix	278 27.0	N 06 22.0	Antares	112 21.4	S 26 28.3
Elnath	278 06.8	N 28 37.4	Atria	107 19.7	S 69 03.7
Alnilam	275 41.6	S 01 11.4	Sabik	102 07.9	S 15 44.8
Betelgeuze	270 56.3	N 07 24.6	Shaula	96 16.3	S 37 07.0
Canopus	263 53.8	S 52 42.2	Rasalhague	96 02.7	N 12 33.0
Sirius	258 29.5	S 16 44.2	Etamin	90 44.6	N 51 29.5
Adhara	255 08.8	S 28 59.8	Kaus Australis	83 38.3	S 34 22.4
Castor	246 02.1	N 31 50.6	Vega	80 36.4	N 38 48.3
Procyon	244 54.8	N 05 10.8	Nunki	75 53.2	S 26 16.2
Pollux	243 21.9	N 27 58.6	Albireo	67 07.6	N 28 00.3
Avior	234 16.0	S 59 34.1	Altair	62 04.3	N 08 55.3
Suhail	222 49.2	S 43 30.5	Peacock	53 12.6	S 56 40.4
Miaplacidus	221 38.5	S 69 47.6	Deneb	49 28.7	N 45 21.4
Alphard	217 51.8	S 08 44.5	Enif	33 42.8	N 09 58.1
Regulus	207 38.8	N 11 52.3	Alnair	27 38.2	S 46 52.1
Dubhe	193 46.5	N 61 38.5	Formalhaut	15 19.1	S 29 31.1
Denebola	182 29.2	N 14 27.8	Markab	13 33.9	N 15 18.8

2019 - First Point of Aries / Selected Stars

UT	day 326 of 365 <i>November 22</i>		day 327 of 365 <i>November 23</i>		day 328 of 365 <i>November 24</i>		day 329 of 365 <i>November 25</i>		day 330 of 365 <i>November 26</i>		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	60 41.5	+02.4	61 40.6	+02.5	62 39.8	+02.4	63 38.9	+02.5	64 38.0	+02.5	00
01	75 43.9	+02.5	76 43.1	+02.4	77 42.2	+02.5	78 41.4	+02.4	79 40.5	+02.5	01
02	90 46.4	+02.5	91 45.5	+02.5	92 44.7	+02.4	93 43.8	+02.5	94 43.0	+02.4	02
03	105 48.9	+02.4	106 48.0	+02.5	107 47.1	+02.5	108 46.3	+02.4	109 45.4	+02.5	03
04	120 51.3	+02.5	121 50.5	+02.4	122 49.6	+02.5	123 48.7	+02.5	124 47.9	+02.5	04
05	135 53.8	+02.5	136 52.9	+02.5	137 52.1	+02.4	138 51.2	+02.5	139 50.4	+02.4	05
06	150 56.3	+02.4	151 55.4	+02.5	152 54.5	+02.5	153 53.7	+02.4	154 52.8	+02.5	06
07	165 58.7	+02.5	166 57.9	+02.4	167 57.0	+02.5	168 56.1	+02.5	169 55.3	+02.4	07
08	181 01.2	+02.5	182 00.3	+02.5	182 59.5	+02.4	183 58.6	+02.5	184 57.7	+02.5	08
09	196 03.7	+02.4	197 02.8	+02.5	198 01.9	+02.5	199 01.1	+02.4	200 00.2	+02.5	09
10	211 06.1	+02.5	212 05.3	+02.4	213 04.4	+02.5	214 03.5	+02.5	215 02.7	+02.4	10
11	226 08.6	+02.4	227 07.7	+02.5	228 06.9	+02.4	229 06.0	+02.5	230 05.1	+02.5	11
12	241 11.0	+02.5	242 10.2	+02.4	243 09.3	+02.5	244 08.5	+02.4	245 07.6	+02.5	12
13	256 13.5	+02.5	257 12.6	+02.5	258 11.8	+02.4	259 10.9	+02.5	260 10.1	+02.4	13
14	271 16.0	+02.4	272 15.1	+02.5	273 14.2	+02.5	274 13.4	+02.5	275 12.5	+02.5	14
15	286 18.4	+02.5	287 17.6	+02.4	288 16.7	+02.5	289 15.9	+02.4	290 15.0	+02.5	15
16	301 20.9	+02.5	302 20.0	+02.5	303 19.2	+02.4	304 18.3	+02.5	305 17.5	+02.4	16
17	316 23.4	+02.4	317 22.5	+02.5	318 21.6	+02.5	319 20.8	+02.4	320 19.9	+02.5	17
18	331 25.8	+02.5	332 25.0	+02.4	333 24.1	+02.5	334 23.2	+02.5	335 22.4	+02.4	18
19	346 28.3	+02.5	347 27.4	+02.5	348 26.6	+02.4	349 25.7	+02.5	350 24.8	+02.5	19
20	1 30.8	+02.4	2 29.9	+02.5	3 29.0	+02.5	4 28.2	+02.4	5 27.3	+02.5	20
21	16 33.2	+02.5	17 32.4	+02.4	18 31.5	+02.5	19 30.6	+02.5	20 29.8	+02.4	21
22	31 35.7	+02.5	32 34.8	+02.5	33 34.0	+02.4	34 33.1	+02.5	35 32.2	+02.5	22
23	46 38.2	+02.4	47 37.3	+02.5	48 36.4	+02.5	49 35.6	+02.4	50 34.7	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.8	N 29 12.1	Gienah	175 47.9	S 17 38.9
Ankaa	353 11.2	S 42 12.0	Acrux	173 04.9	S 63 12.1
Schedir	349 35.2	N 56 38.9	Gacrux	171 56.4	S 57 13.0
Diphda	348 51.3	S 17 52.8	Alioth	166 17.3	N 55 51.1
Achernar	335 23.0	S 57 08.4	Spica	158 26.9	S 11 15.6
Hamal	327 55.5	N 23 33.4	Alkaid	152 55.8	N 49 12.9
Polaris	315 24.4	N 89 20.9	Hadar	148 42.2	S 60 27.8
Acamar	315 14.5	S 40 13.7	Menkent	148 02.5	S 36 27.5
Menkar	314 10.1	N 04 10.0	Arcturus	145 51.7	N 19 05.5
Mirfak	308 33.6	N 49 55.8	Rigel Kentaurus	139 44.1	S 60 54.9
Aldebaran	290 44.0	N 16 32.9	Zubenelgenubi	137 00.8	S 16 07.2
Capella	280 27.5	N 46 01.0	Kocab	137 21.2	N 74 04.5
Rigel	281 07.5	S 08 10.8	Alphecca	126 07.7	N 26 39.1
Bellatrix	278 27.0	N 06 22.0	Antares	112 21.4	S 26 28.3
Elnath	278 06.7	N 28 37.4	Atria	107 19.7	S 69 03.6
Alnilam	275 41.6	S 01 11.4	Sabik	102 07.9	S 15 44.8
Betelgeuze	270 56.3	N 07 24.6	Shaula	96 16.3	S 37 07.0
Canopus	263 53.8	S 52 42.3	Rasalhague	96 02.7	N 12 33.0
Sirius	258 29.4	S 16 44.2	Etamin	90 44.6	N 51 29.4
Adhara	255 08.8	S 28 59.8	Kaus Australis	83 38.3	S 34 22.4
Castor	246 02.0	N 31 50.6	Vega	80 36.4	N 38 48.3
Procyon	244 54.8	N 05 10.7	Nunki	75 53.2	S 26 16.2
Pollux	243 21.8	N 27 58.6	Albireo	67 07.6	N 28 00.3
Avior	234 16.0	S 59 34.1	Altair	62 04.3	N 08 55.3
Suhail	222 49.1	S 43 30.5	Peacock	53 12.6	S 56 40.4
Miaplacidus	221 38.5	S 69 47.6	Deneb	49 28.7	N 45 21.3
Alphard	217 51.7	S 08 44.6	Enif	33 42.9	N 09 58.1
Regulus	207 38.8	N 11 52.2	Alnair	27 38.3	S 46 52.1
Dubhe	193 46.4	N 61 38.5	Formalhaut	15 19.2	S 29 31.1
Denebola	182 29.2	N 14 27.8	Markab	13 33.9	N 15 18.8

2019 - 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	65	37.2	+02.4	66	36.3	+02.5	67	35.5	+02.4	68	34.6	+02.5	69	33.7	+02.5	00
01	80	39.6	+02.5	81	38.8	+02.4	82	37.9	+02.5	83	37.1	+02.4	84	36.2	+02.5	01
02	95	42.1	+02.5	96	41.2	+02.5	97	40.4	+02.4	98	39.5	+02.5	99	38.7	+02.4	02
03	110	44.6	+02.4	111	43.7	+02.5	112	42.8	+02.5	113	42.0	+02.4	114	41.1	+02.5	03
04	125	47.0	+02.5	126	46.2	+02.4	127	45.3	+02.5	128	44.4	+02.5	129	43.6	+02.5	04
05	140	49.5	+02.5	141	48.6	+02.5	142	47.8	+02.4	143	46.9	+02.5	144	46.1	+02.4	05
06	155	52.0	+02.4	156	51.1	+02.5	157	50.2	+02.5	158	49.4	+02.4	159	48.5	+02.5	06
07	170	54.4	+02.5	171	53.6	+02.4	172	52.7	+02.5	173	51.8	+02.5	174	51.0	+02.4	07
08	185	56.9	+02.4	186	56.0	+02.5	187	55.2	+02.4	188	54.3	+02.5	189	53.4	+02.5	08
09	200	59.3	+02.5	201	58.5	+02.5	202	57.6	+02.5	203	56.8	+02.4	204	55.9	+02.5	09
10	216	01.8	+02.5	217	01.0	+02.4	218	00.1	+02.5	218	59.2	+02.5	219	58.4	+02.4	10
11	231	04.3	+02.4	232	03.4	+02.5	233	02.6	+02.4	234	01.7	+02.5	235	00.8	+02.5	11
12	246	06.7	+02.5	247	05.9	+02.4	248	05.0	+02.5	249	04.2	+02.4	250	03.3	+02.5	12
13	261	09.2	+02.5	262	08.3	+02.5	263	07.5	+02.5	264	06.6	+02.5	265	05.8	+02.4	13
14	276	11.7	+02.4	277	10.8	+02.5	278	10.0	+02.4	279	09.1	+02.5	280	08.2	+02.5	14
15	291	14.1	+02.5	292	13.3	+02.4	293	12.4	+02.5	294	11.6	+02.4	295	10.7	+02.5	15
16	306	16.6	+02.5	307	15.7	+02.5	308	14.9	+02.4	309	14.0	+02.5	310	13.2	+02.4	16
17	321	19.1	+02.4	322	18.2	+02.5	323	17.3	+02.5	324	16.5	+02.4	325	15.6	+02.5	17
18	336	21.5	+02.5	337	20.7	+02.4	338	19.8	+02.5	339	18.9	+02.5	340	18.1	+02.5	18
19	351	24.0	+02.5	352	23.1	+02.5	353	22.3	+02.4	354	21.4	+02.5	355	20.6	+02.4	19
20	6	26.5	+02.4	7	25.6	+02.5	8	24.7	+02.5	9	23.9	+02.4	10	23.0	+02.5	20
21	21	28.9	+02.5	22	28.1	+02.4	23	27.2	+02.5	24	26.3	+02.5	25	25.5	+02.4	21
22	36	31.4	+02.4	37	30.5	+02.5	38	29.7	+02.4	39	28.8	+02.5	40	27.9	+02.5	22
23	51	33.8	+02.5	52	33.0	+02.5	53	32.1	+02.5	54	31.3	+02.4	55	30.4	+02.5	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.8	N 29	12.1	Gienah	175	47.9	S 17	38.9
Ankaa	353	11.2	S 42	12.0	Acrux	173	04.8	S 63	12.1
Schedir	349	35.2	N 56	38.9	Gacrux	171	56.4	S 57	13.0
Diphda	348	51.3	S 17	52.8	Alioth	166	17.3	N 55	51.1
Achernar	335	23.0	S 57	08.4	Spica	158	26.9	S 11	15.6
Hamal	327	55.5	N 23	33.4	Alkaid	152	55.8	N 49	12.9
Polaris	315	24.5	N 89	20.9	Hadar	148	42.2	S 60	27.8
Acamar	315	14.5	S 40	13.7	Menkent	148	02.5	S 36	27.5
Menkar	314	10.1	N 04	10.0	Arcturus	145	51.7	N 19	05.5
Mirfak	308	33.5	N 49	55.8	Rigel Kentaurus	139	44.1	S 60	54.8
Aldebaran	290	44.0	N 16	32.9	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	27.5	N 46	01.0	Kocab	137	21.2	N 74	04.4
Rigel	281	07.5	S 08	10.8	Alphecca	126	07.7	N 26	39.1
Bellatrix	278	27.0	N 06	22.0	Antares	112	21.4	S 26	28.3
Elnath	278	06.7	N 28	37.4	Atria	107	19.7	S 69	03.6
Alnilam	275	41.6	S 01	11.4	Sabik	102	07.9	S 15	44.8
Betelgeuze	270	56.2	N 07	24.6	Shaula	96	16.3	S 37	06.9
Canopus	263	53.7	S 52	42.3	Rasalhague	96	02.7	N 12	33.0
Sirius	258	29.4	S 16	44.2	Etamin	90	44.6	N 51	29.4
Adhara	255	08.8	S 28	59.9	Kaus Australis	83	38.3	S 34	22.4
Castor	246	02.0	N 31	50.6	Vega	80	36.4	N 38	48.3
Procyon	244	54.7	N 05	10.7	Nunki	75	53.2	S 26	16.2
Pollux	243	21.8	N 27	58.6	Albireo	67	07.6	N 28	00.3
Avior	234	15.9	S 59	34.1	Altair	62	04.3	N 08	55.3
Suhail	222	49.1	S 43	30.5	Peacock	53	12.6	S 56	40.4
Miaplacidus	221	38.4	S 69	47.6	Deneb	49	28.7	N 45	21.3
Alphard	217	51.7	S 08	44.6	Enif	33	42.9	N 09	58.1
Regulus	207	38.7	N 11	52.2	Alnair	27	38.3	S 46	52.1
Dubhe	193	46.3	N 61	38.4	Formalhaut	15	19.2	S 29	31.2
Denebola	182	29.2	N 14	27.8	Markab	13	33.9	N 15	18.8

2019 - First Point of Aries / Selected Stars

UT	day 336 of 365		day 337 of 365		day 338 of 365		day 339 of 365		day 340 of 365		UT		
	<i>December 2</i>		<i>December 3</i>		<i>December 4</i>		<i>December 5</i>		<i>December 6</i>				
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA			
	°	'	°	'	°	'	°	'	°	'			
00	70	32.9	+02.4	71	32.0	+02.5	72	31.2	+02.4	73	30.3	+02.5	00
01	85	35.3	+02.5	86	34.5	+02.4	87	33.6	+02.5	88	32.8	+02.4	01
02	100	37.8	+02.5	101	36.9	+02.5	102	36.1	+02.4	103	35.2	+02.5	02
03	115	40.3	+02.4	116	39.4	+02.5	117	38.5	+02.5	118	37.7	+02.4	03
04	130	42.7	+02.5	131	41.9	+02.4	132	41.0	+02.5	133	40.1	+02.5	04
05	145	45.2	+02.5	146	44.3	+02.5	147	43.5	+02.4	148	42.6	+02.5	05
06	160	47.7	+02.4	161	46.8	+02.5	162	45.9	+02.5	163	45.1	+02.4	06
07	175	50.1	+02.5	176	49.3	+02.4	177	48.4	+02.5	178	47.5	+02.5	07
08	190	52.6	+02.5	191	51.7	+02.5	192	50.9	+02.4	193	50.0	+02.5	08
09	205	55.1	+02.4	206	54.2	+02.5	207	53.3	+02.5	208	52.5	+02.4	09
10	220	57.5	+02.5	221	56.7	+02.4	222	55.8	+02.5	223	54.9	+02.5	10
11	235	60.0	+02.4	236	59.1	+02.5	237	58.3	+02.4	238	57.4	+02.5	11
12	251	02.4	+02.5	252	01.6	+02.4	253	00.7	+02.5	253	59.9	+02.4	12
13	266	04.9	+02.5	267	04.0	+02.5	268	03.2	+02.4	269	02.3	+02.5	13
14	281	07.4	+02.4	282	06.5	+02.5	283	05.6	+02.5	284	04.8	+02.5	14
15	296	09.8	+02.5	297	09.0	+02.4	298	08.1	+02.5	299	07.3	+02.4	15
16	311	12.3	+02.5	312	11.4	+02.5	313	10.6	+02.4	314	09.7	+02.5	16
17	326	14.8	+02.4	327	13.9	+02.5	328	13.0	+02.5	329	12.2	+02.4	17
18	341	17.2	+02.5	342	16.4	+02.4	343	15.5	+02.5	344	14.6	+02.5	18
19	356	19.7	+02.5	357	18.8	+02.5	358	18.0	+02.4	359	17.1	+02.5	19
20	11	22.2	+02.4	12	21.3	+02.5	13	20.4	+02.5	14	19.6	+02.4	20
21	26	24.6	+02.5	27	23.8	+02.4	28	22.9	+02.5	29	22.0	+02.5	21
22	41	27.1	+02.4	42	26.2	+02.5	43	25.4	+02.4	44	24.5	+02.5	22
23	56	29.5	+02.5	57	28.7	+02.5	58	27.8	+02.5	59	27.0	+02.4	23

	SHA	Dec		SHA	Dec				
	°	'		°	'				
Alpheratz	357	38.8	N 29	12.2	Gienah	175	47.9	S 17	38.9
Ankaa	353	11.2	S 42	12.0	Acrux	173	04.7	S 63	12.1
Schedir	349	35.2	N 56	38.9	Gacrux	171	56.3	S 57	13.0
Diphda	348	51.3	S 17	52.8	Alioth	166	17.2	N 55	51.0
Achernar	335	23.1	S 57	08.5	Spica	158	26.8	S 11	15.7
Hamal	327	55.5	N 23	33.4	Alkaid	152	55.7	N 49	12.8
Polaris	315	24.9	N 89	20.9	Hadar	148	42.1	S 60	27.7
Acamar	315	14.5	S 40	13.7	Menkent	148	02.4	S 36	27.5
Menkar	314	10.1	N 04	10.0	Arcturus	145	51.7	N 19	05.5
Mirfak	308	33.5	N 49	55.9	Rigel Kentaurus	139	44.0	S 60	54.8
Aldebaran	290	44.0	N 16	32.9	Zubenelgenubi	137	00.8	S 16	07.2
Capella	280	27.5	N 46	01.1	Kocab	137	21.1	N 74	04.4
Rigel	281	07.5	S 08	10.8	Alphecca	126	07.7	N 26	39.0
Bellatrix	278	26.9	N 06	22.0	Antares	112	21.3	S 26	28.3
Elnath	278	06.7	N 28	37.4	Atria	107	19.7	S 69	03.6
Alnilam	275	41.6	S 01	11.4	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.2	N 07	24.5	Shaula	96	16.3	S 37	06.9
Canopus	263	53.7	S 52	42.3	Rasalhague	96	02.7	N 12	33.0
Sirius	258	29.4	S 16	44.2	Etamin	90	44.6	N 51	29.4
Adhara	255	08.7	S 28	59.9	Kaus Australis	83	38.3	S 34	22.4
Castor	246	02.0	N 31	50.5	Vega	80	36.4	N 38	48.2
Procyon	244	54.7	N 05	10.7	Nunki	75	53.2	S 26	16.2
Pollux	243	21.8	N 27	58.6	Albireo	67	07.6	N 28	00.3
Avior	234	15.9	S 59	34.2	Altair	62	04.3	N 08	55.3
Suhail	222	49.0	S 43	30.5	Peacock	53	12.6	S 56	40.4
Miaplacidus	221	38.3	S 69	47.6	Deneb	49	28.7	N 45	21.3
Alphard	217	51.6	S 08	44.6	Enif	33	42.9	N 09	58.1
Regulus	207	38.7	N 11	52.2	Alnair	27	38.3	S 46	52.1
Dubhe	193	46.2	N 61	38.4	Formalhaut	15	19.2	S 29	31.2
Denebola	182	29.1	N 14	27.8	Markab	13	33.9	N 15	18.8

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UT	day 341 of 365 <i>December 7</i>		day 342 of 365 <i>December 8</i>		day 343 of 365 <i>December 9</i>		day 344 of 365 <i>December 10</i>		day 345 of 365 <i>December 11</i>		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	75 28.6	+02.4	76 27.7	+02.5	77 26.8	+02.5	78 26.0	+02.4	79 25.1	+02.5	00
01	90 31.0	+02.5	91 30.2	+02.4	92 29.3	+02.5	93 28.4	+02.5	94 27.6	+02.4	01
02	105 33.5	+02.5	106 32.6	+02.5	107 31.8	+02.4	108 30.9	+02.5	109 30.0	+02.5	02
03	120 36.0	+02.4	121 35.1	+02.5	122 34.2	+02.5	123 33.4	+02.4	124 32.5	+02.5	03
04	135 38.4	+02.5	136 37.6	+02.4	137 36.7	+02.5	138 35.8	+02.5	139 35.0	+02.4	04
05	150 40.9	+02.4	151 40.0	+02.5	152 39.2	+02.4	153 38.3	+02.5	154 37.4	+02.5	05
06	165 43.3	+02.5	166 42.5	+02.5	167 41.6	+02.5	168 40.8	+02.4	169 39.9	+02.5	06
07	180 45.8	+02.5	181 45.0	+02.4	182 44.1	+02.5	183 43.2	+02.5	184 42.4	+02.4	07
08	195 48.3	+02.4	196 47.4	+02.5	197 46.6	+02.4	198 45.7	+02.5	199 44.8	+02.5	08
09	210 50.7	+02.5	211 49.9	+02.4	212 49.0	+02.5	213 48.2	+02.4	214 47.3	+02.5	09
10	225 53.2	+02.5	226 52.3	+02.5	227 51.5	+02.4	228 50.6	+02.5	229 49.8	+02.4	10
11	240 55.7	+02.4	241 54.8	+02.5	242 53.9	+02.5	243 53.1	+02.5	244 52.2	+02.5	11
12	255 58.1	+02.5	256 57.3	+02.4	257 56.4	+02.5	258 55.6	+02.4	259 54.7	+02.5	12
13	271 00.6	+02.5	271 59.7	+02.5	272 58.9	+02.4	273 58.0	+02.5	274 57.2	+02.4	13
14	286 03.1	+02.4	287 02.2	+02.5	288 01.3	+02.5	289 00.5	+02.4	289 59.6	+02.5	14
15	301 05.5	+02.5	302 04.7	+02.4	303 03.8	+02.5	304 02.9	+02.5	305 02.1	+02.4	15
16	316 08.0	+02.5	317 07.1	+02.5	318 06.3	+02.4	319 05.4	+02.5	320 04.5	+02.5	16
17	331 10.5	+02.4	332 09.6	+02.5	333 08.7	+02.5	334 07.9	+02.4	335 07.0	+02.5	17
18	346 12.9	+02.5	347 12.1	+02.4	348 11.2	+02.5	349 10.3	+02.5	350 09.5	+02.4	18
19	1 15.4	+02.4	2 14.5	+02.5	3 13.7	+02.4	4 12.8	+02.5	5 11.9	+02.5	19
20	16 17.8	+02.5	17 17.0	+02.4	18 16.1	+02.5	19 15.3	+02.4	20 14.4	+02.5	20
21	31 20.3	+02.5	32 19.4	+02.5	33 18.6	+02.5	34 17.7	+02.5	35 16.9	+02.4	21
22	46 22.8	+02.4	47 21.9	+02.5	48 21.1	+02.4	49 20.2	+02.5	50 19.3	+02.5	22
23	61 25.2	+02.5	62 24.4	+02.4	63 23.5	+02.5	64 22.7	+02.4	65 21.8	+02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.9	N 29 12.2	Gienah	175 47.8	S 17 38.9
Ankaa	353 11.2	S 42 12.1	Acrux	173 04.7	S 63 12.1
Schedir	349 35.3	N 56 39.0	Gacrux	171 56.3	S 57 13.0
Diphda	348 51.4	S 17 52.8	Alioth	166 17.1	N 55 51.0
Achernar	335 23.1	S 57 08.5	Spica	158 26.8	S 11 15.7
Hamal	327 55.6	N 23 33.4	Alkaid	152 55.7	N 49 12.8
Polaris	315 25.8	N 89 20.9	Hadar	148 42.1	S 60 27.7
Acamar	315 14.6	S 40 13.7	Menkent	148 02.4	S 36 27.5
Menkar	314 10.1	N 04 10.0	Arcturus	145 51.6	N 19 05.5
Mirfak	308 33.5	N 49 55.9	Rigel Kentaurus	139 44.0	S 60 54.8
Aldebaran	290 44.0	N 16 32.9	Zubenelgenubi	137 00.8	S 16 07.2
Capella	280 27.4	N 46 01.1	Kocab	137 21.1	N 74 04.4
Rigel	281 07.5	S 08 10.8	Alphecca	126 07.6	N 26 39.0
Bellatrix	278 26.9	N 06 22.0	Antares	112 21.3	S 26 28.3
Elnath	278 06.6	N 28 37.4	Atria	107 19.6	S 69 03.6
Alnilam	275 41.5	S 01 11.4	Sabik	102 07.8	S 15 44.8
Betelgeuze	270 56.2	N 07 24.5	Shaula	96 16.3	S 37 06.9
Canopus	263 53.7	S 52 42.3	Rasalhague	96 02.7	N 12 33.0
Sirius	258 29.3	S 16 44.2	Etamin	90 44.6	N 51 29.4
Adhara	255 08.7	S 28 59.9	Kaus Australis	83 38.3	S 34 22.4
Castor	246 01.9	N 31 50.6	Vega	80 36.4	N 38 48.2
Procyon	244 54.7	N 05 10.7	Nunki	75 53.2	S 26 16.2
Pollux	243 21.7	N 27 58.6	Albireo	67 07.6	N 28 00.3
Avior	234 15.8	S 59 34.2	Altair	62 04.3	N 08 55.2
Suhail	222 49.0	S 43 30.5	Peacock	53 12.7	S 56 40.4
Miaplacidus	221 38.2	S 69 47.6	Deneb	49 28.8	N 45 21.3
Alphard	217 51.6	S 08 44.6	Enif	33 42.9	N 09 58.0
Regulus	207 38.6	N 11 52.2	Alnair	27 38.3	S 46 52.1
Dubhe	193 46.2	N 61 38.4	Formalhaut	15 19.2	S 29 31.2
Denebola	182 29.1	N 14 27.7	Markab	13 33.9	N 15 18.8

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UT	day 346 of 365 <i>December 12</i>		day 347 of 365 <i>December 13</i>		day 348 of 365 <i>December 14</i>		day 349 of 365 <i>December 15</i>		day 350 of 365 <i>December 16</i>		UT
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	80	24.3 +02.4	81	23.4 +02.5	82	22.5 +02.5	83	21.7 +02.4	84	20.8 +02.5	00
01	95	26.7 +02.5	96	25.9 +02.4	97	25.0 +02.5	98	24.1 +02.5	99	23.3 +02.5	01
02	110	29.2 +02.5	111	28.3 +02.5	112	27.5 +02.4	113	26.6 +02.5	114	25.8 +02.4	02
03	125	31.7 +02.4	126	30.8 +02.5	127	29.9 +02.5	128	29.1 +02.4	129	28.2 +02.5	03
04	140	34.1 +02.5	141	33.3 +02.4	142	32.4 +02.5	143	31.5 +02.5	144	30.7 +02.4	04
05	155	36.6 +02.4	156	35.7 +02.5	157	34.9 +02.4	158	34.0 +02.5	159	33.1 +02.5	05
06	170	39.0 +02.5	171	38.2 +02.5	172	37.3 +02.5	173	36.5 +02.4	174	35.6 +02.5	06
07	185	41.5 +02.5	186	40.7 +02.4	187	39.8 +02.5	188	38.9 +02.5	189	38.1 +02.4	07
08	200	44.0 +02.4	201	43.1 +02.5	202	42.3 +02.4	203	41.4 +02.5	204	40.5 +02.5	08
09	215	46.4 +02.5	216	45.6 +02.4	217	44.7 +02.5	218	43.9 +02.4	219	43.0 +02.5	09
10	230	48.9 +02.5	231	48.0 +02.5	232	47.2 +02.4	233	46.3 +02.5	234	45.5 +02.4	10
11	245	51.4 +02.4	246	50.5 +02.5	247	49.6 +02.5	248	48.8 +02.5	249	47.9 +02.5	11
12	260	53.8 +02.5	261	53.0 +02.4	262	52.1 +02.5	263	51.3 +02.4	264	50.4 +02.5	12
13	275	56.3 +02.5	276	55.4 +02.5	277	54.6 +02.4	278	53.7 +02.5	279	52.9 +02.4	13
14	290	58.8 +02.4	291	57.9 +02.5	292	57.0 +02.5	293	56.2 +02.4	294	55.3 +02.5	14
15	306	01.2 +02.5	307	00.4 +02.4	307	59.5 +02.5	308	58.6 +02.5	309	57.8 +02.5	15
16	321	03.7 +02.5	322	02.8 +02.5	323	02.0 +02.4	324	01.1 +02.5	325	00.3 +02.4	16
17	336	06.2 +02.4	337	05.3 +02.5	338	04.4 +02.5	339	03.6 +02.4	340	02.7 +02.5	17
18	351	08.6 +02.5	352	07.8 +02.4	353	06.9 +02.5	354	06.0 +02.5	355	05.2 +02.4	18
19	6	11.1 +02.4	7	10.2 +02.5	8	09.4 +02.4	9	08.5 +02.5	10	07.6 +02.5	19
20	21	13.5 +02.5	22	12.7 +02.5	23	11.8 +02.5	24	11.0 +02.4	25	10.1 +02.5	20
21	36	16.0 +02.5	37	15.2 +02.4	38	14.3 +02.5	39	13.4 +02.5	40	12.6 +02.4	21
22	51	18.5 +02.4	52	17.6 +02.5	53	16.8 +02.4	54	15.9 +02.5	55	15.0 +02.5	22
23	66	20.9 +02.5	67	20.1 +02.4	68	19.2 +02.5	69	18.4 +02.4	70	17.5 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.9	N 29 12.1	Gienah	175 47.8	S 17 38.9
Ankaa	353 11.3	S 42 12.1	Acrux	173 04.6	S 63 12.1
Schedir	349 35.3	N 56 39.0	Gacrux	171 56.2	S 57 13.0
Diphda	348 51.4	S 17 52.9	Alioth	166 17.1	N 55 51.0
Achernar	335 23.1	S 57 08.5	Spica	158 26.7	S 11 15.7
Hamal	327 55.6	N 23 33.4	Alkaid	152 55.6	N 49 12.8
Polaris	315 26.6	N 89 21.0	Hadar	148 42.0	S 60 27.7
Acamar	315 14.6	S 40 13.8	Menkent	148 02.4	S 36 27.5
Menkar	314 10.1	N 04 10.0	Arcturus	145 51.6	N 19 05.5
Mirfak	308 33.5	N 49 55.9	Rigel Kentaurus	139 43.9	S 60 54.8
Aldebaran	290 44.0	N 16 32.9	Zubenelgenubi	137 00.7	S 16 07.2
Capella	280 27.4	N 46 01.1	Kocab	137 21.0	N 74 04.3
Rigel	281 07.4	S 08 10.8	Alphecca	126 07.6	N 26 39.0
Bellatrix	278 26.9	N 06 21.9	Antares	112 21.3	S 26 28.3
Elnath	278 06.6	N 28 37.4	Atria	107 19.6	S 69 03.6
Alnilam	275 41.5	S 01 11.5	Sabik	102 07.8	S 15 44.8
Betelgeuze	270 56.2	N 07 24.5	Shaula	96 16.3	S 37 06.9
Canopus	263 53.6	S 52 42.4	Rasalhague	96 02.7	N 12 33.0
Sirius	258 29.3	S 16 44.2	Etamin	90 44.6	N 51 29.3
Adhara	255 08.7	S 28 59.9	Kaus Australis	83 38.3	S 34 22.4
Castor	246 01.9	N 31 50.5	Vega	80 36.5	N 38 48.2
Procyon	244 54.6	N 05 10.7	Nunki	75 53.2	S 26 16.2
Pollux	243 21.7	N 27 58.6	Albireo	67 07.6	N 28 00.2
Avior	234 15.8	S 59 34.2	Altair	62 04.3	N 08 55.2
Suhail	222 48.9	S 43 30.6	Peacock	53 12.7	S 56 40.4
Miaplacidus	221 38.1	S 69 47.7	Deneb	49 28.8	N 45 21.3
Alphard	217 51.6	S 08 44.6	Enif	33 42.9	N 09 58.0
Regulus	207 38.6	N 11 52.2	Alnair	27 38.4	S 46 52.1
Dubhe	193 46.1	N 61 38.4	Formalhaut	15 19.2	S 29 31.2
Denebola	182 29.0	N 14 27.7	Markab	13 34.0	N 15 18.8

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UT	day 351 of 365		day 352 of 365		day 353 of 365		day 354 of 365		day 355 of 365		UT
	<i>December 17</i>		<i>December 18</i>		<i>December 19</i>		<i>December 20</i>		<i>December 21</i>		
	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	GHA	ddGHA	
00	85	20.0 +02.4	86	19.1 +02.5	87	18.2 +02.5	88	17.4 +02.4	89	16.5 +02.5	00
01	100	22.4 +02.5	101	21.6 +02.4	102	20.7 +02.5	103	19.8 +02.5	104	19.0 +02.4	01
02	115	24.9 +02.5	116	24.0 +02.5	117	23.2 +02.4	118	22.3 +02.5	119	21.4 +02.5	02
03	130	27.4 +02.4	131	26.5 +02.5	132	25.6 +02.5	133	24.8 +02.4	134	23.9 +02.5	03
04	145	29.8 +02.5	146	29.0 +02.4	147	28.1 +02.5	148	27.2 +02.5	149	26.4 +02.4	04
05	160	32.3 +02.4	161	31.4 +02.5	162	30.6 +02.4	163	29.7 +02.5	164	28.8 +02.5	05
06	175	34.7 +02.5	176	33.9 +02.5	177	33.0 +02.5	178	32.2 +02.4	179	31.3 +02.5	06
07	190	37.2 +02.5	191	36.4 +02.4	192	35.5 +02.5	193	34.6 +02.5	194	33.8 +02.4	07
08	205	39.7 +02.4	206	38.8 +02.5	207	38.0 +02.4	208	37.1 +02.5	209	36.2 +02.5	08
09	220	42.1 +02.5	221	41.3 +02.4	222	40.4 +02.5	223	39.6 +02.4	224	38.7 +02.5	09
10	235	44.6 +02.5	236	43.7 +02.5	237	42.9 +02.4	238	42.0 +02.5	239	41.2 +02.4	10
11	250	47.1 +02.4	251	46.2 +02.5	252	45.3 +02.5	253	44.5 +02.4	254	43.6 +02.5	11
12	265	49.5 +02.5	266	48.7 +02.4	267	47.8 +02.5	268	46.9 +02.5	269	46.1 +02.5	12
13	280	52.0 +02.5	281	51.1 +02.5	282	50.3 +02.4	283	49.4 +02.5	284	48.6 +02.4	13
14	295	54.5 +02.4	296	53.6 +02.5	297	52.7 +02.5	298	51.9 +02.4	299	51.0 +02.5	14
15	310	56.9 +02.5	311	56.1 +02.4	312	55.2 +02.5	313	54.3 +02.5	314	53.5 +02.4	15
16	325	59.4 +02.5	326	58.5 +02.5	327	57.7 +02.4	328	56.8 +02.5	329	55.9 +02.5	16
17	341	01.9 +02.4	342	01.0 +02.5	343	00.1 +02.5	343	59.3 +02.4	344	58.4 +02.5	17
18	356	04.3 +02.5	357	03.5 +02.4	358	02.6 +02.5	359	01.7 +02.5	0	00.9 +02.4	18
19	11	06.8 +02.4	12	05.9 +02.5	13	05.1 +02.4	14	04.2 +02.5	15	03.3 +02.5	19
20	26	09.2 +02.5	27	08.4 +02.4	28	07.5 +02.5	29	06.7 +02.4	30	05.8 +02.5	20
21	41	11.7 +02.5	42	10.8 +02.5	43	10.0 +02.5	44	09.1 +02.5	45	08.3 +02.4	21
22	56	14.2 +02.4	57	13.3 +02.5	58	12.5 +02.4	59	11.6 +02.5	60	10.7 +02.5	22
23	71	16.6 +02.5	72	15.8 +02.4	73	14.9 +02.5	74	14.1 +02.4	75	13.2 +02.5	23

	SHA	Dec		SHA	Dec
	° ,	° ,		° ,	° ,
Alpheratz	357 38.9	N 29 12.2	Gienah	175 47.7	S 17 38.9
Ankaa	353 11.3	S 42 12.1	Acrux	173 04.5	S 63 12.1
Schedir	349 35.3	N 56 39.0	Gacrux	171 56.1	S 57 13.0
Diphda	348 51.4	S 17 52.9	Alioth	166 17.0	N 55 51.0
Achernar	335 23.2	S 57 08.5	Spica	158 26.7	S 11 15.7
Hamal	327 55.6	N 23 33.4	Alkaid	152 55.6	N 49 12.8
Polaris	315 27.6	N 89 21.0	Hadar	148 42.0	S 60 27.7
Acamar	315 14.6	S 40 13.8	Menkent	148 02.3	S 36 27.5
Menkar	314 10.1	N 04 10.0	Arcturus	145 51.6	N 19 05.4
Mirfak	308 33.5	N 49 55.9	Rigel Kentaurus	139 43.8	S 60 54.8
Aldebaran	290 43.9	N 16 32.9	Zubenelgenubi	137 00.7	S 16 07.2
Capella	280 27.4	N 46 01.1	Kocab	137 21.0	N 74 04.3
Rigel	281 07.4	S 08 10.8	Alphecca	126 07.6	N 26 39.0
Bellatrix	278 26.9	N 06 21.9	Antares	112 21.3	S 26 28.3
Elnath	278 06.6	N 28 37.4	Atria	107 19.6	S 69 03.5
Alnilam	275 41.5	S 01 11.5	Sabik	102 07.8	S 15 44.8
Betelgeuze	270 56.1	N 07 24.5	Shaula	96 16.3	S 37 06.9
Canopus	263 53.6	S 52 42.4	Rasalhague	96 02.7	N 12 32.9
Sirius	258 29.3	S 16 44.3	Etamin	90 44.6	N 51 29.3
Adhara	255 08.7	S 28 59.9	Kaus Australis	83 38.3	S 34 22.4
Castor	246 01.9	N 31 50.5	Vega	80 36.5	N 38 48.2
Procyon	244 54.6	N 05 10.7	Nunki	75 53.2	S 26 16.2
Pollux	243 21.7	N 27 58.6	Albireo	67 07.6	N 28 00.2
Avior	234 15.7	S 59 34.2	Altair	62 04.3	N 08 55.2
Suhail	222 48.9	S 43 30.6	Peacock	53 12.7	S 56 40.4
Miaplacidus	221 38.1	S 69 47.7	Deneb	49 28.8	N 45 21.3
Alphard	217 51.5	S 08 44.6	Enif	33 42.9	N 09 58.0
Regulus	207 38.6	N 11 52.2	Alnair	27 38.4	S 46 52.1
Dubhe	193 46.0	N 61 38.4	Formalhaut	15 19.2	S 29 31.2
Denebola	182 29.0	N 14 27.7	Markab	13 34.0	N 15 18.8

2019 - First Point of Aries / Selected Stars

UT	day 356 of 365 December 22			day 357 of 365 December 23			day 358 of 365 December 24			day 359 of 365 December 25			day 360 of 365 December 26			UT
	GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		GHA	ddGHA		
	° ' "	' "	"	° ' "	' "	"	° ' "	' "	"	° ' "	' "	"	° ' "	' "	"	
00	90	15.7	+02.4	91	14.8	+02.5	92	13.9	+02.5	93	13.1	+02.4	94	12.2	+02.5	00
01	105	18.1	+02.5	106	17.3	+02.4	107	16.4	+02.5	108	15.5	+02.5	109	14.7	+02.4	01
02	120	20.6	+02.4	121	19.7	+02.5	122	18.9	+02.4	123	18.0	+02.5	124	17.1	+02.5	02
03	135	23.0	+02.5	136	22.2	+02.5	137	21.3	+02.5	138	20.5	+02.4	139	19.6	+02.5	03
04	150	25.5	+02.5	151	24.7	+02.4	152	23.8	+02.5	153	22.9	+02.5	154	22.1	+02.4	04
05	165	28.0	+02.4	166	27.1	+02.5	167	26.3	+02.4	168	25.4	+02.5	169	24.5	+02.5	05
06	180	30.4	+02.5	181	29.6	+02.4	182	28.7	+02.5	183	27.9	+02.4	184	27.0	+02.5	06
07	195	32.9	+02.5	196	32.0	+02.5	197	31.2	+02.4	198	30.3	+02.5	199	29.5	+02.4	07
08	210	35.4	+02.4	211	34.5	+02.5	212	33.6	+02.5	213	32.8	+02.5	214	31.9	+02.5	08
09	225	37.8	+02.5	226	37.0	+02.4	227	36.1	+02.5	228	35.3	+02.4	229	34.4	+02.5	09
10	240	40.3	+02.5	241	39.4	+02.5	242	38.6	+02.4	243	37.7	+02.5	244	36.9	+02.4	10
11	255	42.8	+02.4	256	41.9	+02.5	257	41.0	+02.5	258	40.2	+02.4	259	39.3	+02.5	11
12	270	45.2	+02.5	271	44.4	+02.4	272	43.5	+02.5	273	42.6	+02.5	274	41.8	+02.5	12
13	285	47.7	+02.5	286	46.8	+02.5	287	46.0	+02.4	288	45.1	+02.5	289	44.3	+02.4	13
14	300	50.2	+02.4	301	49.3	+02.5	302	48.4	+02.5	303	47.6	+02.4	304	46.7	+02.5	14
15	315	52.6	+02.5	316	51.8	+02.4	317	50.9	+02.5	318	50.0	+02.5	319	49.2	+02.4	15
16	330	55.1	+02.4	331	54.2	+02.5	332	53.4	+02.4	333	52.5	+02.5	334	51.6	+02.5	16
17	345	57.5	+02.5	346	56.7	+02.5	347	55.8	+02.5	348	55.0	+02.4	349	54.1	+02.5	17
18	1	00.0	+02.5	1	59.2	+02.4	2	58.3	+02.5	3	57.4	+02.5	4	56.6	+02.4	18
19	16	02.5	+02.4	17	01.6	+02.5	18	00.8	+02.4	18	59.9	+02.5	19	59.0	+02.5	19
20	31	04.9	+02.5	32	04.1	+02.4	33	03.2	+02.5	34	02.4	+02.4	35	01.5	+02.5	20
21	46	07.4	+02.5	47	06.5	+02.5	48	05.7	+02.4	49	04.8	+02.5	50	04.0	+02.4	21
22	61	09.9	+02.4	62	09.0	+02.5	63	08.1	+02.5	64	07.3	+02.5	65	06.4	+02.5	22
23	76	12.3	+02.5	77	11.5	+02.4	78	10.6	+02.5	79	09.8	+02.4	80	08.9	+02.5	23

	SHA		Dec			SHA		Dec	
	° ' "	' "	° ' "	' "		° ' "	' "	° ' "	' "
Alpheratz	357	38.9	N 29	12.1	Gienah	175	47.7	S 17	38.9
Ankaa	353	11.3	S 42	12.1	Acrux	173	04.4	S 63	12.1
Schedir	349	35.4	N 56	39.0	Gacrux	171	56.1	S 57	13.0
Diphda	348	51.4	S 17	52.9	Alioth	166	17.0	N 55	50.9
Achernar	335	23.2	S 57	08.5	Spica	158	26.7	S 11	15.7
Hamal	327	55.6	N 23	33.4	Alkaid	152	55.5	N 49	12.7
Polaris	315	29.1	N 89	21.0	Hadar	148	41.9	S 60	27.7
Acamar	315	14.6	S 40	13.8	Menkent	148	02.3	S 36	27.5
Menkar	314	10.1	N 04	10.0	Arcturus	145	51.5	N 19	05.4
Mirfak	308	33.5	N 49	55.9	Rigel Kentaurus	139	43.8	S 60	54.8
Aldebaran	290	43.9	N 16	32.9	Zubenelgenubi	137	00.7	S 16	07.2
Capella	280	27.4	N 46	01.1	Kocab	137	20.9	N 74	04.3
Rigel	281	07.4	S 08	10.9	Alphecca	126	07.6	N 26	38.9
Bellatrix	278	26.9	N 06	21.9	Antares	112	21.3	S 26	28.3
Elnath	278	06.6	N 28	37.4	Atria	107	19.5	S 69	03.5
Alnilam	275	41.5	S 01	11.5	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.1	N 07	24.5	Shaula	96	16.3	S 37	06.9
Canopus	263	53.6	S 52	42.4	Rasalhague	96	02.7	N 12	32.9
Sirius	258	29.3	S 16	44.3	Etamin	90	44.6	N 51	29.3
Adhara	255	08.6	S 28	60.0	Kaus Australis	83	38.3	S 34	22.4
Castor	246	01.8	N 31	50.6	Vega	80	36.5	N 38	48.1
Procyon	244	54.6	N 05	10.7	Nunki	75	53.2	S 26	16.2
Pollux	243	21.6	N 27	58.6	Albireo	67	07.7	N 28	00.2
Avior	234	15.7	S 59	34.3	Altair	62	04.4	N 08	55.2
Suhail	222	48.8	S 43	30.6	Peacock	53	12.7	S 56	40.3
Miaplacidus	221	38.0	S 69	47.7	Deneb	49	28.8	N 45	21.3
Alphard	217	51.5	S 08	44.7	Enif	33	42.9	N 09	58.0
Regulus	207	38.5	N 11	52.2	Alnair	27	38.4	S 46	52.1
Dubhe	193	45.9	N 61	38.4	Formalhaut	15	19.3	S 29	31.2
Denebola	182	29.0	N 14	27.7	Markab	13	34.0	N 15	18.8

2019 - 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	11.4	+02.4	96	10.5	+02.5	97	09.6	+02.5	98	08.8	+02.4	99	07.9	+02.5	00
01	110	13.8	+02.5	111	13.0	+02.4	112	12.1	+02.5	113	11.2	+02.5	114	10.4	+02.4	01
02	125	16.3	+02.5	126	15.4	+02.5	127	14.6	+02.4	128	13.7	+02.5	129	12.8	+02.5	02
03	140	18.8	+02.4	141	17.9	+02.5	142	17.0	+02.5	143	16.2	+02.4	144	15.3	+02.5	03
04	155	21.2	+02.5	156	20.4	+02.4	157	19.5	+02.5	158	18.6	+02.5	159	17.8	+02.4	04
05	170	23.7	+02.4	171	22.8	+02.5	172	22.0	+02.4	173	21.1	+02.5	174	20.2	+02.5	05
06	185	26.1	+02.5	186	25.3	+02.4	187	24.4	+02.5	188	23.6	+02.4	189	22.7	+02.5	06
07	200	28.6	+02.5	201	27.7	+02.5	202	26.9	+02.5	203	26.0	+02.5	204	25.2	+02.4	07
08	215	31.1	+02.4	216	30.2	+02.5	217	29.4	+02.4	218	28.5	+02.5	219	27.6	+02.5	08
09	230	33.5	+02.5	231	32.7	+02.4	232	31.8	+02.5	233	31.0	+02.4	234	30.1	+02.5	09
10	245	36.0	+02.5	246	35.1	+02.5	247	34.3	+02.4	248	33.4	+02.5	249	32.6	+02.4	10
11	260	38.5	+02.4	261	37.6	+02.5	262	36.7	+02.5	263	35.9	+02.4	264	35.0	+02.5	11
12	275	40.9	+02.5	276	40.1	+02.4	277	39.2	+02.5	278	38.3	+02.5	279	37.5	+02.5	12
13	290	43.4	+02.5	291	42.5	+02.5	292	41.7	+02.4	293	40.8	+02.5	294	40.0	+02.4	13
14	305	45.9	+02.4	306	45.0	+02.5	307	44.1	+02.5	308	43.3	+02.4	309	42.4	+02.5	14
15	320	48.3	+02.5	321	47.5	+02.4	322	46.6	+02.5	323	45.7	+02.5	324	44.9	+02.4	15
16	335	50.8	+02.5	336	49.9	+02.5	337	49.1	+02.4	338	48.2	+02.5	339	47.3	+02.5	16
17	350	53.3	+02.4	351	52.4	+02.5	352	51.5	+02.5	353	50.7	+02.4	354	49.8	+02.5	17
18	5	55.7	+02.5	6	54.9	+02.4	7	54.0	+02.5	8	53.1	+02.5	9	52.3	+02.4	18
19	20	58.2	+02.4	21	57.3	+02.5	22	56.5	+02.4	23	55.6	+02.5	24	54.7	+02.5	19
20	36	00.6	+02.5	36	59.8	+02.4	37	58.9	+02.5	38	58.1	+02.4	39	57.2	+02.5	20
21	51	03.1	+02.5	52	02.2	+02.5	53	01.4	+02.5	54	00.5	+02.5	54	59.7	+02.4	21
22	66	05.6	+02.4	67	04.7	+02.5	68	03.9	+02.4	69	03.0	+02.5	70	02.1	+02.5	22
23	81	08.0	+02.5	82	07.2	+02.4	83	06.3	+02.5	84	05.5	+02.4	85	04.6	+02.5	23

	SHA		Dec			SHA		Dec	
	° ' "	' "	° ' "	' "		° ' "	' "	° ' "	' "
Alpheratz	357	38.9	N 29	12.1	Gienah	175	47.6	S 17	39.0
Ankaa	353	11.3	S 42	12.1	Acrux	173	04.4	S 63	12.2
Schedir	349	35.4	N 56	39.0	Gacrux	171	56.0	S 57	13.0
Diphda	348	51.4	S 17	52.9	Alioth	166	16.9	N 55	50.9
Achernar	335	23.2	S 57	08.5	Spica	158	26.6	S 11	15.7
Hamal	327	55.6	N 23	33.4	Alkaid	152	55.5	N 49	12.7
Polaris	315	30.3	N 89	21.0	Hadar	148	41.8	S 60	27.7
Acamar	315	14.6	S 40	13.8	Menkent	148	02.2	S 36	27.5
Menkar	314	10.1	N 04	10.0	Arcturus	145	51.5	N 19	05.4
Mirfak	308	33.5	N 49	55.9	Rigel Kentaurus	139	43.7	S 60	54.8
Aldebaran	290	43.9	N 16	32.9	Zubenelgenubi	137	00.6	S 16	07.2
Capella	280	27.4	N 46	01.1	Kocab	137	20.8	N 74	04.3
Rigel	281	07.4	S 08	10.9	Alphecca	126	07.5	N 26	38.9
Bellatrix	278	26.9	N 06	21.9	Antares	112	21.2	S 26	28.3
Elnath	278	06.6	N 28	37.4	Atria	107	19.5	S 69	03.5
Alnilam	275	41.5	S 01	11.5	Sabik	102	07.8	S 15	44.8
Betelgeuze	270	56.1	N 07	24.5	Shaula	96	16.3	S 37	06.9
Canopus	263	53.6	S 52	42.5	Rasalhague	96	02.7	N 12	32.9
Sirius	258	29.3	S 16	44.3	Etamin	90	44.6	N 51	29.2
Adhara	255	08.6	S 29	00.0	Kaus Australis	83	38.3	S 34	22.4
Castor	246	01.8	N 31	50.5	Vega	80	36.4	N 38	48.1
Procyon	244	54.5	N 05	10.7	Nunki	75	53.1	S 26	16.2
Pollux	243	21.6	N 27	58.6	Albireo	67	07.6	N 28	00.2
Avior	234	15.6	S 59	34.3	Altair	62	04.3	N 08	55.2
Suhail	222	48.8	S 43	30.6	Peacock	53	12.7	S 56	40.3
Miaplacidus	221	37.9	S 69	47.7	Deneb	49	28.8	N 45	21.2
Alphard	217	51.5	S 08	44.7	Enif	33	43.0	N 09	58.0
Regulus	207	38.5	N 11	52.1	Alnair	27	38.4	S 46	52.1
Dubhe	193	45.9	N 61	38.4	Formalhaut	15	19.3	S 29	31.2
Denebola	182	28.9	N 14	27.7	Markab	13	34.0	N 15	18.8

