

2024

ANUARIO DEL OBSERVATORIO ASTRONÓMICO NACIONAL



INSTITUTO DE ASTRONOMÍA

UNIVERSIDAD NACIONAL
AUTÓNOMA DE MÉXICO

ANUARIO DEL
OBSERVATORIO
ASTRONÓMICO NACIONAL

Edición CXLIII

2024

INSTITUTO DE ASTRONOMÍA
UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

DR 2024, Universidad Nacional Aut3noma de M3xico
Ciudad Universitaria, 04510. Ciudad de M3xico.
Instituto de Astronom3a
Impreso y hecho en M3xico

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MAPA DE ESTRELLAS PARA EL AÑO 2024

Prefacio, 2024

En el Anuario del Observatorio Astronómico Nacional se publican efemérides astronómicas del Sol, la Luna, planetas y estrellas, sucesos astronómicos como eclipses, ocultaciones y conjunciones; datos astronómicos generales, así como parámetros geométricos y físicos de los planetas y sus satélites.

Para el cálculo de las efemérides y los instantes en que ocurren los sucesos astronómicos, se toma el meridiano efemérico 90° al oeste del meridiano efemérico de Greenwich, y la diferencia entre el tiempo de las efemérides y el Universal se estima en $\Delta T = 70$ s. Los instantes para los fenómenos astronómicos y las horas del paso por el meridiano 90° W.G., deberán corregirse por el horario de verano que corresponda al lugar geográfico y la época del año. De acuerdo al Decreto Presidencial sobre Husos Horarios (Ver Hora legal en la República mexicana).

Todos los cálculos de las efemérides astronómicas son referidos al Ecuador y Eclíptica de la época J2000.0, de acuerdo a las resoluciones tomadas por la Unión Astronómica Internacional (UAI) en 1976. Nuestros cálculos se fundamentan en los parámetros astronómicos y elementos orbitales medios, utilizados para otros anuarios astronómicos, como: *Astronomical Almanac*, *EUA*, *National Almanac of Royal Greenwich Observatory*, *Inglaterra*, *Jet Propulsion Laboratory*, *EUA* y *Service des Calculs Bureau des Longitudes*, Francia.

En esta edición, los cálculos son referidos a los fundamentos recomendados por la Unión Astronómica Internacional (2000) para la precesión y nutación, los sistemas de referencia celeste intermedio y el ángulo de rotación de la Tierra CIP, CIO, ICRS, CIRS. La relación entre los orígenes se da a partir de la longitud cero del origen intermedio terrestre y el origen de equinoccio verdadero y del origen del intermedio celeste (CIO), los cuales difieren por el ángulo de rotación de la Tierra (ERA). El ecuador verdadero y el intermedio son coplanares, cuyo polo es el intermedio celeste (CIP)

De acuerdo a las recomendaciones del grupo Working Group on Nomenclature for Fundamental Astronomy de la IAU, las efemérides para los planetas, el Sol y la Luna, se obtuvieron en función de la efemérides JPL Planetary and Lunar Ephemeris DE431/LE431. Para las estrellas se tomaron de los parámetros astronómicos del catálogo The Hipparcos and Tycho Catalog, ESA Hipparcos Space Astrometry Mission, a partir del cual se determinaron las posiciones medias de estrellas y posiciones aparentes de estrellas brillantes.

Para el cálculo de las declinaciones magnéticas se utilizó la décima generación del modelo del campo magnético terrestre adoptado por la “International Association of Geomagnetism and Aeronomy”. Los cálculos corresponden a las determinaciones, teóricas y observadas, para la República Mexicana del Departamento de Geomagnetismo y Exploración del Instituto de Geofísica de la Universidad Nacional Autónoma de México.

Se incluye un mapa de estrellas referidas al año 2019. En el apartado de nomenclatura de estrellas se incluyen los nombres comunes de estrellas además de los números de los catálogos Hipparco (NH) y los números asignados en el Bright Star Catalog of the University of Yale (NBSC). En la tabla de posiciones medias se presentan las coordenadas ascensión recta en unidades (h, m, s), y declinación ($^{\circ}$, $'$, $''$), y en decimales de grado ($^{\circ}$). Debemos señalar que en el futuro próximo las tablas de efemérides se darán en decimales de grado.

En este año 2024 se observarán en la República Mexicana tres eclipses de sol. Se han incluido, para cada uno de ellos, la trayectoria del eclipse, las circunstancias como eclipses parciales, además de las de eclipse anular y total, según sea el caso.

Se publican en esta edición posiciones geográficas de poblaciones en la República Mexicana, tomadas de las publicadas por el Instituto Nacional de Estadística y Geografía (INEGI).

Todos los cálculos se efectuaron en los sistemas de cómputo del departamento de Astrofísica Computacional del Instituto de Astronomía, de la Universidad Nacional Autónoma de México.

*c. Dr. J. Daniel Flores Gutiérrez
Departamento de Efemérides
Instituto de Astronomía
Universidad Nacional Autónoma de México
Ciudad Universitaria
Apartado postal 70-264
México, D.F., 04510*

Día Juliano, 2024

A las 0^h del meridiano 90° W.G.

d	ds	dj	d	ds	dj	d	ds	dj	d	ds	dj
enero			21	mie	2460361.75	11	jue	2460411.75	junio		
1	lun	2460310.75	22	jue	2460362.75	12	vie	2460412.75	1	sab	2460462.75
2	mar	2460311.75	23	vie	2460363.75	13	sab	2460413.75	2	dom	2460463.75
3	mie	2460312.75	24	sab	2460364.75	14	dom	2460414.75	3	lun	2460464.75
4	jue	2460313.75	25	dom	2460365.75	15	lun	2460415.75	4	mar	2460465.75
5	vie	2460314.75	26	lun	2460366.75	16	mar	2460416.75	5	mie	2460466.75
6	sab	2460315.75	27	mar	2460367.75	17	mie	2460417.75	6	jue	2460467.75
7	dom	2460316.75	28	mie	2460368.75	18	jue	2460418.75	7	vie	2460468.75
8	lun	2460317.75	29	jue	2460369.75	19	vie	2460419.75	8	sab	2460469.75
9	mar	2460318.75	marzo			20	sab	2460420.75	9	dom	2460470.75
10	mie	2460319.75	1	vie	2460370.75	21	dom	2460421.75	10	lun	2460471.75
11	jue	2460320.75	2	sab	2460371.75	22	lun	2460422.75	11	mar	2460472.75
12	vie	2460321.75	3	dom	2460372.75	23	mar	2460423.75	12	mie	2460473.75
13	sab	2460322.75	4	lun	2460373.75	24	mie	2460424.75	13	jue	2460474.75
14	dom	2460323.75	5	mar	2460374.75	25	jue	2460425.75	14	vie	2460475.75
15	lun	2460324.75	6	mie	2460375.75	26	vie	2460426.75	15	sab	2460476.75
16	mar	2460325.75	7	jue	2460376.75	27	sab	2460427.75	16	dom	2460477.75
17	mie	2460326.75	8	vie	2460377.75	28	dom	2460428.75	17	lun	2460478.75
18	jue	2460327.75	9	sab	2460378.75	29	lun	2460429.75	18	mar	2460479.75
19	vie	2460328.75	10	dom	2460379.75	30	mar	2460430.75	19	mie	2460480.75
20	sab	2460329.75	11	lun	2460380.75	mayo			20	jue	2460481.75
21	dom	2460330.75	12	mar	2460381.75	1	mie	2460431.75	21	vie	2460482.75
22	lun	2460331.75	13	mie	2460382.75	2	jue	2460432.75	22	sab	2460483.75
23	mar	2460332.75	14	jue	2460383.75	3	vie	2460433.75	23	dom	2460484.75
24	mie	2460333.75	15	vie	2460384.75	4	sab	2460434.75	24	lun	2460485.75
25	jue	2460334.75	16	sab	2460385.75	5	dom	2460435.75	25	mar	2460486.75
26	vie	2460335.75	17	dom	2460386.75	6	lun	2460436.75	26	mie	2460487.75
27	sab	2460336.75	18	lun	2460387.75	7	mar	2460437.75	27	jue	2460488.75
28	dom	2460337.75	19	mar	2460388.75	8	mie	2460438.75	28	vie	2460489.75
29	lun	2460338.75	20	mie	2460389.75	9	jue	2460439.75	29	sab	2460490.75
30	mar	2460339.75	21	jue	2460390.75	10	vie	2460440.75	30	dom	2460491.75
31	mie	2460340.75	22	vie	2460391.75	11	sab	2460441.75	julio		
febrero			23	sab	2460392.75	12	dom	2460442.75	1	lun	2460492.75
1	jue	2460341.75	24	dom	2460393.75	13	lun	2460443.75	2	mar	2460493.75
2	vie	2460342.75	25	lun	2460394.75	14	mar	2460444.75	3	mie	2460494.75
3	sab	2460343.75	26	mar	2460395.75	15	mie	2460445.75	4	jue	2460495.75
4	dom	2460344.75	27	mie	2460396.75	16	jue	2460446.75	5	vie	2460496.75
5	lun	2460345.75	28	jue	2460397.75	17	vie	2460447.75	6	sab	2460497.75
6	mar	2460346.75	29	vie	2460398.75	18	sab	2460448.75	7	dom	2460498.75
7	mie	2460347.75	30	sab	2460399.75	19	dom	2460449.75	8	lun	2460499.75
8	jue	2460348.75	31	dom	2460400.75	20	lun	2460450.75	9	mar	2460500.75
9	vie	2460349.75	abril			21	mar	2460451.75	10	mie	2460501.75
10	sab	2460350.75	1	lun	2460401.75	22	mie	2460452.75	11	jue	2460502.75
11	dom	2460351.75	2	mar	2460402.75	23	jue	2460453.75	12	vie	2460503.75
12	lun	2460352.75	3	mie	2460403.75	24	vie	2460454.75	13	sab	2460504.75
13	mar	2460353.75	4	jue	2460404.75	25	sab	2460455.75	14	dom	2460505.75
14	mie	2460354.75	5	vie	2460405.75	26	dom	2460456.75	15	lun	2460506.75
15	jue	2460355.75	6	sab	2460406.75	27	lun	2460457.75	16	mar	2460507.75
16	vie	2460356.75	7	dom	2460407.75	28	mar	2460458.75	17	mie	2460508.75
17	sab	2460357.75	8	lun	2460408.75	29	mie	2460459.75	18	jue	2460509.75
18	dom	2460358.75	9	mar	2460409.75	30	jue	2460460.75	19	vie	2460510.75
19	lun	2460359.75	10	mie	2460410.75	31	vie	2460461.75	20	sab	2460511.75
20	mar	2460360.75							21	dom	2460512.75

Día Juliano, 2024

A las 0^h del meridiano 90° W.G.

d	ds	dj	d	ds	dj	d	ds	dj	d	ds	dj
22	lun	2460513.75	septiembre			11	vie	2460594.75	21	jue	2460635.75
23	mar	2460514.75	1	dom	2460554.75	12	sab	2460595.75	22	vie	2460636.75
24	mie	2460515.75	2	lun	2460555.75	13	dom	2460596.75	23	sab	2460637.75
25	jue	2460516.75	3	mar	2460556.75	14	lun	2460597.75	24	dom	2460638.75
26	vie	2460517.75	4	mie	2460557.75	15	mar	2460598.75	25	lun	2460639.75
27	sab	2460518.75	5	jue	2460558.75	16	mie	2460599.75	26	mar	2460640.75
28	dom	2460519.75	6	vie	2460559.75	17	jue	2460600.75	27	mie	2460641.75
29	lun	2460520.75	7	sab	2460560.75	18	vie	2460601.75	28	jue	2460642.75
30	mar	2460521.75	8	dom	2460561.75	19	sab	2460602.75	29	vie	2460643.75
31	mie	2460522.75	9	lun	2460562.75	20	dom	2460603.75	30	sab	2460644.75
agosto			10	mar	2460563.75	21	lun	2460604.75	diciembre		
1	jue	2460523.75	11	mie	2460564.75	22	mar	2460605.75	1	dom	2460645.75
2	vie	2460524.75	12	jue	2460565.75	23	mie	2460606.75	2	lun	2460646.75
3	sab	2460525.75	13	vie	2460566.75	24	jue	2460607.75	3	mar	2460647.75
4	dom	2460526.75	14	sab	2460567.75	25	vie	2460608.75	4	mie	2460648.75
5	lun	2460527.75	15	dom	2460568.75	26	sab	2460609.75	5	jue	2460649.75
6	mar	2460528.75	16	lun	2460569.75	27	dom	2460610.75	6	vie	2460650.75
7	mie	2460529.75	17	mar	2460570.75	28	lun	2460611.75	7	sab	2460651.75
8	jue	2460530.75	18	mie	2460571.75	29	mar	2460612.75	8	dom	2460652.75
9	vie	2460531.75	19	jue	2460572.75	30	mie	2460613.75	9	lun	2460653.75
10	sab	2460532.75	20	vie	2460573.75	31	jue	2460614.75	10	mar	2460654.75
11	dom	2460533.75	21	sab	2460574.75	noviembre			11	mie	2460655.75
12	lun	2460534.75	22	dom	2460575.75	1	vie	2460615.75	12	jue	2460656.75
13	mar	2460535.75	23	lun	2460576.75	2	sab	2460616.75	13	vie	2460657.75
14	mie	2460536.75	24	mar	2460577.75	3	dom	2460617.75	14	sab	2460658.75
15	jue	2460537.75	25	mie	2460578.75	4	lun	2460618.75	15	dom	2460659.75
16	vie	2460538.75	26	jue	2460579.75	5	mar	2460619.75	16	lun	2460660.75
17	sab	2460539.75	27	vie	2460580.75	6	mie	2460620.75	17	mar	2460661.75
18	dom	2460540.75	28	sab	2460581.75	7	jue	2460621.75	18	mie	2460662.75
19	lun	2460541.75	29	dom	2460582.75	8	vie	2460622.75	19	jue	2460663.75
20	mar	2460542.75	30	lun	2460583.75	9	sab	2460623.75	20	vie	2460664.75
21	mie	2460543.75	octubre			10	dom	2460624.75	21	sab	2460665.75
22	jue	2460544.75	1	mar	2460584.75	11	lun	2460625.75	22	dom	2460666.75
23	vie	2460545.75	2	mie	2460585.75	12	mar	2460626.75	23	lun	2460667.75
24	sab	2460546.75	3	jue	2460586.75	13	mie	2460627.75	24	mar	2460668.75
25	dom	2460547.75	4	vie	2460587.75	14	jue	2460628.75	25	mie	2460669.75
26	lun	2460548.75	5	sab	2460588.75	15	vie	2460629.75	26	jue	2460670.75
27	mar	2460549.75	6	dom	2460589.75	16	sab	2460630.75	27	vie	2460671.75
28	mie	2460550.75	7	lun	2460590.75	17	dom	2460631.75	28	sab	2460672.75
29	jue	2460551.75	8	mar	2460591.75	18	lun	2460632.75	29	dom	2460673.75
30	vie	2460552.75	9	mie	2460592.75	19	mar	2460633.75	30	lun	2460674.75
31	sab	2460553.75	10	jue	2460593.75	20	mie	2460634.75	31	mar	2460675.75
enero											
1 mie 2460676.75											
2 jue 2460677.75											

Eras y ciclos cronológicos: 2024

Calendario Gregoriano

Cómputo

Letra dominical.	GF
Epacta	19
Ciclo lunar (Número de Oro)	XI
Ciclo solar	17
Indicción romana	2

Eras

El año 2024 es el vigésimo cuarto del siglo XXI de la Era Cristiana.

El año 2024 corresponde al año 6737 del Período Juliano.

El 1 de enero del año 2024 del Calendario Juliano, corresponde al 14 de enero.

Año	Era	Inicia
2777	Romana	enero 14
2684	Japones	enero 1
5785	Judía	octubre 2
2336	Griega	septiembre 14
1446	Hégira	julio 7
7533	Bizantina	septiembre 14
	China	febrero 10

Fiestas y aniversarios para el año 2024

Año Nuevo	lunes	1	de enero
Epifania	sabado	6	de enero
Septuagesima	domingo	28	de enero
Proclamacion de la Constitucion de 1917	lunes	5	de febrero
Quinquagesima	domingo	11	de febrero
Carnaval	martes	13	de febrero
Miercoles de ceniza	miercoles	14	de febrero
Dia de la Bandera	sabado	24	de febrero
Ramadàn	lunes	11	de marzo
Aniversario del Natalicio de Benito Juarez	jueves	21	de marzo
Domingo de Ramos	domingo	24	de marzo
Viernes Santo	viernes	29	de marzo
Pascua	domingo	31	de marzo
Dia del Trabajo	miercoles	1	de mayo
Aniversario de la Batalla de Puebla	domingo	5	de mayo
Ascension	jueves	9	de mayo
Pentecostes	domingo	19	de mayo
Trinidad	domingo	26	de mayo
Corpus	jueves	30	de mayo
Domingo de Corpus	domingo	2	de junio
San Pedro y San Pablo	sabado	29	de junio
Año Nuevo Islàmico	lunes	8	de julio
Aniversario de la Muerte de Benito Juarez	jueves	18	de julio
Aniversario de la Muerte de Miguel Hidalgo	martes	30	de julio
Aniversario de la Independencia de Mexico	lunes	16	de septiembre
Año Nuevo Judio	mièrcoles	2	de octubre
Dia de la Raza	sabado	12	de octubre
Conmemoracion de los Difuntos	sabado	2	de noviembre
Aniversario de la Revolucion Mexicana	miercoles	20	de noviembre
Adviento	domingo	1	de diciembre
Navidad	miercoles	25	de diciembre

Estaciones del año, 2024

Hora del meridiano 90° W.G.

mes	día	h	m	longitud $\lambda(^{\circ})$	Signo
<u>Invierno</u>					
Enero	17	19	14.....	300	Capricornio
Febrero	16	6	43.....	330	Acuario
<u>Primavera</u>					
Marzo	20	15	24.....	0	Piscis
Abril	22	7	48.....	30	Aries
Mayo	23	5	14.....	60	Tauro
<u>Verano</u>					
Junio	21	8	58.....	90	Géminis
Julio	20	15	18.....	120	Cáncer
Agosto	20	20	39.....	150	Leo
<u>Otoño</u>					
Septiembre	23	0	50.....	180	Virgo
Octubre	25	14	53.....	210	Libra
Noviembre	24	9	39.....	240	Escorpión
<u>Invierno</u>					
Diciembre	21	21	27.....	270	Sagitario

Hora sidereal, 2024

A las 0^h del meridiano 90° W.G.

d	dj	h	h	m	s	d	dj	h	h	m	s	d	dj	h	h	m	s
Ene						20	2460360.75	9	58	43.3	9	2460409.75	13	11	54.4		
1	2460310.75	6	41	35.4	21	2460361.75	10	2	39.9	10	2460410.75	13	15	51			
2	2460311.75	6	45	32	22	2460362.75	10	6	36.4	11	2460411.75	13	19	47.5			
3	2460312.75	6	49	28.5	23	2460363.75	10	10	33	12	2460412.75	13	23	44.1			
4	2460313.75	6	53	25.1	24	2460364.75	10	14	29.5	13	2460413.75	13	27	40.6			
5	2460314.75	6	57	21.6	25	2460365.75	10	18	26.1	14	2460414.75	13	31	37.2			
6	2460315.75	7	1	18.2	26	2460366.75	10	22	22.6	15	2460415.75	13	35	33.8			
7	2460316.75	7	5	14.8	27	2460367.75	10	26	19.2	16	2460416.75	13	39	30.3			
8	2460317.75	7	9	11.3	28	2460368.75	10	30	15.7	17	2460417.75	13	43	26.9			
9	2460318.75	7	13	7.9	29	2460369.75	10	34	12.3	18	2460418.75	13	47	23.4			
10	2460319.75	7	17	4.5	Mar						19	2460419.75	13	51	20		
11	2460320.75	7	21	1	1	2460370.75	10	38	8.8	20	2460420.75	13	55	16.5			
12	2460321.75	7	24	57.6	2	2460371.75	10	42	5.4	21	2460421.75	13	59	13.1			
13	2460322.75	7	28	54.2	3	2460372.75	10	46	1.9	22	2460422.75	14	3	9.6			
14	2460323.75	7	32	50.7	4	2460373.75	10	49	58.5	23	2460423.75	14	7	6.2			
15	2460324.75	7	36	47.3	5	2460374.75	10	53	55	24	2460424.75	14	11	2.7			
16	2460325.75	7	40	43.8	6	2460375.75	10	57	51.6	25	2460425.75	14	14	59.3			
17	2460326.75	7	44	40.4	7	2460376.75	11	1	48.2	26	2460426.75	14	18	55.8			
18	2460327.75	7	48	36.9	8	2460377.75	11	5	44.7	27	2460427.75	14	22	52.4			
19	2460328.75	7	52	33.5	9	2460378.75	11	9	41.3	28	2460428.75	14	26	49			
20	2460329.75	7	56	30	10	2460379.75	11	13	37.8	29	2460429.75	14	30	45.5			
21	2460330.75	8	0	26.6	11	2460380.75	11	17	34.4	30	2460430.75	14	34	42.1			
22	2460331.75	8	4	23.2	12	2460381.75	11	21	30.9	May							
23	2460332.75	8	8	19.7	13	2460382.75	11	25	27.5	1	2460431.75	14	38	38.7			
24	2460333.75	8	12	16.3	14	2460383.75	11	29	24	2	2460432.75	14	42	35.2			
25	2460334.75	8	16	12.8	15	2460384.75	11	33	20.6	3	2460433.75	14	46	31.8			
26	2460335.75	8	20	9.4	16	2460385.75	11	37	17.1	4	2460434.75	14	50	28.3			
27	2460336.75	8	24	6	17	2460386.75	11	41	13.7	5	2460435.75	14	54	24.9			
28	2460337.75	8	28	2.5	18	2460387.75	11	45	10.3	6	2460436.75	14	58	21.4			
29	2460338.75	8	31	59.1	19	2460388.75	11	49	6.8	7	2460437.75	15	2	18			
30	2460339.75	8	35	55.6	20	2460389.75	11	53	3.4	8	2460438.75	15	6	14.5			
31	2460340.75	8	39	52.2	21	2460390.75	11	56	59.9	9	2460439.75	15	10	11.1			
Feb						22	2460391.75	12	0	56.5	10	2460440.75	15	14	7.6		
1	2460341.75	8	43	48.7	23	2460392.75	12	4	53	11	2460441.75	15	18	4.2			
2	2460342.75	8	47	45.3	24	2460393.75	12	8	49.6	12	2460442.75	15	22	0.8			
3	2460343.75	8	51	41.8	25	2460394.75	12	12	46.1	13	2460443.75	15	25	57.3			
4	2460344.75	8	55	38.4	26	2460395.75	12	16	42.7	14	2460444.75	15	29	53.9			
5	2460345.75	8	59	34.9	27	2460396.75	12	20	39.2	15	2460445.75	15	33	50.4			
6	2460346.75	9	3	31.5	28	2460397.75	12	24	35.8	16	2460446.75	15	37	47			
7	2460347.75	9	7	28.1	29	2460398.75	12	28	32.3	17	2460447.75	15	41	43.6			
8	2460348.75	9	11	24.6	30	2460399.75	12	32	28.9	18	2460448.75	15	45	40.1			
9	2460349.75	9	15	21.2	31	2460400.75	12	36	25.4	19	2460449.75	15	49	36.7			
10	2460350.75	9	19	17.7	Abr						20	2460450.75	15	53	33.2		
11	2460351.75	9	23	14.3	1	2460401.75	12	40	22	21	2460451.75	15	57	29.8			
12	2460352.75	9	27	10.9	2	2460402.75	12	44	18.5	22	2460452.75	16	1	26.3			
13	2460353.75	9	31	7.4	3	2460403.75	12	48	15.1	23	2460453.75	16	5	22.9			
14	2460354.75	9	35	4	4	2460404.75	12	52	11.7	24	2460454.75	16	9	19.4			
15	2460355.75	9	39	0.5	5	2460405.75	12	56	8.2	25	2460455.75	16	13	16			
16	2460356.75	9	42	57.1	6	2460406.75	13	0	4.8	26	2460456.75	16	17	12.6			
17	2460357.75	9	46	53.6	7	2460407.75	13	4	1.3	27	2460457.75	16	21	9.1			
18	2460358.75	9	50	50.2	8	2460408.75	13	7	57.9	28	2460458.75	16	25	5.7			
19	2460359.75	9	54	46.7							29	2460459.75	16	29	2.3		

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A las 0^h del meridiano 90° W.G.

d	dj	h	h	m	s	d	dj	h	h	m	s	d	dj	h	h	m	s
30	2460460.75	16	32	58.8	18	2460509.75	19	46	10.1	5	2460558.75	22	59	21.4			
31	2460461.75	16	36	55.4	19	2460510.75	19	50	6.7	6	2460559.75	23	3	17.9			
Jun						20	2460511.75	19	54	3.3	7	2460560.75	23	7	14.5		
1	2460462.75	16	40	51.9	21	2460512.75	19	57	59.8	8	2460561.75	23	11	11			
2	2460463.75	16	44	48.5	22	2460513.75	20	1	56.4	9	2460562.75	23	15	7.6			
3	2460464.75	16	48	45	23	2460514.75	20	5	53	10	2460563.75	23	19	4.1			
4	2460465.75	16	52	41.6	24	2460515.75	20	9	49.5	11	2460564.75	23	23	0.7			
5	2460466.75	16	56	38.1	25	2460516.75	20	13	46.1	12	2460565.75	23	26	57.3			
6	2460467.75	17	0	34.7	26	2460517.75	20	17	42.6	13	2460566.75	23	30	53.8			
7	2460468.75	17	4	31.3	27	2460518.75	20	21	39.2	14	2460567.75	23	34	50.4			
8	2460469.75	17	8	27.8	28	2460519.75	20	25	35.7	15	2460568.75	23	38	46.9			
9	2460470.75	17	12	24.4	29	2460520.75	20	29	32.3	16	2460569.75	23	42	43.5			
10	2460471.75	17	16	21	30	2460521.75	20	33	28.8	17	2460570.75	23	46	40			
11	2460472.75	17	20	17.5	31	2460522.75	20	37	25.4	18	2460571.75	23	50	36.6			
12	2460473.75	17	24	14.1	Ago						19	2460572.75	23	54	33.1		
13	2460474.75	17	28	10.6	1	2460523.75	20	41	22	20	2460573.75	23	58	29.7			
14	2460475.75	17	32	7.2	2	2460524.75	20	45	18.5	21	2460574.75	0	2	26.2			
15	2460476.75	17	36	3.7	3	2460525.75	20	49	15.1	22	2460575.75	0	6	22.8			
16	2460477.75	17	40	0.3	4	2460526.75	20	53	11.6	23	2460576.75	0	10	19.4			
17	2460478.75	17	43	56.8	5	2460527.75	20	57	8.2	24	2460577.75	0	14	15.9			
18	2460479.75	17	47	53.4	6	2460528.75	21	1	4.8	25	2460578.75	0	18	12.5			
19	2460480.75	17	51	49.9	7	2460529.75	21	5	1.3	26	2460579.75	0	22	9			
20	2460481.75	17	55	46.5	8	2460530.75	21	8	57.9	27	2460580.75	0	26	5.6			
21	2460482.75	17	59	43.1	9	2460531.75	21	12	54.4	28	2460581.75	0	30	2.1			
22	2460483.75	18	3	39.6	10	2460532.75	21	16	51	29	2460582.75	0	33	58.7			
23	2460484.75	18	7	36.2	11	2460533.75	21	20	47.5	30	2460583.75	0	37	55.2			
24	2460485.75	18	11	32.8	12	2460534.75	21	24	44.1	Oct							
25	2460486.75	18	15	29.3	13	2460535.75	21	28	40.6	1	2460584.75	0	41	51.8			
26	2460487.75	18	19	25.9	14	2460536.75	21	32	37.2	2	2460585.75	0	45	48.3			
27	2460488.75	18	23	22.4	15	2460537.75	21	36	33.7	3	2460586.75	0	49	44.9			
28	2460489.75	18	27	19	16	2460538.75	21	40	30.3	4	2460587.75	0	53	41.4			
29	2460490.75	18	31	15.5	17	2460539.75	21	44	26.9	5	2460588.75	0	57	38			
30	2460491.75	18	35	12.1	18	2460540.75	21	48	23.4	6	2460589.75	1	1	34.5			
Jul						19	2460541.75	21	52	20	7	2460590.75	1	5	31.1		
1	2460492.75	18	39	8.7	20	2460542.75	21	56	16.5	8	2460591.75	1	9	27.7			
2	2460493.75	18	43	5.2	21	2460543.75	22	0	13.1	9	2460592.75	1	13	24.2			
3	2460494.75	18	47	1.8	22	2460544.75	22	4	9.6	10	2460593.75	1	17	20.8			
4	2460495.75	18	50	58.3	23	2460545.75	22	8	6.2	11	2460594.75	1	21	17.3			
5	2460496.75	18	54	54.9	24	2460546.75	22	12	2.7	12	2460595.75	1	25	13.9			
6	2460497.75	18	58	51.5	25	2460547.75	22	15	59.3	13	2460596.75	1	29	10.4			
7	2460498.75	19	2	48	26	2460548.75	22	19	55.8	14	2460597.75	1	33	7			
8	2460499.75	19	6	44.6	27	2460549.75	22	23	52.4	15	2460598.75	1	37	3.5			
9	2460500.75	19	10	41.2	28	2460550.75	22	27	49	16	2460599.75	1	41	0.1			
10	2460501.75	19	14	37.7	29	2460551.75	22	31	45.5	17	2460600.75	1	44	56.6			
11	2460502.75	19	18	34.3	30	2460552.75	22	35	42.1	18	2460601.75	1	48	53.2			
12	2460503.75	19	22	30.8	31	2460553.75	22	39	38.6	19	2460602.75	1	52	49.7			
13	2460504.75	19	26	27.4	Sep						20	2460603.75	1	56	46.3		
14	2460505.75	19	30	23.9	1	2460554.75	22	43	35.2	21	2460604.75	2	0	42.9			
15	2460506.75	19	34	20.5	2	2460555.75	22	47	31.7	22	2460605.75	2	4	39.4			
16	2460507.75	19	38	17	3	2460556.75	22	51	28.3	23	2460606.75	2	8	36			
17	2460508.75	19	42	13.6	4	2460557.75	22	55	24.8	24	2460607.75	2	12	32.6			
												25	2460608.75	2	16	29.1	

Hora sideral, 2024

A las 0^h del meridiano 90° W.G.

d	dj	h	h	m	s	d	dj	h	h	m	s	d	dj	h	h	m	s
26	2460609.75	2	20	25.7		17	2460631.75	3	47	9.9		9	2460653.75	5	13	54.2	
27	2460610.75	2	24	22.2		18	2460632.75	3	51	6.4		10	2460654.75	5	17	50.7	
28	2460611.75	2	28	18.8		19	2460633.75	3	55	3		11	2460655.75	5	21	47.3	
29	2460612.75	2	32	15.3		20	2460634.75	3	58	59.6		12	2460656.75	5	25	43.8	
30	2460613.75	2	36	11.9		21	2460635.75	4	2	56.1		13	2460657.75	5	29	40.4	
31	2460614.75	2	40	8.4		22	2460636.75	4	6	52.7		14	2460658.75	5	33	37	
Nov						23	2460637.75	4	10	49.2		15	2460659.75	5	37	33.5	
1	2460615.75	2	44	5		24	2460638.75	4	14	45.8		16	2460660.75	5	41	30.1	
2	2460616.75	2	48	1.5		25	2460639.75	4	18	42.4		17	2460661.75	5	45	26.7	
3	2460617.75	2	51	58.1		26	2460640.75	4	22	38.9		18	2460662.75	5	49	23.2	
4	2460618.75	2	55	54.6		27	2460641.75	4	26	35.5		19	2460663.75	5	53	19.8	
5	2460619.75	2	59	51.2		28	2460642.75	4	30	32		20	2460664.75	5	57	16.3	
6	2460620.75	3	3	47.8		29	2460643.75	4	34	28.6		21	2460665.75	6	1	12.9	
7	2460621.75	3	7	44.3		30	2460644.75	4	38	25.1		22	2460666.75	6	5	9.4	
8	2460622.75	3	11	40.9		Dic						23	2460667.75	6	9	6	
9	2460623.75	3	15	37.4		1	2460645.75	4	42	21.7		24	2460668.75	6	13	2.6	
10	2460624.75	3	19	34		2	2460646.75	4	46	18.3		25	2460669.75	6	16	59.1	
11	2460625.75	3	23	30.5		3	2460647.75	4	50	14.8		26	2460670.75	6	20	55.7	
12	2460626.75	3	27	27.1		4	2460648.75	4	54	11.4		27	2460671.75	6	24	52.2	
13	2460627.75	3	31	23.7		5	2460649.75	4	58	7.9		28	2460672.75	6	28	48.8	
14	2460628.75	3	35	20.2		6	2460650.75	5	2	4.5		29	2460673.75	6	32	45.3	
15	2460629.75	3	39	16.8		7	2460651.75	5	6	1.1		30	2460674.75	6	36	41.9	
16	2460630.75	3	43	13.3		8	2460652.75	5	9	57.6		31	2460675.75	6	40	38.5	

Sol, 2024

Efermídes a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α		vh s	δ °	“ ”		dis UA	h	hp		
				m	s			“	”			m	s	
ene	1	2460310.75	18	44	47.28	11.0	-23	2	20.54	12.4	0.98332	18	44	47.1
ene	2	2460311.75	18	49	12.10	11.0	-22	57	23.56	13.5	0.98331	18	49	11.9
ene	3	2460312.75	18	53	36.60	11.0	-22	51	59.11	14.7	0.98331	18	53	36.4
ene	4	2460313.75	18	58	0.76	11.0	-22	46	7.33	15.8	0.98331	18	58	0.6
ene	5	2460314.75	19	2	24.54	11.0	-22	39	48.38	16.9	0.98332	19	2	24.3
ene	6	2460315.75	19	6	47.93	11.0	-22	33	2.44	18.0	0.98333	19	6	47.9
ene	7	2460316.75	19	11	10.88	10.9	-22	25	49.71	19.1	0.98335	19	11	10.9
ene	8	2460317.75	19	15	33.38	10.9	-22	18	10.38	20.2	0.98337	19	15	33.3
ene	9	2460318.75	19	19	55.40	10.9	-22	10	4.68	21.3	0.98340	19	19	55.4
ene	10	2460319.75	19	24	16.90	10.9	-22	1	32.87	22.4	0.98343	19	24	16.8
ene	11	2460320.75	19	28	37.86	10.8	-21	52	35.19	23.5	0.98347	19	28	37.8
ene	12	2460321.75	19	32	58.23	10.8	-21	43	11.92	24.5	0.98350	19	32	58.1
ene	13	2460322.75	19	37	18.00	10.8	-21	33	23.33	25.6	0.98354	19	37	17.9
ene	14	2460323.75	19	41	37.13	10.8	-21	23	9.72	26.6	0.98359	19	41	37.0
ene	15	2460324.75	19	45	55.59	10.7	-21	12	31.37	27.6	0.98364	19	45	55.5
ene	16	2460325.75	19	50	13.38	10.7	-21	1	28.58	28.6	0.98369	19	50	13.2
ene	17	2460326.75	19	54	30.46	10.7	-20	50	1.69	29.6	0.98375	19	54	30.3
ene	18	2460327.75	19	58	46.83	10.7	-20	38	11.03	30.6	0.98381	19	58	46.7
ene	19	2460328.75	20	3	2.47	10.6	-20	25	56.94	31.5	0.98388	20	3	2.3
ene	20	2460329.75	20	7	17.36	10.6	-20	13	19.76	32.5	0.98395	20	7	17.2
ene	21	2460330.75	20	11	31.50	10.6	-20	0	19.87	33.4	0.98403	20	11	31.5
ene	22	2460331.75	20	15	44.87	10.5	-19	46	57.62	34.3	0.98411	20	15	44.9
ene	23	2460332.75	20	19	57.47	10.5	-19	33	13.36	35.2	0.98420	20	19	57.4
ene	24	2460333.75	20	24	9.28	10.5	-19	19	7.46	36.1	0.98429	20	24	9.2
ene	25	2460334.75	20	28	20.30	10.4	-19	4	40.28	37.0	0.98439	20	28	20.2
ene	26	2460335.75	20	32	30.53	10.4	-18	49	52.16	37.9	0.98450	20	32	30.5
ene	27	2460336.75	20	36	39.96	10.4	-18	34	43.48	38.7	0.98461	20	36	39.9
ene	28	2460337.75	20	40	48.59	10.3	-18	19	14.59	39.5	0.98473	20	40	48.5
ene	29	2460338.75	20	44	56.42	10.3	-18	3	25.86	40.3	0.98486	20	44	56.3
ene	30	2460339.75	20	49	3.44	10.3	-17	47	17.64	41.1	0.98499	20	49	3.3
ene	31	2460340.75	20	53	9.67	10.2	-17	30	50.33	41.9	0.98512	20	53	9.5
feb	1	2460341.75	20	57	15.09	10.2	-17	14	4.29	42.7	0.98526	20	57	14.9
feb	2	2460342.75	21	1	19.71	10.2	-16	56	59.91	43.4	0.98541	21	1	19.5
feb	3	2460343.75	21	5	23.55	10.1	-16	39	37.57	44.2	0.98556	21	5	23.4
feb	4	2460344.75	21	9	26.58	10.1	-16	21	57.69	44.9	0.98571	21	9	26.4
feb	5	2460345.75	21	13	28.83	10.1	-16	4	0.65	45.6	0.98587	21	13	28.8
feb	6	2460346.75	21	17	30.29	10.0	-15	45	46.88	46.3	0.98603	21	17	30.3
feb	7	2460347.75	21	21	30.96	10.0	-15	27	16.80	46.9	0.98620	21	21	30.9
feb	8	2460348.75	21	25	30.85	10.0	-15	8	30.85	47.6	0.98637	21	25	30.8
feb	9	2460349.75	21	29	29.95	9.9	-14	49	29.46	48.2	0.98654	21	29	29.9
feb	10	2460350.75	21	33	28.25	9.9	-14	30	13.07	48.8	0.98671	21	33	28.2
feb	11	2460351.75	21	37	25.78	9.9	-14	10	42.12	49.4	0.98689	21	37	25.7
feb	12	2460352.75	21	41	22.52	9.8	-13	50	57.05	49.9	0.98707	21	41	22.4
feb	13	2460353.75	21	45	18.48	9.8	-13	30	58.29	50.5	0.98725	21	45	18.4
feb	14	2460354.75	21	49	13.68	9.8	-13	10	46.28	51.0	0.98743	21	49	13.6
feb	15	2460355.75	21	53	8.13	9.7	-12	50	21.46	51.5	0.98762	21	53	8.0
feb	16	2460356.75	21	57	1.83	9.7	-12	29	44.28	52.0	0.98781	21	57	1.7
feb	17	2460357.75	22	0	54.79	9.7	-12	8	55.15	52.5	0.98800	22	0	54.6
feb	18	2460358.75	22	4	47.04	9.6	-11	47	54.52	53.0	0.98820	22	4	46.9
feb	19	2460359.75	22	8	38.58	9.6	-11	26	42.79	53.4	0.98840	22	8	38.4

Sol, 2024

Efemérides de solpru2 para el año 2024

mes	día	dj	h	α m	s	vh s	δ °	"	vh "	dis UA	h	hp m	s	
feb	20	2460360.75	22	12	29.43	9.6	-11	5	20.40	53.9	0.98860	22	12	29.2
feb	21	2460361.75	22	16	19.60	9.6	-10	43	47.72	54.3	0.98881	22	16	19.6
feb	22	2460362.75	22	20	9.11	9.5	-10	22	5.18	54.7	0.98903	22	20	9.1
feb	23	2460363.75	22	23	57.98	9.5	-10	0	13.15	55.0	0.98925	22	23	57.9
feb	24	2460364.75	22	27	46.22	9.5	-9	38	12.02	55.4	0.98947	22	27	46.2
feb	25	2460365.75	22	31	33.86	9.5	-9	16	2.17	55.8	0.98970	22	31	33.8
feb	26	2460366.75	22	35	20.92	9.4	-8	53	43.98	56.1	0.98993	22	35	20.8
feb	27	2460367.75	22	39	7.42	9.4	-8	31	17.82	56.4	0.99016	22	39	7.3
feb	28	2460368.75	22	42	53.37	9.4	-8	8	44.07	56.7	0.99040	22	42	53.3
feb	29	2460369.75	22	46	38.80	9.4	-7	46	3.09	57.0	0.99065	22	46	38.7
mar	1	2460370.75	22	50	23.73	9.4	-7	23	15.26	57.3	0.99089	22	50	23.6
mar	2	2460371.75	22	54	8.18	9.3	-7	0	20.96	57.5	0.99114	22	54	8.0
mar	3	2460372.75	22	57	52.17	9.3	-6	37	20.57	57.8	0.99140	22	57	52.0
mar	4	2460373.75	23	1	35.72	9.3	-6	14	14.46	58.0	0.99165	23	1	35.5
mar	5	2460374.75	23	5	18.85	9.3	-5	51	3.04	58.2	0.99191	23	5	18.7
mar	6	2460375.75	23	9	1.57	9.3	-5	27	46.69	58.4	0.99217	23	9	1.4
mar	7	2460376.75	23	12	43.91	9.2	-5	4	25.83	58.5	0.99243	23	12	43.9
mar	8	2460377.75	23	16	25.87	9.2	-4	41	0.85	58.7	0.99269	23	16	25.8
mar	9	2460378.75	23	20	7.47	9.2	-4	17	32.17	58.8	0.99296	23	20	7.4
mar	10	2460379.75	23	23	48.73	9.2	-3	54	0.21	59.0	0.99322	23	23	48.7
mar	11	2460380.75	23	27	29.66	9.2	-3	30	25.37	59.1	0.99349	23	27	29.6
mar	12	2460381.75	23	31	10.28	9.2	-3	6	48.05	59.1	0.99375	23	31	10.2
mar	13	2460382.75	23	34	50.62	9.2	-2	43	8.66	59.2	0.99401	23	34	50.5
mar	14	2460383.75	23	38	30.68	9.2	-2	19	27.60	59.3	0.99428	23	38	30.6
mar	15	2460384.75	23	42	10.49	9.1	-1	55	45.28	59.3	0.99455	23	42	10.4
mar	16	2460385.75	23	45	50.06	9.1	-1	32	2.09	59.3	0.99481	23	45	49.9
mar	17	2460386.75	23	49	29.41	9.1	-1	8	18.41	59.3	0.99508	23	49	29.3
mar	18	2460387.75	23	53	8.57	9.1	-0	44	34.62	59.3	0.99535	23	53	8.4
mar	19	2460388.75	23	56	47.54	9.1	-0	20	51.08	59.3	0.99562	23	56	47.4
mar	20	2460389.75	0	0	26.36	9.1	+0	2	51.83	59.2	0.99590	0	0	26.2
mar	21	2460390.75	0	4	5.04	9.1	+0	26	33.78	59.2	0.99617	0	4	4.8
mar	22	2460391.75	0	7	43.61	9.1	+0	50	14.41	59.1	0.99645	0	7	43.6
mar	23	2460392.75	0	11	22.09	9.1	+1	13	53.40	59.0	0.99673	0	11	22.1
mar	24	2460393.75	0	15	0.51	9.1	+1	37	30.39	58.9	0.99701	0	15	0.5
mar	25	2460394.75	0	18	38.88	9.1	+2	1	5.07	58.8	0.99729	0	18	38.8
mar	26	2460395.75	0	22	17.23	9.1	+2	24	37.11	58.7	0.99758	0	22	17.2
mar	27	2460396.75	0	25	55.59	9.1	+2	48	6.18	58.6	0.99786	0	25	55.5
mar	28	2460397.75	0	29	33.98	9.1	+3	11	31.97	58.4	0.99815	0	29	33.9
mar	29	2460398.75	0	33	12.42	9.1	+3	34	54.14	58.3	0.99844	0	33	12.3
mar	30	2460399.75	0	36	50.93	9.1	+3	58	12.38	58.1	0.99873	0	36	50.8
mar	31	2460400.75	0	40	29.54	9.1	+4	21	26.34	57.9	0.99903	0	40	29.4
abr	1	2460401.75	0	44	8.27	9.1	+4	44	35.69	57.7	0.99932	0	44	8.1
abr	2	2460402.75	0	47	47.13	9.1	+5	7	40.10	57.5	0.99961	0	47	47.0
abr	3	2460403.75	0	51	26.15	9.1	+5	30	39.20	57.2	0.99991	0	51	26.0
abr	4	2460404.75	0	55	5.33	9.1	+5	53	32.65	57.0	1.00020	0	55	5.1
abr	5	2460405.75	0	58	44.71	9.1	+6	16	20.07	56.7	1.00049	0	58	44.5
abr	6	2460406.75	1	2	24.29	9.2	+6	39	1.09	56.4	1.00078	1	2	24.3
abr	7	2460407.75	1	6	4.09	9.2	+7	1	35.35	56.1	1.00107	1	6	4.1

Sol, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	vh s	δ °	“	”	dis UA	h	hp m	s	
abr	8	2460408.75	1	9	44.13	9.2	+7	24	2.48	55.8	1.00136	1	9	44.1
abr	9	2460409.75	1	13	24.42	9.2	+7	46	22.11	55.5	1.00165	1	13	24.4
abr	10	2460410.75	1	17	4.97	9.2	+8	8	33.87	55.1	1.00193	1	17	4.9
abr	11	2460411.75	1	20	45.80	9.2	+8	30	37.39	54.8	1.00221	1	20	45.7
abr	12	2460412.75	1	24	26.93	9.2	+8	52	32.30	54.4	1.00249	1	24	26.8
abr	13	2460413.75	1	28	8.35	9.2	+9	14	18.24	54.0	1.00277	1	28	8.3
abr	14	2460414.75	1	31	50.09	9.3	+9	35	54.85	53.6	1.00304	1	31	50.0
abr	15	2460415.75	1	35	32.16	9.3	+9	57	21.78	53.2	1.00332	1	35	32.0
abr	16	2460416.75	1	39	14.57	9.3	+10	18	38.68	52.8	1.00359	1	39	14.4
abr	17	2460417.75	1	42	57.33	9.3	+10	39	45.22	52.3	1.00386	1	42	57.2
abr	18	2460418.75	1	46	40.47	9.3	+11	0	41.07	51.9	1.00414	1	46	40.3
abr	19	2460419.75	1	50	24.00	9.3	+11	21	25.92	51.4	1.00441	1	50	23.8
abr	20	2460420.75	1	54	7.92	9.3	+11	41	59.43	50.9	1.00468	1	54	7.7
abr	21	2460421.75	1	57	52.27	9.4	+12	2	21.32	50.4	1.00495	1	57	52.3
abr	22	2460422.75	2	1	37.05	9.4	+12	22	31.26	49.9	1.00522	2	1	37.0
abr	23	2460423.75	2	5	22.28	9.4	+12	42	28.95	49.4	1.00548	2	5	22.3
abr	24	2460424.75	2	9	7.98	9.4	+13	2	14.10	48.8	1.00575	2	9	7.9
abr	25	2460425.75	2	12	54.16	9.4	+13	21	46.41	48.3	1.00602	2	12	54.1
abr	26	2460426.75	2	16	40.83	9.5	+13	41	5.58	47.7	1.00629	2	16	40.8
abr	27	2460427.75	2	20	28.01	9.5	+14	0	11.32	47.2	1.00656	2	20	27.9
abr	28	2460428.75	2	24	15.72	9.5	+14	19	3.31	46.6	1.00682	2	24	15.6
abr	29	2460429.75	2	28	3.95	9.5	+14	37	41.26	46.0	1.00709	2	28	3.8
abr	30	2460430.75	2	31	52.73	9.6	+14	56	4.84	45.4	1.00735	2	31	52.6
may	1	2460431.75	2	35	42.05	9.6	+15	14	13.74	44.7	1.00761	2	35	41.9
may	2	2460432.75	2	39	31.93	9.6	+15	32	7.62	44.1	1.00787	2	39	31.8
may	3	2460433.75	2	43	22.37	9.6	+15	49	46.16	43.5	1.00813	2	43	22.2
may	4	2460434.75	2	47	13.38	9.6	+16	7	9.02	42.8	1.00838	2	47	13.2
may	5	2460435.75	2	51	4.97	9.7	+16	24	15.88	42.1	1.00863	2	51	4.8
may	6	2460436.75	2	54	57.13	9.7	+16	41	6.41	41.4	1.00888	2	54	56.9
may	7	2460437.75	2	58	49.87	9.7	+16	57	40.28	40.7	1.00912	2	58	49.9
may	8	2460438.75	3	2	43.19	9.7	+17	13	57.17	40.0	1.00936	3	2	43.2
may	9	2460439.75	3	6	37.08	9.8	+17	29	56.77	39.2	1.00959	3	6	37.0
may	10	2460440.75	3	10	31.55	9.8	+17	45	38.75	38.5	1.00982	3	10	31.5
may	11	2460441.75	3	14	26.58	9.8	+18	1	2.80	37.7	1.01005	3	14	26.5
may	12	2460442.75	3	18	22.16	9.8	+18	16	8.61	37.0	1.01027	3	18	22.1
may	13	2460443.75	3	22	18.31	9.9	+18	30	55.88	36.2	1.01048	3	22	18.2
may	14	2460444.75	3	26	15.00	9.9	+18	45	24.31	35.4	1.01070	3	26	14.9
may	15	2460445.75	3	30	12.24	9.9	+18	59	33.62	34.6	1.01091	3	30	12.1
may	16	2460446.75	3	34	10.03	9.9	+19	13	23.53	33.8	1.01112	3	34	9.9
may	17	2460447.75	3	38	8.35	10.0	+19	26	53.79	32.9	1.01132	3	38	8.2
may	18	2460448.75	3	42	7.22	10.0	+19	40	4.14	32.1	1.01152	3	42	7.1
may	19	2460449.75	3	46	6.61	10.0	+19	52	54.32	31.2	1.01172	3	46	6.4
may	20	2460450.75	3	50	6.54	10.0	+20	5	24.11	30.4	1.01191	3	50	6.3
may	21	2460451.75	3	54	7.00	10.0	+20	17	33.26	29.5	1.01211	3	54	6.8
may	22	2460452.75	3	58	7.97	10.1	+20	29	21.56	28.6	1.01230	3	58	8.0
may	23	2460453.75	4	2	9.46	10.1	+20	40	48.79	27.7	1.01249	4	2	9.4
may	24	2460454.75	4	6	11.47	10.1	+20	51	54.74	26.9	1.01267	4	6	11.4
may	25	2460455.75	4	10	13.98	10.1	+21	2	39.20	25.9	1.01286	4	10	13.9
may	26	2460456.75	4	14	16.98	10.1	+21	13	1.96	25.0	1.01304	4	14	16.9

Sol, 2024

Efemérides de solpru2 para el año 2024

mes	día	dj	h	α m	s	vh s	δ °	"	vh "	dis UA	h	hp m	s	
may	27	2460457.75	4	18	20.47	10.2	+21	23	2.81	24.1	1.01322	4	18	20.4
may	28	2460458.75	4	22	24.43	10.2	+21	32	41.55	23.2	1.01339	4	22	24.3
may	29	2460459.75	4	26	28.85	10.2	+21	41	57.94	22.2	1.01357	4	26	28.7
may	30	2460460.75	4	30	33.73	10.2	+21	50	51.80	21.3	1.01374	4	30	33.6
may	31	2460461.75	4	34	39.04	10.2	+21	59	22.90	20.3	1.01390	4	34	38.9
jun	1	2460462.75	4	38	44.78	10.3	+22	7	31.04	19.4	1.01406	4	38	44.6
jun	2	2460463.75	4	42	50.93	10.3	+22	15	16.04	18.4	1.01422	4	42	50.8
jun	3	2460464.75	4	46	57.47	10.3	+22	22	37.72	17.4	1.01437	4	46	57.3
jun	4	2460465.75	4	51	4.39	10.3	+22	29	35.91	16.4	1.01452	4	51	4.2
jun	5	2460466.75	4	55	11.65	10.3	+22	36	10.45	15.4	1.01466	4	55	11.4
jun	6	2460467.75	4	59	19.24	10.3	+22	42	21.21	14.5	1.01480	4	59	19.2
jun	7	2460468.75	5	3	27.13	10.3	+22	48	8.03	13.4	1.01493	5	3	27.1
jun	8	2460469.75	5	7	35.30	10.4	+22	53	30.79	12.4	1.01505	5	7	35.3
jun	9	2460470.75	5	11	43.71	10.4	+22	58	29.35	11.4	1.01517	5	11	43.7
jun	10	2460471.75	5	15	52.34	10.4	+23	3	3.61	10.4	1.01528	5	15	52.3
jun	11	2460472.75	5	20	1.16	10.4	+23	7	13.45	9.4	1.01539	5	20	1.1
jun	12	2460473.75	5	24	10.15	10.4	+23	10	58.80	8.4	1.01549	5	24	10.1
jun	13	2460474.75	5	28	19.30	10.4	+23	14	19.56	7.3	1.01559	5	28	19.2
jun	14	2460475.75	5	32	28.56	10.4	+23	17	15.69	6.3	1.01568	5	32	28.4
jun	15	2460476.75	5	36	37.93	10.4	+23	19	47.12	5.3	1.01577	5	36	37.8
jun	16	2460477.75	5	40	47.39	10.4	+23	21	53.81	4.2	1.01586	5	40	47.2
jun	17	2460478.75	5	44	56.90	10.4	+23	23	35.75	3.2	1.01594	5	44	56.7
jun	18	2460479.75	5	49	6.45	10.4	+23	24	52.92	2.2	1.01601	5	49	6.3
jun	19	2460480.75	5	53	16.02	10.4	+23	25	45.31	1.2	1.01608	5	53	15.8
jun	20	2460481.75	5	57	25.59	10.4	+23	26	12.92	0.1	1.01615	5	57	25.4
jun	21	2460482.75	6	1	35.13	10.4	+23	26	15.78	-0.9	1.01622	6	1	35.1
jun	22	2460483.75	6	5	44.64	10.4	+23	25	53.91	-1.9	1.01628	6	5	44.6
jun	23	2460484.75	6	9	54.07	10.4	+23	25	7.33	-3.0	1.01634	6	9	54.0
jun	24	2460485.75	6	14	3.43	10.4	+23	23	56.07	-4.0	1.01640	6	14	3.4
jun	25	2460486.75	6	18	12.67	10.4	+23	22	20.15	-5.0	1.01645	6	18	12.6
jun	26	2460487.75	6	22	21.79	10.4	+23	20	19.59	-6.0	1.01650	6	22	21.7
jun	27	2460488.75	6	26	30.77	10.4	+23	17	54.44	-7.1	1.01654	6	26	30.7
jun	28	2460489.75	6	30	39.58	10.4	+23	15	4.72	-8.1	1.01658	6	30	39.5
jun	29	2460490.75	6	34	48.21	10.4	+23	11	50.51	-9.1	1.01662	6	34	48.1
jun	30	2460491.75	6	38	56.64	10.3	+23	8	11.87	-10.1	1.01665	6	38	56.5
jul	1	2460492.75	6	43	4.85	10.3	+23	4	8.88	-11.1	1.01668	6	43	4.7
jul	2	2460493.75	6	47	12.81	10.3	+22	59	41.66	-12.1	1.01670	6	47	12.7
jul	3	2460494.75	6	51	20.50	10.3	+22	54	50.32	-13.1	1.01671	6	51	20.3
jul	4	2460495.75	6	55	27.89	10.3	+22	49	34.99	-14.1	1.01672	6	55	27.7
jul	5	2460496.75	6	59	34.96	10.3	+22	43	55.80	-15.1	1.01673	6	59	34.8
jul	6	2460497.75	7	3	41.68	10.3	+22	37	52.91	-16.1	1.01672	7	3	41.5
jul	7	2460498.75	7	7	48.02	10.2	+22	31	26.47	-17.1	1.01671	7	7	48.0
jul	8	2460499.75	7	11	53.97	10.2	+22	24	36.62	-18.0	1.01670	7	11	53.9
jul	9	2460500.75	7	15	59.49	10.2	+22	17	23.55	-19.0	1.01668	7	15	59.5
jul	10	2460501.75	7	20	4.58	10.2	+22	9	47.42	-20.0	1.01665	7	20	4.5
jul	11	2460502.75	7	24	9.21	10.2	+22	1	48.43	-20.9	1.01662	7	24	9.1
jul	12	2460503.75	7	28	13.37	10.2	+21	53	26.76	-21.8	1.01658	7	28	13.3
jul	13	2460504.75	7	32	17.04	10.1	+21	44	42.62	-22.8	1.01653	7	32	16.9

Sol, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	α			vh s	δ °	δ		dis UA	h	hp		
			h	m	s			"	"			m	s	
jul	14	2460505.75	7	36	20.20	10.1	+21	35	36.22	-23.7	1.01649	7	36	20.1
jul	15	2460506.75	7	40	22.86	10.1	+21	26	7.78	-24.6	1.01643	7	40	22.7
jul	16	2460507.75	7	44	24.98	10.1	+21	16	17.53	-25.5	1.01638	7	44	24.8
jul	17	2460508.75	7	48	26.57	10.0	+21	6	5.69	-26.4	1.01631	7	48	26.4
jul	18	2460509.75	7	52	27.61	10.0	+20	55	32.52	-27.3	1.01625	7	52	27.4
jul	19	2460510.75	7	56	28.10	10.0	+20	44	38.24	-28.1	1.01618	7	56	27.9
jul	20	2460511.75	8	0	28.03	10.0	+20	33	23.10	-29.0	1.01611	8	0	27.8
jul	21	2460512.75	8	4	27.38	9.9	+20	21	47.34	-29.8	1.01603	8	4	27.2
jul	22	2460513.75	8	8	26.16	9.9	+20	9	51.20	-30.7	1.01595	8	8	26.2
jul	23	2460514.75	8	12	24.37	9.9	+19	57	34.89	-31.5	1.01587	8	12	24.3
jul	24	2460515.75	8	16	21.99	9.9	+19	44	58.65	-32.3	1.01579	8	16	22.0
jul	25	2460516.75	8	20	19.03	9.9	+19	32	2.69	-33.1	1.01570	8	20	19.0
jul	26	2460517.75	8	24	15.49	9.8	+19	18	47.25	-33.9	1.01561	8	24	15.4
jul	27	2460518.75	8	28	11.38	9.8	+19	5	12.56	-34.7	1.01551	8	28	11.3
jul	28	2460519.75	8	32	6.68	9.8	+18	51	18.88	-35.5	1.01541	8	32	6.6
jul	29	2460520.75	8	36	1.41	9.8	+18	37	6.48	-36.3	1.01531	8	36	1.3
jul	30	2460521.75	8	39	55.55	9.7	+18	22	35.66	-37.0	1.01520	8	39	55.4
jul	31	2460522.75	8	43	49.10	9.7	+18	7	46.69	-37.8	1.01508	8	43	49.0
ago	1	2460523.75	8	47	42.06	9.7	+17	52	39.89	-38.5	1.01497	8	47	41.9
ago	2	2460524.75	8	51	34.42	9.7	+17	37	15.55	-39.2	1.01484	8	51	34.3
ago	3	2460525.75	8	55	26.18	9.6	+17	21	33.99	-39.9	1.01471	8	55	26.0
ago	4	2460526.75	8	59	17.34	9.6	+17	5	35.51	-40.6	1.01457	8	59	17.1
ago	5	2460527.75	9	3	7.89	9.6	+16	49	20.42	-41.3	1.01443	9	3	7.7
ago	6	2460528.75	9	6	57.83	9.6	+16	32	49.04	-42.0	1.01429	9	6	57.8
ago	7	2460529.75	9	10	47.17	9.5	+16	16	1.67	-42.6	1.01413	9	10	47.2
ago	8	2460530.75	9	14	35.92	9.5	+15	58	58.64	-43.3	1.01398	9	14	35.9
ago	9	2460531.75	9	18	24.06	9.5	+15	41	40.26	-43.9	1.01382	9	18	24.0
ago	10	2460532.75	9	22	11.62	9.5	+15	24	6.84	-44.5	1.01365	9	22	11.6
ago	11	2460533.75	9	25	58.59	9.4	+15	6	18.73	-45.1	1.01348	9	25	58.5
ago	12	2460534.75	9	29	44.98	9.4	+14	48	16.23	-45.7	1.01330	9	29	44.9
ago	13	2460535.75	9	33	30.81	9.4	+14	29	59.66	-46.3	1.01312	9	33	30.7
ago	14	2460536.75	9	37	16.07	9.4	+14	11	29.37	-46.8	1.01294	9	37	16.0
ago	15	2460537.75	9	41	0.79	9.3	+13	52	45.66	-47.4	1.01275	9	41	0.7
ago	16	2460538.75	9	44	44.96	9.3	+13	33	48.86	-47.9	1.01256	9	44	44.8
ago	17	2460539.75	9	48	28.61	9.3	+13	14	39.29	-48.4	1.01237	9	48	28.4
ago	18	2460540.75	9	52	11.73	9.3	+12	55	17.26	-48.9	1.01218	9	52	11.6
ago	19	2460541.75	9	55	54.35	9.3	+12	35	43.07	-49.4	1.01198	9	55	54.2
ago	20	2460542.75	9	59	36.49	9.2	+12	15	56.99	-49.9	1.01178	9	59	36.3
ago	21	2460543.75	10	3	18.15	9.2	+11	55	59.31	-50.4	1.01158	10	3	18.1
ago	22	2460544.75	10	6	59.36	9.2	+11	35	50.28	-50.8	1.01138	10	6	59.3
ago	23	2460545.75	10	10	40.14	9.2	+11	15	30.17	-51.3	1.01117	10	10	40.1
ago	24	2460546.75	10	14	20.51	9.2	+10	54	59.28	-51.7	1.01096	10	14	20.5
ago	25	2460547.75	10	18	0.48	9.1	+10	34	17.89	-52.1	1.01076	10	18	0.4
ago	26	2460548.75	10	21	40.08	9.1	+10	13	26.31	-52.6	1.01054	10	21	40.0
ago	27	2460549.75	10	25	19.31	9.1	+9	52	24.87	-53.0	1.01033	10	25	19.2
ago	28	2460550.75	10	28	58.19	9.1	+9	31	13.90	-53.3	1.01011	10	28	58.1
ago	29	2460551.75	10	32	36.73	9.1	+9	9	53.73	-53.7	1.00989	10	32	36.6
ago	30	2460552.75	10	36	14.94	9.1	+8	48	24.69	-54.1	1.00966	10	36	14.8
ago	31	2460553.75	10	39	52.83	9.1	+8	26	47.15	-54.4	1.00943	10	39	52.7

Sol, 2024

Efemérides de solpru2 para el año 2024

mes	día	dj	h	α m	s	vh s	°	δ "	"	"	dis UA	h	hp m	s
sep	1	2460554.75	10	43	30.43	9.1	+8	5	1.42	-54.7	1.00920	10	43	30.3
sep	2	2460555.75	10	47	7.73	9.0	+7	43	7.85	-55.0	1.00896	10	47	7.6
sep	3	2460556.75	10	50	44.77	9.0	+7	21	6.79	-55.3	1.00872	10	50	44.6
sep	4	2460557.75	10	54	21.55	9.0	+6	58	58.57	-55.6	1.00847	10	54	21.3
sep	5	2460558.75	10	57	58.08	9.0	+6	36	43.54	-55.9	1.00822	10	57	58.1
sep	6	2460559.75	11	1	34.39	9.0	+6	14	22.04	-56.2	1.00797	11	1	34.4
sep	7	2460560.75	11	5	10.49	9.0	+5	51	54.41	-56.4	1.00772	11	5	10.5
sep	8	2460561.75	11	8	46.41	9.0	+5	29	20.99	-56.6	1.00746	11	8	46.4
sep	9	2460562.75	11	12	22.14	9.0	+5	6	42.13	-56.8	1.00719	11	12	22.1
sep	10	2460563.75	11	15	57.73	9.0	+4	43	58.17	-57.0	1.00693	11	15	57.7
sep	11	2460564.75	11	19	33.17	9.0	+4	21	9.45	-57.2	1.00666	11	19	33.1
sep	12	2460565.75	11	23	8.49	9.0	+3	58	16.32	-57.4	1.00639	11	23	8.4
sep	13	2460566.75	11	26	43.71	9.0	+3	35	19.12	-57.5	1.00612	11	26	43.6
sep	14	2460567.75	11	30	18.85	9.0	+3	12	18.18	-57.7	1.00585	11	30	18.7
sep	15	2460568.75	11	33	53.92	9.0	+2	49	13.84	-57.8	1.00558	11	33	53.8
sep	16	2460569.75	11	37	28.95	9.0	+2	26	6.40	-57.9	1.00530	11	37	28.8
sep	17	2460570.75	11	41	3.96	9.0	+2	2	56.17	-58.0	1.00503	11	41	3.8
sep	18	2460571.75	11	44	38.97	9.0	+1	39	43.45	-58.1	1.00476	11	44	38.8
sep	19	2460572.75	11	48	14.02	9.0	+1	16	28.50	-58.2	1.00448	11	48	13.8
sep	20	2460573.75	11	51	49.13	9.0	+0	53	11.61	-58.3	1.00421	11	51	48.9
sep	21	2460574.75	11	55	24.33	9.0	+0	29	53.06	-58.3	1.00394	11	55	24.3
sep	22	2460575.75	11	58	59.64	9.0	+0	6	33.17	-58.4	1.00366	11	58	59.6
sep	23	2460576.75	12	2	35.08	9.0	-0	16	47.76	-58.4	1.00339	12	2	35.0
sep	24	2460577.75	12	6	10.68	9.0	-0	40	9.37	-58.4	1.00311	12	6	10.6
sep	25	2460578.75	12	9	46.45	9.0	-1	3	31.32	-58.4	1.00284	12	9	46.4
sep	26	2460579.75	12	13	22.40	9.0	-1	26	53.26	-58.4	1.00256	12	13	22.3
sep	27	2460580.75	12	16	58.57	9.0	-1	50	14.83	-58.4	1.00228	12	16	58.5
sep	28	2460581.75	12	20	34.97	9.0	-2	13	35.65	-58.3	1.00201	12	20	34.9
sep	29	2460582.75	12	24	11.61	9.0	-2	36	55.37	-58.3	1.00172	12	24	11.5
sep	30	2460583.75	12	27	48.52	9.0	-3	0	13.62	-58.2	1.00144	12	27	48.4
oct	1	2460584.75	12	31	25.71	9.1	-3	23	30.02	-58.1	1.00116	12	31	25.6
oct	2	2460585.75	12	35	3.21	9.1	-3	46	44.21	-58.0	1.00087	12	35	3.0
oct	3	2460586.75	12	38	41.02	9.1	-4	9	55.81	-57.9	1.00059	12	38	40.8
oct	4	2460587.75	12	42	19.18	9.1	-4	33	4.44	-57.7	1.00030	12	42	19.0
oct	5	2460588.75	12	45	57.69	9.1	-4	56	9.73	-57.6	1.00001	12	45	57.5
oct	6	2460589.75	12	49	36.58	9.1	-5	19	11.30	-57.4	0.99972	12	49	36.6
oct	7	2460590.75	12	53	15.86	9.2	-5	42	8.77	-57.2	0.99943	12	53	15.8
oct	8	2460591.75	12	56	55.54	9.2	-6	5	1.74	-57.0	0.99913	12	56	55.5
oct	9	2460592.75	13	0	35.66	9.2	-6	27	49.85	-56.8	0.99884	13	0	35.6
oct	10	2460593.75	13	4	16.22	9.2	-6	50	32.70	-56.6	0.99855	13	4	16.2
oct	11	2460594.75	13	7	57.23	9.2	-7	13	9.90	-56.3	0.99825	13	7	57.2
oct	12	2460595.75	13	11	38.72	9.2	-7	35	41.08	-56.0	0.99796	13	11	38.6
oct	13	2460596.75	13	15	20.70	9.3	-7	58	5.85	-55.7	0.99767	13	15	20.6
oct	14	2460597.75	13	19	3.20	9.3	-8	20	23.84	-55.5	0.99738	13	19	3.1
oct	15	2460598.75	13	22	46.23	9.3	-8	42	34.70	-55.1	0.99709	13	22	46.1
oct	16	2460599.75	13	26	29.81	9.3	-9	4	38.08	-54.8	0.99680	13	26	29.7
oct	17	2460600.75	13	30	13.97	9.4	-9	26	33.64	-54.5	0.99652	13	30	13.8
oct	18	2460601.75	13	33	58.74	9.4	-9	48	21.06	-54.1	0.99624	13	33	58.6

Sol, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	vh s	δ °	“	”	dis UA	h	hp m	s	
oct	19	2460602.75	13	37	44.13	9.4	-10	10	0.01	-53.8	0.99596	13	37	43.9
oct	20	2460603.75	13	41	30.17	9.4	-10	31	30.12	-53.4	0.99568	13	41	30.0
oct	21	2460604.75	13	45	16.88	9.5	-10	52	51.05	-53.0	0.99541	13	45	16.9
oct	22	2460605.75	13	49	4.27	9.5	-11	14	2.39	-52.6	0.99514	13	49	4.2
oct	23	2460606.75	13	52	52.35	9.5	-11	35	3.76	-52.1	0.99487	13	52	52.3
oct	24	2460607.75	13	56	41.15	9.6	-11	55	54.76	-51.7	0.99460	13	56	41.1
oct	25	2460608.75	14	0	30.68	9.6	-12	16	34.96	-51.2	0.99433	14	0	30.6
oct	26	2460609.75	14	4	20.94	9.6	-12	37	3.95	-50.7	0.99407	14	4	20.9
oct	27	2460610.75	14	8	11.95	9.7	-12	57	21.32	-50.2	0.99381	14	8	11.9
oct	28	2460611.75	14	12	3.73	9.7	-13	17	26.63	-49.7	0.99354	14	12	3.6
oct	29	2460612.75	14	15	56.28	9.7	-13	37	19.43	-49.2	0.99328	14	15	56.2
oct	30	2460613.75	14	19	49.61	9.8	-13	56	59.29	-48.6	0.99302	14	19	49.5
oct	31	2460614.75	14	23	43.72	9.8	-14	16	26.05	-48.0	0.99276	14	23	43.6
nov	1	2460615.75	14	27	38.64	9.8	-14	35	39.18	-47.5	0.99250	14	27	38.5
nov	2	2460616.75	14	31	34.38	9.9	-14	54	38.13	-46.8	0.99224	14	31	34.2
nov	3	2460617.75	14	35	30.93	9.9	-15	13	22.49	-46.2	0.99199	14	35	30.7
nov	4	2460618.75	14	39	28.29	9.9	-15	31	51.86	-45.6	0.99173	14	39	28.1
nov	5	2460619.75	14	43	26.48	10.0	-15	50	5.83	-44.9	0.99148	14	43	26.5
nov	6	2460620.75	14	47	25.48	10.0	-16	8	3.97	-44.2	0.99122	14	47	25.5
nov	7	2460621.75	14	51	25.31	10.0	-16	25	45.87	-43.6	0.99097	14	51	25.3
nov	8	2460622.75	14	55	25.96	10.1	-16	43	11.10	-42.8	0.99072	14	55	25.9
nov	9	2460623.75	14	59	27.44	10.1	-17	0	19.27	-42.1	0.99048	14	59	27.4
nov	10	2460624.75	15	3	29.74	10.1	-17	17	9.95	-41.4	0.99023	15	3	29.7
nov	11	2460625.75	15	7	32.86	10.2	-17	33	42.74	-40.6	0.98999	15	7	32.8
nov	12	2460626.75	15	11	36.82	10.2	-17	49	57.27	-39.8	0.98976	15	11	36.7
nov	13	2460627.75	15	15	41.60	10.2	-18	5	53.16	-39.0	0.98952	15	15	41.5
nov	14	2460628.75	15	19	47.23	10.3	-18	21	30.06	-38.2	0.98930	15	19	47.1
nov	15	2460629.75	15	23	53.69	10.3	-18	36	47.62	-37.4	0.98907	15	23	53.5
nov	16	2460630.75	15	28	0.99	10.3	-18	51	45.49	-36.6	0.98885	15	28	0.8
nov	17	2460631.75	15	32	9.14	10.4	-19	6	23.34	-35.7	0.98864	15	32	9.0
nov	18	2460632.75	15	36	18.13	10.4	-19	20	40.80	-34.9	0.98843	15	36	17.9
nov	19	2460633.75	15	40	27.96	10.4	-19	34	37.50	-34.0	0.98823	15	40	27.8
nov	20	2460634.75	15	44	38.61	10.5	-19	48	13.08	-33.1	0.98803	15	44	38.4
nov	21	2460635.75	15	48	50.09	10.5	-20	1	27.15	-32.2	0.98783	15	48	50.1
nov	22	2460636.75	15	53	2.37	10.5	-20	14	19.36	-31.2	0.98764	15	53	2.3
nov	23	2460637.75	15	57	15.47	10.6	-20	26	49.31	-30.3	0.98745	15	57	15.4
nov	24	2460638.75	16	1	29.35	10.6	-20	38	56.67	-29.3	0.98727	16	1	29.3
nov	25	2460639.75	16	5	44.01	10.6	-20	50	41.07	-28.4	0.98709	16	5	43.9
nov	26	2460640.75	16	9	59.44	10.7	-21	2	2.16	-27.4	0.98691	16	9	59.4
nov	27	2460641.75	16	14	15.62	10.7	-21	12	59.61	-26.4	0.98674	16	14	15.5
nov	28	2460642.75	16	18	32.52	10.7	-21	23	33.09	-25.4	0.98657	16	18	32.4
nov	29	2460643.75	16	22	50.14	10.8	-21	33	42.28	-24.4	0.98640	16	22	50.0
nov	30	2460644.75	16	27	8.45	10.8	-21	43	26.87	-23.3	0.98623	16	27	8.3
dic	1	2460645.75	16	31	27.42	10.8	-21	52	46.55	-22.3	0.98607	16	31	27.3
dic	2	2460646.75	16	35	47.03	10.8	-22	1	41.05	-21.2	0.98591	16	35	46.9
dic	3	2460647.75	16	40	7.25	10.9	-22	10	10.08	-20.1	0.98576	16	40	7.1
dic	4	2460648.75	16	44	28.06	10.9	-22	18	13.37	-19.1	0.98561	16	44	27.9
dic	5	2460649.75	16	48	49.42	10.9	-22	25	50.66	-18.0	0.98546	16	48	49.2
dic	6	2460650.75	16	53	11.30	10.9	-22	33	1.70	-16.9	0.98531	16	53	11.3

Sol, 2024

Efemérides de solpru2 para el año 2024

mes	día	dj	h	α m	s	vh s	°	δ "	"	vh "	dis UA	h	hp m	s
dic	7	2460651.75	16	57	33.67	11.0	-22	39	46.25	-15.7	0.98517	16	57	33.6
dic	8	2460652.75	17	1	56.50	11.0	-22	46	4.10	-14.6	0.98503	17	1	56.5
dic	9	2460653.75	17	6	19.77	11.0	-22	51	55.04	-13.5	0.98490	17	6	19.7
dic	10	2460654.75	17	10	43.45	11.0	-22	57	18.90	-12.4	0.98477	17	10	43.4
dic	11	2460655.75	17	15	7.50	11.0	-23	2	15.50	-11.2	0.98464	17	15	7.4
dic	12	2460656.75	17	19	31.91	11.0	-23	6	44.72	-10.1	0.98453	17	19	31.8
dic	13	2460657.75	17	23	56.65	11.0	-23	10	46.44	-8.9	0.98441	17	23	56.5
dic	14	2460658.75	17	28	21.69	11.1	-23	14	20.53	-7.8	0.98431	17	28	21.6
dic	15	2460659.75	17	32	47.00	11.1	-23	17	26.91	-6.6	0.98421	17	32	46.9
dic	16	2460660.75	17	37	12.55	11.1	-23	20	5.47	-5.4	0.98412	17	37	12.4
dic	17	2460661.75	17	41	38.32	11.1	-23	22	16.11	-4.3	0.98403	17	41	38.2
dic	18	2460662.75	17	46	4.27	11.1	-23	23	58.76	-3.1	0.98395	17	46	4.1
dic	19	2460663.75	17	50	30.37	11.1	-23	25	13.32	-1.9	0.98387	17	50	30.2
dic	20	2460664.75	17	54	56.59	11.1	-23	25	59.73	-0.8	0.98380	17	54	56.4
dic	21	2460665.75	17	59	22.90	11.1	-23	26	17.93	0.4	0.98374	17	59	22.9
dic	22	2460666.75	18	3	49.27	11.1	-23	26	7.88	1.6	0.98368	18	3	49.2
dic	23	2460667.75	18	8	15.66	11.1	-23	25	29.57	2.8	0.98363	18	8	15.6
dic	24	2460668.75	18	12	42.05	11.1	-23	24	23.00	4.0	0.98358	18	12	42.0
dic	25	2460669.75	18	17	8.40	11.1	-23	22	48.17	5.1	0.98354	18	17	8.3
dic	26	2460670.75	18	21	34.66	11.1	-23	20	45.12	6.3	0.98350	18	21	34.6
dic	27	2460671.75	18	26	0.82	11.1	-23	18	13.90	7.5	0.98346	18	26	0.7
dic	28	2460672.75	18	30	26.83	11.1	-23	15	14.59	8.6	0.98343	18	30	26.7
dic	29	2460673.75	18	34	52.66	11.1	-23	11	47.26	9.8	0.98341	18	34	52.5
dic	30	2460674.75	18	39	18.26	11.1	-23	7	52.02	11.0	0.98338	18	39	18.1
dic	31	2460675.75	18	43	43.61	11.0	-23	3	28.98	12.1	0.98336	18	43	43.5
ene	1	2460676.75	18	48	8.66	10.7	-22	58	38.29	12.9	0.98335	18	48	8.5
ene	2	2460677.75	18	52	26.24	39.5	-22	53	28.69	49.4	0.97496	18	52	26.1

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ "	"	dis DT	sed	pax	fase	hp h
ene	1	2460310.75	10	47	22.4	+11	20	40.7	63.47	14.8	54.2	75.7	4.1
ene	2	2460311.75	11	30	3.0	+6	0	3.8	63.45	14.8	54.2	67.2	4.7
ene	3	2460312.75	12	11	58.4	+0	26	30.2	63.23	14.8	54.4	58.1	5.4
ene	4	2460313.75	12	54	13.4	-5	11	2.8	62.82	14.9	54.7	48.6	6.0
ene	5	2460314.75	13	37	56.0	-10	43	7.3	62.22	15.0	55.3	39.0	6.7
ene	6	2460315.75	14	24	16.6	-15	58	15.1	61.47	15.2	55.9	29.6	7.4
ene	7	2460316.75	15	14	22.3	-20	41	26.5	60.60	15.5	56.7	20.7	8.1
ene	8	2460317.75	16	9	4.3	-24	33	14.0	59.69	15.7	57.6	12.8	9.0
ene	9	2460318.75	17	8	33.3	-27	10	30.1	58.80	15.9	58.5	6.4	9.9
ene	10	2460319.75	18	11	53.4	-28	10	26.8	58.01	16.1	59.3	2.0	10.9
ene	11	2460320.75	19	16	57.1	-27	17	43.6	57.38	16.3	59.9	0.1	11.9
ene	12	2460321.75	20	21	6.6	-24	31	14.5	56.97	16.4	60.3	0.9	12.9
ene	13	2460322.75	21	22	18.7	-20	5	24.6	56.80	16.5	60.5	4.7	13.9
ene	14	2460323.75	22	19	44.3	-14	25	8.6	56.87	16.5	60.5	11.0	14.8
ene	15	2460324.75	23	13	41.9	-7	58	46.9	57.15	16.4	60.2	19.6	15.6
ene	16	2460325.75	0	5	10.6	-1	13	5.3	57.61	16.3	59.7	29.7	16.4
ene	17	2460326.75	0	55	25.0	+5	28	41.6	58.17	16.1	59.1	40.6	17.2
ene	18	2460327.75	1	45	39.7	+11	46	42.0	58.80	15.9	58.5	51.8	17.9
ene	19	2460328.75	2	36	59.4	+17	23	27.2	59.44	15.8	57.8	62.6	18.7
ene	20	2460329.75	3	30	8.6	+22	3	1.8	60.08	15.6	57.2	72.7	19.5
ene	21	2460330.75	4	25	20.8	+25	31	7.5	60.68	15.4	56.7	81.5	20.4
ene	22	2460331.75	5	22	8.5	+27	36	23.2	61.25	15.3	56.1	88.8	21.3
ene	23	2460332.75	6	19	25.3	+28	12	37.8	61.77	15.2	55.7	94.4	22.2
ene	24	2460333.75	7	15	44.1	+27	20	39.6	62.25	15.0	55.2	98.1	23.0
ene	25	2460334.75	8	9	47.3	+25	8	15.9	62.68	14.9	54.9	99.8	23.9
ene	26	2460335.75	9	0	49.3	+21	48	10.7	63.05	14.9	54.5	99.7	0.7
ene	27	2460336.75	9	48	42.7	+17	35	10.1	63.34	14.8	54.3	97.6	1.4
ene	28	2460337.75	10	33	51.0	+12	43	39.9	63.54	14.7	54.1	93.8	2.1
ene	29	2460338.75	11	16	56.8	+7	26	31.9	63.62	14.7	54.0	88.5	2.7
ene	30	2460339.75	11	58	53.0	+1	54	52.2	63.56	14.7	54.1	81.8	3.4
ene	31	2460340.75	12	40	38.3	-3	41	30.0	63.33	14.8	54.3	74.0	4.0
feb	1	2460341.75	13	23	15.1	-9	13	7.7	62.94	14.9	54.6	65.3	4.6
feb	2	2460342.75	14	7	48.8	-14	29	45.7	62.36	15.0	55.1	55.9	5.3
feb	3	2460343.75	14	55	25.1	-19	19	0.2	61.62	15.2	55.8	46.0	6.0
feb	4	2460344.75	15	47	2.6	-23	25	6.1	60.74	15.4	56.6	36.0	6.8
feb	5	2460345.75	16	43	16.1	-26	28	31.0	59.78	15.7	57.5	26.2	7.7
feb	6	2460346.75	17	43	52.7	-28	7	29.8	58.80	15.9	58.5	17.2	8.7
feb	7	2460347.75	18	47	33.2	-28	2	42.2	57.86	16.2	59.4	9.5	9.7
feb	8	2460348.75	19	52	3.9	-26	4	0.5	57.07	16.4	60.2	3.7	10.7
feb	9	2460349.75	20	55	6.0	-22	15	36.8	56.49	16.6	60.9	0.5	11.6
feb	10	2460350.75	21	55	10.1	-16	55	47.2	56.18	16.7	61.2	0.2	12.6
feb	11	2460351.75	22	51	56.5	-10	31	50.2	56.17	16.7	61.2	3.0	13.5
feb	12	2460352.75	23	45	59.7	-3	34	0.6	56.45	16.6	60.9	8.6	14.3
feb	13	2460353.75	0	38	23.0	+3	28	54.1	56.97	16.4	60.3	16.5	15.1
feb	14	2460354.75	1	30	17.1	+10	11	39.5	57.68	16.2	59.6	26.0	15.9
feb	15	2460355.75	2	22	46.4	+16	12	57.5	58.50	16.0	58.8	36.6	16.7
feb	16	2460356.75	3	16	37.1	+21	15	3.7	59.36	15.8	57.9	47.5	17.5
feb	17	2460357.75	4	12	6.9	+25	3	34.1	60.21	15.6	57.1	58.2	18.4
feb	18	2460358.75	5	8	55.9	+27	27	57.7	60.99	15.4	56.4	68.3	19.3

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	δ °	"	dis DT	sed	pax	fas fase	hp h	
feb	19	2460359.75	6	6	7.9	+28	22	52.1	61.68	15.2	55.7	77.3	20.2
feb	20	2460360.75	7	2	25.9	+27	49	10.2	62.28	15.0	55.2	85.1	21.0
feb	21	2460361.75	7	56	38.2	+25	53	53.7	62.76	14.9	54.8	91.4	21.9
feb	22	2460362.75	8	47	59.5	+22	48	34.8	63.14	14.8	54.4	96.0	22.7
feb	23	2460363.75	9	36	18.9	+18	46	56.6	63.42	14.8	54.2	98.9	23.4
feb	24	2460364.75	10	21	54.3	+14	2	53.5	63.61	14.7	54.0	100.0	0.1
feb	25	2460365.75	11	5	22.6	+8	49	23.6	63.70	14.7	54.0	99.3	0.8
feb	26	2460366.75	11	47	31.4	+3	18	10.5	63.68	14.7	54.0	96.8	1.4
feb	27	2460367.75	12	29	13.8	-2	20	3.8	63.56	14.7	54.1	92.6	2.0
feb	28	2460368.75	13	11	26.0	-7	55	4.7	63.31	14.8	54.3	86.9	2.7
feb	29	2460369.75	13	55	6.4	-13	16	19.2	62.93	14.9	54.6	79.8	3.3
mar	1	2460370.75	14	41	13.6	-18	12	1.0	62.40	15.0	55.1	71.6	4.0
mar	2	2460371.75	15	30	41.5	-22	28	16.9	61.74	15.2	55.7	62.3	4.8
mar	3	2460372.75	16	24	7.9	-25	48	36.3	60.94	15.4	56.4	52.2	5.6
mar	4	2460373.75	17	21	37.9	-27	54	29.0	60.04	15.6	57.3	41.8	6.5
mar	5	2460374.75	18	22	26.3	-28	27	59.8	59.09	15.8	58.2	31.3	7.5
mar	6	2460375.75	19	24	57.2	-27	16	21.8	58.15	16.1	59.1	21.4	8.4
mar	7	2460376.75	20	27	12.8	-24	16	40.9	57.28	16.3	60.0	12.7	9.4
mar	8	2460377.75	21	27	37.7	-19	38	4.6	56.58	16.5	60.8	5.8	10.3
mar	9	2460378.75	22	25	29.1	-13	40	10.9	56.12	16.7	61.3	1.4	11.2
mar	10	2460379.75	23	20	58.6	-6	49	28.5	55.95	16.7	61.4	0.0	12.1
mar	11	2460380.75	0	14	53.9	+0	24	36.7	56.10	16.7	61.3	1.6	12.9
mar	12	2460381.75	1	8	18.5	+7	32	45.4	56.53	16.6	60.8	6.2	13.8
mar	13	2460382.75	2	2	15.1	+14	7	53.9	57.22	16.4	60.1	13.1	14.6
mar	14	2460383.75	2	57	31.0	+19	46	38.1	58.08	16.1	59.2	21.9	15.5
mar	15	2460384.75	3	54	24.6	+24	10	11.8	59.04	15.9	58.2	31.8	16.3
mar	16	2460385.75	4	52	35.6	+27	5	30.6	60.01	15.6	57.3	42.3	17.2
mar	17	2460386.75	5	51	4.8	+28	26	21.7	60.92	15.4	56.4	52.8	18.1
mar	18	2460387.75	6	48	31.4	+28	14	0.0	61.74	15.2	55.7	62.9	19.0
mar	19	2460388.75	7	43	40.7	+26	36	19.6	62.42	15.0	55.1	72.2	19.9
mar	20	2460389.75	8	35	47.0	+23	45	37.1	62.96	14.9	54.6	80.4	20.7
mar	21	2460390.75	9	24	40.6	+19	55	52.9	63.34	14.8	54.3	87.4	21.4
mar	22	2460391.75	10	10	41.3	+15	20	53.0	63.58	14.7	54.1	93.0	22.1
mar	23	2460392.75	10	54	27.7	+10	13	15.3	63.69	14.7	54.0	97.1	22.8
mar	24	2460393.75	11	36	47.9	+4	44	27.3	63.68	14.7	54.0	99.4	23.5
mar	25	2460394.75	12	18	34.6	-0	54	49.7	63.57	14.7	54.1	100.0	0.1
mar	26	2460395.75	13	0	42.2	-6	34	3.6	63.35	14.8	54.3	98.8	0.7
mar	27	2460396.75	13	44	5.9	-12	2	11.9	63.05	14.9	54.5	95.8	1.4
mar	28	2460397.75	14	29	39.8	-17	7	2.7	62.66	14.9	54.9	91.0	2.1
mar	29	2460398.75	15	18	12.4	-21	34	42.9	62.17	15.1	55.3	84.6	2.8
mar	30	2460399.75	16	10	17.5	-25	9	27.7	61.59	15.2	55.8	76.8	3.6
mar	31	2460400.75	17	6	0.5	-27	34	23.7	60.91	15.4	56.4	67.6	4.5
abr	1	2460401.75	18	4	45.0	-28	33	32.0	60.16	15.6	57.1	57.5	5.4
abr	2	2460402.75	19	5	11.9	-27	55	9.1	59.36	15.8	57.9	46.7	6.3
abr	3	2460403.75	20	5	41.1	-25	35	10.0	58.53	16.0	58.7	35.7	7.3
abr	4	2460404.75	21	4	46.8	-21	38	45.1	57.75	16.2	59.5	25.2	8.2
abr	5	2460405.75	22	1	45.3	-16	19	31.7	57.07	16.4	60.2	15.7	9.1
abr	6	2460406.75	22	56	41.0	-9	57	24.9	56.57	16.6	60.8	8.0	9.9

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis DT	sed	pax	fase	hp h
abr	7	2460407.75	23	50	14.8	-2	56	32.2	56.29	16.6	61.1	2.7	10.8
abr	8	2460408.75	0	43	27.3	+4	16	22.3	56.30	16.6	61.1	0.2	11.6
abr	9	2460409.75	1	37	23.6	+11	13	23.9	56.58	16.5	60.8	0.6	12.4
abr	10	2460410.75	2	32	58.4	+17	27	8.9	57.14	16.4	60.2	4.0	13.3
abr	11	2460411.75	3	30	39.5	+22	32	52.5	57.90	16.2	59.4	9.8	14.2
abr	12	2460412.75	4	30	12.6	+26	11	7.6	58.81	15.9	58.5	17.5	15.1
abr	13	2460413.75	5	30	35.1	+28	10	29.0	59.78	15.7	57.5	26.6	16.0
abr	14	2460414.75	6	30	11.4	+28	29	18.6	60.73	15.4	56.6	36.4	17.0
abr	15	2460415.75	7	27	27.0	+27	15	9.0	61.60	15.2	55.8	46.5	17.8
abr	16	2460416.75	8	21	20.5	+24	41	39.7	62.34	15.0	55.1	56.5	18.7
abr	17	2460417.75	9	11	34.9	+21	4	42.7	62.92	14.9	54.6	66.0	19.5
abr	18	2460418.75	9	58	30.4	+16	39	28.9	63.32	14.8	54.3	74.7	20.2
abr	19	2460419.75	10	42	49.4	+11	39	13.5	63.54	14.7	54.1	82.4	20.8
abr	20	2460420.75	11	25	25.3	+6	15	18.9	63.59	14.7	54.1	89.0	21.5
abr	21	2460421.75	12	7	15.0	+0	37	57.6	63.50	14.7	54.1	94.2	22.1
abr	22	2460422.75	12	49	16.5	-5	2	52.3	63.28	14.8	54.3	97.8	22.8
abr	23	2460423.75	13	32	27.5	-10	36	30.8	62.96	14.9	54.6	99.7	23.4
abr	24	2460424.75	14	17	43.7	-15	50	47.2	62.57	15.0	54.9	99.8	0.1
abr	25	2460425.75	15	5	54.8	-20	31	27.4	62.12	15.1	55.3	97.9	0.8
abr	26	2460426.75	15	57	35.0	-24	22	12.4	61.62	15.2	55.8	94.1	1.6
abr	27	2460427.75	16	52	49.5	-27	5	36.0	61.09	15.3	56.3	88.4	2.5
abr	28	2460428.75	17	51	1.4	-28	25	25.6	60.52	15.5	56.8	80.9	3.4
abr	29	2460429.75	18	50	50.5	-28	10	10.0	59.93	15.6	57.4	71.9	4.3
abr	30	2460430.75	19	50	35.1	-26	16	9.5	59.32	15.8	58.0	61.7	5.2
may	1	2460431.75	20	48	47.9	-22	48	35.8	58.71	15.9	58.6	50.7	6.2
may	2	2460432.75	21	44	43.9	-18	0	0.8	58.13	16.1	59.1	39.4	7.0
may	3	2460433.75	22	38	26.6	-12	7	38.8	57.62	16.3	59.7	28.5	7.8
may	4	2460434.75	23	30	36.4	-5	31	28.3	57.22	16.4	60.1	18.6	8.7
may	5	2460435.75	0	22	15.7	+1	26	36.1	56.98	16.4	60.3	10.3	9.4
may	6	2460436.75	1	14	34.7	+8	22	49.8	56.95	16.4	60.4	4.2	10.3
may	7	2460437.75	2	8	39.3	+14	51	49.4	57.14	16.4	60.2	0.8	11.1
may	8	2460438.75	3	5	15.7	+20	27	38.5	57.55	16.3	59.7	0.1	12.0
may	9	2460439.75	4	4	31.3	+24	46	15.2	58.17	16.1	59.1	2.2	12.9
may	10	2460440.75	5	5	39.2	+27	29	22.0	58.94	15.9	58.3	6.7	13.8
may	11	2460441.75	6	7	1.0	+28	28	27.8	59.80	15.7	57.5	13.2	14.8
may	12	2460442.75	7	6	39.2	+27	46	35.9	60.68	15.4	56.7	21.1	15.7
may	13	2460443.75	8	3	0.8	+25	36	21.1	61.52	15.2	55.9	30.1	16.6
may	14	2460444.75	8	55	24.3	+22	15	5.0	62.24	15.0	55.2	39.6	17.4
may	15	2460445.75	9	43	57.7	+18	0	23.5	62.82	14.9	54.7	49.3	18.2
may	16	2460446.75	10	29	21.4	+13	7	35.1	63.21	14.8	54.4	58.9	18.8
may	17	2460447.75	11	12	31.8	+7	49	9.8	63.41	14.8	54.2	68.0	19.5
may	18	2460448.75	11	54	30.8	+2	15	29.4	63.42	14.8	54.2	76.4	20.1
may	19	2460449.75	12	36	21.5	-3	24	3.7	63.25	14.8	54.4	84.0	20.8
may	20	2460450.75	13	19	7.0	-8	59	50.7	62.94	14.9	54.6	90.3	21.4
may	21	2460451.75	14	3	48.7	-14	20	45.3	62.50	15.0	55.0	95.3	22.1
may	22	2460452.75	14	51	23.3	-19	13	16.0	61.99	15.1	55.5	98.6	22.8
may	23	2460453.75	15	42	34.1	-23	21	0.4	61.43	15.2	56.0	100.0	23.6
may	24	2460454.75	16	37	36.2	-26	25	26.7	60.87	15.4	56.5	99.3	0.5
may	25	2460455.75	17	35	59.6	-28	8	19.1	60.32	15.5	57.0	96.4	1.4

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	δ °	"	dis DT	sed	pax	fas fase	hp h	
may	26	2460456.75	18	36	22.8	-28	15	45.8	59.80	15.7	57.5	91.3	2.3
may	27	2460457.75	19	36	52.3	-26	42	30.1	59.32	15.8	58.0	84.2	3.2
may	28	2460458.75	20	35	43.8	-23	33	34.2	58.90	15.9	58.4	75.4	4.2
may	29	2460459.75	21	31	57.4	-19	2	28.5	58.52	16.0	58.7	65.1	5.0
may	30	2460460.75	22	25	27.8	-13	27	28.5	58.20	16.1	59.1	54.0	5.9
may	31	2460461.75	23	16	52.7	-7	8	28.9	57.95	16.2	59.3	42.6	6.7
jun	1	2460462.75	0	7	14.9	-0	25	41.5	57.78	16.2	59.5	31.5	7.4
jun	2	2460463.75	0	57	48.0	+6	20	21.9	57.71	16.2	59.6	21.3	8.2
jun	3	2460464.75	1	49	45.3	+12	48	11.6	57.77	16.2	59.5	12.7	9.0
jun	4	2460465.75	2	44	7.6	+18	35	0.2	57.98	16.2	59.3	6.0	9.8
jun	5	2460466.75	3	41	27.1	+23	17	34.4	58.34	16.1	58.9	1.8	10.7
jun	6	2460467.75	4	41	27.0	+26	34	55.6	58.84	15.9	58.4	0.0	11.7
jun	7	2460468.75	5	42	51.6	+28	12	40.4	59.47	15.7	57.8	0.8	12.6
jun	8	2460469.75	6	43	42.6	+28	7	4.0	60.19	15.6	57.1	4.0	13.6
jun	9	2460470.75	7	42	2.6	+26	25	50.9	60.93	15.4	56.4	9.1	14.5
jun	10	2460471.75	8	36	37.2	+23	24	55.2	61.66	15.2	55.8	15.9	15.3
jun	11	2460472.75	9	27	8.0	+19	23	6.2	62.31	15.0	55.2	23.8	16.1
jun	12	2460473.75	10	14	1.4	+14	38	2.7	62.82	14.9	54.7	32.6	16.8
jun	13	2460474.75	10	58	8.9	+9	24	24.1	63.18	14.8	54.4	41.8	17.5
jun	14	2460475.75	11	40	32.6	+3	53	52.6	63.34	14.8	54.3	51.3	18.1
jun	15	2460476.75	12	22	17.9	-1	43	49.7	63.31	14.8	54.3	60.6	18.8
jun	16	2460477.75	13	4	31.0	-7	19	41.7	63.07	14.8	54.5	69.7	19.4
jun	17	2460478.75	13	48	17.8	-12	43	59.2	62.67	14.9	54.9	78.1	20.1
jun	18	2460479.75	14	34	42.1	-17	44	54.6	62.12	15.1	55.3	85.6	20.8
jun	19	2460480.75	15	24	39.2	-22	7	35.5	61.48	15.2	55.9	91.9	21.5
jun	20	2460481.75	16	18	42.3	-25	33	54.5	60.79	15.4	56.6	96.6	22.4
jun	21	2460482.75	17	16	43.1	-27	44	2.9	60.10	15.6	57.2	99.4	23.3
jun	22	2460483.75	18	17	35.3	-28	20	27.3	59.46	15.7	57.8	99.9	0.2
jun	23	2460484.75	19	19	23.6	-27	13	13.8	58.91	15.9	58.4	98.0	1.2
jun	24	2460485.75	20	20	2.0	-24	24	0.4	58.47	16.0	58.8	93.6	2.1
jun	25	2460486.75	21	18	2.0	-20	5	34.8	58.16	16.1	59.1	87.0	3.0
jun	26	2460487.75	22	12	55.6	-14	37	52.0	57.97	16.2	59.3	78.3	3.9
jun	27	2460488.75	23	5	8.0	-8	23	18.2	57.90	16.2	59.4	68.1	4.7
jun	28	2460489.75	23	55	37.2	-1	43	58.9	57.92	16.2	59.4	57.0	5.5
jun	29	2460490.75	0	45	36.5	+4	59	12.6	58.03	16.1	59.2	45.6	6.2
jun	30	2460491.75	1	36	21.1	+11	26	9.2	58.22	16.1	59.0	34.4	7.0
jul	1	2460492.75	2	28	58.8	+17	16	43.2	58.48	16.0	58.8	24.1	7.8
jul	2	2460493.75	3	24	15.8	+22	10	31.2	58.82	15.9	58.4	15.2	8.7
jul	3	2460494.75	4	22	19.9	+25	48	1.3	59.23	15.8	58.0	8.2	9.6
jul	4	2460495.75	5	22	25.3	+27	53	29.7	59.71	15.7	57.6	3.2	10.5
jul	5	2460496.75	6	22	55.4	+28	18	59.3	60.26	15.5	57.0	0.5	11.5
jul	6	2460497.75	7	21	53.4	+27	6	57.8	60.85	15.4	56.5	0.1	12.4
jul	7	2460498.75	8	17	45.2	+24	29	22.4	61.46	15.2	55.9	1.9	13.2
jul	8	2460499.75	9	9	47.0	+20	43	38.8	62.05	15.1	55.4	5.7	14.0
jul	9	2460500.75	9	58	4.2	+16	8	11.0	62.58	15.0	54.9	11.1	14.8
jul	10	2460501.75	10	43	15.2	+10	59	26.4	63.00	14.9	54.6	17.8	15.5
jul	11	2460502.75	11	26	15.8	+5	30	58.6	63.28	14.8	54.3	25.7	16.1
jul	12	2460503.75	12	8	8.2	-0	6	12.8	63.40	14.8	54.2	34.4	16.7

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	δ °	"	dis DT	sed	pax	fase	hp h	
jul	13	2460504.75	12	49	56.9	-5	42	41.6	63.32	14.8	54.3	43.5	17.4
jul	14	2460505.75	13	32	47.6	-11	9	18.6	63.04	14.9	54.5	53.0	18.0
jul	15	2460506.75	14	17	45.7	-16	15	48.9	62.57	15.0	54.9	62.5	18.7
jul	16	2460507.75	15	5	52.9	-20	49	34.2	61.94	15.1	55.5	71.7	19.4
jul	17	2460508.75	15	57	57.5	-24	34	39.9	61.19	15.3	56.2	80.3	20.2
jul	18	2460509.75	16	54	17.1	-27	12	12.4	60.37	15.5	57.0	87.9	21.1
jul	19	2460510.75	17	54	17.6	-28	22	48.0	59.53	15.7	57.7	94.0	22.1
jul	20	2460511.75	18	56	25.8	-27	51	28.1	58.76	15.9	58.5	98.2	23.0
jul	21	2460512.75	19	58	33.2	-25	33	13.8	58.10	16.1	59.2	100.0	24.0
jul	22	2460513.75	20	58	44.8	-21	35	46.2	57.61	16.3	59.7	99.1	0.9
jul	23	2460514.75	21	55	59.1	-16	17	25.1	57.31	16.3	60.0	95.5	1.8
jul	24	2460515.75	22	50	16.2	-10	2	20.9	57.21	16.4	60.1	89.3	2.7
jul	25	2460516.75	23	42	19.9	-3	16	5.8	57.30	16.3	60.0	81.0	3.5
jul	26	2460517.75	0	33	17.4	+3	37	1.0	57.56	16.3	59.7	71.0	4.2
jul	27	2460518.75	1	24	22.3	+10	14	38.4	57.93	16.2	59.3	60.1	5.0
jul	28	2460519.75	2	16	43.0	+16	16	8.0	58.39	16.0	58.9	48.7	5.8
jul	29	2460520.75	3	11	10.7	+21	22	7.6	58.90	15.9	58.4	37.7	6.7
jul	30	2460521.75	4	8	4.6	+25	14	49.6	59.44	15.8	57.8	27.4	7.6
jul	31	2460522.75	5	6	58.1	+27	39	39.9	59.98	15.6	57.3	18.3	8.5
ago	1	2460523.75	6	6	36.3	+28	28	7.9	60.53	15.5	56.8	10.8	9.4
ago	2	2460524.75	7	5	16.8	+27	40	15.8	61.07	15.3	56.3	5.2	10.3
ago	3	2460525.75	8	1	26.3	+25	24	49.2	61.60	15.2	55.8	1.6	11.2
ago	4	2460526.75	8	54	9.4	+21	56	43.3	62.11	15.1	55.4	0.1	12.0
ago	5	2460527.75	9	43	17.0	+17	33	18.2	62.58	15.0	54.9	0.5	12.8
ago	6	2460528.75	10	29	14.8	+12	31	18.9	62.98	14.9	54.6	2.9	13.5
ago	7	2460529.75	11	12	49.3	+7	5	24.7	63.29	14.8	54.3	7.0	14.1
ago	8	2460530.75	11	54	56.4	+1	27	55.1	63.49	14.7	54.1	12.6	14.8
ago	9	2460531.75	12	36	35.5	-4	10	39.0	63.54	14.7	54.1	19.4	15.4
ago	10	2460532.75	13	18	47.7	-9	40	41.3	63.42	14.8	54.2	27.4	16.0
ago	11	2460533.75	14	2	34.7	-14	52	24.2	63.12	14.8	54.5	36.2	16.7
ago	12	2460534.75	14	48	56.4	-19	34	38.7	62.63	15.0	54.9	45.6	17.4
ago	13	2460535.75	15	38	45.5	-23	33	53.6	61.97	15.1	55.5	55.4	18.2
ago	14	2460536.75	16	32	34.5	-26	33	50.3	61.17	15.3	56.2	65.3	19.0
ago	15	2460537.75	17	30	18.1	-28	16	23.2	60.26	15.5	57.0	74.8	19.9
ago	16	2460538.75	18	30	58.8	-28	24	47.9	59.32	15.8	58.0	83.6	20.8
ago	17	2460539.75	19	32	52.0	-26	48	35.3	58.41	16.0	58.9	91.0	21.8
ago	18	2460540.75	20	34	1.4	-23	27	52.0	57.60	16.3	59.7	96.5	22.7
ago	19	2460541.75	21	33	2.0	-18	34	27.8	56.98	16.4	60.3	99.5	23.7
ago	20	2460542.75	22	29	24.8	-12	29	25.6	56.59	16.5	60.7	99.7	0.5
ago	21	2460543.75	23	23	31.4	-5	38	56.1	56.47	16.6	60.9	97.0	1.4
ago	22	2460544.75	0	16	16.2	+1	29	20.4	56.61	16.5	60.7	91.6	2.2
ago	23	2460545.75	1	8	46.9	+8	28	36.5	56.98	16.4	60.3	83.8	3.0
ago	24	2460546.75	2	2	10.1	+14	54	11.7	57.54	16.3	59.8	74.2	3.8
ago	25	2460547.75	2	57	17.0	+20	24	3.5	58.21	16.1	59.1	63.5	4.7
ago	26	2460548.75	3	54	29.7	+24	39	20.8	58.95	15.9	58.3	52.5	5.6
ago	27	2460549.75	4	53	27.2	+27	25	38.4	59.70	15.7	57.6	41.5	6.5
ago	28	2460550.75	5	53	3.6	+28	34	56.6	60.43	15.5	56.9	31.3	7.4
ago	29	2460551.75	6	51	45.4	+28	7	21.0	61.10	15.3	56.3	22.1	8.3
ago	30	2460552.75	7	48	4.4	+26	10	56.4	61.70	15.2	55.7	14.2	9.2

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	δ °	"	dis DT	sed	pax	fas fase	hp h	
ago	31	2460553.75	8	41	5.9	+22	59	29.0	62.23	15.0	55.2	8.0	10.0
sep	1	2460554.75	9	30	37.0	+18	49	13.3	62.69	14.9	54.8	3.5	10.8
sep	2	2460555.75	10	16	59.1	+13	56	14.8	63.07	14.8	54.5	0.8	11.5
sep	3	2460556.75	11	0	54.0	+8	35	7.8	63.37	14.8	54.3	0.0	12.1
sep	4	2460557.75	11	43	13.0	+2	58	38.0	63.57	14.7	54.1	1.0	12.8
sep	5	2460558.75	12	24	51.3	-2	41	59.3	63.68	14.7	54.0	3.8	13.4
sep	6	2460559.75	13	6	45.4	-8	16	22.4	63.66	14.7	54.0	8.2	14.0
sep	7	2460560.75	13	49	51.3	-13	34	17.3	63.51	14.7	54.1	14.0	14.7
sep	8	2460561.75	14	35	3.8	-18	24	48.5	63.20	14.8	54.4	21.2	15.4
sep	9	2460562.75	15	23	11.6	-22	35	32.8	62.73	14.9	54.8	29.6	16.1
sep	10	2460563.75	16	14	49.2	-25	52	14.4	62.09	15.1	55.4	38.9	16.9
sep	11	2460564.75	17	10	3.1	-27	59	9.5	61.31	15.3	56.1	48.9	17.8
sep	12	2460565.75	18	8	19.1	-28	40	56.9	60.41	15.5	56.9	59.2	18.7
sep	13	2460566.75	19	8	21.4	-27	45	54.7	59.44	15.8	57.8	69.5	19.6
sep	14	2460567.75	20	8	32.8	-25	9	37.8	58.46	16.0	58.8	79.2	20.5
sep	15	2460568.75	21	7	29.2	-20	57	5.2	57.56	16.3	59.7	87.7	21.5
sep	16	2460569.75	22	4	27.5	-15	22	21.5	56.80	16.5	60.5	94.4	22.3
sep	17	2460570.75	22	59	32.0	-8	46	38.7	56.28	16.6	61.1	98.6	23.2
sep	18	2460571.75	23	53	23.4	-1	35	51.3	56.03	16.7	61.4	100.0	0.0
sep	19	2460572.75	0	47	2.5	+5	41	36.0	56.09	16.7	61.3	98.3	0.9
sep	20	2460573.75	1	41	34.4	+12	36	48.7	56.44	16.6	60.9	93.7	1.7
sep	21	2460574.75	2	37	52.5	+18	42	19.6	57.04	16.4	60.3	86.7	2.6
sep	22	2460575.75	3	36	21.3	+23	34	8.0	57.82	16.2	59.5	77.8	3.5
sep	23	2460576.75	4	36	40.5	+26	53	59.5	58.70	16.0	58.6	67.6	4.4
sep	24	2460577.75	5	37	40.7	+28	31	53.2	59.62	15.7	57.7	57.0	5.4
sep	25	2460578.75	6	37	41.4	+28	27	36.9	60.51	15.5	56.8	46.3	6.3
sep	26	2460579.75	7	35	7.8	+26	50	1.8	61.32	15.3	56.1	36.1	7.2
sep	27	2460580.75	8	29	1.6	+23	53	54.9	62.02	15.1	55.4	26.8	8.0
sep	28	2460581.75	9	19	10.6	+19	56	9.2	62.60	15.0	54.9	18.5	8.8
sep	29	2460582.75	10	5	58.1	+15	12	56.5	63.06	14.9	54.5	11.6	9.5
sep	30	2460583.75	10	50	8.5	+9	58	36.8	63.39	14.8	54.2	6.2	10.2
oct	1	2460584.75	11	32	35.0	+4	25	37.3	63.61	14.7	54.0	2.5	10.8
oct	2	2460585.75	12	14	13.2	-1	14	55.1	63.72	14.7	54.0	0.4	11.5
oct	3	2460586.75	12	55	58.7	-6	52	30.3	63.73	14.7	53.9	0.1	12.1
oct	4	2460587.75	13	38	45.5	-12	16	33.4	63.63	14.7	54.0	1.6	12.7
oct	5	2460588.75	14	23	25.0	-17	15	46.6	63.43	14.8	54.2	4.8	13.4
oct	6	2460589.75	15	10	42.0	-21	37	40.9	63.11	14.8	54.5	9.7	14.1
oct	7	2460590.75	16	1	7.4	-25	8	28.3	62.67	14.9	54.9	16.1	14.9
oct	8	2460591.75	16	54	47.5	-27	33	34.1	62.10	15.1	55.4	24.0	15.7
oct	9	2460592.75	17	51	14.0	-28	39	8.8	61.41	15.3	56.0	33.1	16.6
oct	10	2460593.75	18	49	23.0	-28	14	37.3	60.60	15.5	56.7	43.1	17.5
oct	11	2460594.75	19	47	51.0	-26	15	12.8	59.72	15.7	57.6	53.7	18.4
oct	12	2460595.75	20	45	23.1	-22	43	23.1	58.79	15.9	58.5	64.5	19.3
oct	13	2460596.75	21	41	17.3	-17	48	36.2	57.90	16.2	59.4	74.9	20.2
oct	14	2460597.75	22	35	33.4	-11	46	7.6	57.10	16.4	60.2	84.3	21.0
oct	15	2460598.75	23	28	46.6	-4	55	54.6	56.47	16.6	60.9	92.0	21.8
oct	16	2460599.75	0	21	55.1	+2	18	4.2	56.09	16.7	61.3	97.3	22.7
oct	17	2460600.75	1	16	6.5	+9	28	24.5	56.00	16.7	61.4	99.8	23.5

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mes	día	dj	h	α m	s	δ °	"	dis DT	sed	pax	fase	hp h	
oct	18	2460601.75	2	12	23.0	+16	5	29.8	56.22	16.7	61.1	99.3	0.4
oct	19	2460602.75	3	11	22.9	+21	39	53.8	56.73	16.5	60.6	95.8	1.3
oct	20	2460603.75	4	12	57.7	+25	46	2.6	57.47	16.3	59.8	89.8	2.3
oct	21	2460604.75	5	15	58.6	+28	6	49.7	58.37	16.0	58.9	81.8	3.2
oct	22	2460605.75	6	18	29.0	+28	37	19.0	59.35	15.8	57.9	72.4	4.2
oct	23	2460606.75	7	18	27.4	+27	25	4.6	60.33	15.5	57.0	62.3	5.1
oct	24	2460607.75	8	14	32.6	+24	46	21.8	61.24	15.3	56.1	52.0	6.0
oct	25	2460608.75	9	6	20.9	+21	0	35.0	62.04	15.1	55.4	42.0	6.8
oct	26	2460609.75	9	54	15.3	+16	26	4.1	62.68	14.9	54.8	32.5	7.5
oct	27	2460610.75	10	39	5.1	+11	18	17.1	63.16	14.8	54.4	23.9	8.2
oct	28	2460611.75	11	21	49.7	+5	49	52.9	63.48	14.8	54.2	16.3	8.9
oct	29	2460612.75	12	3	30.7	+0	11	35.4	63.65	14.7	54.0	10.0	9.5
oct	30	2460613.75	12	45	8.0	-5	26	41.2	63.67	14.7	54.0	5.1	10.1
oct	31	2460614.75	13	27	39.1	-10	54	50.7	63.58	14.7	54.1	1.8	10.8
nov	1	2460615.75	14	11	57.7	-16	1	45.9	63.39	14.8	54.2	0.1	11.4
nov	2	2460616.75	14	58	50.0	-20	34	46.4	63.10	14.8	54.5	0.3	12.2
nov	3	2460617.75	15	48	47.9	-24	19	37.1	62.74	14.9	54.8	2.4	12.9
nov	4	2460618.75	16	41	57.6	-27	1	14.2	62.30	15.0	55.2	6.3	13.8
nov	5	2460619.75	17	37	49.8	-28	25	34.7	61.79	15.2	55.6	12.1	14.6
nov	6	2460620.75	18	35	18.5	-28	22	16.6	61.21	15.3	56.2	19.4	15.5
nov	7	2460621.75	19	32	58.0	-26	47	7.9	60.56	15.5	56.8	28.3	16.4
nov	8	2460622.75	20	29	31.0	-23	43	4.3	59.84	15.6	57.4	38.3	17.3
nov	9	2460623.75	21	24	14.1	-19	19	11.8	59.10	15.8	58.2	49.1	18.1
nov	10	2460624.75	22	17	5.5	-13	48	53.6	58.35	16.0	58.9	60.2	18.9
nov	11	2460625.75	23	8	39.6	-7	28	24.2	57.65	16.2	59.6	71.0	19.7
nov	12	2460626.75	23	59	55.1	-0	36	29.0	57.06	16.4	60.2	81.0	20.5
nov	13	2460627.75	0	52	3.7	+6	25	6.8	56.65	16.5	60.7	89.5	21.3
nov	14	2460628.75	1	46	18.3	+13	11	6.0	56.46	16.6	60.9	95.7	22.2
nov	15	2460629.75	2	43	38.3	+19	13	4.1	56.54	16.6	60.8	99.2	23.1
nov	16	2460630.75	3	44	25.5	+24	1	51.3	56.89	16.5	60.4	99.9	0.0
nov	17	2460631.75	4	47	58.7	+27	12	25.9	57.48	16.3	59.8	97.6	1.0
nov	18	2460632.75	5	52	26.8	+28	30	16.9	58.27	16.1	59.0	92.8	2.0
nov	19	2460633.75	6	55	21.5	+27	55	42.9	59.18	15.8	58.1	86.0	3.0
nov	20	2460634.75	7	54	38.4	+25	42	34.0	60.13	15.6	57.2	77.6	3.9
nov	21	2460635.75	8	49	18.0	+22	11	58.3	61.06	15.3	56.3	68.4	4.8
nov	22	2460636.75	9	39	25.1	+17	45	43.7	61.89	15.1	55.5	58.6	5.5
nov	23	2460637.75	10	25	45.7	+12	42	27.6	62.58	15.0	54.9	48.9	6.2
nov	24	2460638.75	11	9	23.6	+7	16	46.9	63.09	14.8	54.5	39.3	6.9
nov	25	2460639.75	11	51	26.9	+1	40	6.6	63.41	14.8	54.2	30.3	7.5
nov	26	2460640.75	12	33	2.1	-3	57	57.8	63.54	14.7	54.1	22.1	8.2
nov	27	2460641.75	13	15	13.1	-9	28	14.5	63.50	14.7	54.1	14.8	8.8
nov	28	2460642.75	13	58	60.0	-14	40	40.8	63.31	14.8	54.3	8.7	9.5
nov	29	2460643.75	14	45	16.6	-19	23	26.6	63.00	14.9	54.6	4.1	10.2
nov	30	2460644.75	15	34	43.5	-23	22	28.7	62.60	15.0	54.9	1.1	10.9
dic	1	2460645.75	16	27	36.3	-26	21	59.4	62.14	15.1	55.3	0.0	11.7
dic	2	2460646.75	17	23	32.5	-28	6	18.9	61.64	15.2	55.8	0.9	12.6
dic	3	2460647.75	18	21	25.9	-28	23	6.6	61.13	15.3	56.2	3.9	13.5
dic	4	2460648.75	19	19	41.1	-27	6	44.0	60.61	15.5	56.7	8.9	14.4
dic	5	2460649.75	20	16	45.4	-24	19	56.5	60.09	15.6	57.2	15.8	15.3

Luna, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	δ °	"	dis DT	sed	pax	fas fase	hp h	
dic	6	2460650.75	21	11	40.1	-20	12	50.5	59.57	15.7	57.7	24.4	16.1
dic	7	2460651.75	22	4	13.5	-15	0	8.4	59.06	15.9	58.2	34.4	17.0
dic	8	2460652.75	22	54	54.6	-8	58	34.7	58.56	16.0	58.7	45.3	17.7
dic	9	2460653.75	23	44	40.3	-2	25	42.7	58.10	16.1	59.2	56.5	18.5
dic	10	2460654.75	0	34	42.4	+4	19	56.8	57.72	16.2	59.6	67.7	19.3
dic	11	2460655.75	1	26	18.5	+10	57	58.6	57.43	16.3	59.9	78.0	20.1
dic	12	2460656.75	2	20	40.7	+17	5	8.5	57.29	16.3	60.0	86.9	20.9
dic	13	2460657.75	3	18	38.3	+22	15	32.6	57.33	16.3	60.0	93.8	21.8
dic	14	2460658.75	4	20	11.8	+26	3	3.1	57.56	16.3	59.7	98.2	22.8
dic	15	2460659.75	5	24	10.2	+28	6	38.8	58.00	16.1	59.3	100.0	23.8
dic	16	2460660.75	6	28	17.5	+28	16	58.2	58.62	16.0	58.6	99.0	0.8
dic	17	2460661.75	7	30	2.2	+26	39	42.7	59.37	15.8	57.9	95.6	1.7
dic	18	2460662.75	8	27	38.2	+23	32	41.1	60.19	15.6	57.1	90.1	2.6
dic	19	2460663.75	9	20	31.3	+19	18	53.2	61.03	15.3	56.3	83.0	3.4
dic	20	2460664.75	10	9	6.0	+14	20	18.7	61.81	15.2	55.6	74.8	4.2
dic	21	2460665.75	10	54	18.7	+8	55	0.2	62.48	15.0	55.0	65.8	4.9
dic	22	2460666.75	11	37	17.5	+3	16	48.6	62.98	14.9	54.6	56.4	5.5
dic	23	2460667.75	12	19	12.4	-2	23	31.8	63.30	14.8	54.3	46.9	6.2
dic	24	2460668.75	13	1	11.2	-7	56	52.6	63.42	14.8	54.2	37.6	6.8
dic	25	2460669.75	13	44	19.1	-13	14	11.1	63.33	14.8	54.3	28.7	7.4
dic	26	2460670.75	14	29	37.0	-18	5	10.2	63.06	14.8	54.5	20.5	8.1
dic	27	2460671.75	15	17	56.6	-22	17	18.8	62.64	15.0	54.9	13.3	8.9
dic	28	2460672.75	16	9	49.9	-25	35	36.2	62.10	15.1	55.4	7.3	9.7
dic	29	2460673.75	17	5	14.4	-27	43	34.9	61.50	15.2	55.9	3.0	10.5
dic	30	2460674.75	18	3	20.3	-28	26	12.2	60.88	15.4	56.5	0.5	11.4
dic	31	2460675.75	19	2	34.8	-27	33	56.9	60.27	15.5	57.0	0.1	12.3

Mercurio, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ '	"	dis UA	hp h
ene	1	2460310.75	17	26	58.44	-20	9	56.42	0.7824	17.4
ene	2	2460311.75	17	26	42.21	-20	13	58.39	0.8020	17.4
ene	3	2460312.75	17	27	4.47	-20	19	39.57	0.8223	17.5
ene	4	2460313.75	17	28	2.36	-20	26	44.94	0.8430	17.5
ene	5	2460314.75	17	29	32.94	-20	34	59.38	0.8639	17.5
ene	6	2460315.75	17	31	33.32	-20	44	8.25	0.8848	17.5
ene	7	2460316.75	17	34	0.72	-20	53	57.64	0.9057	17.6
ene	8	2460317.75	17	36	52.56	-21	4	14.66	0.9265	17.6
ene	9	2460318.75	17	40	6.44	-21	14	47.46	0.9470	17.7
ene	10	2460319.75	17	43	40.19	-21	25	25.30	0.9672	17.7
ene	11	2460320.75	17	47	31.82	-21	35	58.51	0.9870	17.8
ene	12	2460321.75	17	51	39.55	-21	46	18.41	1.0064	17.9
ene	13	2460322.75	17	56	1.80	-21	56	17.29	1.0254	17.9
ene	14	2460323.75	18	0	37.14	-22	5	48.26	1.0440	18.0
ene	15	2460324.75	18	5	24.30	-22	14	45.22	1.0620	18.1
ene	16	2460325.75	18	10	22.15	-22	23	2.76	1.0796	18.2
ene	17	2460326.75	18	15	29.68	-22	30	36.11	1.0967	18.3
ene	18	2460327.75	18	20	46.00	-22	37	21.01	1.1132	18.3
ene	19	2460328.75	18	26	10.31	-22	43	13.73	1.1293	18.4
ene	20	2460329.75	18	31	41.88	-22	48	10.92	1.1448	18.5
ene	21	2460330.75	18	37	20.07	-22	52	9.61	1.1598	18.6
ene	22	2460331.75	18	43	4.29	-22	55	7.15	1.1744	18.7
ene	23	2460332.75	18	48	54.03	-22	57	1.19	1.1884	18.8
ene	24	2460333.75	18	54	48.81	-22	57	49.60	1.2019	18.9
ene	25	2460334.75	19	0	48.20	-22	57	30.47	1.2149	19.0
ene	26	2460335.75	19	6	51.82	-22	56	2.09	1.2275	19.1
ene	27	2460336.75	19	12	59.30	-22	53	22.92	1.2396	19.2
ene	28	2460337.75	19	19	10.33	-22	49	31.57	1.2512	19.3
ene	29	2460338.75	19	25	24.62	-22	44	26.78	1.2623	19.4
ene	30	2460339.75	19	31	41.90	-22	38	7.43	1.2729	19.5
ene	31	2460340.75	19	38	1.92	-22	30	32.49	1.2831	19.6
feb	1	2460341.75	19	44	24.47	-22	21	41.04	1.2929	19.7
feb	2	2460342.75	19	50	49.34	-22	11	32.24	1.3022	19.8
feb	3	2460343.75	19	57	16.34	-22	0	5.33	1.3110	20.0
feb	4	2460344.75	20	3	45.31	-21	47	19.65	1.3194	20.1
feb	5	2460345.75	20	10	16.09	-21	33	14.56	1.3273	20.2
feb	6	2460346.75	20	16	48.54	-21	17	49.53	1.3348	20.3
feb	7	2460347.75	20	23	22.53	-21	1	4.05	1.3418	20.4
feb	8	2460348.75	20	29	57.94	-20	42	57.69	1.3484	20.5
feb	9	2460349.75	20	36	34.67	-20	23	30.05	1.3545	20.6
feb	10	2460350.75	20	43	12.62	-20	2	40.76	1.3602	20.7
feb	11	2460351.75	20	49	51.72	-19	40	29.50	1.3654	20.8
feb	12	2460352.75	20	56	31.89	-19	16	55.98	1.3702	20.9
feb	13	2460353.75	21	3	13.08	-18	51	59.96	1.3744	21.1
feb	14	2460354.75	21	9	55.24	-18	25	41.23	1.3782	21.2
feb	15	2460355.75	21	16	38.35	-17	57	59.62	1.3815	21.3
feb	16	2460356.75	21	23	22.37	-17	28	55.02	1.3843	21.4
feb	17	2460357.75	21	30	7.28	-16	58	27.37	1.3866	21.5
feb	18	2460358.75	21	36	53.07	-16	26	36.63	1.3884	21.6

Mercurio, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	dia	dj	h	α m	s	°	δ '	"	dis UA	hp h
feb	19	2460359.75	21	43	39.74	-15	53	22.86	1.3896	21.7
feb	20	2460360.75	21	50	27.28	-15	18	46.15	1.3902	21.8
feb	21	2460361.75	21	57	15.69	-14	42	46.69	1.3903	22.0
feb	22	2460362.75	22	4	4.98	-14	5	24.78	1.3897	22.1
feb	23	2460363.75	22	10	55.15	-13	26	40.80	1.3885	22.2
feb	24	2460364.75	22	17	46.21	-12	46	35.31	1.3867	22.3
feb	25	2460365.75	22	24	38.15	-12	5	9.02	1.3841	22.4
feb	26	2460366.75	22	31	30.97	-11	22	22.87	1.3808	22.5
feb	27	2460367.75	22	38	24.63	-10	38	18.02	1.3768	22.6
feb	28	2460368.75	22	45	19.11	-9	52	55.93	1.3719	22.8
feb	29	2460369.75	22	52	14.33	-9	6	18.41	1.3662	22.9
mar	1	2460370.75	22	59	10.22	-8	18	27.73	1.3595	23.0
mar	2	2460371.75	23	6	6.64	-7	29	26.63	1.3520	23.1
mar	3	2460372.75	23	13	3.43	-6	39	18.41	1.3435	23.2
mar	4	2460373.75	23	20	0.36	-5	48	7.04	1.3339	23.3
mar	5	2460374.75	23	26	57.15	-4	55	57.23	1.3232	23.4
mar	6	2460375.75	23	33	53.44	-4	2	54.57	1.3114	23.6
mar	7	2460376.75	23	40	48.78	-3	9	5.58	1.2985	23.7
mar	8	2460377.75	23	47	42.63	-2	14	37.85	1.2843	23.8
mar	9	2460378.75	23	54	34.35	-1	19	40.07	1.2690	23.9
mar	10	2460379.75	0	1	23.18	-0	24	22.12	1.2523	0.0
mar	11	2460380.75	0	8	8.22	+0	31	4.90	1.2344	0.1
mar	12	2460381.75	0	14	48.47	+1	26	28.70	1.2153	0.2
mar	13	2460382.75	0	21	22.79	+2	21	35.87	1.1949	0.4
mar	14	2460383.75	0	27	49.90	+3	16	11.95	1.1734	0.5
mar	15	2460384.75	0	34	8.45	+4	10	1.63	1.1507	0.6
mar	16	2460385.75	0	40	16.95	+5	2	48.95	1.1270	0.7
mar	17	2460386.75	0	46	13.85	+5	54	17.62	1.1024	0.8
mar	18	2460387.75	0	51	57.56	+6	44	11.22	1.0769	0.9
mar	19	2460388.75	0	57	26.45	+7	32	13.58	1.0508	1.0
mar	20	2460389.75	1	2	38.93	+8	18	8.98	1.0241	1.0
mar	21	2460390.75	1	7	33.41	+9	1	42.45	0.9971	1.1
mar	22	2460391.75	1	12	8.40	+9	42	39.89	0.9699	1.2
mar	23	2460392.75	1	16	22.49	+10	20	48.26	0.9427	1.3
mar	24	2460393.75	1	20	14.37	+10	55	55.60	0.9155	1.3
mar	25	2460394.75	1	23	42.90	+11	27	51.07	0.8887	1.4
mar	26	2460395.75	1	26	47.05	+11	56	24.95	0.8623	1.4
mar	27	2460396.75	1	29	26.00	+12	21	28.60	0.8365	1.5
mar	28	2460397.75	1	31	39.10	+12	42	54.45	0.8115	1.5
mar	29	2460398.75	1	33	25.91	+13	0	36.02	0.7873	1.6
mar	30	2460399.75	1	34	46.22	+13	14	27.95	0.7640	1.6
mar	31	2460400.75	1	35	40.09	+13	24	26.16	0.7418	1.6
abr	1	2460401.75	1	36	7.84	+13	30	27.97	0.7208	1.6
abr	2	2460402.75	1	36	10.09	+13	32	32.34	0.7011	1.6
abr	3	2460403.75	1	35	47.79	+13	30	40.20	0.6826	1.6
abr	4	2460404.75	1	35	2.22	+13	24	54.77	0.6655	1.6
abr	5	2460405.75	1	33	55.01	+13	15	21.85	0.6498	1.6
abr	6	2460406.75	1	32	28.11	+13	2	10.19	0.6357	1.5

Mercurio, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ "	"	dis UA	hp h
abr	7	2460407.75	1	30	43.80	+12	45	31.70	0.6230	1.5
abr	8	2460408.75	1	28	44.64	+12	25	41.62	0.6118	1.5
abr	9	2460409.75	1	26	33.43	+12	2	58.50	0.6022	1.4
abr	10	2460410.75	1	24	13.16	+11	37	43.99	0.5941	1.4
abr	11	2460411.75	1	21	46.90	+11	10	22.55	0.5875	1.4
abr	12	2460412.75	1	19	17.78	+10	41	20.82	0.5825	1.3
abr	13	2460413.75	1	16	48.87	+10	11	7.02	0.5789	1.3
abr	14	2460414.75	1	14	23.11	+9	40	10.10	0.5768	1.2
abr	15	2460415.75	1	12	3.26	+9	8	58.93	0.5760	1.2
abr	16	2460416.75	1	9	51.83	+8	38	1.51	0.5766	1.2
abr	17	2460417.75	1	7	51.04	+8	7	44.20	0.5785	1.1
abr	18	2460418.75	1	6	2.80	+7	38	31.16	0.5815	1.1
abr	19	2460419.75	1	4	28.67	+7	10	43.90	0.5857	1.1
abr	20	2460420.75	1	3	9.91	+6	44	40.96	0.5910	1.1
abr	21	2460421.75	1	2	7.46	+6	20	37.85	0.5973	1.0
abr	22	2460422.75	1	1	21.99	+5	58	47.06	0.6045	1.0
abr	23	2460423.75	1	0	53.89	+5	39	18.16	0.6126	1.0
abr	24	2460424.75	1	0	43.34	+5	22	18.08	0.6215	1.0
abr	25	2460425.75	1	0	50.33	+5	7	51.34	0.6311	1.0
abr	26	2460426.75	1	1	14.70	+4	56	0.36	0.6414	1.0
abr	27	2460427.75	1	1	56.15	+4	46	45.79	0.6523	1.0
abr	28	2460428.75	1	2	54.28	+4	40	6.77	0.6638	1.0
abr	29	2460429.75	1	4	8.65	+4	36	1.25	0.6759	1.1
abr	30	2460430.75	1	5	38.75	+4	34	26.20	0.6884	1.1
may	1	2460431.75	1	7	24.03	+4	35	17.86	0.7014	1.1
may	2	2460432.75	1	9	23.95	+4	38	31.91	0.7148	1.2
may	3	2460433.75	1	11	37.96	+4	44	3.64	0.7286	1.2
may	4	2460434.75	1	14	5.53	+4	51	48.07	0.7427	1.2
may	5	2460435.75	1	16	46.13	+5	1	40.08	0.7572	1.3
may	6	2460436.75	1	19	39.29	+5	13	34.47	0.7719	1.3
may	7	2460437.75	1	22	44.53	+5	27	26.04	0.7870	1.4
may	8	2460438.75	1	26	1.44	+5	43	9.62	0.8023	1.4
may	9	2460439.75	1	29	29.64	+6	0	40.12	0.8179	1.5
may	10	2460440.75	1	33	8.76	+6	19	52.53	0.8336	1.6
may	11	2460441.75	1	36	58.51	+6	40	41.96	0.8496	1.6
may	12	2460442.75	1	40	58.62	+7	3	3.61	0.8658	1.7
may	13	2460443.75	1	45	8.87	+7	26	52.80	0.8822	1.8
may	14	2460444.75	1	49	29.07	+7	52	4.97	0.8987	1.8
may	15	2460445.75	1	53	59.09	+8	18	35.61	0.9154	1.9
may	16	2460446.75	1	58	38.83	+8	46	20.30	0.9323	2.0
may	17	2460447.75	2	3	28.23	+9	15	14.67	0.9492	2.1
may	18	2460448.75	2	8	27.27	+9	45	14.36	0.9663	2.1
may	19	2460449.75	2	13	35.95	+10	16	15.02	0.9834	2.2
may	20	2460450.75	2	18	54.34	+10	48	12.26	1.0007	2.3
may	21	2460451.75	2	24	22.51	+11	21	1.63	1.0180	2.4
may	22	2460452.75	2	30	0.58	+11	54	38.57	1.0353	2.5
may	23	2460453.75	2	35	48.70	+12	28	58.39	1.0526	2.6
may	24	2460454.75	2	41	47.03	+13	3	56.19	1.0698	2.7
may	25	2460455.75	2	47	55.78	+13	39	26.87	1.0871	2.8

Mercurio, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	dia	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
may	26	2460456.75	2	54	15.16	+14	15	25.00	1.1042	2.9
may	27	2460457.75	3	0	45.39	+14	51	44.85	1.1211	3.0
may	28	2460458.75	3	7	26.71	+15	28	20.29	1.1379	3.1
may	29	2460459.75	3	14	19.36	+16	5	4.71	1.1544	3.2
may	30	2460460.75	3	21	23.57	+16	41	51.02	1.1706	3.4
may	31	2460461.75	3	28	39.54	+17	18	31.59	1.1865	3.5
jun	1	2460462.75	3	36	7.44	+17	54	58.17	1.2019	3.6
jun	2	2460463.75	3	43	47.43	+18	31	1.89	1.2168	3.7
jun	3	2460464.75	3	51	39.54	+19	6	33.24	1.2311	3.9
jun	4	2460465.75	3	59	43.78	+19	41	22.04	1.2447	4.0
jun	5	2460466.75	4	8	0.00	+20	15	17.52	1.2575	4.1
jun	6	2460467.75	4	16	27.98	+20	48	8.33	1.2694	4.3
jun	7	2460468.75	4	25	7.32	+21	19	42.69	1.2803	4.4
jun	8	2460469.75	4	33	57.48	+21	49	48.54	1.2902	4.6
jun	9	2460470.75	4	42	57.75	+22	18	13.72	1.2989	4.7
jun	10	2460471.75	4	52	7.23	+22	44	46.25	1.3064	4.9
jun	11	2460472.75	5	1	24.88	+23	9	14.59	1.3125	5.0
jun	12	2460473.75	5	10	49.46	+23	31	27.97	1.3173	5.2
jun	13	2460474.75	5	20	19.61	+23	51	16.67	1.3206	5.3
jun	14	2460475.75	5	29	53.84	+24	8	32.35	1.3226	5.5
jun	15	2460476.75	5	39	30.61	+24	23	8.06	1.3230	5.7
jun	16	2460477.75	5	49	8.27	+24	34	58.77	1.3221	5.8
jun	17	2460478.75	5	58	45.23	+24	44	1.34	1.3197	6.0
jun	18	2460479.75	6	8	19.91	+24	50	14.36	1.3160	6.1
jun	19	2460480.75	6	17	50.82	+24	53	38.26	1.3110	6.3
jun	20	2460481.75	6	27	16.56	+24	54	15.12	1.3047	6.5
jun	21	2460482.75	6	36	35.85	+24	52	8.52	1.2973	6.6
jun	22	2460483.75	6	45	47.56	+24	47	23.33	1.2889	6.8
jun	23	2460484.75	6	54	50.70	+24	40	5.42	1.2795	6.9
jun	24	2460485.75	7	3	44.44	+24	30	21.50	1.2692	7.1
jun	25	2460486.75	7	12	28.08	+24	18	18.89	1.2581	7.2
jun	26	2460487.75	7	21	1.04	+24	4	5.31	1.2463	7.4
jun	27	2460488.75	7	29	22.90	+23	47	48.69	1.2339	7.5
jun	28	2460489.75	7	37	33.31	+23	29	37.13	1.2210	7.6
jun	29	2460490.75	7	45	32.04	+23	9	38.67	1.2075	7.8
jun	30	2460491.75	7	53	18.93	+22	48	1.29	1.1937	7.9
jul	1	2460492.75	8	0	53.87	+22	24	52.81	1.1795	8.0
jul	2	2460493.75	8	8	16.84	+22	0	20.87	1.1650	8.1
jul	3	2460494.75	8	15	27.82	+21	34	32.87	1.1502	8.3
jul	4	2460495.75	8	22	26.85	+21	7	35.96	1.1353	8.4
jul	5	2460496.75	8	29	13.98	+20	39	37.04	1.1201	8.5
jul	6	2460497.75	8	35	49.28	+20	10	42.77	1.1049	8.6
jul	7	2460498.75	8	42	12.81	+19	40	59.56	1.0895	8.7
jul	8	2460499.75	8	48	24.67	+19	10	33.57	1.0740	8.8
jul	9	2460500.75	8	54	24.93	+18	39	30.78	1.0584	8.9
jul	10	2460501.75	9	0	13.65	+18	7	56.97	1.0429	9.0
jul	11	2460502.75	9	5	50.89	+17	35	57.75	1.0273	9.1
jul	12	2460503.75	9	11	16.71	+17	3	38.59	1.0117	9.2

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
jul	13	2460504.75	9	16	31.11	+16	31	4.85	0.9961	9.3
jul	14	2460505.75	9	21	34.11	+15	58	21.78	0.9805	9.4
jul	15	2460506.75	9	26	25.69	+15	25	34.59	0.9650	9.4
jul	16	2460507.75	9	31	5.80	+14	52	48.46	0.9495	9.5
jul	17	2460508.75	9	35	34.36	+14	20	8.53	0.9341	9.6
jul	18	2460509.75	9	39	51.27	+13	47	39.98	0.9188	9.7
jul	19	2460510.75	9	43	56.39	+13	15	28.04	0.9035	9.7
jul	20	2460511.75	9	47	49.55	+12	43	38.02	0.8883	9.8
jul	21	2460512.75	9	51	30.55	+12	12	15.30	0.8733	9.9
jul	22	2460513.75	9	54	59.14	+11	41	25.40	0.8583	9.9
jul	23	2460514.75	9	58	15.06	+11	11	14.01	0.8435	10.0
jul	24	2460515.75	10	1	17.98	+10	41	46.98	0.8289	10.0
jul	25	2460516.75	10	4	7.56	+10	13	10.37	0.8144	10.1
jul	26	2460517.75	10	6	43.42	+9	45	30.49	0.8001	10.1
jul	27	2460518.75	10	9	5.15	+9	18	53.93	0.7860	10.2
jul	28	2460519.75	10	11	12.30	+8	53	27.60	0.7721	10.2
jul	29	2460520.75	10	13	4.38	+8	29	18.69	0.7585	10.2
jul	30	2460521.75	10	14	40.89	+8	6	34.76	0.7451	10.2
jul	31	2460522.75	10	16	1.31	+7	45	23.66	0.7321	10.3
ago	1	2460523.75	10	17	5.12	+7	25	53.56	0.7194	10.3
ago	2	2460524.75	10	17	51.80	+7	8	12.88	0.7070	10.3
ago	3	2460525.75	10	18	20.86	+6	52	30.23	0.6952	10.3
ago	4	2460526.75	10	18	31.84	+6	38	54.33	0.6838	10.3
ago	5	2460527.75	10	18	24.38	+6	27	33.88	0.6729	10.3
ago	6	2460528.75	10	17	58.19	+6	18	37.36	0.6626	10.3
ago	7	2460529.75	10	17	13.12	+6	12	12.87	0.6529	10.3
ago	8	2460530.75	10	16	9.22	+6	8	27.81	0.6440	10.3
ago	9	2460531.75	10	14	46.70	+6	7	28.59	0.6359	10.2
ago	10	2460532.75	10	13	6.07	+6	9	20.29	0.6287	10.2
ago	11	2460533.75	10	11	8.10	+6	14	6.21	0.6224	10.2
ago	12	2460534.75	10	8	53.92	+6	21	47.53	0.6171	10.1
ago	13	2460535.75	10	6	25.02	+6	32	22.80	0.6130	10.1
ago	14	2460536.75	10	3	43.28	+6	45	47.65	0.6102	10.1
ago	15	2460537.75	10	0	50.97	+7	1	54.47	0.6086	10.0
ago	16	2460538.75	9	57	50.77	+7	20	32.21	0.6084	10.0
ago	17	2460539.75	9	54	45.72	+7	41	26.33	0.6097	9.9
ago	18	2460540.75	9	51	39.16	+8	4	19.01	0.6126	9.9
ago	19	2460541.75	9	48	34.68	+8	28	49.36	0.6171	9.8
ago	20	2460542.75	9	45	36.03	+8	54	34.01	0.6232	9.8
ago	21	2460543.75	9	42	47.01	+9	21	7.71	0.6310	9.7
ago	22	2460544.75	9	40	11.37	+9	48	4.02	0.6406	9.7
ago	23	2460545.75	9	37	52.70	+10	14	56.12	0.6519	9.6
ago	24	2460546.75	9	35	54.36	+10	41	17.49	0.6650	9.6
ago	25	2460547.75	9	34	19.35	+11	6	42.54	0.6798	9.6
ago	26	2460548.75	9	33	10.28	+11	30	47.13	0.6962	9.6
ago	27	2460549.75	9	32	29.35	+11	53	8.87	0.7142	9.5
ago	28	2460550.75	9	32	18.27	+12	13	27.40	0.7338	9.5
ago	29	2460551.75	9	32	38.28	+12	31	24.46	0.7549	9.5
ago	30	2460552.75	9	33	30.17	+12	46	43.95	0.7773	9.6

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Efemérides a las 0^h del meridiano 90° W.G.

mes	dia	dj	h	α m	s	°	δ "	"	dis UA	hp h
ago	31	2460553.75	9	34	54.28	+12	59	11.90	0.8009	9.6
sep	1	2460554.75	9	36	50.52	+13	8	36.42	0.8256	9.6
sep	2	2460555.75	9	39	18.41	+13	14	47.68	0.8513	9.7
sep	3	2460556.75	9	42	17.08	+13	17	37.91	0.8778	9.7
sep	4	2460557.75	9	45	45.36	+13	17	1.37	0.9049	9.8
sep	5	2460558.75	9	49	41.74	+13	12	54.44	0.9325	9.8
sep	6	2460559.75	9	54	4.48	+13	5	15.59	0.9604	9.9
sep	7	2460560.75	9	58	51.59	+12	54	5.51	0.9883	10.0
sep	8	2460561.75	10	4	0.95	+12	39	27.03	1.0161	10.1
sep	9	2460562.75	10	9	30.27	+12	21	25.14	1.0436	10.2
sep	10	2460563.75	10	15	17.21	+12	0	6.84	1.0707	10.3
sep	11	2460564.75	10	21	19.43	+11	35	41.04	1.0971	10.4
sep	12	2460565.75	10	27	34.61	+11	8	18.23	1.1228	10.5
sep	13	2460566.75	10	34	0.50	+10	38	10.25	1.1475	10.6
sep	14	2460567.75	10	40	35.01	+10	5	29.95	1.1713	10.7
sep	15	2460568.75	10	47	16.17	+9	30	30.80	1.1940	10.8
sep	16	2460569.75	10	54	2.24	+8	53	26.59	1.2155	10.9
sep	17	2460570.75	11	0	51.63	+8	14	31.09	1.2359	11.0
sep	18	2460571.75	11	7	42.99	+7	33	57.81	1.2550	11.1
sep	19	2460572.75	11	14	35.16	+6	51	59.73	1.2729	11.2
sep	20	2460573.75	11	21	27.14	+6	8	49.18	1.2896	11.4
sep	21	2460574.75	11	28	18.16	+5	24	37.75	1.3051	11.5
sep	22	2460575.75	11	35	7.55	+4	39	36.16	1.3194	11.6
sep	23	2460576.75	11	41	54.82	+3	53	54.30	1.3325	11.7
sep	24	2460577.75	11	48	39.59	+3	7	41.18	1.3446	11.8
sep	25	2460578.75	11	55	21.58	+2	21	4.97	1.3556	11.9
sep	26	2460579.75	12	2	0.62	+1	34	13.03	1.3655	12.0
sep	27	2460580.75	12	8	36.58	+0	47	12.00	1.3745	12.1
sep	28	2460581.75	12	15	9.43	+0	0	7.79	1.3825	12.3
sep	29	2460582.75	12	21	39.18	-0	46	54.30	1.3896	12.4
sep	30	2460583.75	12	28	5.88	-1	33	49.53	1.3958	12.5
oct	1	2460584.75	12	34	29.60	-2	20	33.72	1.4012	12.6
oct	2	2460585.75	12	40	50.46	-3	7	3.12	1.4059	12.7
oct	3	2460586.75	12	47	8.58	-3	53	14.27	1.4097	12.8
oct	4	2460587.75	12	53	24.11	-4	39	4.16	1.4128	12.9
oct	5	2460588.75	12	59	37.19	-5	24	30.08	1.4152	13.0
oct	6	2460589.75	13	5	47.98	-6	9	29.57	1.4170	13.1
oct	7	2460590.75	13	11	56.66	-6	54	0.40	1.4181	13.2
oct	8	2460591.75	13	18	3.37	-7	38	0.53	1.4185	13.3
oct	9	2460592.75	13	24	8.28	-8	21	28.10	1.4184	13.4
oct	10	2460593.75	13	30	11.55	-9	4	21.38	1.4176	13.5
oct	11	2460594.75	13	36	13.34	-9	46	38.77	1.4163	13.6
oct	12	2460595.75	13	42	13.78	-10	28	18.75	1.4144	13.7
oct	13	2460596.75	13	48	13.03	-11	9	19.90	1.4120	13.8
oct	14	2460597.75	13	54	11.23	-11	49	40.89	1.4091	13.9
oct	15	2460598.75	14	0	8.51	-12	29	20.41	1.4056	14.0
oct	16	2460599.75	14	6	5.00	-13	8	17.25	1.4016	14.1
oct	17	2460600.75	14	12	0.81	-13	46	30.20	1.3970	14.2

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ '	"	dis UA	hp h
oct	18	2460601.75	14	17	56.06	-14	23	58.09	1.3920	14.3
oct	19	2460602.75	14	23	50.84	-15	0	39.78	1.3865	14.4
oct	20	2460603.75	14	29	45.24	-15	36	34.10	1.3804	14.5
oct	21	2460604.75	14	35	39.32	-16	11	39.88	1.3739	14.6
oct	22	2460605.75	14	41	33.14	-16	45	55.92	1.3669	14.7
oct	23	2460606.75	14	47	26.75	-17	19	21.00	1.3594	14.8
oct	24	2460607.75	14	53	20.16	-17	51	53.86	1.3514	14.9
oct	25	2460608.75	14	59	13.39	-18	23	33.25	1.3428	15.0
oct	26	2460609.75	15	5	6.41	-18	54	17.86	1.3338	15.1
oct	27	2460610.75	15	10	59.20	-19	24	6.35	1.3243	15.2
oct	28	2460611.75	15	16	51.70	-19	52	57.36	1.3143	15.3
oct	29	2460612.75	15	22	43.82	-20	20	49.50	1.3037	15.4
oct	30	2460613.75	15	28	35.47	-20	47	41.31	1.2927	15.5
oct	31	2460614.75	15	34	26.48	-21	13	31.33	1.2811	15.6
nov	1	2460615.75	15	40	16.70	-21	38	18.03	1.2690	15.7
nov	2	2460616.75	15	46	5.90	-22	1	59.86	1.2563	15.8
nov	3	2460617.75	15	51	53.82	-22	24	35.22	1.2431	15.9
nov	4	2460618.75	15	57	40.15	-22	46	2.47	1.2294	16.0
nov	5	2460619.75	16	3	24.54	-23	6	19.93	1.2151	16.1
nov	6	2460620.75	16	9	6.55	-23	25	25.89	1.2002	16.2
nov	7	2460621.75	16	14	45.70	-23	43	18.60	1.1848	16.2
nov	8	2460622.75	16	20	21.42	-23	59	56.27	1.1688	16.3
nov	9	2460623.75	16	25	53.06	-24	15	17.08	1.1522	16.4
nov	10	2460624.75	16	31	19.87	-24	29	19.19	1.1351	16.5
nov	11	2460625.75	16	36	41.00	-24	42	0.75	1.1174	16.6
nov	12	2460626.75	16	41	55.48	-24	53	19.87	1.0991	16.7
nov	13	2460627.75	16	47	2.21	-25	3	14.67	1.0802	16.8
nov	14	2460628.75	16	51	59.94	-25	11	43.26	1.0609	16.9
nov	15	2460629.75	16	56	47.24	-25	18	43.72	1.0409	16.9
nov	16	2460630.75	17	1	22.52	-25	24	14.13	1.0205	17.0
nov	17	2460631.75	17	5	43.95	-25	28	12.51	0.9996	17.1
nov	18	2460632.75	17	9	49.52	-25	30	36.82	0.9783	17.2
nov	19	2460633.75	17	13	36.95	-25	31	24.92	0.9565	17.2
nov	20	2460634.75	17	17	3.72	-25	30	34.53	0.9345	17.3
nov	21	2460635.75	17	20	7.07	-25	28	3.19	0.9122	17.3
nov	22	2460636.75	17	22	44.00	-25	23	48.24	0.8898	17.4
nov	23	2460637.75	17	24	51.30	-25	17	46.69	0.8674	17.4
nov	24	2460638.75	17	26	25.59	-25	9	55.23	0.8452	17.4
nov	25	2460639.75	17	27	23.48	-25	0	10.21	0.8233	17.5
nov	26	2460640.75	17	27	41.62	-24	48	27.67	0.8018	17.5
nov	27	2460641.75	17	27	16.98	-24	34	43.52	0.7812	17.5
nov	28	2460642.75	17	26	7.09	-24	18	53.96	0.7616	17.4
nov	29	2460643.75	17	24	10.37	-24	0	56.15	0.7433	17.4
nov	30	2460644.75	17	21	26.55	-23	40	49.21	0.7267	17.4
dic	1	2460645.75	17	17	57.01	-23	18	35.73	0.7120	17.3
dic	2	2460646.75	17	13	45.16	-22	54	23.47	0.6996	17.2
dic	3	2460647.75	17	8	56.66	-22	28	27.18	0.6899	17.1
dic	4	2460648.75	17	3	39.36	-22	1	10.03	0.6830	17.1
dic	5	2460649.75	16	58	3.09	-21	33	4.14	0.6791	17.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
dic	6	2460650.75	16	52	18.97	-21	4	49.73	0.6785	16.9
dic	7	2460651.75	16	46	38.69	-20	37	12.70	0.6811	16.8
dic	8	2460652.75	16	41	13.56	-20	11	0.95	0.6868	16.7
dic	9	2460653.75	16	36	13.70	-19	47	0.01	0.6956	16.6
dic	10	2460654.75	16	31	47.40	-19	25	49.05	0.7071	16.5
dic	11	2460655.75	16	28	0.75	-19	7	57.88	0.7211	16.5
dic	12	2460656.75	16	24	57.66	-18	53	45.51	0.7373	16.4
dic	13	2460657.75	16	22	39.97	-18	43	20.12	0.7553	16.4
dic	14	2460658.75	16	21	7.81	-18	36	40.22	0.7749	16.4
dic	15	2460659.75	16	20	19.99	-18	33	36.47	0.7956	16.3
dic	16	2460660.75	16	20	14.39	-18	33	53.77	0.8173	16.3
dic	17	2460661.75	16	20	48.28	-18	37	13.25	0.8396	16.3
dic	18	2460662.75	16	21	58.62	-18	43	13.99	0.8622	16.4
dic	19	2460663.75	16	23	42.27	-18	51	34.35	0.8851	16.4
dic	20	2460664.75	16	25	56.14	-19	1	52.95	0.9080	16.4
dic	21	2460665.75	16	28	37.26	-19	13	49.36	0.9308	16.5
dic	22	2460666.75	16	31	42.88	-19	27	4.50	0.9533	16.5
dic	23	2460667.75	16	35	10.47	-19	41	20.82	0.9755	16.6
dic	24	2460668.75	16	38	57.73	-19	56	22.41	0.9973	16.6
dic	25	2460669.75	16	43	2.62	-20	11	54.99	1.0187	16.7
dic	26	2460670.75	16	47	23.29	-20	27	45.79	1.0395	16.8
dic	27	2460671.75	16	51	58.13	-20	43	43.46	1.0598	16.9
dic	28	2460672.75	16	56	45.68	-20	59	37.96	1.0794	16.9
dic	29	2460673.75	17	1	44.68	-21	15	20.41	1.0985	17.0
dic	30	2460674.75	17	6	53.99	-21	30	42.96	1.1170	17.1
dic	31	2460675.75	17	12	12.63	-21	45	38.67	1.1349	17.2
ene	1	2460676.75	17	17	39.71	-22	0	1.41	1.1522	17.3
ene	2	2460677.75	17	23	5.29	-22	13	25.21	1.1585	17.4

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
ene	1	2460310.75	16	5	3.37	-18	50	6.00	1.1835	16.1
ene	2	2460311.75	16	10	5.05	-19	5	34.55	1.1897	16.2
ene	3	2460312.75	16	15	7.90	-19	20	33.94	1.1960	16.3
ene	4	2460313.75	16	20	11.89	-19	35	3.46	1.2022	16.3
ene	5	2460314.75	16	25	17.01	-19	49	2.42	1.2084	16.4
ene	6	2460315.75	16	30	23.23	-20	2	30.15	1.2145	16.5
ene	7	2460316.75	16	35	30.52	-20	15	26.01	1.2206	16.6
ene	8	2460317.75	16	40	38.86	-20	27	49.34	1.2267	16.7
ene	9	2460318.75	16	45	48.21	-20	39	39.55	1.2328	16.8
ene	10	2460319.75	16	50	58.54	-20	50	56.02	1.2388	16.8
ene	11	2460320.75	16	56	9.80	-21	1	38.20	1.2448	16.9
ene	12	2460321.75	17	1	21.96	-21	11	45.51	1.2507	17.0
ene	13	2460322.75	17	6	34.96	-21	21	17.42	1.2567	17.1
ene	14	2460323.75	17	11	48.77	-21	30	13.40	1.2626	17.2
ene	15	2460324.75	17	17	3.35	-21	38	32.99	1.2684	17.3
ene	16	2460325.75	17	22	18.65	-21	46	15.71	1.2743	17.4
ene	17	2460326.75	17	27	34.63	-21	53	21.16	1.2801	17.5
ene	18	2460327.75	17	32	51.24	-21	59	48.95	1.2859	17.5
ene	19	2460328.75	17	38	8.45	-22	5	38.73	1.2916	17.6
ene	20	2460329.75	17	43	26.21	-22	10	50.18	1.2973	17.7
ene	21	2460330.75	17	48	44.46	-22	15	22.98	1.3030	17.8
ene	22	2460331.75	17	54	3.16	-22	19	16.85	1.3087	17.9
ene	23	2460332.75	17	59	22.25	-22	22	31.55	1.3143	18.0
ene	24	2460333.75	18	4	41.69	-22	25	6.84	1.3199	18.1
ene	25	2460334.75	18	10	1.42	-22	27	2.51	1.3255	18.2
ene	26	2460335.75	18	15	21.39	-22	28	18.38	1.3310	18.3
ene	27	2460336.75	18	20	41.53	-22	28	54.29	1.3366	18.3
ene	28	2460337.75	18	26	1.81	-22	28	50.13	1.3420	18.4
ene	29	2460338.75	18	31	22.16	-22	28	5.80	1.3475	18.5
ene	30	2460339.75	18	36	42.52	-22	26	41.24	1.3529	18.6
ene	31	2460340.75	18	42	2.86	-22	24	36.42	1.3583	18.7
feb	1	2460341.75	18	47	23.10	-22	21	51.35	1.3637	18.8
feb	2	2460342.75	18	52	43.19	-22	18	26.07	1.3690	18.9
feb	3	2460343.75	18	58	3.09	-22	14	20.66	1.3743	19.0
feb	4	2460344.75	19	3	22.73	-22	9	35.21	1.3795	19.1
feb	5	2460345.75	19	8	42.06	-22	4	9.88	1.3848	19.1
feb	6	2460346.75	19	14	1.03	-21	58	4.85	1.3900	19.2
feb	7	2460347.75	19	19	19.58	-21	51	20.32	1.3951	19.3
feb	8	2460348.75	19	24	37.65	-21	43	56.52	1.4002	19.4
feb	9	2460349.75	19	29	55.20	-21	35	53.73	1.4053	19.5
feb	10	2460350.75	19	35	12.16	-21	27	12.24	1.4104	19.6
feb	11	2460351.75	19	40	28.49	-21	17	52.35	1.4154	19.7
feb	12	2460352.75	19	45	44.14	-21	7	54.40	1.4204	19.8
feb	13	2460353.75	19	50	59.08	-20	57	18.77	1.4254	19.8
feb	14	2460354.75	19	56	13.27	-20	46	5.85	1.4303	19.9
feb	15	2460355.75	20	1	26.66	-20	34	16.06	1.4352	20.0
feb	16	2460356.75	20	6	39.23	-20	21	49.86	1.4401	20.1
feb	17	2460357.75	20	11	50.95	-20	8	47.73	1.4449	20.2
feb	18	2460358.75	20	17	1.78	-19	55	10.15	1.4497	20.3

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Efemérides a las 0^h del meridiano 90° W.G.

mes	dia	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
feb	19	2460359.75	20	22	11.69	-19	40	57.62	1.4545	20.4
feb	20	2460360.75	20	27	20.67	-19	26	10.65	1.4592	20.5
feb	21	2460361.75	20	32	28.69	-19	10	49.78	1.4639	20.5
feb	22	2460362.75	20	37	35.72	-18	54	55.55	1.4686	20.6
feb	23	2460363.75	20	42	41.76	-18	38	28.50	1.4732	20.7
feb	24	2460364.75	20	47	46.78	-18	21	29.21	1.4778	20.8
feb	25	2460365.75	20	52	50.77	-18	3	58.26	1.4824	20.9
feb	26	2460366.75	20	57	53.73	-17	45	56.22	1.4870	21.0
feb	27	2460367.75	21	2	55.64	-17	27	23.72	1.4915	21.0
feb	28	2460368.75	21	7	56.50	-17	8	21.36	1.4960	21.1
feb	29	2460369.75	21	12	56.30	-16	48	49.77	1.5004	21.2
mar	1	2460370.75	21	17	55.05	-16	28	49.60	1.5048	21.3
mar	2	2460371.75	21	22	52.74	-16	8	21.51	1.5092	21.4
mar	3	2460372.75	21	27	49.38	-15	47	26.15	1.5135	21.5
mar	4	2460373.75	21	32	44.96	-15	26	4.22	1.5178	21.5
mar	5	2460374.75	21	37	39.50	-15	4	16.40	1.5221	21.6
mar	6	2460375.75	21	42	32.99	-14	42	3.40	1.5263	21.7
mar	7	2460376.75	21	47	25.43	-14	19	25.92	1.5305	21.8
mar	8	2460377.75	21	52	16.85	-13	56	24.68	1.5347	21.9
mar	9	2460378.75	21	57	7.23	-13	33	0.41	1.5388	22.0
mar	10	2460379.75	22	1	56.61	-13	9	13.81	1.5429	22.0
mar	11	2460380.75	22	6	44.98	-12	45	5.61	1.5470	22.1
mar	12	2460381.75	22	11	32.37	-12	20	36.52	1.5510	22.2
mar	13	2460382.75	22	16	18.79	-11	55	47.28	1.5550	22.3
mar	14	2460383.75	22	21	4.28	-11	30	38.61	1.5589	22.4
mar	15	2460384.75	22	25	48.85	-11	5	11.24	1.5628	22.4
mar	16	2460385.75	22	30	32.52	-10	39	25.91	1.5667	22.5
mar	17	2460386.75	22	35	15.31	-10	13	23.35	1.5705	22.6
mar	18	2460387.75	22	39	57.27	-9	47	4.27	1.5743	22.7
mar	19	2460388.75	22	44	38.40	-9	20	29.39	1.5781	22.7
mar	20	2460389.75	22	49	18.74	-8	53	39.42	1.5818	22.8
mar	21	2460390.75	22	53	58.32	-8	26	35.07	1.5855	22.9
mar	22	2460391.75	22	58	37.18	-7	59	17.04	1.5891	23.0
mar	23	2460392.75	23	3	15.34	-7	31	46.02	1.5928	23.1
mar	24	2460393.75	23	7	52.85	-7	4	2.72	1.5963	23.1
mar	25	2460394.75	23	12	29.73	-6	36	7.83	1.5999	23.2
mar	26	2460395.75	23	17	6.02	-6	8	2.04	1.6034	23.3
mar	27	2460396.75	23	21	41.77	-5	39	46.05	1.6068	23.4
mar	28	2460397.75	23	26	17.00	-5	11	20.54	1.6103	23.4
mar	29	2460398.75	23	30	51.77	-4	42	46.21	1.6137	23.5
mar	30	2460399.75	23	35	26.10	-4	14	3.76	1.6170	23.6
mar	31	2460400.75	23	40	0.03	-3	45	13.89	1.6203	23.7
abr	1	2460401.75	23	44	33.60	-3	16	17.31	1.6236	23.7
abr	2	2460402.75	23	49	6.85	-2	47	14.73	1.6268	23.8
abr	3	2460403.75	23	53	39.81	-2	18	6.86	1.6300	23.9
abr	4	2460404.75	23	58	12.52	-1	48	54.43	1.6331	24.0
abr	5	2460405.75	0	2	45.03	-1	19	38.14	1.6362	0.0
abr	6	2460406.75	0	7	17.35	-0	50	18.73	1.6393	0.1

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	'	δ "	"	dis UA	hp h
abr	7	2460407.75	0	11	49.54	-0	20	56.91	1.6423	0.2
abr	8	2460408.75	0	16	21.63	+0	8	26.60	1.6453	0.3
abr	9	2460409.75	0	20	53.67	+0	37	51.10	1.6482	0.3
abr	10	2460410.75	0	25	25.69	+1	7	15.87	1.6511	0.4
abr	11	2460411.75	0	29	57.73	+1	36	40.19	1.6540	0.5
abr	12	2460412.75	0	34	29.82	+2	6	3.34	1.6568	0.6
abr	13	2460413.75	0	39	2.02	+2	35	24.60	1.6595	0.7
abr	14	2460414.75	0	43	34.34	+3	4	43.27	1.6622	0.7
abr	15	2460415.75	0	48	6.84	+3	33	58.62	1.6649	0.8
abr	16	2460416.75	0	52	39.55	+4	3	9.95	1.6675	0.9
abr	17	2460417.75	0	57	12.52	+4	32	16.56	1.6701	1.0
abr	18	2460418.75	1	1	45.77	+5	1	17.75	1.6726	1.0
abr	19	2460419.75	1	6	19.36	+5	30	12.82	1.6751	1.1
abr	20	2460420.75	1	10	53.32	+5	59	1.07	1.6775	1.2
abr	21	2460421.75	1	15	27.69	+6	27	41.81	1.6799	1.3
abr	22	2460422.75	1	20	2.52	+6	56	14.36	1.6823	1.3
abr	23	2460423.75	1	24	37.84	+7	24	38.00	1.6846	1.4
abr	24	2460424.75	1	29	13.70	+7	52	52.06	1.6868	1.5
abr	25	2460425.75	1	33	50.12	+8	20	55.83	1.6891	1.6
abr	26	2460426.75	1	38	27.16	+8	48	48.61	1.6912	1.6
abr	27	2460427.75	1	43	4.85	+9	16	29.69	1.6933	1.7
abr	28	2460428.75	1	47	43.22	+9	43	58.37	1.6954	1.8
abr	29	2460429.75	1	52	22.31	+10	11	13.92	1.6974	1.9
abr	30	2460430.75	1	57	2.14	+10	38	15.62	1.6994	2.0
may	1	2460431.75	2	1	42.76	+11	5	2.73	1.7013	2.0
may	2	2460432.75	2	6	24.18	+11	31	34.52	1.7032	2.1
may	3	2460433.75	2	11	6.45	+11	57	50.23	1.7051	2.2
may	4	2460434.75	2	15	49.59	+12	23	49.13	1.7068	2.3
may	5	2460435.75	2	20	33.62	+12	49	30.47	1.7086	2.3
may	6	2460436.75	2	25	18.57	+13	14	53.50	1.7102	2.4
may	7	2460437.75	2	30	4.48	+13	39	57.50	1.7118	2.5
may	8	2460438.75	2	34	51.36	+14	4	41.71	1.7134	2.6
may	9	2460439.75	2	39	39.22	+14	29	5.41	1.7149	2.7
may	10	2460440.75	2	44	28.10	+14	53	7.83	1.7164	2.7
may	11	2460441.75	2	49	18.00	+15	16	48.25	1.7178	2.8
may	12	2460442.75	2	54	8.93	+15	40	5.91	1.7191	2.9
may	13	2460443.75	2	59	0.92	+16	3	0.08	1.7204	3.0
may	14	2460444.75	3	3	53.97	+16	25	30.02	1.7217	3.1
may	15	2460445.75	3	8	48.10	+16	47	35.00	1.7229	3.1
may	16	2460446.75	3	13	43.31	+17	9	14.30	1.7240	3.2
may	17	2460447.75	3	18	39.62	+17	30	27.22	1.7251	3.3
may	18	2460448.75	3	23	37.03	+17	51	13.04	1.7261	3.4
may	19	2460449.75	3	28	35.55	+18	11	31.07	1.7271	3.5
may	20	2460450.75	3	33	35.18	+18	31	20.63	1.7280	3.6
may	21	2460451.75	3	38	35.93	+18	50	41.02	1.7289	3.6
may	22	2460452.75	3	43	37.80	+19	9	31.57	1.7297	3.7
may	23	2460453.75	3	48	40.78	+19	27	51.64	1.7305	3.8
may	24	2460454.75	3	53	44.87	+19	45	40.55	1.7312	3.9
may	25	2460455.75	3	58	50.06	+20	2	57.66	1.7318	4.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	dia	dj	h	α m	s	°	δ -	"	dis UA	hp h
may	26	2460456.75	4	3	56.34	+20	19	42.33	1.7324	4.1
may	27	2460457.75	4	9	3.69	+20	35	53.93	1.7330	4.2
may	28	2460458.75	4	14	12.11	+20	51	31.81	1.7335	4.2
may	29	2460459.75	4	19	21.56	+21	6	35.35	1.7339	4.3
may	30	2460460.75	4	24	32.03	+21	21	3.95	1.7343	4.4
may	31	2460461.75	4	29	43.50	+21	34	56.99	1.7346	4.5
jun	1	2460462.75	4	34	55.94	+21	48	13.89	1.7348	4.6
jun	2	2460463.75	4	40	9.32	+22	0	54.09	1.7350	4.7
jun	3	2460464.75	4	45	23.61	+22	12	57.01	1.7352	4.8
jun	4	2460465.75	4	50	38.75	+22	24	21.49	1.7353	4.8
jun	5	2460466.75	4	55	54.94	+22	35	9.41	1.7353	4.9
jun	6	2460467.75	5	1	11.71	+22	45	17.93	1.7352	5.0
jun	7	2460468.75	5	6	29.27	+22	54	47.13	1.7351	5.1
jun	8	2460469.75	5	11	47.55	+23	3	36.76	1.7350	5.2
jun	9	2460470.75	5	17	6.48	+23	11	46.42	1.7348	5.3
jun	10	2460471.75	5	22	26.03	+23	19	15.72	1.7345	5.4
jun	11	2460472.75	5	27	46.13	+23	26	4.31	1.7342	5.5
jun	12	2460473.75	5	33	6.74	+23	32	11.87	1.7338	5.6
jun	13	2460474.75	5	38	27.79	+23	37	38.10	1.7333	5.6
jun	14	2460475.75	5	43	49.25	+23	42	22.73	1.7328	5.7
jun	15	2460476.75	5	49	11.05	+23	46	25.54	1.7322	5.8
jun	16	2460477.75	5	54	33.14	+23	49	46.32	1.7316	5.9
jun	17	2460478.75	5	59	55.47	+23	52	24.91	1.7309	6.0
jun	18	2460479.75	6	5	17.97	+23	54	21.16	1.7301	6.1
jun	19	2460480.75	6	10	40.60	+23	55	34.99	1.7293	6.2
jun	20	2460481.75	6	16	3.29	+23	56	6.31	1.7285	6.3
jun	21	2460482.75	6	21	25.99	+23	55	55.08	1.7276	6.4
jun	22	2460483.75	6	26	48.64	+23	55	1.30	1.7266	6.4
jun	23	2460484.75	6	32	11.18	+23	53	24.96	1.7255	6.5
jun	24	2460485.75	6	37	33.55	+23	51	6.12	1.7244	6.6
jun	25	2460486.75	6	42	55.69	+23	48	4.83	1.7233	6.7
jun	26	2460487.75	6	48	17.55	+23	44	21.18	1.7221	6.8
jun	27	2460488.75	6	53	39.08	+23	39	55.27	1.7208	6.9
jun	28	2460489.75	6	59	0.21	+23	34	47.25	1.7195	7.0
jun	29	2460490.75	7	4	20.90	+23	28	57.29	1.7181	7.1
jun	30	2460491.75	7	9	41.09	+23	22	25.62	1.7166	7.2
jul	1	2460492.75	7	15	0.74	+23	15	12.47	1.7151	7.3
jul	2	2460493.75	7	20	19.79	+23	7	18.13	1.7136	7.3
jul	3	2460494.75	7	25	38.19	+22	58	42.92	1.7119	7.4
jul	4	2460495.75	7	30	55.89	+22	49	27.18	1.7102	7.5
jul	5	2460496.75	7	36	12.83	+22	39	31.28	1.7085	7.6
jul	6	2460497.75	7	41	28.98	+22	28	55.62	1.7067	7.7
jul	7	2460498.75	7	46	44.27	+22	17	40.61	1.7048	7.8
jul	8	2460499.75	7	51	58.68	+22	5	46.69	1.7029	7.9
jul	9	2460500.75	7	57	12.16	+21	53	14.31	1.7009	8.0
jul	10	2460501.75	8	2	24.66	+21	40	3.96	1.6989	8.0
jul	11	2460502.75	8	7	36.17	+21	26	16.14	1.6968	8.1
jul	12	2460503.75	8	12	46.64	+21	11	51.37	1.6947	8.2

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	'	δ "	"	dis UA	hp h
jul	13	2460504.75	8	17	56.05	+20	56	50.19	1.6924	8.3
jul	14	2460505.75	8	23	4.38	+20	41	13.17	1.6902	8.4
jul	15	2460506.75	8	28	11.59	+20	25	0.89	1.6879	8.5
jul	16	2460507.75	8	33	17.68	+20	8	13.95	1.6855	8.6
jul	17	2460508.75	8	38	22.62	+19	50	52.95	1.6830	8.6
jul	18	2460509.75	8	43	26.39	+19	32	58.53	1.6806	8.7
jul	19	2460510.75	8	48	28.99	+19	14	31.32	1.6780	8.8
jul	20	2460511.75	8	53	30.41	+18	55	31.98	1.6754	8.9
jul	21	2460512.75	8	58	30.63	+18	36	1.15	1.6728	9.0
jul	22	2460513.75	9	3	29.64	+18	15	59.49	1.6701	9.1
jul	23	2460514.75	9	8	27.45	+17	55	27.67	1.6673	9.1
jul	24	2460515.75	9	13	24.07	+17	34	26.32	1.6645	9.2
jul	25	2460516.75	9	18	19.48	+17	12	56.12	1.6616	9.3
jul	26	2460517.75	9	23	13.70	+16	50	57.72	1.6587	9.4
jul	27	2460518.75	9	28	6.74	+16	28	31.80	1.6558	9.5
jul	28	2460519.75	9	32	58.61	+16	5	39.05	1.6527	9.5
jul	29	2460520.75	9	37	49.32	+15	42	20.18	1.6497	9.6
jul	30	2460521.75	9	42	38.88	+15	18	35.90	1.6465	9.7
jul	31	2460522.75	9	47	27.30	+14	54	26.94	1.6434	9.8
ago	1	2460523.75	9	52	14.60	+14	29	54.03	1.6401	9.9
ago	2	2460524.75	9	57	0.79	+14	4	57.91	1.6369	10.0
ago	3	2460525.75	10	1	45.89	+13	39	39.31	1.6335	10.0
ago	4	2460526.75	10	6	29.90	+13	13	58.98	1.6302	10.1
ago	5	2460527.75	10	11	12.86	+12	47	57.65	1.6267	10.2
ago	6	2460528.75	10	15	54.78	+12	21	36.05	1.6233	10.3
ago	7	2460529.75	10	20	35.69	+11	54	54.93	1.6197	10.3
ago	8	2460530.75	10	25	15.61	+11	27	55.01	1.6161	10.4
ago	9	2460531.75	10	29	54.56	+11	0	37.04	1.6125	10.5
ago	10	2460532.75	10	34	32.59	+10	33	1.75	1.6088	10.6
ago	11	2460533.75	10	39	9.71	+10	5	9.87	1.6051	10.7
ago	12	2460534.75	10	43	45.96	+9	37	2.15	1.6013	10.7
ago	13	2460535.75	10	48	21.37	+9	8	39.31	1.5975	10.8
ago	14	2460536.75	10	52	55.97	+8	40	2.09	1.5936	10.9
ago	15	2460537.75	10	57	29.79	+8	11	11.23	1.5897	11.0
ago	16	2460538.75	11	2	2.88	+7	42	7.45	1.5858	11.0
ago	17	2460539.75	11	6	35.25	+7	12	51.50	1.5818	11.1
ago	18	2460540.75	11	11	6.96	+6	43	24.08	1.5777	11.2
ago	19	2460541.75	11	15	38.02	+6	13	45.91	1.5736	11.3
ago	20	2460542.75	11	20	8.50	+5	43	57.70	1.5695	11.3
ago	21	2460543.75	11	24	38.41	+5	14	0.14	1.5653	11.4
ago	22	2460544.75	11	29	7.82	+4	43	53.89	1.5611	11.5
ago	23	2460545.75	11	33	36.76	+4	13	39.64	1.5568	11.6
ago	24	2460546.75	11	38	5.28	+3	43	18.06	1.5525	11.6
ago	25	2460547.75	11	42	33.42	+3	12	49.83	1.5482	11.7
ago	26	2460548.75	11	47	1.22	+2	42	15.66	1.5438	11.8
ago	27	2460549.75	11	51	28.73	+2	11	36.26	1.5394	11.9
ago	28	2460550.75	11	55	55.99	+1	40	52.32	1.5349	11.9
ago	29	2460551.75	12	0	23.03	+1	10	4.58	1.5304	12.0
ago	30	2460552.75	12	4	49.90	+0	39	13.74	1.5259	12.1

Venus, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	dia	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
ago	31	2460553.75	12	9	16.63	+0	8	20.53	1.5213	12.2
sep	1	2460554.75	12	13	43.27	-0	22	34.33	1.5167	12.2
sep	2	2460555.75	12	18	9.86	-0	53	30.12	1.5120	12.3
sep	3	2460556.75	12	22	36.44	-1	24	26.13	1.5073	12.4
sep	4	2460557.75	12	27	3.05	-1	55	21.63	1.5026	12.5
sep	5	2460558.75	12	31	29.73	-2	26	15.90	1.4978	12.5
sep	6	2460559.75	12	35	56.53	-2	57	8.23	1.4930	12.6
sep	7	2460560.75	12	40	23.48	-3	27	57.90	1.4881	12.7
sep	8	2460561.75	12	44	50.63	-3	58	44.17	1.4832	12.7
sep	9	2460562.75	12	49	18.02	-4	29	26.33	1.4783	12.8
sep	10	2460563.75	12	53	45.69	-5	0	3.64	1.4733	12.9
sep	11	2460564.75	12	58	13.67	-5	30	35.38	1.4683	13.0
sep	12	2460565.75	13	2	42.01	-6	1	0.82	1.4633	13.0
sep	13	2460566.75	13	7	10.74	-6	31	19.21	1.4582	13.1
sep	14	2460567.75	13	11	39.90	-7	1	29.82	1.4531	13.2
sep	15	2460568.75	13	16	9.54	-7	31	31.92	1.4480	13.3
sep	16	2460569.75	13	20	39.68	-8	1	24.77	1.4428	13.3
sep	17	2460570.75	13	25	10.36	-8	31	7.65	1.4376	13.4
sep	18	2460571.75	13	29	41.64	-9	0	39.84	1.4323	13.5
sep	19	2460572.75	13	34	13.55	-9	30	0.63	1.4271	13.6
sep	20	2460573.75	13	38	46.13	-9	59	9.34	1.4218	13.6
sep	21	2460574.75	13	43	19.42	-10	28	5.26	1.4164	13.7
sep	22	2460575.75	13	47	53.47	-10	56	47.68	1.4111	13.8
sep	23	2460576.75	13	52	28.31	-11	25	15.87	1.4057	13.9
sep	24	2460577.75	13	57	3.97	-11	53	29.09	1.4003	14.0
sep	25	2460578.75	14	1	40.49	-12	21	26.60	1.3948	14.0
sep	26	2460579.75	14	6	17.89	-12	49	7.64	1.3893	14.1
sep	27	2460580.75	14	10	56.21	-13	16	31.44	1.3838	14.2
sep	28	2460581.75	14	15	35.47	-13	43	37.24	1.3783	14.3
sep	29	2460582.75	14	20	15.71	-14	10	24.27	1.3727	14.3
sep	30	2460583.75	14	24	56.94	-14	36	51.75	1.3671	14.4
oct	1	2460584.75	14	29	39.20	-15	2	58.92	1.3615	14.5
oct	2	2460585.75	14	34	22.50	-15	28	45.00	1.3558	14.6
oct	3	2460586.75	14	39	6.87	-15	54	9.22	1.3502	14.7
oct	4	2460587.75	14	43	52.32	-16	19	10.82	1.3444	14.7
oct	5	2460588.75	14	48	38.88	-16	43	49.01	1.3387	14.8
oct	6	2460589.75	14	53	26.56	-17	8	3.03	1.3329	14.9
oct	7	2460590.75	14	58	15.36	-17	31	52.11	1.3271	15.0
oct	8	2460591.75	15	3	5.30	-17	55	15.49	1.3213	15.1
oct	9	2460592.75	15	7	56.39	-18	18	12.39	1.3154	15.1
oct	10	2460593.75	15	12	48.62	-18	40	42.06	1.3096	15.2
oct	11	2460594.75	15	17	42.01	-19	2	43.72	1.3036	15.3
oct	12	2460595.75	15	22	36.54	-19	24	16.63	1.2977	15.4
oct	13	2460596.75	15	27	32.21	-19	45	20.04	1.2917	15.5
oct	14	2460597.75	15	32	29.03	-20	5	53.20	1.2858	15.5
oct	15	2460598.75	15	37	26.98	-20	25	55.38	1.2797	15.6
oct	16	2460599.75	15	42	26.07	-20	45	25.87	1.2737	15.7
oct	17	2460600.75	15	47	26.27	-21	4	24.00	1.2676	15.8

Venus, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
oct	18	2460601.75	15	52	27.60	-21	22	49.09	1.2615	15.9
oct	19	2460602.75	15	57	30.03	-21	40	40.50	1.2554	16.0
oct	20	2460603.75	16	2	33.56	-21	57	57.59	1.2493	16.0
oct	21	2460604.75	16	7	38.15	-22	14	39.72	1.2432	16.1
oct	22	2460605.75	16	12	43.80	-22	30	46.25	1.2370	16.2
oct	23	2460606.75	16	17	50.46	-22	46	16.55	1.2308	16.3
oct	24	2460607.75	16	22	58.13	-23	1	10.01	1.2246	16.4
oct	25	2460608.75	16	28	6.75	-23	15	26.02	1.2183	16.5
oct	26	2460609.75	16	33	16.31	-23	29	3.99	1.2120	16.6
oct	27	2460610.75	16	38	26.75	-23	42	3.37	1.2058	16.6
oct	28	2460611.75	16	43	38.05	-23	54	23.59	1.1994	16.7
oct	29	2460612.75	16	48	50.16	-24	6	4.14	1.1931	16.8
oct	30	2460613.75	16	54	3.02	-24	17	4.52	1.1868	16.9
oct	31	2460614.75	16	59	16.60	-24	27	24.27	1.1804	17.0
nov	1	2460615.75	17	4	30.84	-24	37	2.93	1.1740	17.1
nov	2	2460616.75	17	9	45.68	-24	46	0.09	1.1676	17.2
nov	3	2460617.75	17	15	1.06	-24	54	15.37	1.1611	17.3
nov	4	2460618.75	17	20	16.93	-25	1	48.42	1.1546	17.3
nov	5	2460619.75	17	25	33.21	-25	8	38.90	1.1481	17.4
nov	6	2460620.75	17	30	49.85	-25	14	46.53	1.1416	17.5
nov	7	2460621.75	17	36	6.76	-25	20	11.03	1.1351	17.6
nov	8	2460622.75	17	41	23.87	-25	24	52.18	1.1285	17.7
nov	9	2460623.75	17	46	41.12	-25	28	49.78	1.1220	17.8
nov	10	2460624.75	17	51	58.42	-25	32	3.66	1.1154	17.9
nov	11	2460625.75	17	57	15.71	-25	34	33.68	1.1087	18.0
nov	12	2460626.75	18	2	32.91	-25	36	19.76	1.1021	18.0
nov	13	2460627.75	18	7	49.94	-25	37	21.83	1.0954	18.1
nov	14	2460628.75	18	13	6.75	-25	37	39.91	1.0888	18.2
nov	15	2460629.75	18	18	23.25	-25	37	14.00	1.0821	18.3
nov	16	2460630.75	18	23	39.38	-25	36	4.20	1.0753	18.4
nov	17	2460631.75	18	28	55.06	-25	34	10.60	1.0686	18.5
nov	18	2460632.75	18	34	10.23	-25	31	33.34	1.0619	18.6
nov	19	2460633.75	18	39	24.81	-25	28	12.56	1.0551	18.7
nov	20	2460634.75	18	44	38.74	-25	24	8.46	1.0483	18.7
nov	21	2460635.75	18	49	51.94	-25	19	21.23	1.0415	18.8
nov	22	2460636.75	18	55	4.35	-25	13	51.11	1.0347	18.9
nov	23	2460637.75	19	0	15.89	-25	7	38.37	1.0278	19.0
nov	24	2460638.75	19	5	26.52	-25	0	43.31	1.0210	19.1
nov	25	2460639.75	19	10	36.15	-24	53	6.27	1.0141	19.2
nov	26	2460640.75	19	15	44.74	-24	44	47.60	1.0072	19.3
nov	27	2460641.75	19	20	52.21	-24	35	47.72	1.0003	19.3
nov	28	2460642.75	19	25	58.50	-24	26	7.04	0.9934	19.4
nov	29	2460643.75	19	31	3.57	-24	15	46.04	0.9864	19.5
nov	30	2460644.75	19	36	7.34	-24	4	45.20	0.9795	19.6
dic	1	2460645.75	19	41	9.76	-23	53	5.05	0.9725	19.7
dic	2	2460646.75	19	46	10.77	-23	40	46.13	0.9655	19.8
dic	3	2460647.75	19	51	10.32	-23	27	49.04	0.9585	19.9
dic	4	2460648.75	19	56	8.35	-23	14	14.36	0.9514	19.9
dic	5	2460649.75	20	1	4.82	-23	0	2.74	0.9444	20.0

Venus, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	dia	dj	h	α m	s	°	δ '	"	dis UA	hp h
dic	6	2460650.75	20	5	59.66	-22	45	14.80	0.9373	20.1
dic	7	2460651.75	20	10	52.84	-22	29	51.23	0.9303	20.2
dic	8	2460652.75	20	15	44.30	-22	13	52.69	0.9232	20.3
dic	9	2460653.75	20	20	34.00	-21	57	19.90	0.9160	20.3
dic	10	2460654.75	20	25	21.91	-21	40	13.58	0.9089	20.4
dic	11	2460655.75	20	30	7.99	-21	22	34.45	0.9018	20.5
dic	12	2460656.75	20	34	52.21	-21	4	23.28	0.8946	20.6
dic	13	2460657.75	20	39	34.55	-20	45	40.82	0.8874	20.7
dic	14	2460658.75	20	44	14.96	-20	26	27.87	0.8803	20.7
dic	15	2460659.75	20	48	53.43	-20	6	45.21	0.8731	20.8
dic	16	2460660.75	20	53	29.94	-19	46	33.61	0.8658	20.9
dic	17	2460661.75	20	58	4.46	-19	25	53.87	0.8586	21.0
dic	18	2460662.75	21	2	36.98	-19	4	46.76	0.8514	21.0
dic	19	2460663.75	21	7	7.48	-18	43	13.06	0.8441	21.1
dic	20	2460664.75	21	11	35.95	-18	21	13.54	0.8369	21.2
dic	21	2460665.75	21	16	2.38	-17	58	49.00	0.8296	21.3
dic	22	2460666.75	21	20	26.75	-17	36	0.21	0.8223	21.3
dic	23	2460667.75	21	24	49.06	-17	12	47.99	0.8151	21.4
dic	24	2460668.75	21	29	9.30	-16	49	13.13	0.8078	21.5
dic	25	2460669.75	21	33	27.45	-16	25	16.44	0.8005	21.6
dic	26	2460670.75	21	37	43.51	-16	0	58.75	0.7931	21.6
dic	27	2460671.75	21	41	57.47	-15	36	20.86	0.7858	21.7
dic	28	2460672.75	21	46	9.32	-15	11	23.62	0.7785	21.8
dic	29	2460673.75	21	50	19.05	-14	46	7.87	0.7711	21.8
dic	30	2460674.75	21	54	26.65	-14	20	34.44	0.7638	21.9
dic	31	2460675.75	21	58	32.10	-13	54	44.20	0.7564	22.0
ene	1	2460676.75	22	2	35.38	-13	28	38.02	0.7491	22.0
ene	2	2460677.75	22	6	32.36	-13	2	46.34	0.7355	22.1

Marte, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
ene	1	2460310.75	17	49	1.73	-23	58	2.94	2.4230	17.8
ene	2	2460311.75	17	52	16.55	-23	59	21.31	2.4200	17.9
ene	3	2460312.75	17	55	31.63	-24	0	24.57	2.4169	17.9
ene	4	2460313.75	17	58	46.95	-24	1	12.65	2.4138	18.0
ene	5	2460314.75	18	2	2.51	-24	1	45.51	2.4107	18.0
ene	6	2460315.75	18	5	18.29	-24	2	3.09	2.4075	18.1
ene	7	2460316.75	18	8	34.27	-24	2	5.34	2.4043	18.1
ene	8	2460317.75	18	11	50.45	-24	1	52.23	2.4011	18.2
ene	9	2460318.75	18	15	6.80	-24	1	23.73	2.3979	18.3
ene	10	2460319.75	18	18	23.31	-24	0	39.81	2.3946	18.3
ene	11	2460320.75	18	21	39.96	-23	59	40.46	2.3913	18.4
ene	12	2460321.75	18	24	56.73	-23	58	25.65	2.3880	18.4
ene	13	2460322.75	18	28	13.60	-23	56	55.35	2.3847	18.5
ene	14	2460323.75	18	31	30.55	-23	55	9.54	2.3814	18.5
ene	15	2460324.75	18	34	47.57	-23	53	8.20	2.3780	18.6
ene	16	2460325.75	18	38	4.64	-23	50	51.32	2.3746	18.6
ene	17	2460326.75	18	41	21.76	-23	48	18.90	2.3712	18.7
ene	18	2460327.75	18	44	38.90	-23	45	30.95	2.3678	18.7
ene	19	2460328.75	18	47	56.07	-23	42	27.50	2.3643	18.8
ene	20	2460329.75	18	51	13.23	-23	39	8.57	2.3609	18.9
ene	21	2460330.75	18	54	30.39	-23	35	34.20	2.3574	18.9
ene	22	2460331.75	18	57	47.52	-23	31	44.42	2.3539	19.0
ene	23	2460332.75	19	1	4.62	-23	27	39.26	2.3504	19.0
ene	24	2460333.75	19	4	21.67	-23	23	18.76	2.3469	19.1
ene	25	2460334.75	19	7	38.66	-23	18	42.95	2.3433	19.1
ene	26	2460335.75	19	10	55.57	-23	13	51.87	2.3398	19.2
ene	27	2460336.75	19	14	12.39	-23	8	45.55	2.3362	19.2
ene	28	2460337.75	19	17	29.12	-23	3	24.04	2.3326	19.3
ene	29	2460338.75	19	20	45.73	-22	57	47.37	2.3290	19.3
ene	30	2460339.75	19	24	2.23	-22	51	55.60	2.3254	19.4
ene	31	2460340.75	19	27	18.59	-22	45	48.79	2.3218	19.5
feb	1	2460341.75	19	30	34.81	-22	39	26.99	2.3182	19.5
feb	2	2460342.75	19	33	50.87	-22	32	50.28	2.3145	19.6
feb	3	2460343.75	19	37	6.78	-22	25	58.74	2.3109	19.6
feb	4	2460344.75	19	40	22.50	-22	18	52.44	2.3072	19.7
feb	5	2460345.75	19	43	38.04	-22	11	31.48	2.3035	19.7
feb	6	2460346.75	19	46	53.38	-22	3	55.96	2.2998	19.8
feb	7	2460347.75	19	50	8.51	-21	56	5.99	2.2961	19.8
feb	8	2460348.75	19	53	23.41	-21	48	1.67	2.2924	19.9
feb	9	2460349.75	19	56	38.07	-21	39	43.12	2.2887	19.9
feb	10	2460350.75	19	59	52.47	-21	31	10.44	2.2850	20.0
feb	11	2460351.75	20	3	6.60	-21	22	23.75	2.2812	20.1
feb	12	2460352.75	20	6	20.45	-21	13	23.13	2.2775	20.1
feb	13	2460353.75	20	9	34.01	-21	4	8.72	2.2737	20.2
feb	14	2460354.75	20	12	47.28	-20	54	40.63	2.2699	20.2
feb	15	2460355.75	20	16	0.24	-20	44	59.01	2.2661	20.3
feb	16	2460356.75	20	19	12.90	-20	35	3.98	2.2623	20.3
feb	17	2460357.75	20	22	25.24	-20	24	55.69	2.2586	20.4
feb	18	2460358.75	20	25	37.27	-20	14	34.30	2.2548	20.4

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
feb	19	2460359.75	20	28	48.96	-20	3	59.93	2.2509	20.5
feb	20	2460360.75	20	32	0.32	-19	53	12.74	2.2471	20.5
feb	21	2460361.75	20	35	11.34	-19	42	12.86	2.2433	20.6
feb	22	2460362.75	20	38	22.02	-19	31	0.43	2.2395	20.6
feb	23	2460363.75	20	41	32.34	-19	19	35.59	2.2357	20.7
feb	24	2460364.75	20	44	42.32	-19	7	58.47	2.2319	20.7
feb	25	2460365.75	20	47	51.94	-18	56	9.22	2.2280	20.8
feb	26	2460366.75	20	51	1.20	-18	44	7.98	2.2242	20.9
feb	27	2460367.75	20	54	10.10	-18	31	54.90	2.2204	20.9
feb	28	2460368.75	20	57	18.64	-18	19	30.11	2.2165	21.0
feb	29	2460369.75	21	0	26.82	-18	6	53.78	2.2127	21.0
mar	1	2460370.75	21	3	34.64	-17	54	6.07	2.2089	21.1
mar	2	2460371.75	21	6	42.09	-17	41	7.14	2.2050	21.1
mar	3	2460372.75	21	9	49.17	-17	27	57.15	2.2012	21.2
mar	4	2460373.75	21	12	55.89	-17	14	36.30	2.1973	21.2
mar	5	2460374.75	21	16	2.23	-17	1	4.75	2.1935	21.3
mar	6	2460375.75	21	19	8.19	-16	47	22.70	2.1896	21.3
mar	7	2460376.75	21	22	13.78	-16	33	30.34	2.1858	21.4
mar	8	2460377.75	21	25	18.97	-16	19	27.86	2.1819	21.4
mar	9	2460378.75	21	28	23.78	-16	5	15.44	2.1780	21.5
mar	10	2460379.75	21	31	28.20	-15	50	53.27	2.1742	21.5
mar	11	2460380.75	21	34	32.22	-15	36	21.53	2.1703	21.6
mar	12	2460381.75	21	37	35.85	-15	21	40.40	2.1664	21.6
mar	13	2460382.75	21	40	39.09	-15	6	50.08	2.1626	21.7
mar	14	2460383.75	21	43	41.94	-14	51	50.76	2.1587	21.7
mar	15	2460384.75	21	46	44.40	-14	36	42.65	2.1548	21.8
mar	16	2460385.75	21	49	46.48	-14	21	25.94	2.1510	21.8
mar	17	2460386.75	21	52	48.18	-14	6	0.83	2.1471	21.9
mar	18	2460387.75	21	55	49.49	-13	50	27.52	2.1432	21.9
mar	19	2460388.75	21	58	50.42	-13	34	46.19	2.1394	22.0
mar	20	2460389.75	22	1	50.98	-13	18	57.03	2.1355	22.0
mar	21	2460390.75	22	4	51.16	-13	3	0.22	2.1317	22.1
mar	22	2460391.75	22	7	50.97	-12	46	55.94	2.1278	22.1
mar	23	2460392.75	22	10	50.42	-12	30	44.37	2.1240	22.2
mar	24	2460393.75	22	13	49.51	-12	14	25.68	2.1201	22.2
mar	25	2460394.75	22	16	48.25	-11	58	0.05	2.1163	22.3
mar	26	2460395.75	22	19	46.65	-11	41	27.66	2.1124	22.3
mar	27	2460396.75	22	22	44.71	-11	24	48.69	2.1086	22.4
mar	28	2460397.75	22	25	42.43	-11	8	3.32	2.1048	22.4
mar	29	2460398.75	22	28	39.83	-10	51	11.73	2.1009	22.5
mar	30	2460399.75	22	31	36.91	-10	34	14.12	2.0971	22.5
mar	31	2460400.75	22	34	33.67	-10	17	10.68	2.0933	22.6
abr	1	2460401.75	22	37	30.12	-10	0	1.61	2.0895	22.6
abr	2	2460402.75	22	40	26.27	-9	42	47.11	2.0856	22.7
abr	3	2460403.75	22	43	22.10	-9	25	27.40	2.0818	22.7
abr	4	2460404.75	22	46	17.64	-9	8	2.68	2.0780	22.8
abr	5	2460405.75	22	49	12.88	-8	50	33.17	2.0742	22.8
abr	6	2460406.75	22	52	7.82	-8	32	59.06	2.0704	22.9

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
abr	7	2460407.75	22	55	2.46	-8	15	20.57	2.0665	22.9
abr	8	2460408.75	22	57	56.82	-7	57	37.89	2.0627	23.0
abr	9	2460409.75	23	0	50.90	-7	39	51.22	2.0589	23.0
abr	10	2460410.75	23	3	44.71	-7	22	0.78	2.0551	23.1
abr	11	2460411.75	23	6	38.25	-7	4	6.75	2.0513	23.1
abr	12	2460412.75	23	9	31.52	-6	46	9.37	2.0475	23.2
abr	13	2460413.75	23	12	24.54	-6	28	8.83	2.0437	23.2
abr	14	2460414.75	23	15	17.30	-6	10	5.34	2.0399	23.3
abr	15	2460415.75	23	18	9.81	-5	51	59.10	2.0361	23.3
abr	16	2460416.75	23	21	2.09	-5	33	50.30	2.0323	23.4
abr	17	2460417.75	23	23	54.12	-5	15	39.12	2.0285	23.4
abr	18	2460418.75	23	26	45.94	-4	57	25.75	2.0247	23.4
abr	19	2460419.75	23	29	37.53	-4	39	10.37	2.0209	23.5
abr	20	2460420.75	23	32	28.92	-4	20	53.14	2.0171	23.5
abr	21	2460421.75	23	35	20.10	-4	2	34.25	2.0133	23.6
abr	22	2460422.75	23	38	11.10	-3	44	13.86	2.0096	23.6
abr	23	2460423.75	23	41	1.91	-3	25	52.15	2.0058	23.7
abr	24	2460424.75	23	43	52.55	-3	7	29.29	2.0020	23.7
abr	25	2460425.75	23	46	43.04	-2	49	5.45	1.9982	23.8
abr	26	2460426.75	23	49	33.36	-2	30	40.80	1.9945	23.8
abr	27	2460427.75	23	52	23.54	-2	12	15.54	1.9907	23.9
abr	28	2460428.75	23	55	13.58	-1	53	49.84	1.9869	23.9
abr	29	2460429.75	23	58	3.49	-1	35	23.89	1.9832	24.0
abr	30	2460430.75	0	0	53.27	-1	16	57.89	1.9794	0.0
may	1	2460431.75	0	3	42.93	-0	58	32.04	1.9757	0.1
may	2	2460432.75	0	6	32.46	-0	40	6.54	1.9719	0.1
may	3	2460433.75	0	9	21.89	-0	21	41.57	1.9681	0.2
may	4	2460434.75	0	12	11.21	-0	3	17.35	1.9644	0.2
may	5	2460435.75	0	15	0.43	+0	15	5.95	1.9606	0.3
may	6	2460436.75	0	17	49.55	+0	33	28.12	1.9568	0.3
may	7	2460437.75	0	20	38.58	+0	51	48.99	1.9531	0.3
may	8	2460438.75	0	23	27.54	+1	10	8.35	1.9493	0.4
may	9	2460439.75	0	26	16.41	+1	28	26.02	1.9455	0.4
may	10	2460440.75	0	29	5.21	+1	46	41.80	1.9418	0.5
may	11	2460441.75	0	31	53.94	+2	4	55.50	1.9380	0.5
may	12	2460442.75	0	34	42.61	+2	23	6.92	1.9342	0.6
may	13	2460443.75	0	37	31.22	+2	41	15.88	1.9304	0.6
may	14	2460444.75	0	40	19.77	+2	59	22.21	1.9266	0.7
may	15	2460445.75	0	43	8.27	+3	17	25.74	1.9229	0.7
may	16	2460446.75	0	45	56.73	+3	35	26.30	1.9191	0.8
may	17	2460447.75	0	48	45.16	+3	53	23.73	1.9153	0.8
may	18	2460448.75	0	51	33.57	+4	11	17.88	1.9115	0.9
may	19	2460449.75	0	54	21.95	+4	29	8.60	1.9077	0.9
may	20	2460450.75	0	57	10.33	+4	46	55.72	1.9039	1.0
may	21	2460451.75	0	59	58.72	+5	4	39.11	1.9001	1.0
may	22	2460452.75	1	2	47.10	+5	22	18.62	1.8963	1.0
may	23	2460453.75	1	5	35.51	+5	39	54.09	1.8925	1.1
may	24	2460454.75	1	8	23.93	+5	57	25.38	1.8887	1.1
may	25	2460455.75	1	11	12.39	+6	14	52.32	1.8849	1.2

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
may	26	2460456.75	1	14	0.88	+6	32	14.77	1.8811	1.2
may	27	2460457.75	1	16	49.40	+6	49	32.55	1.8773	1.3
may	28	2460458.75	1	19	37.97	+7	6	45.49	1.8735	1.3
may	29	2460459.75	1	22	26.57	+7	23	53.43	1.8697	1.4
may	30	2460460.75	1	25	15.23	+7	40	56.18	1.8658	1.4
may	31	2460461.75	1	28	3.94	+7	57	53.57	1.8620	1.5
jun	1	2460462.75	1	30	52.70	+8	14	45.44	1.8581	1.5
jun	2	2460463.75	1	33	41.52	+8	31	31.63	1.8543	1.6
jun	3	2460464.75	1	36	30.40	+8	48	11.97	1.8504	1.6
jun	4	2460465.75	1	39	19.35	+9	4	46.30	1.8465	1.7
jun	5	2460466.75	1	42	8.36	+9	21	14.46	1.8427	1.7
jun	6	2460467.75	1	44	57.44	+9	37	36.28	1.8388	1.7
jun	7	2460468.75	1	47	46.58	+9	53	51.60	1.8349	1.8
jun	8	2460469.75	1	50	35.79	+10	10	0.26	1.8309	1.8
jun	9	2460470.75	1	53	25.07	+10	26	2.09	1.8270	1.9
jun	10	2460471.75	1	56	14.41	+10	41	56.95	1.8231	1.9
jun	11	2460472.75	1	59	3.81	+10	57	44.68	1.8191	2.0
jun	12	2460473.75	2	1	53.29	+11	13	25.15	1.8152	2.0
jun	13	2460474.75	2	4	42.84	+11	28	58.22	1.8112	2.1
jun	14	2460475.75	2	7	32.46	+11	44	23.76	1.8072	2.1
jun	15	2460476.75	2	10	22.17	+11	59	41.66	1.8032	2.2
jun	16	2460477.75	2	13	11.96	+12	14	51.79	1.7993	2.2
jun	17	2460478.75	2	16	1.84	+12	29	54.05	1.7952	2.3
jun	18	2460479.75	2	18	51.80	+12	44	48.31	1.7912	2.3
jun	19	2460480.75	2	21	41.86	+12	59	34.47	1.7872	2.4
jun	20	2460481.75	2	24	32.02	+13	14	12.42	1.7832	2.4
jun	21	2460482.75	2	27	22.28	+13	28	42.04	1.7791	2.5
jun	22	2460483.75	2	30	12.63	+13	43	3.24	1.7750	2.5
jun	23	2460484.75	2	33	3.08	+13	57	15.88	1.7710	2.6
jun	24	2460485.75	2	35	53.62	+14	11	19.84	1.7669	2.6
jun	25	2460486.75	2	38	44.27	+14	25	15.00	1.7627	2.6
jun	26	2460487.75	2	41	35.00	+14	39	1.22	1.7586	2.7
jun	27	2460488.75	2	44	25.83	+14	52	38.38	1.7545	2.7
jun	28	2460489.75	2	47	16.75	+15	6	6.36	1.7503	2.8
jun	29	2460490.75	2	50	7.77	+15	19	25.03	1.7461	2.8
jun	30	2460491.75	2	52	58.87	+15	32	34.28	1.7420	2.9
jul	1	2460492.75	2	55	50.05	+15	45	34.00	1.7377	2.9
jul	2	2460493.75	2	58	41.32	+15	58	24.08	1.7335	3.0
jul	3	2460494.75	3	1	32.66	+16	11	4.42	1.7293	3.0
jul	4	2460495.75	3	4	24.06	+16	23	34.91	1.7250	3.1
jul	5	2460496.75	3	7	15.53	+16	35	55.43	1.7207	3.1
jul	6	2460497.75	3	10	7.04	+16	48	5.89	1.7164	3.2
jul	7	2460498.75	3	12	58.60	+17	0	6.17	1.7121	3.2
jul	8	2460499.75	3	15	50.20	+17	11	56.17	1.7077	3.3
jul	9	2460500.75	3	18	41.83	+17	23	35.82	1.7033	3.3
jul	10	2460501.75	3	21	33.48	+17	35	5.02	1.6989	3.4
jul	11	2460502.75	3	24	25.16	+17	46	23.71	1.6945	3.4
jul	12	2460503.75	3	27	16.87	+17	57	31.80	1.6901	3.5

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
jul	13	2460504.75	3	30	8.59	+18	8	29.25	1.6856	3.5
jul	14	2460505.75	3	33	0.32	+18	19	16.00	1.6812	3.6
jul	15	2460506.75	3	35	52.06	+18	29	51.98	1.6767	3.6
jul	16	2460507.75	3	38	43.81	+18	40	17.17	1.6722	3.6
jul	17	2460508.75	3	41	35.55	+18	50	31.50	1.6676	3.7
jul	18	2460509.75	3	44	27.30	+19	0	34.95	1.6631	3.7
jul	19	2460510.75	3	47	19.03	+19	10	27.46	1.6585	3.8
jul	20	2460511.75	3	50	10.75	+19	20	9.01	1.6539	3.8
jul	21	2460512.75	3	53	2.44	+19	29	39.53	1.6493	3.9
jul	22	2460513.75	3	55	54.11	+19	38	58.98	1.6446	3.9
jul	23	2460514.75	3	58	45.73	+19	48	7.31	1.6400	4.0
jul	24	2460515.75	4	1	37.31	+19	57	4.44	1.6353	4.0
jul	25	2460516.75	4	4	28.84	+20	5	50.34	1.6305	4.1
jul	26	2460517.75	4	7	20.31	+20	14	24.96	1.6258	4.1
jul	27	2460518.75	4	10	11.71	+20	22	48.27	1.6210	4.2
jul	28	2460519.75	4	13	3.03	+20	31	0.23	1.6162	4.2
jul	29	2460520.75	4	15	54.26	+20	39	0.83	1.6114	4.3
jul	30	2460521.75	4	18	45.38	+20	46	50.04	1.6065	4.3
jul	31	2460522.75	4	21	36.39	+20	54	27.85	1.6016	4.4
ago	1	2460523.75	4	24	27.27	+21	1	54.23	1.5967	4.4
ago	2	2460524.75	4	27	18.00	+21	9	9.16	1.5918	4.5
ago	3	2460525.75	4	30	8.56	+21	16	12.64	1.5868	4.5
ago	4	2460526.75	4	32	58.95	+21	23	4.65	1.5818	4.5
ago	5	2460527.75	4	35	49.14	+21	29	45.18	1.5768	4.6
ago	6	2460528.75	4	38	39.14	+21	36	14.23	1.5717	4.6
ago	7	2460529.75	4	41	28.92	+21	42	31.83	1.5666	4.7
ago	8	2460530.75	4	44	18.47	+21	48	37.97	1.5615	4.7
ago	9	2460531.75	4	47	7.79	+21	54	32.70	1.5563	4.8
ago	10	2460532.75	4	49	56.86	+22	0	16.04	1.5512	4.8
ago	11	2460533.75	4	52	45.68	+22	5	48.02	1.5460	4.9
ago	12	2460534.75	4	55	34.22	+22	11	8.70	1.5407	4.9
ago	13	2460535.75	4	58	22.49	+22	16	18.12	1.5355	5.0
ago	14	2460536.75	5	1	10.48	+22	21	16.32	1.5302	5.0
ago	15	2460537.75	5	3	58.16	+22	26	3.38	1.5249	5.1
ago	16	2460538.75	5	6	45.53	+22	30	39.34	1.5195	5.1
ago	17	2460539.75	5	9	32.58	+22	35	4.25	1.5141	5.2
ago	18	2460540.75	5	12	19.30	+22	39	18.18	1.5087	5.2
ago	19	2460541.75	5	15	5.66	+22	43	21.15	1.5033	5.3
ago	20	2460542.75	5	17	51.67	+22	47	13.22	1.4978	5.3
ago	21	2460543.75	5	20	37.31	+22	50	54.43	1.4923	5.3
ago	22	2460544.75	5	23	22.57	+22	54	24.83	1.4868	5.4
ago	23	2460545.75	5	26	7.44	+22	57	44.48	1.4812	5.4
ago	24	2460546.75	5	28	51.91	+23	0	53.45	1.4756	5.5
ago	25	2460547.75	5	31	35.95	+23	3	51.84	1.4700	5.5
ago	26	2460548.75	5	34	19.56	+23	6	39.72	1.4643	5.6
ago	27	2460549.75	5	37	2.71	+23	9	17.19	1.4586	5.6
ago	28	2460550.75	5	39	45.38	+23	11	44.35	1.4529	5.7
ago	29	2460551.75	5	42	27.55	+23	14	1.27	1.4471	5.7
ago	30	2460552.75	5	45	9.21	+23	16	8.06	1.4413	5.8

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
ago	31	2460553.75	5	47	50.34	+23	18	4.81	1.4355	5.8
sep	1	2460554.75	5	50	30.91	+23	19	51.63	1.4296	5.8
sep	2	2460555.75	5	53	10.92	+23	21	28.61	1.4237	5.9
sep	3	2460556.75	5	55	50.33	+23	22	55.88	1.4178	5.9
sep	4	2460557.75	5	58	29.15	+23	24	13.55	1.4118	6.0
sep	5	2460558.75	6	1	7.35	+23	25	21.74	1.4058	6.0
sep	6	2460559.75	6	3	44.92	+23	26	20.60	1.3998	6.1
sep	7	2460560.75	6	6	21.85	+23	27	10.24	1.3937	6.1
sep	8	2460561.75	6	8	58.12	+23	27	50.83	1.3876	6.1
sep	9	2460562.75	6	11	33.72	+23	28	22.51	1.3815	6.2
sep	10	2460563.75	6	14	8.63	+23	28	45.42	1.3753	6.2
sep	11	2460564.75	6	16	42.84	+23	28	59.73	1.3691	6.3
sep	12	2460565.75	6	19	16.34	+23	29	5.59	1.3629	6.3
sep	13	2460566.75	6	21	49.12	+23	29	3.16	1.3566	6.4
sep	14	2460567.75	6	24	21.15	+23	28	52.59	1.3504	6.4
sep	15	2460568.75	6	26	52.43	+23	28	34.03	1.3440	6.4
sep	16	2460569.75	6	29	22.94	+23	28	7.62	1.3377	6.5
sep	17	2460570.75	6	31	52.67	+23	27	33.51	1.3313	6.5
sep	18	2460571.75	6	34	21.60	+23	26	51.83	1.3249	6.6
sep	19	2460572.75	6	36	49.74	+23	26	2.73	1.3185	6.6
sep	20	2460573.75	6	39	17.05	+23	25	6.39	1.3120	6.7
sep	21	2460574.75	6	41	43.53	+23	24	2.97	1.3055	6.7
sep	22	2460575.75	6	44	9.16	+23	22	52.68	1.2990	6.7
sep	23	2460576.75	6	46	33.92	+23	21	35.71	1.2924	6.8
sep	24	2460577.75	6	48	57.79	+23	20	12.26	1.2858	6.8
sep	25	2460578.75	6	51	20.73	+23	18	42.53	1.2792	6.9
sep	26	2460579.75	6	53	42.73	+23	17	6.71	1.2725	6.9
sep	27	2460580.75	6	56	3.77	+23	15	25.00	1.2658	6.9
sep	28	2460581.75	6	58	23.83	+23	13	37.61	1.2591	7.0
sep	29	2460582.75	7	0	42.88	+23	11	44.75	1.2523	7.0
sep	30	2460583.75	7	3	0.91	+23	9	46.62	1.2456	7.1
oct	1	2460584.75	7	5	17.88	+23	7	43.43	1.2387	7.1
oct	2	2460585.75	7	7	33.80	+23	5	35.41	1.2319	7.1
oct	3	2460586.75	7	9	48.63	+23	3	22.78	1.2250	7.2
oct	4	2460587.75	7	12	2.37	+23	1	5.78	1.2181	7.2
oct	5	2460588.75	7	14	14.98	+22	58	44.63	1.2112	7.2
oct	6	2460589.75	7	16	26.46	+22	56	19.57	1.2043	7.3
oct	7	2460590.75	7	18	36.79	+22	53	50.86	1.1973	7.3
oct	8	2460591.75	7	20	45.94	+22	51	18.72	1.1903	7.3
oct	9	2460592.75	7	22	53.90	+22	48	43.41	1.1833	7.4
oct	10	2460593.75	7	25	0.65	+22	46	5.17	1.1763	7.4
oct	11	2460594.75	7	27	6.17	+22	43	24.25	1.1692	7.5
oct	12	2460595.75	7	29	10.44	+22	40	40.88	1.1621	7.5
oct	13	2460596.75	7	31	13.45	+22	37	55.30	1.1550	7.5
oct	14	2460597.75	7	33	15.18	+22	35	7.73	1.1479	7.6
oct	15	2460598.75	7	35	15.60	+22	32	18.40	1.1408	7.6
oct	16	2460599.75	7	37	14.71	+22	29	27.54	1.1336	7.6
oct	17	2460600.75	7	39	12.48	+22	26	35.39	1.1264	7.7

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mes	día	dj	h	α m	s	'	δ "	"	dis UA	hp h
oct	18	2460601.75	7	41	8.90	+22	23	42.19	1.1192	7.7
oct	19	2460602.75	7	43	3.94	+22	20	48.23	1.1120	7.7
oct	20	2460603.75	7	44	57.58	+22	17	53.79	1.1048	7.7
oct	21	2460604.75	7	46	49.79	+22	14	59.17	1.0976	7.8
oct	22	2460605.75	7	48	40.53	+22	12	4.66	1.0903	7.8
oct	23	2460606.75	7	50	29.77	+22	9	10.56	1.0830	7.8
oct	24	2460607.75	7	52	17.48	+22	6	17.16	1.0757	7.9
oct	25	2460608.75	7	54	3.63	+22	3	24.77	1.0684	7.9
oct	26	2460609.75	7	55	48.18	+22	0	33.67	1.0611	7.9
oct	27	2460610.75	7	57	31.11	+21	57	44.18	1.0538	8.0
oct	28	2460611.75	7	59	12.38	+21	54	56.59	1.0465	8.0
oct	29	2460612.75	8	0	51.96	+21	52	11.21	1.0391	8.0
oct	30	2460613.75	8	2	29.82	+21	49	28.35	1.0318	8.0
oct	31	2460614.75	8	4	5.92	+21	46	48.33	1.0244	8.1
nov	1	2460615.75	8	5	40.25	+21	44	11.47	1.0171	8.1
nov	2	2460616.75	8	7	12.76	+21	41	38.08	1.0097	8.1
nov	3	2460617.75	8	8	43.42	+21	39	8.49	1.0024	8.1
nov	4	2460618.75	8	10	12.20	+21	36	43.02	0.9950	8.2
nov	5	2460619.75	8	11	39.07	+21	34	22.00	0.9877	8.2
nov	6	2460620.75	8	13	3.99	+21	32	5.73	0.9804	8.2
nov	7	2460621.75	8	14	26.93	+21	29	54.53	0.9730	8.2
nov	8	2460622.75	8	15	47.86	+21	27	48.72	0.9657	8.3
nov	9	2460623.75	8	17	6.73	+21	25	48.59	0.9584	8.3
nov	10	2460624.75	8	18	23.53	+21	23	54.44	0.9511	8.3
nov	11	2460625.75	8	19	38.21	+21	22	6.54	0.9438	8.3
nov	12	2460626.75	8	20	50.73	+21	20	25.20	0.9366	8.3
nov	13	2460627.75	8	22	1.08	+21	18	50.68	0.9293	8.4
nov	14	2460628.75	8	23	9.21	+21	17	23.28	0.9221	8.4
nov	15	2460629.75	8	24	15.08	+21	16	3.30	0.9149	8.4
nov	16	2460630.75	8	25	18.65	+21	14	51.08	0.9077	8.4
nov	17	2460631.75	8	26	19.88	+21	13	46.95	0.9005	8.4
nov	18	2460632.75	8	27	18.71	+21	12	51.23	0.8934	8.5
nov	19	2460633.75	8	28	15.09	+21	12	4.28	0.8863	8.5
nov	20	2460634.75	8	29	8.98	+21	11	26.42	0.8793	8.5
nov	21	2460635.75	8	30	0.31	+21	10	57.97	0.8722	8.5
nov	22	2460636.75	8	30	49.03	+21	10	39.25	0.8652	8.5
nov	23	2460637.75	8	31	35.09	+21	10	30.55	0.8583	8.5
nov	24	2460638.75	8	32	18.44	+21	10	32.17	0.8514	8.5
nov	25	2460639.75	8	32	59.03	+21	10	44.41	0.8445	8.5
nov	26	2460640.75	8	33	36.81	+21	11	7.53	0.8377	8.6
nov	27	2460641.75	8	34	11.72	+21	11	41.81	0.8309	8.6
nov	28	2460642.75	8	34	43.72	+21	12	27.50	0.8242	8.6
nov	29	2460643.75	8	35	12.76	+21	13	24.84	0.8175	8.6
nov	30	2460644.75	8	35	38.79	+21	14	34.05	0.8109	8.6
dic	1	2460645.75	8	36	1.77	+21	15	55.34	0.8044	8.6
dic	2	2460646.75	8	36	21.65	+21	17	28.90	0.7980	8.6
dic	3	2460647.75	8	36	38.38	+21	19	14.88	0.7916	8.6
dic	4	2460648.75	8	36	51.92	+21	21	13.43	0.7853	8.6
dic	5	2460649.75	8	37	2.23	+21	23	24.63	0.7791	8.6

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
dic	6	2460650.75	8	37	9.28	+21	25	48.57	0.7729	8.6
dic	7	2460651.75	8	37	13.03	+21	28	25.28	0.7669	8.6
dic	8	2460652.75	8	37	13.45	+21	31	14.76	0.7609	8.6
dic	9	2460653.75	8	37	10.50	+21	34	16.98	0.7551	8.6
dic	10	2460654.75	8	37	4.17	+21	37	31.89	0.7493	8.6
dic	11	2460655.75	8	36	54.43	+21	40	59.39	0.7436	8.6
dic	12	2460656.75	8	36	41.25	+21	44	39.40	0.7381	8.6
dic	13	2460657.75	8	36	24.62	+21	48	31.79	0.7326	8.6
dic	14	2460658.75	8	36	4.51	+21	52	36.42	0.7273	8.6
dic	15	2460659.75	8	35	40.91	+21	56	53.15	0.7221	8.6
dic	16	2460660.75	8	35	13.78	+22	1	21.77	0.7170	8.6
dic	17	2460661.75	8	34	43.12	+22	6	2.05	0.7121	8.6
dic	18	2460662.75	8	34	8.91	+22	10	53.71	0.7073	8.6
dic	19	2460663.75	8	33	31.15	+22	15	56.42	0.7026	8.6
dic	20	2460664.75	8	32	49.84	+22	21	9.80	0.6980	8.5
dic	21	2460665.75	8	32	4.99	+22	26	33.44	0.6936	8.5
dic	22	2460666.75	8	31	16.62	+22	32	6.85	0.6894	8.5
dic	23	2460667.75	8	30	24.76	+22	37	49.52	0.6853	8.5
dic	24	2460668.75	8	29	29.43	+22	43	40.88	0.6813	8.5
dic	25	2460669.75	8	28	30.70	+22	49	40.31	0.6776	8.5
dic	26	2460670.75	8	27	28.60	+22	55	47.17	0.6740	8.5
dic	27	2460671.75	8	26	23.21	+23	2	0.73	0.6705	8.4
dic	28	2460672.75	8	25	14.59	+23	8	20.27	0.6673	8.4
dic	29	2460673.75	8	24	2.84	+23	14	44.99	0.6642	8.4
dic	30	2460674.75	8	22	48.05	+23	21	14.07	0.6613	8.4
dic	31	2460675.75	8	21	30.33	+23	27	46.63	0.6586	8.4
ene	1	2460676.75	8	20	9.79	+23	34	21.80	0.6561	8.3
ene	2	2460677.75	8	18	47.98	+23	40	49.28	0.6484	8.3

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
ene	1	2460310.75	2	14	44.62	+12	15	55.70	4.4851	2.2
ene	2	2460311.75	2	14	45.52	+12	16	19.85	4.4998	2.2
ene	3	2460312.75	2	14	47.21	+12	16	48.11	4.5146	2.2
ene	4	2460313.75	2	14	49.71	+12	17	20.48	4.5295	2.2
ene	5	2460314.75	2	14	53.02	+12	17	56.93	4.5445	2.2
ene	6	2460315.75	2	14	57.12	+12	18	37.48	4.5595	2.2
ene	7	2460316.75	2	15	2.03	+12	19	22.11	4.5747	2.3
ene	8	2460317.75	2	15	7.73	+12	20	10.82	4.5900	2.3
ene	9	2460318.75	2	15	14.24	+12	21	3.58	4.6054	2.3
ene	10	2460319.75	2	15	21.54	+12	22	0.39	4.6208	2.3
ene	11	2460320.75	2	15	29.62	+12	23	1.21	4.6363	2.3
ene	12	2460321.75	2	15	38.50	+12	24	6.00	4.6519	2.3
ene	13	2460322.75	2	15	48.15	+12	25	14.71	4.6676	2.3
ene	14	2460323.75	2	15	58.57	+12	26	27.29	4.6833	2.3
ene	15	2460324.75	2	16	9.77	+12	27	43.71	4.6991	2.3
ene	16	2460325.75	2	16	21.73	+12	29	3.91	4.7149	2.3
ene	17	2460326.75	2	16	34.46	+12	30	27.87	4.7308	2.3
ene	18	2460327.75	2	16	47.94	+12	31	55.56	4.7467	2.3
ene	19	2460328.75	2	17	2.17	+12	33	26.93	4.7627	2.3
ene	20	2460329.75	2	17	17.16	+12	35	1.95	4.7787	2.3
ene	21	2460330.75	2	17	32.88	+12	36	40.57	4.7947	2.3
ene	22	2460331.75	2	17	49.34	+12	38	22.75	4.8107	2.3
ene	23	2460332.75	2	18	6.52	+12	40	8.44	4.8268	2.3
ene	24	2460333.75	2	18	24.42	+12	41	57.57	4.8429	2.3
ene	25	2460334.75	2	18	43.02	+12	43	50.10	4.8590	2.3
ene	26	2460335.75	2	19	2.33	+12	45	45.96	4.8751	2.3
ene	27	2460336.75	2	19	22.34	+12	47	45.11	4.8912	2.3
ene	28	2460337.75	2	19	43.03	+12	49	47.50	4.9073	2.3
ene	29	2460338.75	2	20	4.41	+12	51	53.08	4.9234	2.3
ene	30	2460339.75	2	20	26.47	+12	54	1.81	4.9395	2.3
ene	31	2460340.75	2	20	49.21	+12	56	13.64	4.9556	2.3
feb	1	2460341.75	2	21	12.61	+12	58	28.54	4.9717	2.4
feb	2	2460342.75	2	21	36.68	+13	0	46.46	4.9877	2.4
feb	3	2460343.75	2	22	1.41	+13	3	7.37	5.0037	2.4
feb	4	2460344.75	2	22	26.79	+13	5	31.22	5.0198	2.4
feb	5	2460345.75	2	22	52.82	+13	7	57.98	5.0357	2.4
feb	6	2460346.75	2	23	19.49	+13	10	27.61	5.0517	2.4
feb	7	2460347.75	2	23	46.80	+13	13	0.05	5.0676	2.4
feb	8	2460348.75	2	24	14.73	+13	15	35.24	5.0834	2.4
feb	9	2460349.75	2	24	43.27	+13	18	13.12	5.0993	2.4
feb	10	2460350.75	2	25	12.43	+13	20	53.63	5.1150	2.4
feb	11	2460351.75	2	25	42.18	+13	23	36.68	5.1308	2.4
feb	12	2460352.75	2	26	12.53	+13	26	22.23	5.1464	2.4
feb	13	2460353.75	2	26	43.47	+13	29	10.21	5.1620	2.4
feb	14	2460354.75	2	27	14.99	+13	32	0.59	5.1776	2.5
feb	15	2460355.75	2	27	47.09	+13	34	53.31	5.1930	2.5
feb	16	2460356.75	2	28	19.76	+13	37	48.33	5.2084	2.5
feb	17	2460357.75	2	28	52.99	+13	40	45.59	5.2237	2.5
feb	18	2460358.75	2	29	26.77	+13	43	45.03	5.2390	2.5

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
feb	19	2460359.75	2	30	1.09	+13	46	46.59	5.2541	2.5
feb	20	2460360.75	2	30	35.95	+13	49	50.22	5.2692	2.5
feb	21	2460361.75	2	31	11.33	+13	52	55.84	5.2842	2.5
feb	22	2460362.75	2	31	47.23	+13	56	3.40	5.2991	2.5
feb	23	2460363.75	2	32	23.64	+13	59	12.84	5.3139	2.5
feb	24	2460364.75	2	33	0.56	+14	2	24.10	5.3287	2.6
feb	25	2460365.75	2	33	37.97	+14	5	37.12	5.3433	2.6
feb	26	2460366.75	2	34	15.87	+14	8	51.87	5.3578	2.6
feb	27	2460367.75	2	34	54.25	+14	12	8.29	5.3722	2.6
feb	28	2460368.75	2	35	33.12	+14	15	26.34	5.3866	2.6
feb	29	2460369.75	2	36	12.46	+14	18	45.98	5.4008	2.6
mar	1	2460370.75	2	36	52.28	+14	22	7.16	5.4149	2.6
mar	2	2460371.75	2	37	32.56	+14	25	29.86	5.4289	2.6
mar	3	2460372.75	2	38	13.29	+14	28	54.02	5.4427	2.6
mar	4	2460373.75	2	38	54.48	+14	32	19.61	5.4565	2.6
mar	5	2460374.75	2	39	36.12	+14	35	46.58	5.4701	2.7
mar	6	2460375.75	2	40	18.19	+14	39	14.87	5.4837	2.7
mar	7	2460376.75	2	41	0.69	+14	42	44.44	5.4971	2.7
mar	8	2460377.75	2	41	43.62	+14	46	15.22	5.5103	2.7
mar	9	2460378.75	2	42	26.96	+14	49	47.14	5.5235	2.7
mar	10	2460379.75	2	43	10.70	+14	53	20.15	5.5365	2.7
mar	11	2460380.75	2	43	54.86	+14	56	54.18	5.5494	2.7
mar	12	2460381.75	2	44	39.41	+15	0	29.20	5.5621	2.7
mar	13	2460382.75	2	45	24.35	+15	4	5.17	5.5747	2.8
mar	14	2460383.75	2	46	9.69	+15	7	42.04	5.5871	2.8
mar	15	2460384.75	2	46	55.40	+15	11	19.78	5.5994	2.8
mar	16	2460385.75	2	47	41.49	+15	14	58.34	5.6116	2.8
mar	17	2460386.75	2	48	27.94	+15	18	37.65	5.6236	2.8
mar	18	2460387.75	2	49	14.74	+15	22	17.68	5.6355	2.8
mar	19	2460388.75	2	50	1.90	+15	25	58.36	5.6472	2.8
mar	20	2460389.75	2	50	49.39	+15	29	39.64	5.6588	2.8
mar	21	2460390.75	2	51	37.22	+15	33	21.46	5.6702	2.9
mar	22	2460391.75	2	52	25.37	+15	37	3.79	5.6814	2.9
mar	23	2460392.75	2	53	13.85	+15	40	46.57	5.6925	2.9
mar	24	2460393.75	2	54	2.65	+15	44	29.76	5.7034	2.9
mar	25	2460394.75	2	54	51.76	+15	48	13.33	5.7142	2.9
mar	26	2460395.75	2	55	41.18	+15	51	57.23	5.7248	2.9
mar	27	2460396.75	2	56	30.90	+15	55	41.43	5.7353	2.9
mar	28	2460397.75	2	57	20.92	+15	59	25.92	5.7456	3.0
mar	29	2460398.75	2	58	11.24	+16	3	10.64	5.7557	3.0
mar	30	2460399.75	2	59	1.85	+16	6	55.58	5.7657	3.0
mar	31	2460400.75	2	59	52.75	+16	10	40.70	5.7754	3.0
abr	1	2460401.75	3	0	43.93	+16	14	25.98	5.7851	3.0
abr	2	2460402.75	3	1	35.38	+16	18	11.36	5.7945	3.0
abr	3	2460403.75	3	2	27.10	+16	21	56.80	5.8038	3.0
abr	4	2460404.75	3	3	19.08	+16	25	42.27	5.8129	3.1
abr	5	2460405.75	3	4	11.31	+16	29	27.70	5.8218	3.1
abr	6	2460406.75	3	5	3.79	+16	33	13.04	5.8306	3.1

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	"	δ "	"	dis UA	hp h
abr	7	2460407.75	3	5	56.52	+16	36	58.26	5.8391	3.1
abr	8	2460408.75	3	6	49.49	+16	40	43.30	5.8475	3.1
abr	9	2460409.75	3	7	42.69	+16	44	28.15	5.8557	3.1
abr	10	2460410.75	3	8	36.13	+16	48	12.77	5.8638	3.1
abr	11	2460411.75	3	9	29.80	+16	51	57.14	5.8716	3.2
abr	12	2460412.75	3	10	23.69	+16	55	41.23	5.8793	3.2
abr	13	2460413.75	3	11	17.79	+16	59	25.00	5.8867	3.2
abr	14	2460414.75	3	12	12.09	+17	3	8.40	5.8940	3.2
abr	15	2460415.75	3	13	6.59	+17	6	51.40	5.9011	3.2
abr	16	2460416.75	3	14	1.28	+17	10	33.95	5.9080	3.2
abr	17	2460417.75	3	14	56.16	+17	14	16.00	5.9147	3.2
abr	18	2460418.75	3	15	51.21	+17	17	57.52	5.9213	3.3
abr	19	2460419.75	3	16	46.44	+17	21	38.48	5.9276	3.3
abr	20	2460420.75	3	17	41.84	+17	25	18.84	5.9338	3.3
abr	21	2460421.75	3	18	37.41	+17	28	58.58	5.9397	3.3
abr	22	2460422.75	3	19	33.14	+17	32	37.66	5.9455	3.3
abr	23	2460423.75	3	20	29.03	+17	36	16.07	5.9511	3.3
abr	24	2460424.75	3	21	25.08	+17	39	53.79	5.9565	3.4
abr	25	2460425.75	3	22	21.28	+17	43	30.80	5.9617	3.4
abr	26	2460426.75	3	23	17.63	+17	47	7.08	5.9667	3.4
abr	27	2460427.75	3	24	14.12	+17	50	42.62	5.9715	3.4
abr	28	2460428.75	3	25	10.75	+17	54	17.38	5.9761	3.4
abr	29	2460429.75	3	26	7.52	+17	57	51.35	5.9806	3.4
abr	30	2460430.75	3	27	4.41	+18	1	24.50	5.9848	3.5
may	1	2460431.75	3	28	1.43	+18	4	56.79	5.9888	3.5
may	2	2460432.75	3	28	58.56	+18	8	28.19	5.9927	3.5
may	3	2460433.75	3	29	55.80	+18	11	58.65	5.9963	3.5
may	4	2460434.75	3	30	53.15	+18	15	28.14	5.9998	3.5
may	5	2460435.75	3	31	50.60	+18	18	56.63	6.0030	3.5
may	6	2460436.75	3	32	48.15	+18	22	24.11	6.0061	3.5
may	7	2460437.75	3	33	45.80	+18	25	50.54	6.0089	3.6
may	8	2460438.75	3	34	43.55	+18	29	15.93	6.0116	3.6
may	9	2460439.75	3	35	41.38	+18	32	40.25	6.0140	3.6
may	10	2460440.75	3	36	39.29	+18	36	3.49	6.0163	3.6
may	11	2460441.75	3	37	37.27	+18	39	25.62	6.0183	3.6
may	12	2460442.75	3	38	35.32	+18	42	46.60	6.0202	3.6
may	13	2460443.75	3	39	33.43	+18	46	6.41	6.0218	3.7
may	14	2460444.75	3	40	31.59	+18	49	25.02	6.0233	3.7
may	15	2460445.75	3	41	29.79	+18	52	42.38	6.0245	3.7
may	16	2460446.75	3	42	28.04	+18	55	58.47	6.0256	3.7
may	17	2460447.75	3	43	26.33	+18	59	13.23	6.0264	3.7
may	18	2460448.75	3	44	24.65	+19	2	26.50	6.0271	3.7
may	19	2460449.75	3	45	22.96	+19	5	38.60	6.0275	3.8
may	20	2460450.75	3	46	21.33	+19	8	49.75	6.0278	3.8
may	21	2460451.75	3	47	19.73	+19	11	59.41	6.0279	3.8
may	22	2460452.75	3	48	18.15	+19	15	7.67	6.0277	3.8
may	23	2460453.75	3	49	16.59	+19	18	14.56	6.0274	3.8
may	24	2460454.75	3	50	15.04	+19	21	20.08	6.0269	3.8
may	25	2460455.75	3	51	13.49	+19	24	24.24	6.0261	3.9

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
may	26	2460456.75	3	52	11.95	+19	27	27.02	6.0252	3.9
may	27	2460457.75	3	53	10.40	+19	30	28.41	6.0241	3.9
may	28	2460458.75	3	54	8.85	+19	33	28.39	6.0228	3.9
may	29	2460459.75	3	55	7.27	+19	36	26.93	6.0213	3.9
may	30	2460460.75	3	56	5.68	+19	39	24.01	6.0196	3.9
may	31	2460461.75	3	57	4.06	+19	42	19.59	6.0177	4.0
jun	1	2460462.75	3	58	2.42	+19	45	13.68	6.0156	4.0
jun	2	2460463.75	3	59	0.74	+19	48	6.24	6.0133	4.0
jun	3	2460464.75	3	59	59.03	+19	50	57.27	6.0108	4.0
jun	4	2460465.75	4	0	57.28	+19	53	46.77	6.0081	4.0
jun	5	2460466.75	4	1	55.48	+19	56	34.74	6.0053	4.0
jun	6	2460467.75	4	2	53.63	+19	59	21.18	6.0022	4.0
jun	7	2460468.75	4	3	51.73	+20	2	6.07	5.9989	4.1
jun	8	2460469.75	4	4	49.75	+20	4	49.40	5.9954	4.1
jun	9	2460470.75	4	5	47.70	+20	7	31.14	5.9918	4.1
jun	10	2460471.75	4	6	45.57	+20	10	11.29	5.9879	4.1
jun	11	2460472.75	4	7	43.35	+20	12	49.82	5.9839	4.1
jun	12	2460473.75	4	8	41.04	+20	15	26.70	5.9797	4.1
jun	13	2460474.75	4	9	38.63	+20	18	1.95	5.9753	4.2
jun	14	2460475.75	4	10	36.12	+20	20	35.53	5.9706	4.2
jun	15	2460476.75	4	11	33.50	+20	23	7.45	5.9659	4.2
jun	16	2460477.75	4	12	30.77	+20	25	37.71	5.9609	4.2
jun	17	2460478.75	4	13	27.93	+20	28	6.30	5.9557	4.2
jun	18	2460479.75	4	14	24.97	+20	30	33.23	5.9504	4.2
jun	19	2460480.75	4	15	21.89	+20	32	58.50	5.9448	4.3
jun	20	2460481.75	4	16	18.68	+20	35	22.12	5.9391	4.3
jun	21	2460482.75	4	17	15.34	+20	37	44.10	5.9332	4.3
jun	22	2460483.75	4	18	11.86	+20	40	4.43	5.9271	4.3
jun	23	2460484.75	4	19	8.24	+20	42	23.12	5.9209	4.3
jun	24	2460485.75	4	20	4.46	+20	44	40.16	5.9144	4.3
jun	25	2460486.75	4	21	0.53	+20	46	55.53	5.9078	4.4
jun	26	2460487.75	4	21	56.44	+20	49	9.21	5.9010	4.4
jun	27	2460488.75	4	22	52.18	+20	51	21.19	5.8941	4.4
jun	28	2460489.75	4	23	47.74	+20	53	31.47	5.8869	4.4
jun	29	2460490.75	4	24	43.13	+20	55	40.03	5.8796	4.4
jun	30	2460491.75	4	25	38.34	+20	57	46.88	5.8721	4.4
jul	1	2460492.75	4	26	33.37	+20	59	52.02	5.8644	4.4
jul	2	2460493.75	4	27	28.20	+21	1	55.48	5.8566	4.5
jul	3	2460494.75	4	28	22.84	+21	3	57.25	5.8486	4.5
jul	4	2460495.75	4	29	17.27	+21	5	57.33	5.8404	4.5
jul	5	2460496.75	4	30	11.48	+21	7	55.74	5.8320	4.5
jul	6	2460497.75	4	31	5.47	+21	9	52.46	5.8235	4.5
jul	7	2460498.75	4	31	59.23	+21	11	47.49	5.8148	4.5
jul	8	2460499.75	4	32	52.75	+21	13	40.81	5.8060	4.5
jul	9	2460500.75	4	33	46.02	+21	15	32.42	5.7969	4.6
jul	10	2460501.75	4	34	39.04	+21	17	22.32	5.7878	4.6
jul	11	2460502.75	4	35	31.80	+21	19	10.50	5.7784	4.6
jul	12	2460503.75	4	36	24.30	+21	20	56.98	5.7689	4.6

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
jul	13	2460504.75	4	37	16.53	+21	22	41.75	5.7592	4.6
jul	14	2460505.75	4	38	8.49	+21	24	24.82	5.7494	4.6
jul	15	2460506.75	4	39	0.17	+21	26	6.22	5.7395	4.7
jul	16	2460507.75	4	39	51.57	+21	27	45.95	5.7293	4.7
jul	17	2460508.75	4	40	42.68	+21	29	24.03	5.7191	4.7
jul	18	2460509.75	4	41	33.50	+21	31	0.47	5.7087	4.7
jul	19	2460510.75	4	42	24.01	+21	32	35.29	5.6981	4.7
jul	20	2460511.75	4	43	14.22	+21	34	8.50	5.6874	4.7
jul	21	2460512.75	4	44	4.11	+21	35	40.12	5.6765	4.7
jul	22	2460513.75	4	44	53.67	+21	37	10.12	5.6655	4.7
jul	23	2460514.75	4	45	42.91	+21	38	38.52	5.6544	4.8
jul	24	2460515.75	4	46	31.80	+21	40	5.30	5.6431	4.8
jul	25	2460516.75	4	47	20.36	+21	41	30.45	5.6317	4.8
jul	26	2460517.75	4	48	8.56	+21	42	53.98	5.6202	4.8
jul	27	2460518.75	4	48	56.41	+21	44	15.91	5.6085	4.8
jul	28	2460519.75	4	49	43.91	+21	45	36.24	5.5966	4.8
jul	29	2460520.75	4	50	31.04	+21	46	55.01	5.5847	4.8
jul	30	2460521.75	4	51	17.79	+21	48	12.22	5.5726	4.9
jul	31	2460522.75	4	52	4.17	+21	49	27.90	5.5604	4.9
ago	1	2460523.75	4	52	50.15	+21	50	42.06	5.5481	4.9
ago	2	2460524.75	4	53	35.72	+21	51	54.69	5.5356	4.9
ago	3	2460525.75	4	54	20.89	+21	53	5.81	5.5230	4.9
ago	4	2460526.75	4	55	5.63	+21	54	15.42	5.5103	4.9
ago	5	2460527.75	4	55	49.94	+21	55	23.52	5.4975	4.9
ago	6	2460528.75	4	56	33.81	+21	56	30.11	5.4846	4.9
ago	7	2460529.75	4	57	17.24	+21	57	35.21	5.4715	5.0
ago	8	2460530.75	4	58	0.22	+21	58	38.81	5.4584	5.0
ago	9	2460531.75	4	58	42.74	+21	59	40.94	5.4451	5.0
ago	10	2460532.75	4	59	24.80	+22	0	41.61	5.4317	5.0
ago	11	2460533.75	5	0	6.38	+22	1	40.84	5.4183	5.0
ago	12	2460534.75	5	0	47.49	+22	2	38.65	5.4047	5.0
ago	13	2460535.75	5	1	28.12	+22	3	35.07	5.3911	5.0
ago	14	2460536.75	5	2	8.26	+22	4	30.12	5.3773	5.0
ago	15	2460537.75	5	2	47.90	+22	5	23.82	5.3635	5.0
ago	16	2460538.75	5	3	27.03	+22	6	16.20	5.3495	5.1
ago	17	2460539.75	5	4	5.65	+22	7	7.27	5.3355	5.1
ago	18	2460540.75	5	4	43.74	+22	7	57.03	5.3214	5.1
ago	19	2460541.75	5	5	21.30	+22	8	45.50	5.3072	5.1
ago	20	2460542.75	5	5	58.32	+22	9	32.67	5.2929	5.1
ago	21	2460543.75	5	6	34.80	+22	10	18.55	5.2786	5.1
ago	22	2460544.75	5	7	10.72	+22	11	3.12	5.2642	5.1
ago	23	2460545.75	5	7	46.08	+22	11	46.41	5.2497	5.1
ago	24	2460546.75	5	8	20.88	+22	12	28.45	5.2351	5.1
ago	25	2460547.75	5	8	55.10	+22	13	9.25	5.2205	5.1
ago	26	2460548.75	5	9	28.75	+22	13	48.84	5.2058	5.2
ago	27	2460549.75	5	10	1.80	+22	14	27.26	5.1911	5.2
ago	28	2460550.75	5	10	34.26	+22	15	4.51	5.1763	5.2
ago	29	2460551.75	5	11	6.09	+22	15	40.61	5.1614	5.2
ago	30	2460552.75	5	11	37.31	+22	16	15.56	5.1465	5.2

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
ago	31	2460553.75	5	12	7.89	+22	16	49.38	5.1316	5.2
sep	1	2460554.75	5	12	37.82	+22	17	22.07	5.1166	5.2
sep	2	2460555.75	5	13	7.11	+22	17	53.63	5.1015	5.2
sep	3	2460556.75	5	13	35.74	+22	18	24.09	5.0864	5.2
sep	4	2460557.75	5	14	3.69	+22	18	53.44	5.0713	5.2
sep	5	2460558.75	5	14	30.98	+22	19	21.70	5.0562	5.2
sep	6	2460559.75	5	14	57.59	+22	19	48.90	5.0410	5.2
sep	7	2460560.75	5	15	23.50	+22	20	15.05	5.0258	5.3
sep	8	2460561.75	5	15	48.73	+22	20	40.17	5.0106	5.3
sep	9	2460562.75	5	16	13.26	+22	21	4.29	4.9954	5.3
sep	10	2460563.75	5	16	37.07	+22	21	27.43	4.9801	5.3
sep	11	2460564.75	5	17	0.18	+22	21	49.62	4.9649	5.3
sep	12	2460565.75	5	17	22.56	+22	22	10.87	4.9497	5.3
sep	13	2460566.75	5	17	44.22	+22	22	31.21	4.9344	5.3
sep	14	2460567.75	5	18	5.13	+22	22	50.64	4.9192	5.3
sep	15	2460568.75	5	18	25.30	+22	23	9.18	4.9039	5.3
sep	16	2460569.75	5	18	44.72	+22	23	26.83	4.8887	5.3
sep	17	2460570.75	5	19	3.37	+22	23	43.57	4.8735	5.3
sep	18	2460571.75	5	19	21.26	+22	23	59.41	4.8583	5.3
sep	19	2460572.75	5	19	38.39	+22	24	14.34	4.8431	5.3
sep	20	2460573.75	5	19	54.74	+22	24	28.40	4.8280	5.3
sep	21	2460574.75	5	20	10.31	+22	24	41.59	4.8129	5.3
sep	22	2460575.75	5	20	25.10	+22	24	53.94	4.7978	5.3
sep	23	2460576.75	5	20	39.09	+22	25	5.48	4.7827	5.3
sep	24	2460577.75	5	20	52.28	+22	25	16.22	4.7677	5.3
sep	25	2460578.75	5	21	4.66	+22	25	26.17	4.7528	5.4
sep	26	2460579.75	5	21	16.21	+22	25	35.34	4.7378	5.4
sep	27	2460580.75	5	21	26.94	+22	25	43.72	4.7230	5.4
sep	28	2460581.75	5	21	36.84	+22	25	51.31	4.7082	5.4
sep	29	2460582.75	5	21	45.89	+22	25	58.11	4.6935	5.4
sep	30	2460583.75	5	21	54.10	+22	26	4.13	4.6788	5.4
oct	1	2460584.75	5	22	1.45	+22	26	9.37	4.6642	5.4
oct	2	2460585.75	5	22	7.96	+22	26	13.83	4.6497	5.4
oct	3	2460586.75	5	22	13.61	+22	26	17.52	4.6352	5.4
oct	4	2460587.75	5	22	18.40	+22	26	20.45	4.6209	5.4
oct	5	2460588.75	5	22	22.34	+22	26	22.63	4.6066	5.4
oct	6	2460589.75	5	22	25.41	+22	26	24.08	4.5925	5.4
oct	7	2460590.75	5	22	27.62	+22	26	24.82	4.5784	5.4
oct	8	2460591.75	5	22	28.96	+22	26	24.84	4.5645	5.4
oct	9	2460592.75	5	22	29.44	+22	26	24.17	4.5506	5.4
oct	10	2460593.75	5	22	29.05	+22	26	22.81	4.5369	5.4
oct	11	2460594.75	5	22	27.79	+22	26	20.77	4.5233	5.4
oct	12	2460595.75	5	22	25.66	+22	26	18.04	4.5098	5.4
oct	13	2460596.75	5	22	22.65	+22	26	14.61	4.4965	5.4
oct	14	2460597.75	5	22	18.78	+22	26	10.46	4.4833	5.4
oct	15	2460598.75	5	22	14.03	+22	26	5.60	4.4702	5.4
oct	16	2460599.75	5	22	8.42	+22	25	59.99	4.4573	5.4
oct	17	2460600.75	5	22	1.95	+22	25	53.64	4.4445	5.4

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	'	δ "	"	dis UA	hp h
oct	18	2460601.75	5	21	54.62	+22	25	46.55	4.4319	5.4
oct	19	2460602.75	5	21	46.44	+22	25	38.73	4.4194	5.4
oct	20	2460603.75	5	21	37.40	+22	25	30.21	4.4071	5.4
oct	21	2460604.75	5	21	27.51	+22	25	20.97	4.3949	5.4
oct	22	2460605.75	5	21	16.76	+22	25	11.04	4.3829	5.4
oct	23	2460606.75	5	21	5.17	+22	25	0.39	4.3711	5.4
oct	24	2460607.75	5	20	52.72	+22	24	49.01	4.3595	5.3
oct	25	2460608.75	5	20	39.43	+22	24	36.89	4.3480	5.3
oct	26	2460609.75	5	20	25.30	+22	24	24.02	4.3368	5.3
oct	27	2460610.75	5	20	10.34	+22	24	10.39	4.3257	5.3
oct	28	2460611.75	5	19	54.55	+22	23	55.98	4.3149	5.3
oct	29	2460612.75	5	19	37.94	+22	23	40.80	4.3042	5.3
oct	30	2460613.75	5	19	20.53	+22	23	24.83	4.2938	5.3
oct	31	2460614.75	5	19	2.33	+22	23	8.09	4.2835	5.3
nov	1	2460615.75	5	18	43.34	+22	22	50.57	4.2735	5.3
nov	2	2460616.75	5	18	23.58	+22	22	32.28	4.2637	5.3
nov	3	2460617.75	5	18	3.07	+22	22	13.23	4.2542	5.3
nov	4	2460618.75	5	17	41.80	+22	21	53.42	4.2448	5.3
nov	5	2460619.75	5	17	19.81	+22	21	32.86	4.2357	5.3
nov	6	2460620.75	5	16	57.09	+22	21	11.56	4.2269	5.3
nov	7	2460621.75	5	16	33.67	+22	20	49.50	4.2183	5.3
nov	8	2460622.75	5	16	9.56	+22	20	26.69	4.2099	5.3
nov	9	2460623.75	5	15	44.77	+22	20	3.12	4.2018	5.3
nov	10	2460624.75	5	15	19.32	+22	19	38.78	4.1939	5.3
nov	11	2460625.75	5	14	53.23	+22	19	13.65	4.1863	5.2
nov	12	2460626.75	5	14	26.52	+22	18	47.72	4.1790	5.2
nov	13	2460627.75	5	13	59.20	+22	18	21.00	4.1719	5.2
nov	14	2460628.75	5	13	31.31	+22	17	53.47	4.1651	5.2
nov	15	2460629.75	5	13	2.85	+22	17	25.17	4.1586	5.2
nov	16	2460630.75	5	12	33.85	+22	16	56.11	4.1524	5.2
nov	17	2460631.75	5	12	4.32	+22	16	26.31	4.1464	5.2
nov	18	2460632.75	5	11	34.29	+22	15	55.78	4.1407	5.2
nov	19	2460633.75	5	11	3.77	+22	15	24.53	4.1353	5.2
nov	20	2460634.75	5	10	32.77	+22	14	52.55	4.1302	5.2
nov	21	2460635.75	5	10	1.33	+22	14	19.85	4.1254	5.2
nov	22	2460636.75	5	9	29.45	+22	13	46.44	4.1208	5.2
nov	23	2460637.75	5	8	57.17	+22	13	12.30	4.1166	5.1
nov	24	2460638.75	5	8	24.50	+22	12	37.46	4.1126	5.1
nov	25	2460639.75	5	7	51.48	+22	12	1.94	4.1090	5.1
nov	26	2460640.75	5	7	18.13	+22	11	25.74	4.1057	5.1
nov	27	2460641.75	5	6	44.48	+22	10	48.89	4.1026	5.1
nov	28	2460642.75	5	6	10.55	+22	10	11.43	4.0999	5.1
nov	29	2460643.75	5	5	36.37	+22	9	33.38	4.0975	5.1
nov	30	2460644.75	5	5	1.97	+22	8	54.78	4.0954	5.1
dic	1	2460645.75	5	4	27.37	+22	8	15.66	4.0936	5.1
dic	2	2460646.75	5	3	52.61	+22	7	36.06	4.0921	5.1
dic	3	2460647.75	5	3	17.71	+22	6	56.03	4.0910	5.1
dic	4	2460648.75	5	2	42.70	+22	6	15.58	4.0901	5.0
dic	5	2460649.75	5	2	7.60	+22	5	34.74	4.0896	5.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
dic	6	2460650.75	5	1	32.44	+22	4	53.56	4.0894	5.0
dic	7	2460651.75	5	0	57.25	+22	4	12.04	4.0895	5.0
dic	8	2460652.75	5	0	22.05	+22	3	30.21	4.0899	5.0
dic	9	2460653.75	4	59	46.88	+22	2	48.10	4.0906	5.0
dic	10	2460654.75	4	59	11.77	+22	2	5.74	4.0917	5.0
dic	11	2460655.75	4	58	36.74	+22	1	23.18	4.0931	5.0
dic	12	2460656.75	4	58	1.83	+22	0	40.45	4.0947	5.0
dic	13	2460657.75	4	57	27.06	+21	59	57.62	4.0967	5.0
dic	14	2460658.75	4	56	52.45	+21	59	14.75	4.0991	4.9
dic	15	2460659.75	4	56	18.03	+21	58	31.87	4.1017	4.9
dic	16	2460660.75	4	55	43.82	+21	57	49.04	4.1046	4.9
dic	17	2460661.75	4	55	9.85	+21	57	6.31	4.1079	4.9
dic	18	2460662.75	4	54	36.13	+21	56	23.69	4.1114	4.9
dic	19	2460663.75	4	54	2.69	+21	55	41.23	4.1153	4.9
dic	20	2460664.75	4	53	29.56	+21	54	58.96	4.1195	4.9
dic	21	2460665.75	4	52	56.77	+21	54	16.94	4.1239	4.9
dic	22	2460666.75	4	52	24.32	+21	53	35.19	4.1287	4.9
dic	23	2460667.75	4	51	52.26	+21	52	53.79	4.1338	4.9
dic	24	2460668.75	4	51	20.61	+21	52	12.77	4.1392	4.9
dic	25	2460669.75	4	50	49.39	+21	51	32.20	4.1448	4.8
dic	26	2460670.75	4	50	18.63	+21	50	52.14	4.1508	4.8
dic	27	2460671.75	4	49	48.35	+21	50	12.64	4.1571	4.8
dic	28	2460672.75	4	49	18.57	+21	49	33.77	4.1636	4.8
dic	29	2460673.75	4	48	49.31	+21	48	55.58	4.1705	4.8
dic	30	2460674.75	4	48	20.61	+21	48	18.14	4.1776	4.8
dic	31	2460675.75	4	47	52.46	+21	47	41.49	4.1850	4.8
ene	1	2460676.75	4	47	24.90	+21	47	5.68	4.1927	4.8
ene	2	2460677.75	4	46	59.65	+21	46	33.72	4.1676	4.8

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
ene	1	2460310.75	22	23	11.82	-11	49	50.77	10.2980	22.4
ene	2	2460311.75	22	23	32.11	-11	47	50.12	10.3112	22.4
ene	3	2460312.75	22	23	52.66	-11	45	48.04	10.3241	22.4
ene	4	2460313.75	22	24	13.45	-11	43	44.53	10.3370	22.4
ene	5	2460314.75	22	24	34.48	-11	41	39.61	10.3496	22.4
ene	6	2460315.75	22	24	55.76	-11	39	33.29	10.3621	22.4
ene	7	2460316.75	22	25	17.28	-11	37	25.59	10.3744	22.4
ene	8	2460317.75	22	25	39.03	-11	35	16.54	10.3865	22.4
ene	9	2460318.75	22	26	1.02	-11	33	6.16	10.3984	22.4
ene	10	2460319.75	22	26	23.23	-11	30	54.49	10.4101	22.4
ene	11	2460320.75	22	26	45.66	-11	28	41.56	10.4217	22.4
ene	12	2460321.75	22	27	8.31	-11	26	27.42	10.4330	22.5
ene	13	2460322.75	22	27	31.16	-11	24	12.08	10.4442	22.5
ene	14	2460323.75	22	27	54.21	-11	21	55.59	10.4551	22.5
ene	15	2460324.75	22	28	17.45	-11	19	37.96	10.4659	22.5
ene	16	2460325.75	22	28	40.89	-11	17	19.20	10.4764	22.5
ene	17	2460326.75	22	29	4.51	-11	14	59.32	10.4868	22.5
ene	18	2460327.75	22	29	28.33	-11	12	38.35	10.4969	22.5
ene	19	2460328.75	22	29	52.32	-11	10	16.30	10.5068	22.5
ene	20	2460329.75	22	30	16.49	-11	7	53.22	10.5165	22.5
ene	21	2460330.75	22	30	40.84	-11	5	29.12	10.5260	22.5
ene	22	2460331.75	22	31	5.35	-11	3	4.04	10.5353	22.5
ene	23	2460332.75	22	31	30.03	-11	0	38.01	10.5443	22.5
ene	24	2460333.75	22	31	54.86	-10	58	11.08	10.5532	22.5
ene	25	2460334.75	22	32	19.84	-10	55	43.26	10.5618	22.5
ene	26	2460335.75	22	32	44.97	-10	53	14.57	10.5702	22.5
ene	27	2460336.75	22	33	10.24	-10	50	45.05	10.5783	22.6
ene	28	2460337.75	22	33	35.65	-10	48	14.72	10.5862	22.6
ene	29	2460338.75	22	34	1.20	-10	45	43.57	10.5939	22.6
ene	30	2460339.75	22	34	26.87	-10	43	11.65	10.6014	22.6
ene	31	2460340.75	22	34	52.67	-10	40	38.95	10.6087	22.6
feb	1	2460341.75	22	35	18.60	-10	38	5.50	10.6157	22.6
feb	2	2460342.75	22	35	44.65	-10	35	31.32	10.6224	22.6
feb	3	2460343.75	22	36	10.81	-10	32	56.42	10.6289	22.6
feb	4	2460344.75	22	36	37.09	-10	30	20.84	10.6352	22.6
feb	5	2460345.75	22	37	3.48	-10	27	44.59	10.6413	22.6
feb	6	2460346.75	22	37	29.98	-10	25	7.71	10.6471	22.6
feb	7	2460347.75	22	37	56.57	-10	22	30.23	10.6526	22.6
feb	8	2460348.75	22	38	23.26	-10	19	52.20	10.6579	22.6
feb	9	2460349.75	22	38	50.04	-10	17	13.65	10.6630	22.6
feb	10	2460350.75	22	39	16.89	-10	14	34.62	10.6678	22.7
feb	11	2460351.75	22	39	43.82	-10	11	55.14	10.6724	22.7
feb	12	2460352.75	22	40	10.81	-10	9	15.21	10.6767	22.7
feb	13	2460353.75	22	40	37.88	-10	6	34.86	10.6807	22.7
feb	14	2460354.75	22	41	5.01	-10	3	54.10	10.6846	22.7
feb	15	2460355.75	22	41	32.20	-10	1	12.96	10.6881	22.7
feb	16	2460356.75	22	41	59.45	-9	58	31.45	10.6914	22.7
feb	17	2460357.75	22	42	26.75	-9	55	49.62	10.6945	22.7
feb	18	2460358.75	22	42	54.10	-9	53	7.51	10.6972	22.7

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
feb	19	2460359.75	22	43	21.49	-9	50	25.14	10.6998	22.7
feb	20	2460360.75	22	43	48.92	-9	47	42.56	10.7021	22.7
feb	21	2460361.75	22	44	16.38	-9	44	59.78	10.7041	22.7
feb	22	2460362.75	22	44	43.87	-9	42	16.85	10.7059	22.7
feb	23	2460363.75	22	45	11.38	-9	39	33.78	10.7074	22.8
feb	24	2460364.75	22	45	38.91	-9	36	50.60	10.7087	22.8
feb	25	2460365.75	22	46	6.45	-9	34	7.33	10.7097	22.8
feb	26	2460366.75	22	46	34.01	-9	31	24.00	10.7104	22.8
feb	27	2460367.75	22	47	1.57	-9	28	40.64	10.7109	22.8
feb	28	2460368.75	22	47	29.14	-9	25	57.27	10.7112	22.8
feb	29	2460369.75	22	47	56.70	-9	23	13.86	10.7112	22.8
mar	1	2460370.75	22	48	24.26	-9	20	30.32	10.7109	22.8
mar	2	2460371.75	22	48	51.83	-9	17	46.79	10.7104	22.8
mar	3	2460372.75	22	49	19.38	-9	15	3.33	10.7096	22.8
mar	4	2460373.75	22	49	46.93	-9	12	19.96	10.7086	22.8
mar	5	2460374.75	22	50	14.46	-9	9	36.72	10.7073	22.8
mar	6	2460375.75	22	50	41.97	-9	6	53.63	10.7058	22.8
mar	7	2460376.75	22	51	9.45	-9	4	10.73	10.7040	22.9
mar	8	2460377.75	22	51	36.89	-9	1	28.06	10.7019	22.9
mar	9	2460378.75	22	52	4.29	-8	58	45.65	10.6996	22.9
mar	10	2460379.75	22	52	31.65	-8	56	3.52	10.6971	22.9
mar	11	2460380.75	22	52	58.96	-8	53	21.69	10.6943	22.9
mar	12	2460381.75	22	53	26.21	-8	50	40.17	10.6912	22.9
mar	13	2460382.75	22	53	53.42	-8	47	58.98	10.6879	22.9
mar	14	2460383.75	22	54	20.56	-8	45	18.14	10.6843	22.9
mar	15	2460384.75	22	54	47.65	-8	42	37.70	10.6805	22.9
mar	16	2460385.75	22	55	14.67	-8	39	57.68	10.6765	22.9
mar	17	2460386.75	22	55	41.63	-8	37	18.12	10.6722	22.9
mar	18	2460387.75	22	56	8.50	-8	34	39.06	10.6676	22.9
mar	19	2460388.75	22	56	35.30	-8	32	0.53	10.6628	22.9
mar	20	2460389.75	22	57	2.01	-8	29	22.56	10.6578	23.0
mar	21	2460390.75	22	57	28.63	-8	26	45.17	10.6525	23.0
mar	22	2460391.75	22	57	55.15	-8	24	8.39	10.6470	23.0
mar	23	2460392.75	22	58	21.58	-8	21	32.24	10.6413	23.0
mar	24	2460393.75	22	58	47.91	-8	18	56.73	10.6353	23.0
mar	25	2460394.75	22	59	14.13	-8	16	21.88	10.6290	23.0
mar	26	2460395.75	22	59	40.25	-8	13	47.70	10.6226	23.0
mar	27	2460396.75	23	0	6.27	-8	11	14.22	10.6159	23.0
mar	28	2460397.75	23	0	32.17	-8	8	41.46	10.6090	23.0
mar	29	2460398.75	23	0	57.96	-8	6	9.44	10.6018	23.0
mar	30	2460399.75	23	1	23.63	-8	3	38.17	10.5945	23.0
mar	31	2460400.75	23	1	49.18	-8	1	7.70	10.5869	23.0
abr	1	2460401.75	23	2	14.60	-7	58	38.06	10.5790	23.0
abr	2	2460402.75	23	2	39.90	-7	56	9.27	10.5710	23.0
abr	3	2460403.75	23	3	5.05	-7	53	41.37	10.5627	23.1
abr	4	2460404.75	23	3	30.07	-7	51	14.41	10.5542	23.1
abr	5	2460405.75	23	3	54.94	-7	48	48.42	10.5455	23.1
abr	6	2460406.75	23	4	19.66	-7	46	23.41	10.5366	23.1

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
abr	7	2460407.75	23	4	44.22	-7	43	59.42	10.5274	23.1
abr	8	2460408.75	23	5	8.62	-7	41	36.45	10.5181	23.1
abr	9	2460409.75	23	5	32.86	-7	39	14.53	10.5085	23.1
abr	10	2460410.75	23	5	56.94	-7	36	53.66	10.4987	23.1
abr	11	2460411.75	23	6	20.86	-7	34	33.88	10.4888	23.1
abr	12	2460412.75	23	6	44.61	-7	32	15.23	10.4786	23.1
abr	13	2460413.75	23	7	8.18	-7	29	57.73	10.4682	23.1
abr	14	2460414.75	23	7	31.57	-7	27	41.44	10.4576	23.1
abr	15	2460415.75	23	7	54.78	-7	25	26.37	10.4468	23.1
abr	16	2460416.75	23	8	17.79	-7	23	12.56	10.4359	23.1
abr	17	2460417.75	23	8	40.62	-7	21	0.03	10.4247	23.1
abr	18	2460418.75	23	9	3.24	-7	18	48.81	10.4134	23.2
abr	19	2460419.75	23	9	25.67	-7	16	38.91	10.4019	23.2
abr	20	2460420.75	23	9	47.89	-7	14	30.34	10.3901	23.2
abr	21	2460421.75	23	10	9.91	-7	12	23.14	10.3783	23.2
abr	22	2460422.75	23	10	31.72	-7	10	17.30	10.3662	23.2
abr	23	2460423.75	23	10	53.32	-7	8	12.84	10.3540	23.2
abr	24	2460424.75	23	11	14.70	-7	6	9.79	10.3416	23.2
abr	25	2460425.75	23	11	35.88	-7	4	8.15	10.3290	23.2
abr	26	2460426.75	23	11	56.83	-7	2	7.96	10.3162	23.2
abr	27	2460427.75	23	12	17.56	-7	0	9.23	10.3033	23.2
abr	28	2460428.75	23	12	38.07	-6	58	11.99	10.2903	23.2
abr	29	2460429.75	23	12	58.35	-6	56	16.29	10.2771	23.2
abr	30	2460430.75	23	13	18.40	-6	54	22.14	10.2637	23.2
may	1	2460431.75	23	13	38.20	-6	52	29.59	10.2502	23.2
may	2	2460432.75	23	13	57.76	-6	50	38.66	10.2365	23.2
may	3	2460433.75	23	14	17.07	-6	48	49.37	10.2227	23.2
may	4	2460434.75	23	14	36.12	-6	47	1.76	10.2087	23.2
may	5	2460435.75	23	14	54.93	-6	45	15.84	10.1946	23.2
may	6	2460436.75	23	15	13.47	-6	43	31.60	10.1804	23.3
may	7	2460437.75	23	15	31.76	-6	41	49.08	10.1660	23.3
may	8	2460438.75	23	15	49.78	-6	40	8.28	10.1515	23.3
may	9	2460439.75	23	16	7.54	-6	38	29.24	10.1369	23.3
may	10	2460440.75	23	16	25.03	-6	36	51.99	10.1221	23.3
may	11	2460441.75	23	16	42.25	-6	35	16.56	10.1072	23.3
may	12	2460442.75	23	16	59.19	-6	33	42.99	10.0923	23.3
may	13	2460443.75	23	17	15.85	-6	32	11.29	10.0772	23.3
may	14	2460444.75	23	17	32.22	-6	30	41.50	10.0620	23.3
may	15	2460445.75	23	17	48.30	-6	29	13.62	10.0467	23.3
may	16	2460446.75	23	18	4.09	-6	27	47.68	10.0313	23.3
may	17	2460447.75	23	18	19.58	-6	26	23.68	10.0158	23.3
may	18	2460448.75	23	18	34.78	-6	25	1.64	10.0002	23.3
may	19	2460449.75	23	18	49.68	-6	23	41.56	9.9845	23.3
may	20	2460450.75	23	19	4.27	-6	22	23.46	9.9687	23.3
may	21	2460451.75	23	19	18.57	-6	21	7.34	9.9529	23.3
may	22	2460452.75	23	19	32.57	-6	19	53.21	9.9370	23.3
may	23	2460453.75	23	19	46.26	-6	18	41.09	9.9210	23.3
may	24	2460454.75	23	19	59.65	-6	17	31.00	9.9049	23.3
may	25	2460455.75	23	20	12.72	-6	16	22.95	9.8888	23.3

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	$^{\circ}$	δ -	"	dis UA	hp h
may	26	2460456.75	23	20	25.48	-6	15	16.97	9.8726	23.3
may	27	2460457.75	23	20	37.92	-6	14	13.09	9.8563	23.3
may	28	2460458.75	23	20	50.04	-6	13	11.34	9.8400	23.3
may	29	2460459.75	23	21	1.84	-6	12	11.73	9.8237	23.4
may	30	2460460.75	23	21	13.30	-6	11	14.29	9.8073	23.4
may	31	2460461.75	23	21	24.43	-6	10	19.03	9.7908	23.4
jun	1	2460462.75	23	21	35.22	-6	9	25.96	9.7743	23.4
jun	2	2460463.75	23	21	45.68	-6	8	35.09	9.7578	23.4
jun	3	2460464.75	23	21	55.81	-6	7	46.41	9.7412	23.4
jun	4	2460465.75	23	22	5.59	-6	6	59.94	9.7246	23.4
jun	5	2460466.75	23	22	15.04	-6	6	15.69	9.7080	23.4
jun	6	2460467.75	23	22	24.14	-6	5	33.68	9.6914	23.4
jun	7	2460468.75	23	22	32.90	-6	4	53.94	9.6747	23.4
jun	8	2460469.75	23	22	41.31	-6	4	16.48	9.6581	23.4
jun	9	2460470.75	23	22	49.36	-6	3	41.33	9.6414	23.4
jun	10	2460471.75	23	22	57.06	-6	3	8.49	9.6248	23.4
jun	11	2460472.75	23	23	4.41	-6	2	37.99	9.6081	23.4
jun	12	2460473.75	23	23	11.39	-6	2	9.81	9.5915	23.4
jun	13	2460474.75	23	23	18.01	-6	1	43.97	9.5749	23.4
jun	14	2460475.75	23	23	24.28	-6	1	20.46	9.5583	23.4
jun	15	2460476.75	23	23	30.18	-6	0	59.27	9.5417	23.4
jun	16	2460477.75	23	23	35.73	-6	0	40.41	9.5251	23.4
jun	17	2460478.75	23	23	40.91	-6	0	23.86	9.5086	23.4
jun	18	2460479.75	23	23	45.73	-6	0	9.63	9.4921	23.4
jun	19	2460480.75	23	23	50.20	-5	59	57.72	9.4756	23.4
jun	20	2460481.75	23	23	54.30	-5	59	48.12	9.4592	23.4
jun	21	2460482.75	23	23	58.04	-5	59	40.84	9.4429	23.4
jun	22	2460483.75	23	24	1.42	-5	59	35.89	9.4265	23.4
jun	23	2460484.75	23	24	4.44	-5	59	33.28	9.4103	23.4
jun	24	2460485.75	23	24	7.08	-5	59	33.02	9.3941	23.4
jun	25	2460486.75	23	24	9.36	-5	59	35.13	9.3780	23.4
jun	26	2460487.75	23	24	11.26	-5	59	39.61	9.3619	23.4
jun	27	2460488.75	23	24	12.79	-5	59	46.46	9.3459	23.4
jun	28	2460489.75	23	24	13.95	-5	59	55.66	9.3300	23.4
jun	29	2460490.75	23	24	14.74	-6	0	7.21	9.3142	23.4
jun	30	2460491.75	23	24	15.16	-6	0	21.09	9.2984	23.4
jul	1	2460492.75	23	24	15.21	-6	0	37.30	9.2828	23.4
jul	2	2460493.75	23	24	14.89	-6	0	55.82	9.2672	23.4
jul	3	2460494.75	23	24	14.20	-6	1	16.67	9.2518	23.4
jul	4	2460495.75	23	24	13.15	-6	1	39.83	9.2364	23.4
jul	5	2460496.75	23	24	11.72	-6	2	5.32	9.2212	23.4
jul	6	2460497.75	23	24	9.93	-6	2	33.13	9.2061	23.4
jul	7	2460498.75	23	24	7.77	-6	3	3.25	9.1911	23.4
jul	8	2460499.75	23	24	5.23	-6	3	35.69	9.1762	23.4
jul	9	2460500.75	23	24	2.33	-6	4	10.41	9.1615	23.4
jul	10	2460501.75	23	23	59.06	-6	4	47.41	9.1468	23.4
jul	11	2460502.75	23	23	55.43	-6	5	26.65	9.1324	23.4
jul	12	2460503.75	23	23	51.44	-6	6	8.12	9.1180	23.4

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
jul	13	2460504.75	23	23	47.08	-6	6	51.78	9.1038	23.4
jul	14	2460505.75	23	23	42.38	-6	7	37.60	9.0898	23.4
jul	15	2460506.75	23	23	37.32	-6	8	25.57	9.0759	23.4
jul	16	2460507.75	23	23	31.92	-6	9	15.66	9.0622	23.4
jul	17	2460508.75	23	23	26.17	-6	10	7.84	9.0487	23.4
jul	18	2460509.75	23	23	20.07	-6	11	2.09	9.0353	23.4
jul	19	2460510.75	23	23	13.64	-6	11	58.39	9.0221	23.4
jul	20	2460511.75	23	23	6.87	-6	12	56.73	9.0090	23.4
jul	21	2460512.75	23	22	59.76	-6	13	57.09	8.9962	23.4
jul	22	2460513.75	23	22	52.32	-6	14	59.48	8.9835	23.4
jul	23	2460514.75	23	22	44.54	-6	16	3.85	8.9710	23.4
jul	24	2460515.75	23	22	36.42	-6	17	10.20	8.9587	23.4
jul	25	2460516.75	23	22	27.98	-6	18	18.49	8.9466	23.4
jul	26	2460517.75	23	22	19.22	-6	19	28.67	8.9347	23.4
jul	27	2460518.75	23	22	10.14	-6	20	40.72	8.9230	23.4
jul	28	2460519.75	23	22	0.74	-6	21	54.59	8.9115	23.4
jul	29	2460520.75	23	21	51.04	-6	23	10.25	8.9002	23.4
jul	30	2460521.75	23	21	41.03	-6	24	27.66	8.8891	23.4
jul	31	2460522.75	23	21	30.72	-6	25	46.82	8.8783	23.4
ago	1	2460523.75	23	21	20.11	-6	27	7.69	8.8676	23.4
ago	2	2460524.75	23	21	9.21	-6	28	30.24	8.8572	23.4
ago	3	2460525.75	23	20	58.02	-6	29	54.44	8.8471	23.3
ago	4	2460526.75	23	20	46.55	-6	31	20.25	8.8371	23.3
ago	5	2460527.75	23	20	34.79	-6	32	47.64	8.8274	23.3
ago	6	2460528.75	23	20	22.76	-6	34	16.55	8.8180	23.3
ago	7	2460529.75	23	20	10.46	-6	35	46.95	8.8088	23.3
ago	8	2460530.75	23	19	57.90	-6	37	18.76	8.7998	23.3
ago	9	2460531.75	23	19	45.09	-6	38	51.94	8.7911	23.3
ago	10	2460532.75	23	19	32.03	-6	40	26.44	8.7826	23.3
ago	11	2460533.75	23	19	18.73	-6	42	2.19	8.7744	23.3
ago	12	2460534.75	23	19	5.20	-6	43	39.16	8.7665	23.3
ago	13	2460535.75	23	18	51.45	-6	45	17.28	8.7588	23.3
ago	14	2460536.75	23	18	37.49	-6	46	56.51	8.7514	23.3
ago	15	2460537.75	23	18	23.31	-6	48	36.81	8.7442	23.3
ago	16	2460538.75	23	18	8.93	-6	50	18.12	8.7373	23.3
ago	17	2460539.75	23	17	54.35	-6	52	0.41	8.7307	23.3
ago	18	2460540.75	23	17	39.58	-6	53	43.65	8.7244	23.3
ago	19	2460541.75	23	17	24.62	-6	55	27.80	8.7184	23.3
ago	20	2460542.75	23	17	9.48	-6	57	12.80	8.7126	23.3
ago	21	2460543.75	23	16	54.16	-6	58	58.60	8.7071	23.3
ago	22	2460544.75	23	16	38.68	-7	0	45.14	8.7019	23.3
ago	23	2460545.75	23	16	23.04	-7	2	32.36	8.6969	23.3
ago	24	2460546.75	23	16	7.26	-7	4	20.20	8.6923	23.3
ago	25	2460547.75	23	15	51.34	-7	6	8.60	8.6879	23.3
ago	26	2460548.75	23	15	35.29	-7	7	57.50	8.6838	23.3
ago	27	2460549.75	23	15	19.12	-7	9	46.87	8.6801	23.3
ago	28	2460550.75	23	15	2.83	-7	11	36.66	8.6766	23.3
ago	29	2460551.75	23	14	46.43	-7	13	26.83	8.6734	23.2
ago	30	2460552.75	23	14	29.93	-7	15	17.31	8.6705	23.2

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
ago	31	2460553.75	23	14	13.34	-7	17	8.06	8.6679	23.2
sep	1	2460554.75	23	13	56.66	-7	18	59.01	8.6656	23.2
sep	2	2460555.75	23	13	39.91	-7	20	50.11	8.6636	23.2
sep	3	2460556.75	23	13	23.09	-7	22	41.30	8.6620	23.2
sep	4	2460557.75	23	13	6.22	-7	24	32.49	8.6606	23.2
sep	5	2460558.75	23	12	49.30	-7	26	23.62	8.6595	23.2
sep	6	2460559.75	23	12	32.34	-7	28	14.63	8.6587	23.2
sep	7	2460560.75	23	12	15.36	-7	30	5.45	8.6582	23.2
sep	8	2460561.75	23	11	58.36	-7	31	56.01	8.6581	23.2
sep	9	2460562.75	23	11	41.36	-7	33	46.26	8.6582	23.2
sep	10	2460563.75	23	11	24.37	-7	35	36.13	8.6586	23.2
sep	11	2460564.75	23	11	7.38	-7	37	25.57	8.6594	23.2
sep	12	2460565.75	23	10	50.42	-7	39	14.53	8.6604	23.2
sep	13	2460566.75	23	10	33.49	-7	41	2.95	8.6618	23.2
sep	14	2460567.75	23	10	16.60	-7	42	50.80	8.6634	23.2
sep	15	2460568.75	23	9	59.75	-7	44	38.03	8.6654	23.2
sep	16	2460569.75	23	9	42.96	-7	46	24.60	8.6677	23.2
sep	17	2460570.75	23	9	26.22	-7	48	10.44	8.6702	23.2
sep	18	2460571.75	23	9	9.55	-7	49	55.50	8.6731	23.2
sep	19	2460572.75	23	8	52.96	-7	51	39.71	8.6762	23.1
sep	20	2460573.75	23	8	36.46	-7	53	23.01	8.6797	23.1
sep	21	2460574.75	23	8	20.07	-7	55	5.34	8.6834	23.1
sep	22	2460575.75	23	8	3.78	-7	56	46.65	8.6874	23.1
sep	23	2460576.75	23	7	47.61	-7	58	26.90	8.6918	23.1
sep	24	2460577.75	23	7	31.56	-8	0	6.06	8.6964	23.1
sep	25	2460578.75	23	7	15.65	-8	1	44.07	8.7013	23.1
sep	26	2460579.75	23	6	59.87	-8	3	20.90	8.7065	23.1
sep	27	2460580.75	23	6	44.25	-8	4	56.50	8.7120	23.1
sep	28	2460581.75	23	6	28.77	-8	6	30.82	8.7178	23.1
sep	29	2460582.75	23	6	13.46	-8	8	3.81	8.7239	23.1
sep	30	2460583.75	23	5	58.33	-8	9	35.41	8.7302	23.1
oct	1	2460584.75	23	5	43.37	-8	11	5.56	8.7369	23.1
oct	2	2460585.75	23	5	28.61	-8	12	34.21	8.7438	23.1
oct	3	2460586.75	23	5	14.04	-8	14	1.31	8.7510	23.1
oct	4	2460587.75	23	4	59.69	-8	15	26.80	8.7584	23.1
oct	5	2460588.75	23	4	45.55	-8	16	50.63	8.7662	23.1
oct	6	2460589.75	23	4	31.64	-8	18	12.76	8.7742	23.1
oct	7	2460590.75	23	4	17.97	-8	19	33.14	8.7824	23.1
oct	8	2460591.75	23	4	4.54	-8	20	51.74	8.7910	23.1
oct	9	2460592.75	23	3	51.35	-8	22	8.53	8.7998	23.1
oct	10	2460593.75	23	3	38.42	-8	23	23.46	8.8088	23.1
oct	11	2460594.75	23	3	25.76	-8	24	36.53	8.8181	23.1
oct	12	2460595.75	23	3	13.35	-8	25	47.70	8.8276	23.1
oct	13	2460596.75	23	3	1.22	-8	26	56.94	8.8374	23.1
oct	14	2460597.75	23	2	49.36	-8	28	4.23	8.8474	23.0
oct	15	2460598.75	23	2	37.78	-8	29	9.52	8.8577	23.0
oct	16	2460599.75	23	2	26.50	-8	30	12.79	8.8682	23.0
oct	17	2460600.75	23	2	15.50	-8	31	13.99	8.8789	23.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	δ °	"	dis UA	hp h	
oct	18	2460601.75	23	2	4.81	-8	32	13.09	8.8899	23.0
oct	19	2460602.75	23	1	54.43	-8	33	10.04	8.9011	23.0
oct	20	2460603.75	23	1	44.37	-8	34	4.84	8.9125	23.0
oct	21	2460604.75	23	1	34.62	-8	34	57.48	8.9241	23.0
oct	22	2460605.75	23	1	25.19	-8	35	47.93	8.9359	23.0
oct	23	2460606.75	23	1	16.09	-8	36	36.19	8.9479	23.0
oct	24	2460607.75	23	1	7.32	-8	37	22.24	8.9602	23.0
oct	25	2460608.75	23	0	58.89	-8	38	6.06	8.9726	23.0
oct	26	2460609.75	23	0	50.79	-8	38	47.61	8.9853	23.0
oct	27	2460610.75	23	0	43.03	-8	39	26.88	8.9981	23.0
oct	28	2460611.75	23	0	35.62	-8	40	3.84	9.0111	23.0
oct	29	2460612.75	23	0	28.56	-8	40	38.44	9.0243	23.0
oct	30	2460613.75	23	0	21.86	-8	41	10.68	9.0377	23.0
oct	31	2460614.75	23	0	15.53	-8	41	40.53	9.0512	23.0
nov	1	2460615.75	23	0	9.56	-8	42	7.96	9.0650	23.0
nov	2	2460616.75	23	0	3.96	-8	42	32.96	9.0789	23.0
nov	3	2460617.75	22	59	58.74	-8	42	55.51	9.0929	23.0
nov	4	2460618.75	22	59	53.90	-8	43	15.61	9.1071	23.0
nov	5	2460619.75	22	59	49.44	-8	43	33.25	9.1215	23.0
nov	6	2460620.75	22	59	45.36	-8	43	48.42	9.1360	23.0
nov	7	2460621.75	22	59	41.66	-8	44	1.14	9.1506	23.0
nov	8	2460622.75	22	59	38.35	-8	44	11.40	9.1654	23.0
nov	9	2460623.75	22	59	35.42	-8	44	19.20	9.1803	23.0
nov	10	2460624.75	22	59	32.87	-8	44	24.54	9.1954	23.0
nov	11	2460625.75	22	59	30.71	-8	44	27.42	9.2105	23.0
nov	12	2460626.75	22	59	28.94	-8	44	27.84	9.2258	23.0
nov	13	2460627.75	22	59	27.56	-8	44	25.76	9.2412	23.0
nov	14	2460628.75	22	59	26.57	-8	44	21.20	9.2566	23.0
nov	15	2460629.75	22	59	25.98	-8	44	14.13	9.2722	23.0
nov	16	2460630.75	22	59	25.78	-8	44	4.57	9.2879	23.0
nov	17	2460631.75	22	59	25.98	-8	43	52.52	9.3037	23.0
nov	18	2460632.75	22	59	26.57	-8	43	38.00	9.3195	23.0
nov	19	2460633.75	22	59	27.56	-8	43	21.03	9.3355	23.0
nov	20	2460634.75	22	59	28.94	-8	43	1.62	9.3515	23.0
nov	21	2460635.75	22	59	30.71	-8	42	39.78	9.3676	23.0
nov	22	2460636.75	22	59	32.87	-8	42	15.50	9.3837	23.0
nov	23	2460637.75	22	59	35.42	-8	41	48.78	9.4000	23.0
nov	24	2460638.75	22	59	38.37	-8	41	19.62	9.4163	23.0
nov	25	2460639.75	22	59	41.71	-8	40	48.02	9.4326	23.0
nov	26	2460640.75	22	59	45.44	-8	40	13.97	9.4490	23.0
nov	27	2460641.75	22	59	49.57	-8	39	37.48	9.4654	23.0
nov	28	2460642.75	22	59	54.09	-8	38	58.53	9.4819	23.0
nov	29	2460643.75	22	59	59.01	-8	38	17.15	9.4984	23.0
nov	30	2460644.75	23	0	4.32	-8	37	33.34	9.5149	23.0
dic	1	2460645.75	23	0	10.03	-8	36	47.10	9.5314	23.0
dic	2	2460646.75	23	0	16.13	-8	35	58.46	9.5480	23.0
dic	3	2460647.75	23	0	22.61	-8	35	7.43	9.5646	23.0
dic	4	2460648.75	23	0	29.49	-8	34	14.04	9.5812	23.0
dic	5	2460649.75	23	0	36.75	-8	33	18.31	9.5977	23.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
dic	6	2460650.75	23	0	44.38	-8	32	20.26	9.6143	23.0
dic	7	2460651.75	23	0	52.40	-8	31	19.91	9.6309	23.0
dic	8	2460652.75	23	1	0.79	-8	30	17.28	9.6474	23.0
dic	9	2460653.75	23	1	9.54	-8	29	12.38	9.6640	23.0
dic	10	2460654.75	23	1	18.68	-8	28	5.21	9.6805	23.0
dic	11	2460655.75	23	1	28.18	-8	26	55.78	9.6970	23.0
dic	12	2460656.75	23	1	38.05	-8	25	44.11	9.7134	23.0
dic	13	2460657.75	23	1	48.28	-8	24	30.20	9.7299	23.0
dic	14	2460658.75	23	1	58.89	-8	23	14.09	9.7462	23.0
dic	15	2460659.75	23	2	9.85	-8	21	55.80	9.7626	23.0
dic	16	2460660.75	23	2	21.17	-8	20	35.37	9.7788	23.0
dic	17	2460661.75	23	2	32.84	-8	19	12.83	9.7951	23.0
dic	18	2460662.75	23	2	44.85	-8	17	48.20	9.8112	23.0
dic	19	2460663.75	23	2	57.22	-8	16	21.50	9.8273	23.0
dic	20	2460664.75	23	3	9.92	-8	14	52.74	9.8434	23.1
dic	21	2460665.75	23	3	22.96	-8	13	21.94	9.8593	23.1
dic	22	2460666.75	23	3	36.33	-8	11	49.10	9.8752	23.1
dic	23	2460667.75	23	3	50.04	-8	10	14.23	9.8910	23.1
dic	24	2460668.75	23	4	4.09	-8	8	37.35	9.9068	23.1
dic	25	2460669.75	23	4	18.47	-8	6	58.48	9.9224	23.1
dic	26	2460670.75	23	4	33.17	-8	5	17.62	9.9380	23.1
dic	27	2460671.75	23	4	48.20	-8	3	34.79	9.9534	23.1
dic	28	2460672.75	23	5	3.55	-8	1	50.02	9.9688	23.1
dic	29	2460673.75	23	5	19.23	-8	0	3.33	9.9840	23.1
dic	30	2460674.75	23	5	35.22	-7	58	14.76	9.9991	23.1
dic	31	2460675.75	23	5	51.51	-7	56	24.33	10.0141	23.1
ene	1	2460676.75	23	6	8.11	-7	54	32.08	10.0290	23.1
ene	2	2460677.75	23	6	26.39	-7	52	30.24	9.9724	23.1

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
ene	1	2460310.75	3	8	3.40	+17	16	40.72	18.9787	20.2
ene	2	2460311.75	3	7	58.21	+17	16	21.15	18.9921	20.2
ene	3	2460312.75	3	7	53.21	+17	16	2.30	19.0057	20.1
ene	4	2460313.75	3	7	48.38	+17	15	44.19	19.0194	20.0
ene	5	2460314.75	3	7	43.75	+17	15	26.82	19.0333	20.0
ene	6	2460315.75	3	7	39.31	+17	15	10.21	19.0474	19.9
ene	7	2460316.75	3	7	35.06	+17	14	54.38	19.0617	19.8
ene	8	2460317.75	3	7	31.00	+17	14	39.36	19.0762	19.8
ene	9	2460318.75	3	7	27.15	+17	14	25.14	19.0908	19.7
ene	10	2460319.75	3	7	23.49	+17	14	11.76	19.1056	19.6
ene	11	2460320.75	3	7	20.04	+17	13	59.21	19.1205	19.6
ene	12	2460321.75	3	7	16.78	+17	13	47.49	19.1356	19.5
ene	13	2460322.75	3	7	13.72	+17	13	36.60	19.1508	19.4
ene	14	2460323.75	3	7	10.86	+17	13	26.51	19.1661	19.4
ene	15	2460324.75	3	7	8.20	+17	13	17.23	19.1816	19.3
ene	16	2460325.75	3	7	5.74	+17	13	8.76	19.1972	19.2
ene	17	2460326.75	3	7	3.49	+17	13	1.11	19.2130	19.2
ene	18	2460327.75	3	7	1.45	+17	12	54.29	19.2288	19.1
ene	19	2460328.75	3	6	59.62	+17	12	48.31	19.2448	19.0
ene	20	2460329.75	3	6	58.00	+17	12	43.21	19.2608	19.0
ene	21	2460330.75	3	6	56.60	+17	12	38.97	19.2770	18.9
ene	22	2460331.75	3	6	55.40	+17	12	35.61	19.2932	18.8
ene	23	2460332.75	3	6	54.42	+17	12	33.12	19.3096	18.8
ene	24	2460333.75	3	6	53.65	+17	12	31.50	19.3260	18.7
ene	25	2460334.75	3	6	53.09	+17	12	30.74	19.3425	18.6
ene	26	2460335.75	3	6	52.73	+17	12	30.84	19.3591	18.6
ene	27	2460336.75	3	6	52.58	+17	12	31.79	19.3758	18.5
ene	28	2460337.75	3	6	52.65	+17	12	33.59	19.3925	18.4
ene	29	2460338.75	3	6	52.92	+17	12	36.23	19.4093	18.4
ene	30	2460339.75	3	6	53.40	+17	12	39.71	19.4261	18.3
ene	31	2460340.75	3	6	54.10	+17	12	44.04	19.4430	18.2
feb	1	2460341.75	3	6	55.01	+17	12	49.23	19.4599	18.2
feb	2	2460342.75	3	6	56.14	+17	12	55.28	19.4769	18.1
feb	3	2460343.75	3	6	57.48	+17	13	2.19	19.4939	18.0
feb	4	2460344.75	3	6	59.03	+17	13	9.98	19.5109	18.0
feb	5	2460345.75	3	7	0.81	+17	13	18.65	19.5279	17.9
feb	6	2460346.75	3	7	2.80	+17	13	28.20	19.5450	17.8
feb	7	2460347.75	3	7	5.00	+17	13	38.65	19.5621	17.8
feb	8	2460348.75	3	7	7.41	+17	13	49.97	19.5792	17.7
feb	9	2460349.75	3	7	10.04	+17	14	2.15	19.5963	17.7
feb	10	2460350.75	3	7	12.87	+17	14	15.18	19.6133	17.6
feb	11	2460351.75	3	7	15.90	+17	14	29.03	19.6304	17.5
feb	12	2460352.75	3	7	19.14	+17	14	43.70	19.6475	17.5
feb	13	2460353.75	3	7	22.59	+17	14	59.17	19.6645	17.4
feb	14	2460354.75	3	7	26.25	+17	15	15.46	19.6815	17.3
feb	15	2460355.75	3	7	30.12	+17	15	32.58	19.6985	17.3

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
feb	16	2460356.75	3	7	34.20	+17	15	50.52	19.7155	17.2
feb	17	2460357.75	3	7	38.49	+17	16	9.30	19.7324	17.1
feb	18	2460358.75	3	7	42.98	+17	16	28.91	19.7492	17.1
feb	19	2460359.75	3	7	47.68	+17	16	49.34	19.7660	17.0
feb	20	2460360.75	3	7	52.57	+17	17	10.57	19.7828	16.9
feb	21	2460361.75	3	7	57.66	+17	17	32.60	19.7995	16.9
feb	22	2460362.75	3	8	2.95	+17	17	55.41	19.8161	16.8
feb	23	2460363.75	3	8	8.43	+17	18	18.98	19.8326	16.7
feb	24	2460364.75	3	8	14.10	+17	18	43.31	19.8491	16.7
feb	25	2460365.75	3	8	19.96	+17	19	8.37	19.8655	16.6
feb	26	2460366.75	3	8	26.01	+17	19	34.17	19.8818	16.6
feb	27	2460367.75	3	8	32.25	+17	20	0.70	19.8981	16.5
feb	28	2460368.75	3	8	38.68	+17	20	27.96	19.9142	16.4
feb	29	2460369.75	3	8	45.30	+17	20	55.94	19.9303	16.4
mar	1	2460370.75	3	8	52.11	+17	21	24.65	19.9462	16.3
mar	2	2460371.75	3	8	59.11	+17	21	54.09	19.9620	16.2
mar	3	2460372.75	3	9	6.29	+17	22	24.25	19.9778	16.2
mar	4	2460373.75	3	9	13.66	+17	22	55.13	19.9934	16.1
mar	5	2460374.75	3	9	21.21	+17	23	26.73	20.0089	16.0
mar	6	2460375.75	3	9	28.94	+17	23	59.04	20.0242	16.0
mar	7	2460376.75	3	9	36.84	+17	24	32.05	20.0395	15.9
mar	8	2460377.75	3	9	44.92	+17	25	5.71	20.0546	15.9
mar	9	2460378.75	3	9	53.16	+17	25	40.02	20.0696	15.8
mar	10	2460379.75	3	10	1.57	+17	26	14.96	20.0844	15.7
mar	11	2460380.75	3	10	10.14	+17	26	50.49	20.0991	15.7
mar	12	2460381.75	3	10	18.89	+17	27	26.63	20.1136	15.6
mar	13	2460382.75	3	10	27.80	+17	28	3.37	20.1280	15.5
mar	14	2460383.75	3	10	36.87	+17	28	40.73	20.1423	15.5
mar	15	2460384.75	3	10	46.11	+17	29	18.69	20.1563	15.4
mar	16	2460385.75	3	10	55.51	+17	29	57.26	20.1702	15.3
mar	17	2460386.75	3	11	5.07	+17	30	36.42	20.1840	15.3
mar	18	2460387.75	3	11	14.78	+17	31	16.15	20.1975	15.2
mar	19	2460388.75	3	11	24.63	+17	31	56.44	20.2109	15.2
mar	20	2460389.75	3	11	34.63	+17	32	37.27	20.2241	15.1
mar	21	2460390.75	3	11	44.78	+17	33	18.61	20.2371	15.0
mar	22	2460391.75	3	11	55.06	+17	34	0.46	20.2500	15.0
mar	23	2460392.75	3	12	5.48	+17	34	42.79	20.2626	14.9
mar	24	2460393.75	3	12	16.03	+17	35	25.59	20.2751	14.8
mar	25	2460394.75	3	12	26.73	+17	36	8.86	20.2874	14.8
mar	26	2460395.75	3	12	37.55	+17	36	52.59	20.2994	14.7
mar	27	2460396.75	3	12	48.51	+17	37	36.77	20.3113	14.7
mar	28	2460397.75	3	12	59.60	+17	38	21.40	20.3230	14.6
mar	29	2460398.75	3	13	10.82	+17	39	6.47	20.3345	14.5
mar	30	2460399.75	3	13	22.17	+17	39	52.00	20.3457	14.5
mar	31	2460400.75	3	13	33.64	+17	40	37.96	20.3568	14.4
abr	1	2460401.75	3	13	45.23	+17	41	24.35	20.3676	14.3

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
abr	2	2460402.75	3	13	56.94	+17	42	11.17	20.3782	14.3
abr	3	2460403.75	3	14	8.77	+17	42	58.38	20.3886	14.2
abr	4	2460404.75	3	14	20.70	+17	43	45.98	20.3988	14.2
abr	5	2460405.75	3	14	32.75	+17	44	33.94	20.4087	14.1
abr	6	2460406.75	3	14	44.89	+17	45	22.22	20.4185	14.0
abr	7	2460407.75	3	14	57.14	+17	46	10.82	20.4280	14.0
abr	8	2460408.75	3	15	9.49	+17	46	59.72	20.4372	13.9
abr	9	2460409.75	3	15	21.94	+17	47	48.92	20.4463	13.8
abr	10	2460410.75	3	15	34.49	+17	48	38.41	20.4550	13.8
abr	11	2460411.75	3	15	47.14	+17	49	28.22	20.4636	13.7
abr	12	2460412.75	3	15	59.88	+17	50	18.32	20.4719	13.7
abr	13	2460413.75	3	16	12.72	+17	51	8.71	20.4800	13.6
abr	14	2460414.75	3	16	25.64	+17	51	59.37	20.4878	13.5
abr	15	2460415.75	3	16	38.64	+17	52	50.29	20.4953	13.5
abr	16	2460416.75	3	16	51.72	+17	53	41.43	20.5027	13.4
abr	17	2460417.75	3	17	4.87	+17	54	32.79	20.5097	13.3
abr	18	2460418.75	3	17	18.09	+17	55	24.34	20.5166	13.3
abr	19	2460419.75	3	17	31.38	+17	56	16.07	20.5231	13.2
abr	20	2460420.75	3	17	44.73	+17	57	7.96	20.5294	13.2
abr	21	2460421.75	3	17	58.15	+17	58	0.01	20.5355	13.1
abr	22	2460422.75	3	18	11.63	+17	58	52.20	20.5413	13.0
abr	23	2460423.75	3	18	25.18	+17	59	44.53	20.5469	13.0
abr	24	2460424.75	3	18	38.79	+18	0	37.00	20.5521	12.9
abr	25	2460425.75	3	18	52.45	+18	1	29.60	20.5572	12.9
abr	26	2460426.75	3	19	6.17	+18	2	22.34	20.5620	12.8
abr	27	2460427.75	3	19	19.94	+18	3	15.20	20.5665	12.7
abr	28	2460428.75	3	19	33.77	+18	4	8.18	20.5707	12.7
abr	29	2460429.75	3	19	47.64	+18	5	1.27	20.5747	12.6
abr	30	2460430.75	3	20	1.55	+18	5	54.46	20.5784	12.5
may	1	2460431.75	3	20	15.50	+18	6	47.72	20.5819	12.5
may	2	2460432.75	3	20	29.48	+18	7	41.04	20.5851	12.4
may	3	2460433.75	3	20	43.50	+18	8	34.38	20.5880	12.4
may	4	2460434.75	3	20	57.54	+18	9	27.74	20.5907	12.3
may	5	2460435.75	3	21	11.61	+18	10	21.08	20.5930	12.2
may	6	2460436.75	3	21	25.71	+18	11	14.42	20.5952	12.2
may	7	2460437.75	3	21	39.84	+18	12	7.75	20.5970	12.1
may	8	2460438.75	3	21	53.99	+18	13	1.07	20.5986	12.0
may	9	2460439.75	3	22	8.16	+18	13	54.39	20.5999	12.0
may	10	2460440.75	3	22	22.35	+18	14	47.70	20.6009	11.9
may	11	2460441.75	3	22	36.56	+18	15	40.98	20.6017	11.9
may	12	2460442.75	3	22	50.78	+18	16	34.19	20.6022	11.8
may	13	2460443.75	3	23	5.03	+18	17	26.18	20.6024	11.7
may	14	2460444.75	3	23	19.14	+18	18	20.17	20.6024	11.7
may	15	2460445.75	3	23	33.36	+18	19	13.36	20.6020	11.6
may	16	2460446.75	3	23	47.56	+18	20	6.28	20.6015	11.6
may	17	2460447.75	3	24	1.76	+18	20	59.05	20.6006	11.5

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
may	18	2460448.75	3	24	15.94	+18	21	51.67	20.5995	11.4
may	19	2460449.75	3	24	30.11	+18	22	44.15	20.5981	11.4
may	20	2460450.75	3	24	44.27	+18	23	36.47	20.5964	11.3
may	21	2460451.75	3	24	58.42	+18	24	28.64	20.5945	11.2
may	22	2460452.75	3	25	12.54	+18	25	20.65	20.5923	11.2
may	23	2460453.75	3	25	26.65	+18	26	12.51	20.5899	11.1
may	24	2460454.75	3	25	40.74	+18	27	4.21	20.5872	11.1
may	25	2460455.75	3	25	54.81	+18	27	55.75	20.5842	11.0
may	26	2460456.75	3	26	8.85	+18	28	47.13	20.5810	10.9
may	27	2460457.75	3	26	22.85	+18	29	38.33	20.5774	10.9
may	28	2460458.75	3	26	36.82	+18	30	29.32	20.5737	10.8
may	29	2460459.75	3	26	50.75	+18	31	20.11	20.5697	10.8
may	30	2460460.75	3	27	4.63	+18	32	10.65	20.5654	10.7
may	31	2460461.75	3	27	18.47	+18	33	0.93	20.5608	10.6
jun	1	2460462.75	3	27	32.27	+18	33	50.94	20.5560	10.6
jun	2	2460463.75	3	27	46.01	+18	34	40.68	20.5510	10.5
jun	3	2460464.75	3	27	59.71	+18	35	30.13	20.5457	10.4
jun	4	2460465.75	3	28	13.36	+18	36	19.32	20.5401	10.4
jun	5	2460466.75	3	28	26.96	+18	37	8.23	20.5343	10.3
jun	6	2460467.75	3	28	40.50	+18	37	56.88	20.5282	10.3
jun	7	2460468.75	3	28	53.99	+18	38	45.24	20.5219	10.2
jun	8	2460469.75	3	29	7.40	+18	39	33.32	20.5153	10.1
jun	9	2460470.75	3	29	20.75	+18	40	21.09	20.5085	10.1
jun	10	2460471.75	3	29	34.03	+18	41	8.54	20.5014	10.0
jun	11	2460472.75	3	29	47.23	+18	41	55.64	20.4941	9.9
jun	12	2460473.75	3	30	0.35	+18	42	42.38	20.4866	9.9
jun	13	2460474.75	3	30	13.39	+18	43	28.75	20.4788	9.8
jun	14	2460475.75	3	30	26.34	+18	44	14.74	20.4708	9.8
jun	15	2460476.75	3	30	39.22	+18	45	0.34	20.4625	9.7
jun	16	2460477.75	3	30	52.00	+18	45	45.55	20.4540	9.6
jun	17	2460478.75	3	31	4.71	+18	46	30.38	20.4453	9.6
jun	18	2460479.75	3	31	17.32	+18	47	14.81	20.4363	9.5
jun	19	2460480.75	3	31	29.84	+18	47	58.86	20.4272	9.4
jun	20	2460481.75	3	31	42.28	+18	48	42.52	20.4178	9.4
jun	21	2460482.75	3	31	54.62	+18	49	25.79	20.4081	9.3
jun	22	2460483.75	3	32	6.86	+18	50	8.68	20.3983	9.3
jun	23	2460484.75	3	32	18.99	+18	50	51.16	20.3883	9.2
jun	24	2460485.75	3	32	31.03	+18	51	33.23	20.3780	9.1
jun	25	2460486.75	3	32	42.95	+18	52	14.88	20.3675	9.1
jun	26	2460487.75	3	32	54.76	+18	52	56.06	20.3568	9.0
jun	27	2460488.75	3	33	6.45	+18	53	36.78	20.3459	8.9
jun	28	2460489.75	3	33	18.03	+18	54	17.02	20.3348	8.9
jun	29	2460490.75	3	33	29.50	+18	54	56.76	20.3235	8.8
jun	30	2460491.75	3	33	40.84	+18	55	36.03	20.3120	8.8
jul	1	2460492.75	3	33	52.07	+18	56	14.81	20.3003	8.7
jul	2	2460493.75	3	34	3.18	+18	56	53.12	20.2884	8.6

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
jul	3	2460494.75	3	34	14.17	+18	57	30.95	20.2763	8.6
jul	4	2460495.75	3	34	25.03	+18	58	8.31	20.2641	8.5
jul	5	2460496.75	3	34	35.76	+18	58	45.19	20.2516	8.4
jul	6	2460497.75	3	34	46.35	+18	59	21.56	20.2390	8.4
jul	7	2460498.75	3	34	56.81	+18	59	57.43	20.2261	8.3
jul	8	2460499.75	3	35	7.12	+19	0	32.77	20.2131	8.3
jul	9	2460500.75	3	35	17.29	+19	1	7.56	20.2000	8.2
jul	10	2460501.75	3	35	27.32	+19	1	41.81	20.1866	8.1
jul	11	2460502.75	3	35	37.19	+19	2	15.49	20.1731	8.1
jul	12	2460503.75	3	35	46.92	+19	2	48.60	20.1594	8.0
jul	13	2460504.75	3	35	56.50	+19	3	21.14	20.1456	7.9
jul	14	2460505.75	3	36	5.93	+19	3	53.12	20.1316	7.9
jul	15	2460506.75	3	36	15.21	+19	4	24.53	20.1175	7.8
jul	16	2460507.75	3	36	24.34	+19	4	55.38	20.1032	7.8
jul	17	2460508.75	3	36	33.31	+19	5	25.68	20.0888	7.7
jul	18	2460509.75	3	36	42.13	+19	5	55.41	20.0742	7.6
jul	19	2460510.75	3	36	50.79	+19	6	24.60	20.0595	7.6
jul	20	2460511.75	3	36	59.29	+19	6	53.22	20.0447	7.5
jul	21	2460512.75	3	37	7.62	+19	7	21.28	20.0297	7.4
jul	22	2460513.75	3	37	15.79	+19	7	48.76	20.0146	7.4
jul	23	2460514.75	3	37	23.78	+19	8	15.64	19.9994	7.3
jul	24	2460515.75	3	37	31.60	+19	8	41.89	19.9841	7.2
jul	25	2460516.75	3	37	39.25	+19	9	7.52	19.9687	7.2
jul	26	2460517.75	3	37	46.72	+19	9	32.50	19.9531	7.1
jul	27	2460518.75	3	37	54.03	+19	9	56.85	19.9374	7.1
jul	28	2460519.75	3	38	1.16	+19	10	20.58	19.9217	7.0
jul	29	2460520.75	3	38	8.11	+19	10	43.69	19.9058	6.9
jul	30	2460521.75	3	38	14.89	+19	11	6.19	19.8898	6.9
jul	31	2460522.75	3	38	21.49	+19	11	28.08	19.8738	6.8
ago	1	2460523.75	3	38	27.91	+19	11	49.35	19.8576	6.7
ago	2	2460524.75	3	38	34.14	+19	12	10.00	19.8414	6.7
ago	3	2460525.75	3	38	40.18	+19	12	30.01	19.8251	6.6
ago	4	2460526.75	3	38	46.03	+19	12	49.37	19.8087	6.5
ago	5	2460527.75	3	38	51.68	+19	13	8.07	19.7922	6.5
ago	6	2460528.75	3	38	57.15	+19	13	26.10	19.7757	6.4
ago	7	2460529.75	3	39	2.41	+19	13	43.45	19.7591	6.4
ago	8	2460530.75	3	39	7.48	+19	14	0.12	19.7425	6.3
ago	9	2460531.75	3	39	12.36	+19	14	16.11	19.7258	6.2
ago	10	2460532.75	3	39	17.04	+19	14	31.42	19.7091	6.2
ago	11	2460533.75	3	39	21.53	+19	14	46.06	19.6923	6.1
ago	12	2460534.75	3	39	25.82	+19	15	0.03	19.6755	6.0
ago	13	2460535.75	3	39	29.91	+19	15	13.34	19.6586	6.0
ago	14	2460536.75	3	39	33.81	+19	15	25.99	19.6417	5.9
ago	15	2460537.75	3	39	37.51	+19	15	37.99	19.6248	5.8
ago	16	2460538.75	3	39	41.01	+19	15	49.34	19.6079	5.8
ago	17	2460539.75	3	39	44.31	+19	16	0.04	19.5910	5.7

Urano, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
ago	18	2460540.75	3	39	47.40	+19	16	10.07	19.5740	5.6
ago	19	2460541.75	3	39	50.29	+19	16	19.43	19.5571	5.6
ago	20	2460542.75	3	39	52.97	+19	16	28.09	19.5401	5.5
ago	21	2460543.75	3	39	55.44	+19	16	36.05	19.5232	5.4
ago	22	2460544.75	3	39	57.70	+19	16	43.29	19.5062	5.4
ago	23	2460545.75	3	39	59.76	+19	16	49.82	19.4893	5.3
ago	24	2460546.75	3	40	1.62	+19	16	55.66	19.4724	5.3
ago	25	2460547.75	3	40	3.27	+19	17	0.81	19.4555	5.2
ago	26	2460548.75	3	40	4.72	+19	17	5.29	19.4386	5.1
ago	27	2460549.75	3	40	5.97	+19	17	9.10	19.4217	5.1
ago	28	2460550.75	3	40	7.01	+19	17	12.24	19.4049	5.0
ago	29	2460551.75	3	40	7.84	+19	17	14.70	19.3882	4.9
ago	30	2460552.75	3	40	8.46	+19	17	16.49	19.3714	4.9
ago	31	2460553.75	3	40	8.86	+19	17	17.58	19.3548	4.8
sep	1	2460554.75	3	40	9.06	+19	17	17.97	19.3381	4.7
sep	2	2460555.75	3	40	9.04	+19	17	17.66	19.3216	4.7
sep	3	2460556.75	3	40	8.81	+19	17	16.64	19.3051	4.6
sep	4	2460557.75	3	40	8.36	+19	17	14.91	19.2886	4.5
sep	5	2460558.75	3	40	7.71	+19	17	12.46	19.2723	4.5
sep	6	2460559.75	3	40	6.85	+19	17	9.32	19.2560	4.4
sep	7	2460560.75	3	40	5.79	+19	17	5.49	19.2398	4.3
sep	8	2460561.75	3	40	4.52	+19	17	0.97	19.2237	4.3
sep	9	2460562.75	3	40	3.04	+19	16	55.78	19.2077	4.2
sep	10	2460563.75	3	40	1.37	+19	16	49.92	19.1918	4.1
sep	11	2460564.75	3	39	59.49	+19	16	43.41	19.1760	4.1
sep	12	2460565.75	3	39	57.41	+19	16	36.25	19.1603	4.0
sep	13	2460566.75	3	39	55.13	+19	16	28.45	19.1447	3.9
sep	14	2460567.75	3	39	52.64	+19	16	20.00	19.1293	3.9
sep	15	2460568.75	3	39	49.96	+19	16	10.89	19.1139	3.8
sep	16	2460569.75	3	39	47.07	+19	16	1.12	19.0987	3.7
sep	17	2460570.75	3	39	43.97	+19	15	50.67	19.0837	3.7
sep	18	2460571.75	3	39	40.68	+19	15	39.54	19.0687	3.6
sep	19	2460572.75	3	39	37.19	+19	15	27.73	19.0539	3.5
sep	20	2460573.75	3	39	33.51	+19	15	15.26	19.0393	3.5
sep	21	2460574.75	3	39	29.64	+19	15	2.14	19.0247	3.4
sep	22	2460575.75	3	39	25.59	+19	14	48.40	19.0104	3.3
sep	23	2460576.75	3	39	21.34	+19	14	34.04	18.9962	3.3
sep	24	2460577.75	3	39	16.91	+19	14	19.08	18.9822	3.2
sep	25	2460578.75	3	39	12.29	+19	14	3.51	18.9683	3.1
sep	26	2460579.75	3	39	7.48	+19	13	47.33	18.9546	3.1
sep	27	2460580.75	3	39	2.49	+19	13	30.53	18.9411	3.0
sep	28	2460581.75	3	38	57.31	+19	13	13.12	18.9277	2.9
sep	29	2460582.75	3	38	51.94	+19	12	55.09	18.9146	2.9
sep	30	2460583.75	3	38	46.39	+19	12	36.44	18.9016	2.8
oct	1	2460584.75	3	38	40.67	+19	12	17.18	18.8889	2.7
oct	2	2460585.75	3	38	34.77	+19	11	57.31	18.8763	2.7

Urano, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
oct	3	2460586.75	3	38	28.70	+19	11	36.85	18.8639	2.6
oct	4	2460587.75	3	38	22.46	+19	11	15.81	18.8518	2.5
oct	5	2460588.75	3	38	16.05	+19	10	54.20	18.8398	2.5
oct	6	2460589.75	3	38	9.49	+19	10	32.04	18.8281	2.4
oct	7	2460590.75	3	38	2.76	+19	10	9.35	18.8166	2.3
oct	8	2460591.75	3	37	55.89	+19	9	46.14	18.8053	2.3
oct	9	2460592.75	3	37	48.85	+19	9	22.42	18.7942	2.2
oct	10	2460593.75	3	37	41.67	+19	8	58.21	18.7834	2.1
oct	11	2460594.75	3	37	34.34	+19	8	33.51	18.7728	2.1
oct	12	2460595.75	3	37	26.86	+19	8	8.32	18.7625	2.0
oct	13	2460596.75	3	37	19.23	+19	7	42.63	18.7524	1.9
oct	14	2460597.75	3	37	11.46	+19	7	16.45	18.7425	1.9
oct	15	2460598.75	3	37	3.55	+19	6	49.78	18.7329	1.8
oct	16	2460599.75	3	36	55.51	+19	6	22.61	18.7235	1.7
oct	17	2460600.75	3	36	47.34	+19	5	54.97	18.7144	1.7
oct	18	2460601.75	3	36	39.04	+19	5	26.87	18.7056	1.6
oct	19	2460602.75	3	36	30.63	+19	4	58.35	18.6970	1.5
oct	20	2460603.75	3	36	22.10	+19	4	29.43	18.6886	1.4
oct	21	2460604.75	3	36	13.46	+19	4	0.12	18.6806	1.4
oct	22	2460605.75	3	36	4.71	+19	3	30.44	18.6728	1.3
oct	23	2460606.75	3	35	55.84	+19	3	0.38	18.6652	1.2
oct	24	2460607.75	3	35	46.86	+19	2	29.94	18.6580	1.2
oct	25	2460608.75	3	35	37.78	+19	1	59.13	18.6510	1.1
oct	26	2460609.75	3	35	28.60	+19	1	27.96	18.6443	1.0
oct	27	2460610.75	3	35	19.31	+19	0	56.42	18.6379	1.0
oct	28	2460611.75	3	35	9.93	+19	0	24.54	18.6318	0.9
oct	29	2460612.75	3	35	0.47	+18	59	52.32	18.6260	0.8
oct	30	2460613.75	3	34	50.92	+18	59	19.77	18.6204	0.8
oct	31	2460614.75	3	34	41.30	+18	58	46.93	18.6152	0.7
nov	1	2460615.75	3	34	31.60	+18	58	13.81	18.6102	0.6
nov	2	2460616.75	3	34	21.83	+18	57	40.43	18.6055	0.6
nov	3	2460617.75	3	34	12.01	+18	57	6.82	18.6012	0.5
nov	4	2460618.75	3	34	2.12	+18	56	33.00	18.5971	0.4
nov	5	2460619.75	3	33	52.18	+18	55	58.98	18.5934	0.4
nov	6	2460620.75	3	33	42.19	+18	55	24.78	18.5899	0.3
nov	7	2460621.75	3	33	32.15	+18	54	50.41	18.5868	0.2
nov	8	2460622.75	3	33	22.07	+18	54	15.89	18.5839	0.1
nov	9	2460623.75	3	33	11.94	+18	53	41.21	18.5814	0.1
nov	10	2460624.75	3	33	1.78	+18	53	6.39	18.5791	0.0
nov	11	2460625.75	3	32	51.59	+18	52	31.42	18.5772	23.9
nov	12	2460626.75	3	32	41.37	+18	51	56.31	18.5756	23.9
nov	13	2460627.75	3	32	31.12	+18	51	21.08	18.5743	23.8
nov	14	2460628.75	3	32	20.87	+18	50	45.76	18.5733	23.7
nov	15	2460629.75	3	32	10.61	+18	50	10.37	18.5726	23.7
nov	16	2460630.75	3	32	0.34	+18	49	34.95	18.5723	23.6
nov	17	2460631.75	3	31	50.08	+18	48	59.51	18.5722	23.5

Urano, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
nov	18	2460632.75	3	31	39.82	+18	48	24.09	18.5724	23.5
nov	19	2460633.75	3	31	29.56	+18	47	48.68	18.5730	23.4
nov	20	2460634.75	3	31	19.31	+18	47	13.29	18.5739	23.3
nov	21	2460635.75	3	31	9.07	+18	46	37.92	18.5750	23.3
nov	22	2460636.75	3	30	58.85	+18	46	2.59	18.5765	23.2
nov	23	2460637.75	3	30	48.64	+18	45	27.29	18.5783	23.1
nov	24	2460638.75	3	30	38.46	+18	44	52.05	18.5804	23.1
nov	25	2460639.75	3	30	28.31	+18	44	16.88	18.5829	23.0
nov	26	2460640.75	3	30	18.20	+18	43	41.80	18.5856	22.9
nov	27	2460641.75	3	30	8.12	+18	43	6.84	18.5886	22.8
nov	28	2460642.75	3	29	58.10	+18	42	32.00	18.5920	22.8
nov	29	2460643.75	3	29	48.13	+18	41	57.33	18.5956	22.7
nov	30	2460644.75	3	29	38.22	+18	41	22.85	18.5996	22.6
dic	1	2460645.75	3	29	28.37	+18	40	48.57	18.6039	22.6
dic	2	2460646.75	3	29	18.59	+18	40	14.53	18.6084	22.5
dic	3	2460647.75	3	29	8.88	+18	39	40.73	18.6133	22.4
dic	4	2460648.75	3	28	59.24	+18	39	7.20	18.6185	22.4
dic	5	2460649.75	3	28	49.68	+18	38	33.94	18.6239	22.3
dic	6	2460650.75	3	28	40.20	+18	38	0.96	18.6297	22.2
dic	7	2460651.75	3	28	30.80	+18	37	28.26	18.6358	22.2
dic	8	2460652.75	3	28	21.49	+18	36	55.85	18.6421	22.1
dic	9	2460653.75	3	28	12.27	+18	36	23.74	18.6488	22.0
dic	10	2460654.75	3	28	3.15	+18	35	51.94	18.6557	22.0
dic	11	2460655.75	3	27	54.13	+18	35	20.48	18.6629	21.9
dic	12	2460656.75	3	27	45.23	+18	34	49.38	18.6704	21.8
dic	13	2460657.75	3	27	36.44	+18	34	18.67	18.6782	21.8
dic	14	2460658.75	3	27	27.77	+18	33	48.37	18.6862	21.7
dic	15	2460659.75	3	27	19.22	+18	33	18.52	18.6945	21.6
dic	16	2460660.75	3	27	10.79	+18	32	49.11	18.7031	21.5
dic	17	2460661.75	3	27	2.48	+18	32	20.15	18.7120	21.5
dic	18	2460662.75	3	26	54.30	+18	31	51.64	18.7211	21.4
dic	19	2460663.75	3	26	46.24	+18	31	23.59	18.7305	21.3
dic	20	2460664.75	3	26	38.32	+18	30	56.00	18.7401	21.3
dic	21	2460665.75	3	26	30.53	+18	30	28.88	18.7500	21.2
dic	22	2460666.75	3	26	22.88	+18	30	2.24	18.7602	21.1
dic	23	2460667.75	3	26	15.38	+18	29	36.10	18.7706	21.1
dic	24	2460668.75	3	26	8.02	+18	29	10.47	18.7812	21.0
dic	25	2460669.75	3	26	0.82	+18	28	45.38	18.7921	20.9
dic	26	2460670.75	3	25	53.78	+18	28	20.85	18.8033	20.9
dic	27	2460671.75	3	25	46.89	+18	27	56.90	18.8146	20.8
dic	28	2460672.75	3	25	40.18	+18	27	33.55	18.8262	20.7
dic	29	2460673.75	3	25	33.63	+18	27	10.81	18.8380	20.7
dic	30	2460674.75	3	25	27.25	+18	26	48.70	18.8501	20.6
dic	31	2460675.75	3	25	21.04	+18	26	27.23	18.8624	20.5

Neptuno, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
ene	1	2460310.75	23	43	54.06	-3	5	26.34	30.1467	23.7
ene	2	2460311.75	23	43	57.31	-3	5	3.14	30.1634	23.7
ene	3	2460312.75	23	44	0.67	-3	4	39.20	30.1801	23.7
ene	4	2460313.75	23	44	4.16	-3	4	14.49	30.1966	23.7
ene	5	2460314.75	23	44	7.76	-3	3	49.03	30.2130	23.7
ene	6	2460315.75	23	44	11.48	-3	3	22.81	30.2294	23.7
ene	7	2460316.75	23	44	15.33	-3	2	55.83	30.2456	23.7
ene	8	2460317.75	23	44	19.29	-3	2	28.09	30.2618	23.7
ene	9	2460318.75	23	44	23.37	-3	1	59.60	30.2778	23.7
ene	10	2460319.75	23	44	27.56	-3	1	30.38	30.2937	23.7
ene	11	2460320.75	23	44	31.88	-3	1	0.45	30.3095	23.7
ene	12	2460321.75	23	44	36.30	-3	0	29.81	30.3251	23.7
ene	13	2460322.75	23	44	40.83	-2	59	58.51	30.3406	23.7
ene	14	2460323.75	23	44	45.46	-2	59	26.54	30.3560	23.7
ene	15	2460324.75	23	44	50.20	-2	58	53.92	30.3713	23.7
ene	16	2460325.75	23	44	55.04	-2	58	20.64	30.3864	23.7
ene	17	2460326.75	23	44	59.99	-2	57	46.71	30.4013	23.7
ene	18	2460327.75	23	45	5.05	-2	57	12.11	30.4161	23.8
ene	19	2460328.75	23	45	10.21	-2	56	36.85	30.4307	23.8
ene	20	2460329.75	23	45	15.47	-2	56	0.95	30.4452	23.8
ene	21	2460330.75	23	45	20.84	-2	55	24.40	30.4595	23.8
ene	22	2460331.75	23	45	26.31	-2	54	47.22	30.4736	23.8
ene	23	2460332.75	23	45	31.87	-2	54	9.44	30.4876	23.8
ene	24	2460333.75	23	45	37.54	-2	53	31.07	30.5013	23.8
ene	25	2460334.75	23	45	43.29	-2	52	52.13	30.5149	23.8
ene	26	2460335.75	23	45	49.14	-2	52	12.64	30.5283	23.8
ene	27	2460336.75	23	45	55.07	-2	51	32.59	30.5415	23.8
ene	28	2460337.75	23	46	1.09	-2	50	52.01	30.5546	23.8
ene	29	2460338.75	23	46	7.20	-2	50	10.90	30.5674	23.8
ene	30	2460339.75	23	46	13.40	-2	49	29.25	30.5800	23.8
ene	31	2460340.75	23	46	19.68	-2	48	47.08	30.5924	23.8
feb	1	2460341.75	23	46	26.05	-2	48	4.39	30.6047	23.8
feb	2	2460342.75	23	46	32.50	-2	47	21.17	30.6167	23.8
feb	3	2460343.75	23	46	39.04	-2	46	37.44	30.6285	23.8
feb	4	2460344.75	23	46	45.66	-2	45	53.20	30.6400	23.8
feb	5	2460345.75	23	46	52.36	-2	45	8.46	30.6514	23.8
feb	6	2460346.75	23	46	59.14	-2	44	23.24	30.6625	23.8
feb	7	2460347.75	23	47	6.00	-2	43	37.55	30.6734	23.8
feb	8	2460348.75	23	47	12.93	-2	42	51.42	30.6841	23.8
feb	9	2460349.75	23	47	19.94	-2	42	4.86	30.6945	23.8
feb	10	2460350.75	23	47	27.01	-2	41	17.92	30.7047	23.8
feb	11	2460351.75	23	47	34.14	-2	40	30.59	30.7147	23.8
feb	12	2460352.75	23	47	41.34	-2	39	42.89	30.7244	23.8
feb	13	2460353.75	23	47	48.60	-2	38	54.81	30.7338	23.8
feb	14	2460354.75	23	47	55.92	-2	38	6.35	30.7431	23.8
feb	15	2460355.75	23	48	3.31	-2	37	17.51	30.7520	23.8
feb	16	2460356.75	23	48	10.76	-2	36	28.31	30.7607	23.8
feb	17	2460357.75	23	48	18.27	-2	35	38.76	30.7692	23.8
feb	18	2460358.75	23	48	25.84	-2	34	48.87	30.7774	23.8

Neptuno, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ "	"	dis UA	hp h
feb	19	2460359.75	23	48	33.46	-2	33	58.66	30.7853	23.8
feb	20	2460360.75	23	48	41.13	-2	33	8.17	30.7930	23.8
feb	21	2460361.75	23	48	48.86	-2	32	17.40	30.8004	23.8
feb	22	2460362.75	23	48	56.63	-2	31	26.37	30.8076	23.8
feb	23	2460363.75	23	49	4.44	-2	30	35.10	30.8145	23.8
feb	24	2460364.75	23	49	12.29	-2	29	43.60	30.8211	23.8
feb	25	2460365.75	23	49	20.19	-2	28	51.88	30.8275	23.8
feb	26	2460366.75	23	49	28.12	-2	27	59.93	30.8335	23.8
feb	27	2460367.75	23	49	36.09	-2	27	7.78	30.8394	23.8
feb	28	2460368.75	23	49	44.10	-2	26	15.42	30.8449	23.8
feb	29	2460369.75	23	49	52.15	-2	25	22.86	30.8502	23.8
mar	1	2460370.75	23	50	0.23	-2	24	30.10	30.8552	23.8
mar	2	2460371.75	23	50	8.35	-2	23	37.15	30.8599	23.8
mar	3	2460372.75	23	50	16.51	-2	22	44.03	30.8643	23.8
mar	4	2460373.75	23	50	24.69	-2	21	50.74	30.8685	23.8
mar	5	2460374.75	23	50	32.90	-2	20	57.30	30.8724	23.8
mar	6	2460375.75	23	50	41.14	-2	20	3.74	30.8759	23.8
mar	7	2460376.75	23	50	49.40	-2	19	10.09	30.8793	23.8
mar	8	2460377.75	23	50	57.68	-2	18	16.35	30.8823	23.8
mar	9	2460378.75	23	51	5.97	-2	17	22.56	30.8850	23.9
mar	10	2460379.75	23	51	14.28	-2	16	28.73	30.8875	23.9
mar	11	2460380.75	23	51	22.60	-2	15	34.86	30.8897	23.9
mar	12	2460381.75	23	51	30.93	-2	14	40.94	30.8915	23.9
mar	13	2460382.75	23	51	39.28	-2	13	46.98	30.8931	23.9
mar	14	2460383.75	23	51	47.64	-2	12	52.99	30.8945	23.9
mar	15	2460384.75	23	51	56.01	-2	11	59.00	30.8955	23.9
mar	16	2460385.75	23	52	4.39	-2	11	5.05	30.8962	23.9
mar	17	2460386.75	23	52	12.76	-2	10	11.24	30.8967	23.9
mar	18	2460387.75	23	52	21.13	-2	9	17.27	30.8968	23.9
mar	19	2460388.75	23	52	29.50	-2	8	23.23	30.8967	23.9
mar	20	2460389.75	23	52	37.87	-2	7	29.32	30.8963	23.9
mar	21	2460390.75	23	52	46.24	-2	6	35.53	30.8956	23.9
mar	22	2460391.75	23	52	54.60	-2	5	41.86	30.8946	23.9
mar	23	2460392.75	23	53	2.94	-2	4	48.31	30.8934	23.9
mar	24	2460393.75	23	53	11.28	-2	3	54.88	30.8918	23.9
mar	25	2460394.75	23	53	19.60	-2	3	1.57	30.8900	23.9
mar	26	2460395.75	23	53	27.91	-2	2	8.40	30.8879	23.9
mar	27	2460396.75	23	53	36.21	-2	1	15.35	30.8856	23.9
mar	28	2460397.75	23	53	44.49	-2	0	22.45	30.8829	23.9
mar	29	2460398.75	23	53	52.75	-1	59	29.68	30.8800	23.9
mar	30	2460399.75	23	54	1.00	-1	58	37.07	30.8768	23.9
mar	31	2460400.75	23	54	9.23	-1	57	44.63	30.8733	23.9
abr	1	2460401.75	23	54	17.43	-1	56	52.37	30.8695	23.9
abr	2	2460402.75	23	54	25.62	-1	56	0.31	30.8655	23.9
abr	3	2460403.75	23	54	33.77	-1	55	8.47	30.8611	23.9
abr	4	2460404.75	23	54	41.89	-1	54	16.88	30.8566	23.9
abr	5	2460405.75	23	54	49.98	-1	53	25.55	30.8517	23.9
abr	6	2460406.75	23	54	58.03	-1	52	34.50	30.8466	23.9

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
abr	7	2460407.75	23	55	6.05	-1	51	43.74	30.8412	23.9
abr	8	2460408.75	23	55	14.02	-1	50	53.26	30.8355	23.9
abr	9	2460409.75	23	55	21.96	-1	50	3.07	30.8296	23.9
abr	10	2460410.75	23	55	29.86	-1	49	13.16	30.8234	23.9
abr	11	2460411.75	23	55	37.72	-1	48	23.53	30.8169	23.9
abr	12	2460412.75	23	55	45.54	-1	47	34.22	30.8102	23.9
abr	13	2460413.75	23	55	53.32	-1	46	45.22	30.8032	23.9
abr	14	2460414.75	23	56	1.05	-1	45	56.58	30.7960	23.9
abr	15	2460415.75	23	56	8.74	-1	45	8.30	30.7885	23.9
abr	16	2460416.75	23	56	16.36	-1	44	20.41	30.7808	23.9
abr	17	2460417.75	23	56	23.94	-1	43	32.92	30.7728	23.9
abr	18	2460418.75	23	56	31.45	-1	42	45.84	30.7646	23.9
abr	19	2460419.75	23	56	38.91	-1	41	59.17	30.7561	23.9
abr	20	2460420.75	23	56	46.31	-1	41	12.93	30.7474	23.9
abr	21	2460421.75	23	56	53.65	-1	40	27.11	30.7385	23.9
abr	22	2460422.75	23	57	0.92	-1	39	41.72	30.7293	24.0
abr	23	2460423.75	23	57	8.14	-1	38	56.76	30.7199	24.0
abr	24	2460424.75	23	57	15.30	-1	38	12.23	30.7103	24.0
abr	25	2460425.75	23	57	22.39	-1	37	28.14	30.7004	24.0
abr	26	2460426.75	23	57	29.43	-1	36	44.50	30.6903	24.0
abr	27	2460427.75	23	57	36.40	-1	36	1.30	30.6800	24.0
abr	28	2460428.75	23	57	43.30	-1	35	18.58	30.6695	24.0
abr	29	2460429.75	23	57	50.13	-1	34	36.33	30.6587	24.0
abr	30	2460430.75	23	57	56.89	-1	33	54.59	30.6478	24.0
may	1	2460431.75	23	58	3.58	-1	33	13.37	30.6366	24.0
may	2	2460432.75	23	58	10.18	-1	32	32.69	30.6252	24.0
may	3	2460433.75	23	58	16.71	-1	31	52.56	30.6136	24.0
may	4	2460434.75	23	58	23.16	-1	31	12.99	30.6018	24.0
may	5	2460435.75	23	58	29.53	-1	30	33.98	30.5899	24.0
may	6	2460436.75	23	58	35.81	-1	29	55.52	30.5777	24.0
may	7	2460437.75	23	58	42.02	-1	29	17.61	30.5653	24.0
may	8	2460438.75	23	58	48.15	-1	28	40.25	30.5527	24.0
may	9	2460439.75	23	58	54.19	-1	28	3.45	30.5400	24.0
may	10	2460440.75	23	59	0.15	-1	27	27.22	30.5271	24.0
may	11	2460441.75	23	59	6.03	-1	26	51.59	30.5140	24.0
may	12	2460442.75	23	59	11.82	-1	26	16.57	30.5007	24.0
may	13	2460443.75	23	59	17.51	-1	25	42.18	30.4872	24.0
may	14	2460444.75	23	59	23.11	-1	25	8.43	30.4736	24.0
may	15	2460445.75	23	59	28.62	-1	24	35.33	30.4599	24.0
may	16	2460446.75	23	59	34.03	-1	24	2.88	30.4459	24.0
may	17	2460447.75	23	59	39.34	-1	23	31.09	30.4318	24.0
may	18	2460448.75	23	59	44.55	-1	22	59.96	30.4176	24.0
may	19	2460449.75	23	59	49.67	-1	22	29.49	30.4032	24.0
may	20	2460450.75	23	59	54.69	-1	21	59.68	30.3887	24.0
may	21	2460451.75	23	59	59.61	-1	21	30.52	30.3740	24.0
may	22	2460452.75	0	0	4.44	-1	21	2.01	30.3593	0.0
may	23	2460453.75	0	0	9.17	-1	20	34.16	30.3443	0.0
may	24	2460454.75	0	0	13.80	-1	20	6.97	30.3293	0.0
may	25	2460455.75	0	0	18.33	-1	19	40.44	30.3141	0.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
may	26	2460456.75	0	0	22.76	-1	19	14.60	30.2988	0.0
may	27	2460457.75	0	0	27.09	-1	18	49.46	30.2834	0.0
may	28	2460458.75	0	0	31.31	-1	18	25.04	30.2679	0.0
may	29	2460459.75	0	0	35.42	-1	18	1.34	30.2523	0.0
may	30	2460460.75	0	0	39.42	-1	17	38.37	30.2366	0.0
may	31	2460461.75	0	0	43.31	-1	17	16.15	30.2207	0.0
jun	1	2460462.75	0	0	47.09	-1	16	54.67	30.2048	0.0
jun	2	2460463.75	0	0	50.76	-1	16	33.92	30.1888	0.0
jun	3	2460464.75	0	0	54.31	-1	16	13.89	30.1727	0.0
jun	4	2460465.75	0	0	57.77	-1	15	54.59	30.1565	0.0
jun	5	2460466.75	0	1	1.11	-1	15	36.01	30.1403	0.0
jun	6	2460467.75	0	1	4.34	-1	15	18.15	30.1240	0.0
jun	7	2460468.75	0	1	7.46	-1	15	1.04	30.1076	0.0
jun	8	2460469.75	0	1	10.47	-1	14	44.68	30.0911	0.0
jun	9	2460470.75	0	1	13.36	-1	14	29.09	30.0746	0.0
jun	10	2460471.75	0	1	16.14	-1	14	14.29	30.0580	0.0
jun	11	2460472.75	0	1	18.79	-1	14	0.27	30.0414	0.0
jun	12	2460473.75	0	1	21.32	-1	13	47.04	30.0248	0.0
jun	13	2460474.75	0	1	23.74	-1	13	34.59	30.0081	0.0
jun	14	2460475.75	0	1	26.04	-1	13	22.93	29.9914	0.0
jun	15	2460476.75	0	1	28.21	-1	13	12.05	29.9746	0.0
jun	16	2460477.75	0	1	30.28	-1	13	1.94	29.9578	0.0
jun	17	2460478.75	0	1	32.22	-1	12	52.59	29.9410	0.0
jun	18	2460479.75	0	1	34.05	-1	12	44.00	29.9242	0.0
jun	19	2460480.75	0	1	35.76	-1	12	36.17	29.9074	0.0
jun	20	2460481.75	0	1	37.36	-1	12	29.10	29.8905	0.0
jun	21	2460482.75	0	1	38.84	-1	12	22.78	29.8737	0.0
jun	22	2460483.75	0	1	40.21	-1	12	17.22	29.8569	0.0
jun	23	2460484.75	0	1	41.45	-1	12	12.43	29.8401	0.0
jun	24	2460485.75	0	1	42.58	-1	12	8.43	29.8233	0.0
jun	25	2460486.75	0	1	43.58	-1	12	5.23	29.8065	0.0
jun	26	2460487.75	0	1	44.46	-1	12	2.82	29.7897	0.0
jun	27	2460488.75	0	1	45.22	-1	12	1.22	29.7729	0.0
jun	28	2460489.75	0	1	45.85	-1	12	0.41	29.7562	0.0
jun	29	2460490.75	0	1	46.37	-1	12	0.39	29.7395	0.0
jun	30	2460491.75	0	1	46.76	-1	12	1.13	29.7229	0.0
jul	1	2460492.75	0	1	47.04	-1	12	2.64	29.7063	0.0
jul	2	2460493.75	0	1	47.20	-1	12	4.90	29.6897	0.0
jul	3	2460494.75	0	1	47.24	-1	12	7.92	29.6732	0.0
jul	4	2460495.75	0	1	47.17	-1	12	11.69	29.6567	0.0
jul	5	2460496.75	0	1	46.98	-1	12	16.23	29.6403	0.0
jul	6	2460497.75	0	1	46.66	-1	12	21.55	29.6240	0.0
jul	7	2460498.75	0	1	46.23	-1	12	27.65	29.6078	0.0
jul	8	2460499.75	0	1	45.67	-1	12	34.53	29.5916	0.0
jul	9	2460500.75	0	1	45.00	-1	12	42.20	29.5755	0.0
jul	10	2460501.75	0	1	44.20	-1	12	50.64	29.5595	0.0
jul	11	2460502.75	0	1	43.28	-1	12	59.85	29.5436	0.0
jul	12	2460503.75	0	1	42.24	-1	13	9.81	29.5278	0.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
jul	13	2460504.75	0	1	41.09	-1	13	20.52	29.5121	0.0
jul	14	2460505.75	0	1	39.82	-1	13	31.96	29.4965	0.0
jul	15	2460506.75	0	1	38.44	-1	13	44.12	29.4810	0.0
jul	16	2460507.75	0	1	36.95	-1	13	56.99	29.4657	0.0
jul	17	2460508.75	0	1	35.34	-1	14	10.56	29.4504	0.0
jul	18	2460509.75	0	1	33.63	-1	14	24.83	29.4353	0.0
jul	19	2460510.75	0	1	31.81	-1	14	39.79	29.4203	0.0
jul	20	2460511.75	0	1	29.88	-1	14	55.44	29.4054	0.0
jul	21	2460512.75	0	1	27.83	-1	15	11.80	29.3907	0.0
jul	22	2460513.75	0	1	25.68	-1	15	28.87	29.3761	0.0
jul	23	2460514.75	0	1	23.41	-1	15	46.64	29.3616	0.0
jul	24	2460515.75	0	1	21.02	-1	16	5.13	29.3473	0.0
jul	25	2460516.75	0	1	18.53	-1	16	24.31	29.3331	0.0
jul	26	2460517.75	0	1	15.93	-1	16	44.16	29.3191	0.0
jul	27	2460518.75	0	1	13.23	-1	17	4.68	29.3053	0.0
jul	28	2460519.75	0	1	10.42	-1	17	25.84	29.2916	0.0
jul	29	2460520.75	0	1	7.51	-1	17	47.62	29.2781	0.0
jul	30	2460521.75	0	1	4.50	-1	18	10.03	29.2648	0.0
jul	31	2460522.75	0	1	1.39	-1	18	33.06	29.2516	0.0
ago	1	2460523.75	0	0	58.19	-1	18	56.71	29.2386	0.0
ago	2	2460524.75	0	0	54.88	-1	19	20.98	29.2258	0.0
ago	3	2460525.75	0	0	51.47	-1	19	45.87	29.2132	0.0
ago	4	2460526.75	0	0	47.96	-1	20	11.39	29.2008	0.0
ago	5	2460527.75	0	0	44.35	-1	20	37.51	29.1886	0.0
ago	6	2460528.75	0	0	40.65	-1	21	4.24	29.1766	0.0
ago	7	2460529.75	0	0	36.85	-1	21	31.55	29.1648	0.0
ago	8	2460530.75	0	0	32.96	-1	21	59.44	29.1532	0.0
ago	9	2460531.75	0	0	28.97	-1	22	27.87	29.1418	0.0
ago	10	2460532.75	0	0	24.90	-1	22	56.84	29.1307	0.0
ago	11	2460533.75	0	0	20.75	-1	23	26.33	29.1197	0.0
ago	12	2460534.75	0	0	16.51	-1	23	56.32	29.1090	0.0
ago	13	2460535.75	0	0	12.19	-1	24	26.79	29.0985	0.0
ago	14	2460536.75	0	0	7.79	-1	24	57.73	29.0882	0.0
ago	15	2460537.75	0	0	3.31	-1	25	29.14	29.0782	0.0
ago	16	2460538.75	23	59	58.76	-1	26	1.01	29.0684	24.0
ago	17	2460539.75	23	59	54.13	-1	26	33.33	29.0589	24.0
ago	18	2460540.75	23	59	49.43	-1	27	6.10	29.0495	24.0
ago	19	2460541.75	23	59	44.65	-1	27	39.33	29.0405	24.0
ago	20	2460542.75	23	59	39.79	-1	28	13.01	29.0316	24.0
ago	21	2460543.75	23	59	34.86	-1	28	47.12	29.0231	24.0
ago	22	2460544.75	23	59	29.86	-1	29	21.65	29.0147	24.0
ago	23	2460545.75	23	59	24.79	-1	29	56.57	29.0067	24.0
ago	24	2460546.75	23	59	19.66	-1	30	31.85	28.9988	24.0
ago	25	2460547.75	23	59	14.47	-1	31	7.47	28.9913	24.0
ago	26	2460548.75	23	59	9.22	-1	31	43.42	28.9840	24.0
ago	27	2460549.75	23	59	3.91	-1	32	19.69	28.9770	24.0
ago	28	2460550.75	23	58	58.55	-1	32	56.28	28.9702	24.0
ago	29	2460551.75	23	58	53.14	-1	33	33.19	28.9637	24.0
ago	30	2460552.75	23	58	47.67	-1	34	10.41	28.9575	24.0

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Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	$^{\circ}$	δ "	"	dis UA	hp h
ago	31	2460553.75	23	58	42.14	-1	34	47.92	28.9515	24.0
sep	1	2460554.75	23	58	36.56	-1	35	25.73	28.9459	24.0
sep	2	2460555.75	23	58	30.94	-1	36	3.82	28.9405	24.0
sep	3	2460556.75	23	58	25.26	-1	36	42.16	28.9354	24.0
sep	4	2460557.75	23	58	19.54	-1	37	20.74	28.9306	24.0
sep	5	2460558.75	23	58	13.79	-1	37	59.53	28.9260	24.0
sep	6	2460559.75	23	58	7.99	-1	38	38.52	28.9218	24.0
sep	7	2460560.75	23	58	2.16	-1	39	17.68	28.9178	24.0
sep	8	2460561.75	23	57	56.30	-1	39	56.98	28.9142	24.0
sep	9	2460562.75	23	57	50.41	-1	40	36.42	28.9108	24.0
sep	10	2460563.75	23	57	44.49	-1	41	15.97	28.9077	24.0
sep	11	2460564.75	23	57	38.55	-1	41	55.62	28.9049	24.0
sep	12	2460565.75	23	57	32.59	-1	42	35.35	28.9024	24.0
sep	13	2460566.75	23	57	26.61	-1	43	15.17	28.9002	24.0
sep	14	2460567.75	23	57	20.60	-1	43	55.07	28.8983	24.0
sep	15	2460568.75	23	57	14.58	-1	44	35.03	28.8967	24.0
sep	16	2460569.75	23	57	8.54	-1	45	15.06	28.8954	24.0
sep	17	2460570.75	23	57	2.49	-1	45	55.14	28.8944	24.0
sep	18	2460571.75	23	56	56.42	-1	46	35.25	28.8937	23.9
sep	19	2460572.75	23	56	50.34	-1	47	15.37	28.8932	23.9
sep	20	2460573.75	23	56	44.26	-1	47	55.46	28.8931	23.9
sep	21	2460574.75	23	56	38.17	-1	48	35.50	28.8933	23.9
sep	22	2460575.75	23	56	32.09	-1	49	15.47	28.8938	23.9
sep	23	2460576.75	23	56	26.01	-1	49	55.35	28.8945	23.9
sep	24	2460577.75	23	56	19.94	-1	50	35.15	28.8956	23.9
sep	25	2460578.75	23	56	13.88	-1	51	14.86	28.8970	23.9
sep	26	2460579.75	23	56	7.82	-1	51	54.48	28.8986	23.9
sep	27	2460580.75	23	56	1.77	-1	52	33.99	28.9006	23.9
sep	28	2460581.75	23	55	55.73	-1	53	13.38	28.9029	23.9
sep	29	2460582.75	23	55	49.70	-1	53	52.65	28.9054	23.9
sep	30	2460583.75	23	55	43.68	-1	54	31.75	28.9083	23.9
oct	1	2460584.75	23	55	37.69	-1	55	10.69	28.9115	23.9
oct	2	2460585.75	23	55	31.71	-1	55	49.43	28.9149	23.9
oct	3	2460586.75	23	55	25.76	-1	56	27.95	28.9187	23.9
oct	4	2460587.75	23	55	19.84	-1	57	6.23	28.9228	23.9
oct	5	2460588.75	23	55	13.96	-1	57	44.25	28.9271	23.9
oct	6	2460589.75	23	55	8.10	-1	58	21.98	28.9318	23.9
oct	7	2460590.75	23	55	2.29	-1	58	59.41	28.9367	23.9
oct	8	2460591.75	23	54	56.51	-1	59	36.53	28.9419	23.9
oct	9	2460592.75	23	54	50.78	-2	0	13.33	28.9475	23.9
oct	10	2460593.75	23	54	45.09	-2	0	49.79	28.9533	23.9
oct	11	2460594.75	23	54	39.44	-2	1	25.91	28.9594	23.9
oct	12	2460595.75	23	54	33.84	-2	2	1.69	28.9657	23.9
oct	13	2460596.75	23	54	28.29	-2	2	37.12	28.9724	23.9
oct	14	2460597.75	23	54	22.78	-2	3	12.19	28.9793	23.9
oct	15	2460598.75	23	54	17.32	-2	3	46.89	28.9865	23.9
oct	16	2460599.75	23	54	11.92	-2	4	21.19	28.9940	23.9
oct	17	2460600.75	23	54	6.57	-2	4	55.07	29.0018	23.9

Neptuno, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
oct	18	2460601.75	23	54	1.28	-2	5	28.49	29.0098	23.9
oct	19	2460602.75	23	53	56.06	-2	6	1.44	29.0181	23.9
oct	20	2460603.75	23	53	50.91	-2	6	33.91	29.0266	23.9
oct	21	2460604.75	23	53	45.82	-2	7	5.89	29.0354	23.9
oct	22	2460605.75	23	53	40.81	-2	7	37.38	29.0445	23.9
oct	23	2460606.75	23	53	35.86	-2	8	8.39	29.0539	23.9
oct	24	2460607.75	23	53	30.98	-2	8	38.90	29.0635	23.9
oct	25	2460608.75	23	53	26.17	-2	9	8.92	29.0733	23.9
oct	26	2460609.75	23	53	21.43	-2	9	38.42	29.0834	23.9
oct	27	2460610.75	23	53	16.77	-2	10	7.39	29.0937	23.9
oct	28	2460611.75	23	53	12.18	-2	10	35.82	29.1043	23.9
oct	29	2460612.75	23	53	7.68	-2	11	3.68	29.1152	23.9
oct	30	2460613.75	23	53	3.26	-2	11	30.96	29.1262	23.9
oct	31	2460614.75	23	52	58.92	-2	11	57.64	29.1376	23.9
nov	1	2460615.75	23	52	54.68	-2	12	23.69	29.1491	23.9
nov	2	2460616.75	23	52	50.52	-2	12	49.11	29.1609	23.9
nov	3	2460617.75	23	52	46.46	-2	13	13.88	29.1728	23.9
nov	4	2460618.75	23	52	42.50	-2	13	37.99	29.1851	23.9
nov	5	2460619.75	23	52	38.63	-2	14	1.43	29.1975	23.9
nov	6	2460620.75	23	52	34.86	-2	14	24.21	29.2101	23.9
nov	7	2460621.75	23	52	31.18	-2	14	46.31	29.2230	23.9
nov	8	2460622.75	23	52	27.61	-2	15	7.74	29.2360	23.9
nov	9	2460623.75	23	52	24.13	-2	15	28.50	29.2493	23.9
nov	10	2460624.75	23	52	20.75	-2	15	48.58	29.2627	23.9
nov	11	2460625.75	23	52	17.48	-2	16	7.98	29.2763	23.9
nov	12	2460626.75	23	52	14.30	-2	16	26.68	29.2902	23.9
nov	13	2460627.75	23	52	11.23	-2	16	44.66	29.3042	23.9
nov	14	2460628.75	23	52	8.27	-2	17	1.90	29.3183	23.9
nov	15	2460629.75	23	52	5.42	-2	17	18.39	29.3327	23.9
nov	16	2460630.75	23	52	2.69	-2	17	34.11	29.3472	23.9
nov	17	2460631.75	23	52	0.07	-2	17	49.06	29.3619	23.9
nov	18	2460632.75	23	51	57.56	-2	18	3.24	29.3767	23.9
nov	19	2460633.75	23	51	55.16	-2	18	16.67	29.3917	23.9
nov	20	2460634.75	23	51	52.88	-2	18	29.36	29.4069	23.9
nov	21	2460635.75	23	51	50.71	-2	18	41.29	29.4222	23.9
nov	22	2460636.75	23	51	48.66	-2	18	52.47	29.4376	23.9
nov	23	2460637.75	23	51	46.71	-2	19	2.88	29.4532	23.9
nov	24	2460638.75	23	51	44.88	-2	19	12.53	29.4689	23.9
nov	25	2460639.75	23	51	43.17	-2	19	21.39	29.4847	23.9
nov	26	2460640.75	23	51	41.58	-2	19	29.45	29.5007	23.9
nov	27	2460641.75	23	51	40.12	-2	19	36.70	29.5168	23.9
nov	28	2460642.75	23	51	38.77	-2	19	43.13	29.5330	23.9
nov	29	2460643.75	23	51	37.55	-2	19	48.73	29.5493	23.9
nov	30	2460644.75	23	51	36.46	-2	19	53.49	29.5657	23.9
dic	1	2460645.75	23	51	35.49	-2	19	57.41	29.5822	23.9
dic	2	2460646.75	23	51	34.65	-2	20	0.50	29.5988	23.9
dic	3	2460647.75	23	51	33.94	-2	20	2.74	29.6155	23.9
dic	4	2460648.75	23	51	33.36	-2	20	4.15	29.6322	23.9
dic	5	2460649.75	23	51	32.89	-2	20	4.74	29.6491	23.9

Neptuno, 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
dic	6	2460650.75	23	51	32.56	-2	20	4.51	29.6660	23.9
dic	7	2460651.75	23	51	32.35	-2	20	3.47	29.6830	23.9
dic	8	2460652.75	23	51	32.26	-2	20	1.62	29.7000	23.9
dic	9	2460653.75	23	51	32.30	-2	19	58.94	29.7171	23.9
dic	10	2460654.75	23	51	32.46	-2	19	55.44	29.7342	23.9
dic	11	2460655.75	23	51	32.75	-2	19	51.10	29.7514	23.9
dic	12	2460656.75	23	51	33.17	-2	19	45.90	29.7686	23.9
dic	13	2460657.75	23	51	33.73	-2	19	39.85	29.7859	23.9
dic	14	2460658.75	23	51	34.41	-2	19	32.94	29.8031	23.9
dic	15	2460659.75	23	51	35.23	-2	19	25.19	29.8204	23.9
dic	16	2460660.75	23	51	36.17	-2	19	16.60	29.8378	23.9
dic	17	2460661.75	23	51	37.24	-2	19	7.19	29.8551	23.9
dic	18	2460662.75	23	51	38.44	-2	18	56.98	29.8724	23.9
dic	19	2460663.75	23	51	39.75	-2	18	45.98	29.8898	23.9
dic	20	2460664.75	23	51	41.20	-2	18	34.17	29.9071	23.9
dic	21	2460665.75	23	51	42.76	-2	18	21.56	29.9244	23.9
dic	22	2460666.75	23	51	44.45	-2	18	8.14	29.9417	23.9
dic	23	2460667.75	23	51	46.27	-2	17	53.91	29.9590	23.9
dic	24	2460668.75	23	51	48.22	-2	17	38.86	29.9763	23.9
dic	25	2460669.75	23	51	50.29	-2	17	22.99	29.9936	23.9
dic	26	2460670.75	23	51	52.49	-2	17	6.30	30.0108	23.9
dic	27	2460671.75	23	51	54.81	-2	16	48.78	30.0280	23.9
dic	28	2460672.75	23	51	57.27	-2	16	30.44	30.0451	23.9
dic	29	2460673.75	23	51	59.85	-2	16	11.28	30.0622	23.9
dic	30	2460674.75	23	52	2.56	-2	15	51.32	30.0792	23.9
dic	31	2460675.75	23	52	5.39	-2	15	30.57	30.0962	23.9
ene	1	2460676.75	23	52	8.35	-2	15	9.03	30.1131	23.9
ene	2	2460677.75	23	52	13.56	-2	14	33.17	30.0353	23.9

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
ene	1	2460310.75	20	8	34.76	-22	59	19.57	35.8497	20.1
ene	2	2460311.75	20	8	42.73	-22	58	59.27	35.8559	20.1
ene	3	2460312.75	20	8	50.74	-22	58	38.91	35.8618	20.1
ene	4	2460313.75	20	8	58.79	-22	58	18.48	35.8674	20.1
ene	5	2460314.75	20	9	6.87	-22	57	57.99	35.8728	20.2
ene	6	2460315.75	20	9	14.98	-22	57	37.44	35.8779	20.2
ene	7	2460316.75	20	9	23.13	-22	57	16.83	35.8827	20.2
ene	8	2460317.75	20	9	31.30	-22	56	56.19	35.8872	20.2
ene	9	2460318.75	20	9	39.51	-22	56	35.52	35.8914	20.2
ene	10	2460319.75	20	9	47.75	-22	56	14.85	35.8953	20.2
ene	11	2460320.75	20	9	56.01	-22	55	54.19	35.8990	20.2
ene	12	2460321.75	20	10	4.28	-22	55	33.56	35.9023	20.2
ene	13	2460322.75	20	10	12.57	-22	55	12.96	35.9054	20.2
ene	14	2460323.75	20	10	20.87	-22	54	52.39	35.9081	20.2
ene	15	2460324.75	20	10	29.18	-22	54	31.85	35.9106	20.2
ene	16	2460325.75	20	10	37.49	-22	54	11.32	35.9127	20.2
ene	17	2460326.75	20	10	45.82	-22	53	50.81	35.9146	20.2
ene	18	2460327.75	20	10	54.15	-22	53	30.32	35.9162	20.2
ene	19	2460328.75	20	11	2.48	-22	53	9.85	35.9175	20.2
ene	20	2460329.75	20	11	10.83	-22	52	49.42	35.9185	20.2
ene	21	2460330.75	20	11	19.17	-22	52	29.01	35.9192	20.2
ene	22	2460331.75	20	11	27.52	-22	52	8.64	35.9196	20.2
ene	23	2460332.75	20	11	35.86	-22	51	48.35	35.9197	20.2
ene	24	2460333.75	20	11	44.21	-22	51	28.16	35.9195	20.2
ene	25	2460334.75	20	11	52.54	-22	51	8.07	35.9190	20.2
ene	26	2460335.75	20	12	0.86	-22	50	48.09	35.9183	20.2
ene	27	2460336.75	20	12	9.17	-22	50	28.23	35.9172	20.2
ene	28	2460337.75	20	12	17.47	-22	50	8.46	35.9159	20.2
ene	29	2460338.75	20	12	25.74	-22	49	48.81	35.9143	20.2
ene	30	2460339.75	20	12	34.00	-22	49	29.25	35.9123	20.2
ene	31	2460340.75	20	12	42.24	-22	49	9.79	35.9101	20.2
feb	1	2460341.75	20	12	50.46	-22	48	50.44	35.9076	20.2
feb	2	2460342.75	20	12	58.67	-22	48	31.20	35.9048	20.2
feb	3	2460343.75	20	13	6.85	-22	48	12.07	35.9018	20.2
feb	4	2460344.75	20	13	15.00	-22	47	53.06	35.8984	20.2
feb	5	2460345.75	20	13	23.14	-22	47	34.19	35.8948	20.2
feb	6	2460346.75	20	13	31.24	-22	47	15.48	35.8908	20.2
feb	7	2460347.75	20	13	39.32	-22	46	56.93	35.8866	20.2
feb	8	2460348.75	20	13	47.37	-22	46	38.58	35.8821	20.2
feb	9	2460349.75	20	13	55.38	-22	46	20.42	35.8774	20.2
feb	10	2460350.75	20	14	3.34	-22	46	2.47	35.8723	20.2
feb	11	2460351.75	20	14	11.26	-22	45	44.71	35.8670	20.2
feb	12	2460352.75	20	14	19.13	-22	45	27.13	35.8614	20.2
feb	13	2460353.75	20	14	26.96	-22	45	9.73	35.8555	20.2
feb	14	2460354.75	20	14	34.74	-22	44	52.49	35.8494	20.2
feb	15	2460355.75	20	14	42.48	-22	44	35.44	35.8430	20.2
feb	16	2460356.75	20	14	50.17	-22	44	18.57	35.8363	20.2
feb	17	2460357.75	20	14	57.82	-22	44	1.92	35.8294	20.2
feb	18	2460358.75	20	15	5.41	-22	43	45.50	35.8222	20.3

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
feb	19	2460359.75	20	15	12.95	-22	43	29.32	35.8148	20.3
feb	20	2460360.75	20	15	20.44	-22	43	13.39	35.8071	20.3
feb	21	2460361.75	20	15	27.86	-22	42	57.72	35.7991	20.3
feb	22	2460362.75	20	15	35.23	-22	42	42.32	35.7909	20.3
feb	23	2460363.75	20	15	42.53	-22	42	27.17	35.7825	20.3
feb	24	2460364.75	20	15	49.77	-22	42	12.29	35.7738	20.3
feb	25	2460365.75	20	15	56.94	-22	41	57.67	35.7648	20.3
feb	26	2460366.75	20	16	4.04	-22	41	43.31	35.7557	20.3
feb	27	2460367.75	20	16	11.07	-22	41	29.20	35.7463	20.3
feb	28	2460368.75	20	16	18.04	-22	41	15.34	35.7366	20.3
feb	29	2460369.75	20	16	24.93	-22	41	1.74	35.7268	20.3
mar	1	2460370.75	20	16	31.76	-22	40	48.41	35.7167	20.3
mar	2	2460371.75	20	16	38.52	-22	40	35.35	35.7063	20.3
mar	3	2460372.75	20	16	45.20	-22	40	22.57	35.6958	20.3
mar	4	2460373.75	20	16	51.82	-22	40	10.08	35.6851	20.3
mar	5	2460374.75	20	16	58.35	-22	39	57.91	35.6741	20.3
mar	6	2460375.75	20	17	4.81	-22	39	46.06	35.6629	20.3
mar	7	2460376.75	20	17	11.19	-22	39	34.54	35.6515	20.3
mar	8	2460377.75	20	17	17.48	-22	39	23.37	35.6399	20.3
mar	9	2460378.75	20	17	23.68	-22	39	12.54	35.6281	20.3
mar	10	2460379.75	20	17	29.79	-22	39	2.03	35.6161	20.3
mar	11	2460380.75	20	17	35.81	-22	38	51.84	35.6039	20.3
mar	12	2460381.75	20	17	41.75	-22	38	41.95	35.5916	20.3
mar	13	2460382.75	20	17	47.59	-22	38	32.37	35.5790	20.3
mar	14	2460383.75	20	17	53.34	-22	38	23.10	35.5663	20.3
mar	15	2460384.75	20	17	59.01	-22	38	14.17	35.5534	20.3
mar	16	2460385.75	20	18	4.59	-22	38	5.58	35.5403	20.3
mar	17	2460386.75	20	18	10.07	-22	37	57.36	35.5270	20.3
mar	18	2460387.75	20	18	15.46	-22	37	49.51	35.5136	20.3
mar	19	2460388.75	20	18	20.75	-22	37	42.05	35.5000	20.3
mar	20	2460389.75	20	18	25.94	-22	37	34.96	35.4863	20.3
mar	21	2460390.75	20	18	31.02	-22	37	28.25	35.4724	20.3
mar	22	2460391.75	20	18	36.01	-22	37	21.92	35.4584	20.3
mar	23	2460392.75	20	18	40.88	-22	37	15.96	35.4442	20.3
mar	24	2460393.75	20	18	45.66	-22	37	10.37	35.4299	20.3
mar	25	2460394.75	20	18	50.33	-22	37	5.13	35.4154	20.3
mar	26	2460395.75	20	18	54.90	-22	37	0.26	35.4009	20.3
mar	27	2460396.75	20	18	59.36	-22	36	55.75	35.3862	20.3
mar	28	2460397.75	20	19	3.72	-22	36	51.59	35.3714	20.3
mar	29	2460398.75	20	19	7.98	-22	36	47.80	35.3564	20.3
mar	30	2460399.75	20	19	12.13	-22	36	44.39	35.3414	20.3
mar	31	2460400.75	20	19	16.17	-22	36	41.36	35.3262	20.3
abr	1	2460401.75	20	19	20.12	-22	36	38.72	35.3110	20.3
abr	2	2460402.75	20	19	23.95	-22	36	36.49	35.2956	20.3
abr	3	2460403.75	20	19	27.67	-22	36	34.67	35.2801	20.3
abr	4	2460404.75	20	19	31.27	-22	36	33.28	35.2646	20.3
abr	5	2460405.75	20	19	34.76	-22	36	32.30	35.2490	20.3
abr	6	2460406.75	20	19	38.13	-22	36	31.72	35.2332	20.3

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
abr	7	2460407.75	20	19	41.39	-22	36	31.55	35.2174	20.3
abr	8	2460408.75	20	19	44.52	-22	36	31.75	35.2016	20.3
abr	9	2460409.75	20	19	47.54	-22	36	32.32	35.1857	20.3
abr	10	2460410.75	20	19	50.45	-22	36	33.26	35.1697	20.3
abr	11	2460411.75	20	19	53.24	-22	36	34.58	35.1536	20.3
abr	12	2460412.75	20	19	55.92	-22	36	36.31	35.1375	20.3
abr	13	2460413.75	20	19	58.49	-22	36	38.45	35.1214	20.3
abr	14	2460414.75	20	20	0.94	-22	36	41.01	35.1052	20.3
abr	15	2460415.75	20	20	3.27	-22	36	44.00	35.0890	20.3
abr	16	2460416.75	20	20	5.48	-22	36	47.41	35.0728	20.3
abr	17	2460417.75	20	20	7.57	-22	36	51.25	35.0565	20.3
abr	18	2460418.75	20	20	9.53	-22	36	55.50	35.0402	20.3
abr	19	2460419.75	20	20	11.38	-22	37	0.15	35.0239	20.3
abr	20	2460420.75	20	20	13.10	-22	37	5.21	35.0076	20.3
abr	21	2460421.75	20	20	14.70	-22	37	10.66	34.9912	20.3
abr	22	2460422.75	20	20	16.18	-22	37	16.49	34.9749	20.3
abr	23	2460423.75	20	20	17.55	-22	37	22.69	34.9586	20.3
abr	24	2460424.75	20	20	18.79	-22	37	29.28	34.9423	20.3
abr	25	2460425.75	20	20	19.92	-22	37	36.24	34.9260	20.3
abr	26	2460426.75	20	20	20.93	-22	37	43.59	34.9097	20.3
abr	27	2460427.75	20	20	21.83	-22	37	51.32	34.8934	20.3
abr	28	2460428.75	20	20	22.61	-22	37	59.45	34.8772	20.3
abr	29	2460429.75	20	20	23.27	-22	38	7.98	34.8610	20.3
abr	30	2460430.75	20	20	23.81	-22	38	16.92	34.8448	20.3
may	1	2460431.75	20	20	24.23	-22	38	26.28	34.8287	20.3
may	2	2460432.75	20	20	24.53	-22	38	36.04	34.8126	20.3
may	3	2460433.75	20	20	24.70	-22	38	46.19	34.7966	20.3
may	4	2460434.75	20	20	24.75	-22	38	56.73	34.7806	20.3
may	5	2460435.75	20	20	24.67	-22	39	7.63	34.7647	20.3
may	6	2460436.75	20	20	24.48	-22	39	18.88	34.7488	20.3
may	7	2460437.75	20	20	24.17	-22	39	30.48	34.7331	20.3
may	8	2460438.75	20	20	23.75	-22	39	42.42	34.7174	20.3
may	9	2460439.75	20	20	23.21	-22	39	54.71	34.7017	20.3
may	10	2460440.75	20	20	22.56	-22	40	7.38	34.6862	20.3
may	11	2460441.75	20	20	21.79	-22	40	20.42	34.6707	20.3
may	12	2460442.75	20	20	20.91	-22	40	33.84	34.6554	20.3
may	13	2460443.75	20	20	19.91	-22	40	47.64	34.6401	20.3
may	14	2460444.75	20	20	18.79	-22	41	1.82	34.6250	20.3
may	15	2460445.75	20	20	17.55	-22	41	16.35	34.6099	20.3
may	16	2460446.75	20	20	16.20	-22	41	31.23	34.5950	20.3
may	17	2460447.75	20	20	14.73	-22	41	46.45	34.5802	20.3
may	18	2460448.75	20	20	13.14	-22	42	2.00	34.5655	20.3
may	19	2460449.75	20	20	11.45	-22	42	17.86	34.5509	20.3
may	20	2460450.75	20	20	9.64	-22	42	34.02	34.5365	20.3
may	21	2460451.75	20	20	7.73	-22	42	50.49	34.5222	20.3
may	22	2460452.75	20	20	5.71	-22	43	7.25	34.5081	20.3
may	23	2460453.75	20	20	3.59	-22	43	24.30	34.4941	20.3
may	24	2460454.75	20	20	1.36	-22	43	41.65	34.4802	20.3
may	25	2460455.75	20	19	59.04	-22	43	59.31	34.4665	20.3

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
may	26	2460456.75	20	19	56.60	-22	44	17.27	34.4529	20.3
may	27	2460457.75	20	19	54.07	-22	44	35.55	34.4395	20.3
may	28	2460458.75	20	19	51.43	-22	44	54.13	34.4263	20.3
may	29	2460459.75	20	19	48.68	-22	45	13.02	34.4132	20.3
may	30	2460460.75	20	19	45.83	-22	45	32.20	34.4003	20.3
may	31	2460461.75	20	19	42.87	-22	45	51.66	34.3876	20.3
jun	1	2460462.75	20	19	39.82	-22	46	11.36	34.3750	20.3
jun	2	2460463.75	20	19	36.66	-22	46	31.31	34.3627	20.3
jun	3	2460464.75	20	19	33.40	-22	46	51.48	34.3505	20.3
jun	4	2460465.75	20	19	30.06	-22	47	11.87	34.3385	20.3
jun	5	2460466.75	20	19	26.62	-22	47	32.49	34.3267	20.3
jun	6	2460467.75	20	19	23.10	-22	47	53.34	34.3151	20.3
jun	7	2460468.75	20	19	19.48	-22	48	14.43	34.3037	20.3
jun	8	2460469.75	20	19	15.78	-22	48	35.77	34.2925	20.3
jun	9	2460470.75	20	19	11.99	-22	48	57.35	34.2816	20.3
jun	10	2460471.75	20	19	8.10	-22	49	19.16	34.2708	20.3
jun	11	2460472.75	20	19	4.13	-22	49	41.19	34.2603	20.3
jun	12	2460473.75	20	19	0.07	-22	50	3.43	34.2499	20.3
jun	13	2460474.75	20	18	55.93	-22	50	25.86	34.2399	20.3
jun	14	2460475.75	20	18	51.70	-22	50	48.46	34.2300	20.3
jun	15	2460476.75	20	18	47.39	-22	51	11.23	34.2203	20.3
jun	16	2460477.75	20	18	43.01	-22	51	34.15	34.2109	20.3
jun	17	2460478.75	20	18	38.55	-22	51	57.21	34.2018	20.3
jun	18	2460479.75	20	18	34.02	-22	52	20.41	34.1928	20.3
jun	19	2460480.75	20	18	29.42	-22	52	43.73	34.1841	20.3
jun	20	2460481.75	20	18	24.75	-22	53	7.19	34.1757	20.3
jun	21	2460482.75	20	18	20.02	-22	53	30.77	34.1675	20.3
jun	22	2460483.75	20	18	15.23	-22	53	54.50	34.1595	20.3
jun	23	2460484.75	20	18	10.36	-22	54	18.36	34.1518	20.3
jun	24	2460485.75	20	18	5.44	-22	54	42.36	34.1443	20.3
jun	25	2460486.75	20	18	0.45	-22	55	6.49	34.1371	20.3
jun	26	2460487.75	20	17	55.39	-22	55	30.73	34.1302	20.3
jun	27	2460488.75	20	17	50.27	-22	55	55.08	34.1235	20.3
jun	28	2460489.75	20	17	45.09	-22	56	19.49	34.1171	20.3
jun	29	2460490.75	20	17	39.86	-22	56	43.97	34.1109	20.3
jun	30	2460491.75	20	17	34.57	-22	57	8.49	34.1050	20.3
jul	1	2460492.75	20	17	29.23	-22	57	33.04	34.0994	20.3
jul	2	2460493.75	20	17	23.85	-22	57	57.64	34.0940	20.3
jul	3	2460494.75	20	17	18.42	-22	58	22.27	34.0889	20.3
jul	4	2460495.75	20	17	12.96	-22	58	46.95	34.0841	20.3
jul	5	2460496.75	20	17	7.45	-22	59	11.68	34.0796	20.3
jul	6	2460497.75	20	17	1.89	-22	59	36.46	34.0753	20.3
jul	7	2460498.75	20	16	56.30	-23	0	1.28	34.0714	20.3
jul	8	2460499.75	20	16	50.67	-23	0	26.13	34.0677	20.3
jul	9	2460500.75	20	16	45.00	-23	0	50.99	34.0643	20.3
jul	10	2460501.75	20	16	39.29	-23	1	15.85	34.0611	20.3
jul	11	2460502.75	20	16	33.56	-23	1	40.70	34.0583	20.3
jul	12	2460503.75	20	16	27.79	-23	2	5.51	34.0558	20.3

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
jul	13	2460504.75	20	16	21.99	-23	2	30.27	34.0535	20.3
jul	14	2460505.75	20	16	16.18	-23	2	54.98	34.0515	20.3
jul	15	2460506.75	20	16	10.34	-23	3	19.63	34.0498	20.3
jul	16	2460507.75	20	16	4.49	-23	3	44.20	34.0484	20.3
jul	17	2460508.75	20	15	58.62	-23	4	8.71	34.0473	20.3
jul	18	2460509.75	20	15	52.75	-23	4	33.14	34.0465	20.3
jul	19	2460510.75	20	15	46.86	-23	4	57.50	34.0460	20.3
jul	20	2460511.75	20	15	40.96	-23	5	21.80	34.0457	20.3
jul	21	2460512.75	20	15	35.06	-23	5	46.03	34.0458	20.3
jul	22	2460513.75	20	15	29.14	-23	6	10.20	34.0461	20.3
jul	23	2460514.75	20	15	23.22	-23	6	34.29	34.0467	20.3
jul	24	2460515.75	20	15	17.29	-23	6	58.28	34.0476	20.3
jul	25	2460516.75	20	15	11.36	-23	7	22.15	34.0488	20.3
jul	26	2460517.75	20	15	5.42	-23	7	45.88	34.0503	20.3
jul	27	2460518.75	20	14	59.49	-23	8	9.45	34.0521	20.2
jul	28	2460519.75	20	14	53.57	-23	8	32.86	34.0542	20.2
jul	29	2460520.75	20	14	47.66	-23	8	56.11	34.0566	20.2
jul	30	2460521.75	20	14	41.76	-23	9	19.20	34.0592	20.2
jul	31	2460522.75	20	14	35.88	-23	9	42.14	34.0622	20.2
ago	1	2460523.75	20	14	30.02	-23	10	4.94	34.0654	20.2
ago	2	2460524.75	20	14	24.17	-23	10	27.59	34.0690	20.2
ago	3	2460525.75	20	14	18.34	-23	10	50.08	34.0728	20.2
ago	4	2460526.75	20	14	12.53	-23	11	12.41	34.0769	20.2
ago	5	2460527.75	20	14	6.74	-23	11	34.57	34.0813	20.2
ago	6	2460528.75	20	14	0.97	-23	11	56.54	34.0860	20.2
ago	7	2460529.75	20	13	55.23	-23	12	18.31	34.0910	20.2
ago	8	2460530.75	20	13	49.52	-23	12	39.85	34.0962	20.2
ago	9	2460531.75	20	13	43.84	-23	13	1.17	34.1018	20.2
ago	10	2460532.75	20	13	38.20	-23	13	22.25	34.1076	20.2
ago	11	2460533.75	20	13	32.59	-23	13	43.08	34.1137	20.2
ago	12	2460534.75	20	13	27.03	-23	14	3.66	34.1201	20.2
ago	13	2460535.75	20	13	21.51	-23	14	23.99	34.1267	20.2
ago	14	2460536.75	20	13	16.04	-23	14	44.06	34.1336	20.2
ago	15	2460537.75	20	13	10.62	-23	15	3.89	34.1408	20.2
ago	16	2460538.75	20	13	5.25	-23	15	23.47	34.1483	20.2
ago	17	2460539.75	20	12	59.93	-23	15	42.82	34.1560	20.2
ago	18	2460540.75	20	12	54.66	-23	16	1.92	34.1640	20.2
ago	19	2460541.75	20	12	49.44	-23	16	20.78	34.1723	20.2
ago	20	2460542.75	20	12	44.27	-23	16	39.39	34.1808	20.2
ago	21	2460543.75	20	12	39.15	-23	16	57.71	34.1896	20.2
ago	22	2460544.75	20	12	34.09	-23	17	15.73	34.1986	20.2
ago	23	2460545.75	20	12	29.09	-23	17	33.44	34.2079	20.2
ago	24	2460546.75	20	12	24.15	-23	17	50.82	34.2174	20.2
ago	25	2460547.75	20	12	19.28	-23	18	7.88	34.2272	20.2
ago	26	2460548.75	20	12	14.49	-23	18	24.63	34.2373	20.2
ago	27	2460549.75	20	12	9.76	-23	18	41.08	34.2476	20.2
ago	28	2460550.75	20	12	5.11	-23	18	57.23	34.2581	20.2
ago	29	2460551.75	20	12	0.52	-23	19	13.09	34.2689	20.2
ago	30	2460552.75	20	11	56.01	-23	19	28.65	34.2799	20.2

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ '	"	dis UA	hp h
ago	31	2460553.75	20	11	51.58	-23	19	43.91	34.2911	20.2
sep	1	2460554.75	20	11	47.22	-23	19	58.85	34.3026	20.2
sep	2	2460555.75	20	11	42.93	-23	20	13.48	34.3143	20.2
sep	3	2460556.75	20	11	38.73	-23	20	27.77	34.3262	20.2
sep	4	2460557.75	20	11	34.60	-23	20	41.71	34.3384	20.2
sep	5	2460558.75	20	11	30.56	-23	20	55.29	34.3507	20.2
sep	6	2460559.75	20	11	26.60	-23	21	8.52	34.3633	20.2
sep	7	2460560.75	20	11	22.74	-23	21	21.37	34.3761	20.2
sep	8	2460561.75	20	11	18.97	-23	21	33.85	34.3891	20.2
sep	9	2460562.75	20	11	15.29	-23	21	45.96	34.4023	20.2
sep	10	2460563.75	20	11	11.70	-23	21	57.71	34.4157	20.2
sep	11	2460564.75	20	11	8.22	-23	22	9.09	34.4293	20.2
sep	12	2460565.75	20	11	4.83	-23	22	20.12	34.4431	20.2
sep	13	2460566.75	20	11	1.54	-23	22	30.80	34.4571	20.2
sep	14	2460567.75	20	10	58.35	-23	22	41.13	34.4713	20.2
sep	15	2460568.75	20	10	55.25	-23	22	51.12	34.4856	20.2
sep	16	2460569.75	20	10	52.25	-23	23	0.76	34.5001	20.2
sep	17	2460570.75	20	10	49.35	-23	23	10.03	34.5148	20.2
sep	18	2460571.75	20	10	46.55	-23	23	18.92	34.5297	20.2
sep	19	2460572.75	20	10	43.85	-23	23	27.41	34.5447	20.2
sep	20	2460573.75	20	10	41.25	-23	23	35.49	34.5599	20.2
sep	21	2460574.75	20	10	38.76	-23	23	43.16	34.5752	20.2
sep	22	2460575.75	20	10	36.39	-23	23	50.43	34.5907	20.2
sep	23	2460576.75	20	10	34.12	-23	23	57.32	34.6063	20.2
sep	24	2460577.75	20	10	31.97	-23	24	3.83	34.6221	20.2
sep	25	2460578.75	20	10	29.93	-23	24	9.99	34.6380	20.2
sep	26	2460579.75	20	10	28.00	-23	24	15.78	34.6541	20.2
sep	27	2460580.75	20	10	26.18	-23	24	21.21	34.6702	20.2
sep	28	2460581.75	20	10	24.47	-23	24	26.27	34.6866	20.2
sep	29	2460582.75	20	10	22.87	-23	24	30.95	34.7030	20.2
sep	30	2460583.75	20	10	21.38	-23	24	35.24	34.7195	20.2
oct	1	2460584.75	20	10	20.01	-23	24	39.13	34.7362	20.2
oct	2	2460585.75	20	10	18.75	-23	24	42.62	34.7530	20.2
oct	3	2460586.75	20	10	17.61	-23	24	45.71	34.7698	20.2
oct	4	2460587.75	20	10	16.59	-23	24	48.38	34.7868	20.2
oct	5	2460588.75	20	10	15.69	-23	24	50.64	34.8039	20.2
oct	6	2460589.75	20	10	14.92	-23	24	52.49	34.8210	20.2
oct	7	2460590.75	20	10	14.27	-23	24	53.94	34.8382	20.2
oct	8	2460591.75	20	10	13.74	-23	24	55.00	34.8555	20.2
oct	9	2460592.75	20	10	13.33	-23	24	55.67	34.8729	20.2
oct	10	2460593.75	20	10	13.05	-23	24	55.97	34.8903	20.2
oct	11	2460594.75	20	10	12.89	-23	24	55.89	34.9078	20.2
oct	12	2460595.75	20	10	12.85	-23	24	55.46	34.9254	20.2
oct	13	2460596.75	20	10	12.92	-23	24	54.65	34.9430	20.2
oct	14	2460597.75	20	10	13.12	-23	24	53.47	34.9607	20.2
oct	15	2460598.75	20	10	13.44	-23	24	51.91	34.9784	20.2
oct	16	2460599.75	20	10	13.87	-23	24	49.94	34.9961	20.2
oct	17	2460600.75	20	10	14.43	-23	24	47.56	35.0138	20.2

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	\circ	δ -	"	dis UA	hp h
oct	18	2460601.75	20	10	15.11	-23	24	44.77	35.0316	20.2
oct	19	2460602.75	20	10	15.92	-23	24	41.58	35.0494	20.2
oct	20	2460603.75	20	10	16.85	-23	24	37.99	35.0673	20.2
oct	21	2460604.75	20	10	17.92	-23	24	34.04	35.0851	20.2
oct	22	2460605.75	20	10	19.10	-23	24	29.73	35.1030	20.2
oct	23	2460606.75	20	10	20.41	-23	24	25.08	35.1208	20.2
oct	24	2460607.75	20	10	21.85	-23	24	20.08	35.1387	20.2
oct	25	2460608.75	20	10	23.40	-23	24	14.73	35.1565	20.2
oct	26	2460609.75	20	10	25.07	-23	24	9.03	35.1744	20.2
oct	27	2460610.75	20	10	26.86	-23	24	2.96	35.1922	20.2
oct	28	2460611.75	20	10	28.77	-23	23	56.53	35.2100	20.2
oct	29	2460612.75	20	10	30.80	-23	23	49.72	35.2277	20.2
oct	30	2460613.75	20	10	32.95	-23	23	42.53	35.2455	20.2
oct	31	2460614.75	20	10	35.22	-23	23	34.97	35.2632	20.2
nov	1	2460615.75	20	10	37.62	-23	23	27.04	35.2808	20.2
nov	2	2460616.75	20	10	40.15	-23	23	18.73	35.2984	20.2
nov	3	2460617.75	20	10	42.79	-23	23	10.07	35.3159	20.2
nov	4	2460618.75	20	10	45.57	-23	23	1.05	35.3334	20.2
nov	5	2460619.75	20	10	48.46	-23	22	51.70	35.3509	20.2
nov	6	2460620.75	20	10	51.47	-23	22	42.01	35.3682	20.2
nov	7	2460621.75	20	10	54.60	-23	22	32.01	35.3855	20.2
nov	8	2460622.75	20	10	57.85	-23	22	21.70	35.4027	20.2
nov	9	2460623.75	20	11	1.22	-23	22	11.07	35.4198	20.2
nov	10	2460624.75	20	11	4.69	-23	22	0.14	35.4368	20.2
nov	11	2460625.75	20	11	8.28	-23	21	48.88	35.4537	20.2
nov	12	2460626.75	20	11	11.97	-23	21	37.30	35.4705	20.2
nov	13	2460627.75	20	11	15.78	-23	21	25.37	35.4873	20.2
nov	14	2460628.75	20	11	19.70	-23	21	13.11	35.5039	20.2
nov	15	2460629.75	20	11	23.74	-23	21	0.50	35.5204	20.2
nov	16	2460630.75	20	11	27.89	-23	20	47.58	35.5368	20.2
nov	17	2460631.75	20	11	32.16	-23	20	34.35	35.5530	20.2
nov	18	2460632.75	20	11	36.54	-23	20	20.84	35.5691	20.2
nov	19	2460633.75	20	11	41.02	-23	20	7.07	35.5852	20.2
nov	20	2460634.75	20	11	45.62	-23	19	53.03	35.6010	20.2
nov	21	2460635.75	20	11	50.31	-23	19	38.73	35.6168	20.2
nov	22	2460636.75	20	11	55.11	-23	19	24.17	35.6323	20.2
nov	23	2460637.75	20	12	0.00	-23	19	9.34	35.6478	20.2
nov	24	2460638.75	20	12	5.00	-23	18	54.24	35.6631	20.2
nov	25	2460639.75	20	12	10.10	-23	18	38.85	35.6782	20.2
nov	26	2460640.75	20	12	15.29	-23	18	23.19	35.6932	20.2
nov	27	2460641.75	20	12	20.59	-23	18	7.25	35.7080	20.2
nov	28	2460642.75	20	12	25.99	-23	17	51.04	35.7226	20.2
nov	29	2460643.75	20	12	31.48	-23	17	34.55	35.7370	20.2
nov	30	2460644.75	20	12	37.08	-23	17	17.81	35.7513	20.2
dic	1	2460645.75	20	12	42.77	-23	17	0.82	35.7654	20.2
dic	2	2460646.75	20	12	48.56	-23	16	43.60	35.7793	20.2
dic	3	2460647.75	20	12	54.45	-23	16	26.15	35.7930	20.2
dic	4	2460648.75	20	13	0.42	-23	16	8.50	35.8065	20.2
dic	5	2460649.75	20	13	6.48	-23	15	50.65	35.8199	20.2

Plutón (planeta enano), 2024

Efemérides a las 0^h del meridiano 90° W.G.

mes	día	dj	h	α m	s	°	δ -	"	dis UA	hp h
dic	6	2460650.75	20	13	12.63	-23	15	32.61	35.8330	20.2
dic	7	2460651.75	20	13	18.86	-23	15	14.37	35.8459	20.2
dic	8	2460652.75	20	13	25.16	-23	14	55.94	35.8586	20.2
dic	9	2460653.75	20	13	31.55	-23	14	37.30	35.8710	20.2
dic	10	2460654.75	20	13	38.01	-23	14	18.44	35.8833	20.2
dic	11	2460655.75	20	13	44.56	-23	13	59.38	35.8953	20.2
dic	12	2460656.75	20	13	51.18	-23	13	40.10	35.9071	20.2
dic	13	2460657.75	20	13	57.89	-23	13	20.63	35.9187	20.2
dic	14	2460658.75	20	14	4.67	-23	13	0.98	35.9301	20.2
dic	15	2460659.75	20	14	11.53	-23	12	41.16	35.9412	20.2
dic	16	2460660.75	20	14	18.46	-23	12	21.21	35.9521	20.2
dic	17	2460661.75	20	14	25.46	-23	12	1.13	35.9628	20.2
dic	18	2460662.75	20	14	32.52	-23	11	40.93	35.9732	20.2
dic	19	2460663.75	20	14	39.65	-23	11	20.61	35.9833	20.2
dic	20	2460664.75	20	14	46.84	-23	11	0.16	35.9933	20.2
dic	21	2460665.75	20	14	54.09	-23	10	39.58	36.0029	20.2
dic	22	2460666.75	20	15	1.39	-23	10	18.87	36.0124	20.3
dic	23	2460667.75	20	15	8.76	-23	9	58.02	36.0215	20.3
dic	24	2460668.75	20	15	16.18	-23	9	37.04	36.0304	20.3
dic	25	2460669.75	20	15	23.66	-23	9	15.93	36.0391	20.3
dic	26	2460670.75	20	15	31.19	-23	8	54.70	36.0475	20.3
dic	27	2460671.75	20	15	38.78	-23	8	33.36	36.0556	20.3
dic	28	2460672.75	20	15	46.43	-23	8	11.91	36.0634	20.3
dic	29	2460673.75	20	15	54.13	-23	7	50.38	36.0710	20.3
dic	30	2460674.75	20	16	1.87	-23	7	28.78	36.0783	20.3
dic	31	2460675.75	20	16	9.66	-23	7	7.13	36.0853	20.3
ene	1	2460676.75	20	16	17.50	-23	6	45.43	36.0921	20.3
ene	2	2460677.75	20	16	26.12	-23	6	23.46	36.0294	20.3

Satélite de los planetas, 2024

Planeta	Satélite	Periodo orbital (días)	Semi eje mayor (10 ³ km)	Excentricidad de la órbita	Inclinación de la órbita		Razón de Ms a Mp	Radio (km)	Albedo
Tie	1 Luna	27.321661	384.400	0.0549018	2.28.58	p	1.23000371E-02	1737.40	0.11 0.07
Mar	1 Fobos	0.31891011	9.376	0.01510	1.075	p	1.6720E-08	7.81	irr 0.07
Mar	2 Deimos	1.26244080	23.458	0.00020	1.788	p	2.4300E-09	10.35	irr
Júp	1 Io	1.76914	421.800	0.00410	0.036	p	4.7040E-05	1821.35	irr 0.62
Júp	2 Europa	3.55118	671.100	0.00940	0.466	p	2.5280E-05	1562.00	irr 0.68
Júp	3 Ganimedes	7.15455	1070.400	0.00130	0.177	p	7.8050E-05	2632.30	0.44
Júp	4 Calixto	16.88902	1882.700	0.00740	0.192	p	5.6670E-05	2409.30	0.19
Júp	5 Amaltea	0.49818	181.400	0.00320	0.380	p	1.1000E-09	92.09	irr 0.09
Júp	6 Himalia	250.56000	11461.000	0.16230	27.496	p	2.2000E-09	85.00	0.04
Júp	7 Elara	259.64000	11471.000	0.21740	26.627	p	4.5800E-10	40.00	0.04
Júp	8 Pasifae	743.63000	23624.000	0.40900	151.431	p	1.5800E-10	18.00	0.04
Júp	9 Sinope	758.90000	23939.000	0.24950	158.109	p	3.9500E-11	14.00	0.04
Júp	10 Lisistea	259.20000	11717.000	0.11240	28.302	p	3.3100E-11	12.00	0.04
Júp	11 Carmé	734.14000	23404.000	0.25330	164.907	p	6.9400E-11	15.00	0.04
Júp	12 Ananque	629.77000	21276.000	0.24350	148.889	p	1.5800E-11	10.00	0.04
Júp	13 Leda	240.92000	11165.000	0.16360	27.457	p	5.7600E-12	5.00	0.04
Júp	14 Tebe	0.67500	221.900	0.01760	1.080	p	7.8900E-10	50.52	irr 0.05
Júp	15 Adrastea	0.29800	129.000	0.00180	0.054	p	3.9500E-12	8.52	irr 0.10
Júp	16 Metis	0.29500	128.000	0.00120	0.019	p	6.3100E-11	23.70	irr 0.06
Júp	17 Calirre	736.00000	24596.240	0.20600	143.000	e		4.30	0.04
Júp	18 Temixto	130.00000	7450.000	0.20000	46.000	e		4.00	0.04
Júp	19 Megaclito	734.10000	23439.080	0.52770	151.700	e		2.70	0.04
Júp	20 Taiguet	650.10000	21671.850	0.24600	163.545	e		2.50	0.04
Júp	21 Caldena	591.70000	20299.460	0.15530	165.620	e		1.90	0.04
Júp	22 Harpalika	617.30000	20917.720	0.20030	149.288	e		2.20	0.04
Júp	23 Kalica	767.00000	24135.610	0.31770	165.792	e		2.60	0.04
Júp	24 Iocasta	606.30000	20642.860	0.26860	149.906	e		2.60	0.04
Júp	25 Erinoma	661.10000	21867.750	0.34650	160.909	e		1.60	0.04
Júp	26 Isunoa	704.90000	22804.700	0.28090	165.039	e		1.90	0.04
Júp	27 Praxiodica	624.60000	21098.100	0.14580	146.353	e		3.40	0.04
Júp	28 Autonoa	778.00000	24413.090	0.45860	153.056	e		2.00	0.04
Júp	29 Tiona	610.00000	20769.900	0.28830	148.286	e		2.00	0.04
Júp	30 Hermipe	624.60000	21047.990	0.24790	149.785	e		2.00	0.04
Júp	31 Gitna	679.30000	22274.410	0.31120	164.343	e		1.50	0.04
Júp	32 Euridome	752.40000	23830.940	0.32550	150.430	e		1.50	0.04
Júp	33 Euanda	620.90000	20983.140	0.14270	146.030	e		1.50	0.04
Júp	36 Esponda	690.30000	22548.240	0.51890	155.220	e		1.00	0.04
Júp	37 Kala	679.40000	22300.640	0.32500	164.794	e		1.00	0.04
Júp	39 Egémona	715.00000	23006.330	0.24940	152.330	e		1.50	0.04
Júp	41 Oda	747.00000	23743.830	0.40510	159.408	e		2.00	0.04
Júp	43 Arca	748.70000	23765.120	0.22370	163.254	e		1.50	0.04
Júp	45 Élica	601.40000	20540.270	0.13750	154.587	e		2.00	0.04
Júp	46 Carpo	455.07000	17056.040	0.29490	55.147	e		1.50	0.04
Júp	47 Euquelade	735.27000	23485.28	0.28280	164.000	e		2.00	0.04
Júp	53 Dia	287.00000	12118.000	0.21100	28.230			1.00	0.04
Sat	1 Mimas	0.94242	185.539	0.01960	1.574	p	6.6100E-08	198.62	irr 0.60
Sat	2 Encélado	1.37022	238.042	0.00000	0.003	p	1.9000E-07	252.15	irr 1.00
Sat	3 Tetis	1.88780	294.672	0.00010	1.091	p	1.0900E-06	531.05	irr 0.80
Sat	4 Dione	2.73692	377.415	0.00220	0.026	p	1.9300E-06	560.45	irr 0.60
Sat	5 Rea	4.51750	527.068	0.00020	0.333	p	4.0600E-06	763.50	irr 0.60
Sat	6 Titán	15.94545	1221.865	0.02880	0.306	p	2.3660E-04	2574.73	0.20

Satélite de los planetas, 2024

Planeta	Satélite	Periodo orbital (días)	Semi eje mayor (10 ³ km)	Excentricidad de la órbita	Inclinación de la órbita	Razón de Ms a Mp	Radio (km)	Albedo		
Sat 7	Hiperión	21.27666	1500.933	0.02320	0.615	p	1.0000E-08	145.69	irr	0.25
Sat 8	Iapetos	79.33112	3560.854	0.02930	8.298	p	3.1770E-06	734.84	irr	0.20
Sat 9	Febe	546.41400	r 12893.240	0.17560	173.730	e	1.4540E-08	106.67	irr	0.08
Sat 10	Jano	0.69500	151.460	0.00680	0.163	p	3.3380E-09	91.28	irr	0.71
Sat 11	Epimeteo	0.69400	151.410	0.00980	0.351	p	9.2630E-10	58.75	irr	0.73
Sat 12	Elena	2.74000	377.400	0.00000	0.212	p	4.4800E-11	18.63	irr	1.67
Sat 13	Telesto	1.88800	294.660	0.00100	1.158	p	1.2650E-11	13.25	irr	1.00
Sat 14	Calipso	1.88800	294.660	0.00100	1.473	p	6.3250E-12	12.09	irr	0.70
Sat 15	Atlas	0.60200	137.670	0.00120	0.003	p	1.1610E-11	17.05	irr	0.40
Sat 16	Prometeo	0.61300	139.380	0.00220	0.008	p	2.8060E-10	51.11	irr	0.60
Sat 17	Pandora	0.62900	141.720	0.00420	0.050	p	2.4120E-10	43.08	irr	0.50
Sat 18	Pan	0.57500	133.585	0.00000	0.000	p	8.7070E-12	14.98	irr	0.50
Sat 19	Aimir	1315.13000	r 23128.000	0.33380	173.496	p		10.00		0.08
Sat 20	Paalia	686.95000	15204.000	0.33250	46.230	p		13.00		0.08
Sat 21	Tarrus	926.35000	18243.000	0.52820	33.725	p		7.00		0.08
Sat 22	Ijira	451.42000	11408.000	0.27210	47.483	p		6.00		0.08
Sat 24	Quivio	449.22000	11384.000	0.33250	46.766	p		8.00		0.08
Sat 26	Alborer	783.46000	16393.000	0.47970	34.059	p		16.00		0.08
Sat 29	Sarmac	895.51000	18182.000	0.28010	45.809	p		21.00		0.08
Ura 1	Ariel	2.52038	190.900	0.00120	0.041	p	1.5600E-05	578.90	irr	0.39
Ura 2	Umbriel	4.14418	266.000	0.00390	0.128	p	1.3500E-05	584.70		0.21
Ura 3	Titania	8.70587	436.300	0.00110	0.079	p	4.0600E-05	788.90		0.27
Ura 4	Oberón	13.46323	583.500	0.00140	0.068	p	3.4700E-05	761.40		0.23
Ura 5	Miranda	1.41348	129.900	0.00130	4.338	p	8.0000E-06	235.88	irr	0.32
Ura 7	Ofeia	0.37640	53.800	0.00990	0.104	p	6.2100E-10	21.40		0.07
Ura 8	Bianca	0.43458	59.200	0.00090	0.193	p	1.0700E-09	25.70		0.07
Ura 9	Crésida	0.46357	61.800	0.00040	0.006	p	3.9500E-09	39.80		0.07
Ura 10	Desdémona	0.47365	62.700	0.00010	0.113	p	2.0500E-09	32.00		0.07
Ura 11	Julieta	0.49307	64.400	0.00070	0.065	p	6.4200E-09	46.80		0.07
Ura 12	Porcia	0.51320	66.100	0.00010	0.059	p	1.9200E-08	67.60		0.07
Ura 13	Rosalinda	0.55846	69.900	0.00010	0.279	p	2.9300E-09	36.00		0.07
Ura 14	Belinda	0.62353	75.300	0.00010	0.031	p	4.1100E-09	40.30		0.07
Ura 15	Pucle	0.76183	86.000	0.18000	0.319	p	3.3300E-08	81.00		0.07
Ura 16	Calibán	579.73000	r 7231.000	0.52000	141.530	e	8.4500E-09	36.00		0.04
Ura 17	Sícorax	1288.33000	r 12179.000		159.420	e	6.1900E-08	75.00		0.04
Nep 1	Tritón	5.87685	r 354.759	0.00000	156.865	p	2.0890E-04	1353.00		0.72
Nep 2	Nereida	360.13000	5513.818	0.75070	7.090	p	3.0100E-07	170.00		0.16
Nep 5	Despina	0.33466	52.526	0.00014	0.070	p	2.0500E-08	74.00		0.09
Nep 6	Galatea	0.42875	61.953	0.00012	0.050	p	3.6600E-08	79.00		0.08
Nep 7	Larisa	0.55465	73.548	0.00139	0.200	p	4.8300E-08	96.00		0.09
Nep 8	Proteo	1.12200	117.646	0.00050	0.075	p	4.9140E-07	209.23	irr	0.10
Plu 1	Caronte	6.38723	19.571	0.00000	96.145	t	1.1650E-01	606.00		0.37

r movimiento retrogrado

irr forma irregular

p inclinación de la órbita relativa al ecuador del planeta

e inclinación de la órbita relativa a la eclíptica

t inclinación de la órbita relativa al ecuador terrestre

Ms masa del satélite

Mp masa del planeta

Parámetros orbitales y físicos, 2024

Parámetros de las órbitas de los planetas

(a las 0h del meridiano 90° W.G. del 7 de enero del 2017)

Planetas	Semieje mayor en UA	Revolución en años trópicos	Excentricidad	Inclinación °	Aplanamiento geométrico ($\times 10^{-3}$)
Mercurio	0.3870983	0.251	0.2056272	7.00400	0
Venus	0.7233267	0.615	0.0067404	3.39442	0
Tierra	0.9999985	1.000	0.0167015	0.00217	3.354
Marte	1.5237182	1.881	0.0935073	1.82839	6.772
Júpiter	5.202041	11.862	0.0489192	1.30373	5.000
Saturno	9.558687	29.458	0.0530788	2.48732	64.874
Urano	19.10948	84.013	0.0508390	0.77193	97.462
Neptuno	29.96013	164.749	0.0064668	1.77232	22.927

Parámetros físicos de la Luna y los planetas

	radio	masa	densidad	período de rotación	semidiámetro mínimo
	km	kg	g/cm ³	días	"
Luna	1737.4	7.3458×10^{22}	3.34	+ 27.32166	2010.7
Mercurio	2439.7	3.3010×10^{23}	5.43	+ 58.6462	12.3
Venus	6051.8	4.8673×10^{24}	5.24	- 243.0185	63.0
Tierra	6378.1	5.9721×10^{24}	5.513	+ 0.99726963	
Marte	3396.2	6.4169×10^{23}	3.93	+ 1.02595676	25.1
Júpiter	71492.0	1.8981×10^{27}	1.33	+ 0.41354	49.9
Saturno	60268.0	5.6831×10^{26}	0.69	+ 0.44401	20.7
Urano	25559.0	8.6890×10^{25}	1.27	- 0.71833	4.1
Neptuno	24764.0	1.0241×10^{26}	1.64	+ 0.67125	2.4
Plutón	1195.0	1.3041×10^{22}	1.82	- 6.3872	0.11

* Movimiento de rotación retrógrado

Sistema de constantes y parámetros, 2024

Unión Astronómica Internacional (IAU 1976)

Tiempos y épocas de referencia

Duración del año en 1990

Año	d	d	h	m	s
Trópico (equinoccio a equinoccio)	365.242190	365	05	48	45.19
Sidereal (estrella fija a estrella fija)	365.256363	365	06	09	10
Anomalístico (perihelio a perihelio)	365.259636	365	06	13	53
Eclípsar (nodo lunar a nodo lunar)	346.620078	346	14	52	52
Juliano	365.25	365	06	00	00

Duración del mes

Sinódico (luna nueva a luna nueva)	29.53059	29	12	44	03
Trópico (equinoccio a equinoccio)	27.32158	27	07	43	05
Sidereal (estrella fija a estrella fija)	27.32166	27	07	43	12
Anomalístico (perigeo a perigeo)	27.55455	27	13	18	33
Draconítico (nodo a nodo)	27.21222	27	05	36	

Duración del día

	Día sidereal medio			segundos siderales	
	d	h	m	s	s
Un día del tiempo solar medio	1.00273790935	24	03	56.555367	86636.555367
	Día solar medio			segundos solares	
	d	h	m	s	s
Un día del tiempo sidereal medio	0.99726956633	23	56	04.09054	86164.09054

Épocas de referencia para los años Juliano (J) y Beseliano (B)

Año Juliano	DJ
J1900.0	2415020.0
J1950.0	2433282.5
J2000.0	2451545.0
J2050.0	2469807.5
J2100.0	2488070.0
B1850.0	2396758.203
B1900.0	2415020.313
B1950.0	2433282.423
B1975.0	2442413.478
B2000.0	2451544.533
B2025.0	2460675.588
B2050.0	2469806.643
B2100.0	2488068.753
1900 enero 0.5	2415020.0
1925 enero 0.5	2424151.0
1950 enero 0.5	2433282.0
2000 enero 0.5	2451544.0
2050 enero 0.5	2469807.0
2100 enero 0.5	2488069.0

Sistema de constantes y parámetros, 2024

Unión Astronómica Internacional (IAU 1976)

Parámetros del Sol, la Tierra y la Luna

Sol	
Radio	6.96×10^8 m
Semidiámetro a la distancia media	$15' 59.63'' = 959.63''$
Masa	1.9891×10^{33} g
Densidad media	1.41 g cm ⁻³
Gravedad superficial	29,398 cm s ⁻²
Inclinación del ecuador solar (respecto de la eclíptica)	7° 15'
Longitud del Nodo Ascendente (T en siglos desde J2000.0)	75° 46' + 84' T
Periodo sinódico de rotación (f: latitud en el Sol)	$(26.90 + 5.2 \text{ sen} 2f)$ días
Periodo sideral de rotación (para longitudes heliográficas)	25.38 días
Apex	$a = 18\text{h } 10' \quad \delta = +37^\circ$
Rapidez en el sistema local de reposo	1.94×10^4 m/s, (0.0112 au/d)

Tierra

Órbita	
Paralaje solar	8.794148''
Constante de Aberración (J2000)	20.49552''
Tiempo luz a 1 AU	499.004782 s
Unidad astronómica de longitud (AU)	$1.49597870 \times 10^{11}$ m
Proporciones entre las masas:	
Sol/Tierra	332946.0
Sol/(Tierra más Luna)	328900.5
Tierra/Luna	0.0123002
Excentricidad media	0.016708617
Oblicuidad media de la Eclíptica	23° 26' 21.448''
Variación anual en rotación en la Eclíptica	0.4704''
Distancia media de la Tierra al Sol	1.0000010178 UA
Rapidez orbital media	29.7859 km/s
Aceleración centrípeta media	0.00594 m/s ²

Período de rotación respecto a estrellas fijas:

En tiempo solar medio	24 h 0 m 0.0084 s
En tiempo sideral medio	23 h 56 m 4.0989 s
Variación de la rotación	$15.04106717866910 \text{ ''/s} = 7.29211510 \times 10^{-5} \text{ rad s}^{-1}$

Precesión (" / año)

(T dado en siglos desde J2000)

Precesión general en longitud	$50.290966'' + 0.0222226'' T$
Precesión lunisolar en longitud	$50.387784'' + 0.0049263'' T$
Precesión planetaria	$-0.0188626'' - 0.0476128'' T$

Sistema de constantes y parámetros, 2024

Unión Astronómica Internacional (IAU 1976)

Figura y campo de gravedad	
Radio ecuatorial (a)	6378140 m
Radio polar (b)	6356755 m
Masa	$5.9742 \cdot 10^{24}$ g
Densidad media	5.52 g/cm ³
Factor dinámico (J ₂)	$0.00108263 \cdot 10^{-11}$ años ⁻¹
Gravedad normal (g)	$g = 9.80621 - 0.02593 \cos(2f) + 0.00003 \cos(4f)$ m/s ²
Constante de gravitación geocéntrica	$3.986005 \cdot 10^{14}$ m ³ s ⁻²

Luna

Radio medio	1738 km
Semidiámetro a la distancia media	15' 32.6"
Masa	$7.3483 \cdot 10^{22}$ kg
Densidad media	3.34 g/cm ²
Gravedad superficial	$1.62 \text{ m/s}^2 = 0.17g$

Orbita de la Luna en torno a la Tierra

Movimiento sideral medio	$2.661699489 \cdot 10^{-6}$ rad/s
Distancia media de la Tierra a la Luna	$3.844 \cdot 10^5$ km = 60.27 radios terrestres = 0.002570 UA
Paralaje horizontal ecuatorial (a la distancia media)	$57' 02.608'' = 3422.608''$
Distancia media del centro de la Tierra al baricentro Tierra-Luna	$4.671 \cdot 10^3$ km
Excentricidad media	0.05490
Inclinación media (respecto de la Eclíptica)	5.145396°
Inclinación media (respecto del ecuador de la Luna)	$6^\circ 41'$
Límites de la declinación geocéntrica	$+29^\circ \qquad - 29^\circ$
Período de revolución del nodo	6798d
Período de revolución del perigeo	3232d
Período Saros	223 lunaciones = 19 pasos del Sol por el Nodo $6585 \frac{1}{3}$ días
Rapidez orbital media	$1023 \text{ m/s} = 0.000591 \text{ UA/día}$
Aceleración centrípeta media	$0.00272 \text{ m/s}^2 = 0.0003 g$

Nomenclatura de las estrellas brillantes, 2024

Nombres de estrellas				Nombres de estrellas			
Propios	Clasificación Bayer		NBSC	Propios	Clasificación Bayer		NBSC
Acamar	θ	Eri	897	Algomeyla	β	CMi	2845
Achernar	α	Eri	472	Algomeysa	α	CMi	2943
Achird	η	Cas	219	Algorab	δ	Crv	4757
Acrux	α	Cru	4730	Alhajoth	α	Aur	1708
Acubens	α	Cnc	3572	Al Hammam	ζ	Peg	8634
Adhafera	ζ	Leo	4031	Alhena	γ	Gem	2421
Adhara	ε	CMA	2618	Alioth	ε	UMa	4905
Adhil	ξ	And	390	Al Kaffal Jidmah	γ	Cet	804
Adib	α	Dra	5291	Alkaid	η	UMa	5191
Agena	β	Cen	5267	Al Kalbal Asad	α	Leo	3982
Ain	ε	Tau	1409	Alkalurops	μ	Boo	5733
Ain al Rami	ν	Sgr	7116	Al Kaphrab	χ	UMa	4518
Ak	α	UMa	4301	Alkes	α	Crt	4287
Akrab	β	Sco	5984	Alkhiba	α	Crv	4623
Aladfar	η	Lyr	7298	Al Kirdah	ξ	Cep	8417
Alamak	γ	And	603	Almaak	γ	And	603
Al Anchatal Nahr	τ	Eri	850	Almaaz	ε	Aur	1605
Al Anf	ε	Peg	8308	Al Minliar al Asad	κ	Leo	3731
Al Anz	ε	Aur	1605	Al Minliar al Shuja	σ	Hya	3418
Alaraph	α	Vir	5056	Almuredin	ε	Vir	4932
Alaraph	β	Vir	4540	Alnair	α	Gru	8425
Alascha	λ	Sco	6527	Al Nasl	γ	Sgr	6746
Al Athfar	μ	Lyr	6903	Alnath	α	Ari	617
Al Atik	ο	Per	1131	Alnilam	ε	Ori	1903
Al Baldah	π	Sgr	7264	Alnitak	ζ	Ori	1948
Al Bali	ε	Aqr	7950	Al Niyat	σ	Sco	6084
Albireo	β	Cyg	7417	Al Niyat	τ	Sco	6165
Al Chiba	α	Crv	4623	Alphard	α	Hya	3748
Alcor	80	UMa	5062	Alphecca	α	CrB	5793
Alcyone	ν	Tau	1165	Alpheratz	α	And	15
Aldebarán	α	Tau	1457	Alphirk	β	Cep	8238
Alderamin	α	Cep	8162	Alrai	γ	Cep	8974
Aldhafara	ζ	Leo	4031	Alrami	α	Sgr	7348
Al Dhiba	ι	Dra	5744	Al Rescha	α	Psc	595
Aldhibah	ζ	Dra	6396	Alruccabah	α	UMi	424
Al Dihi	ι	Dra	5744	Al Rukbahal Daj	ω	Cyg	7851
Aldib	δ	Dra	7310	Alsafi	σ	Dra	7462
Al Dibah	ζ	Dra	6396	Alsah	α	Sge	7479
Alfard	α	Hya	3748	Al Sanamal Nakah	β	Cas	21
Alfecca	α	CrA	7254	Alsciaukat	31	Lyn	3275
Alfirk	β	Cep	8238	Alshain	β	Aql	7602
Alga	θ	Ser	7141	Alshat	ν	Cap	7773
Algebar	β	Ori	1713	Alshemali	μ	leo	3905
Algedi Prima	α	Cap	7747	Al Sheratain	β	Ari	553
Algedi Secunda	α	Cap	7754	Al Suhail	λ	Vel	3634
Algeiba	γ	Leo	4057	Al Suhailal Muhlif	γ	Vel	3206
Algenib	γ	Peg	39	Altair	α	Aql	7557
Algenib	α	Per	1017	Altais	δ	Dra	7310
Algenubi	ε	Leo	3873	AlTarf	β	Cnc	3249
Algieba	γ	Leo	4058	Alterf	λ	Leo	3773
Algol	β	Per	936	Aludra	η	CMA	2827

Nomenclatura de las estrellas brillantes, 2024

Nombres de estrellas				Nombres de estrellas			
Propios	Clasificación Bayer		NBSC	Propios	Clasificación Bayer		NBSC
Alula Australia	ξ	UMa	4374	Cebalrai	β	Oph	6603
Alula Borealis	ν	UMa	4377	Ceginus	γ	Boo	5435
Alwaid	β	Dra	6536	Celaeno	16	Tau	1140
Al Wazor	δ	CMa	2693	Chara	β	CVn	4785
Alya	θ	Ser	7141	Chertan	θ	Leo	4359
Alzirr	ξ	Gem	2484	Cor Caroli	α	CVn	4915
Ancha	θ	Aqr	8499	Cor Tauri	α	Tau	1457
Angetenar	τ	Eri	850	Cursa	β	Eri	1666
Ankaa	α	Phe	99	Dabih Major	β	Cap	7776
Anser	α	Vul	7405	Demon Star	β	per	936
Antares	α	Sco	6134	Deneb	α	Cyg	7924
Arcturus	α	Boo	5340	Deneb	ε	Aql	7176
Arich	γ	Vir	4825	Deneb	ε	Del	7852
Arietis	α	Ari	617	Deneb	η	Cet	334
Arkab Posterior	β	Sgr	7343	Deneb	ζ	Aql	7235
Arkab Prior	β	Sgr	7337	Deneb Algedi	δ	Cap	8322
Arneb	α	Lep	1865	Denebkaitos	ι	Cet	74
Arnai	γ	Cep	8974	Denebola	β	Leo	4534
Ascella	ζ	Sgr	7194	Dhur	δ	Leo	4357
Asellus Australis	δ	Cnc	3461	Diadem	α	Com	4968
Asellus Borealis	γ	Cnc	3449	Diphda	β	Cet	188
Asellus Primus	θ	Boo	5404	Dschubba	δ	Sco	5953
Asellus Secundus	ι	Boo	5350	Dubhe	α	UMa	4301
Asellus Tertius	κ	Boo	5329	Ed Asich	ι	Dra	5744
Asmidiske	ι	Car	3699	El Acola	ξ	UMa	4374
Asmidiske	ξ	Pup	3045	Elacrab	β	Sco	5984
Asuia	ψ	Dra	6636	El Kaprah	κ	UMa	3594
Atik	ο	Per	1131	El Karidab	δ	Sgr	6859
Atlas	27	Tau	1178	El Khereb	τ	Peg	8880
Atria	α	Tri	544	Elkhiffa Australis	α	Lib	5530
Auva	δ	Vir	4910	Elkhiffa Borealis	β	Lib	5685
Avior	ε	Car	3307	El Koprah	χ	UMa	4518
Azelfafage	π	Cyg	8301	El Nath	β	Tau	1791
Azha	η	Eri	874	El Phekrab	μ	UMa	4069
Baham	θ	Peg	8450	Enif	ε	Peg	8308
Baten Kaitos	ζ	Cet	539	Erakis	μ	Cep	8316
Becrux	β	Cru	4853	Etamin	γ	Dra	6705
Beid	ο	Eri	1298	Fomalhaut	α	Psa	8728
Bellatrix	γ	Ori	1790	Fornacis	α	For	963
Benetnash	η	UMa	5191	Fumal Samakah	β	Psc	8773
Betelgeuse	α	Ori	2061	Furud	ζ	CMa	2282
Botein	δ	Ari	951	Gacrux	γ	Cru	4763
Brachiu	γ	Sco	1809	Gemma	α	CrB	5793
Bunda	ξ	Agr	8264	Genam	ξ	Dra	6688
Caja	ω	Her	6117	Gianfar	λ	Dra	4434
Calx	μ	Gem	2298	Giedi Prima	α	Cap	7747
Canopus	α	Car	2326	Giedi Secunda	α	Cap	7754
Capella	α	Aur	1708	Gienah	γ	Crv	4662
Castor	α	Gem	2890	Gienah	ε	Cyg	7949
Castula	υ	Cas	253	Gildun	δ	UMi	6789
Castula	υ	Cas	265	Gomeisa	β	CMi	2845

Nomenclatura de las estrellas brillantes, 2024

Nombres de estrellas				Nombres de estrellas			
Propios	Clasificación Bayer		NBSC	Propios	Clasificación Bayer		NBSC
Gorgonea Quarta	ω	Per	947	Merope	23	Tau	1156
Gorgonea Tertia	ρ	Per	921	Mesartim	γ	Ari	545
Hadar	β	Cen	5267	Minelauva	β	Vir	4540
Haedus	ζ	Aur	1612	Minkar	ε	Crv	4630
Hamal	α	Ari	617	Mintaka	δ	Ori	1852
Hassaleh	ι	Aur	1577	Mira	ο	Cet	681
Hatysa	ι	Ori	1895	Mirach	β	And	337
Head of Hydrus	α	Hyi	691	Miram	η	Per	834
Heka	λ	Ori	1879	Mirphak	α	Per	2294
Hércules	β	Gem	2990	Mirza	β	CMA	2286
Heze	ζ	Vir	5107	Misam	κ	Per	941
Hoedus II	ν	Aur	1641	Mizar	ζ	UMa	5055
Homam	ζ	Peg	8634	Mufrid	η	Boo	5235
Hyadum I	γ	Tau	1346	Muscida	ο	UMa	3323
Hyadum II	δ	Tau	1373	Muscida	π	UMa	3403
Isis	γ	CMA	2657	Naos	ζ	Pup	3165
Izar	ε	Boo	5506	Nashira	γ	Cap	8278
Jabbah	ν	Sco	6027	Nicolaus	α	Del	7906
Jed	δ	Oph	6056	Nihal	β	Lep	1829
Jugum	γ	Lyr	7178	Nodus I	ζ	Dra	6396
Kaffaljdhma	γ	Cet	804	Nunki	σ	Sgr	7121
Kaus Australis	ε	Sgr	6879	Nusakan	β	CrB	5747
Kaus Borealis	λ	Sgr	6913	Oculus Boreus	ε	Tau	1409
Keid	ο	Eri	1325	Peacock	α	Pav	7790
Kitalphar	α	Equ	8131	Phact	α	Col	1956
Kocab	β	UMi	5563	Phad	γ	UMa	4554
Kornephoros	β	Her	6148	Pherkad	γ	UMi	5735
Kraz	β	Crv	4786	Pherkad Minor	λ	UMi	5714
Ksora	δ	Cas	403	Pleione	28	Tau	1180
Kuma	ν	Dra	6555	Polaris	α	UMi	424
Lesath	υ	Sco	6508	Pullux	β	Gem	2990
Maasym	λ	Her	6526	Praecipua	46	LMi	4247
Maia	20	Tau	1149	Praepes	η	Gem	2216
Maiaplacidus	β	Car	3685	Praesaepe	ε	Cnc	3429
Marfak	θ	Cas	343	Prima Giedi	α	Cap	7747
Marfak	κ	Her	6008	Procyon	α	CMi	2943
Marfak	μ	Cas	321	Propus	ι	Gem	2821
Marfic	λ	Oph	6149	Rana	δ	Eri	1136
Markab	α	Peg	8781	Rasalgethi	α	Her	6406
Matar	η	Peg	8650	Rasalhague	α	Oph	6556
Mebsuta	ε	Gem	2473	Ras Elased Austral	ε	Leo	3873
Megrez	δ	UMa	4660	Regulus	α	Leo	3982
Mekbuda	ζ	Gem	2650	Rigel	β	Ori	1713
Menchib	ξ	Per	1228	Rigil Kent	α	Cen	5459
Menkalinan	β	Aur	2088	Rijilal Awwa	μ	Vir	5487
Menkar	α	Cet	911	Rotanev	β	Del	7882
Menkar	λ	Cet	896	Ruchbah	ε	Cas	542
Menkent	θ	Cen	5288	Saad el Sund	β	Aqr	8232
Merak	β	UMa	4295	Sabik	η	Oph	6378
Meres	β	Boo	5602	Sadalachbia	γ	Aqr	8518
Meridiana	β	CrA	7259	Sadalbari	μ	Peg	8684

Nomenclatura de las estrellas brillantes, 2024

Nombres de estrellas				Nombres de estrellas			
Propios	Clasificación Bayer		NBSC	Propios	Clasificación Bayer		NBSC
Sadalmelik	α	Aqr	8414	Talitha	ι	UMa	3569
Sadir	γ	Cyg	7796	Tarazed	γ	Aql	7525
Saidak	80	UMa	5062	Tayeta	19	Tau	1845
Saiph	κ	Ori	2004	Tegmen	ζ	Cnc	3208
Saiph	η	Ori	1788	Terebellum	β	Sgr	7604
Sargas	θ	Sco	6553	Theemim	υ	Eri	1464
Sarin	δ	Her	6410	Thuban	α	Dra	5291
Sartan	α	Cnc	3572	Torcularis Septentr.	\circ	Psc	510
Sceptrum	53	Eri	1481	Tyl	ϵ	Dra	7582
Scheat	β	Peg	8775	Unukalhai	α	Ser	5854
Scheat	δ	Aqr	8709	Vega	α	Lyr	7001
Segin	ϵ	Cas	542	Vindemiatrix	ϵ	Vir	4932
Shaula	λ	Sco	6527	Wasat	δ	Gem	2777
Schedir	α	Cas	168	Wazn	β	Col	2040
Sheliak	β	Lyr	7106	Yed Posterior	ϵ	Oph	5985
Sirius	α	CMa	2491	Zaniah	η	Vir	4689
Situla	κ	Aqr	8610	Zaurak	γ	Eri	1231
Spica	α	Vir	5056	Zibal	ζ	Eri	984
Subra	\circ	Leo	3852	Zuben Elakrab	γ	Lib	5787
Superba	λ	CVn	4846	Zuben Elakribi	δ	Lib	5586
Syrma	ι	Vir	5338	Zuben Hakrabi	ζ	Lib	5848
Tabit	π	Ori	1543	Zuben Hakrabi	υ	Lib	5794
Tabit	υ	Ori	1855				

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
171	9088	85 Peg	2210	105	η Scl	3903	239	AZ Phe	5586	352	τ Psc
154	9089	30 Psc	2224	106	48 Psc	3949	242	ρ Phe	5594	353	34 Cet
154	9089	YY Psc	2355	114	GN And	4129	246	V357 And	5688	354	V761 Cas
183	9091	ζ Scl	2353	117	12 Cet	4147	248	20 Cet	5661	359	AI Scl
186	9092	31 Psc	2388	119	BB Phe	4084	252	λ ¹ Tuc	5742	360	φ Psc
194	9093	32 Psc	2474	121	13 Cas	4292	253	υ ¹ Cas	5737	361	ζ Psc
194	9093	c Psc	2505	123	λ Cas	4267	254	66 Psc	5743	362	ζ Psc
274	9097	V639 Cas	2472	125	λ ¹ Phe	4257	255	21 Cet	5778	364	87 Psc
301	9098	2 Cet	2484	126	β ¹ Tuc	4200	257	BQ Tuc	5926	365	V762 Cas
302	9099	V398 Cep	2487	127	β ² Tuc	4288	258	36 And	5799	366	37 Cet
330	9100	9 Cas	2599	130	κ Cas	4366	262	k Psc	5824	367	88 Psc
355	9103	3 Cet	2568	131	52 Psc	4427	264	γ Cas	5833	368	38 Cet
418	9110	V567 Cas	2548	132	51 Psc	4422	265	υ ² Cas	5862	370	v Phe
443	3	33 Psc	2707	137	16 Cas	4371	267	φ ³ Cet	5951	373	39 Cet
476	4	86 Peg	2629	139	θ Tuc	4436	269	μ And	5896	377	κ Tuc
518	5	V640 Cas	2762	142	13 Cet	4293	270	λ ² Tuc	6061	378	f Psc
531	7	10 Cas	2787	143	14 Cet	4463	271	η And	6242	382	φ Cas
664	14	AP Psc	2802	147	λ ² Phe	4510	274	h Psc	6193	383	υ Psc
677	15	α And	2865	149	PY And	4587	279	φ ⁴ Cas	6312	384	35 Cas
696	18	CF Cet	2852	151	BG Cet	4577	280	α Scl	6226	385	42 Cet
746	21	β Cas	2920	153	ζ Cas	4655	284	WW Psc	6315	389	l Psc
729	22	87 Peg	2912	154	π And	4770	288	ξ Scl	6411	390	ξ And
761	24	κ ¹ Scl	2903	155	53 Psc	4903	290	39 And	6429	393	43 Cet
765	25	ε Phe	3031	163	ε And	4889	291	σ Psc	6514	395	47 And
813	26	34 Psc	3092	165	δ And	4852	293	σ Scl	6692	399	ψ Cas
841	27	22 And	3093	166	54 Psc	4906	294	ε Psc	6539	401	44 Cet
814	30	γ ³ Oct	3138	167	55 Psc	4914	296	25 Cet	6537	402	θ Cet
910	33	6 Cet	3179	168	α Cas	4979	301	26 Cet	6686	403	δ Cas
930	34	κ ² Scl	3142	170	Z Scl	5074	307	73 Psc	6670	412	46 Cet
950	35	θ Scl	3231	175	32 And	5081	308	72 Psc	6706	413	ρ Psc
1067	39	γ Peg	3300	179	ξ Cas	5131	310	ψ ¹ Psc	6732	414	94 Psc
1086	41	23 And	3245	180	μ Phe	5132	311	ψ ¹ Psc	6813	417	ω And
1168	45	x Peg	3277	183	ξ Phe	5141	313	77 Psc	6748	421	47 Cet
1158	46	AD Cet	3414	184	π Cas	5121	315	27 Cet	6759	423	R Scl
1170	48	AE Cet	3356	185	λ ¹ Scl	5164	317	28 Cet	11767	424	α UMi
1196	50	UU Psc	3330	187	ρ Tuc	5204	319	75 Psc	7078	427	38 Cas
1319	59	36 Psc	3419	188	β Cet	5336	321	μ Cas	6867	429	γ Phe
1366	63	θ And	3405	191	η Phe	5165	322	β Phe	6999	430	49 And
1415	65	AO Cas	3572	192	21 Cas	5193	323	AW Scl	6888	431	WZ Scl
1473	68	σ And	3504	193	o Cas	5317	324	41 And	6981	432	97 Psc
1501	70	26 And	3455	194	φ ¹ Cet	5319	327	78 Psc	6960	433	48 Cet
1562	74	ι Cet	3456	195	λ ² Scl	5310	328	ψ ² Psc	7007	434	μ Psc
1599	77	ζ Tuc	3559	203	18 Cet	5296	329	30 Cet	6952	435	AW Phe
1645	80	d Psc	3721	208	23 Cas	5346	330	e Psc	7097	437	η Psc
1686	82	ρ And	3632	211	57 Psc	5300	331	υ Phe	7083	440	δ Phe
1647	83	π Tuc	3675	213	58 Psc	5268	332	ι Tuc	7294	442	x Cas
1708	84	ι Scl	3685	214	59 Psc	5364	334	η Cet	7321	446	KK And
1728	85	T Cet	3693	215	ζ And	5434	335	φ And	7345	451	49 Cet
1772	86	42 Psc	3697	216	60 Psc	5518	336	31 Cas	7493	454	OP And
1803	88	BE Cet	3730	217	61 Psc	5447	337	β And	7436	455	101 Psc
1830	89	AV Scl	3821	219	η Cas	5348	338	ζ Phe	7650	456	40 Cas
1901	90	R And	3801	223	v Cas	5454	339	ψ ³ Psc	7513	458	υ And
1921	91	V746 Cas	3786	224	δ Psc	5493	340	44 And	7450	459	50 Cet
1960	93	12 Cas	3810	225	64 Psc	5542	343	θ Cas	7463	462	τ Scl
2006	97	44 Psc	3881	226	v And	5589	345	RU Cas	7535	463	π Psc
2021	98	β Hyi	3885	230	65 Psc	5485	346	32 Cet	7607	464	υ Per
2081	99	α Phe	3919	234	GO And	5510	347	33 Cet	7651	465	GY And
2072	100	κ Phe	3909	235	φ ² Cet	5550	348	45 And	7719	469	x And
2100	101	10 Cet	3781	236	λ Hyi	5544	349	g Psc	7588	472	α Eri
2219	103	TV Psc	3965	238	V526 Cas	5571	351	x Psc	7740	475	105 Psc

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
7818	477	τ And	9440	594	π For	11072	695	κ For	12486	794	ι Eri
7965	478	V557 Cas	9487	595	α Psc	11279	696	V554 Per	12777	799	13 Per
8016	480	42 Cas	9487	596	113 Psc	11313	699	65 And	12777	799	θ Per
7939	481	V772 Cas	9570	599	ε Tri	11249	702	ξ Ari	12768	800	14 Per
7751	487	p Eri	9459	602	x Phe	11261	704	71 Cet	12719	801	35 Ari
7884	489	v Psc	9640	603	γ ¹ And	11001	705	δ Hyi	12484	802	ζ Hor
8046	491	44 Cas	9640	604	γ ² And	11569	707	ι Cas	12706	804	86 Cet
7981	493	107 Psc	9621	605	10 Ari	11345	708	ρ Cet	12706	804	γ Cet
8068	496	φ Per	9589	607	60 Cet	11465	709	66 And	12394	806	ε Hyi
7955	497	π Scl	9631	610	61 Cet	11348	710	AB Cet	12784	808	36 Ari
8115	499	V773 Cas	9677	612	v For	11432	712	11 Tri	12803	809	o Ari
7978	506	q ¹ Eri	9836	613	κ Ari	11258	714	λ Hor	12803	809	37 Ari
8159	508	109 Psc	9809	614	WZ Psc	11095	715	κ Hyi	12653	810	ι Hor
8102	509	τ Cet	9859	615	11 Ari	11486	717	12 Tri	12770	811	π Cet
8198	510	o Psc	9884	617	α Ari	11484	718	73 Cet	12770	811	89 Cet
8209	514	ε Scl	9990	618	V472 Per	11484	718	ξ ² Cet	12832	812	38 Ari
8271	515	VY Psc	9977	620	58 And	11548	720	13 Tri	12832	812	UV Ari
7879	516	τ ¹ Hyi	10064	622	β Tri	11407	721	κ Eri	12828	813	μ Cet
8241	520	q ² Eri	10053	623	14 Ari	11293	722	TZ Hor	12828	813	87 Cet
8387	522	4 Ari	10227	627	5 Per	11477	724	φ For	13133	815	RZ Cas
8544	530	1 Ari	10176	628	59 And	11678	729	26 Ari	12843	818	τ ¹ Eri
8497	531	x Cet	10180	629	59 And	11678	729	UU Ari	12843	818	1 Eri
8704	533	V436 Per	10155	631	15 Ari	11698	731	27 Ari	13061	824	39 Ari
8714	536	2 Per	10203	633	16 Ari	11644	733	TY For	13178	825	V480 Per
8645	539	ζ Cet	10220	634	5 Tri	11784	736	14 Tri	13108	828	40 Ari
8593	541	BD Phe	10212	635	64 Cet	11791	739	75 Cet	13367	829	SU Cas
8886	542	ε Cas	10234	639	63 Cet	11783	740	σ Cet	13121	830	VZ Ari
8814	543	55 And	10438	640	55 Cas	11783	740	76 Cet	13064	832	Z Eri
8796	544	α Tri	10280	642	TZ Tri	11843	741	29 Ari	12871	833	γ Hor
8832	545	γ ¹ Ari	10340	643	60 And	11867	744	λ ¹ For	13268	834	η Per
8778	547	BK Cet	10366	645	6 Per	11918	749	ω For	13268	834	15 Per
9009	548	ω Cas	10306	646	η Ari	12086	750	15 Tri	13040	835	η ¹ For
8833	549	ξ Psc	10328	648	19 Ari	12002	752	77 Cet	13165	836	42 Ari
8366	550	τ ² Hyi	10324	649	ξ ¹ Cet	12093	754	78 Cet	13165	836	π Ari
8903	553	β Ari	10305	650	66 Cet	12093	754	v Cet	12876	837	ζ Hyi
8837	555	ψ Phe	10320	652	μ For	12193	758	R Tri	13209	838	41 Ari
9021	557	56 And	10633	654	V551 Per	12107	759	80 Cet	13254	840	16 Per
8882	558	φ Phe	10559	655	7 Tri	12153	763	31 Ari	13147	841	β For
8993	559	7 Ari	10540	656	20 Ari	12184	764	30 Ari	13328	843	17 Per
9110	563	ι Ari	10535	657	21 Ari	12189	765	30 Ari	13197	844	γ ¹ For
9061	565	56 Cet	10644	660	δ Tri	12122	767	ι ¹ For	13202	845	γ ² For
9007	566	x Eri	10718	661	8 Per	12247	771	81 Cet	13327	847	σ Ari
9222	568	3 Per	10729	662	x Per	12186	772	λ ² For	13327	847	43 Ari
9153	569	λ Ari	10687	663	W And	12332	773	32 Ari	13225	848	η ² For
8928	570	η ² Hyi	10670	664	γ Tri	12332	773	v Ari	13288	850	τ ² Eri
9480	575	48 Cas	10642	666	67 Cet	11757	776	μ Hyi	13288	850	2 Eri
9598	580	50 Cas	10418	667	π ¹ Hyi	12288	777	ι ² For	13265	851	η ³ For
9727	581	47 Cas	10732	669	θ Ari	12225	778	η Hor	13141	852	v Hor
9353	582	112 Psc	10819	670	62 And	12387	779	δ Cet	13531	854	18 Per
9326	583	57 Cet	10602	674	φ Eri	12387	779	82 Cet	13531	854	τ Per
9347	585	v Cet	10793	675	10 Tri	12387	779	δ Cet	13531	854	τ Per
9347	585	59 Cet	10513	678	π ² Hyi	12390	781	ε Cet	13490	855	20 Per
9564	586	52 Cas	10826	681	o Cet	12390	781	83 Cet	13402	857	EP Eri
9372	587	AR Cet	10944	682	63 And	12489	782	33 Ari	13473	863	ψ For
9573	589	53 Cas	11060	685	9 Per	12692	785	11 Per	13654	867	45 Ari
9505	590	g Per	11060	685	V474 Per	12623	788	12 Per	13654	867	RZ Ari
9505	590	4 Per	11021	689	69 Cet	12413	789	s Eri	13502	868	R Hor
9236	591	α Hyi	11174	690	V440 Per	12530	790	84 Cet	13702	869	46 Ari
9763	592	49 Cas	11046	691	70 Cet	12640	793	μ Ari	13702	869	ρ Ari
8991	593	o Hyi	11220	694	64 And	12640	793	34 Ari	13244	872	v Hyi

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
13775	873	LT Per	14668	941	27 Per	16319	1032	V805 Cas	17529	1135	41 Per
13775	873	21 Per	14668	941	κ Per	16228	1035	CS Cam	17378	1136	6 Eri
13701	874	3 Eri	14677	944	55 Ari	16083	1038	2 Tau	17378	1136	6 Eri
13701	874	η Eri	14817	947	ω Per	16083	1038	ξ Tau	17378	1136	23 Eri
13756	877	EH Cet	14817	947	28 Per	16083	1038	ξ Tau	17489	1140	16 Tau
13834	878	47 Ari	14838	951	57 Ari	16281	1040	CE Cam	17499	1142	17 Tau
13879	879	π Per	14838	951	δ Ari	15987	1042	x ¹ For	17351	1143	h Eri
13879	879	22 Per	14893	954	56 Ari	16244	1044	34 Per	17527	1144	18 Tau
13905	882	24 Per	14893	954	SX Ari	16181	1048	66 Ari	17531	1145	19 Tau
13782	883	4 Eri	14915	958	EL Cet	16335	1052	σ Per	17531	1145	q Tau
13914	887	48 Ari	14954	962	94 Cet	16335	1052	35 Per	17457	1146	24 Eri
13914	887	ε Ari	14879	963	α For	16112	1054	x ² For	17959	1148	γ Cam
13914	888	48 Ari	15110	972	58 Ari	16156	1058	x ³ For	17573	1149	20 Tau
13914	888	ε Ari	15110	972	ζ Ari	16322	1061	4 Tau	17506	1150	25 Eri
13835	889	6 Eri	15204	976	V423 Per	16322	1061	s Tau	17579	1151	21 Tau
13954	896	91 Cet	14930	977	TW Hor	16470	1063	V396 Per	17588	1152	22 Tau
13954	896	λ Cet	15241	978	V573 Per	16369	1066	5 Tau	17563	1153	u Tau
13847	897	θ ² Eri	14521	981	BN Hyi	16369	1066	f Tau	17563	1153	29 Tau
13847	897	θ ¹ Eri	15338	982	30 Per	16499	1069	36 Per	17884	1155	BE Cam
13847	898	θ ² Eri	15197	984	ζ Eri	16341	1070	v Eri	17608	1156	23 Tau
13847	898	θ ¹ Eri	15197	984	13 Eri	16341	1070	17 Eri	17608	1156	V971 Tau
13951	899	5 Eri	15520	985	BK Cam	16516	1072	KP Per	17593	1162	π Eri
13942	901	ζ For	15404	987	29 Per	16591	1078	IW Per	17593	1162	26 Eri
14040	904	7 Eri	15244	988	14 Eri	16511	1079	t Tau	17593	1162	π Eri
14040	904	CV Eri	15444	989	31 Per	16511	1079	6 Tau	17702	1165	η Tau
14109	905	49 Ari	15383	992	95 Cet	16339	1081	TU Hor	17702	1165	25 Tau
14060	907	8 Eri	15382	994	15 Eri	16245	1083	κ Ret	17846	1170	V376 Per
14060	907	ρ ¹ Eri	15514	995	59 Ari	16537	1084	18 Eri	17618	1171	σ For
13884	909	β Hor	15457	996	κ ¹ Cet	16537	1084	ε Eri	17651	1173	27 Eri
14143	910	93 Cet	15457	996	κ ¹ Cet	16537	1084	ε Eri	17651	1173	τ ⁶ Eri
14135	911	α Cet	15457	996	96 Cet	16664	1086	7 Tau	17771	1174	30 Tau
14135	911	92 Cet	15557	1000	60 Ari	16826	1087	ψ Per	17771	1174	e Tau
14135	911	α Cet	15648	1002	32 Per	16826	1087	ψ Per	17440	1175	β Ret
14086	914	ε For	15648	1002	1 Per	16826	1087	37 Per	17886	1177	42 Per
14328	915	γ Per	15474	1003	τ ⁴ Eri	16611	1088	τ ⁵ Eri	17886	1177	V467 Per
14328	915	γ Per	15474	1003	16 Eri	16611	1088	19 Eri	17886	1177	n Per
14328	915	23 Per	15474	1003	τ ⁴ Eri	16846	1099	V711 Tau	17847	1178	27 Tau
14168	917	9 Eri	15479	1004	AI For	16803	1100	20 Eri	17851	1180	BU Tau
14168	917	ρ ² Eri	15627	1005	τ ¹ Ari	16803	1100	EG Eri	17851	1180	28 Tau
14382	918	k Per	15627	1005	61 Ari	16852	1101	10 Tau	17717	1181	τ ⁷ Eri
14146	919	τ ³ Eri	15627	1005	τ ¹ Ari	17296	1105	BD Cam	17717	1181	28 Eri
14146	919	11 Eri	15330	1006	ζ ¹ Ret	16870	1106	y Eri	17738	1184	ρ For
14354	921	25 Per	15619	1007	97 Cet	17027	1111	21 Eri	18033	1194	V766 Tau
14354	921	ρ Per	15619	1007	κ ² Cet	17007	1114	τ For	17874	1195	g Eri
14354	921	ρ Per	15510	1008	e Eri	17103	1115	12 Tau	18089	1199	31 Tau
14293	925	10 Eri	15510	1008	82 Eri	17181	1118	11 Tau	18141	1202	30 Eri
14293	925	ρ ³ Eri	15890	1009	CQ Cam	17167	1121	22 Eri	18246	1203	ζ Per
14376	927	52 Ari	15371	1010	ζ ² Ret	17167	1121	FY Eri	18246	1203	44 Per
14376	927	52 Ari	15770	1011	V575 Per	17358	1122	δ Per	17678	1208	γ Hyi
14376	928	52 Ari	15696	1012	62 Ari	17358	1122	δ Per	18350	1209	X Per
14376	928	52 Ari	15737	1015	63 Ari	17358	1122	39 Per	18453	1210	43 Per
14240	934	μ Hor	15737	1015	τ ² Ari	17313	1123	o Per	18255	1211	32 Eri
14576	936	β Per	15863	1017	33 Per	17313	1123	40 Per	18255	1212	32 Eri
14576	936	β Per	15863	1017	α Per	17309	1126	13 Tau	18216	1213	τ ⁸ Eri
14576	936	26 Per	15861	1022	64 Ari	17448	1131	o Per	18216	1213	τ ⁸ Eri
14632	937	ι Per	15201	1025	ι Hyi	17448	1131	38 Per	18216	1213	33 Eri
14514	938	53 Ari	15870	1027	65 Ari	17448	1131	o Per	18213	1214	i Eri
14514	938	UW Ari	15988	1029	V576 Per	17408	1132	14 Tau	18339	1217	DO Eri
14131	939	θ Hyi	15900	1030	o Tau	17304	1134	δ For	18471	1218	32 Tau
14586	940	54 Ari	15900	1030	1 Tau	17529	1135	v Per	18532	1220	45 Per

Número de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
18532	1220	ε Per	19811	1306	f Per	20542	1380	δ ² Tau	21248	1453	50 Eri
18532	1220	ε Per	19811	1306	52 Per	20522	1381	66 Tau	21476	1454	58 Per
18485	1221	V817 Tau	19719	1309	46 Tau	20522	1381	r Tau	20297	1456	v Men
18485	1221	33 Tau	19740	1311	47 Tau	20507	1383	42 Eri	21421	1457	87 Tau
18547	1223	V386 Per	19725	1312	GY Eri	20507	1383	ξ Eri	21421	1457	α Tau
18455	1225	DL Eri	19777	1318	39 Eri	20635	1387	κ ¹ Tau	21421	1457	α Tau
18614	1228	ξ Per	19877	1319	48 Tau	20635	1387	65 Tau	21402	1458	88 Tau
18614	1228	ξ Per	19860	1320	μ Tau	20641	1388	67 Tau	21402	1458	d Tau
18614	1228	46 Per	19860	1320	49 Tau	20641	1388	κ ² Tau	21444	1463	v Eri
18543	1231	γ Eri	19855	1321	V891 Tau	20648	1389	68 Tau	21444	1463	48 Eri
18543	1231	γ Eri	19859	1322	V774 Tau	20648	1389	V776 Tau	21444	1463	v Eri
18543	1231	34 Eri	20070	1324	b Per	20648	1389	δ ³ Tau	21393	1464	52 Eri
18724	1239	35 Tau	20070	1324	b Per	20661	1391	70 Tau	21393	1464	υ ² Eri
18724	1239	λ Tau	19849	1325	40 Eri	20711	1392	υ Tau	21281	1465	α Dor
18724	1239	λ Tau	19849	1325	o ² Eri	20711	1392	69 Tau	21281	1465	α Dor
18673	1240	36 Eri	19747	1326	α Hor	20711	1392	υ Tau	21730	1466	2 Cam
18673	1240	τ ⁹ Eri	19990	1329	ω ² Tau	20535	1393	d Eri	21727	1467	3 Cam
18673	1240	τ ⁹ Eri	19990	1329	ω Tau	20535	1393	υ ³ Eri	21604	1471	HU Tau
18788	1244	35 Eri	19990	1329	50 Tau	20535	1393	43 Eri	21588	1472	89 Tau
18597	1247	δ Ret	20087	1331	51 Tau	20713	1394	71 Tau	21589	1473	c Tau
18691	1250	XY Dor	19780	1336	α Ret	20713	1394	V777 Tau	21589	1473	90 Tau
18907	1251	38 Tau	19893	1338	γ Dor	20384	1395	η Ret	21547	1474	51 Eri
18907	1251	v Tau	19893	1338	γ Dor	20732	1396	π Tau	21547	1474	c Eri
19009	1252	36 Tau	20171	1339	V102 Tau	20732	1396	73 Tau	21673	1478	91 Tau
18957	1253	40 Tau	20171	1339	53 Tau	20715	1397	V114 Tau	21673	1478	σ ¹ Tau
18957	1253	V113 Tau	20186	1341	56 Tau	20789	1399	72 Tau	21683	1479	σ ² Tau
19038	1256	37 Tau	20186	1341	V724 Tau	20877	1407	75 Tau	21683	1479	92 Tau
19167	1261	λ Per	20252	1343	54 Per	20873	1408	76 Tau	21594	1481	53 Eri
19167	1261	47 Per	20075	1345	GZ Eri	20889	1409	ε Tau	21594	1481	l Eri
19076	1262	39 Tau	20205	1346	γ Tau	20889	1409	74 Tau	21735	1484	93 Tau
18744	1264	γ Ret	20205	1346	54 Tau	20885	1411	θ ¹ Tau	21479	1492	R Dor
18744	1264	γ Ret	20042	1347	υ ⁴ Eri	20885	1411	77 Tau	21928	1494	59 Per
18772	1266	ι Ret	20042	1347	41 Eri	20894	1412	78 Tau	21763	1496	54 Eri
19171	1268	GS Tau	20250	1348	φ Tau	20894	1412	θ ² Tau	21763	1496	DM Eri
19171	1268	41 Tau	20250	1348	52 Tau	20894	1412	θ ² Tau	21881	1497	94 Tau
19205	1269	ψ Tau	20354	1350	V469 Per	20901	1414	b Tau	21881	1497	τ Tau
19205	1269	42 Tau	20354	1350	53 Per	20901	1414	79 Tau	21961	1499	95 Tau
19343	1273	48 Per	20354	1350	d Per	21148	1417	l Cam	21770	1502	α Cae
19343	1273	c Per	20219	1351	V483 Tau	21148	1417	DL Cam	21861	1503	β Cae
19343	1273	MX Per	20219	1351	h Tau	20963	1420	V114 Tau	21986	1505	55 Eri
19302	1277	49 Per	20219	1351	57 Tau	20995	1422	80 Tau	21986	1505	DW Eri
19335	1278	V582 Per	19921	1355	ε Ret	20922	1423	DU Eri	21986	1506	55 Eri
19335	1278	50 Per	20261	1356	58 Tau	20049	1426	δ Men	21986	1506	DW Eri
19388	1283	43 Tau	20261	1356	V696 Tau	21039	1428	81 Tau	22024	1508	56 Eri
19388	1283	ω ¹ Tau	19917	1357	TT Ret	20856	1429	RV Cae	22024	1508	DX Eri
19513	1287	IM Tau	20263	1362	EK Eri	21036	1430	83 Tau	22287	1511	4 Cam
19513	1287	44 Tau	20271	1363	EM Eri	21137	1432	85 Tau	21914	1516	λ πc
19513	1287	p Tau	20400	1368	60 Tau	21242	1434	57 Per	22109	1520	μ Eri
19398	1288	GU Eri	20400	1368	V775 Tau	21242	1434	m Per	22109	1520	57 Eri
20860	1289	V408 Cep	20430	1369	x Tau	21139	1437	45 Eri	22040	1530	κ Dor
19483	1290	37 Eri	20430	1369	59 Tau	21192	1441	DZ Eri	22263	1532	58 Eri
19554	1292	45 Tau	20020	1372	θ Ret	21060	1443	δ Cae	22453	1533	1 Aur
19672	1297	V113 Tau	20455	1373	δ ¹ Tau	21273	1444	ρ Tau	22441	1537	96 Tau
19587	1298	o ¹ Eri	20455	1373	61 Tau	21273	1444	86 Tau	22325	1538	59 Eri
19587	1298	38 Eri	20493	1375	V114 Tau	21273	1444	ρ Tau	22280	1539	ζ Cae
19587	1298	o ¹ Eri	20484	1376	63 Tau	21278	1449	EH Eri	21949	1541	μ Men
19571	1300	GW Eri	20579	1377	55 Per	21278	1449	46 Eri	22783	1542	9 Cam
19515	1302	δ Hor	20533	1378	62 Tau	21296	1451	DV Eri	22783	1542	α Cam
19812	1303	51 Per	20591	1379	56 Per	21296	1451	47 Eri	22449	1543	π ³ Ori
19812	1303	μ Per	20542	1380	64 Tau	21248	1453	υ ¹ Eri	22449	1543	1 Ori

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
22509	1544	2 Ori	23743	1623	BM Cam	24645	1707	R Aur	25428	1791	β Tau
22509	1544	π ² Ori	23743	1623	12 Cam	24608	1708	13 Aur	25428	1791	112 Tau
22565	1547	97 Tau	22871	1629	η Men	24608	1708	α Aur	25194	1793	SW Col
22565	1547	V480 Tau	23474	1634	1 Lep	24512	1711	108 Tau	25410	1798	113 Tau
22565	1547	i Tau	23783	1637	9 Aur	24575	1712	AE Aur	25098	1801	κ πc
22479	1549	60 Eri	23783	1637	V398 Aur	24436	1713	β Ori	25769	1802	17 Cam
22678	1551	2 Aur	23607	1638	V103 Ori	24436	1713	19 Ori	25541	1805	24 Aur
22549	1552	3 Ori	23607	1638	11 Ori	24436	1713	β Ori	25 541	1805	φ Aur
22549	1552	π ⁴ Ori	23767	1641	10 Aur	23148	1716	ξ Men	25499	1808	115 Tau
22854	1555	5 Cam	23767	1641	η Aur	24555	1718	18 Ori	25539	1810	o Tau
22667	1556	o ¹ Ori	24254	1643	BN Cam	24836	1719	DV Cam	25539	1810	114 Tau
22667	1556	o ¹ Ori	23680	1648	W Ori	24836	1719	15 Cam	25473	1811	ψ Ori
22667	1556	4 Ori	23482	1649	η ¹ πc	24738	1722	PU Aur	25473	1811	ψ ² Ori
22701	1560	61 Eri	23595	1652	γ ¹ Cae	24727	1726	16 Aur	25473	1811	ψ Ori
22701	1560	ω Eri	23596	1653	γ ² Cae	24740	1728	17 Aur	25473	1811	30 Ori
22730	1562	5 Ori	23596	1653	X Cae	24740	1728	AR Aur	25555	1814	116 Tau
22531	1563	ι πc	23685	1654	ε Lep	24813	1729	λ Aur	25583	1816	117 Tau
22534	1564	ι πc	23685	1654	2 Lep	24813	1729	15 Aur	25303	1818	θ πc
22797	1567	π05 Ori	23835	1656	104 Tau	24799	1732	IQ Aur	25695	1821	118 Tau
22797	1567	π ⁵ Ori	23835	1656	m Tau	24832	1734	18 Aur	25973	1828	18 Cam
22797	1567	8 Ori	23794	1657	EN Eri	24674	1735	20 Ori	25606	1829	β Lep
23040	1568	7 Cam	23794	1657	66 Eri	24674	1735	τ Ori	25606	1829	9 Lep
22833	1569	6 Ori	23871	1658	106 Tau	24822	1739	n Tau	25737	1834	31 Ori
22833	1569	g Ori	23871	1658	l Tau	24822	1739	109 Tau	25737	1834	CI Ori
22845	1570	π ¹ Ori	23900	1659	103 Tau	24879	1740	19 Aur	25429	1836	λ Dor
22845	1570	7 Ori	23883	1660	105 Tau	24659	1743	o Col	25785	1837	CK Ori
23015	1577	ι Aur	23883	1660	V115 Tau	24372	1744	θ Dor	25813	1839	32 Ori
23015	1577	3 Aur	23852	1662	13 Ori	24817	1746	21 Ori	25861	1842	33 Ori
22957	1580	o ² Ori	23649	1663	η ² πc	25048	1749	20 Aur	25861	1842	n ¹ Ori
22957	1580	9 Ori	23879	1664	14 Ori	25048	1749	ρ Aur	25984	1843	x Aur
22881	1581	R Eri	23879	1664	i Ori	25197	1751	16 Cam	25984	1843	25 Aur
22958	1582	b Eri	23875	1666	β Eri	24827	1754	TX Lep	25945	1845	119 Tau
22958	1582	62 Eri	23875	1666	67 Eri	24845	1756	λ Lep	25945	1845	CE Tau
23068	1586	99 Tau	24019	1670	V115 Tau	24845	1756	6 Lep	25853	1849	10 Lep
23216	1588	8 Cam	23983	1672	16 Ori	24873	1757	7 Lep	25930	1852	δ Ori
23088	1590	k Tau	23983	1672	h Ori	24873	1757	v Lep	25930	1852	δ Ori
23088	1590	98 Tau	23941	1673	68 Eri	25011	1761	V136 Ori	25930	1852	34 Ori
23179	1592	4 Aur	23693	1674	ζ Dor	25044	1765	22 Ori	25923	1855	υ Ori
23261	1599	5 Aur	24010	1676	15 Ori	25044	1765	o Ori	25923	1855	36 Ori
23123	1601	10 Ori	23467	1677	β Men	24829	1767	ζ πc	26408	1857	19 Cam
23123	1601	π ⁶ Ori	24348	1678	14 Cam	25192	1768	22 Aur	26064	1858	120 Tau
23268	1602	6 Aur	23972	1679	λ Eri	25142	1770	23 Ori	26064	1858	V960 Tau
23522	1603	10 Cam	23972	1679	69 Eri	25292	1773	σ Aur	25859	1862	ε Col
23522	1603	β Cam	23972	1679	λ Eri	25292	1773	21 Aur	26093	1864	35 Ori
23416	1605	ε Aur	24340	1689	μ Aur	25216	1774	110 Tau	25985	1865	11 Lep
23416	1605	ε Aur	24340	1689	11 Aur	25278	1780	V111 Tau	25985	1865	α Lep
23416	1605	7 Aur	24196	1690	V108 Ori	25278	1780	111 Tau	26063	1868	VV Ori
23203	1607	R Lep	24169	1693	RX Lep	25202	1783	8 Lep	26126	1872	38 Ori
23221	1608	63 Eri	23840	1695	WZ Dor	25247	1784	29 Ori	26126	1872	n ² Ori
23231	1611	64 Eri	24244	1696	ι Lep	25247	1784	e Ori	26248	1875	121 Tau
23231	1611	S Eri	24244	1696	3 Lep	25282	1787	p Ori	26176	1876	37 Ori
23453	1612	8 Aur	24331	1698	ρ Ori	25282	1787	27 Ori	26176	1876	φ ¹ Ori
23453	1612	ζ Aur	24331	1698	17 Ori	25281	1788	η Ori	26207	1879	λ Ori
23453	1612	ζ Aur	24305	1702	μ Lep	25281	1788	28 Ori	26207	1879	39 Ori
23364	1617	ψ Eri	24305	1702	μ Lep	25281	1788	η Ori	26207	1880	λ Ori
23364	1617	65 Eri	24305	1702	5 Lep	25302	1789	V108 Ori	26207	1880	39 Ori
23497	1620	ι Tau	24327	1705	κ Lep	25302	1789	25 Ori	26233	1890	V104 Ori
23497	1620	102 Tau	24327	1705	4 Lep	25302	1789	ψ ¹ Ori	26237	1892	c Ori
23734	1622	BV Cam	24504	1706	KW Aur	25336	1790	24 Ori	26237	1892	42 Ori
23734	1622	11 Cam	24504	1706	14 Aur	25336	1790	γ Ori	26220	1893	41 Ori

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
26220	1893	V101 Ori	27196	1971	27 Aur	28358	2077	δ Aur	29388	2176	41 Aur
26220	1893	θ ¹ Ori	26868	1973	WZ Col	28358	2077	33 Aur	29034	2177	θ Col
26220	1893	θ ¹ Ori	27181	1977	Y Tau	28237	2084	139 Tau	29064	2181	π ² Col
26220	1894	41 Ori	27072	1983	γ Lep	28103	2085	η Lep	29379	2185	5 Gem
26220	1894	V101 Ori	27072	1983	13 Lep	28103	2085	16 Lep	29416	2190	TV Gem
26220	1894	θ ¹ Ori	27265	1985	129 Tau	28010	2087	ξ Col	29433	2193	68 Ori
26220	1894	θ ¹ Ori	27316	1989	131 Tau	28360	2088	β Aur	28909	2194	η ¹ Dor
26221	1895	41 Ori	27338	1990	130 Tau	28360	2088	34 Aur	29323	2195	V653 Mon
26221	1895	θ ¹ Ori	26264	1991	ι Men	28360	2088	β Aur	29450	2197	6 Gem
26224	1896	41 Ori	26264	1991	ι Men	28404	2091	35 Aur	29450	2197	BU Gem
26224	1896	θ ¹ Ori	27592	1992	29 Cam	28404	2091	π Aur	29434	2198	f ¹ Ori
26235	1897	θ ² Ori	27364	1993	133 Tau	28404	2091	π Aur	29434	2198	69 Ori
26235	1897	43 Ori	27483	1995	29 Aur	28098	2092	σ Col	29426	2199	ξ Ori
26241	1899	44 Ori	27483	1995	τ Aur	28380	2095	37 Aur	29426	2199	70 Ori
26241	1899	ι Ori	27204	1996	μ Col	28380	2095	θ Aur	29730	2201	40 Cam
26263	1900	V137 Ori	27288	1998	ζ Lep	28380	2095	θ Aur	29401	2202	V638 Mon
26268	1901	45 Ori	27288	1998	14 Lep	28271	2100	V100 Ori	29263	2203	AF Col
26311	1903	ε Ori	27386	1999	52 Ori	28271	2100	59 Ori	29276	2212	δ πc
26311	1903	46 Ori	27341	2001	V103 Ori	28499	2101	V444 Aur	29276	2212	δ πc
26311	1903	ε Ori	27468	2002	132 Tau	28499	2101	36 Aur	29488	2213	IP CMa
26382	1905	122 Tau	27366	2004	κ Ori	28296	2103	60 Ori	29919	2215	UW Lyn
26366	1907	40 Ori	27366	2004	53 Ori	28199	2106	γ Col	29919	2215	1 Lyn
26366	1907	φ ² Ori	27731	2006	30 Cam	28321	2107	V474 Mon	29655	2216	η Gem
26451	1910	ζ Tau	27511	2010	134 Tau	28321	2107	1 Mon	29655	2216	η Gem
26451	1910	123 Tau	27639	2011	31 Aur	28325	2108	2 Mon	29655	2216	7 Gem
26451	1910	ζ Tau	27639	2011	υ Aur	28677	2119	38 Aur	29696	2219	44 Aur
26536	1914	26 Aur	27673	2012	32 Aur	28328	2120	η Col	29696	2219	κ Aur
26069	1922	β Dor	27673	2012	ν Aur	28614	2124	61 Ori	29650	2220	71 Ori
26069	1922	β Dor	27100	2015	δ Dor	28614	2124	μ Ori	29134	2221	ν Dor
26606	1924	V433 Aur	27581	2016	135 Tau	27566	2125	κ Men	29704	2223	f ² Ori
26412	1926	v ¹ Col	27661	2018	V440 Aur	28574	2128	3 Mon	29704	2223	72 Ori
26300	1927	YX πc	27321	2020	β πc	28691	2130	64 Ori	29651	2227	5 Mon
26640	1928	125 Tau	26394	2022	π Men	28823	2132	39 Aur	29651	2227	γ Mon
26549	1931	σ Ori	27971	2027	31 Cam	28734	2134	1 Gem	29884	2228	42 Aur
26549	1931	48 Ori	27971	2027	TU Cam	28716	2135	x ² Ori	29736	2229	73 Ori
26594	1934	47 Ori	27949	2029	ξ Aur	28716	2135	x ² Ori	29789	2230	8 Gem
26594	1934	ω Ori	27949	2029	30 Aur	28716	2135	62 Ori	30060	2238	UZ Lyn
26594	1934	ω Ori	27658	2031	55 Ori	28744	2142	V696 Mon	30060	2238	2 Lyn
26460	1935	v ² Col	27743	2033	V809 Tau	28946	2143	40 Aur	29949	2239	43 Aur
26563	1937	d Ori	27743	2033	137 Tau	28812	2144	63 Ori	29840	2240	9 Gem
26563	1937	49 Ori	27830	2034	136 Tau	28814	2145	66 Ori	29840	2240	PX Gem
26718	1939	NO Aur	27654	2035	δ Lep	28930	2146	V394 Aur	29800	2241	74 Ori
26942	1941	24 Cam	27654	2035	15 Lep	28816	2148	SS Lep	29800	2241	k Ori
27046	1943	23 Cam	27750	2037	56 Ori	28816	2148	17 Lep	29353	2245	η ² Dor
26777	1946	126 Tau	27628	2040	β Col	28756	2149	72 Col	29850	2247	75 Ori
26727	1948	ζ Ori	27530	2042	γ πc	28596	2151	SW πc	29850	2247	1 Ori
26727	1948	50 Ori	27913	2047	54 Ori	29246	2152	37 Cam	29885	2255	6 Mon
26727	1949	ζ Ori	27913	2047	x ¹ Ori	28910	2155	θ Lep	29807	2256	κ Col
26727	1949	50 Ori	27965	2052	57 Ori	28910	2155	18 Lep	30272	2257	4 Lyn
25918	1953	γ Men	28162	2054	V403 Aur	28874	2156	S Lep	30019	2258	V115 Ori
26634	1956	α Col	27810	2056	λ Col	29038	2159	v Ori	29271	2261	α Men
26728	1957	V105 Ori	27810	2056	λ Col	29038	2159	67 Ori	30247	2264	45 Aur
26964	1961	V731 Tau	25776	2059	31 Men	28973	2161	XZ Lep	30073	2273	7 Mon
26885	1963	51 Ori	25776	2059	TZ Men	29490	2165	36 Cam	30122	2282	ζ CMa
26885	1963	b Ori	27989	2061	58 Ori	28984	2166	YY Lep	30122	2282	1 CMa
26169	1964	WX Men	27989	2061	α Ori	29048	2168	19 Lep	30214	2284	FR CMa
26865	1968	12 Lep	27989	2061	α Ori	28957	2171	π ¹ Col	30343	2286	μ Gem
27249	1969	26 Cam	27369	2062	λ Men	29225	2173	3 Gem	30343	2286	13 Gem
26953	1970	V119 Ori	28041	2063	U Ori	29225	2173	PU Gem	30343	2286	μ Gem
27196	1971	o Aur	27534	2064	ε Dor	29388	2175	41 Aur	30520	2289	ψ ¹ Aur

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
30520	2289	ψ^1 Aur	31681	2421	24 Gem	32921	2529	d Gem	33856	2646	σ CMa
30520	2289	46 Aur	31681	2421	γ Gem	32838	2534	V592 Mon	33971	2648	19 Mon
30651	2291	RR Lyn	31646	2422	V640 Mon	32759	2538	κ CMa	33971	2648	V637 Mon
30679	2293	5 Lyn	31564	2423	6 CMa	32759	2538	κ CMa	34088	2650	43 Gem
30324	2294	β CMa	31564	2423	ν^1 CMa	32759	2538	13 CMa	34088	2650	ζ Gem
30324	2294	β CMa	31737	2425	53 Aur	33041	2539	OX Aur	34088	2650	ζ Gem
30324	2294	2 CMa	31832	2427	ψ^2 Aur	33041	2539	59 Aur	33977	2653	σ^2 CMa
30277	2296	δ Col	31832	2427	50 Aur	33018	2540	θ Gem	33977	2653	24 CMa
30419	2298	8 Mon	31592	2429	7 CMa	33018	2540	34 Gem	33977	2653	σ^2 CMa
30419	2298	ϵ Mon	31592	2429	ν^2 CMa	33064	2541	60 Aur	34045	2657	γ CMa
30422	2299	ϵ Mon	31697	2432	V731 Mon	32810	2545	HZ CMa	34045	2657	23 CMa
30422	2299	8 Mon	31852	2438	54 Aur	33133	2547	61 Aur	34182	2659	44 Gem
30407	2301	V721 Mon	31766	2442	V689 Mon	33133	2547	ψ^8 Aur	34081	2666	C Pup
30426	2306	IU CMa	31700	2443	ν^3 CMa	32607	2550	α π c	34234	2670	V569 Mon
30564	2308	BL Ori	31700	2443	8 CMa	32768	2553	τ Pup	34356	2671	R Gem
30541	2310	T Mon	31685	2451	ν Pup	33269	2557	V352 Aur	34059	2672	H Pup
30342	2320	ν π c	32019	2453	25 Gem	31897	2559	ζ Men	34000	2674	V450 Car
30438	2326	α Car	31978	2456	S Mon	33449	2560	15 Lyn	34301	2678	FN CMa
30369	2330	16 Gem	31978	2456	15 Mon	33202	2564	e Gem	34248	2680	IL CMa
31039	2331	6 Lyn	32173	2459	55 Aur	33202	2564	38 Gem	34105	2683	V386 Car
30827	2332	RT Aur	32173	2459	ψ^4 Aur	33040	2567	KX CMa	34440	2684	45 Gem
30827	2332	48 Aur	32104	2466	26 Gem	33377	2568	ψ^9 Aur	33384	2689	θ Men
30972	2338	47 Aur	32438	2470	12 Lyn	33277	2569	37 Gem	34360	2690	FV CMa
30883	2343	ν Gem	32246	2473	27 Gem	33092	2571	EY CMa	34444	2693	δ CMa
30883	2343	18 Gem	32246	2473	ϵ Gem	33092	2571	15 CMa	34444	2693	25 CMa
30772	2344	10 Mon	32489	2477	13 Lyn	33160	2574	θ CMa	34752	2696	63 Aur
30591	2348	G Pup	32249	2478	30 Gem	33160	2574	14 CMa	34693	2697	46 Gem
30321	2352	π^1 Dor	32311	2480	28 Gem	33152	2580	σ^1 CMa	34693	2697	τ Gem
30867	2356	β Mon	32480	2483	56 Aur	33152	2580	16 CMa	34722	2700	47 Gem
30867	2356	11 Mon	32480	2483	ψ^5 Aur	33152	2580	σ^1 CMa	34622	2701	20 Mon
30867	2357	β Mon	32362	2484	ξ Gem	33165	2583	EZ CMa	34495	2702	A Pup
30867	2357	11 Mon	32362	2484	31 Gem	33485	2585	ψ^1 Aur	34912	2703	UY Lyn
30867	2358	β Mon	32562	2487	57 Aur	33485	2585	16 Lyn	34579	2704	LZ CMa
30867	2358	11 Mon	32562	2487	ψ^6 Aur	33248	2588	17 CMa	34819	2706	48 Gem
30788	2361	λ CMa	32404	2489	32 Gem	33302	2590	π CMa	34724	2707	21 Mon
30840	2364	IY CMa	32864	2490	42 Cam	33302	2590	19 CMa	34724	2707	V571 Mon
31105	2371	19 Gem	32349	2491	η CMa	33189	2591	NP Pup	34769	2714	22 Mon
31173	2372	WW Aur	32349	2491	α CMa	33345	2593	μ CMa	34769	2714	δ Mon
31359	2376	BQ Lyn	32292	2492	10 CMa	33345	2593	18 CMa	35146	2715	18 Lyn
31359	2376	7 Lyn	32292	2492	FT CMa	33347	2596	ι CMa	34909	2717	51 Gem
30565	2377	π^2 Dor	32463	2494	16 Mon	33347	2596	20 CMa	34909	2717	BQ Gem
31159	2382	12 Mon	32385	2501	HP CMa	33347	2596	ι CMa	34798	2718	26 CMa
31216	2385	13 Mon	32533	2503	17 Mon	33614	2600	62 Aur	34798	2718	MM CMa
31125	2387	4 CMa	32492	2504	11 CMa	33595	2601	39 Gem	34814	2724	HN CMa
31125	2387	ξ^1 CMa	32578	2506	18 Mon	32912	2602	ι Vol	35025	2725	52 Gem
31125	2387	ξ^1 CMa	32504	2509	12 CMa	33447	2603	HH CMa	34817	2726	V363 Pup
31205	2392	HR CMa	32504	2509	HK CMa	33650	2605	40 Gem	34802	2727	E Pup
31099	2393	SX Col	32434	2510	V339 Pup	37391	2609	OV Cep	34924	2734	GY CMa
31676	2394	8 Lyn	33104	2511	43 Cam	33715	2615	41 Gem	34473	2735	γ^1 Vol
31434	2398	49 Aur	32740	2512	IS Gem	33579	2618	ϵ CMa	34481	2736	γ^2 Vol
31665	2402	11 Lyn	32844	2516	ψ^7 Aur	33579	2618	21 CMa	35152	2738	53 Gem
31385	2404	14 Mon	32844	2516	58 Aur	33558	2619	t Pup	34834	2740	I Pup
31579	2405	UU Aur	32682	2517	V715 Mon	33721	2628	FU CMa	34834	2740	QW Pup
31068	2410	AE π c	32537	2518	x Pup	33927	2630	42 Gem	34937	2741	GG CMa
31137	2412	μ π c	32753	2519	33 Gem	33927	2630	ω Gem	36547	2742	VZ Cam
31416	2414	ξ^2 CMa	32753	2519	OV Gem	33927	2630	ω Gem	35080	2744	24 Mon
31416	2414	5 CMa	33048	2520	14 Lyn	33929	2631	NP Gem	34981	2745	27 CMa
31771	2419	51 Aur	32814	2525	35 Gem	33804	2640	LS CMa	34981	2745	EW CMa
31789	2420	ψ^3 Aur	32531	2526	V448 Car	33856	2646	σ CMa	34899	2746	OU Pup
31789	2420	52 Aur	32921	2529	36 Gem	33856	2646	22 CMa	34899	2746	1 Pup

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
34922	2748	1 Pup	36186	2853	NR CMa	37949	2975	51 Cam	38835	3102	11 Pup
34922	2748	L02 Pup	36284	2854	γ CMi	37934	2977	BC Cam	38835	3102	j Pup
35037	2749	ω CMa	36284	2854	4 CMi	37934	2977	49 Cam	38945	3103	BU CMi
35037	2749	28 CMa	36168	2855	FY CMa	37704	2983	76 Gem	39261	3109	AX Cam
35037	2749	ω CMa	36393	2857	64 Gem	37704	2983	c Gem	39261	3109	53 Cam
35341	2753	64 Aur	36429	2861	b Gem	37740	2985	κ Gem	38962	3110	14 CMi
35029	2761	PR Pup	36429	2861	65 Gem	37740	2985	77 Gem	38872	3116	N Pup
35350	2763	54 Gem	36425	2864	6 CMi	37705	2989	AZ CMi	38827	3117	x Car
35350	2763	λ Gem	36363	2875	y Pup	37826	2990	β Gem	38827	3117	x Car
35210	2764	145 CMa	36377	2878	σ Pup	37826	2990	78 Gem	39348	3119	AE Lyn
35735	2772	47 Cam	36377	2878	σ Pup	37811	2991	79 Gem	39348	3119	54 Cam
35264	2773	π Pup	36641	2880	δ^1 CMi	37648	2993	1 Pup	38917	3121	O Pup
35264	2773	π Pup	36641	2880	7 CMi	37677	2996	3 Pup	39079	3122	27 Mon
35550	2777	δ Gem	36760	2886	68 Gem	37677	2996	1 Pup	39023	3123	12 Pup
35550	2777	55 Gem	36723	2887	δ^2 CMi	37908	3003	g Gem	39191	3124	ω^1 Cnc
35412	2781	29 CMa	36723	2887	8 CMi	37908	3003	81 Gem	39191	3124	2 Cnc
35412	2781	UW CMa	36608	2889	PS Pup	37751	3004	V390 Pup	38834	3126	V341 Car
35415	2782	30 CMa	36850	2890	66 Gem	37921	3008	11 CMi	39177	3128	3 Cnc
35415	2782	τ CMa	36850	2890	α Gem	37842	3009	PV Pup	38957	3129	V Pup
35415	2782	τ CMa	36850	2890	66 Gem	37842	3009	2 Pup	39263	3132	ω^2 Cnc
35783	2783	19 Lyn	36850	2891	66 Gem	37843	3010	2 Pup	39263	3132	4 Cnc
35785	2784	19 Lyn	36850	2891	α Gem	38016	3013	π Gem	39236	3134	5 Cnc
35363	2787	NV Pup	36850	2891	66 Gem	38016	3013	80 Gem	39172	3135	V695 Mon
35487	2788	R CMa	36965	2898	CC Lyn	37891	3015	4 Pup	39211	3141	28 Mon
35406	2790	ν^2 Pup	36812	2901	δ^3 CMi	37819	3017	c Pup	39211	3141	V645 Mon
35406	2790	NW Pup	36812	2901	9 CMi	38106	3021	82 Gem	38994	3147	V374 Car
35393	2791	F Pup	36773	2902	KQ Pup	37915	3022	V392 Pup	39424	3149	x Gem
35710	2793	65 Aur	36962	2905	69 Gem	37504	3024	ζ Vol	39153	3151	PY Pup
35699	2795	56 Gem	36962	2905	ν Gem	38031	3026	QY Pup	39070	3153	V460 Car
35611	2800	HQ CMa	36728	2907	V376 Pup	38048	3029	5 Pup	39225	3157	V461 Car
35626	2802	MZ CMa	36778	2911	OW Pup	37982	3032	OX Pup	39360	3162	V336 Pup
35228	2803	δ Vol	36778	2911	z Pup	38070	3034	o Pup	39567	3163	8 Cnc
35907	2805	66 Aur	36039	2919	ϵ Men	38070	3034	o Pup	39429	3165	ζ Pup
35846	2808	57 Gem	36981	2921	V378 Pup	38074	3041	T Pup	39722	3167	28 Lyn
35842	2810	58 Gem	37204	2924	70 Gem	38211	3044	6 Pup	39524	3168	14 Pup
35941	2816	59 Gem	37088	2927	25 Mon	38170	3045	ξ Pup	39659	3169	9 Cnc
35933	2817	OT Gem	37036	2928	PT Pup	38170	3045	7 Pup	39659	3169	μ^1 Cnc
36145	2818	21 Lyn	37406	2929	23 Lyn	38089	3046	Q Pup	39659	3169	BL Cnc
35795	2819	NO CMa	37265	2930	71 Gem	38167	3049	V397 Pup	39487	3170	MZ Pup
35987	2820	1 CMi	37265	2930	o Gem	38164	3055	P Pup	39847	3173	27 Lyn
36046	2821	60 Gem	37096	2937	f Pup	38159	3058	QS Pup	39780	3176	μ Cnc
36046	2821	ι Gem	37300	2938	f Gem	38373	3059	13 CMi	39780	3176	10 Cnc
35951	2825	FW CMa	37300	2938	74 Gem	38373	3059	ζ CMi	39780	3176	μ^2 Cnc
35904	2827	η CMa	37279	2943	α CMi	38406	3061	BC CMi	39584	3179	MX Vel
35904	2827	η CMa	37279	2943	10 CMi	38372	3063	8 Pup	39874	3184	12 Cnc
35904	2827	31 CMa	37173	2944	PU Pup	38382	3064	9 Pup	39757	3185	ρ Pup
36041	2828	2 CMi	37173	2944	m Pup	38623	3065	25 Lyn	39757	3185	ρ Pup
36041	2828	ϵ CMi	37609	2946	24 Lyn	38639	3066	26 Lyn	39757	3185	15 Pup
36156	2837	61 Gem	37174	2957	MY Pup	38538	3067	ϕ Gem	39530	3186	V375 Car
35960	2842	V368 Pup	37297	2961	n^1 Pup	38538	3067	83 Gem	39863	3188	ζ Mon
35960	2843	V368 Pup	37322	2963	d^2 Pup	38427	3073	10 Pup	39863	3188	29 Mon
36188	2845	3 CMi	37329	2964	d^3 Pup	38370	3078	QU Pup	40023	3191	14 Cnc
36188	2845	β CMi	37521	2967	NZ Gem	38414	3080	a Pup	40023	3191	ψ Cnc
36188	2845	β CMi	37447	2970	26 Mon	38455	3084	b Pup	39906	3192	16 Pup
36238	2846	63 Gem	37447	2970	α Mon	38455	3084	QZ Pup	39866	3195	PQ Pup
36439	2849	22 Lyn	37248	2971	V390 Car	38722	3086	85 Gem	40035	3202	18 Pup
36265	2851	5 CMi	37629	2973	75 Gem	38438	3088	V372 Car	39919	3203	NN Vel
36265	2851	η CMi	37629	2973	σ Gem	38518	3090	J Pup	39953	3207	ν^2 Vel
36366	2852	62 Gem	37629	2973	σ Gem	38848	3095	1 Cnc	39953	3207	ν^2 Vel
36366	2852	ρ Gem	37415	2974	R Pup	38792	3099	PX Pup	39953	3207	ν Vel

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
40167	3208	16 Cnc	41400	3319	BP Cnc	42515	3438	β Pyx	43409	3518	γ Pyx
40167	3208	ζ ² Cnc	41375	3321	2 Hya	42540	3439	NY Vel	43584	3519	51 Cnc
40167	3208	ζ ¹ Cnc	41375	3321	LM Hya	42459	3440	HW Vel	43584	3519	σ ¹ Cnc
40167	3209	16 Cnc	41250	3322	V438 Pup	42662	3441	9 Hya	43347	3520	g Vel
40167	3209	ζ ² Cnc	41704	3323	o UMa	42504	3442	NZ Vel	43575	3521	BO Cnc
40167	3209	ζ ¹ Cnc	41704	3323	1 UMa	42570	3445	b Vel	43575	3521	53 Cnc
40167	3210	16 Cnc	41361	3327	NO Pup	42536	3447	o Vel	43587	3522	ρ ¹ Cnc
40167	3210	ζ ² Cnc	41361	3328	NO Pup	42536	3447	o Vel	43587	3522	55 Cnc
40167	3210	ζ ¹ Cnc	41574	3329	28 Cnc	42806	3449	43 Cnc	43496	3523	15 Hya
40084	3211	19 Pup	41574	3329	CX Cnc	42806	3449	γ Cnc	42794	3524	RS Cha
39970	3213	IS Vel	41578	3333	29 Cnc	42795	3450	45 Cnc	43413	3527	f Vel
40240	3215	15 Cnc	41003	3334	η Vol	42624	3452	n Vel	43413	3527	KX Vel
40240	3215	BM Cnc	41475	3335	VV Pyx	42799	3454	η Hya	43685	3528	CY Lyn
39794	3223	ε Vol	41564	3337	LO Hya	42799	3454	7 Hya	43903	3531	6 UMa
40091	3225	NS Pup	40888	3340	θ Cha	42799	3454	η Hya	43721	3532	57 Cnc
40091	3225	h ¹ Pup	41515	3343	XY Pyx	42679	3456	LN Vel	43834	3540	ρ ² Cnc
40259	3229	20 Pup	41312	3347	β Vol	42568	3457	V343 Car	43834	3540	58 Cnc
40155	3232	AH Vel	41483	3350	GU Vel	42568	3457	d Car	43811	3541	X Cnc
40646	3235	29 Lyn	41483	3350	F Vel	42835	3459	F Hya	43813	3547	16 Hya
40274	3237	MX Pup	42080	3354	2 UMa	42425	3460	θ Vol	43813	3547	ζ Hya
40274	3237	r Pup	41816	3355	30 Cnc	42911	3461	δ Cnc	43851	3550	60 Cnc
40321	3240	OS Pup	41816	3355	υ ¹ Cnc	42911	3461	47 Cnc	43822	3552	17 Hya
40326	3243	h ² Pup	41822	3357	31 Cnc	42712	3462	HX Vel	43822	3553	17 Hya
40285	3244	NO Vel	41822	3357	θ Cnc	42954	3464	46 Cnc	43932	3555	σ ² Cnc
40534	3248	R Cnc	41726	3364	AB Pyx	42917	3465	b Cnc	43932	3555	59 Cnc
40526	3249	β Cnc	41975	3365	32 Lyn	42917	3465	BI Cnc	43825	3556	δ Pyx
40526	3249	17 Cnc	41909	3366	η Cnc	42917	3465	49 Cnc	43970	3561	o Cnc
40875	3254	30 Lyn	41909	3366	33 Cnc	42715	3466	KT Vel	43970	3561	62 Cnc
40604	3257	21 Pup	41940	3369	32 Cnc	42726	3467	HY Vel	43807	3562	IY Vel
40843	3262	x Cnc	41940	3369	υ ² Cnc	42828	3468	α Pyx	44031	3563	61 Cnc
40843	3262	18 Cnc	41904	3372	34 Cnc	42931	3469	10 Hya	44001	3565	o Cnc
40766	3265	HQ Hya	42090	3377	33 Lyn	42951	3472	MX Hya	44001	3565	63 Cnc
40881	3268	19 Cnc	41939	3385	VX Pyx	43100	3474	48 Cnc	43763	3568	V473 Car
40881	3268	λ Cnc	42133	3387	35 Cnc	43100	3474	ι Cnc	44127	3569	9 UMa
40706	3270	q Pup	42438	3391	3 UMa	43103	3475	48 Cnc	44127	3569	ι UMa
41075	3275	31 Lyn	42438	3391	π ¹ UMa	43103	3475	ι Cnc	43783	3571	c Car
40945	3282	w Pup	42146	3398	3 Hya	42834	3476	D Vel	44066	3572	α Cnc
41117	3284	20 Cnc	42146	3398	HV Hya	42884	3477	d Vel	44066	3572	65 Cnc
41117	3284	d ¹ Cnc	42527	3403	π ² UMa	43121	3481	50 Cnc	43878	3574	H Vel
41067	3289	22 Pup	42527	3403	4 UMa	43109	3482	ε Hya	44154	3575	64 Cnc
41163	3290	21 Cnc	42265	3406	36 Cnc	43109	3482	11 Hya	44154	3575	σ ³ Cnc
41039	3294	B Vel	42265	3406	c Cnc	43109	3482	ε Hya	44390	3576	8 UMa
41107	3296	V436 Pup	42088	3407	C Vel	43067	3484	D Hya	44390	3576	ρ UMa
41211	3297	1 Hya	42313	3410	4 Hya	43067	3484	12 Hya	44126	3577	FZ Cnc
41319	3299	25 Cnc	42313	3410	δ Hya	42913	3485	δ Vel	44248	3579	10 UMa
41319	3299	d ² Cnc	42353	3412	37 Cnc	43023	3487	a Vel	43937	3582	V376 Car
40817	3301	κ ¹ Vol	42177	3413	HV Vel	43114	3490	AI Pyx	43937	3582	b ¹ Car
40834	3302	κ ² Vol	42134	3414	e ² Car	43234	3492	ρ Hya	44307	3587	66 Cnc
41377	3304	φ ¹ Cnc	42129	3415	e ¹ Car	43234	3492	13 Hya	44093	3588	FZ Vel
41377	3304	22 Cnc	42402	3418	σ Hya	43082	3494	OP Vel	44342	3589	67 Cnc
41037	3307	ε Car	42402	3418	5 Hya	43105	3498	V344 Car	44191	3591	w Vel
41404	3310	23 Cnc	42334	3420	η Pyx	43105	3498	f Car	44213	3593	IU Vel
41404	3310	φ ² Cnc	42604	3422	34 Lyn	43305	3500	14 Hya	44471	3594	κ UMa
41404	3311	23 Cnc	42312	3426	e Vel	43305	3500	KX Hya	44471	3594	12 UMa
41404	3311	φ ² Cnc	42516	3427	39 Cnc	42637	3502	η Cha	44405	3595	69 Cnc
41389	3312	24 Cnc	42556	3429	41 Cnc	43644	3505	5 UMa	44405	3595	ν Cnc
41389	3313	24 Cnc	42556	3429	ε Cnc	43644	3505	b UMa	44143	3598	b ² Car
41307	3314	C Hya	42509	3431	a Hya	43531	3508	35 Lyn	44299	3600	IZ Vel
40702	3318	α Cha	42509	3431	6 Hya	43454	3510	54 Cnc	44512	3601	70 Cnc
41400	3319	27 Cnc	42483	3433	ζ Pyx	43354	3517	HZ Vel	44337	3605	OY Vel

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
44857	3609	11 UMa	45915	3698	CG UMa	47080	3815	11 LMi	48341	3899	6 Sex
44857	3609	o ¹ UMa	45556	3699	i Car	47080	3815	SV LMi	48390	3900	g Leo
44659	3613	18 Hya	45631	3703	K Vel	46806	3816	R Car	48390	3900	22 Leo
44659	3613	ω Hya	45860	3705	40 Lyn	47096	3818	7 Leo	47956	3902	v Cha
44511	3614	c Vel	45860	3705	α Lyn	46950	3819	L Vel	48356	3903	u ¹ Hya
44382	3615	α Vol	45751	3706	26 Hya	46974	3825	h Car	48356	3903	39 Hya
45038	3616	13 UMa	45675	3708	LR Vel	47189	3826	8 Leo	48455	3905	μ Leo
45038	3616	o ² UMa	45811	3709	27 Hya	47205	3827	10 Leo	48455	3905	24 Leo
44738	3618	NS Hya	45615	3713	V478 Car	47300	3829	42 Lyn	48414	3906	7 Sex
44901	3619	15 UMa	45902	3718	θ Pyx	47145	3831	IM Vel	48437	3909	8 Sex
44901	3619	f UMa	46247	3722	EZ UMa	47249	3832	34 Hya	48437	3909	γ Sex
44818	3621	72 Cnc	45999	3724	KU Hya	47310	3834	2 Sex	48374	3912	m Vel
44818	3621	τ Cnc	45856	3728	k Car	47175	3836	M Vel	48682	3917	SY UMa
44798	3623	κ Cnc	46146	3731	κ Leo	47654	3839	27 UMa	48682	3917	31 UMa
44798	3623	76 Cnc	46146	3731	1 Leo	47267	3842	y Vel	48469	3920	QZ Vel
44798	3623	κ Cnc	46026	3733	λ Pyx	47431	3845	i Hya	48527	3924	V335 Vel
45075	3624	τ UMa	45941	3734	κ Vel	47431	3845	35 Hya	48833	3928	19 LMi
45075	3624	14 UMa	46221	3738	28 Hya	47427	3846	OW Hya	48883	3937	27 Leo
44892	3626	75 Cnc	46365	3744	29 Hya	47427	3846	37 Hya	48883	3937	v Leo
44946	3627	ξ Cnc	46390	3748	α Hya	47452	3849	38 Hya	48774	3940	φ Vel
44946	3627	77 Cnc	46390	3748	30 Hya	47452	3849	κ Hya	48799	3941	IV Vel
44824	3628	κ Pyx	46371	3749	G Hya	47544	3850	DR Leo	48990	3945	12 Sex
44883	3630	19 Hya	46283	3753	I Vel	47570	3851	43 Lyn	48943	3946	OY Hya
44816	3634	λ Vel	46454	3754	2 Leo	47508	3852	14 Leo	48926	3947	η Ant
44816	3634	λ Vel	46454	3754	ω Leo	47508	3852	o Leo	48782	3949	V492 Car
45058	3639	RS Cnc	46457	3755	3 Leo	47550	3853	13 Leo	49029	3950	29 Leo
45033	3640	79 Cnc	46733	3757	23 UMa	47391	3856	m Car	49029	3950	π Leo
44961	3641	20 Hya	46733	3757	h UMa	47631	3857	13 LMi	49081	3951	20 LMi
44626	3642	V345 Car	46509	3759	τ ¹ Hya	47522	3858	I Hya	49220	3952	EO Leo
45001	3644	ε Pyx	46509	3759	31 Hya	46928	3860	ζ Cha	49329	3961	13 Sex
45333	3648	16 UMa	46652	3764	7 LMi	46928	3860	ζ Cha	49402	3970	40 Hya
45333	3648	c UMa	46515	3765	ε Ant	47701	3861	f Leo	49402	3970	u ² Hya
45170	3650	τ ¹ Cnc	47013	3768	22 UMa	47701	3861	15 Leo	49530	3973	14 Sex
45170	3650	81 Cnc	46735	3769	8 LMi	47911	3865	28 UMa	49593	3974	21 LMi
45290	3652	36 Lyn	46977	3771	d UMa	47723	3866	16 Leo	49583	3975	η Leo
45085	3654	GX Vel	46977	3771	24 UMa	47723	3866	ψ Leo	49583	3975	30 Leo
45184	3655	21 Hya	46977	3771	DK UMa	47965	3870	CS UMa	49477	3978	R Vel
45184	3655	KW Hya	46750	3773	4 Leo	47758	3871	θ Ant	49637	3980	31 Leo
45080	3659	V357 Car	46750	3773	λ Leo	47694	3872	IP Vel	49641	3981	α Sex
45080	3659	a Car	46853	3775	25 UMa	47908	3873	17 Leo	49641	3981	15 Sex
45455	3660	17 UMa	46853	3775	θ UMa	47908	3873	ε Leo	49669	3982	α Leo
45189	3661	KL Vel	46774	3779	6 Leo	47717	3875	O Vel	49669	3982	32 Leo
45493	3662	DD UMa	46657	3780	ζ ¹ Ant	47959	3877	18 Leo	49065	3983	μ Cha
45493	3662	18 UMa	46657	3781	ζ ¹ Ant	48029	3880	19 Leo	49812	3989	17 Sex
45493	3662	e UMa	46771	3782	ξ Leo	48036	3882	R Leo	49712	3990	Q Vel
45101	3663	i Car	46771	3782	5 Leo	47893	3883	V487 Car	49841	3994	41 Hya
45336	3665	22 Hya	46651	3786	ψ Vel	47854	3884	1 Car	49841	3994	λ Hya
45336	3665	θ Hya	46776	3787	32 Hya	47854	3884	1 Car	49865	3996	18 Sex
45410	3669	π Cnc	46776	3787	τ ² Hya	48319	3888	υ UMa	49929	3998	34 Leo
45410	3669	82 Cnc	46734	3789	ζ ² Ant	48319	3888	υ UMa	49751	3999	S Car
45410	3669	π ² Cnc	46904	3791	9 LMi	48319	3888	29 UMa	50027	4004	19 Sex
45344	3674	z Vel	46620	3793	V482 Car	48218	3889	DG Leo	49926	4007	V368 Car
43908	3678	ζ Oct	46107	3795	i Cha	48218	3889	20 Leo	50222	4008	U UMa
45527	3681	23 Hya	46810	3798	S Ant	48002	3890	υ Car	49934	4009	QY Car
45439	3682	l Vel	47006	3799	26 UMa	48002	3891	υ Car	50218	4014	22 LMi
45526	3683	24 Hya	46952	3800	10 LMi	48273	3893	4 Sex	50070	4017	LW Vel
45448	3684	k Vel	46952	3800	SU LMi	48402	3894	φ UMa	50191	4023	q Vel
45238	3685	β Car	46701	3803	N Vel	48402	3894	30 UMa	50303	4024	23 LMi
45688	3690	38 Lyn	46701	3803	N Vel	48324	3896	23 Leo	50448	4026	32 UMa
45496	3696	g Car	46982	3814	33 Hya	48224	3898	u Vel	50316	4027	24 LMi

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
50319	4030	35 Leo	51624	4133	ρ Leo	52943	4232	v Hya	54539	4335	52 UMa
50335	4031	ζ Leo	51624	4133	ρ Leo	52633	4234	δ ² Cha	54463	4337	x Car
50335	4031	36 Leo	51624	4133	47 Leo	53043	4235	43 UMa	54463	4337	V382 Car
50372	4033	33 UMa	51685	4137	34 LMi	53064	4236	42 UMa	54461	4338	V371 Car
50372	4033	λ UMa	51576	4140	p Car	52980	4237	41 Sex	54682	4343	β Crt
50333	4035	37 Leo	51576	4140	PP Car	53261	4246	44 UMa	54682	4343	11 Crt
50099	4037	ω Car	51814	4141	37 UMa	53229	4247	46 LMi	54751	4352	V533 Car
50384	4039	39 Leo	51635	4143	t Vel	53295	4248	45 UMa	54849	4356	p ⁵ Leo
50414	4042	22 Sex	51718	4145	44 Hya	53295	4248	ω UMa	54849	4356	69 Leo
50414	4042	ε Sex	51775	4146	48 Leo	53154	4250	V524 Car	54872	4357	68 Leo
50332	4045	GY Vel	51676	4147	V369 Car	53252	4251	b ³ Hya	54872	4357	δ Leo
50685	4047	EN UMa	51802	4148	49 Leo	53273	4253	p ¹ Leo	54879	4359	70 Leo
50456	4049	AG Ant	51802	4148	TX Leo	53355	4254	48 LMi	54879	4359	θ Leo
50371	4050	V337 Car	51914	4150	35 LMi	53253	4257	u Car	54951	4362	FN Leo
50371	4050	q Car	51821	4153	U Ant	53426	4258	46 UMa	54951	4362	72 Leo
50564	4054	40 Leo	51905	4156	φ ² Hya	53417	4259	54 Leo	55016	4365	n Leo
50583	4057	41 Leo	51849	4159	r Car	53417	4260	54 Leo	55016	4365	73 Leo
50583	4057	γ ² Leo	52009	4163	U Hya	53379	4263	KQ Vel	55084	4368	φ Leo
50583	4057	γ ¹ Leo	51912	4164	t ¹ Car	53423	4265	55 Leo	55084	4368	74 Leo
50583	4058	41 Leo	52098	4166	37 LMi	53449	4267	VY Leo	55106	4369	SV Crt
50583	4058	γ ² Leo	51986	4167	p Vel	53449	4267	56 Leo	55137	4371	75 Leo
50583	4058	γ ¹ Leo	52139	4168	38 LMi	53492	4270	50 LMi	55203	4374	53 UMa
50555	4063	GZ Vel	52004	4169	V370 Car	53394	4271	T Car	55203	4374	ξ UMa
50684	4064	RS Sex	52085	4171	φ ³ Hya	53502	4273	ι Ant	55203	4374	ξ UMa
50684	4064	23 Sex	52085	4171	φ Hya	53530	4274	IW Vel	55203	4375	53 UMa
50801	4069	μ UMa	52043	4173	V514 Car	53589	4276	U Car	55203	4375	ξ UMa
50801	4069	34 UMa	51839	4174	γ Cha	53721	4277	47 UMa	55203	4375	ξ UMa
50755	4070	42 Leo	52353	4178	38 UMa	53740	4287	7 Crt	55219	4377	v UMa
50933	4072	ET UMa	52154	4180	x Vel	53740	4287	a Crt	55219	4377	54 UMa
50676	4074	J Vel	52316	4182	33 Sex	53838	4288	49 UMa	55140	4379	V535 Car
50860	4075	27 LMi	52366	4184	RX LMi	53807	4291	58 Leo	55266	4380	55 UMa
50851	4077	43 Leo	52221	4185	V364 Car	53773	4293	i Vel	55249	4381	76 Leo
50799	4080	r Vel	52478	4187	39 UMa	53824	4294	59 Leo	55282	4382	δ Crt
50935	4081	28 LMi	52308	4188	V429 Car	53824	4294	c Leo	55282	4382	12 Crt
50885	4082	SS Sex	52422	4189	40 LMi	53910	4295	β UMa	55434	4386	σ Leo
50885	4082	25 Sex	52457	4192	41 LMi	53910	4295	48 UMa	55434	4386	77 Leo
51008	4088	44 Leo	52452	4193	35 Sex	53907	4299	61 Leo	55425	4390	π Cen
51008	4088	DE Leo	52577	4195	VY UMa	53907	4299	p ² Leo	55560	4392	56 UMa
51056	4090	30 LMi	52370	4196	V518 Car	53954	4300	60 Leo	55598	4395	λ Crt
51069	4094	42 Hya	52405	4198	V519 Car	53954	4300	b Leo	55598	4395	13 Crt
51069	4094	μ Hya	52419	4199	θ Car	54061	4301	50 UMa	55642	4399	78 Leo
51233	4100	31 LMi	52468	4200	w Car	54061	4301	a UMa	55642	4399	ι Leo
51233	4100	β LMi	52468	4200	V520 Car	54049	4306	62 Leo	55650	4400	79 Leo
51213	4101	CX Leo	52584	4201	36 Sex	54049	4306	p ³ Leo	55687	4402	14 Crt
51213	4101	45 Leo	52685	4202	41 UMa	54136	4309	51 UMa	55687	4402	ε Crt
51172	4104	α Ant	52638	4203	42 LMi	54182	4310	63 Leo	55705	4405	γ Crt
51401	4106	35 UMa	52340	4206	DR Cha	54182	4310	x Leo	55705	4405	15 Crt
51192	4110	V399 Car	52686	4208	51 Leo	53702	4312	η Oct	55765	4408	81 Leo
51459	4112	36 UMa	52686	4208	m Leo	54204	4314	x ¹ Hya	55791	4410	80 Leo
51420	4113	32 LMi	52689	4209	k Leo	54255	4317	x ² Hya	55846	4414	83 Leo
51232	4114	s Car	52689	4209	52 Leo	54255	4317	x ² Hya	55874	4416	16 Crt
51362	4116	δ Sex	52737	4214	b ¹ Hya	54336	4319	65 Leo	55874	4416	κ Crt
51362	4116	29 Sex	52727	4216	μ Vel	54336	4319	p ⁴ Leo	55945	4418	τ Leo
51376	4118	δ Ant	52882	4223	43 LMi	54388	4322	64 Leo	55945	4418	84 Leo
51437	4119	β Sex	52911	4227	l Leo	54301	4325	z Car	55953	4420	QT Hya
51437	4119	30 Sex	52911	4227	53 Leo	54360	4327	V815 Cen	56034	4422	57 UMa
51437	4119	β Sex	52827	4228	V522 Car	54540	4330	EP UMa	56080	4426	85 Leo
51556	4124	33 LMi	52913	4229	40 Sex	54487	4332	67 Leo	56135	4430	EE UMa
51585	4127	46 Leo	52959	4230	44 LMi	54522	4333	CO UMa	56148	4431	58 UMa
51585	4127	ES Leo	52595	4231	δ ¹ Cha	54539	4335	ψ UMa	56127	4432	87 Leo

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
56127	4432	e Leo	57632	4534	94 Leo	59608	4650	12 Vir	60904	4752	17 Com
56146	4433	86 Leo	57632	4534	β Leo	59654	4652	D Cen	60904	4752	AI Com
56211	4434	λ Dra	57632	4534	β Leo	59678	4653	DL Cru	60941	4753	18 Com
56211	4434	1 Dra	57669	4537	j Cen	59747	4656	δ Cru	60979	4755	V928 Cen
56242	4437	88 Leo	57757	4540	5 Vir	59747	4656	δ Cru	60957	4756	20 Com
56201	4438	V809 Cen	57757	4540	β Vir	59774	4660	69 UMa	60965	4757	7 Crv
56243	4441	o ¹ Cen	57803	4546	B Cen	59774	4660	δ UMa	60965	4757	δ Crv
56243	4441	o ¹ Cen	57936	4552	β Hya	59803	4662	γ Crv	60978	4760	74 UMa
56250	4442	o ² Cen	57936	4552	β Hya	59803	4662	4 Crv	60988	4761	7 CVn
56250	4442	o ² Cen	58001	4554	γ UMa	59819	4663	6 Com	60992	4762	75 UMa
56280	4443	17 Crt	58001	4554	64 UMa	59796	4665	DK Dra	61084	4763	γ Cru
56280	4444	17 Crt	58110	4559	6 Vir	59831	4666	2 CVn	60998	4765	CQ Dra
56343	4450	ξ Hya	58112	4560	65 UMa	59847	4667	7 Com	60998	4765	4 Dra
56445	4455	89 Leo	58112	4560	DN UMa	59929	4671	ϵ μ s	61071	4766	UU Com
56473	4456	90 Leo	58117	4561	65 UMa	59929	4671	ϵ μ s	61071	4766	21 Com
56480	4460	A Cen	58159	4564	95 Leo	60000	4674	β Cha	61136	4768	BG Cru
56583	4461	2 Dra	58159	4564	o Leo	60009	4679	ζ Cru	61136	4768	35 Cru
56518	4463	V763 Cen	58181	4566	66 UMa	60030	4681	13 Vir	61199	4773	γ μ s
56518	4463	c ¹ Cen	58188	4567	η Crt	60059	4682	F Cen	61174	4775	η Crv
56573	4466	c ² Cen	58188	4567	30 Crt	60066	4684	FM Com	61174	4775	8 Crv
56561	4467	λ Cen	58272	4571	LV Hya	60087	4685	8 Com	61246	4777	20 Vir
56633	4468	21 Crt	58484	4583	ϵ Cha	60098	4688	9 Com	61295	4780	22 Com
56633	4468	θ Crt	58510	4585	7 Vir	60129	4689	η Vir	61318	4781	21 Vir
56647	4471	91 Leo	58510	4585	b Vir	60129	4689	15 Vir	61318	4781	q Vir
56647	4471	v Leo	58545	4586	FR Cam	60122	4690	3 CVn	61317	4785	8 CVn
56700	4476	c ³ Cen	58590	4589	8 Vir	60172	4695	c Vir	61317	4785	β CVn
56770	4477	59 UMa	58590	4589	π Vir	60172	4695	16 Vir	61359	4786	β Crv
56675	4479	π Cha	58587	4590	TY Crv	60189	4696	5 Crv	61359	4786	9 Crv
56789	4480	60 UMa	58587	4590	31 Crt	60189	4696	ζ Crv	61281	4787	κ Dra
56779	4483	ω Vir	58684	4594	67 UMa	60202	4697	11 Com	61281	4787	κ Dra
56779	4483	ω Vir	58684	4594	DP UMa	60260	4700	ϵ Cru	61281	4787	5 Dra
56779	4483	1 Vir	58758	4599	θ^1 Cru	60212	4701	70 UMa	61394	4789	23 Com
56802	4488	ι Crt	58858	4602	2 Com	60320	4703	ζ^2 μ s	61415	4791	24 Com
56802	4488	24 Crt	58867	4603	θ^2 Cru	60329	4704	ζ^1 μ s	61418	4792	24 Com
56899	4491	VX Crt	58867	4603	θ^2 Cru	60351	4707	12 Com	61384	4795	6 Dra
56862	4492	GT μ s	58905	4605	κ Cha	60353	4708	17 Vir	61496	4797	TU Crv
56922	4494	o Hya	58948	4608	9 Vir	60425	4711	6 Crv	61585	4798	a μ s
56975	4495	92 Leo	58948	4608	o Vir	60449	4712	x ¹ Cen	61585	4798	a μ s
56997	4496	61 UMa	59072	4616	η Cru	60467	4715	AI CVn	61558	4799	25 Vir
56970	4497	V914 Cen	59173	4618	V863 Cen	60467	4715	4 CVn	61558	4799	f Vir
57029	4501	62 UMa	59184	4620	E Cen	60485	4716	5 CVn	61532	4800	T UMa
57111	4504	3 Dra	59196	4621	δ Cen	60514	4717	GN Com	61571	4801	25 Com
57175	4511	V810 Cen	59196	4621	δ Cen	60514	4717	13 Com	61622	4802	τ Cen
57283	4514	27 Crt	59199	4623	a Crv	60610	4724	x ² Cen	61703	4806	KY μ s
57283	4514	ζ Crt	59199	4623	1 Crv	60584	4726	71 UMa	61658	4807	FW Vir
57328	4515	2 Vir	59229	4624	V788 Cen	60646	4728	6 CVn	61667	4808	R Vir
57328	4515	ξ Vir	59232	4625	V817 Cen	60718	4730	α^1 Cru	61692	4811	9 CVn
57380	4517	v Vir	59285	4626	10 Vir	60718	4730	α^2 Cru	61740	4813	26 Vir
57380	4517	3 Vir	59309	4629	11 Vir	60718	4731	α^1 Cru	61740	4813	x Vir
57380	4517	v Vir	59316	4630	2 Crv	60718	4731	α^2 Cru	61796	4814	FH μ s
57399	4518	x UMa	59316	4630	ϵ Crv	60710	4732	G Cen	61724	4815	26 Com
57399	4518	63 UMa	59352	4632	3 Com	60697	4733	14 Com	61748	4816	AX CVn
57363	4520	λ μ s	59394	4635	3 Crv	60742	4737	γ Com	61789	4817	1 Cen
57512	4526	V918 Cen	59449	4638	ρ Cen	60742	4737	15 Com	61932	4819	γ Cen
57565	4527	93 Leo	59468	4640	4 Com	60746	4738	16 Com	61981	4820	R μ s
57565	4527	DQ Leo	59458	4641	68 UMa	60781	4739	BL Cru	61910	4821	VV Crv
57562	4528	4 Vir	59501	4643	5 Com	60823	4743	σ Cen	61910	4822	VV Crv
57581	4530	μ μ s	59551	4645	S μ s	60795	4745	73 UMa	61966	4823	CH Cru
57581	4530	μ μ s	59504	4646	CO Cam	60813	4746	FT Vir	61966	4823	39 Cru
57613	4532	II Hya	59588	4647	V335 Hya	60855	4748	u Cen	61937	4824	GG Vir

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
61937	4824	27 Vir	63210	4913	H Cen	64792	5011	59 Vir	66607	5115	DY Cha
61941	4825	γ Vir	63210	4913	V945 Cen	64792	5011	e Vir	66458	5127	25 CVn
61941	4825	29 Vir	63121	4914	12 CVn	64852	5015	σ Vir	66657	5132	ε Cen
61941	4826	γ Vir	63121	4914	α ¹ CVn	64852	5015	60 Vir	66657	5132	ε Cen
61941	4826	29 Vir	63125	4915	α ² CVn	64844	5017	20 CVn	66666	5134	V744 Cen
61960	4828	ρ Vir	63125	4915	12 CVn	64844	5017	AO CVn	66645	5135	V765 Cen
61960	4828	30 Vir	63125	4915	α ² CVn	64924	5019	61 Vir	66821	5141	Q Cen
61960	4828	ρ Vir	63076	4916	8 Dra	64962	5020	γ Hya	66634	5142	82 UMa
61968	4829	d ¹ Vir	63355	4920	36 Com	64962	5020	46 Hya	66727	5144	1 Boo
61968	4829	31 Vir	63414	4921	k Vir	64906	5023	21 CVn	66825	5147	T Cen
62027	4830	BZ Cru	63414	4921	44 Vir	64906	5023	BK CVn	66763	5149	2 Boo
62012	4831	w Cen	63613	4923	δ μs	65112	5026	V964 Cen	66803	5150	m Vir
61936	4833	76 UMa	63462	4924	37 Com	65109	5028	ι Cen	66803	5150	82 Vir
62268	4842	ι Cru	63494	4925	46 Vir	65072	5032	23 CVn	66700	5153	CQ UMa
62322	4844	β μs	63432	4928	9 Dra	65271	5035	J Cen	66738	5154	83 UMa
62207	4845	10 CVn	63533	4929	38 Com	65241	5040	64 Vir	66738	5154	IQ UMa
62223	4846	Y CVn	63688	4930	LS μs	65387	5041	m Cen	67036	5158	V827 Cen
62267	4847	32 Vir	63503	4931	78 UMa	65468	5042	ι μs	66936	5159	84 Vir
62267	4847	FM Vir	63608	4932	ε Vir	65301	5044	63 Vir	67057	5165	83 Vir
62267	4847	d ² Vir	63608	4932	47 Vir	65323	5047	65 Vir	67153	5168	1 Cen
62325	4849	33 Vir	63724	4933	ξ ¹ Cen	65420	5050	66 Vir	67153	5168	i Cen
62356	4851	27 Com	63750	4937	48 Vir	65628	5051	ι μs	67139	5170	85 Vir
62434	4853	β Cru	63820	4938	V789 Cen	65376	5052	CL CVn	67261	5171	V766 Cen
62434	4853	β Cru	63945	4940	f Cen	65378	5054	79 UMa	67234	5172	M Cen
62376	4854	EP Vir	64004	4942	ξ ² Cen	65378	5054	ζ UMa	67172	5173	86 Vir
62394	4855	34 Vir	63901	4943	14 CVn	65378	5055	79 UMa	67244	5174	z Cen
62443	4858	35 Vir	63948	4946	39 Com	65378	5055	ζ UMa	67288	5181	87 Vir
62478	4861	28 Com	63950	4949	40 Com	65474	5056	α Vir	67239	5182	3 Boo
62423	4863	7 Dra	63950	4949	FS Com	65474	5056	67 Vir	67275	5185	ι Boo
62541	4865	29 Com	64094	4952	θ μs	65474	5056	α Vir	67275	5185	4 Boo
62516	4866	11 CVn	64094	4952	θ μs	65477	5062	80 UMa	67231	5187	84 UMa
62576	4869	30 Com	64022	4954	41 Com	65581	5064	68 Vir	67231	5187	CR UMa
63031	4870	ι Oct	64078	4955	49 Vir	65581	5064	i Vir	67464	5190	v Cen
62683	4874	p Cen	64122	4957	g Vir	65755	5066	EZ μs	67464	5190	v Cen
62732	4876	DS Cru	64166	4958	45 Hya	65639	5068	69 Vir	67301	5191	η UMa
62757	4878	37 Vir	64166	4958	ψ Hya	65810	5071	K Cen	67301	5191	85 UMa
62763	4883	31 Com	64224	4961	50 Vir	65721	5072	70 Vir	67457	5192	2 Cen
62807	4884	32 Com	64238	4963	51 Vir	65835	5080	R Hya	67457	5192	V806 Cen
62867	4888	e Cen	64238	4963	θ Vir	65790	5081	71 Vir	67472	5193	μ Cen
62896	4889	n Cen	64320	4965	V824 Cen	66121	5082	S Cha	67472	5193	μ Cen
62931	4890	κ Cru	64217	4967	15 CVn	66753	5084	κ Oct	67494	5196	89 Vir
62875	4891	38 Vir	64241	4968	42 Com	65892	5088	72 Vir	67410	5199	R CVn
62886	4894	35 Com	64241	4968	α Com	65936	5089	d Cen	67459	5200	υ Boo
62986	4895	S Cru	64241	4969	42 Com	66015	5094	73 Vir	67459	5200	5 Boo
63007	4897	λ Cru	64241	4969	α Com	66015	5094	HX Vir	67480	5201	e Boo
63007	4897	λ Cru	64246	4971	17 CVn	66006	5095	l Vir	67480	5201	6 Boo
63003	4898	μ ¹ Cru	64425	4975	V831 Cen	66006	5095	74 Vir	67669	5210	V983 Cen
63005	4899	μ ² Cru	64407	4981	53 Vir	66091	5099	75 Vir	67669	5210	3 Cen
63005	4899	μ ² Cru	64394	4983	β Com	66098	5100	76 Vir	67669	5211	V983 Cen
62933	4900	41 Vir	64394	4983	43 Com	66098	5100	h Vir	67669	5211	3 Cen
62985	4902	ψ Vir	64520	4990	54 Vir	66100	5101	S Vir	67665	5219	AW CVn
62985	4902	40 Vir	64520	4990	LM Vir	66200	5105	78 Vir	67786	5221	h Cen
62985	4902	ψ Vir	64661	4993	η μs	66200	5105	o Vir	67786	5221	4 Cen
62956	4905	ε UMa	64661	4993	η μs	66200	5105	CW Vir	67819	5222	y Cen
62956	4905	ε UMa	64577	4995	55 Vir	66249	5107	ζ Vir	67861	5223	V767 Cen
62956	4905	77 UMa	64607	4998	LN Vir	66249	5107	79 Vir	67787	5225	7 Boo
63024	4909	TU CVn	64725	5001	57 Vir	66198	5109	81 UMa	67627	5226	i Dra
63090	4910	δ Vir	64692	5004	19 CVn	66257	5110	BH CVn	67627	5226	10 Dra
63090	4910	43 Vir	64769	5005	DK Vir	66320	5111	80 Vir	67627	5226	CU Dra
63159	4912	LN Hya	64803	5006	r Cen	66234	5112	24 CVn	68002	5231	ζ Cen

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
67929	5232	p Vir	69701	5338	99 Vir	71683	5459	α^1 Cen	72487	5533	38 Boo
67929	5232	90 Vir	69701	5338	ι Vir	71681	5460	α^2 Cen	72631	5535	11 Lib
67927	5235	η Boo	70638	5339	δ Oct	71908	5463	α Cir	72524	5538	39 Boo
67927	5235	8 Boo	69673	5340	16 Boo	71908	5463	α Cir	72965	5539	ζ Cir
67848	5238	86 UMa	69673	5340	α Boo	71618	5468	33 Boo	73223	5540	R Aps
68092	5244	92 Vir	69713	5350	21 Boo	71860	5469	α Lup	72800	5543	V101 Cen
68103	5247	9 Boo	69713	5350	ι Boo	71860	5469	α Lup	72659	5544	ξ Boo
68245	5248	φ Cen	69713	5350	ι Boo	72370	5470	α Aps	72659	5544	37 Boo
68282	5249	υ^1 Cen	69732	5351	19 Boo	71762	5475	29 Boo	72659	5544	ξ Boo
68269	5250	47 Hya	69732	5351	λ Boo	71762	5475	π^2 Boo	73771	5545	π^2 Oct
68276	5255	10 Boo	69829	5352	CY Boo	71762	5475	π^1 Boo	72929	5548	12 Lib
68390	5257	48 Hya	69996	5354	ι Lup	71762	5476	29 Boo	73129	5551	θ Cir
68523	5260	υ^2 Cen	69929	5355	CS Vir	71762	5476	π^2 Boo	73129	5551	θ Cir
68815	5261	θ Aps	70069	5358	ν Cen	71762	5476	π^1 Boo	72848	5553	DE Boo
68815	5261	θ Aps	69974	5359	100 Vir	71795	5477	ζ Boo	72934	5554	ξ^1 Lib
68478	5263	11 Boo	69974	5359	λ Vir	71795	5477	30 Boo	72934	5554	13 Lib
68520	5264	τ Vir	69879	5361	A Boo	71795	5478	ζ Boo	73095	5556	c Lup
68520	5264	93 Vir	69989	5365	18 Boo	71795	5478	30 Boo	74296	5557	ω Oct
68702	5267	β Cen	70012	5366	υ Vir	71832	5480	31 Boo	72607	5563	β UMi
68702	5267	β Cen	70012	5366	102 Vir	71837	5481	32 Boo	72607	5563	7 UMi
68673	5269	V828 Cen	70090	5367	ψ Cen	71974	5484	4 Lib	73133	5564	15 Lib
68842	5278	V992 Cen	70027	5370	20 Boo	72010	5485	c^1 Cen	73133	5564	ξ^2 Lib
68862	5285	x Cen	70270	5375	HX Lup	71957	5487	μ Vir	73165	5570	16 Lib
68862	5285	x Cen	70300	5378	V761 Cen	71957	5487	107 Vir	73273	5571	β Lup
68895	5287	π Hya	70300	5378	a Cen	72121	5488	BU Cir	73334	5576	κ Cen
68895	5287	49 Hya	70306	5381	51 Hya	72104	5489	c^2 Cen	73284	5577	59 Hya
68933	5288	5 Cen	70306	5381	k Hya	71995	5490	W Boo	73249	5578	17 Lib
68933	5288	θ Cen	70336	5383	2 Lib	71995	5490	34 Boo	73310	5582	18 Lib
68940	5290	95 Vir	70574	5395	τ^1 Lup	75736	5491	BP Oct	73473	5586	δ Lib
68756	5291	α Dra	70574	5395	τ^1 Lup	71876	5492	DL Dra	73473	5586	19 Lib
68756	5291	11 Dra	70576	5396	τ^2 Lup	72290	5495	b Lup	73473	5586	δ Lib
69122	5292	V883 Cen	70497	5404	θ Boo	72197	5497	54 Hya	73369	5588	40 Boo
69174	5296	V869 Cen	70497	5404	23 Boo	72197	5497	m Hya	73199	5589	RR UMi
69127	5298	96 Vir	70602	5405	22 Boo	72438	5500	CO Cir	73566	5591	60 Hya
69038	5299	BY Boo	70602	5405	f Boo	72154	5501	108 Vir	73776	5593	η Cir
69068	5300	CF Boo	70680	5406	104 Vir	72125	5502	o Boo	73454	5597	BX Boo
69068	5300	13 Boo	70753	5407	52 Hya	72125	5502	35 Boo	73568	5600	ω Boo
69269	5301	ET Vir	70753	5407	1 Hya	72194	5503	5 Lib	73568	5600	41 Boo
69896	5303	η Aps	70755	5409	105 Vir	72105	5505	36 Boo	73620	5601	110 Vir
69226	5304	12 Boo	70755	5409	φ Vir	72105	5505	ϵ Boo	73555	5602	β Boo
69226	5304	d Boo	70794	5410	106 Vir	72105	5506	36 Boo	73555	5602	42 Boo
68956	5305	3 UMi	70791	5420	g Boo	72105	5506	ϵ Boo	73714	5603	γ Sco
69491	5311	V716 Cen	70791	5420	24 Boo	72220	5511	109 Vir	73714	5603	σ Lib
69415	5312	50 Hya	71116	5421	V Cen	72208	5512	EK Hya	73714	5603	20 Lib
69389	5313	CU Vir	71121	5425	σ Lup	72323	5514	55 Hya	73714	5603	σ Lib
69427	5315	κ Vir	71121	5425	σ Lup	72357	5516	56 Hya	73764	5604	GM Lup
69427	5315	98 Vir	71053	5429	ρ Boo	72378	5517	57 Hya	73807	5605	π Lup
69618	5316	V795 Cen	71053	5429	25 Boo	72432	5519	V768 Cen	73807	5606	π Lup
69112	5321	4 UMi	70692	5430	5 UMi	72489	5523	μ Lib	73745	5616	ψ Boo
69536	5323	14 Boo	71115	5434	26 Boo	72489	5523	7 Lib	73745	5616	43 Boo
69754	5326	R Cen	71075	5435	γ Boo	73540	5525	π^1 Oct	73695	5618	44 Boo
69481	5328	17 Boo	71075	5435	27 Boo	72571	5526	58 Hya	73695	5618	i Boo
69481	5328	κ^1 Boo	71075	5435	γ Boo	72571	5526	E Hya	73695	5618	i Boo
69483	5329	κ^2 Boo	71040	5437	ER Dra	72773	5527	AX Cir	73937	5619	HZ Lup
69483	5329	17 Boo	71352	5440	η Cen	72683	5528	o Lup	73945	5622	21 Lib
69483	5329	κ^2 Boo	71168	5441	CP Boo	72603	5530	α^1 Lib	73945	5622	v Lib
69612	5330	15 Boo	71284	5447	σ Boo	72603	5530	8 Lib	74066	5624	HR Lup
69614	5331	FS Vir	71284	5447	28 Boo	72622	5531	9 Lib	74117	5626	λ Lup
70248	5336	ϵ Aps	71280	5452	CH Boo	72622	5531	α^2 Lib	73841	5627	47 Boo
70248	5336	ϵ Aps	71536	5453	ρ Lup	72487	5533	h Boo	73841	5627	k Boo

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
73996	5634	45 Boo	75312	5727	η CrB	76337	5795	15 Ser	77336	5870	ν Ser
73996	5634	c Boo	75312	5727	2 CrB	76552	5797	ω Lup	77645	5873	V360 Nor
74087	5638	46 Boo	75312	5728	η CrB	76427	5799	14 Ser	77450	5879	35 Ser
74087	5638	b Boo	75312	5728	2 CrB	76307	5800	μ CrB	77450	5879	κ Ser
74582	5644	X TrA	76996	5729	ρ Oct	76307	5800	6 CrB	77442	5880	R CrB
74376	5646	κ^1 Lup	76013	5730	κ^1 Aps	76425	5802	16 Ser	77516	5881	μ Ser
74380	5647	κ^2 Lup	76013	5730	κ^1 Aps	76424	5804	τ^5 Ser	77516	5881	32 Ser
74395	5649	ζ Lup	75411	5733	μ^1 Boo	76424	5804	18 Ser	77634	5883	x Lup
74449	5651	e Lup	75411	5733	51 Boo	76600	5812	τ Lib	77634	5883	5 Lup
74392	5652	τ^1 Lib	75415	5734	μ^2 Boo	76600	5812	40 Lib	77635	5885	1 Sco
74392	5652	24 Lib	75415	5734	51 Boo	76628	5814	41 Lib	77635	5885	b Sco
74386	5654	FL Ser	75097	5735	γ UMi	76705	5820	3 Lup	77578	5888	ω Ser
74493	5656	τ^2 Lib	75530	5739	9 Ser	76705	5820	ψ^1 Lup	77578	5888	34 Ser
74493	5656	25 Lib	75530	5739	τ^1 Ser	76534	5823	54 Boo	77512	5889	10 CrB
74500	5657	23 Lib	75730	5743	32 Lib	76534	5823	ϕ Boo	77512	5889	δ CrB
74604	5660	1 Lup	75730	5743	ζ^1 Lib	76742	5824	42 Lib	77512	5889	δ CrB
74604	5660	i Lup	75458	5744	ι Dra	76829	5825	g Lup	77982	5891	κ TrA
74600	5662	26 Lib	75458	5744	12 Dra	76008	5826	15 UMi	77622	5892	ϵ Ser
74778	5664	δ Cir	75761	5746	10 Ser	76008	5826	θ UMi	77622	5892	37 Ser
74778	5664	δ Cir	75695	5747	3 CrB	76669	5833	ζ^1 CrB	77615	5894	R Ser
74837	5666	e Cir	75695	5747	β CrB	76669	5833	7 CrB	77660	5895	36 Ser
74824	5670	β Cir	75695	5747	β CrB	76669	5833	ζ^2 CrB	77660	5895	b Ser
74946	5671	γ TrA	75944	5750	ζ^3 Lib	76669	5834	ζ^1 CrB	77952	5897	β TrA
74649	5675	3 Ser	75944	5750	34 Lib	76669	5834	7 CrB	77661	5899	ρ Ser
74596	5676	x Boo	75973	5763	52 Boo	76669	5834	ζ^2 CrB	77655	5901	11 CrB
74596	5676	48 Boo	75973	5763	ν^1 Boo	76939	5837	h Lup	77655	5901	κ CrB
74689	5679	4 Ser	76126	5764	35 Lib	76880	5838	43 Lib	77811	5902	45 Lib
74666	5681	49 Boo	76126	5764	ζ^4 Lib	76880	5838	κ Lib	77811	5902	λ Lib
74666	5681	δ Boo	76126	5764	ζ Lib	76945	5839	4 Lup	77055	5903	16 UMi
74911	5683	μ Lup	76069	5770	12 Ser	76945	5839	ψ^2 Lup	77055	5903	ζ UMi
74785	5685	β Lib	76069	5770	τ^2 Ser	76810	5840	19 Ser	77840	5904	2 Sco
74785	5685	27 Lib	76440	5771	ϵ TrA	76810	5840	τ^6 Ser	77859	5907	V104 Sco
74857	5686	2 Lup	76133	5772	11 Ser	76852	5842	ι Ser	77853	5908	46 Lib
74857	5686	f Lup	76041	5774	53 Boo	76852	5842	21 Ser	77853	5908	θ Lib
74950	5687	GG Lup	76041	5774	ν^2 Boo	76866	5843	x Ser	77801	5911	39 Ser
74975	5694	MQ Ser	76259	5775	36 Lib	76866	5843	20 Ser	77909	5912	V927 Sco
74975	5694	5 Ser	76297	5776	γ Lup	76866	5843	x Ser	77909	5912	3 Sco
75141	5695	δ Lup	76297	5776	γ Lup	76878	5845	22 Ser	77760	5914	x Her
75206	5698	ν^1 Lup	76219	5777	37 Lib	76878	5845	τ^7 Ser	77760	5914	1 Her
75181	5699	ν^2 Lup	76127	5778	θ CrB	77060	5848	44 Lib	77939	5915	47 Lib
75110	5701	28 Lib	76127	5778	4 CrB	77060	5848	η Lib	77984	5917	4 Sco
75118	5703	o Lib	76127	5778	θ CrB	76952	5849	γ CrB	77910	5919	FP Ser
75118	5703	29 Lib	76243	5780	IU Lib	76952	5849	8 CrB	77910	5919	40 Ser
75323	5704	γ Cir	76371	5781	d Lup	76952	5849	γ CrB	78105	5925	ξ^1 Lup
75323	5704	γ Cir	76371	5781	KT Lup	77052	5853	23 Ser	78106	5926	ξ^2 Lup
75177	5705	ϕ^1 Lup	76750	5782	κ^2 Aps	77052	5853	ψ Ser	78104	5928	5 Sco
75264	5708	e Lup	76333	5787	38 Lib	77070	5854	a Ser	78104	5928	ρ Sco
75049	5709	1 CrB	76333	5787	γ Lib	77070	5854	24 Ser	77907	5932	2 Her
75049	5709	o CrB	76276	5788	δ Ser	77048	5855	9 CrB	78072	5933	41 Ser
75119	5710	6 Ser	76276	5788	δ Ser	77048	5855	π CrB	78072	5933	γ Ser
75304	5712	ϕ^2 Lup	76276	5788	13 Ser	76957	5857	BP Boo	78012	5936	12 CrB
74793	5714	11 UMi	76276	5789	δ Ser	77111	5858	26 Ser	78012	5936	λ CrB
75230	5717	7 Ser	76276	5789	δ Ser	77111	5858	τ^8 Ser	77986	5938	4 Her
75178	5718	50 Boo	76276	5789	13 Ser	77227	5863	25 Ser	77986	5938	V839 Her
75439	5719	ν Lup	76267	5793	a CrB	77227	5863	PT Ser	78476	5939	S TrA
75342	5721	8 Ser	76267	5793	a CrB	77233	5867	β Ser	78132	5940	ϕ Ser
75379	5723	e Lib	76267	5793	5 CrB	77233	5867	28 Ser	78207	5941	48 Lib
75379	5723	31 Lib	76470	5794	ν Lib	77257	5868	λ Ser	78207	5941	FX Lib
75501	5724	k Lup	76470	5794	39 Lib	77257	5868	27 Ser	78246	5942	V913 Sco
75665	5725	LX TrA	76337	5795	τ^3 Ser	77336	5870	31 Ser	78265	5944	π Sco

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
78265	5944	π Sco	79374	6027	ν Sco	80197	6107	20 CrB	81305	6164	V918 Sco
78265	5944	6 Sco	79374	6027	14 Sco	80197	6107	v ¹ CrB	81266	6165	τ Sco
78159	5947	ε CrB	79404	6028	13 Sco	80214	6108	21 CrB	81266	6165	23 Sco
78159	5947	13 CrB	79404	6028	c ² Sco	80214	6108	v ² CrB	81126	6168	35 Her
78384	5948	η Lup	79399	6029	c ¹ Sco	80645	6109	ι TrA	81126	6168	σ Her
78401	5953	7 Sco	79399	6029	12 Sco	80351	6111	21 Her	81300	6171	12 Oph
78401	5953	δ Sco	79664	6030	δ TrA	80351	6111	o Her	81300	6171	V213 Oph
78400	5954	49 Lib	79375	6031	ψ Sco	80473	6112	5 Oph	81710	6172	η ¹ TrA
78322	5958	T CrB	79375	6031	15 Sco	80473	6112	ρ Oph	81472	6174	V100 Sco
78436	5959	50 Lib	79387	6033	16 Sco	80473	6113	5 Oph	81377	6175	ζ Oph
78180	5960	CL Dra	79332	6035	q Her	80473	6113	ρ Oph	81377	6175	ζ Oph
78662	5961	t ¹ Nor	79349	6039	LQ Her	80582	6115	ε Nor	81377	6175	13 Oph
78639	5962	η Nor	79349	6039	10 Her	79822	6116	η UMi	81337	6176	V773 Her
78481	5966	5 Her	79530	6042	V105 Sco	79822	6116	21 UMi	81290	6184	16 Dra
78481	5966	r Her	79653	6045	θ Nor	80463	6117	24 Her	81292	6185	17 Dra
78459	5968	15 CrB	79488	6047	9 Her	80463	6117	ω Her	81292	6186	17 Dra
78459	5968	ρ CrB	79540	6048	x Sco	80463	6117	ω Her	81634	6194	36 Her
78493	5971	ι CrB	79540	6048	17 Sco	80569	6118	x Oph	81641	6195	37 Her
78493	5971	14 CrB	79754	6055	V368 Nor	80569	6118	x Oph	81497	6200	42 Her
78554	5972	π Ser	79593	6056	δ Oph	80569	6118	7 Oph	82129	6204	LP TrA
78554	5972	44 Ser	79593	6056	1 Oph	80488	6119	U Her	81734	6205	14 Oph
78685	5976	43 Ser	79790	6058	γ ¹ Nor	80788	6120	V378 Nor	81693	6212	40 Her
78727	5977	ξ Sco	79672	6060	18 Sco	80460	6123	25 Her	81693	6212	ζ Her
78727	5978	ξ Sco	79932	6062	S Nor	80375	6127	DQ Dra	81729	6213	39 Her
78914	5980	δ Nor	79607	6063	TZ CrB	80620	6128	V210 Oph	82273	6217	α TrA
78592	5982	υ Her	79607	6063	σ CrB	80628	6129	3 Oph	81833	6220	44 Her
78592	5982	6 Her	79607	6063	17 CrB	80628	6129	υ Oph	81833	6220	η Her
78820	5984	8 Sco	79607	6064	TZ CrB	80782	6131	QU Nor	81660	6223	g Dra
78820	5984	β ¹ Sco	79607	6064	σ CrB	80331	6132	η Dra	81660	6223	18 Dra
78821	5985	8 Sco	79607	6064	17 CrB	80331	6132	14 Dra	82037	6224	16 Oph
78821	5985	β ² Sco	79666	6065	16 Her	80763	6134	α Sco	82140	6225	25 Sco
78527	5986	13 Dra	79881	6070	d Sco	80763	6134	21 Sco	82073	6228	i Her
78527	5986	θ Dra	79963	6071	λ Nor	80763	6134	α Sco	82073	6228	43 Her
78918	5987	θ Lup	80000	6072	γ ² Nor	83255	6139	CW Oct	82363	6229	η Ara
78877	5988	V929 Sco	79757	6074	υ CrB	80815	6141	i Sco	82162	6232	19 Oph
78933	5993	9 Sco	79757	6074	18 CrB	80815	6141	22 Sco	82216	6234	l Her
78933	5993	ω ¹ Sco	79882	6075	ε Oph	80945	6142	V105 Sco	82216	6234	V776 Her
79153	5994	t ² Nor	79882	6075	2 Oph	80704	6146	30 Her	82216	6234	45 Her
78990	5997	ω ² Sco	79280	6079	19 UMi	80704	6146	g Her	82339	6240	V101 Oph
78990	5997	10 Sco	80079	6081	o Sco	80704	6146	g Her	82396	6241	ε Sco
79080	5999	V856 Sco	80079	6081	19 Sco	80894	6147	φ Oph	82396	6241	26 Sco
79005	6002	11 Sco	79420	6082	20 UMi	80894	6147	8 Oph	82172	6242	V636 Her
79007	6004	45 Ser	80112	6084	σ Sco	80816	6148	27 Her	82369	6243	20 Oph
79043	6008	7 Her	80112	6084	20 Sco	80816	6148	β Her	82493	6245	V973 Sco
79043	6008	κ Her	80112	6084	σ Sco	80883	6149	10 Oph	82514	6247	μ ¹ Sco
79045	6009	7 Her	79804	6086	AT Dra	80883	6149	λ Oph	82514	6247	μ ¹ Sco
79072	6010	47 Ser	79992	6092	22 Her	81252	6151	θ TrA	82543	6249	V919 Sco
79072	6010	FS Ser	79992	6092	τ Her	80843	6152	s Her	82402	6250	47 Her
79102	6013	8 Her	79992	6092	τ Her	80975	6153	ω Oph	82402	6250	k Her
79119	6018	16 CrB	80179	6093	50 Ser	80975	6153	ω Oph	82545	6252	μ ² Sco
79119	6018	τ CrB	80179	6093	σ Ser	80975	6153	9 Oph	82321	6254	52 Her
79497	6019	ζ Nor	80170	6095	20 Her	81122	6155	μ Nor	82321	6254	V637 Her
80047	6020	δ ¹ Aps	80170	6095	γ Her	81122	6155	μ Nor	82480	6255	21 Oph
80047	6020	δ ¹ Aps	80170	6095	γ Her	80809	6156	34 Her	82650	6257	V106 Sco
80057	6021	δ ² Aps	80686	6098	ζ TrA	81007	6158	28 Her	82422	6258	50 Her
79490	6022	V367 Nor	81065	6102	γ Aps	81007	6158	n Her	82669	6261	V900 Sco
79101	6023	φ Her	80181	6103	19 CrB	81008	6159	h Her	82671	6262	ζ ¹ Sco
79101	6023	φ Her	80181	6103	ξ CrB	81008	6159	29 Her	82671	6262	ζ ¹ Sco
79101	6023	11 Her	80343	6104	ψ Oph	80650	6161	15 Dra	82526	6268	49 Her
79509	6024	κ Nor	80343	6104	4 Oph	81852	6163	β Aps	82526	6268	V823 Her

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
82504	6270	51 Her	84401	6397	V107 Sco	85340	6486	44 Oph	86414	6588	85 Her
82729	6271	ζ Sco	84405	6401	36 Oph	85423	6492	d Oph	86414	6588	ι Her
82868	6274	V846 Ara	84405	6402	36 Oph	85423	6492	45 Oph	86736	6595	58 Oph
83150	6276	MX TrA	84345	6406	64 Her	85302	6495	V640 Her	86201	6596	ω Dra
82587	6279	53 Her	84345	6406	α ¹ Her	85355	6498	49 Oph	86201	6596	28 Dra
82730	6280	23 Oph	84345	6406	α Her	85355	6498	σ Oph	86667	6602	83 Her
82673	6281	ι Oph	84345	6406	α ² Her	85727	6500	δ Ara	86742	6603	60 Oph
82673	6281	25 Oph	84345	6407	64 Her	85751	6505	V862 Ara	86742	6603	β Oph
82911	6283	V861 Sco	84345	6407	α ¹ Her	85696	6508	34 Sco	86731	6608	84 Her
83081	6285	ζ Ara	84345	6407	α Her	85696	6508	υ Sco	86831	6609	61 Oph
82960	6288	27 Sco	84345	6407	α ² Her	85379	6509	x Her	86809	6611	V624 Her
82798	6290	V644 Her	84379	6410	65 Her	85379	6509	77 Her	87073	6615	ι Sco
82925	6291	24 Oph	84379	6410	δ Her	85792	6510	α Ara	87072	6616	X Sgr
82780	6292	56 Her	84979	6411	ι Aps	85792	6510	α Ara	87072	6616	3 Sgr
82802	6293	54 Her	84479	6412	V236 Oph	85755	6519	c Oph	87163	6621	V389 Sgr
83153	6295	ε ¹ Ara	84500	6414	U Oph	85755	6519	51 Oph	87314	6622	V539 Ara
83000	6299	27 Oph	84514	6415	41 Oph	85839	6522	V949 Sco	86974	6623	μ Her
83000	6299	κ Oph	84969	6417	ζ Aps	85693	6526	76 Her	86974	6623	86 Her
83000	6299	κ Oph	84380	6418	67 Her	85693	6526	λ Her	86946	6626	V826 Her
83323	6304	V828 Ara	84380	6418	π Her	85927	6527	λ Sco	87108	6629	62 Oph
82987	6305	57 Her	84650	6422	V107 Sco	85927	6527	λ Sco	87108	6629	γ Oph
83196	6310	26 Oph	84626	6424	o Oph	85927	6527	35 Sco	87294	6631	ι Sco
83431	6314	ε ² Ara	84626	6424	39 Oph	85790	6533	78 Her	86614	6636	ψ ¹ Dra
82860	6315	h Dra	84625	6425	39 Oph	86011	6535	V103 Sco	86614	6636	31 Dra
82860	6315	19 Dra	84625	6425	o Oph	85670	6536	β Dra	86620	6637	ψ ¹ Dra
83262	6318	30 Oph	85760	6429	NO Aps	85670	6536	23 Dra	86620	6637	31 Dra
82898	6319	20 Dra	84573	6431	u Her	86092	6537	σ Ara	87194	6644	87 Her
83331	6321	29 Oph	84573	6431	u Her	85934	6543	V642 Her	87460	6647	V957 Sco
82080	6322	ε UMi	84573	6431	68 Her	86060	6545	V212 Oph	87212	6656	30 Dra
82080	6322	22 UMi	84671	6433	e Oph	86060	6545	52 Oph	87495	6661	Y Oph
82080	6322	ε UMi	84704	6434	V211 Oph	85998	6548	f Oph	87616	6662	V906 Sco
83207	6324	ε Her	84606	6436	e Her	85998	6548	53 Oph	87624	6663	V951 Sco
83207	6324	58 Her	84606	6436	69 Her	86305	6549	π Ara	87280	6664	88 Her
83308	6326	V451 Her	84893	6445	40 Oph	86228	6553	θ Sco	87280	6664	V744 Her
83491	6327	V923 Sco	84893	6445	ξ Oph	85819	6554	24 Dra	87280	6664	z Her
83313	6332	59 Her	84880	6446	53 Ser	85819	6554	v ¹ Dra	87706	6672	63 Oph
83313	6332	d Her	84880	6446	v Ser	85829	6555	v ² Dra	87655	6676	V238 Oph
83574	6334	k Sco	84496	6448	VW Dra	85829	6555	25 Dra	87563	6677	f Her
83574	6334	V107 Sco	85020	6450	V975 Sco	86032	6556	55 Oph	87563	6677	90 Her
83462	6346	V931 Her	85079	6451	ι Ara	86032	6556	α Oph	87812	6684	V205 Oph
83462	6346	61 Her	85079	6451	ι Ara	86263	6561	ξ Ser	87747	6685	89 Her
83706	6347	V107 Sco	84833	6452	V656 Her	86263	6561	55 Ser	87747	6685	V441 Her
83601	6349	V221 Oph	84970	6453	θ Oph	85805	6566	27 Dra	87585	6688	32 Dra
83613	6355	60 Her	84970	6453	θ Oph	85805	6566	f Dra	87585	6688	ξ Dra
83608	6369	21 Dra	84970	6453	42 Oph	86284	6567	μ Oph	87808	6695	θ Her
83608	6369	μ Dra	84887	6457	70 Her	86284	6567	57 Oph	87808	6695	91 Her
83608	6370	21 Dra	84862	6458	72 Her	86486	6569	λ Ara	88048	6698	64 Oph
83608	6370	μ Dra	84862	6458	w Her	86254	6571	79 Her	88048	6698	v Oph
84105	6374	V854 Ara	85084	6459	43 Oph	86036	6573	26 Dra	88116	6700	4 Sgr
83838	6377	c Her	85258	6461	β Ara	86182	6574	82 Her	87234	6701	35 Dra
84012	6378	η Oph	85267	6462	γ Ara	86182	6574	y Her	87850	6702	OP Her
84012	6378	35 Oph	84835	6464	74 Her	86628	6576	V626 Ara	87933	6703	ξ Her
84143	6380	η Sco	85312	6468	κ Ara	86670	6580	κ Sco	87933	6703	92 Her
84311	6384	V829 Ara	84949	6469	V819 Her	86670	6580	κ Sco	87933	6703	ξ Her
84054	6391	V620 Her	85157	6480	73 Her	86565	6581	o Ser	87833	6705	33 Dra
84054	6391	63 Her	85112	6484	ρ Her	86565	6581	56 Ser	87833	6705	γ Dra
84332	6392	V915 Sco	85112	6484	75 Her	86565	6581	o Ser	87998	6707	94 Her
84177	6393	37 Oph	85112	6485	ρ Her	86929	6582	η Pav	87998	6707	v Her
83895	6396	22 Dra	85112	6485	75 Her	86796	6585	μ Ara	87998	6707	v Her
83895	6396	ζ Dra	85340	6486	b Oph	86414	6588	ι Her	88148	6709	V212 Oph

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
88175	6710	ζ Ser	89341	6812	13 Sgr	90830	6934	δ ¹ Tel	92175	7063	β Sct
88175	6710	57 Ser	89172	6815	104 Her	90642	6935	c Ser	92202	7066	R Sct
88149	6712	66 Oph	89172	6815	V669 Her	90642	6935	60 Ser	92382	7068	η ² CrA
88149	6712	V204 Oph	89369	6816	14 Sgr	90853	6938	δ ² Tel	92161	7069	111 Her
88128	6713	93 Her	89605	6819	QV Tel	90344	6945	42 Dra	92609	7074	λ Pav
88192	6714	67 Oph	89439	6822	15 Sgr	90836	6947	U Sgr	92609	7074	λ Pav
88258	6715	6 Sgr	89440	6823	16 Sgr	90982	6951	θ CrA	92390	7078	29 Sgr
88030	6718	V771 Her	89470	6825	V438 Sgr	90968	6952	κ ² CrA	92133	7084	CX Dra
88172	6720	V974 Her	90133	6829	φ Oct	90969	6953	κ ¹ CrA	92646	7087	κ Tel
92824	6721	x Oct	89642	6832	η Sgr	90844	6957	61 Ser	92480	7088	30 Sgr
88290	6723	68 Oph	89642	6832	η Sgr	90858	6958	MV Ser	92442	7089	S Sct
88380	6724	7 Sgr	89637	6833	RS Sgr	90913	6959	V450 Sct	92398	7100	v ¹ Lyr
87728	6725	34 Dra	89527	6834	V239 Oph	91004	6961	24 Sgr	92398	7100	8 Lyr
87728	6725	ψ ² Dra	89348	6850	36 Dra	91066	6965	25 Sgr	92524	7101	8 Aql
88267	6729	95 Her	90098	6855	ξ Pav	90971	6967	V239 Oph	92405	7102	9 Lyr
88267	6730	95 Her	89931	6859	19 Sgr	91132	6969	V419 Sgr	92405	7102	v ² Lyr
88404	6733	τ Oph	89931	6859	δ Sgr	90970	6971	V532 Lyr	92405	7102	v Lyr
88404	6733	69 Oph	89773	6860	105 Her	91117	6973	α Sct	92649	7105	V440 Sgr
88404	6734	τ Oph	89980	6861	V402 Sgr	90905	6978	d Dra	92420	7106	β Lyr
88404	6734	69 Oph	89968	6863	Y Sgr	90905	6978	45 Dra	92420	7106	β Lyr
88469	6736	9 Sgr	89448	6865	37 Dra	91792	6982	ζ Pav	92420	7106	10 Lyr
88331	6738	V820 Her	89918	6866	74 Oph	91494	6991	V718 CrA	93015	7107	κ Pav
88331	6738	96 Her	89861	6868	106 Her	91322	6993	e Ser	93015	7107	κ Pav
88346	6741	97 Her	89962	6869	58 Ser	91262	7001	3 Lyr	92593	7109	V822 Her
88567	6742	γ ¹ Sgr	89962	6869	η Ser	91262	7001	α Lyr	92614	7113	112 Her
88567	6742	W Sgr	90074	6870	V405 Sgr	91262	7001	a Lyr	92747	7114	33 Sgr
88714	6743	θ Ara	89826	6872	1 Lyr	91389	7002	X Oph	92761	7116	v ¹ Sgr
88866	6745	π Pav	89826	6872	κ Lyr	91250	7003	V533 Lyr	92761	7116	32 Sgr
88635	6746	10 Sgr	89977	6873	NW Ser	91373	7009	XY Lyr	92845	7120	v ² Sgr
88635	6746	γ ² Sgr	89925	6876	108 Her	91689	7011	26 Sgr	92845	7120	35 Sgr
88635	6746	γ Sgr	89935	6877	107 Her	91726	7020	δ Sct	92855	7121	34 Sgr
88522	6747	V986 Oph	89935	6877	t Her	91726	7020	δ Sct	92855	7121	σ Sgr
88601	6752	V239 Oph	90185	6879	20 Sgr	91875	7021	λ CrA	92112	7124	50 Dra
88601	6752	70 Oph	90185	6879	ε Sgr	91781	7023	V387 Sgr	92512	7125	o Dra
88528	6754	V831 Her	90135	6884	ζ Sct	91845	7032	ε Sct	92512	7125	o Dra
89042	6761	ι Pav	90260	6888	18 Sgr	92294	7036	θ Pav	92512	7125	47 Dra
88657	6765	98 Her	90139	6895	109 Her	92041	7039	27 Sgr	93163	7127	ω Pav
88765	6770	71 Oph	90289	6896	21 Sgr	92041	7039	φ Sgr	92989	7129	V686 CrA
88771	6771	72 Oph	90422	6897	α Tel	91975	7040	4 Aql	92728	7131	δ ¹ Lyr
88905	6773	V379 Sgr	90313	6902	V229 Oph	92079	7045	V440 Sgr	92728	7131	11 Lyr
88745	6775	b Her	90191	6903	μ Lyr	92111	7046	28 Sgr	92818	7133	113 Her
88745	6775	99 Her	90191	6903	2 Lyr	91755	7049	c Dra	93148	7134	λ Tel
88794	6779	o Her	90568	6905	ζ Tel	91755	7049	46 Dra	92791	7139	12 Lyr
88794	6779	o Her	90496	6913	22 Sgr	92226	7050	μ CrA	92791	7139	δ ² Lyr
88794	6779	103 Her	90496	6913	λ Sgr	91919	7051	4 Lyr	92791	7139	δ ² Lyr
88818	6781	100 Her	90797	6916	v Pav	91919	7051	ε ¹ Lyr	92946	7141	θ ¹ Ser
88817	6782	100 Her	90797	6916	v Pav	91919	7052	4 Lyr	92946	7141	63 Ser
89112	6783	ε Tel	90441	6918	d Ser	91919	7052	ε ¹ Lyr	92951	7142	θ ² Ser
88886	6787	102 Her	90441	6918	59 Ser	91926	7053	ε ² Lyr	92951	7142	63 Ser
85822	6789	23 UMi	90441	6918	d Ser	91926	7053	5 Lyr	93057	7145	ξ ¹ Sgr
85822	6789	δ UMi	89908	6920	43 Dra	91926	7054	ε ² Lyr	93057	7145	36 Sgr
88899	6794	101 Her	89908	6920	φ Dra	91926	7054	5 Lyr	92934	7147	V828 Her
88964	6795	73 Oph	89908	6920	φ Dra	91971	7056	ζ ¹ Lyr	93026	7149	η Sct
89178	6802	V404 Sgr	90156	6923	b Dra	91971	7056	6 Lyr	93085	7150	37 Sgr
89290	6804	V692 CrA	90156	6923	39 Dra	91973	7057	ζ ² Lyr	93085	7150	ξ ² Sgr
88127	6809	40 Dra	89937	6927	x Dra	91973	7057	7 Lyr	93174	7152	ε CrA
88136	6810	41 Dra	89937	6927	44 Dra	92036	7058	V535 Her	93174	7152	ε CrA
85699	6811	24 UMi	90610	6929	V403 Sgr	92117	7059	5 Aql	92862	7157	R Lyr
89341	6812	μ Sgr	90595	6930	γ Sct	92043	7061	110 Her	92862	7157	13 Lyr
89341	6812	μ Sgr	90651	6932	V432 Sct	92308	7062	η ¹ CrA	93051	7158	64 Ser

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
93124	7165	FF Aql	94141	7264	π Sgr	94648	7352	τ Dra	96302	7441	9 Cyg
93179	7167	V128 Aql	94141	7264	41 Sgr	94648	7352	60 Dra	96198	7442	V174 Cyg
93179	7167	10 Aql	94068	7266	19 Aql	95260	7358	3 Vul	96483	7446	κ Aql
93203	7172	11 Aql	94724	7274	τ Pav	95260	7358	V377 Vul	96483	7446	39 Aql
93104	7174	V542 Lyr	94013	7275	V176 Cyg	95477	7362	x^1 Sgr	96468	7447	41 Aql
92997	7175	48 Dra	94385	7279	20 Aql	95477	7362	47 Sgr	96468	7447	ι Aql
93244	7176	13 Aql	94311	7283	V471 Lyr	95503	7363	49 Sgr	96387	7457	11 Cyg
93244	7176	ϵ Aql	94311	7283	19 Lyr	95503	7363	x^3 Sgr	96458	7458	U Vul
93194	7178	14 Lyr	94377	7285	V338 Sge	95398	7369	2 Sge	96556	7460	42 Aql
93194	7178	γ Lyr	94477	7287	V128 Aql	95081	7371	58 Dra	96721	7461	QQ Tel
93177	7179	V543 Lyr	94477	7287	21 Aql	95081	7371	π Dra	96100	7462	61 Dra
92782	7180	υ Dra	94140	7290	55 Dra	95372	7372	2 Cyg	96100	7462	σ Dra
92782	7180	52 Dra	94643	7292	42 Sgr	95447	7373	b Aql	96516	7463	4 Sge
93270	7183	V387 Vul	94643	7292	ψ Sgr	95547	7373	31 Aql	96516	7463	ϵ Sge
93210	7185	V545 Lyr	94302	7295	53 Dra	95564	7375	50 Sgr	96739	7464	V409 Sgr
93542	7188	ζ CrA	94730	7296	RY Sgr	95501	7377	30 Aql	96441	7469	13 Cyg
93279	7192	λ Lyr	94481	7298	η Lyr	95501	7377	δ Aql	96441	7469	θ Cyg
93279	7192	15 Lyr	94481	7298	20 Lyr	95498	7385	4 Vul	96729	7470	53 Sgr
93429	7193	i Aql	94620	7301	1 Sge	95585	7387	v Aql	96665	7474	σ Aql
93429	7193	12 Aql	94727	7303	22 Aql	95585	7387	32 Aql	96665	7474	44 Aql
93506	7194	38 Sgr	94820	7304	43 Sgr	95560	7390	5 Vul	96665	7474	σ Aql
93506	7194	ζ Sgr	94820	7304	d Sgr	95932	7393	μ Tel	96688	7475	V340 Sge
93552	7197	V701 CrA	94703	7306	1 Vul	84535	7394	λ UMi	96808	7476	54 Sgr
93309	7201	V547 Lyr	94685	7308	V473 Lyr	84535	7394	λ UMi	96808	7476	e^1 Sgr
93526	7209	14 Aql	94490	7309	54 Dra	95556	7395	4 Cyg	96683	7478	12 Cyg
93526	7209	g Aql	94376	7310	57 Dra	95556	7395	V174 Cyg	96683	7478	ϕ Cyg
93815	7213	ρ Tel	94376	7310	δ Dra	95793	7400	c Aql	96757	7479	a Sge
93408	7215	16 Lyr	94083	7312	59 Dra	95793	7400	35 Aql	96757	7479	5 Sge
93683	7217	39 Sgr	94713	7314	21 Lyr	95820	7402	U Aql	96807	7480	45 Aql
93683	7217	\omicron Sgr	94713	7314	θ Lyr	95673	7403	V558 Lyr	96693	7483	14 Cyg
93340	7218	49 Dra	94834	7315	ω^1 Aql	95771	7405	a Vul	96620	7484	V114 Cyg
93666	7220	V Aql	94834	7315	25 Aql	95771	7405	6 Vul	96840	7486	QS Aql
93603	7222	LT Vul	94827	7318	ES Vul	95785	7406	8 Vul	96837	7488	β Sge
93187	7224	EE Dra	94827	7318	2 Vul	95656	7408	ι^1 Cyg	96837	7488	6 Sge
93717	7225	15 Aql	94885	7319	23 Aql	95656	7408	7 Cyg	96950	7489	e^2 Sgr
93717	7225	h Aql	94913	7321	24 Aql	95818	7409	7 Vul	96950	7489	55 Sgr
93825	7226	γ CrA	94910	7326	U Sge	95937	7414	e Aql	96931	7493	46 Aql
93825	7227	δ CrA	94779	7328	κ Cyg	95937	7414	36 Aql	96957	7497	x Aql
104382	7228	σ Oct	94779	7328	1 Cyg	95929	7415	V923 Aql	96957	7497	47 Aql
104382	7228	σ Oct	95261	7329	η Tel	96178	7416	PW Tel	96988	7501	V127 Cyg
93864	7234	40 Sgr	94982	7331	V120 Aql	95947	7417	6 Cyg	96895	7503	16 Cyg
93864	7234	τ Sgr	94982	7331	28 Aql	95947	7417	β^1 Cyg	97077	7506	10 Vul
93747	7235	17 Aql	95002	7332	ω^2 Aql	95951	7418	6 Cyg	97091	7508	PS Vul
93747	7235	ζ Aql	95002	7332	29 Aql	95951	7418	β^2 Cyg	96919	7509	V135 Cyg
93805	7236	16 Aql	95066	7333	26 Aql	95853	7420	ι^2 Cyg	97421	7510	v Tel
93805	7236	λ Aql	95066	7333	f Aql	95853	7420	10 Cyg	97139	7511	48 Aql
93887	7241	V419 Sgr	95073	7336	27 Aql	95853	7420	ι Cyg	97139	7511	ψ Aql
94005	7242	δ CrA	95073	7336	d Aql	96234	7422	V408 Sgr	97290	7515	f Sgr
93820	7243	R Aql	95241	7337	β^1 Sgr	96341	7424	ι Tel	97290	7515	56 Sgr
93867	7248	Y Aql	95159	7339	V419 Sgr	96052	7426	8 Cyg	97118	7517	15 Cyg
93867	7248	18 Aql	95168	7340	ρ^1 Sgr	96003	7428	V181 Cyg	97150	7518	SU Cyg
93996	7249	V402 Sgr	95168	7340	44 Sgr	96229	7429	μ Aql	97229	7519	49 Aql
93713	7251	51 Dra	95168	7340	ρ^1 Sgr	96229	7429	38 Aql	97229	7519	u Aql
94114	7254	a CrA	95176	7342	46 Sgr	96327	7430	37 Aql	97142	7520	V209 Cyg
93808	7258	V550 Lyr	95176	7342	v Sgr	96406	7431	h ¹ Sgr	97151	7523	V973 Cyg
94160	7259	β CrA	95176	7342	u Sgr	96406	7431	51 Sgr	97674	7524	NZ Pav
93917	7261	17 Lyr	95294	7343	β^2 Sgr	96275	7437	9 Vul	97278	7525	50 Aql
93903	7262	ι Lyr	95188	7344	45 Sgr	96440	7439	V433 Sgr	97278	7525	γ Aql
93903	7262	ι Lyr	95188	7344	ρ^2 Sgr	96465	7440	52 Sgr	97165	7528	δ Cyg
93903	7262	18 Lyr	95347	7348	a Sgr	96465	7440	h ² Sgr	97165	7528	18 Cyg

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
97295	7534	17 Cyg	98103	7610	φ Aql	99303	7708	b ² Cyg	100469	7779	κ^1 Sgr
97365	7536	7 Sge	98103	7610	61 Aql	99303	7708	V162 Cyg	100250	7786	V158 Cyg
97365	7536	δ Sge	98624	7612	μ^2 Pav	99303	7708	28 Cyg	100591	7787	κ^2 Sgr
97365	7536	δ Sge	98068	7613	22 Cyg	99457	7709	BE Cap	100435	7789	25 Vul
97473	7544	π Aql	98258	7614	g Sgr	99473	7710	θ Aql	100751	7790	α Pav
97473	7544	52 Aql	98258	7614	61 Sgr	99473	7710	65 Aql	100221	7792	DE Dra
97496	7546	8 Sge	98110	7615	21 Cyg	99404	7711	18 Vul	100221	7792	71 Dra
97496	7546	ζ Sge	98110	7615	η Cyg	99529	7712	ξ^1 Cap	100453	7796	37 Cyg
97485	7551	V176 Cyg	98353	7618	60 Sgr	99529	7712	1 Cap	100453	7796	γ Cyg
97749	7552	V396 Sgr	98055	7619	24 Cyg	99572	7715	ξ Cap	100261	7804	AC Dra
97650	7553	51 Aql	98055	7619	ψ Cyg	99572	7715	ξ^2 Cap	100587	7806	39 Cyg
97607	7554	V133 Aql	98234	7622	11 Sge	99572	7715	2 Cap	100574	7807	V211 Cyg
97572	7556	V379 Vul	98412	7623	θ^1 Sgr	99518	7718	19 Vul	100881	7814	10 Cap
97649	7557	53 Aql	98421	7624	θ^2 Sgr	99531	7719	20 Vul	100881	7814	π Cap
97649	7557	α Aql	98608	7625	ν Pav	99631	7720	66 Aql	100977	7821	68 Aql
97675	7560	σ Aql	98337	7635	12 Sge	99742	7724	67 Aql	101027	7822	11 Cap
97675	7560	54 Aql	98337	7635	γ Sge	99742	7724	ρ Aql	101027	7822	ρ Cap
97783	7561	57 Sgr	98375	7641	14 Vul	99500	7727	68 Dra	100907	7826	40 Cyg
97326	7563	CN Dra	98438	7645	13 Sge	99920	7728	V443 Sgr	100859	7828	43 Cyg
97629	7564	x Cyg	98438	7645	VZ Sge	99639	7730	30 Cyg	100859	7828	V212 Cyg
97629	7564	x Cyg	98425	7647	V174 Cyg	99738	7731	21 Vul	101120	7829	σ Cap
97679	7565	V395 Vul	98425	7647	25 Cyg	99738	7731	ν Vul	101120	7829	12 Cap
97679	7565	12 Vul	98633	7649	63 Sgr	99675	7735	31 Cyg	101123	7830	12 Cap
97630	7566	19 Cyg	98688	7650	V387 Sgr	99675	7735	σ^1 Cyg	101123	7830	σ Cap
97630	7566	V150 Cyg	98688	7650	c Sgr	99675	7735	V695 Cyg	101101	7831	69 Aql
97634	7567	V380 Cyg	98688	7650	62 Sgr	99770	7736	V164 Cyg	101076	7834	41 Cyg
97651	7568	V209 Cyg	98379	7651	V210 Cyg	99770	7736	b ³ Cyg	101067	7835	42 Cyg
97804	7570	η Aql	98543	7653	15 Vul	99770	7736	29 Cyg	101160	7836	1 δ
97804	7570	55 Aql	98543	7653	NT Vul	99918	7738	3 Cap	101138	7844	V201 Cyg
97804	7570	η Aql	98636	7657	16 Vul	99824	7739	QR Vul	101138	7844	ω^1 Cyg
97849	7571	V505 Sgr	98571	7660	26 Cyg	99655	7740	33 Cyg	101138	7844	45 Cyg
97787	7572	V146 Aql	98571	7660	e Cyg	99853	7741	22 Vul	101477	7846	ν Mic
97796	7574	9 Sge	99240	7665	δ Pav	99853	7741	QS Vul	101214	7847	44 Cyg
97796	7574	QZ Sge	98844	7667	62 Aql	99874	7744	23 Vul	101612	7848	φ^1 Pav
97871	7575	V129 Aql	98823	7669	63 Aql	99913	7746	18 Sge	101093	7850	2 Cep
97635	7576	20 Cyg	98823	7669	τ Aql	100027	7747	5 Cap	101093	7850	θ Cep
97635	7576	d Cyg	98910	7671	V140 Aql	100027	7747	α^1 Cap	101243	7851	ω^2 Cyg
97944	7578	V420 Sgr	98819	7672	15 Sge	100062	7748	4 Cap	101243	7851	46 Cyg
98032	7581	ι Sgr	99120	7673	ξ Tel	99255	7750	1 Cep	101421	7852	2 δ
97433	7582	63 Dra	98953	7675	65 Sgr	99255	7750	κ Cep	101421	7852	ϵ δ
97433	7582	ϵ Dra	98583	7676	e Dra	99848	7751	V148 Cyg	101483	7858	3 δ
97928	7584	56 Aql	98583	7676	64 Dra	99848	7751	σ^2 Cyg	101483	7858	η δ
98495	7590	ϵ Pav	98863	7678	V176 Cyg	99848	7751	32 Cyg	101773	7859	ρ Pav
97886	7592	13 Vul	98920	7679	η Sge	99951	7753	24 Vul	101773	7859	ρ Pav
97966	7593	57 Aql	98920	7679	16 Sge	100064	7754	6 Cap	102162	7863	μ^1 Oct
97967	7594	57 Aql	98954	7680	V147 Aql	100064	7754	α^2 Cap	102125	7864	μ^2 Oct
97938	7595	ξ Aql	98658	7682	65 Dra	100195	7761	7 Cap	101474	7866	V212 Cyg
97938	7595	59 Aql	98702	7685	ρ Dra	100195	7761	σ Cap	101474	7866	47 Cyg
97980	7596	58 Aql	98702	7685	67 Dra	100044	7763	P Cyg	101772	7869	α Ind
98066	7597	ω Sgr	98401	7686	69 Dra	100044	7763	34 Cyg	101475	7870	V201 Cyg
98066	7597	58 Sgr	99080	7688	17 Vul	100044	7763	P Cyg	101589	7871	ζ δ
97845	7600	V819 Cyg	99031	7689	b ¹ Cyg	100108	7769	36 Cyg	101589	7871	4 δ
98036	7602	60 Aql	99031	7689	V200 Cyg	100122	7770	35 Cyg	101692	7873	70 Aql
98036	7602	β Aql	99031	7689	27 Cyg	100310	7773	ν Cap	101641	7874	26 Vul
98478	7603	μ^1 Pav	99171	7690	64 Aql	100310	7773	8 Cap	101983	7875	φ^2 Pav
98162	7604	59 Sgr	99221	7694	AV Cap	100325	7775	β^2 Cap	101260	7879	AF Dra
98162	7604	b Sgr	99176	7696	V344 Sge	100345	7776	9 Cap	101260	7879	73 Dra
97870	7608	23 Cyg	98962	7701	66 Dra	100345	7776	β^1 Cap	101716	7880	27 Vul
98085	7609	S Sge	99352	7705	17 Sge	100345	7776	β Cap	102157	7881	ν Pav
98085	7609	10 Sge	99352	7705	θ Sge	100142	7777	V177 Cyg	101769	7882	β δ

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
101769	7882	6 δ	102790	7952	ζ Ind	104019	8060	22 Cap	105269	8157	V133 Cyg
101800	7883	ι δ	102633	7953	13 δ	103828	8062	V198 Cyg	105412	8160	16 Aqr
101800	7883	5 δ	102571	7956	T Cyg	104031	8066	3 Equ	105199	8162	α Cep
101847	7884	1 Aql	102422	7957	η Cep	104177	8069	η Mic	105199	8162	5 Cep
101847	7884	71 Aql	102422	7957	3 Cep	104148	8070	δ Mic	105413	8163	9 Equ
101765	7885	48 Cyg	102589	7963	54 Cyg	104139	8075	23 Cap	105259	8164	V381 Cep
101810	7886	EU δ	102589	7963	λ Cyg	104139	8075	θ Cap	105515	8167	ι Cap
101923	7889	τ Cap	102589	7963	α Cyg	104101	8077	4 Equ	105515	8167	ι Cap
101923	7889	τ ² Cap	102831	7965	α Mic	104060	8079	ξ Cyg	105515	8167	32 Cap
101923	7889	14 Cap	102950	7968	ι Ind	104060	8079	62 Cyg	105268	8171	V382 Cep
101867	7891	29 Vul	102805	7973	15 δ	104234	8080	24 Cap	105268	8171	6 Cep
101882	7892	8 δ	102819	7974	14 δ	104185	8084	DT Cyg	105502	8173	1 Peg
101882	7892	θ δ	102724	7977	V166 Cyg	104214	8085	61 Cyg	105574	8175	17 Aqr
101868	7894	28 Vul	102724	7977	55 Cyg	104214	8085	V180 Cyg	105570	8178	β Equ
101916	7896	κ δ	102989	7979	β Mic	104217	8086	61 Cyg	105570	8178	10 Equ
101916	7896	7 δ	102978	7980	18 Cap	104365	8087	x Cap	105696	8180	θ ² Mic
101936	7897	1 Aqr	102978	7980	ω Cap	104365	8087	25 Cap	105858	8181	γ Pav
101984	7900	15 Cap	102945	7982	4 Aqr	104194	8089	f ² Cyg	105665	8183	33 Cap
101984	7900	v Cap	102827	7983	V213 Cyg	104194	8089	63 Cyg	105668	8187	18 Aqr
100965	7901	75 Dra	102843	7984	56 Cyg	104452	8091	27 Cap	105841	8188	γ Ind
101958	7906	α δ	103005	7985	5 Aqr	104755	8092	o Pav	105729	8192	20 Aqr
101958	7906	9 δ	103227	7986	β Ind	104459	8093	v Aqr	105761	8195	19 Aqr
101082	7908	74 Dra	102949	7988	T Vul	104459	8093	13 Aqr	106044	8196	SX Pav
101949	7911	V213 Cyg	103045	7990	6 Aqr	104371	8094	V389 Cyg	105767	8199	21 Aqr
102395	7913	β Pav	103045	7990	μ Aqr	104521	8097	γ Equ	105881	8204	34 Cap
102080	7918	10 δ	103004	7995	31 Vul	104521	8097	γ Equ	105881	8204	ζ Cap
102333	7920	η Ind	103168	7997	BY Mic	104521	8097	5 Equ	105733	8206	V193 Cyg
102066	7921	49 Cyg	103226	8000	19 Cap	104538	8098	6 Equ	105928	8207	35 Cap
102158	7923	LU δ	103089	8001	57 Cyg	104634	8102	EW Aqr	105811	8209	V215 Cyg
102098	7924	50 Cyg	102208	8002	76 Dra	104483	8103	V214 Cyg	105811	8209	69 Cyg
102098	7924	α Cyg	103261	8006	EM Aqr	104451	8113	T Cep	105860	8210	IK Peg
102098	7924	a Cyg	103191	8007	BW Vul	104732	8115	ζ Cyg	106039	8213	b Cap
102195	7927	V568 Cyg	103200	8008	32 Vul	104732	8115	64 Cyg	106039	8213	36 Cap
102281	7928	δ δ	103294	8011	17 δ	104858	8123	δ Equ	106067	8214	5 PsA
102281	7928	11 δ	103298	8012	16 δ	104858	8123	7 Equ	105942	8215	70 Cyg
102281	7928	δ δ	103401	8015	7 Aqr	104963	8127	φ Cap	105966	8217	35 Vul
102177	7929	51 Cyg	103312	8020	V214 Cyg	104963	8127	28 Cap	106062	8223	NV Peg
102276	7932	X Cyg	104043	8021	α Oct	104974	8128	29 Cap	105949	8224	V426 Cep
102773	7934	σ Pav	104043	8021	α Oct	104887	8130	65 Cyg	106140	8225	2 Peg
102485	7936	16 Cap	103545	8024	DV Aqr	104887	8130	τ Cyg	105972	8227	7 Cep
102485	7936	ψ Cap	103413	8028	v Cyg	104887	8130	ι Cyg	106093	8228	g Cyg
102487	7937	17 Cap	103413	8028	58 Cyg	104987	8131	α Equ	106093	8228	71 Cyg
102388	7939	30 Vul	103527	8030	18 δ	104987	8131	8 Equ	106327	8229	ξ Gru
102258	7940	V379 Cep	103511	8032	33 Vul	105140	8135	ε Mic	106340	8230	6 PsA
102440	7941	U δ	103616	8033	AO Cap	105143	8137	30 Cap	106278	8232	22 Aqr
102453	7942	52 Cyg	103616	8033	20 Cap	105168	8139	31 Cap	106278	8232	β Aqr
102693	7943	ι Mic	103569	8034	ε Equ	105319	8140	θ Ind	106032	8238	8 Cep
102358	7944	V414 Cep	103569	8034	1 Equ	105164	8141	15 Aqr	106032	8238	β Cep
102253	7945	4 Cep	103738	8039	γ Mic	105102	8143	67 Cyg	106032	8238	β Cep
102531	7947	γ ¹ δ	103682	8041	11 Aqr	105102	8143	σ Cyg	106559	8245	37 Cap
102531	7947	12 δ	103632	8047	f ¹ Cyg	105334	8145	T Ind	106481	8252	ρ Cyg
102532	7948	12 δ	103632	8047	V832 Cyg	105138	8146	u Cyg	106481	8252	73 Cyg
102532	7948	γ ² δ	103632	8047	59 Cyg	105138	8146	66 Cyg	106654	8253	8 PsA
102488	7949	53 Cyg	103882	8048	ζ Mic	105138	8146	v Cyg	107089	8254	v Oct
102488	7949	ε Cyg	103732	8053	V193 Cyg	105382	8151	θ ¹ Mic	106551	8255	72 Cyg
102618	7950	2 Aqr	103732	8053	60 Cyg	105382	8151	θ ¹ Mic	106703	8256	7 PsA
102618	7950	ε Aqr	104085	8055	μ Ind	105091	8153	V421 Cep	106723	8260	39 Cap
102624	7951	3 Aqr	103981	8058	12 Aqr	105186	8154	68 Cyg	106723	8260	ε Cap
102624	7951	k Aqr	103981	8059	12 Aqr	105186	8154	V180 Cyg	106723	8260	ε Cap
102624	7951	EN Aqr	104019	8060	η Cap	105678	8156	Y Pav	106642	8262	W Cyg

Número de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
106786	8264	ξ Aqr	107608	8326	10 PsA	108917	8417	ξ Cep	110273	8512	ρ Aqr
106786	8264	23 Aqr	107608	8326	θ PsA	109139	8418	33 Aqr	110298	8513	30 Peg
106783	8265	3 Peg	107575	8328	11 Peg	109139	8418	ι Aqr	110618	8515	ν Ind
106711	8266	74 Cyg	107835	8333	ο Ind	109056	8419	23 Peg	110391	8516	47 Aqr
106787	8267	5 Peg	107418	8334	ν Cep	109033	8421	HT Lac	110346	8517	PT Peg
106856	8270	4 Peg	107418	8334	10 Cep	109268	8425	α Gru	110395	8518	48 Aqr
106752	8272	CP Cyg	107418	8334	ν Cep	109005	8426	20 Cep	110395	8518	γ Aqr
106897	8276	NZ Peg	107533	8335	81 Cyg	109082	8427	V365 Lac	110386	8520	31 Peg
106944	8277	d Aqr	107533	8335	π ² Cyg	109017	8428	19 Cep	110386	8520	IN Peg
106944	8277	25 Aqr	107586	8339	12 Cep	109176	8430	24 Peg	110478	8521	π ¹ Gru
106985	8278	40 Cap	107763	8343	14 Peg	109176	8430	ι Peg	110478	8521	π ¹ Gru
106985	8278	γ Cap	107788	8344	13 Peg	109285	8431	μ PsA	110371	8522	32 Peg
106801	8279	V337 Cep	107856	8349	V161 Cyg	109285	8431	14 PsA	110351	8523	2 Lac
106801	8279	9 Cep	107956	8350	HO Peg	109289	8433	υ PsA	110506	8524	π ² Gru
107843	8280	λ Oct	108036	8351	51 Cap	109124	8434	V444 Cep	110408	8528	V405 Lac
107095	8283	42 Cap	108036	8351	μ Cap	109212	8436	OY Peg	110529	8529	49 Aqr
106999	8284	75 Cyg	108085	8353	γ Gru	109240	8438	25 Peg	110548	8532	33 Peg
107128	8285	41 Cap	107975	8354	15 Peg	109332	8439	35 Aqr	110578	8533	51 Aqr
107144	8287	26 Aqr	108022	8356	OQ Peg	109205	8443	V399 Lac	110602	8534	50 Aqr
107188	8288	43 Cap	108022	8356	16 Peg	109422	8447	τ PsA	110538	8538	3 Lac
107188	8288	κ Cap	108281	8362	π Ind	109422	8447	15 PsA	110538	8538	β Lac
107151	8289	7 Peg	108347	8367	BZ Gru	109303	8448	AR Lac	110672	8539	π Aqr
107097	8291	76 Cyg	108431	8368	δ Ind	109352	8449	π ¹ Peg	110672	8539	52 Aqr
112355	8294	CG Oct	108478	8369	κ ¹ Ind	109352	8449	27 Peg	110672	8539	π Aqr
107232	8295	44 Cap	108478	8369	BG Ind	109427	8450	26 Peg	110838	8540	δ Tuc
107129	8297	V460 Cyg	108165	8371	13 Cep	109427	8450	θ Peg	110609	8541	4 Lac
107140	8298	V133 Cyg	108339	8373	17 Peg	109472	8452	38 Aqr	110778	8544	53 Aqr
107162	8300	77 Cyg	108348	8377	V217 Cyg	109472	8452	e Aqr	110778	8545	53 Aqr
107136	8301	π ¹ Cyg	108494	8378	BW Cap	109410	8454	π Peg	110785	8548	34 Peg
107136	8301	80 Cyg	108317	8383	VV Cep	109410	8454	29 Peg	110882	8551	35 Peg
107302	8302	45 Cap	108612	8385	18 Peg	109410	8454	π ² Peg	110936	8552	ν Gru
107380	8305	9 PsA	108661	8386	η PsA	109458	8459	28 Peg	110997	8556	δ ¹ Gru
107380	8305	ι PsA	108661	8386	12 PsA	109624	8462	39 Aqr	110960	8558	ζ ¹ Aqr
107253	8307	79 Cyg	108870	8387	ε Ind	109492	8465	ζ Cep	110960	8558	55 Aqr
107315	8308	ε Peg	108691	8390	28 Aqr	109492	8465	ζ Cep	110960	8558	ζ ² Aqr
107315	8308	8 Peg	108693	8392	20 Peg	109492	8465	21 Cep	110960	8559	ζ ¹ Aqr
107315	8308	ε Peg	108699	8393	19 Peg	109400	8468	24 Cep	110960	8559	55 Aqr
107310	8309	78 Cyg	108797	8396	DX Aqr	109556	8469	λ Cep	110960	8559	ζ ² Aqr
107310	8309	μ ² Cyg	108797	8396	29 Aqr	109556	8469	22 Cep	111043	8560	δ ² Gru
107310	8309	μ ¹ Cyg	108535	8400	16 Cep	110078	8471	ψ Oct	111043	8560	δ ² Gru
107310	8310	78 Cyg	108868	8401	30 Aqr	109789	8478	λ PsA	110817	8561	26 Cep
107310	8310	μ ² Cyg	108874	8402	ο Aqr	109789	8478	16 PsA	110986	8562	36 Peg
107310	8310	μ ¹ Cyg	108874	8402	31 Aqr	109786	8480	41 Aqr	111062	8566	37 Peg
107382	8311	c Cap	108874	8402	ο Aqr	110256	8481	BO Oct	111086	8567	56 Aqr
107382	8311	46 Cap	108875	8404	21 Peg	110256	8481	ε Oct	111138	8570	ζ PsA
107348	8313	9 Peg	108952	8405	13 PsA	109908	8486	μ ¹ Gru	110991	8571	δ Cep
107350	8314	HN Peg	108772	8406	14 Cep	109973	8488	μ ² Gru	110991	8571	δ Cep
107354	8315	10 Peg	108772	8406	LZ Cep	109857	8494	23 Cep	110991	8571	27 Cep
107354	8315	κ Peg	108845	8407	V194 Cyg	109857	8494	ε Cep	111022	8572	V412 Lac
107259	8316	μ Cep	108975	8408	UU PsA	109857	8494	ε Cep	111022	8572	5 Lac
107259	8316	μ Cep	109081	8409	κ ² Ind	110000	8496	42 Aqr	111123	8573	57 Aqr
107119	8317	11 Cep	108991	8410	32 Aqr	109937	8498	1 Lac	111123	8573	σ Aqr
107487	8318	47 Cap	109111	8411	λ Gru	110003	8499	43 Aqr	111068	8574	38 Peg
107487	8318	AG Cap	109068	8413	ν Peg	110003	8499	θ Aqr	111072	8575	V350 Lac
107517	8319	48 Cap	109068	8413	22 Peg	110130	8502	α Tuc	111188	8576	β PsA
107517	8319	λ Cap	109074	8414	α Aqr	110023	8504	44 Aqr	111188	8576	17 PsA
107472	8321	12 Peg	109074	8414	34 Aqr	111196	8505	υ Oct	110787	8578	28 Cep
107556	8322	49 Cap	108924	8416	MO Cep	110179	8508	45 Aqr	110787	8578	ρ ¹ Cep
107556	8322	δ Cap	108924	8416	18 Cep	110103	8511	25 Cep	111104	8579	6 Lac
107556	8322	δ Cap	108917	8417	17 Cep	110273	8512	46 Aqr	111310	8582	ν Tuc

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
111310	8582	v Tuc	112615	8676	70 Aqr	113797	8770	V638 Cas	115102	8863	γ Scl
111200	8583	58 Aqr	112716	8679	τ Aqr	113889	8773	4 Psc	115065	8864	9 And
111191	8584	GX Peg	112716	8679	71 Aqr	113889	8773	β Psc	115065	8864	AN And
111169	8585	7 Lac	112716	8679	τ ² Aqr	113957	8774	κ Gru	115115	8865	ψ ³ Aqr
111169	8585	α Lac	112748	8684	μ Peg	113881	8775	53 Peg	115115	8865	95 Aqr
111278	8586	39 Peg	112748	8684	48 Peg	113881	8775	β Peg	115126	8866	94 Aqr
111394	8590	60 Aqr	112778	8690	V360 Lac	113881	8775	β Peg	115142	8868	96 Aqr
111056	8591	ρ Cep	112778	8690	14 Lac	113853	8777	V387 Cep	115088	8872	34 Cep
111056	8591	29 Cep	112862	8693	21 PsA	113919	8780	3 And	115088	8872	o Cep
111449	8592	59 Aqr	112724	8694	32 Cep	113963	8781	54 Peg	115152	8874	11 And
111449	8592	υ Aqr	112724	8694	ι Cep	113963	8781	α Peg	115191	8876	10 And
111497	8597	62 Aqr	112948	8695	22 PsA	113996	8782	83 Aqr	115227	8878	7 Psc
111497	8597	η Aqr	112948	8695	γ PsA	113996	8782	h Aqr	115250	8880	τ Peg
111594	8600	σ ¹ Gru	112935	8697	49 Peg	114131	8787	θ Gru	115250	8880	τ Peg
111643	8602	σ ² Gru	112935	8697	σ Peg	114119	8789	86 Aqr	115250	8880	62 Peg
111546	8603	8 Lac	112961	8698	λ Aqr	114119	8789	c ¹ Aqr	115271	8882	63 Peg
111710	8610	63 Aqr	112961	8698	73 Aqr	114132	8790	υ Gru	115280	8885	12 And
111710	8610	κ Aqr	112961	8698	λ Aqr	114144	8795	55 Peg	115355	8887	64 Peg
111833	8611	CC Gru	112917	8699	15 Lac	114155	8796	56 Peg	115433	8889	DR Tuc
111674	8613	9 Lac	113044	8700	τ ¹ Gru	114104	8797	1 Cas	115404	8890	97 Aqr
111532	8615	31 Cep	113137	8701	ρ Ind	114187	8798	V343 Peg	115407	8891	65 Peg
111809	8616	VZ PsA	112997	8703	IM Peg	114189	8799	V342 Peg	115438	8892	b ¹ Aqr
111810	8618	40 Peg	113031	8704	74 Aqr	114200	8804	4 And	115438	8892	98 Aqr
111795	8621	V416 Lac	113031	8704	HI Aqr	114210	8805	5 And	115444	8893	66 Peg
111841	8622	10 Lac	113009	8706	V377 Lac	114273	8807	5 Psc	115591	8903	67 Peg
111884	8624	41 Peg	113136	8709	δ Aqr	114341	8812	c ² Aqr	115590	8904	4 Cas
111797	8627	30 Cep	113136	8709	76 Aqr	114341	8812	88 Aqr	115623	8905	υ Peg
111954	8628	ε PsA	113127	8710	78 Aqr	114347	8815	57 Peg	115623	8905	68 Peg
111954	8628	18 PsA	113148	8711	77 Aqr	114347	8815	GZ Peg	115669	8906	b ² Aqr
112405	8630	β Oct	113131	8714	HR Peg	114375	8817	89 Aqr	115669	8906	99 Aqr
111944	8632	11 Lac	113167	8715	1 Psc	114407	8818	DL Gru	115713	8907	o Gru
112029	8634	ζ Peg	113186	8717	ρ Peg	114222	8819	33 Cep	115738	8911	8 Psc
112029	8634	42 Peg	113186	8717	50 Peg	114222	8819	π Cep	115738	8911	κ Psc
112122	8636	β Gru	113246	8720	δ PsA	114421	8820	ι Gru	115738	8911	κ Psc
112122	8636	β Gru	113246	8720	23 PsA	114389	8821	58 Peg	115768	8912	9 Psc
112102	8637	19 PsA	113283	8721	TW PsA	114365	8822	2 Cas	115755	8913	V388 And
112031	8640	12 Lac	113307	8722	τ ³ Gru	114430	8825	6 And	115755	8913	13 And
112031	8640	DD Lac	113281	8725	EN Lac	114520	8826	59 Peg	115806	8915	69 Peg
112051	8641	o Peg	113281	8725	16 Lac	114526	8827	60 Peg	115806	8915	HV Peg
112051	8641	43 Peg	113288	8726	V424 Lac	114570	8830	7 And	115830	8916	10 Psc
112203	8644	ρ Gru	113368	8728	α PsA	114724	8834	90 Aqr	115830	8916	θ Psc
112179	8647	67 Aqr	113368	8728	24 PsA	114724	8834	φ Aqr	115908	8919	CG Tuc
112211	8649	g Aqr	113357	8729	51 Peg	114855	8841	ψ ¹ Aqr	115919	8923	70 Peg
112211	8649	66 Aqr	113327	8731	EW Lac	114855	8841	91 Aqr	115990	8926	AR Cas
112158	8650	η Peg	113503	8739	52 Peg	114844	8842	61 Peg	116076	8930	14 And
112158	8650	44 Peg	113532	8740	WX PsA	114996	8848	γ Tuc	116118	8932	100 Aqr
112374	8655	η Gru	113521	8742	2 Psc	114939	8850	92 Aqr	116119	8933	V354 Peg
112242	8656	13 Lac	113638	8747	ζ Gru	114939	8850	x Aqr	116146	8934	13 Psc
112358	8660	45 Peg	113610	8750	3 Psc	114939	8850	x Aqr	116231	8937	β Scl
112781	8663	ξ Oct	113561	8752	V509 Cas	114831	8851	V388 Cep	116247	8939	101 Aqr
112781	8663	ξ Oct	113674	8757	81 Aqr	114971	8852	6 Psc	116247	8939	b ³ Aqr
112447	8665	46 Peg	113640	8758	V378 And	114971	8852	γ Psc	116264	8940	HW Peg
112447	8665	ξ Peg	113726	8762	1 And	114904	8854	V649 Cas	116264	8940	71 Peg
112440	8667	47 Peg	113726	8762	o And	115033	8858	ψ ² Aqr	116310	8943	72 Peg
112440	8667	λ Peg	113726	8762	o And	115033	8858	ψ ² Aqr	116323	8944	14 Psc
112529	8670	68 Aqr	113781	8763	82 Aqr	115033	8858	93 Aqr	116354	8947	15 And
112542	8673	69 Aqr	113788	8766	2 And	115054	8859	φ Gru	116355	8948	73 Peg
112542	8673	τ ¹ Aqr	113860	8767	π PsA	115022	8860	8 And	116389	8949	ι Phe
112623	8675	ε Gru	113860	8767	π PsA	115036	8861	ET And	116389	8949	ι Phe
112615	8676	FM Aqr	113802	8768	LN And	115836	8862	τ Oct	116495	8954	16 Psc

Nombre de estrellas (Catálogo Hiparco), 2024

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
116592	8960	74 Peg	116928	8984	18 Psc	117447	9018	V566 Cas	117863	9045	ρ Cas
116584	8961	λ And	116971	8988	105 Aqr	117447	9018	6 Cas	117887	9047	XZ Psc
116584	8961	λ And	116971	8988	ω ² Aqr	117491	9022	21 Psc	117927	9048	26 Psc
116584	8961	16 And	116948	8989	V816 Cas	117503	9024	OU And	117931	9049	AL Scl
116611	8963	KS Peg	117020	8991	77 Peg	117500	9025	79 Peg	117957	9052	V373 Cas
116611	8963	75 Peg	117054	8992	R Aqr	117628	9030	HH Peg	118027	9056	V Cep
116631	8965	17 And	117073	8997	78 Peg	117628	9030	80 Peg	118114	9061	γ ² Oct
116631	8965	ι And	117089	8998	i ¹ Aqr	117629	9031	ET Aqr	118121	9062	η Tuc
116737	8966	θ Phe	117089	8998	106 Aqr	117629	9031	i ³ Aqr	118131	9064	ψ Peg
116709	8967	18 And	117218	9002	i ² Aqr	117629	9031	108 Aqr	118131	9064	84 Peg
116758	8968	102 Aqr	117218	9002	107 Aqr	117689	9032	γ ¹ Oct	118178	9065	1 Cet
116758	8968	ω ¹ Aqr	117221	9003	ψ And	117683	9033	22 Psc	118188	9066	R Cas
116771	8969	17 Psc	117221	9003	20 And	117718	9036	φ Peg	118209	9067	27 Psc
116771	8969	ι Psc	117245	9004	TX Psc	117718	9036	81 Peg	118234	9069	π Phe
116727	8974	35 Cep	117245	9004	19 Psc	117718	9036	φ Peg	118214	9070	LQ And
116727	8974	γ Cep	117315	9006	σ Phe	117730	9039	HT Peg	118243	9071	σ Cas
116820	8975	μ Scl	117301	9008	τ Cas	117730	9039	82 Peg	118243	9071	8 Cas
116805	8976	19 And	117301	9008	5 Cas	117761	9041	24 Psc	118268	9072	28 Psc
116805	8976	κ And	117375	9012	20 Psc	117774	9042	25 Psc	118268	9072	ω Psc
116889	8980	103 Aqr	117452	9016	δ Scl	117863	9045	7 Cas	118277	9073	BU Scl
116901	8982	104 Aqr	117430	9017	V650 Cas	117863	9045	ρ Cas	118322	9076	ε Tuc

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
118243	0	0	15.8	+55	53	28.6	0.065926	+55.891274	4.88	-0.071	-0.05	B1V...
118268	0	0	34.3	+6	59	56.2	0.142751	+6.998953	4.03	0.419	0.49	F4IV
118322	0	1	10.3	-65	26	27.2	0.293030	-65.440902	4.49	-0.075	-0.04	B9IV
122	0	2	49.3	-76	55	49.9	0.705277	-76.930531	4.78	1.254	1.26	K2III
154	0	3	13.0	-5	52	40.7	0.804115	-5.877977	4.37	1.631	2.35	M3III
301	0	4	59.6	-17	11	58.9	1.248233	-17.199681	4.55	-0.047	-0.03	B9IVn
355	0	5	45.3	-10	22	23.7	1.438772	-10.373257	4.99	1.619	1.64	K3Ibvar
443	0	6	35.4	-5	34	14.5	1.647399	-5.570697	4.61	1.029	1.04	K1III
677	0	9	39.6	+29	13	32.2	2.414827	+29.225619	2.07	-0.038	-0.10	B9p
746	0	10	30.0	+59	17	5.4	2.625052	+59.284830	2.28	0.380	0.40	F2III-IV
765	0	10	38.8	-45	36	44.6	2.661614	-45.612378	3.88	1.013	1.00	K0III
910	0	12	30.6	-15	20	0.9	3.127426	-15.333577	4.89	0.487	0.59	F5V
1067	0	14	30.0	+15	19	10.8	3.625136	+15.319671	2.83	-0.190	-0.22	B2IV
1168	0	15	52.5	+20	20	34.1	3.968562	+20.342792	4.79	1.572	1.93	M2III
1170	0	15	53.0	-18	47	50.2	3.970658	-18.797280	4.44	1.640	1.96	M1III
1366	0	18	22.8	+38	49	3.0	4.594830	+38.817488	4.61	0.059	0.07	A2V
1473	0	19	36.9	+36	55	15.1	4.903687	+36.920853	4.51	0.054	0.06	A2V
1562	0	20	40.5	-8	41	17.9	5.168929	-8.688316	3.56	1.214	1.13	K2III
1599	0	21	19.7	-64	43	52.3	5.332224	-64.731197	4.23	0.576	0.65	F9V
2021	0	26	59.9	-77	6	59.8	6.749558	-77.116600	2.82	0.618	0.68	G2IV
2072	0	27	24.1	-43	32	39.0	6.850541	-43.544163	3.93	0.175	0.20	A7V
2081	0	27	29.4	-42	10	22.4	6.872530	-42.172897	2.40	1.083	1.11	K0III...
2210	0	29	8.4	-32	52	19.8	7.284825	-32.872179	4.86	1.634	2.32	M2/M3III
2472	0	32	35.5	-48	40	6.0	8.147757	-48.668333	4.76	0.018	0.01	A0V
2484	0	32	39.4	-62	49	24.7	8.164007	-62.823537	4.36	-0.064	-0.02	B9V
2487	0	32	40.2	-62	49	51.0	8.167400	-62.830824	4.53	0.147	0.14	A2V
2505	0	33	8.3	+54	39	25.9	8.284594	+54.657204	4.74	-0.098	-0.08	B8Vn
2599	0	34	24.8	+63	4	0.0	8.603134	+63.066676	4.17	0.130	0.17	B1Ia
2912	0	38	11.8	+33	51	13.9	9.549094	+33.853874	4.34	-0.123	-0.08	B5V
2920	0	38	21.0	+54	1	53.0	9.587608	+54.031390	3.69	-0.196	-0.23	B2IV
3031	0	39	51.4	+29	26	40.0	9.964141	+29.444446	4.34	0.871	0.92	G5III...
3092	0	40	38.6	+30	59	41.2	10.160949	+30.994779	3.27	1.268	1.23	K3III...
3179	0	41	54.8	+56	40	16.7	10.478329	+56.671297	2.24	1.170	1.13	K0II-IIIvar
3245	0	42	28.7	-45	57	3.2	10.619378	-45.950894	4.59	0.953	0.95	G8III
3300	0	43	26.6	+50	38	47.4	10.861019	+50.646496	4.80	-0.105	-0.10	B2.5V
3405	0	44	26.8	-57	19	44.7	11.111719	-57.329072	4.36	0.024	0.02	A0IV
3414	0	44	50.1	+47	9	29.4	11.208694	+47.158155	4.95	0.170	0.19	A5V
3419	0	44	49.1	-17	51	9.1	11.204441	-17.852537	2.04	1.019	1.00	K0III
3455	0	45	25.5	-10	28	35.5	11.356411	-10.476529	4.77	0.998	0.98	K0IIIvar
3504	0	46	6.1	+48	25	4.9	11.525576	+48.418024	4.48	-0.069	0.00	B5III
3693	0	48	38.6	+24	24	0.1	12.160654	+24.400032	4.08	1.100	1.06	K1II
3786	0	49	57.3	+7	43	4.7	12.488958	+7.717976	4.44	1.500	1.58	K5III
3801	0	50	14.1	+51	6	4.7	12.558792	+51.101308	4.90	-0.091	-0.07	B9III
3821	0	50	36.1	+57	56	40.6	12.650610	+57.944617	3.46	0.587	0.66	G0V SB
3881	0	51	10.5	+41	12	42.7	12.793659	+41.211873	4.53	-0.136	-0.14	B5V SB
4147	0	54	15.7	-1	0	42.1	13.565392	-1.011707	4.78	1.550	1.66	M0III
4151	0	54	33.1	+61	15	27.9	13.638119	+61.257739	4.80	0.540	0.61	F8V
4292	0	56	28.5	+59	6	17.3	14.118864	+59.104792	4.83	1.216	1.19	K2III
4422	0	58	8.6	+59	18	46.4	14.535763	+59.312877	4.62	0.957	1.01	G8III-IV
4427	0	58	12.5	+60	50	55.8	14.551951	+60.848830	2.15	-0.046	-0.02	B0IV:evan
4436	0	58	7.3	+38	37	54.1	14.530537	+38.631708	3.86	0.130	0.14	A5V
4463	0	58	31.2	+23	32	57.8	14.630036	+23.549396	4.40	0.940	0.94	G8III-IV
4577	0	59	47.0	-29	13	32.0	14.946017	-29.225552	4.30	-0.154	-0.12	B7IIp
4906	1	4	13.1	+8	1	17.3	16.054431	+8.021473	4.27	0.952	0.98	K0III
5165	1	7	10.3	-46	35	15.2	16.792815	-46.587546	3.32	0.885	0.90	G8IIIvar
5348	1	9	24.5	-55	6	55.1	17.352241	-55.115299	3.94	-0.120	-0.08	B6V + B0V
5364	1	9	49.3	-10	3	10.7	17.455573	-10.052979	3.46	1.161	1.11	K2III
5372	1	12	36.8	+86	23	13.0	18.153231	+86.386958	4.24	1.213	1.16	K2II-III
5434	1	10	56.2	+47	22	18.2	17.734034	+47.371733	4.26	0.012	-0.02	B7III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α		δ		V	U-V	B-V	Espectro
	NH	h	m	s	°	'	″	°	°					
5447	1	11	6.7	+35	44	59.3	17.777966	+35.749800	2.07	1.576	1.74	M0IIIvar		
5542	1	12	36.7	+55	16	46.2	18.152763	+55.279501	4.34	0.170	0.19	A7Vvar		
5571	1	12	46.5	+21	9	51.3	18.193887	+21.164263	4.66	1.024	0.99	K0III		
5586	1	13	1.0	+30	13	8.5	18.254206	+30.219029	4.51	1.092	1.05	K0III-IV...		
5742	1	15	5.1	+24	42	46.2	18.771266	+24.712824	4.67	1.047	1.02	K0III...		
5862	1	16	17.2	-45	24	5.3	19.071559	-45.401479	4.97	0.571	0.62	F8V		
5896	1	16	35.8	-68	44	46.2	19.148999	-68.746167	4.25	0.480	0.55	F6IV		
6193	1	20	49.2	+27	23	31.6	20.204874	+27.392106	4.74	0.032	0.10	A3V		
6242	1	21	38.6	+58	21	34.5	20.410646	+58.359574	4.95	0.683	0.93	F0Ia		
6411	1	23	47.7	+45	39	22.9	20.948642	+45.656354	4.87	1.077	1.04	K0III-IV		
6537	1	25	14.9	-8	3	26.8	21.312186	-8.057451	3.60	1.065	1.05	K0III		
6670	1	26	49.5	-14	28	19.5	21.706331	-14.472071	4.90	1.231	1.29	K2III		
6686	1	27	26.4	+60	21	42.1	21.860088	+60.361703	2.66	0.160	0.19	A5Vv SB		
6692	1	27	41.9	+68	15	24.8	21.924715	+68.256901	4.72	1.047	1.01	K0III		
6813	1	29	8.0	+45	31	56.3	22.283524	+45.532317	4.83	0.421	0.49	F5IV		
6867	1	29	25.6	-43	11	36.1	22.356544	-43.193371	3.41	1.542	1.73	K5II-III		
7007	1	31	28.3	+6	16	9.5	22.867889	+6.269319	4.84	1.372	1.42	K4III		
7083	1	32	16.1	-48	56	45.9	23.067055	-48.946082	3.93	0.972	1.00	K0III-IV		
7097	1	32	47.9	+15	28	16.7	23.199643	+15.471306	3.62	0.974	0.94	G8III		
7294	1	35	33.2	+59	21	24.4	23.888395	+59.356777	4.68	0.991	1.01	K0III		
7513	1	38	14.7	+41	31	37.7	24.561441	+41.527137	4.10	0.536	0.58	F8V		
7588	1	38	37.4	-57	6	46.7	24.655677	-57.112967	0.45	-0.158	-0.17	B3Vp		
7607	1	39	30.6	+48	45	5.0	24.877466	+48.751377	3.59	1.275	1.23	K3III		
7818	1	42	2.2	+40	42	0.6	25.509176	+40.700162	4.96	-0.068	-0.06	B8III		
7884	1	42	42.6	+5	36	38.6	25.677333	+5.610713	4.45	1.347	1.37	K3III		
7918	1	43	17.3	+42	44	6.4	25.821885	+42.735119	4.96	0.618	0.67	G2V		
7999	1	43	57.9	-3	34	3.7	25.991329	-3.567683	4.98	1.378	1.26	K3II-III		
8068	1	45	12.7	+50	48	40.0	26.302754	+50.811104	4.01	-0.098	-0.08	B2Vpe		
8102	1	45	12.4	-15	48	33.7	26.301869	-15.809370	3.49	0.727	0.82	G8V		
8198	1	46	41.4	+9	16	48.1	26.672704	+9.280034	4.26	0.942	0.93	K0III		
8497	1	50	47.4	-10	33	58.0	27.697302	-10.566122	4.66	0.333	0.38	F3III		
8645	1	52	40.2	-10	12	53.6	28.167674	-10.214895	3.74	1.136	1.07	K2III		
8796	1	54	29.1	+29	41	49.9	28.621386	+29.697185	3.42	0.488	0.55	F6IV		
8832	1	54	52.8	+19	24	46.7	28.719900	+19.412984	3.88	-0.047	-0.03	A1p Si		
8833	1	54	49.6	+3	18	27.0	28.706701	+3.307493	4.61	0.928	0.93	K0III SB		
8837	1	54	37.5	-46	11	0.5	28.656380	-46.183464	4.39	1.597	2.49	M4III SB		
8886	1	56	11.1	+63	47	22.1	29.046432	+63.789460	3.35	-0.150	-0.12	B2pvar		
8903	1	55	59.9	+20	55	36.4	28.999680	+20.926785	2.64	0.165	0.18	A5V...		
8928	1	55	33.5	-67	31	38.4	28.889729	-67.527320	4.68	0.931	0.95	G5III		
9007	1	56	54.5	-51	29	16.3	29.227107	-51.487851	3.69	0.844	0.90	G5IV		
9009	1	57	56.5	+68	48	15.0	29.485525	+68.804175	4.97	-0.084	-0.06	B8III		
9061	1	57	49.0	-22	24	29.0	29.454214	-22.408068	4.92	1.434	1.45	K3III		
9095	1	58	8.2	-47	15	59.1	29.534237	-47.266420	4.82	0.864	0.89	G8III		
9153	1	59	18.0	+23	42	52.1	29.824930	+23.714483	4.79	0.290	0.33	F0V		
9236	1	59	32.4	-61	27	4.8	29.885182	-61.451324	2.86	0.290	0.34	F0V		
9347	2	1	9.6	-20	57	36.2	30.289800	-20.960062	3.99	1.554	1.79	K5/M0III		
9480	2	4	1.0	+71	1	27.0	31.004259	+71.024158	4.49	0.164	0.20	A3IV		
9487	2	3	19.0	+2	52	51.8	30.829287	+2.881058	3.82	0.024	0.05	A2		
9505	2	3	57.1	+54	36	16.9	30.987741	+54.604684	4.99	-0.071	-0.02	B8III		
9598	2	5	34.8	+72	32	17.5	31.395009	+72.538189	3.95	-0.002	0.03	A2V		
9640	2	5	24.8	+42	26	45.9	31.353496	+42.446083	2.10	1.370	1.37	B8V		
9677	2	5	35.3	-29	10	48.7	31.397026	-29.180183	4.68	-0.156	-0.12	B9.5p (Si)		
9884	2	8	33.6	+23	34	37.7	32.140059	+23.577148	2.01	1.151	1.13	K2III		
9977	2	9	58.5	+37	58	26.6	32.493882	+37.974051	4.78	0.120	0.16	A5IV-V		
10053	2	10	49.4	+26	3	16.7	32.705793	+26.054652	4.98	0.339	0.40	F2III		
10064	2	11	0.6	+35	6	7.1	32.752534	+35.101967	3.00	0.140	0.17	A5III		
10280	2	13	48.0	+30	25	0.1	33.450046	+30.416683	4.94	0.770	0.81	F5V comp SB		
10324	2	14	18.1	+8	57	37.7	33.575454	+8.960460	4.36	0.878	0.90	G8II:		
10340	2	14	46.2	+44	20	43.0	33.692635	+44.345276	4.84	1.476	1.49	K4III		

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
10602	2	17	23.0	-51	23	58.4	34.345983	-51.399565	3.56	-0.120	-0.11	B8IV-V
10644	2	18	33.4	+34	20	6.1	34.639222	+34.335041	4.84	0.607	0.76	G0V
10670	2	18	46.7	+33	57	33.2	34.694789	+33.959221	4.03	0.019	-0.02	A1Vnn
11001	2	22	11.6	-68	32	54.1	35.548139	-68.548364	4.08	0.034	0.04	A3V
11313	2	27	16.4	+50	23	16.8	36.818148	+50.388005	4.73	1.532	1.58	K4III
11345	2	27	8.1	-12	10	52.0	36.783678	-12.181119	4.88	-0.027	-0.01	A0V
11407	2	27	53.0	-47	35	41.1	36.970679	-47.594758	4.24	-0.136	-0.11	B5IV
11484	2	29	27.9	+8	34	6.9	37.366271	+8.568582	4.30	-0.053	-0.06	B9III
11569	2	31	7.2	+67	30	39.2	37.779957	+67.510884	4.46	0.153	0.17	A5p Sr
11767	3	3	40.9	+89	21	56.5	45.920558	+89.365686	1.97	0.636	0.70	F7:lb-IIv SB
11783	2	33	14.9	-15	8	18.4	38.312225	-15.138433	4.74	0.454	0.55	F5V
11918	2	34	55.1	-28	7	32.7	38.729477	-28.125764	4.96	-0.050	-0.04	B9V
12093	2	37	9.8	+5	41	56.0	39.290833	+5.698886	4.87	0.880	0.89	G8III
12387	2	40	44.5	+0	25	58.5	40.185217	+0.432923	4.08	-0.212	-0.22	B2IV
12390	2	40	45.0	-11	46	9.6	40.187669	-11.769321	4.83	0.447	0.53	F5V
12394	2	39	58.5	-68	9	44.6	39.993702	-68.162389	4.12	-0.061	-0.07	B9III
12413	2	40	44.0	-42	47	14.6	40.183288	-42.787401	4.74	0.061	0.09	A2V
12486	2	41	38.0	-39	45	5.5	40.408383	-39.751528	4.11	1.006	1.05	K0III
12623	2	43	48.3	+40	17	45.7	40.951247	+40.296034	4.91	0.582	0.62	F9V
12706	2	44	34.4	+3	20	16.1	41.143205	+3.337801	3.47	0.093	0.10	A3V
12719	2	44	53.8	+27	48	35.8	41.224014	+27.809938	4.65	-0.122	-0.12	B3V
12770	2	45	17.4	-13	45	22.0	41.322390	-13.756103	4.24	-0.122	-0.11	B7IV
12777	2	45	53.2	+49	19	49.3	41.471731	+49.330363	4.10	0.514	0.59	F7V
12828	2	46	16.2	+10	12	58.5	41.567581	+10.216238	4.27	0.311	0.37	F1III-IV
12843	2	46	14.8	-18	28	12.2	41.561757	-18.470053	4.47	0.481	0.54	F5/F6V
12876	2	45	55.8	-67	30	50.7	41.482433	-67.514079	4.83	0.058	0.08	A2IV/V
13061	2	49	22.5	+29	20	50.5	42.343635	+29.347372	4.52	1.112	1.04	K1III
13147	2	50	6.9	-32	18	14.9	42.528893	-32.304131	4.45	0.981	1.00	G8III
13209	2	51	25.9	+27	21	36.0	42.858080	+27.359993	3.61	-0.100	-0.08	B8Vn
13244	2	50	20.8	-74	58	0.3	42.586649	-74.966744	4.76	1.337	1.27	K3III
13254	2	52	8.4	+38	25	4.5	43.035046	+38.417915	4.22	0.343	0.41	F2III
13268	2	52	30.2	+55	59	43.1	43.125646	+55.995307	3.77	1.690	1.64	K3Ib comp SB
13288	2	52	9.1	-20	54	15.2	43.037728	-20.904225	4.76	0.906	0.91	K0III
13328	2	53	1.9	+35	9	32.2	43.257925	+35.158951	4.56	1.554	1.67	K5III
13531	2	56	0.6	+52	51	39.3	44.002658	+52.860908	3.93	0.758	0.80	G4III...
13701	2	57	37.6	-8	48	7.0	44.406462	-8.801935	3.89	1.088	1.08	K1III-IV
13847	2	59	11.4	-40	12	27.1	44.797527	-40.207532	2.88	0.128	0.17	A4III+...
13879	3	0	20.2	+39	45	32.7	45.084337	+39.759080	4.68	0.065	0.11	A2Vn
13884	2	59	15.9	-63	58	27.9	44.816302	-63.974408	4.98	0.126	0.14	A5III
13905	3	0	35.3	+35	16	46.8	45.146880	+35.279675	4.94	1.235	1.19	K2III
13914	3	0	37.1	+21	26	12.7	45.154572	+21.436855	4.63	0.048	0.05	A2Vs
13954	3	1	1.9	+9	0	12.8	45.257926	+9.003542	4.71	-0.109	-0.09	B6III
14135	3	3	33.8	+4	11	3.9	45.890753	+4.184406	2.54	1.630	1.97	M2III
14146	3	3	28.3	-23	31	46.7	45.868119	-23.529650	4.08	0.163	0.18	A4V
14328	3	6	35.2	+53	36	1.5	46.646801	+53.600421	2.91	0.716	0.77	G8III+...
14354	3	6	45.3	+38	56	0.4	46.688901	+38.933453	3.32	1.528	2.76	M3IIIvar
14382	3	7	24.0	+56	47	59.5	46.849968	+56.799861	4.77	1.018	0.99	K0II-III
14576	3	9	46.4	+41	2	53.6	47.443173	+41.048224	2.09	-0.003	0.02	B8V
14632	3	10	50.9	+49	42	17.3	47.712005	+49.704809	4.05	0.595	0.65	G0V
14668	3	11	9.6	+44	56	54.9	47.789902	+44.948587	3.79	0.980	0.94	K0III
14817	3	12	52.8	+39	42	10.2	48.220124	+39.702831	4.61	1.115	1.09	K1III
14838	3	13	2.1	+19	49	3.8	48.258817	+19.817728	4.35	1.033	0.96	K2IIIvar
14862	3	14	39.5	+74	29	1.5	48.664493	+74.483764	4.85	0.035	0.05	A2Vnn
14879	3	13	7.1	-28	53	33.2	48.279412	-28.892548	3.80	0.543	0.63	F8V
15110	3	16	18.9	+21	8	0.9	49.078706	+21.133575	4.87	-0.007	0.02	A1V
15197	3	17	1.5	-8	43	48.5	49.256381	-8.730148	4.80	0.232	0.28	A5m
15382	3	19	27.1	-22	25	22.3	49.863042	-22.422873	4.86	0.904	0.91	K0III
15416	3	20	16.2	+34	18	37.7	50.067546	+34.310484	4.85	1.491	1.41	K2II
15457	3	20	39.0	+3	27	30.5	50.162314	+3.458479	4.84	0.681	0.73	G5Vvar

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
15474	3	20	36.4	-21	40	12.1	50.151814	-21.670016	3.70	1.614	2.42	M3/M4III
15510	3	20	54.2	-42	58	39.0	50.225821	-42.977488	4.26	0.711	0.79	G8V
15520	3	22	10.4	+65	44	21.7	50.543288	+65.739365	4.74	-0.108	-0.12	B2.5Vne
15549	3	21	49.7	+29	8	7.9	50.457019	+29.135516	4.47	1.555	1.61	K2II-III
15648	3	23	5.6	+43	24	58.6	50.773509	+43.416272	4.96	0.051	0.06	A3V
15863	3	26	5.1	+49	56	46.6	51.521259	+49.946273	1.79	0.481	0.63	F5Ib
15900	3	26	8.1	+9	6	48.5	51.533700	+9.113477	3.61	0.887	0.90	G8III
16083	3	28	30.0	+9	48	59.3	52.125053	+9.816465	3.73	-0.082	-0.07	B9Vn
16147	3	29	48.3	+49	8	46.4	52.451376	+49.146214	4.99	-0.091	-0.07	B5V
16228	3	31	4.4	+60	1	23.9	52.768409	+60.023306	4.21	0.419	0.58	B9Ia
16244	3	31	7.9	+49	35	30.0	52.783003	+49.591657	4.67	-0.096	-0.07	B3V
16245	3	29	48.7	-62	51	6.6	52.452888	-62.851833	4.71	0.410	0.49	F5IV-V
16281	3	31	53.3	+58	57	40.8	52.972003	+58.961338	4.55	0.489	0.79	A0Ia SB:
16335	3	32	18.8	+48	4	39.6	53.078482	+48.077675	4.36	1.367	1.42	K3III
16341	3	31	50.1	-4	59	33.6	52.958811	-4.992656	4.74	-0.092	-0.07	B9Vs
16369	3	32	13.8	+13	1	8.2	53.057321	+13.018955	4.14	1.112	1.01	K0II-III...
16537	3	34	5.2	-9	22	36.4	53.521815	-9.376781	3.72	0.881	0.94	K2V
16611	3	34	52.3	-21	33	7.6	53.717755	-21.552104	4.26	-0.106	-0.09	B9V
16826	3	38	14.5	+48	16	19.0	54.560586	+48.271951	4.32	-0.058	0.07	B5Ve
16852	3	38	7.5	+0	28	40.4	54.531444	+0.477887	4.29	0.575	0.66	F9V
16870	3	37	58.5	-40	11	42.8	54.493769	-40.195220	4.57	1.023	1.07	K0III
17304	3	43	13.4	-31	51	41.0	55.805906	-31.861383	4.99	-0.159	-0.15	B5III
17313	3	43	56.2	+34	2	30.0	55.984364	+34.041668	4.97	-0.048	-0.03	B0.5V
17351	3	43	44.6	-37	14	14.6	55.935812	-37.237382	4.59	1.191	1.12	K2IIICN...
17358	3	44	40.8	+47	51	49.1	56.170115	+47.863630	3.01	-0.125	-0.07	B5III SB
17378	3	44	25.4	-9	40	55.6	56.105997	-9.682104	3.52	0.915	0.94	K0IV
17440	3	44	30.8	-64	43	49.1	56.128431	-64.730297	3.84	1.133	1.11	K0IV SB
17448	3	45	51.7	+32	21	50.0	56.465443	+32.363902	3.84	0.022	0.12	B1III
17499	3	46	20.1	+24	11	18.6	56.583882	+24.188507	3.72	-0.105	-0.09	B6III
17529	3	46	52.0	+42	39	13.7	56.716863	+42.653817	3.77	0.425	0.52	F5IIvar
17531	3	46	40.3	+24	32	32.3	56.667917	+24.542301	4.30	-0.110	-0.08	B6V
17573	3	47	17.4	+24	26	32.8	56.822417	+24.442442	3.87	-0.063	-0.02	B8III
17587	3	48	12.3	+63	25	10.9	57.051248	+63.419705	4.78	0.747	0.79	A3V...
17593	3	47	18.1	-12	1	34.6	56.825472	-12.026277	4.43	1.604	1.89	M1III
17608	3	47	47.1	+24	1	22.2	56.946350	+24.022821	4.14	-0.051	0.02	B6IV
17651	3	47	54.2	-23	10	43.2	56.975783	-23.178658	4.22	0.434	0.51	F3/F5V
17678	3	46	53.2	-74	9	48.4	56.721739	-74.163451	3.26	1.590	1.94	M2III
17702	3	48	56.8	+24	10	44.5	57.236474	+24.179018	2.85	-0.086	-0.01	B7III
17797	3	49	30.2	-37	32	47.3	57.375726	-37.546475	4.30	-0.038	-0.02	A+...
17847	3	50	37.4	+24	7	35.2	57.656020	+24.126446	3.62	-0.070	-0.03	B8III
17874	3	50	22.3	-36	7	38.3	57.592946	-36.127308	4.17	0.927	0.92	G8III
17884	3	51	47.5	+65	35	55.8	57.947770	+65.598825	4.39	1.870	2.58	M1III
17959	3	52	59.2	+71	24	15.9	58.246620	+71.404420	4.59	0.064	0.13	A2IVn
18216	3	54	45.3	-24	32	28.1	58.688825	-24.541140	4.64	-0.136	-0.13	B5V
18246	3	55	40.7	+31	57	15.7	58.919534	+31.954371	2.84	0.271	0.18	B1Ib
18255	3	55	31.5	-2	53	2.1	58.881042	-2.883925	4.46	0.672	0.73	G8III
18488	3	59	14.8	+61	10	40.5	59.811728	+61.177907	4.99	1.435	1.53	K3I-II
18505	3	59	36.5	+63	8	28.5	59.902017	+63.141256	4.95	-0.074	-0.01	B9.5V
18532	3	59	30.3	+40	4	44.1	59.876386	+40.078922	2.90	-0.199	-0.19	B0.5V
18543	3	59	10.4	-13	26	25.3	59.793459	-13.440350	2.97	1.588	1.78	M1IIIB Ca-1
18597	3	59	8.3	-61	19	53.6	59.784734	-61.331549	4.56	1.590	1.85	M2III
18614	4	0	33.7	+35	51	33.7	60.140366	+35.859358	3.98	0.016	0.16	O7.5lab:
18673	4	0	58.2	-23	56	53.3	60.242548	-23.948144	4.62	-0.121	-0.07	Ap Si
18724	4	2	2.5	+12	33	27.9	60.510220	+12.557753	3.41	-0.099	-0.08	B3V + A
18744	4	1	15.4	-62	5	29.1	60.314197	-62.091419	4.48	1.500	2.42	M4III
18772	4	1	42.3	-61	0	38.8	60.426164	-61.010781	4.97	1.386	1.41	K4III
18907	4	4	27.7	+6	3	19.8	61.115583	+6.055510	3.91	0.032	0.03	A1V
19018	4	6	30.7	+59	13	15.1	61.627750	+59.220849	5.00	0.495	0.69	F0II
19038	4	6	8.9	+22	8	48.9	61.536995	+22.146910	4.36	1.064	1.02	K0III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α			δ			Espectro
	NH	h	m	s	°	'	"	°	'	"	V	U-V	
19167	4	8	25.2	+50	24	55.1	62.105066	+50.415306	4.25	-0.011	0.08	A0IVn	
19343	4	10	27.0	+47	46	31.8	62.612479	+47.775497	3.96	-0.025	0.08	B3Ve	
19515	4	11	40.2	-41	55	50.9	62.917372	-41.930807	4.93	0.334	0.41	A9V	
19587	4	13	3.8	-6	46	31.3	63.265864	-6.775372	4.04	0.327	0.38	F2II-III	
19740	4	15	16.5	+9	19	26.9	63.818760	+9.324147	4.84	0.799	0.86	G5III	
19747	4	14	48.9	-42	14	6.3	63.703716	-42.235093	3.85	1.085	1.09	K1III	
19777	4	15	33.7	-10	11	49.3	63.890469	-10.197034	4.87	1.156	1.12	K3III	
19780	4	14	44.8	-62	24	46.8	63.686476	-62.412988	3.33	0.915	0.91	G7III	
19811	4	16	33.8	+40	32	36.4	64.140807	+40.543457	4.67	1.007	1.07	G5II comp	
19812	4	16	42.4	+48	28	8.8	64.176556	+48.469104	4.12	0.935	0.93	G0Ib...	
19849	4	16	24.1	-7	36	56.8	64.100373	-7.615782	4.43	0.820	0.89	K1V	
19860	4	16	52.0	+8	57	6.8	64.216846	+8.951888	4.27	-0.054	-0.02	B3IV	
19893	4	16	40.2	-51	25	33.0	64.167597	-51.425824	4.26	0.312	0.37	F4III	
19921	4	16	54.6	-59	14	37.9	64.227678	-59.243864	4.44	1.078	1.05	K2IV	
19990	4	18	42.0	+20	38	12.9	64.675131	+20.636903	4.93	0.259	0.30	A3m	
20042	4	18	49.3	-33	44	23.5	64.705607	-33.739875	3.55	-0.108	-0.09	B9V	
20070	4	20	5.8	+50	21	11.5	65.024035	+50.353208	4.60	0.043	0.16	A2V	
20205	4	21	11.4	+15	41	5.5	65.297707	+15.684852	3.65	0.981	0.95	G8III	
20250	4	21	51.9	+27	24	26.2	65.466220	+27.407277	4.97	1.150	1.35	K1III	
20252	4	22	0.4	+34	37	25.2	65.501803	+34.623661	4.93	0.950	0.94	G8III	
20354	4	23	20.0	+46	33	17.9	65.833300	+46.554959	4.80	-0.022	0.03	B4IV	
20455	4	24	21.1	+17	35	52.7	66.087783	+17.597984	3.77	0.983	0.93	G8III	
20535	4	24	57.5	-33	57	40.6	66.239634	-33.961265	3.97	1.468	1.53	K4III	
20542	4	25	30.7	+17	29	56.2	66.377933	+17.498938	4.80	0.154	0.18	A7V	
20635	4	26	50.0	+22	20	52.5	66.708357	+22.347903	4.21	0.136	0.16	A7IV-V	
20648	4	26	54.6	+17	58	55.1	66.727619	+17.981963	4.30	0.049	0.08	A2IV	
20711	4	27	46.7	+22	52	1.5	66.944383	+22.867086	4.28	0.263	0.32	A8Vn	
20713	4	27	44.7	+15	40	18.7	66.936195	+15.671851	4.48	0.262	0.33	F0V...	
20732	4	27	59.6	+14	46	2.1	66.998369	+14.767244	4.69	0.979	0.96	G8III	
20877	4	29	50.6	+16	24	44.8	67.460809	+16.412451	4.96	1.137	1.12	K2IIIvar	
20885	4	29	58.7	+16	0	52.8	67.494399	+16.014666	3.84	0.952	1.02	G7III	
20889	4	30	3.0	+19	13	57.9	67.512647	+19.232740	3.53	1.014	1.04	K0III	
20894	4	30	3.9	+15	55	23.7	67.516068	+15.923244	3.40	0.179	0.21	A7III	
21029	4	31	58.0	+16	14	43.2	67.991486	+16.245339	4.78	0.170	0.19	A6IV	
21139	4	33	8.0	+0	0	24.3	68.283265	+0.006743	4.91	1.320	1.25	K3II-III	
21248	4	34	28.3	-29	43	5.9	68.617806	-29.718314	4.49	0.972	1.00	K0III	
21273	4	35	14.5	+14	53	38.1	68.810478	+14.893930	4.65	0.255	0.28	A8V	
21281	4	34	31.7	-54	59	42.2	68.632198	-54.995054	3.30	-0.079	-0.08	A0V:	
21393	4	36	30.3	-30	30	48.8	69.126051	-30.513569	3.81	0.957	0.93	G8III	
21402	4	37	0.2	+10	12	32.9	69.250659	+10.209130	4.25	0.184	0.21	A5m	
21421	4	37	19.8	+16	33	23.6	69.332314	+16.556564	0.87	1.538	1.67	K5III	
21444	4	37	32.7	-3	18	14.9	69.386237	-3.304135	3.93	-0.210	-0.20	B2III SB	
21476	4	38	23.7	+41	18	45.7	69.598556	+41.312695	4.25	1.171	1.13	G8II comp	
21589	4	39	31.8	+12	33	28.9	69.882446	+12.558027	4.27	0.122	0.15	A6V	
21594	4	39	18.2	-14	15	28.3	69.825892	-14.257861	3.86	1.082	1.09	K1III	
21644	4	40	2.2	-12	4	34.7	70.009136	-12.076296	4.99	0.074	0.13	A0V	
21683	4	40	40.8	+15	57	52.2	70.169818	+15.964502	4.67	0.147	0.19	A5Vn	
21763	4	41	30.9	-19	37	33.8	70.378720	-19.626045	4.32	1.599	2.27	M3/M4III	
21770	4	41	21.2	-41	49	5.3	70.338166	-41.818143	4.44	0.342	0.40	F2V	
21881	4	43	43.1	+23	0	6.3	70.929718	+23.001762	4.27	-0.112	-0.10	B3V	
22109	4	46	43.8	-3	12	41.5	71.682322	-3.211541	4.01	-0.148	-0.13	B5IV	
22449	4	51	10.3	+7	0	7.5	72.792981	+7.002071	3.19	0.484	0.53	F6V	
22453	4	51	33.9	+37	31	44.8	72.891159	+37.529121	4.89	1.447	1.51	K4II	
22509	4	51	57.0	+8	56	24.9	72.987337	+8.940246	4.35	0.010	0.04	A1Vn	
22549	4	52	30.8	+5	38	42.2	73.128220	+5.645063	3.68	-0.157	-0.16	B2III SB	
22667	4	53	55.3	+14	17	22.0	73.480267	+14.289441	4.71	1.773	2.63	M3Sv	
22678	4	54	16.7	+36	44	31.9	73.569400	+36.742204	4.79	1.414	1.46	K3III	
22701	4	54	6.0	-5	24	48.6	73.524959	-5.413509	4.36	0.257	0.33	A9IV	
22783	4	56	30.2	+66	22	50.6	74.125691	+66.380730	4.26	-0.008	0.09	O9.5Ia SB:	

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
22797	4	55	31.8	+2	28	44.0	73.882420	+2.478897	3.71	-0.179	-0.18	B2III SB
22845	4	56	14.8	+10	11	16.1	74.061524	+10.187812	4.64	0.085	0.11	A0V
22957	4	57	45.1	+13	33	4.1	74.437756	+13.551142	4.06	1.158	1.16	K2III
23015	4	58	35.6	+33	12	9.1	74.648251	+33.202529	2.69	1.490	1.46	K3IIvar
23040	4	59	15.5	+53	47	18.4	74.814691	+53.788440	4.43	-0.017	0.06	A1V
23123	4	59	49.2	+1	44	59.0	74.954945	+1.749728	4.47	1.369	1.32	K2IIvar
23179	5	0	55.5	+37	55	29.4	75.231071	+37.924836	4.93	0.037	0.06	A1V
23231	5	1	4.1	-12	30	10.7	75.267128	-12.502986	4.78	0.267	0.33	F0V
23362	5	2	29.4	-20	1	4.3	75.622585	-20.017853	4.91	-0.047	-0.04	B9V
23364	5	2	37.7	-7	8	23.3	75.657073	-7.139805	4.80	-0.164	-0.18	B3V
23416	5	3	43.9	+43	51	25.0	75.933028	+43.856948	3.03	0.537	0.61	F0Ia
23453	5	4	11.7	+41	6	32.6	76.048815	+41.109069	3.69	1.154	1.12	K4II comp
23497	5	4	33.8	+21	37	22.0	76.140726	+21.622780	4.62	0.155	0.19	A7V
23522	5	5	36.5	+60	28	29.4	76.401970	+60.474842	4.03	0.921	0.89	G0Ib
23595	5	5	17.3	-35	27	2.8	76.322232	-35.450774	4.55	1.177	1.19	K2III
23607	5	5	58.3	+15	26	10.2	76.492851	+15.436156	4.65	-0.064	0.02	A0p Si
23685	5	6	29.9	-22	20	22.8	76.624754	-22.339668	3.19	1.460	1.50	K4III
23693	5	5	56.0	-57	26	23.7	76.483477	-57.439924	4.71	0.526	0.60	F7V
23767	5	8	14.2	+41	15	54.2	77.059337	+41.265057	3.18	-0.148	-0.17	B3V
23783	5	8	36.1	+51	37	38.8	77.150535	+51.627447	4.98	0.343	0.40	F0V
23835	5	8	54.0	+18	40	32.7	77.225066	+18.675747	4.91	0.657	0.74	G4V
23875	5	9	3.4	-5	3	23.5	77.263965	-5.056534	2.78	0.161	0.16	A3IIIvar
23972	5	10	19.2	-8	43	27.9	77.580018	-8.724423	4.25	-0.187	-0.16	B2IVn
24010	5	11	6.2	+15	37	35.1	77.775867	+15.626408	4.81	0.313	0.40	F2IV
24244	5	13	26.5	-11	50	29.7	78.360621	-11.841581	4.45	-0.099	-0.08	B8V
24305	5	14	2.0	-16	10	41.1	78.508334	-16.178086	3.29	-0.110	-0.09	B9IV: HgMn
24327	5	14	21.8	-12	54	50.4	78.590954	-12.913994	4.36	-0.094	-0.07	B7V
24331	5	14	34.4	+2	53	18.7	78.643455	+2.888526	4.46	1.166	1.12	K3III...
24340	5	15	6.5	+38	30	39.8	78.777202	+38.511047	4.82	0.189	0.23	A4m
24372	5	13	44.7	-67	9	27.6	78.436182	-67.157662	4.81	1.274	1.22	K2III
24436	5	15	43.0	-8	10	30.4	78.929116	-8.175114	0.18	-0.030	0.03	B8Ia
24608	5	18	30.2	+46	1	12.8	79.625791	+46.020230	0.08	0.795	0.83	M1: comp
24659	5	18	22.2	-34	52	21.2	79.592365	-34.872558	4.81	0.987	1.00	K0/K1III/IV
24674	5	18	47.8	-6	49	11.1	79.699338	-6.819740	3.59	-0.115	-0.10	B5III
24727	5	19	47.2	+33	23	41.3	79.946592	+33.394817	4.54	1.252	1.32	K3III...
24813	5	20	52.0	+40	7	5.9	80.216846	+40.118292	4.69	0.630	0.70	G0V
24822	5	20	45.1	+22	7	10.7	80.187760	+22.119626	4.96	0.937	0.92	G8III
24845	5	20	42.3	-13	9	11.6	80.176301	-13.153222	4.29	-0.235	-0.26	B0.5IV
24927	5	21	29.7	-21	13	0.2	80.373913	-21.216719	4.70	-0.048	-0.03	A0V
25044	5	23	0.9	-0	21	36.6	80.753632	-0.360175	4.72	-0.168	-0.17	B2IV-V
25142	5	24	7.3	+3	33	58.0	81.030571	+3.566104	4.99	-0.096	-0.14	B1V
25247	5	25	7.7	-7	47	14.4	81.282122	-7.787347	4.13	0.943	0.97	G8III
25278	5	25	51.4	+17	24	14.9	81.463961	+17.404145	5.00	0.544	0.62	F8V SB
25281	5	25	42.6	-2	22	35.3	81.427499	-2.376478	3.35	-0.240	-0.16	B1V + B2
25302	5	26	1.2	+1	52	1.1	81.505033	+1.866960	4.89	-0.200	-0.19	B1V:pe
25336	5	26	26.8	+6	22	11.6	81.611620	+6.369895	1.64	-0.224	-0.22	B2III
25428	5	27	50.6	+28	37	32.9	81.960673	+28.625816	1.65	-0.130	-0.09	B7III
25473	5	28	7.3	+3	6	53.8	82.030496	+3.114952	4.59	-0.199	-0.21	B2IV
25539	5	29	6.5	+21	57	20.4	82.277015	+21.955679	4.88	-0.140	-0.13	B2.5IV
25606	5	29	17.8	-20	44	29.4	82.324003	-20.741489	2.81	0.807	0.86	G5II
25737	5	30	58.7	-1	4	29.4	82.744585	-1.074823	4.71	1.592	1.70	K5III
25813	5	32	5.8	+5	57	53.5	83.024096	+5.964872	4.20	-0.143	-0.14	B5V
25859	5	32	5.0	-35	27	14.1	83.020865	-35.453920	3.86	1.130	1.09	K1II/III
25923	5	33	7.0	-7	17	6.9	83.279301	-7.285257	4.62	-0.261	-0.28	B0V
25930	5	33	15.6	-0	16	58.2	83.314878	-0.282844	2.25	-0.175	-0.21	O9.5II
25945	5	33	39.0	+18	36	37.0	83.412595	+18.610273	4.32	2.060	2.54	M2Ib
25984	5	34	19.5	+32	12	27.8	83.581151	+32.207712	4.71	0.281	0.51	B5Iab
25985	5	33	48.7	-17	48	23.1	83.452947	-17.806410	2.58	0.211	0.32	F0Ib
26069	5	33	50.4	-62	28	26.9	83.460159	-62.474147	3.76	0.640	0.69	F6Ia

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
NH	h	m	s	°	'	"	°	°				
26176	5	36	10.0	+9	30	14.8	84.041715	+9.504116	4.39	-0.157	-0.13	B0IV...
26199	5	36	14.6	-5	59	15.2	84.060821	-5.987558	4.78	-0.248	-0.27	B0.5V
26207	5	36	29.3	+9	56	54.6	84.122136	+9.948510	3.39	-0.160	-0.13	O...
26220	5	36	28.1	-5	22	22.7	84.117032	-5.372981	4.98	0.000	0.00	O7
26235	5	36	35.2	-5	24	6.4	84.146474	-5.401786	4.98	-0.097	0.03	O9.5Vpe
26237	5	36	35.8	-4	49	26.9	84.148967	-4.824146	4.58	-0.183	-0.19	B2III...
26241	5	36	38.0	-5	53	44.4	84.158137	-5.895671	2.75	-0.210	-0.22	O9III
26311	5	37	27.5	-1	11	17.4	84.364453	-1.188168	1.69	-0.184	-0.16	B0Ia
26366	5	38	15.2	+9	18	7.1	84.563370	+9.301962	4.09	0.951	1.02	G8III-IV
26451	5	39	6.6	+21	9	19.0	84.777616	+21.155275	2.97	-0.148	-0.15	B4IIIp
26549	5	39	58.6	-2	35	16.1	84.994295	-2.587809	3.77	-0.190	-0.25	O9.5V...
26563	5	40	4.3	-7	12	3.5	85.017786	-7.200965	4.77	0.139	0.16	A4V
26594	5	40	28.8	+4	8	0.4	85.120136	+4.133451	4.50	-0.098	-0.02	B3IIIe
26634	5	40	32.2	-34	3	44.8	85.134255	-34.062439	2.65	-0.120	-0.07	B7IV
26727	5	41	59.8	-1	55	53.4	85.499010	-1.931488	1.74	-0.199	-0.18	O9.5Ib SB
26736	5	42	5.4	-1	7	4.0	85.522518	-1.117778	4.95	-0.197	-0.21	B2IV-V
26777	5	42	42.8	+16	32	41.1	85.678125	+16.544747	4.84	-0.125	-0.10	B3IV...
26885	5	43	44.7	+1	29	4.5	85.936329	+1.484569	4.90	1.144	1.17	K1III
27072	5	45	29.1	-22	26	30.9	86.371349	-22.441903	3.59	0.481	0.57	F7V
27100	5	44	49.2	-65	43	35.2	86.204851	-65.726446	4.34	0.217	0.27	A7V
27288	5	48	4.0	-14	48	52.3	87.016676	-14.814532	3.55	0.104	0.11	A2Vann
27321	5	47	52.0	-51	3	30.9	86.966591	-51.058580	3.85	0.171	0.18	A3V
27366	5	48	55.2	-9	39	45.6	87.229816	-9.662678	2.07	-0.168	-0.14	B0.5Iavar
27468	5	50	31.3	+24	34	24.8	87.630296	+24.573565	4.88	1.021	1.04	G8IIIvar
27483	5	50	52.4	+39	11	12.6	87.718192	+39.186834	4.51	0.949	0.95	G8III
27511	5	50	55.6	+12	39	25.3	87.731539	+12.657014	4.89	-0.068	-0.05	B9IV
27530	5	50	16.4	-56	9	40.4	87.568533	-56.161226	4.50	1.075	1.06	K1III
27628	5	51	49.5	-35	45	37.8	87.956156	-35.760492	3.12	1.146	1.10	K1.5III
27639	5	52	42.8	+37	18	36.4	88.178207	+37.310105	4.72	1.621	1.90	M1III
27654	5	52	22.5	-20	52	42.8	88.093924	-20.878562	3.76	0.984	1.05	G8III/IV
27673	5	53	11.4	+39	9	10.9	88.297425	+39.153039	3.97	1.132	1.07	K0III
27750	5	53	42.8	+1	51	33.1	88.428418	+1.859185	4.76	1.382	1.31	K2IIvar
27810	5	54	0.3	-33	47	50.3	88.501260	-33.797315	4.88	-0.154	-0.14	B5V
27830	5	54	52.1	+27	36	56.5	88.717088	+27.615708	4.56	-0.008	0.00	A0V
27890	5	54	17.4	-63	4	56.5	88.572334	-63.082354	4.65	1.022	1.03	K1III/IV
27913	5	55	50.1	+20	16	42.3	88.958860	+20.278425	4.39	0.594	0.66	G0V
27949	5	56	54.1	+55	42	34.3	89.225388	+55.709515	4.96	0.052	0.09	A2V
27989	5	56	29.9	+7	24	34.6	89.124737	+7.409611	0.45	1.500	2.32	M2Ib
28010	5	56	20.6	-37	7	6.3	89.085646	-37.118403	4.97	1.102	1.03	K1IIICN...
28103	5	57	31.3	-14	9	53.9	89.380395	-14.164968	3.71	0.337	0.39	F1V
28199	5	58	24.4	-35	16	55.2	89.601575	-35.282000	4.36	-0.165	-0.16	B2.5IV
28237	5	59	30.9	+25	57	16.7	89.878811	+25.954640	4.81	-0.088	-0.04	B1Ib
28328	5	59	53.9	-42	48	53.7	89.974386	-42.814929	3.96	1.146	1.06	K0III
28358	6	1	32.7	+54	17	0.4	90.386367	+54.283440	3.72	1.010	0.99	K0III
28360	6	1	19.6	+44	56	49.8	90.331661	+44.947171	1.90	0.077	0.05	A2V
28380	6	1	23.5	+37	12	42.3	90.348087	+37.211761	2.65	-0.083	-0.06	A0p Si
28404	6	1	45.2	+45	56	10.3	90.438520	+45.936183	4.30	1.701	2.51	M3IIvar
28413	6	1	16.9	-3	4	30.5	90.320560	-3.075138	4.53	1.202	1.26	K2IIIvar
28574	6	2	59.6	-10	35	57.6	90.748411	-10.599346	4.92	-0.128	-0.08	B5III
28614	6	3	43.9	+9	38	42.7	90.932986	+9.645206	4.12	0.170	0.19	Am...
28716	6	5	22.5	+20	8	8.4	91.343835	+20.135666	4.64	0.236	0.41	B2Iavar
28734	6	5	36.6	+23	15	34.7	91.402539	+23.259646	4.16	0.835	0.88	G7III
28816	6	6	4.8	-16	29	15.9	91.519868	-16.487750	4.92	0.196	0.21	Ap shell
28910	6	7	15.9	-14	56	21.0	91.816251	-14.939161	4.67	0.046	0.04	A0V
29034	6	8	22.1	-37	15	27.5	92.092032	-37.257649	5.00	-0.095	-0.08	B8:IV
29038	6	8	58.3	+14	45	48.3	92.242862	+14.763408	4.42	-0.164	-0.17	B3IV
29276	6	10	46.6	-54	58	29.5	92.694097	-54.974871	4.72	-0.229	-0.24	B0.5IV
29426	6	13	20.0	+14	12	4.0	93.333325	+14.201113	4.45	-0.180	-0.16	B3IV
29434	6	13	28.1	+16	7	21.7	93.366959	+16.122703	4.95	-0.149	-0.12	B5Vn

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
29651	6	16	3.1	-6	17	2.8	94.012757	-6.284100	3.99	1.319	1.27	K3III
29655	6	16	21.4	+22	29	50.8	94.089203	+22.497443	3.31	1.600	2.70	M3III
29696	6	16	56.4	+29	29	12.2	94.234821	+29.486723	4.32	1.021	1.04	G8IIIvar
29735	6	16	52.3	-13	43	41.5	94.217774	-13.728187	5.00	-0.078	-0.05	B9V
29807	6	17	25.5	-35	9	0.1	94.356207	-35.150037	4.37	0.978	0.94	G8II
29997	6	21	32.4	+69	18	25.6	95.385192	+69.307107	4.76	0.025	0.05	A0Vn
30060	6	21	47.0	+58	59	55.8	95.445710	+58.998823	4.44	0.032	0.05	A2Vs
30093	6	21	13.2	-2	57	24.3	95.305168	-2.956747	4.91	1.613	1.90	M1III
30122	6	21	15.3	-30	4	32.5	95.313613	-30.075695	3.02	-0.160	-0.20	B2.5V
30277	6	23	0.6	-33	27	0.6	95.752504	-33.450156	3.85	0.858	0.88	G7II
30324	6	23	46.8	-17	58	11.0	95.944812	-17.969728	1.98	-0.240	-0.24	B1II/III
30343	6	24	26.5	+22	29	55.6	96.110612	+22.498780	2.87	1.621	2.30	M3IIIvar
30419	6	25	4.0	+4	34	42.4	96.266644	+4.578433	4.39	0.215	0.25	A5IV
30438	6	24	29.8	-52	42	35.6	96.124020	-52.709893	-0.62	0.164	0.23	F0Ib
30520	6	26	47.0	+49	16	21.1	96.695926	+49.272530	4.92	1.905	1.94	K5Iabvar
30788	6	29	4.8	-32	35	48.8	97.269808	-32.596900	4.47	-0.169	-0.16	B4V
30867	6	30	0.4	-7	3	2.0	97.501588	-7.050552	3.76	-0.113	-0.11	B3Ve
30883	6	30	25.1	+20	11	39.9	97.604386	+20.194419	4.13	-0.115	-0.10	B6III
31125	6	32	52.7	-23	26	15.3	98.219385	-23.437577	4.34	-0.245	-0.24	B1III
31216	6	34	13.7	+7	18	46.9	98.557144	+7.313022	4.47	0.023	0.09	A0Ib
31407	6	35	31.0	-52	59	47.1	98.879128	-52.996425	4.35	-0.021	0.06	B9III
31416	6	36	5.0	-22	59	8.8	99.020972	-22.985767	4.54	-0.035	-0.01	A0III
31592	6	37	45.2	-19	16	42.2	99.438269	-19.278398	3.95	1.037	1.02	K1III+...
31681	6	39	7.5	+16	22	33.8	99.781336	+16.376050	1.93	0.001	0.04	A0IV
31685	6	38	30.7	-43	13	6.8	99.627846	-43.218551	3.17	-0.103	-0.07	B8III SB
31700	6	38	58.1	-18	15	37.1	99.742089	-18.260297	4.42	1.137	1.12	K0II/III
31827	6	40	23.9	-14	10	9.8	100.099696	-14.169400	4.82	1.459	1.45	K2III
31832	6	41	4.7	+42	27	52.9	100.269435	+42.464703	4.80	1.236	1.17	K3III
31978	6	42	19.6	+9	52	15.9	100.581669	+9.871086	4.66	-0.233	-0.22	O7
32246	6	45	26.3	+25	6	16.6	101.359591	+25.104615	3.06	1.377	1.22	A3mA6-A9
32249	6	45	22.2	+13	12	4.5	101.342339	+13.201251	4.49	1.167	1.11	K1III
32349	6	46	13.7	-16	45	4.6	101.557037	-16.751275	-1.44	0.009	-0.02	A0m...
32362	6	46	39.8	+12	52	1.7	101.666011	+12.867141	3.35	0.443	0.48	F5IV
32438	6	48	23.6	+59	24	49.2	102.098487	+59.413655	4.86	0.084	0.10	A3V
32533	6	48	39.6	+8	0	31.8	102.165157	+8.008821	4.77	1.396	1.36	K4III
32578	6	49	8.3	+2	23	0.3	102.284586	+2.383429	4.48	1.099	1.06	K0III
32607	6	48	26.5	-61	58	5.9	102.110304	-61.968318	3.24	0.225	0.28	A7IV
32759	6	50	45.4	-32	32	17.3	102.689183	-32.538144	3.50	-0.116	-0.10	B1.5IVne
32761	6	50	23.2	-53	39	6.9	102.596847	-53.651922	4.41	0.899	0.92	G6II
32768	6	50	32.7	-50	38	40.8	102.636049	-50.644658	2.94	1.207	1.14	K0III...
32844	6	52	29.7	+41	44	59.4	103.123816	+41.749844	4.99	1.256	1.23	K3III
32855	6	51	45.9	-34	23	51.4	102.941067	-34.397598	4.99	1.379	1.28	K2/K3III
33018	6	54	24.1	+33	55	45.6	103.600406	+33.929332	3.60	0.102	0.14	A3III
33092	6	54	36.5	-20	15	22.0	103.652069	-20.256111	4.82	-0.212	-0.21	B1Ib
33152	6	55	9.0	-24	12	59.0	103.787437	-24.216387	3.89	1.740	1.58	K3Iab
33160	6	55	19.7	-12	4	15.6	103.832130	-12.071001	4.08	1.418	1.49	K4III
33202	6	56	1.5	+13	8	40.9	104.006313	+13.144697	4.73	0.321	0.36	F0Vp
33302	6	56	41.2	-20	10	9.5	104.171656	-20.169317	4.66	0.374	0.46	F2IV/V
33345	6	57	14.0	-14	4	36.4	104.308447	-14.076767	5.00	1.182	1.30	B9.5V
33347	6	57	13.8	-17	5	15.4	104.307532	-17.087619	4.36	-0.063	0.01	B3Ib/II
33357	6	56	55.2	-48	45	15.9	104.229799	-48.754425	4.94	1.668	2.05	M1III
33449	6	59	23.5	+58	23	15.3	104.847738	+58.387595	4.35	0.850	0.85	G5III-IV
33485	6	59	24.1	+45	3	34.7	104.850606	+45.059631	4.90	0.027	0.05	A2Vn
33579	6	59	35.4	-29	0	24.7	104.897292	-29.006855	1.50	-0.211	-0.20	B2II
33694	7	3	36.1	+76	56	27.5	105.900377	+76.940960	4.55	1.365	1.35	K4III
33856	7	2	41.7	-27	58	16.9	105.673900	-27.971366	3.49	1.729	1.82	K4III
33971	7	4	7.8	-4	16	35.5	106.032323	-4.276532	4.99	-0.195	-0.19	B1V
33977	7	4	2.9	-23	52	14.1	106.012013	-23.870590	3.02	-0.077	-0.03	B3Ia
34045	7	4	52.0	-15	40	16.1	106.216715	-15.671132	4.11	-0.112	-0.09	B8II

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α			δ			Espectro
	NH	h	m	s	°	'	"	°	'	"	V	U-V	
34059	7	4	31.8	-49	37	14.5	106.132691	-49.620707	4.92	0.140	0.15	A4IV	
34088	7	5	33.6	+20	31	56.0	106.390157	+20.532220	4.01	0.899	0.90	G3Ibv SB	
34444	7	9	23.3	-26	26	0.8	107.347014	-26.433559	1.83	0.671	0.67	F8Ia	
34481	7	8	31.9	-70	32	18.4	107.132946	-70.538451	3.78	1.006	0.94	G8IIIvar	
34495	7	9	40.5	-39	41	46.3	107.418573	-39.696203	4.83	-0.179	-0.17	B3IV/V	
34622	7	11	26.7	-4	16	37.7	107.861223	-4.277140	4.91	1.020	1.03	K0III	
34693	7	12	41.8	+30	12	9.9	108.174094	+30.202742	4.41	1.261	1.25	K2III	
34752	7	13	20.2	+39	16	41.3	108.334207	+39.278136	4.91	1.451	1.48	K4II-III	
34769	7	13	6.9	-0	32	6.5	108.278805	-0.535142	4.15	-0.005	0.02	A2V	
34834	7	13	15.6	-46	48	4.5	108.314826	-46.801251	4.49	0.324	0.40	F0IV	
34899	7	13	57.3	-45	13	34.9	108.488939	-45.226371	4.87	-0.003	0.02	Ap	
34922	7	14	17.2	-44	40	50.9	108.571732	-44.680798	4.42	1.331	3.46	M5e	
34981	7	15	15.2	-26	23	46.3	108.813162	-26.396181	4.42	-0.170	-0.12	B3III	
35020	7	15	18.7	-48	18	56.7	108.827843	-48.315747	4.75	-0.091	-0.07	B8/B9V	
35037	7	15	48.3	-26	48	59.9	108.951335	-26.816629	4.01	-0.150	-0.08	B2IV/Ve	
35205	7	17	33.9	-27	55	33.3	109.391422	-27.925926	4.66	1.589	2.11	M2III	
35210	7	17	38.8	-23	21	38.2	109.411782	-23.360612	4.83	1.601	1.77	K4III	
35228	7	16	48.7	-68	0	7.1	109.202977	-68.001959	3.97	0.760	0.78	F6II	
35264	7	18	0.5	-37	8	33.8	109.502087	-37.142711	2.71	1.616	1.65	K3Ib	
35350	7	19	30.0	+16	29	39.0	109.874884	+16.494158	3.58	0.106	0.12	A3V...	
35363	7	19	10.7	-36	46	47.6	109.794516	-36.779892	4.65	-0.099	0.11	B2V+...	
35384	7	20	23.3	+49	25	6.4	110.096980	+49.418437	5.00	0.087	0.16	A4IIIln	
35412	7	19	41.6	-24	36	17.5	109.923410	-24.604872	4.88	-0.160	-0.06	O7f	
35415	7	19	43.5	-25	0	2.0	109.931127	-25.000558	4.37	-0.132	-0.10	O9Ib	
35550	7	21	35.1	+21	56	6.5	110.396090	+21.935146	3.50	0.374	0.44	F0IV...	
35727	7	23	18.3	-19	3	53.4	110.826212	-19.064832	4.94	-0.039	0.01	B5II/III	
35904	7	25	3.9	-29	21	8.1	111.266156	-29.352257	2.45	-0.083	0.01	B5Ia	
36041	7	26	59.2	+9	13	33.2	111.746591	+9.225879	4.99	0.991	0.96	G8III	
36046	7	27	14.7	+27	44	50.2	111.811388	+27.747265	3.78	1.024	1.01	G9III+...	
36145	7	28	33.3	+49	9	37.1	112.138834	+49.160314	4.61	-0.001	0.02	A1V	
36188	7	28	28.7	+8	14	17.1	112.119594	+8.238072	2.89	-0.097	-0.07	B8Vvar	
36284	7	29	29.8	+8	52	26.6	112.374066	+8.874054	4.33	1.425	1.48	K3III SB	
36366	7	30	41.1	+31	44	1.3	112.671144	+31.733705	4.16	0.320	0.40	F0V...	
36377	7	30	0.5	-43	21	7.8	112.502038	-43.352156	3.25	1.509	1.54	K5III SB	
36425	7	31	9.5	+11	57	14.3	112.789701	+11.953982	4.55	1.276	1.21	K2III	
36431	7	30	53.9	-23	4	36.0	112.724507	-23.076654	4.85	0.243	0.35	A6Ib/II	
36514	7	31	39.8	-31	0	54.4	112.915792	-31.015119	4.65	0.904	0.89	G2Ib...	
36547	7	36	4.4	+82	21	25.3	114.018421	+82.357032	4.92	1.633	2.66	M4IIIa	
36773	7	34	55.5	-14	34	42.4	113.731237	-14.578448	4.82	1.362	1.37	A4Ia	
36795	7	35	6.1	-22	21	1.6	113.775549	-22.350452	4.44	0.521	0.60	F6V	
36850	7	36	9.4	+31	49	55.8	114.039215	+31.832157	1.58	0.034	0.05	A2Vm	
36917	7	36	21.9	-28	25	29.5	114.091391	-28.424851	4.65	-0.111	-0.12	B8V	
36942	7	36	16.1	-52	35	21.7	114.066913	-52.589367	4.93	1.373	1.39	K3III	
36962	7	37	25.7	+26	50	21.1	114.357233	+26.839181	4.06	1.540	1.66	K5III	
37096	7	38	16.6	-35	1	29.6	114.568984	-35.024881	4.53	-0.081	-0.08	B8IV/V	
37173	7	39	19.3	-25	25	18.6	114.830245	-25.421845	4.69	-0.100	-0.07	B8IV	
37229	7	39	50.1	-26	51	39.5	114.958942	-26.860961	3.80	-0.159	-0.15	B5IV	
37265	7	40	45.6	+34	31	33.4	115.190101	+34.525941	4.89	0.413	0.47	F3III	
37279	7	40	35.0	+5	9	37.8	115.145807	+5.160494	0.40	0.432	0.49	F5IV-V	
37297	7	40	19.2	-38	21	55.8	115.079847	-38.365492	4.84	-0.189	-0.17	B3V	
37379	7	41	30.4	-15	19	20.1	115.376848	-15.322256	4.98	1.543	1.49	K3III	
37447	7	42	25.1	-9	36	35.6	115.604397	-9.609886	3.94	1.022	1.01	K0III	
37504	7	41	30.2	-72	39	52.3	115.375968	-72.664530	3.93	1.033	1.02	K0III	
37609	7	45	4.0	+58	39	0.7	116.266574	+58.650207	4.93	0.104	0.17	A3IVn	
37629	7	44	50.4	+28	49	19.7	116.209904	+28.822140	4.23	1.118	1.12	K1III SB	
37648	7	44	31.8	-28	28	13.8	116.132341	-28.470491	4.63	1.632	1.76	K5III	
37677	7	44	47.5	-29	0	53.1	116.197945	-29.014747	3.94	0.160	0.34	A2Iab	
37740	7	45	55.4	+24	20	13.9	116.480991	+24.337198	3.57	0.932	0.90	G8III	
37819	7	46	7.7	-38	1	45.2	116.532111	-38.029234	3.62	1.706	1.82	K4III	

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α		δ		V	U-V	B-V	Espectro
	NH	h	m	s	°	'	″	°	°					
37826	7	46	48.7	+27	57	54.0	116.702994	+27.965009	1.16	0.991	0.97		K0IIIvar	
37908	7	47	32.4	+18	26	54.3	116.885097	+18.448404	4.89	1.425	1.54		K5III	
38070	7	49	6.3	-25	59	57.7	117.276239	-25.999368	4.40	-0.070	0.13		B1IV:nne	
38089	7	49	3.9	-47	8	25.9	117.266292	-47.140532	4.69	1.039	1.03		K0III	
38164	7	49	59.1	-46	26	9.3	117.496240	-46.435915	4.10	-0.160	-0.17		B0III	
38170	7	50	19.5	-24	55	21.6	117.581253	-24.922665	3.34	1.218	1.08		G6Ia	
38414	7	53	3.6	-40	38	24.4	118.264990	-40.640114	3.71	1.012	1.04		G5III...	
38455	7	53	30.7	-38	55	38.6	118.377927	-38.927379	4.49	-0.188	-0.18		B2V	
38500	7	53	45.0	-49	40	39.8	118.437693	-49.677711	4.63	-0.228	-0.24		B1.5Vp	
38518	7	54	1.4	-48	10	4.1	118.505647	-48.167794	4.22	-0.130	-0.11		B0.5Ib	
38538	7	54	59.6	+26	42	1.3	118.748187	+26.700371	4.97	0.098	0.14		A3V	
38827	7	57	24.1	-53	2	56.2	119.350253	-53.048934	3.46	-0.177	-0.17		B3IVp	
38835	7	57	54.8	-22	56	48.8	119.478170	-22.946876	4.20	0.718	0.75		F7/F8II	
38901	7	58	38.7	-30	24	6.3	119.661407	-30.401761	4.76	0.151	0.24		A7III	
38957	7	58	56.7	-49	18	44.4	119.736271	-49.312331	4.47	-0.180	-0.14		B1Vp + B2	
39079	8	0	57.6	-3	44	52.7	120.239825	-3.747965	4.93	1.205	1.22		K2III	
39095	8	0	57.9	-18	28	4.3	120.241386	-18.467867	4.61	0.087	0.11		A1V	
39138	8	0	38.3	-63	38	8.8	120.159401	-63.635768	4.81	-0.173	-0.16		B3V	
39211	8	2	28.1	-1	27	44.1	120.616957	-1.462253	4.69	1.475	1.54		K4III	
39311	8	3	32.4	+2	15	56.1	120.884811	+2.265593	4.39	1.252	1.27		K2III	
39424	8	5	1.1	+27	43	25.4	121.254655	+27.723718	4.94	1.130	1.09		K2III	
39429	8	4	26.7	-40	4	23.8	121.111425	-40.073285	2.21	-0.269	-0.22		O5IAf	
39757	8	8	35.3	-24	22	34.7	122.147003	-24.376319	2.83	0.458	0.42		F2mF5IIp	
39794	8	7	60.0	-68	41	20.8	121.999856	-68.689112	4.35	-0.113	-0.10		B6IV	
39847	8	10	17.4	+51	26	1.3	122.572302	+51.433693	4.78	0.048	0.10		A2V	
39863	8	9	49.5	-3	3	24.1	122.456223	-3.056693	4.36	0.970	0.92		G2Ib	
39903	8	9	24.9	-61	22	38.3	122.353617	-61.377295	4.74	0.437	0.53		F5V	
39906	8	10	7.3	-19	19	5.2	122.530351	-19.318115	4.40	-0.160	-0.14		B5V	
39953	8	10	17.3	-47	24	35.1	122.571955	-47.409755	1.75	-0.145	-0.14		WC8 + O9I	
40084	8	12	25.3	-13	0	4.1	123.105305	-13.001147	4.72	0.939	0.93		K0III	
40091	8	12	14.0	-39	41	33.7	123.058501	-39.692702	4.44	1.590	1.62		K4III	
40096	8	12	15.6	-43	3	41.2	123.064926	-43.061449	4.73	0.164	0.30		A7Ib	
40167	8	13	36.8	+17	34	19.3	123.403317	+17.572030	4.67	0.531	0.60		G0V	
40259	8	14	27.5	-15	51	48.5	123.614759	-15.863463	4.99	1.066	1.02		G5Ib/II	
40274	8	14	25.0	-35	58	28.9	123.604367	-35.974703	4.78	-0.110	-0.01		B2ne	
40326	8	14	55.2	-40	25	25.8	123.729846	-40.423844	4.42	1.170	1.15		K1II/III	
40526	8	17	50.5	+9	6	30.2	124.460545	+9.108376	3.53	1.481	1.47		K4III	
40702	8	17	51.3	-76	59	46.9	124.463671	-76.996355	4.05	0.413	0.49		F5III	
40706	8	19	28.4	-36	44	10.9	124.868249	-36.736361	4.44	0.222	0.25		A4m...	
40888	8	19	51.8	-77	33	45.2	124.965988	-77.562551	4.34	1.161	1.10		K0III-IV	
40945	8	22	21.0	-33	8	0.5	125.587347	-33.133483	4.83	1.419	1.35		K2/K3III	
41037	8	23	0.9	-59	35	20.0	125.753625	-59.588899	1.86	1.196	1.16		K3III+B2V	
41039	8	23	16.9	-48	34	11.9	125.820604	-48.569971	4.79	-0.146	-0.12		B1V	
41075	8	24	30.2	+43	6	26.9	126.125968	+43.107464	4.25	1.550	1.61		K5III	
41307	8	26	53.0	-3	59	16.2	126.721020	-3.987838	3.91	-0.012	-0.02		A0V	
41312	8	25	59.8	-66	13	8.3	126.499022	-66.218963	3.77	1.132	1.10		K2IIIvar	
41704	8	32	16.8	+60	38	1.8	128.069969	+60.633829	3.35	0.856	0.87		G4II-III	
42134	8	35	54.4	-58	5	40.9	128.976492	-58.094698	4.84	0.981	0.98		K0III	
42312	8	38	30.4	-43	4	32.9	129.626545	-43.075801	4.11	0.109	0.20		A6II	
42313	8	38	57.1	+5	37	0.6	129.737858	+5.616847	4.14	0.003	0.02		A1Vnn	
42402	8	40	2.2	+3	15	14.2	130.009114	+3.253937	4.45	1.216	1.12		K2III	
42483	8	40	43.5	-29	38	58.0	130.181349	-29.649455	4.86	0.900	0.99		G5III	
42509	8	41	11.1	-12	33	47.9	130.296325	-12.563305	4.98	1.415	1.40		K3III	
42515	8	41	3.7	-35	23	47.1	130.265606	-35.396423	3.97	0.936	0.91		G5II/III	
42527	8	42	19.7	+64	14	23.5	130.582291	+64.239870	4.59	1.179	1.18		K2III	
42536	8	40	59.7	-53	0	34.6	130.248746	-53.009611	3.60	-0.168	-0.16		B3IV	
42568	8	41	9.4	-59	50	56.5	130.289121	-59.849038	4.31	-0.117	-0.08		B1.5III	
42570	8	41	26.4	-46	44	12.7	130.359950	-46.736850	3.77	0.670	0.92		F3Ia	
42624	8	42	1.4	-47	24	19.7	130.505711	-47.405480	4.74	0.137	0.25		A5II	

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α		δ		Espectro	
	NH	h	m	s	°	'	"	°	°	V		U-V
42662	8	42	51.6	-16	1	57.8	130.714795	-16.032734	4.87	1.063	1.04	K0IIICN...
42726	8	43	7.5	-53	12	9.9	130.781372	-53.202752	4.83	-0.173	-0.18	B3IV
42799	8	44	30.2	+3	18	33.3	131.125938	+3.309240	4.30	-0.192	-0.20	B3V...
42806	8	44	42.0	+21	22	43.6	131.174947	+21.378769	4.66	0.010	0.03	A1IV
42828	8	44	34.7	-33	16	33.0	131.144433	-33.275827	3.68	-0.180	-0.17	B1.5III
42835	8	44	52.5	-7	19	24.0	131.218897	-7.323335	4.63	0.840	0.85	G2Ib
42884	8	45	16.5	-42	44	20.4	131.318792	-42.738996	4.05	0.874	0.89	G5III
42911	8	46	4.4	+18	3	45.7	131.518493	+18.062693	3.94	1.083	1.01	K0III
42913	8	45	22.8	-54	47	58.0	131.345077	-54.799457	1.93	0.043	0.05	A1V
43023	8	46	51.5	-46	7	55.4	131.714709	-46.132062	3.87	0.015	0.09	A1III
43067	8	47	32.0	-13	38	18.8	131.883307	-13.638555	4.32	0.900	0.91	G8III
43103	8	48	10.5	+28	40	7.0	132.043622	+28.668598	4.03	1.007	0.96	G8Iab:
43105	8	47	20.5	-56	51	38.0	131.835500	-56.860544	4.50	-0.169	-0.16	B3Vne
43109	8	48	4.2	+6	19	39.1	132.017474	+6.327541	3.38	0.685	0.78	G0III-IV
43234	8	49	43.7	+5	44	45.2	132.432214	+5.745880	4.35	-0.044	-0.03	A0Vn
43347	8	50	38.5	-45	24	0.0	132.660549	-45.400012	4.94	0.043	0.06	A2III
43409	8	51	34.4	-27	48	6.7	132.893203	-27.801855	4.02	1.272	1.24	K3III
43783	8	55	36.0	-60	44	19.6	133.900032	-60.738776	3.84	-0.104	-0.08	B8III
43813	8	56	41.2	+5	51	3.3	134.171792	+5.850906	3.11	0.978	0.96	G8III-IV
43825	8	56	34.7	-27	46	38.3	134.144494	-27.777305	4.87	0.142	0.16	A3IV
43878	8	57	3.7	-52	49	6.3	134.265228	-52.818412	4.68	-0.115	-0.11	B5V
43937	8	57	34.3	-59	19	28.4	134.392997	-59.324562	4.93	-0.182	-0.21	B2IV-V
44066	8	59	49.5	+11	45	41.1	134.956161	+11.761426	4.26	0.141	0.14	A5m
44127	9	0	52.4	+47	56	38.2	135.218434	+47.943942	3.12	0.223	0.25	A7IV
44191	9	1	0.4	-41	20	59.7	135.251539	-41.349908	4.45	0.646	0.75	Fp
44248	9	2	13.2	+41	41	3.9	135.554887	+41.684417	3.96	0.463	0.53	F5V
44382	9	2	49.6	-66	29	39.3	135.706854	-66.494255	4.00	0.145	0.15	Am
44390	9	4	43.1	+67	31	54.4	136.179725	+67.531788	4.74	1.542	2.15	M3III
44471	9	5	17.2	+47	3	28.3	136.321643	+47.057863	3.57	0.007	0.03	A1Vn
44511	9	5	0.1	-47	11	46.1	136.250245	-47.196143	3.75	1.174	1.11	K2III
44599	9	5	11.7	-72	42	4.8	136.298761	-72.701324	4.47	0.607	0.67	F6II-III
44626	9	5	49.7	-70	38	14.1	136.456969	-70.637249	4.66	-0.149	-0.13	B2IVe
44659	9	7	15.7	+4	59	35.0	136.815212	+4.993063	4.99	1.189	1.17	K2II-III
44700	9	8	4.8	+38	21	9.6	137.019970	+38.352660	4.56	1.037	0.97	G8Ib-II
44816	9	8	53.9	-43	31	56.7	137.224641	-43.532418	2.23	1.665	1.69	K4Ib-II
44824	9	9	7.5	-25	57	30.6	137.281096	-25.958513	4.62	1.594	1.66	K4/K5III
44901	9	10	35.1	+51	30	14.4	137.646347	+51.503992	4.46	0.288	0.30	Am
45038	9	12	30.9	+67	1	56.2	138.128632	+67.032279	4.80	0.489	0.57	F7IV-V
45075	9	12	54.6	+63	24	42.9	138.227590	+63.411908	4.67	0.381	0.45	Am
45080	9	11	36.8	-59	4	4.3	137.903179	-59.067869	3.43	-0.190	-0.17	B2IV
45085	9	11	57.8	-44	58	8.5	137.990965	-44.969032	4.99	0.222	0.36	B5Ia
45101	9	11	50.0	-62	25	5.0	137.958318	-62.418045	3.96	-0.180	-0.18	B3IV
45238	9	13	27.5	-69	49	6.1	138.364754	-69.818358	1.67	0.070	0.02	A2IV
45336	9	15	38.2	+2	12	34.9	138.909265	+2.209702	3.89	-0.060	-0.07	B9.5V
45439	9	16	34.7	-38	40	22.7	139.144784	-38.672974	4.92	1.084	1.06	K1III
45448	9	16	44.0	-37	30	58.4	139.183350	-37.516215	4.63	0.473	0.52	F3/F5V
45493	9	17	56.2	+53	55	8.1	139.483997	+53.918914	4.80	0.199	0.26	A5V
45496	9	16	53.6	-57	38	41.0	139.223280	-57.644713	4.34	1.602	1.83	M1III
45556	9	17	44.7	-59	22	43.0	139.436391	-59.378621	2.21	0.189	0.28	A8Ib
45688	9	20	21.7	+36	41	50.8	140.090223	+36.697450	3.82	0.066	0.12	A1V
45751	9	20	57.2	-12	4	45.8	140.238312	-12.079384	4.77	0.927	0.91	G8III
45811	9	21	40.8	-9	39	38.7	140.419946	-9.660760	4.80	0.913	0.92	F5V+...
45856	9	21	32.0	-62	30	34.5	140.383394	-62.509578	4.79	0.926	0.96	G6III
45860	9	22	32.4	+34	17	15.0	140.635168	+34.287503	3.14	1.550	1.65	M0IIIvar
45902	9	22	34.7	-26	4	14.7	140.644754	-26.070749	4.71	1.633	1.91	M0III
45941	9	22	52.4	-55	6	57.7	140.718315	-55.116014	2.47	-0.141	-0.17	B2IV
46026	9	24	16.0	-28	56	22.6	141.066530	-28.939624	4.71	0.892	0.91	G8III
46146	9	26	4.6	+26	4	31.8	141.519021	+26.075507	4.47	1.222	1.20	K2III
46371	9	28	25.7	-22	27	7.9	142.107183	-22.452206	4.72	1.154	1.11	K1III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α			δ			Espectro
	NH	h	m	s	°	'	"	°	'	"	V	U-V	
46390	9	28	47.5	-8	45	57.3	142.197781	-8.765920	1.99	1.440	1.39	K3III	
46509	9	30	23.4	-2	52	37.6	142.597533	-2.877100	4.59	0.411	0.52	F6V	
46515	9	30	15.5	-36	3	33.9	142.564597	-36.059410	4.51	1.408	1.37	K3III	
46651	9	31	40.1	-40	34	30.3	142.917115	-40.575070	3.60	0.371	0.43	F2IV	
46701	9	31	58.0	-57	8	35.2	142.991870	-57.143109	3.16	1.538	1.59	K5III	
46733	9	33	26.0	+62	57	10.6	143.358264	+62.952948	3.65	0.360	0.41	F0IV	
46750	9	33	6.8	+22	51	31.1	143.278469	+22.858643	4.32	1.541	1.63	K5IIIvar	
46771	9	33	15.8	+11	11	24.5	143.315945	+11.190132	4.99	1.046	0.89	K0IIIvar	
46776	9	33	13.8	-1	17	37.8	143.307573	-1.293825	4.54	0.109	0.16	A3V	
46853	9	34	29.0	+51	33	51.2	143.620643	+51.564222	3.17	0.475	0.56	F6IV	
46952	9	35	43.0	+36	17	14.8	143.929039	+36.287432	4.54	0.914	0.91	G8III	
46974	9	35	9.3	-59	20	22.7	143.788887	-59.339626	4.08	-0.013	0.01	B5II	
46977	9	36	36.3	+69	43	14.5	144.151085	+69.720686	4.54	0.781	0.83	G4III-IV	
47006	9	36	29.3	+51	56	27.7	144.121950	+51.941015	4.47	0.027	0.08	A2V	
47029	9	36	35.0	+39	30	40.9	144.145892	+39.511359	4.81	0.992	1.00	K0III	
47175	9	37	42.3	-49	27	55.9	144.426118	-49.465518	4.34	0.173	0.18	A5V	
47193	9	40	23.7	+81	12	54.0	145.098608	+81.214990	4.28	1.488	1.46	K3III	
47205	9	38	30.1	+6	43	29.6	144.625617	+6.724896	5.00	1.051	1.03	K1IIIvar	
47310	9	39	43.9	+4	32	15.2	144.932799	+4.537555	4.68	1.310	1.35	K3III	
47391	9	40	1.7	-61	26	22.4	145.007242	-61.439546	4.51	-0.070	-0.06	B9V	
47431	9	41	6.4	-1	15	18.4	145.276579	-1.255110	3.90	1.313	1.29	K3IIIvar	
47508	9	42	27.3	+9	46	47.0	145.613958	+9.779730	3.52	0.516	0.59	A5V+...	
47522	9	42	24.2	-23	42	13.8	145.600679	-23.703836	4.76	-0.117	-0.10	B5V	
47592	9	43	20.8	-24	1	35.3	145.836872	-24.026474	4.93	0.534	0.58	G0V	
47758	9	45	17.7	-27	52	57.1	146.323825	-27.882532	4.78	0.516	0.61	A7V+...	
47854	9	45	55.2	-62	37	17.2	146.480020	-62.621437	3.69	1.010	1.03	G5Iab/Ib	
47908	9	47	14.2	+23	39	37.0	146.809303	+23.660287	2.97	0.808	0.81	G0II	
48002	9	47	42.8	-65	11	10.2	146.928344	-65.186160	2.92	0.273	0.42	A9	
48319	9	52	42.6	+58	55	19.6	148.177705	+58.922116	3.78	0.291	0.39	F0IV	
48356	9	52	39.4	-14	57	44.7	148.164344	-14.962428	4.11	0.918	0.92	G6/G8III	
48374	9	52	37.6	-46	39	47.7	148.156741	-46.663260	4.58	1.172	1.10	G5Ib	
48402	9	53	45.4	+53	56	54.6	148.439165	+53.948510	4.55	0.038	0.09	A3IV	
48455	9	54	9.1	+25	53	25.7	148.537995	+25.890472	3.88	1.222	1.13	K0III	
48559	9	55	19.0	-26	2	54.6	148.829300	-26.048486	4.87	1.199	1.19	K2III	
48615	9	56	1.6	-19	7	34.8	149.006720	-19.126338	4.94	1.559	1.75	K5III	
48774	9	57	43.5	-54	41	6.2	149.431322	-54.685067	3.52	-0.067	-0.04	B5Ib	
49029	10	1	30.4	+7	55	32.6	150.376546	+7.925712	4.68	1.589	1.96	M2III	
49402	10	6	19.1	-13	11	3.4	151.579547	-13.184267	4.60	-0.087	-0.07	B8V	
49583	10	8	39.9	+16	38	32.1	152.166217	+16.642244	3.48	-0.031	0.06	A0Ib	
49593	10	8	52.0	+35	7	27.3	152.216724	+35.124239	4.49	0.190	0.19	A7V	
49637	10	9	12.2	+9	52	35.4	152.300630	+9.876509	4.39	1.448	1.51	K4III	
49641	10	9	11.5	-0	29	32.0	152.297731	-0.492235	4.48	-0.032	-0.01	A0III	
49669	10	9	40.4	+11	50	47.5	152.418533	+11.846539	1.36	-0.087	-0.10	B7V	
49712	10	9	52.2	-51	55	55.4	152.467430	-51.932064	4.85	-0.120	-0.10	B3IV	
49841	10	11	47.0	-12	28	33.8	152.945781	-12.476046	3.61	1.007	0.96	K0III	
50099	10	14	19.1	-70	9	35.7	153.579378	-70.159912	3.29	-0.074	-0.03	B8III	
50191	10	15	46.1	-42	14	38.4	153.941971	-42.243991	3.85	0.051	0.03	A2V	
50335	10	18	2.9	+23	17	39.6	154.512098	+23.294329	3.43	0.307	0.39	F0III	
50371	10	17	54.3	-61	27	18.8	154.476125	-61.455227	3.39	1.541	1.45	K3II	
50372	10	18	33.8	+42	47	27.7	154.641021	+42.791030	3.45	0.029	0.05	A2IV	
50555	10	20	32.2	-55	9	10.4	155.134305	-55.152899	4.59	1.600	1.50	K3II	
50564	10	21	4.0	+19	20	44.8	155.266521	+19.345781	4.78	0.452	0.53	F6IV	
50583	10	21	19.2	+19	43	0.1	155.329830	+19.716704	2.01	1.128	1.17	K0III	
50676	10	21	49.8	-56	10	1.8	155.457300	-56.167156	4.50	-0.102	-0.08	B3III	
50799	10	23	22.9	-41	46	25.9	155.845248	-41.773866	4.82	1.095	1.06	K1IIIvar	
50801	10	23	46.8	+41	22	31.4	155.944842	+41.375384	3.06	1.603	1.77	M0III SB	
50847	10	23	41.9	-67	1	33.1	155.924469	-67.025852	4.97	-0.128	-0.12	B8V	
50933	10	25	52.1	+65	26	29.2	156.466978	+65.441454	4.94	-0.052	-0.02	A0sp...	
50954	10	24	52.5	-74	9	23.5	156.218831	-74.156539	3.99	0.369	0.43	F2IV	

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α			δ			Espectro
	NH	h	m	s	°	'	″	°	′	″	V	U-V	
51056	10	27	18.7	+33	40	13.8	156.827763	+33.670513	4.72	0.260	0.31	F0V	
51069	10	27	16.6	-16	57	43.4	156.819193	-16.962054	3.83	1.456	1.47	K4III	
51172	10	28	16.5	-31	11	35.5	157.068902	-31.193186	4.28	1.429	1.47	K4III	
51192	10	28	19.5	-57	45	51.4	157.081352	-57.764288	4.65	0.474	0.69	A6Ia	
51232	10	28	47.0	-58	51	54.0	157.195729	-58.865004	3.81	0.317	0.41	F2II	
51233	10	29	17.5	+36	34	50.9	157.323054	+36.580806	4.20	0.908	0.89	G8III-IV	
51438	10	30	57.2	-72	7	8.9	157.738293	-72.119139	4.72	0.042	0.06	A2III	
51459	10	32	10.6	+55	51	14.4	158.044353	+55.853998	4.82	0.541	0.58	F8V	
51495	10	31	36.2	-73	20	51.9	157.900927	-73.347737	4.94	1.677	1.71	K4/K5III	
51523	10	32	19.3	-53	50	25.8	158.080223	-53.840499	4.89	0.500	0.58	F6V	
51576	10	32	54.0	-61	48	42.5	158.225152	-61.811809	3.30	-0.089	0.02	B4Vne	
51624	10	34	6.0	+9	10	47.2	158.524829	+9.179790	3.84	-0.148	-0.13	B1Ib SB	
51658	10	34	39.1	+40	17	55.4	158.663018	+40.298736	4.72	0.222	0.23	A7IV	
51808	10	37	6.3	+75	35	7.8	159.276307	+75.585505	4.86	0.957	0.94	K0III	
51839	10	35	44.3	-78	44	5.8	158.934657	-78.734946	4.11	1.580	1.71	M0III	
51849	10	36	32.1	-57	41	5.9	159.133747	-57.684972	4.45	1.604	1.62	K3/K4II	
51979	10	38	22.9	-27	32	24.7	159.595328	-27.540193	4.87	1.626	1.89	M1III	
51986	10	38	20.3	-48	21	12.0	159.584461	-48.353336	3.84	0.300	0.35	A3m+...	
52009	10	38	45.9	-13	30	45.3	159.691407	-13.512572	4.89	2.800	2.27	C	
52085	10	39	46.7	-17	0	15.8	159.944488	-17.004381	4.91	0.922	0.85	G8III	
52098	10	40	5.6	+31	50	53.7	160.023191	+31.848251	4.68	0.823	0.82	G0II	
52102	10	39	41.3	-59	18	39.6	159.922059	-59.310988	4.69	1.562	1.63	K4/K5III:	
52154	10	40	17.2	-55	43	52.9	160.071841	-55.731354	4.29	1.025	0.96	G2II	
52370	10	43	6.6	-64	35	42.2	160.777663	-64.595042	4.76	-0.139	-0.13	B3V	
52419	10	43	50.2	-64	31	23.5	160.959142	-64.523202	2.74	-0.220	-0.24	B0Vp	
52468	10	44	28.6	-60	41	44.0	161.119330	-60.695550	4.58	1.700	1.79	K3Ib	
52502	10	45	0.5	-64	5	24.2	161.251949	-64.090050	4.80	-0.134	-0.12	B5Vn	
52633	10	45	59.1	-80	40	10.0	161.496290	-80.669457	4.45	-0.188	-0.19	B2.5IV	
52727	10	47	49.7	-49	33	0.7	161.957155	-49.550188	2.69	0.901	0.91	G5III SB	
52736	10	47	45.1	-64	30	46.8	161.938038	-64.512988	4.87	-0.149	-0.18	B3IV	
52943	10	50	50.1	-16	19	20.8	162.708810	-16.322431	3.11	1.232	1.22	K0/K1III	
53229	10	54	40.5	+34	4	55.9	163.668840	+34.082201	3.79	1.040	1.07	K0III-IV	
53253	10	54	29.8	-58	59	1.2	163.624224	-58.983677	3.78	0.945	0.96	K0III-IV...	
53295	10	55	22.8	+43	3	32.1	163.844964	+43.058915	4.66	-0.039	0.01	A1Vs	
53417	10	56	56.1	+24	37	6.5	164.233837	+24.618477	4.30	0.016	0.07	A1	
53502	10	57	51.8	-37	16	11.6	164.465916	-37.269902	4.60	1.006	0.99	K0III	
53740	11	0	58.2	-18	25	47.0	165.242594	-18.429712	4.08	1.079	1.06	K1III	
53773	11	1	17.0	-42	21	27.6	165.320960	-42.357672	4.37	0.116	0.13	A3IV	
53807	11	1	49.5	+3	29	7.7	165.456340	+3.485471	4.84	1.144	1.13	K1III	
53824	11	2	0.9	+5	58	9.7	165.503867	+5.969358	4.98	0.166	0.18	A5III	
53907	11	3	4.7	-2	37	0.9	165.769416	-2.616929	4.73	1.593	1.77	K5III	
53910	11	3	18.2	+56	15	1.9	165.825922	+56.250531	2.34	0.033	0.02	A1V	
53954	11	3	38.0	+20	2	52.5	165.908511	+20.047925	4.42	0.053	0.03	A1m	
54061	11	5	13.1	+61	37	6.2	166.304645	+61.618402	1.81	1.061	1.03	F7V comp	
54182	11	6	16.8	+7	12	11.3	166.569937	+7.203129	4.62	0.332	0.39	F2III-IVvar	
54204	11	6	30.9	-27	25	34.5	166.628904	-27.426259	4.92	0.369	0.43	F3IV/V	
54301	11	7	33.2	-62	33	24.5	166.888503	-62.556805	4.62	0.988	0.97	G8III	
54463	11	9	38.7	-59	6	29.0	167.411219	-59.108055	3.93	1.225	1.19	G0Ia0	
54539	11	11	1.9	+44	21	54.4	167.757909	+44.365113	3.00	1.144	1.09	K1III	
54682	11	12	52.0	-22	57	35.8	168.216549	-22.959940	4.46	0.025	0.04	A1V	
54751	11	13	39.6	-60	27	4.1	168.415134	-60.451147	4.59	0.541	0.70	A6Ia	
54872	11	15	24.5	+20	23	20.8	168.851970	+20.389116	2.56	0.128	0.12	A4V	
54879	11	15	31.4	+15	17	43.1	168.880826	+15.295296	3.33	-0.003	0.01	A2V	
54951	11	16	30.2	+22	57	41.7	169.125774	+22.961582	4.56	1.657	2.27	M3III	
55084	11	17	54.5	-3	47	9.1	169.476940	-3.785857	4.45	0.210	0.25	A7IVn	
55203	0	1	15.3	+0	8	11.0	0.313885	+0.136379	3.79	0.606	0.68	G0V	
55219	11	19	47.8	+32	57	37.0	169.949132	+32.960271	3.49	1.400	1.37	K3III SB	
55266	11	20	27.6	+38	3	2.9	170.114995	+38.050816	4.76	0.113	0.11	A2V	
55282	11	20	34.1	-14	54	41.3	170.141941	-14.911467	3.56	1.112	1.12	K0III	

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
55425	11	22	8.0	-54	37	31.8	170.533196	-54.625501	3.90	-0.157	-0.16	B5Vn
55434	11	22	23.9	+5	53	41.1	170.599777	+5.894750	4.05	-0.058	-0.06	B9.5Vs
55560	11	24	9.7	+43	20	52.6	171.040612	+43.347957	4.99	0.998	0.94	G8II
55588	11	24	24.2	-36	17	58.0	171.100797	-36.299456	5.00	1.464	1.47	K4III
55642	11	25	11.9	+10	23	39.3	171.299768	+10.394237	4.00	0.423	0.47	F2IV SB
55687	11	25	50.9	-10	59	38.3	171.462205	-10.993973	4.81	1.556	1.67	K5III
55705	11	26	6.5	-17	49	7.8	171.527174	-17.818825	4.06	0.216	0.24	A9V
55945	11	29	11.8	+2	43	15.9	172.299242	+2.721097	4.95	1.000	0.95	G8II-III
56127	11	31	34.0	-3	8	20.0	172.891814	-3.138900	4.77	1.529	1.62	K4III
56211	11	32	49.9	+69	11	44.1	173.207741	+69.195579	3.82	1.613	1.79	M0IIIvar
56280	11	33	29.5	-29	23	43.7	173.373035	-29.395486	4.93	0.540	0.61	F8V
56343	11	34	12.7	-31	59	36.2	173.552960	-31.993379	3.54	0.947	0.92	G8III
56480	11	35	55.9	-54	23	58.5	173.983087	-54.399572	4.62	-0.077	-0.06	B9V
56561	11	36	55.5	-63	9	20.0	174.231070	-63.155542	3.11	-0.044	-0.01	B9II:
56633	11	37	55.6	-9	56	16.6	174.481610	-9.937940	4.70	-0.073	-0.06	B9.5Vn
56647	11	38	12.2	-0	57	33.1	174.550897	-0.959187	4.30	0.983	0.98	G9III
56922	11	41	26.1	-34	52	50.1	175.358891	-34.880575	4.70	-0.070	-0.05	B9V
56986	11	42	3.9	-62	13	33.7	175.516305	-62.226029	4.93	1.111	1.11	G3Ib
57175	11	44	42.1	-62	37	31.6	176.175579	-62.625440	5.00	0.784	0.87	F9Ia
57283	11	46	0.5	-18	29	13.0	176.501913	-18.486941	4.71	0.958	0.94	G8III
57328	11	46	32.8	+8	7	18.6	176.636492	+8.121845	4.84	0.174	0.19	A4V
57363	11	46	46.7	-66	51	52.8	176.694781	-66.864673	3.63	0.160	0.17	A7III
57380	11	47	7.1	+6	23	31.3	176.779492	+6.392034	4.04	1.501	1.79	M0III
57399	11	47	20.1	+47	38	36.4	176.833771	+47.643445	3.69	1.181	1.15	K0III
57439	11	47	42.7	-61	18	52.8	176.928043	-61.314671	4.11	0.895	0.88	G0II
57443	11	47	41.6	-40	38	1.8	176.923346	-40.633826	4.89	0.664	0.73	G3/G5V
57565	11	49	14.8	+20	4	57.7	177.311735	+20.082693	4.50	0.547	0.69	A comp SB
57581	11	49	26.3	-66	57	4.5	177.359423	-66.951237	4.75	1.522	1.62	K4III
57632	11	50	18.5	+14	26	6.2	177.576942	+14.435060	2.14	0.090	0.10	A3Vvar
57669	11	50	53.5	-63	55	28.9	177.722948	-63.924706	4.30	-0.149	-0.09	B3V
57696	11	51	8.1	-70	21	43.4	177.783917	-70.362067	4.98	1.360	1.31	G5Ib
57757	11	51	58.3	+1	37	35.9	177.992806	+1.626628	3.59	0.518	0.61	F8V
57803	11	52	22.7	-45	18	35.3	178.094473	-45.309819	4.47	1.283	1.24	K4III
57851	11	53	4.1	-65	20	32.1	178.267038	-65.342260	4.89	-0.123	-0.11	B4V
57936	11	54	9.1	-34	2	40.0	178.537994	-34.044434	4.29	-0.100	-0.07	Ap Si
58001	11	55	6.5	+53	33	30.6	178.777259	+53.558495	2.41	0.044	0.06	A0V SB
58484	12	0	52.8	-78	21	29.8	180.219820	-78.358275	4.88	-0.054	-0.02	B9Vn
58590	12	2	7.7	+6	28	39.9	180.532072	+6.477748	4.65	0.122	0.14	A5V
58758	12	4	17.3	-63	26	57.3	181.072215	-63.449252	4.32	0.280	0.36	Am
58867	12	5	35.9	-63	18	7.4	181.399549	-63.302059	4.72	-0.081	-0.06	B2IV
58948	12	6	27.4	+8	35	49.3	181.614118	+8.597034	4.12	0.967	0.96	G8III
59072	12	8	10.6	-64	45	1.0	182.044306	-64.750286	4.14	0.353	0.41	F2III
59173	12	9	22.0	-50	47	51.4	182.341648	-50.797625	4.46	-0.163	-0.16	B2IIIne
59196	12	9	38.3	-50	51	31.5	182.409529	-50.858743	2.58	-0.128	-0.12	B2IVne
59199	12	9	40.9	-24	51	55.5	182.420512	-24.865411	4.02	0.334	0.40	F0IV/V
59316	12	11	23.3	-22	45	21.3	182.847213	-22.755925	3.02	1.326	1.23	K2III
59449	12	12	56.6	-52	30	17.2	183.235899	-52.504766	3.97	-0.156	-0.17	B3V
59747	12	16	27.7	-58	53	6.2	184.115257	-58.885055	2.79	-0.193	-0.25	B2IV
59774	12	16	37.7	+56	53	47.8	184.156995	+56.896623	3.32	0.077	0.03	A3Vvar
59803	12	17	4.2	-17	40	40.1	184.267414	-17.677810	2.58	-0.107	-0.10	B8III
59847	12	17	34.8	+23	48	33.7	184.394800	+23.809363	4.93	0.957	0.94	K0III
59856	12	17	43.8	+32	55	29.2	184.432410	+32.924782	4.99	1.140	1.12	K1III
59929	12	18	55.1	-68	5	48.7	184.729470	-68.096859	4.06	1.603	2.82	M5III
60000	12	19	50.4	-79	26	53.0	184.959809	-79.448066	4.24	-0.123	-0.11	B5Vn
60009	12	19	47.1	-64	8	20.6	184.946114	-64.139046	4.06	-0.168	-0.18	B2.5V
60129	12	21	9.6	-0	48	10.0	185.290134	-0.802790	3.89	0.026	0.03	A2IV
60172	12	21	35.7	+3	10	34.8	185.398636	+3.176346	4.97	1.172	1.19	K1III
60202	12	21	57.2	+17	39	27.6	185.488339	+17.657669	4.72	1.010	1.02	G8III
60260	12	22	41.9	-60	32	10.6	185.674717	-60.536285	3.59	1.389	1.39	K3/K4III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	′						
60351	12	23	44.0	+25	42	37.5	185.933472	+25.710415	4.78	0.515	0.61	F8:p...
60485	12	25	12.4	+51	25	36.3	186.301874	+51.426739	4.76	0.877	0.89	G7III
60697	12	27	37.4	+27	7	57.8	186.905798	+27.132735	4.92	0.277	0.28	F0p
60710	12	27	51.9	-51	35	10.0	186.966196	-51.586121	4.82	-0.141	-0.16	B3Vn
60718	12	27	58.8	-63	14	4.6	186.994957	-63.234604	0.77	-0.243	-0.26	B0.5IV
60742	12	28	9.3	+28	7	57.0	187.038952	+28.132487	4.35	1.128	1.04	K2IIICN+...
60746	12	28	12.6	+26	41	24.9	187.052605	+26.690246	4.98	0.088	0.05	A4V
60823	12	29	22.6	-50	21	57.7	187.343994	-50.366029	3.91	-0.192	-0.20	B3V
60965	12	31	8.1	-16	39	5.5	187.783878	-16.651535	2.94	-0.012	-0.04	B9.5V
61084	12	32	32.4	-57	15	0.1	188.135026	-57.250038	1.59	1.600	2.37	M4III
61174	12	33	20.2	-16	19	53.0	188.334209	-16.331391	4.30	0.388	0.44	F2V
61199	12	33	57.8	-72	16	4.7	188.490863	-72.267973	3.84	-0.157	-0.14	B5V
61281	12	34	30.9	+69	39	12.4	188.628809	+69.653432	3.85	-0.116	-0.02	B6IIIp
61317	12	34	54.1	+41	13	28.5	188.725359	+41.224578	4.24	0.588	0.67	G0V
61359	12	35	40.7	-23	31	54.9	188.919716	-23.531922	2.65	0.893	0.88	G5II
61384	12	35	45.5	+69	53	13.2	188.939422	+69.886991	4.95	1.312	1.27	K2III
61394	12	36	4.2	+22	29	40.9	189.017577	+22.494699	4.80	0.012	0.03	A0IV
61585	12	38	40.4	-69	16	12.6	189.668204	-69.270163	2.69	-0.176	-0.23	B2IV-V
61622	12	39	3.2	-48	40	32.9	189.763477	-48.675819	3.85	0.049	0.06	A2V
61740	12	40	30.8	-8	7	48.2	190.128238	-8.130049	4.66	1.240	1.15	K2III
61789	12	41	12.6	-40	7	18.2	190.302570	-40.121720	4.63	-0.082	-0.06	B8II/III
61932	12	42	52.8	-49	5	38.3	190.720061	-49.093971	2.20	-0.023	-0.01	A1V
61941	12	42	54.1	-1	34	58.9	190.725610	-1.583036	2.74	0.368	0.43	F0V+...
61960	12	43	7.4	+10	6	3.6	190.781002	+10.100988	4.88	0.076	0.08	A0V
61966	12	43	22.2	-59	49	11.5	190.842542	-59.819867	4.91	-0.044	-0.02	B6IV
62012	12	43	57.5	-48	56	50.2	190.989677	-48.947267	4.66	1.075	1.03	K0III
62268	12	47	5.6	-61	6	55.3	191.773519	-61.115348	4.69	1.049	1.03	K1III
62322	12	47	48.6	-68	14	30.1	191.952605	-68.241704	3.04	-0.178	-0.19	B2V
62327	12	47	48.1	-56	37	20.7	191.950258	-56.622423	4.62	-0.150	-0.16	B3V
62434	12	49	10.2	-59	49	19.9	192.292589	-59.822193	1.25	-0.238	-0.27	B0.5III
62683	12	52	1.4	-34	7	56.5	193.005670	-34.132368	4.90	-0.031	-0.01	B9V
62763	12	52	53.4	+27	24	28.1	193.222444	+27.407809	4.93	0.681	0.70	G0III
62867	12	54	30.8	-49	4	34.0	193.628371	-49.076121	4.33	1.344	1.33	K3/K4III
62886	12	54	30.0	+21	6	43.6	193.625202	+21.112104	4.89	0.904	0.91	G8III
62896	12	54	48.2	-40	18	41.8	193.700664	-40.311611	4.25	0.224	0.27	A4IV
62956	12	55	6.0	+55	49	38.0	193.775006	+55.827229	1.76	-0.022	-0.04	A0p
62985	12	55	37.8	-9	40	17.8	193.907427	-9.671598	4.77	1.590	2.18	M3IIIvar
63003	12	56	3.0	-57	18	37.6	194.012623	-57.310440	4.03	-0.180	-0.26	B2IV-V
63007	12	56	7.6	-59	16	45.2	194.031495	-59.279215	4.62	-0.153	-0.15	B4Vn
63090	12	56	50.3	+3	15	53.4	194.209674	+3.264821	3.39	1.571	2.24	M3III
63125	12	57	10.2	+38	11	11.4	194.292564	+38.186504	2.89	-0.115	-0.13	A0spe...
63355	13	0	8.1	+17	16	40.3	195.033684	+17.277874	4.76	1.568	1.79	M0III
63462	13	1	26.7	+30	39	12.2	195.361077	+30.653380	4.88	1.165	1.13	K1IIIp
63503	13	1	46.4	+56	14	5.3	195.443262	+56.234819	4.93	0.368	0.45	F2V
63608	13	3	23.8	+10	49	40.8	195.849071	+10.827990	2.85	0.934	0.83	G8IIIvar
63613	13	3	59.7	-71	40	48.9	195.998832	-71.680246	3.61	1.190	1.17	K2III
63724	13	4	59.2	-49	39	30.2	196.246523	-49.658390	4.83	0.029	0.05	A0V
63945	13	7	42.6	-48	35	38.3	196.927655	-48.593981	4.71	-0.148	-0.14	B5V
64004	13	8	21.2	-50	2	12.5	197.088501	-50.036813	4.27	-0.182	-0.18	B1.5V
64022	13	8	21.1	+27	29	37.8	197.088102	+27.493826	4.80	1.482	1.55	K5III
64166	13	10	22.8	-23	14	54.4	197.594861	-23.248453	4.94	1.048	1.02	K0III
64238	13	11	13.2	-5	40	9.1	197.805171	-5.669190	4.38	-0.008	0.01	A1V
64241	13	11	10.7	+17	24	1.2	197.794746	+17.400333	4.32	0.455	0.53	F5V
64394	13	13	0.9	+27	45	16.0	198.253774	+27.754443	4.23	0.572	0.67	G0V
64408	13	13	25.7	-37	55	56.2	198.357020	-37.932277	4.85	0.693	0.73	G3V
64425	13	13	50.6	-60	3	0.7	198.460822	-60.050202	4.58	-0.073	-0.07	B8V
64540	13	14	49.4	+40	1	25.3	198.705799	+40.023708	4.94	1.061	1.03	K0III
64583	13	15	47.3	-59	14	0.3	198.947210	-59.233404	4.90	0.489	0.56	F7IV
64661	13	16	56.5	-68	1	24.9	199.235288	-68.023591	4.79	-0.078	-0.09	B8V

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α		δ		V	U-V	B-V	Espectro
	NH	h	m	s	°	'	"	°	'	°				
64820	13	18	53.9	-66	54	43.3	199.724384	-66.912026	4.86	1.480	1.50	K2Ib/II		
64844	13	18	38.3	+40	26	39.1	199.659431	+40.444192	4.72	0.306	0.31	F3III		
64852	13	18	50.6	+5	20	29.1	199.710695	+5.341424	4.78	1.638	1.97	M2III		
64924	13	19	41.5	-18	26	47.9	199.923003	-18.446638	4.74	0.709	0.75	G5V		
64962	13	20	15.5	-23	18	0.1	200.064713	-23.300024	2.99	0.920	0.90	G8III		
65109	13	21	59.0	-36	50	26.8	200.495693	-36.840772	2.75	0.068	0.02	A2V		
65271	13	24	14.2	-61	6	57.4	201.059263	-61.115935	4.52	-0.141	-0.13	B3V		
65378	13	24	54.5	+54	47	52.7	201.226945	+54.797984	2.23	0.057	0.07	A2V		
65387	13	25	40.9	-64	39	46.6	201.420265	-64.662947	4.52	0.822	0.87	G5III-IV		
65474	13	26	29.2	-11	17	18.4	201.621745	-11.288458	0.98	-0.235	-0.25	B1V		
65477	13	26	12.2	+54	51	39.2	201.550729	+54.860894	3.99	0.169	0.19	A5V SB		
65639	13	28	45.8	-16	5	59.5	202.190923	-16.099859	4.76	1.096	1.02	K1IIICN...		
65721	13	29	37.7	+13	38	55.4	202.407208	+13.648728	4.97	0.714	0.77	G5V		
65936	13	32	28.5	-39	31	58.7	203.118592	-39.532975	3.90	1.186	1.10	G8II/III		
66006	13	33	14.5	-6	22	53.4	203.310314	-6.381503	4.68	1.606	2.06	M3III		
66200	13	35	22.5	+3	32	2.1	203.843779	+3.533919	4.92	0.029	0.03	A1p SrCrEu		
66234	13	35	27.1	+48	53	28.7	203.863108	+48.891314	4.68	0.132	0.10	A5V		
66249	13	35	56.6	-0	43	12.9	203.985958	-0.720250	3.38	0.114	0.12	A3V		
66257	13	35	53.3	+37	3	27.4	203.972081	+37.057603	4.91	0.404	0.55	F2IV SB		
66458	13	38	32.8	+36	10	15.4	204.636774	+36.170957	4.82	0.239	0.31	A7III		
66657	13	41	27.4	-53	35	23.7	205.364094	-53.589911	2.29	-0.171	-0.23	B1III		
66738	13	41	39.9	+54	33	29.7	205.416060	+54.558261	4.63	1.630	1.97	M2IIIvar		
66821	13	43	19.9	-54	40	57.2	205.833019	-54.682544	4.99	-0.055	-0.03	B8Vn+...		
67153	13	47	5.3	-33	9	59.9	206.771877	-33.166645	4.23	0.390	0.44	F3V		
67234	13	48	13.3	-51	33	16.6	207.055519	-51.554618	4.64	0.955	0.93	G8/KOIII		
67275	13	48	25.6	+17	20	8.6	207.106751	+17.335709	4.50	0.508	0.51	F7V		
67301	13	48	30.2	+49	11	29.9	207.125926	+49.191652	1.85	-0.099	-0.08	B3V SB		
67457	13	50	52.4	-34	34	19.6	207.718236	-34.572101	4.19	1.520	3.00	M5III		
67459	13	50	39.6	+15	40	38.0	207.664818	+15.677226	4.05	1.520	1.60	K5IIIvar		
67464	13	50	59.1	-41	48	31.5	207.746126	-41.808747	3.41	-0.225	-0.24	B2IV		
67472	13	51	6.2	-42	35	41.0	207.775739	-42.594730	3.47	-0.170	-0.21	B2IV-Ve		
67480	13	50	52.3	+21	8	36.0	207.718016	+21.143330	4.92	1.432	1.38	K4III		
67494	13	51	12.4	-18	15	18.9	207.801828	-18.255240	4.96	1.059	1.09	K0III		
67627	13	52	8.9	+64	36	10.0	208.036996	+64.602768	4.58	1.572	2.35	M3III		
67665	13	52	52.2	+34	19	25.3	208.217599	+34.323706	4.76	1.611	1.63	K5III		
67669	13	53	14.9	-33	6	52.4	208.312119	-33.114555	4.32	-0.146	-0.12	B5		
67786	13	54	37.6	-32	2	51.2	208.656642	-32.047559	4.75	-0.111	-0.10	B4IV		
67927	13	55	51.1	+18	16	33.0	208.962832	+18.275839	2.68	0.580	0.65	G0IV		
68002	13	57	4.9	-47	24	28.3	209.270213	-47.407864	2.55	-0.176	-0.18	B2.5IV		
68191	13	59	26.9	-63	48	19.6	209.862025	-63.805452	4.71	1.075	1.05	K4III		
68245	13	59	46.3	-42	13	9.4	209.942735	-42.219283	3.83	-0.224	-0.23	B2IV		
68282	14	0	12.2	-44	55	19.2	210.050985	-44.922002	3.87	-0.208	-0.22	B2IV-V		
68520	14	2	53.7	+1	25	37.1	210.723841	+1.426965	4.23	0.121	0.14	A3V		
68523	14	3	15.9	-45	43	15.3	210.816249	-45.720918	4.34	0.598	0.65	F6II		
68702	14	5	34.5	-60	29	23.6	211.393713	-60.489891	0.61	-0.231	-0.25	B1III		
68756	14	5	3.2	+64	15	33.4	211.263474	+64.259287	3.67	-0.049	-0.08	A0III SB		
68862	14	7	33.1	-41	17	44.9	211.888019	-41.295810	4.36	-0.198	-0.21	B2V		
68895	14	7	46.4	-26	47	57.3	211.943288	-26.799247	3.25	1.091	1.10	K2III		
68933	14	8	8.0	-36	29	21.3	212.033324	-36.489251	2.06	1.011	1.01	K0IIIb		
69112	14	8	47.4	+77	25	56.4	212.197555	+77.432339	4.80	1.368	1.34	K3III		
69191	14	11	33.6	-53	33	15.6	212.890185	-53.554335	4.74	0.938	0.92	G8III		
69226	14	11	31.0	+24	58	35.6	212.878992	+24.976563	4.82	0.541	0.57	F9IVw		
69269	14	12	11.0	-16	24	59.9	213.046002	-16.416637	4.93	1.684	1.94	M1III		
69389	14	13	30.3	+2	17	42.6	213.376369	+2.295169	4.99	-0.118	-0.11	B9p Si		
69427	14	14	12.4	-10	23	11.9	213.551559	-10.386634	4.18	1.323	1.35	K3III		
69483	14	14	21.6	+51	40	34.1	213.590033	+51.676145	4.53	0.233	0.23	A8IV		
69673	14	16	46.8	+19	3	21.9	214.195005	+19.056086	-0.05	1.239	1.22	K2IIIp		
69701	14	17	18.1	-6	6	58.3	214.325466	-6.116189	4.07	0.511	0.59	F7V		
69713	14	17	1.9	+51	15	17.9	214.258057	+51.254963	4.75	0.236	0.19	A9V		

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
69732	14	17	18.8	+45	58	35.7	214.328498	+45.976585	4.18	0.087	0.04	A0sh
69879	14	19	1.9	+35	23	50.6	214.757988	+35.397381	4.80	1.057	1.00	K1III
69896	14	21	28.3	-81	7	11.9	215.367968	-81.119963	4.89	0.243	0.24	A2m...
69974	14	20	26.4	-13	28	57.7	215.109881	-13.482690	4.52	0.128	0.11	A1V
69996	14	20	59.1	-46	10	11.2	215.246113	-46.169767	3.55	-0.184	-0.18	B2.5IV
70027	14	20	54.8	+16	11	44.7	215.228536	+16.195749	4.84	1.228	1.16	K3III
70069	14	22	3.4	-56	29	52.3	215.514002	-56.497855	4.30	0.082	0.21	B6Ib
70090	14	22	3.4	-37	59	47.9	215.514120	-37.996638	4.05	-0.030	-0.02	A0IV
70104	14	22	17.1	-45	17	55.5	215.571287	-45.298752	4.78	0.310	0.36	F0IV
70264	14	24	23.6	-58	34	10.2	216.098239	-58.569509	4.76	0.795	0.83	G8/K1+F/G
70300	14	24	33.4	-39	37	20.5	216.139162	-39.622368	4.41	-0.185	-0.20	B2V
70306	14	24	30.9	-27	51	54.7	216.128661	-27.865196	4.78	1.300	1.31	K3III
70327	14	24	35.1	+8	20	10.4	216.146119	+8.336214	4.86	0.010	0.07	A0V
70497	14	26	1.8	+51	44	17.9	216.507663	+51.738316	4.04	0.497	0.59	F7V
70574	14	27	43.3	-45	19	50.9	216.930380	-45.330816	4.56	-0.147	-0.14	B2IV
70576	14	27	46.1	-45	29	19.0	216.941900	-45.488602	4.33	0.434	0.58	A7:+...
70638	14	31	9.3	-83	46	35.5	217.788765	-83.776521	4.31	1.300	1.30	K2III
70692	14	27	30.2	+75	35	13.4	216.875816	+75.587050	4.25	1.431	1.42	K4III
70753	14	29	36.9	-29	36	1.4	217.403903	-29.600392	4.97	-0.074	-0.05	B7/B8V
70755	14	29	28.0	-2	20	11.7	217.366806	-2.336594	4.81	0.693	0.73	G2III
71053	14	32	53.1	+30	15	53.6	218.221367	+30.264902	3.57	1.298	1.22	K3III
71075	14	33	3.8	+38	12	7.2	218.265953	+38.202006	3.04	0.191	0.17	A7IIIvar
71121	14	34	17.0	-50	33	51.1	218.570696	-50.564191	4.44	-0.177	-0.18	B2III
71284	14	35	44.8	+29	38	23.1	218.936667	+29.639736	4.47	0.364	0.41	F3Vwvar
71352	14	37	4.4	-42	15	50.1	219.268308	-42.263918	2.33	-0.157	-0.17	B1Vn+A
71536	14	39	32.9	-49	31	51.5	219.887254	-49.530983	4.05	-0.152	-0.16	B5V
71681	14	41	16.4	-60	56	6.5	220.318474	-60.935138	1.35	0.900	0.88	K1V
71683	14	41	17.6	-60	56	6.3	220.323319	-60.935084	-0.01	0.710	0.69	G2V
71762	14	41	52.7	+16	18	51.9	220.469561	+16.314415	4.49	-0.002	0.02	B9p MnHg
71795	14	42	19.2	+13	37	27.9	220.580019	+13.624411	3.78	0.044	0.06	A3IVn
71832	14	42	51.0	+8	3	29.4	220.712639	+8.058179	4.86	0.992	0.96	G8IIIvar
71860	14	43	34.3	-47	29	30.4	220.892818	-47.491774	2.30	-0.154	-0.21	B1.5III
71865	14	43	29.4	-37	53	49.7	220.872669	-37.897125	4.01	-0.157	-0.18	B2.5V
71908	14	44	31.0	-65	4	47.3	221.129245	-65.079818	3.18	0.256	0.26	F1Vp
71957	14	44	21.3	-5	45	48.2	221.088617	-5.763379	3.87	0.385	0.47	F2III
71995	14	44	30.0	+26	25	29.3	221.124910	+26.424798	4.80	1.672	2.13	M3III
72010	14	45	9.8	-35	16	39.4	221.291029	-35.277600	4.06	1.356	1.35	K3III
72104	14	46	29.9	-35	17	38.7	221.624411	-35.294082	4.92	0.013	0.02	A0V
72105	14	46	3.4	+26	58	19.3	221.514263	+26.972026	2.35	0.966	0.95	A0
72125	14	46	23.1	+16	51	42.2	221.596258	+16.861727	4.60	0.972	0.94	K0III
72220	14	47	29.4	+1	47	27.4	221.872376	+1.790942	3.73	-0.005	0.01	A0V
72370	14	51	1.5	-79	8	44.3	222.756122	-79.145629	3.83	1.433	1.42	K5III
72571	14	51	44.0	-28	3	39.3	222.933465	-28.060929	4.42	1.366	1.43	K3III
72607	14	50	39.6	+74	3	19.1	222.664838	+74.055310	2.07	1.465	1.46	K4IIIvar
72622	14	52	14.3	-16	8	31.8	223.059567	-16.142158	2.75	0.147	0.16	A3IV
72631	14	52	17.5	-2	23	59.5	223.072744	-2.399855	4.93	0.988	0.97	G8...
72659	14	52	31.3	+19	0	0.8	223.130262	+19.000227	4.54	0.720	0.82	G8V+K4V
72683	14	53	14.9	-43	40	30.4	223.312090	-43.675098	4.32	-0.154	-0.14	B5IV
73165	14	58	27.9	-4	26	41.4	224.616405	-4.444838	4.47	0.318	0.38	F0V
73199	14	57	58.8	+65	50	7.1	224.495141	+65.835313	4.63	1.590	2.85	M5III
73273	15	0	8.8	-43	13	51.3	225.036845	-43.230927	2.68	-0.184	-0.23	B2III
73334	15	0	45.9	-42	12	2.8	225.191363	-42.200785	3.13	-0.208	-0.21	B2IV
73473	15	2	17.1	-8	36	53.0	225.571188	-8.614712	4.91	0.000	0.07	B9.5V
73555	15	2	52.1	+40	17	41.8	225.717279	+40.294955	3.49	0.956	0.89	G8III
73568	15	3	10.9	+24	54	45.0	225.795557	+24.912500	4.80	1.506	1.54	K4III
73620	15	4	8.4	+1	59	47.2	226.035173	+1.996448	4.39	1.026	1.04	K0III
73695	15	4	35.8	+47	33	34.3	226.149120	+47.559529	4.83	0.647	0.71	G2V+G2V
73714	15	5	30.6	-25	22	36.0	226.377509	-25.376660	3.25	1.674	2.23	M3/M4III
73745	15	5	29.8	+26	51	11.9	226.374015	+26.853298	4.52	1.240	1.23	K2III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
73807	15	6	47.9	-47	8	43.0	226.699613	-47.145280	3.91	-0.144	-0.15	B5
73996	15	8	22.7	+24	46	30.1	227.094414	+24.775027	4.93	0.429	0.51	F5V
74117	15	10	30.3	-45	22	20.3	227.626187	-45.372310	4.07	-0.162	-0.18	B3V
74376	15	13	39.0	-48	49	44.6	228.412622	-48.829043	3.88	-0.029	-0.02	B9V
74392	15	13	37.4	-19	52	58.0	228.405703	-19.882774	4.54	-0.071	-0.06	Asp...
74395	15	14	3.6	-52	11	25.6	228.514877	-52.190457	3.41	0.918	0.91	G8III
74449	15	14	29.0	-44	35	27.9	228.620712	-44.591082	4.83	-0.177	-0.19	B3IV
74604	15	16	7.8	-31	36	31.9	229.032388	-31.608861	4.91	0.374	0.48	F3III
74666	15	16	29.5	+33	13	28.6	229.122709	+33.224624	3.46	0.961	0.96	G8III
74785	15	18	19.7	-9	28	18.4	229.582160	-9.471777	2.61	-0.071	-0.08	B8V
74824	15	19	27.1	-58	53	25.7	229.863014	-58.890464	4.07	0.088	0.08	A3V
74837	15	19	44.6	-63	41	55.2	229.935915	-63.698663	4.85	1.260	1.20	K2.5III
74857	15	19	19.7	-30	14	13.2	229.831950	-30.237011	4.35	1.100	1.03	K1II/III
74911	15	20	15.0	-47	57	48.3	230.062434	-47.963430	4.27	-0.086	-0.07	B8V
74946	15	21	14.0	-68	46	2.6	230.308447	-68.767389	2.87	0.014	0.04	A1V
75097	15	20	42.5	+71	44	48.5	230.177232	+71.746800	3.00	0.058	0.12	A3II-III
75141	15	22	59.3	-40	44	3.6	230.747270	-40.734342	3.22	-0.227	-0.23	B1.5IV
75177	15	23	22.1	-36	20	54.3	230.842147	-36.348427	3.57	1.534	1.59	K5III
75206	15	23	51.4	-48	0	53.9	230.964116	-48.014965	4.99	0.515	0.59	F8V
75264	15	24	21.3	-44	46	32.9	231.088815	-44.775804	3.37	-0.191	-0.20	B2IV-V
75304	15	24	43.7	-36	56	40.1	231.182259	-36.944484	4.54	-0.155	-0.16	B4V
75312	15	24	13.1	+30	12	2.4	231.054420	+30.200678	4.99	0.577	0.65	G2V
75323	15	25	21.0	-59	24	24.1	231.337296	-59.406688	4.48	0.169	0.18	B5III+F8
75379	15	25	31.8	-10	24	31.4	231.382406	-10.408709	4.92	0.453	0.52	F5IV
75411	15	25	25.0	+37	17	32.4	231.354147	+37.292347	4.31	0.309	0.35	F0V
75458	15	25	28.7	+58	52	51.3	231.369565	+58.880914	3.29	1.166	1.07	K2III
75501	15	26	56.0	-38	49	6.8	231.733515	-38.818544	4.60	0.000	0.02	A0V
75695	15	28	50.4	+29	1	20.9	232.209915	+29.022475	3.66	0.319	0.37	F0p
76008	15	30	44.2	+77	16	0.7	232.684175	+77.266873	5.00	1.545	1.61	K5III
76041	15	32	39.7	+40	49	2.2	233.165243	+40.817265	4.98	0.086	0.15	A5V
76127	15	33	55.1	+31	16	39.6	233.479578	+31.277678	4.14	-0.127	-0.12	B6Vnn
76219	15	35	31.2	-10	8	48.5	233.880135	-10.146801	4.61	1.000	1.02	K1IV
76267	15	35	43.5	+26	38	0.8	233.931444	+26.633556	2.22	0.032	0.05	A0V
76276	15	35	58.5	+10	27	30.4	233.993598	+10.458433	3.80	0.268	0.30	F0IV
76297	15	36	46.9	-41	14	49.6	234.195545	-41.247106	2.80	-0.216	-0.22	B2IV
76333	15	36	54.0	-14	52	10.4	234.225149	-14.869548	3.91	1.007	1.02	K0III
76371	15	37	35.1	-45	2	18.0	234.396145	-45.038338	4.55	-0.175	-0.20	B3IVp
76440	15	38	59.5	-66	23	48.0	234.747891	-66.396666	4.11	1.161	1.12	K0III
76470	15	38	31.0	-28	12	51.9	234.629253	-28.214408	3.60	1.361	1.36	K3III
76552	15	39	42.8	-42	38	44.7	234.928303	-42.645740	4.34	1.412	1.42	K4.5III
76600	15	40	10.0	-29	51	23.2	235.041664	-29.856440	3.66	-0.177	-0.18	B2.5V
76669	15	40	18.1	+36	33	26.9	235.075310	+36.557467	4.64	-0.103	-0.09	B7V+...
76705	15	41	19.7	-34	29	23.9	235.332277	-34.489973	4.66	0.964	0.97	G8/K0III
76742	15	41	44.1	-23	53	45.1	235.433726	-23.895863	4.97	1.302	1.25	K3III
76829	15	42	53.0	-44	44	24.7	235.720951	-44.740205	4.64	0.413	0.47	F5IV-V
76852	15	42	38.7	+19	35	34.5	235.661088	+19.592915	4.51	0.062	0.07	A1V
76880	15	43	21.8	-19	45	23.2	235.840670	-19.756447	4.75	1.574	1.74	K5III
76945	15	44	15.1	-34	47	13.7	236.062917	-34.787134	4.75	-0.151	-0.15	B5V
76952	15	43	46.3	+26	13	9.7	235.943082	+26.219348	3.81	0.020	0.04	A1Vs
77055	15	43	14.1	+77	43	4.9	235.808701	+77.718041	4.29	0.038	0.05	A3Vn
77070	15	45	28.6	+6	21	0.3	236.369076	+6.350092	2.63	1.167	1.09	K2III
77233	15	47	19.2	+15	20	48.0	236.829901	+15.346654	3.65	0.073	0.09	A3V
77257	15	47	38.1	+7	16	40.3	236.908614	+7.277860	4.42	0.604	0.66	G0Vvar
77450	15	49	50.6	+18	4	2.4	237.460895	+18.067341	4.09	1.616	1.73	M1III
77512	15	50	37.3	+25	59	41.1	237.655623	+25.994748	4.59	0.794	0.82	G5III-IV
77516	15	50	54.1	-3	30	12.7	237.725238	-3.503536	3.54	-0.036	-0.03	A0V
77622	15	52	2.4	+4	24	20.1	238.009795	+4.405586	3.71	0.147	0.13	A2m
77634	15	52	31.3	-33	41	59.0	238.130550	-33.699731	3.97	-0.045	-0.05	B9.5III-IV
77635	15	52	27.5	-25	49	25.9	238.114391	-25.823872	4.63	-0.072	-0.04	B1.5Vn

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α		δ		Espectro	
	NH	h	m	s	°	′	″	°	′	V		U-V
77655	15	52	9.4	+35	34	57.5	238.039076	+35.582643	4.79	0.996	0.97	K0III-IV
77661	15	52	20.5	+20	54	20.4	238.085543	+20.905671	4.74	1.534	1.60	K5III
77760	15	53	31.4	+42	23	2.4	238.380773	+42.384006	4.60	0.563	0.63	F9V
77840	15	55	5.3	-25	23	54.2	238.771949	-25.398390	4.59	-0.073	-0.06	B2.5Vn
77853	15	55	13.5	-16	47	57.8	238.806067	-16.799381	4.13	1.003	1.02	K0III
77952	15	57	19.4	-63	30	12.7	239.331036	-63.503529	2.83	0.315	0.36	F2III
78072	15	57	35.2	+15	35	0.1	239.396534	+15.583353	3.85	0.478	0.54	F6V
78104	15	58	24.2	-29	17	1.1	239.600666	-29.283640	3.87	-0.199	-0.18	B2IV/V
78159	15	58	36.2	+26	48	29.9	239.650712	+26.808310	4.14	1.231	1.17	K3III
78180	15	58	22.5	+54	40	52.7	239.593725	+54.681296	4.96	0.269	0.29	F0IV
78207	15	59	33.9	-14	20	53.7	239.891221	-14.348236	4.95	-0.080	-0.06	B8Ia/Iab
78265	16	0	20.3	-26	10	57.6	240.084692	-26.182674	2.89	-0.180	-0.18	B1V+B2V
78323	16	1	10.9	-41	48	45.2	240.295270	-41.812558	4.99	0.988	0.97	G8III
78384	16	1	45.2	-38	27	52.5	240.438213	-38.464592	3.42	-0.206	-0.23	B2.5IV
78401	16	1	47.2	-22	41	22.6	240.446611	-22.689597	2.29	-0.117	-0.09	B0.2IV
78493	16	2	25.5	+29	47	1.8	240.606262	+29.783826	4.98	-0.050	-0.03	A0p...
78527	16	2	21.1	+58	30	1.4	240.588055	+58.500388	4.01	0.528	0.55	F8IV-V
78554	16	3	21.0	+22	44	16.4	240.837707	+22.737886	4.82	0.066	0.09	A3V
78592	16	3	33.8	+45	58	11.1	240.890711	+45.969754	4.72	-0.094	-0.06	B9III
78639	16	5	1.6	-49	17	44.4	241.256578	-49.295680	4.65	0.902	0.91	G8III
78650	16	4	49.7	-25	55	53.6	241.207239	-25.931563	4.96	1.234	1.25	K3III
78655	16	5	2.4	-38	40	7.4	241.259916	-38.668732	4.90	-0.146	-0.15	B6III/IV
78662	16	5	32.6	-57	50	29.1	241.385843	-57.841424	4.63	0.252	0.30	A7IV
78727	0	1	15.3	+0	8	11.0	0.313885	+0.136379	4.16	0.460	0.53	F6IV
78820	16	6	51.9	-19	52	14.2	241.716387	-19.870613	2.56	-0.065	-0.04	B0.5V
78821	16	6	52.2	-19	52	0.8	241.717527	-19.866902	4.90	-0.024	0.00	B2V
78914	16	8	13.9	-45	14	14.3	242.057810	-45.237298	4.73	0.230	0.20	Am
78918	16	8	12.5	-36	52	0.6	242.051927	-36.866835	4.22	-0.184	-0.19	B2.5Vn
78933	16	8	14.6	-20	44	1.0	242.061039	-20.733625	3.93	-0.046	0.01	B1V
78990	16	8	50.8	-20	55	58.9	242.211559	-20.933025	4.31	0.831	0.85	G6/G8III
79043	16	9	10.9	+16	58	59.7	242.295599	+16.983249	5.00	0.931	0.93	G8III
79101	16	9	32.6	+44	52	18.2	242.385716	+44.871728	4.23	-0.045	-0.02	B9MNp...
79119	16	9	52.1	+36	25	47.8	242.467189	+36.429956	4.73	1.015	1.00	K0III-IV
79374	16	13	25.4	-19	31	20.7	243.355788	-19.522414	4.00	0.076	0.14	B2IV
79375	16	13	20.5	-10	7	33.6	243.335355	-10.125997	4.93	0.087	0.09	A3IV
79404	16	13	49.0	-27	59	16.4	243.454307	-27.987877	4.58	-0.172	-0.15	B2V
79509	16	15	25.4	-54	41	28.4	243.855826	-54.691228	4.95	1.017	0.99	G4III
79593	16	15	37.9	-3	45	20.2	243.907957	-3.755600	2.73	1.584	1.82	M1III
79664	16	17	41.3	-63	44	42.9	244.421882	-63.745254	3.86	1.105	1.03	G5II
79790	16	18	51.6	-50	7	36.8	244.714939	-50.126893	4.97	0.788	0.88	F9Ia
79822	16	16	49.1	+75	41	52.4	244.204608	+75.697885	4.95	0.393	0.46	F5V
79881	16	19	49.3	-28	40	22.2	244.955588	-28.672833	4.80	0.008	-0.01	A0V:
79882	16	19	37.2	-4	45	1.6	244.904993	-4.750432	3.23	0.966	0.96	G8III
79992	16	20	28.7	+46	15	21.8	245.119608	+46.256052	3.91	-0.151	-0.19	B5IV
80000	16	21	41.0	-50	12	47.1	245.420819	-50.213085	4.01	1.080	1.03	G8III
80047	16	24	5.5	-78	45	8.7	246.022943	-78.752426	4.68	1.680	2.67	M5III
80079	16	22	6.9	-24	13	34.7	245.528638	-24.226310	4.55	0.758	0.80	A4I/III
80112	16	22	40.9	-25	38	58.2	245.670469	-25.649506	2.90	0.299	0.31	B1III
80170	16	23	0.1	+19	5	49.6	245.750535	+19.097123	3.74	0.299	0.34	A9III
80179	16	23	18.9	+0	58	23.4	245.828793	+0.973180	4.82	0.338	0.39	F0V
80181	16	23	3.2	+30	50	11.3	245.763142	+30.836470	4.86	0.970	0.93	K0III
80331	16	24	19.7	+61	27	33.2	246.082094	+61.459209	2.73	0.910	0.84	G8III
80343	16	25	32.4	-20	5	33.6	246.385078	-20.092666	4.48	0.996	0.99	K0III
80463	16	26	32.9	+13	58	42.5	246.636932	+13.978481	4.57	0.002	0.02	B9p Cr
80473	16	27	3.5	-23	30	5.6	246.764515	-23.501550	4.57	0.227	0.25	B2V
80569	16	28	26.8	-18	30	35.4	247.111767	-18.509830	4.22	0.217	0.24	B2Vne
80582	16	28	59.3	-47	36	29.4	247.247148	-47.608163	4.46	-0.070	-0.04	B4V
80628	16	29	7.9	-8	25	29.4	247.282762	-8.424846	4.62	0.185	0.20	A3m
80650	16	27	56.8	+68	42	54.2	246.986660	+68.715057	4.94	-0.051	0.02	A0III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
80686	16	31	8.0	-70	8	9.4	247.783196	-70.135956	4.90	0.555	0.64	F9V
80704	16	29	26.9	+41	49	44.1	247.362082	+41.828928	4.83	1.289	3.61	M6III:var
80763	16	30	54.8	-26	29	3.3	247.728454	-26.484258	1.06	1.865	2.90	M1Ib+B2.5V
80815	16	31	42.0	-25	10	1.4	247.925076	-25.167064	4.79	-0.116	-0.12	B3V
80816	16	31	16.5	+21	26	15.9	247.818573	+21.437738	2.78	0.947	0.94	G8III
80883	16	32	9.1	+1	55	55.5	248.037785	+1.932091	3.82	0.022	0.03	A2V
80894	16	32	32.7	-16	39	51.0	248.136219	-16.664161	4.29	0.924	0.89	G8/KOIII
80911	16	32	59.3	-34	45	19.7	248.247031	-34.755475	4.24	-0.168	-0.17	B2III-IV
80975	16	33	35.5	-21	31	0.3	248.398056	-21.516758	4.45	0.130	0.12	Ap
81008	16	33	45.2	+11	26	13.5	248.438195	+11.437076	4.84	1.495	1.58	K4III
81065	16	37	17.3	-78	56	48.8	249.321990	-78.946893	3.86	0.923	0.92	KOIV SB
81122	16	35	49.9	-44	5	41.2	248.957847	-44.094783	4.86	0.045	0.18	B0Ia
81126	16	34	53.7	+42	23	15.8	248.723545	+42.387734	4.20	-0.013	0.02	B9Vvar
81266	16	37	24.7	-28	15	52.8	249.352919	-28.264679	2.82	-0.206	-0.24	B0V
81304	16	37	59.5	-35	18	12.5	249.497893	-35.303460	4.18	1.535	1.72	K5III
81377	16	38	30.6	-10	36	53.2	249.627593	-10.614772	2.54	0.038	0.10	O9.5V
81497	16	39	24.8	+48	52	52.9	249.853535	+48.881364	4.86	1.562	2.03	M2.5III
81660	16	41	5.7	+64	32	34.3	250.273639	+64.542859	4.84	1.212	1.19	K1p
81693	16	42	12.7	+31	33	33.7	250.552762	+31.559358	2.81	0.650	0.70	F9IV
81724	16	42	59.6	-17	47	15.1	250.748202	-17.787537	4.91	1.095	1.13	G8II/III
81833	16	43	44.2	+38	52	36.9	250.934272	+38.876905	3.48	0.916	0.89	G8III-IV
81852	16	46	38.2	-77	33	49.4	251.658964	-77.563729	4.23	1.060	1.04	KOIII
82020	16	45	45.9	+56	44	19.6	251.441236	+56.738787	4.84	0.375	0.44	F2V
82080	16	43	32.9	+81	59	36.0	250.887142	+81.993321	4.21	0.897	0.91	G5IIIvar
82273	16	51	16.8	-69	4	8.2	252.820131	-69.068958	1.91	1.447	1.45	K2IIb-IIIa
82321	16	49	57.3	+45	56	30.3	252.488909	+45.941743	4.82	0.087	0.10	A2p...
82363	16	51	54.8	-59	4	55.5	252.978134	-59.082072	3.77	1.562	1.67	K5III
82369	16	51	11.5	-10	49	27.3	252.797812	-10.824263	4.64	0.478	0.55	F7IV
82396	16	51	45.3	-34	20	7.5	252.938727	-34.335407	2.29	1.144	1.10	K2IIIb
82514	16	53	32.1	-38	5	13.2	253.383682	-38.086996	3.00	-0.200	-0.20	B1.5IV+B
82545	16	53	60.0	-38	3	24.8	253.499899	-38.056901	3.56	-0.210	-0.21	B2IV
82671	16	55	43.7	-42	24	1.0	253.932200	-42.400280	4.70	0.444	0.71	B1Iae
82673	16	55	10.1	+10	7	36.2	253.792067	+10.126731	4.39	-0.088	-0.13	B8V
82729	16	56	18.8	-42	24	2.7	254.078146	-42.400738	3.62	1.393	1.37	K4III
82860	16	56	10.1	+65	5	51.4	254.042026	+65.097605	4.88	0.481	0.56	F6Vvar
83000	16	58	49.8	+9	20	19.2	254.707316	+9.338664	3.19	1.160	1.10	K2IIIvar
83081	17	0	39.4	-56	1	33.2	255.163994	-56.025880	3.12	1.552	1.60	K5III
83153	17	1	32.6	-53	11	43.0	255.385994	-53.195266	4.06	1.452	1.42	K4III
83207	17	1	13.7	+30	53	30.2	255.306966	+30.891724	3.92	-0.018	-0.04	A0V
83262	17	2	21.2	-4	15	26.9	255.588410	-4.257477	4.82	1.483	1.49	K4III
83430	17	4	15.3	+14	3	30.1	256.063695	+14.058357	4.97	1.600	2.08	M3III
83574	17	6	26.3	-34	9	18.0	256.609417	-34.155001	4.83	0.257	0.38	B2Iab
83608	17	5	50.7	+54	26	18.5	256.461421	+54.438462	4.91	0.471	0.54	F5
83613	17	6	30.9	+12	42	32.0	256.628830	+12.708889	4.89	0.125	0.11	A4IV
83895	17	8	51.8	+65	41	4.6	257.215651	+65.684612	3.17	-0.120	-0.14	B6III
84012	17	11	47.1	-15	45	11.3	257.946262	-15.753146	2.43	0.059	0.06	A2.5Va
84143	17	13	54.7	-43	16	7.9	258.478023	-43.268857	3.32	0.441	0.47	F3p
84345	17	15	45.9	+14	21	50.6	258.941455	+14.364067	2.78	1.164	1.13	M5IIvar
84379	17	16	2.3	+24	48	42.7	259.009785	+24.811861	3.12	0.080	0.06	A3IVv SB
84380	17	15	54.1	+36	46	58.3	258.975375	+36.782852	3.16	1.437	1.31	K3IIvar
84405	17	16	51.6	-26	38	11.1	259.214875	-26.636419	4.33	0.855	0.92	K2:III:
84514	17	17	52.2	-0	28	15.7	259.467596	-0.471019	4.72	1.119	1.09	K2III
84573	17	18	13.9	+33	4	30.3	259.558029	+33.075081	4.80	-0.166	-0.17	B1.5Vp
84606	17	18	31.0	+37	16	1.7	259.629168	+37.267126	4.64	0.043	0.07	A2V
84880	17	22	12.4	-12	52	10.7	260.551791	-12.869648	4.32	0.037	0.07	A0/A1V
84893	17	22	28.6	-21	8	13.0	260.619278	-21.136954	4.39	0.394	0.47	F2/F3V
84969	17	24	33.8	-67	47	32.9	261.140659	-67.792479	4.76	1.194	1.18	K1III
84970	17	23	31.0	-25	1	18.3	260.879018	-25.021763	3.27	-0.186	-0.21	B2IV
85112	17	24	31.7	+37	7	29.1	261.132153	+37.124736	4.15	-0.011	0.01	B9.5III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α			δ			Espectro
	NH	h	m	s	°	'	''	°	'	''	V	U-V	
85258	17	27	20.5	-55	33	0.1	261.835330	-55.550017	2.84	1.479	1.50		K3Ib-II
85267	17	27	27.7	-56	23	51.9	261.865431	-56.397737	3.31	-0.150	-0.12		B1Ib
85340	17	27	52.1	-24	11	44.1	261.967059	-24.195592	4.16	0.283	0.30		A3IV:m
85355	17	27	43.9	+4	7	15.3	261.932813	+4.120912	4.34	1.480	1.44		K3IIvar
85365	17	27	56.0	-5	6	22.6	261.983151	-5.106283	4.53	0.385	0.46		F3V
85423	17	28	55.3	-29	53	12.6	262.230230	-29.886847	4.28	0.402	0.45		F3III
85670	17	30	59.3	+52	17	2.7	262.746919	+52.284084	2.79	0.954	0.93		G2II
85693	17	31	43.8	+26	5	37.3	262.932353	+26.093686	4.41	1.434	1.39		K3IIIvar
85696	17	32	25.9	-37	18	46.3	263.107945	-37.312862	2.70	-0.179	-0.23		B2IV
85727	17	33	19.0	-60	42	3.6	263.328961	-60.701008	3.60	-0.104	-0.10		B8V
85755	17	32	54.7	-23	58	45.6	263.228086	-23.979338	4.78	0.016	0.08		A0V
85792	17	33	44.3	-49	53	33.9	263.434679	-49.892745	2.84	-0.136	-0.15		B2Vne
85819	17	32	39.6	+55	10	5.6	263.165025	+55.168234	4.89	0.251	0.28		Am...
85822	17	24	26.5	+86	34	4.9	261.110464	+86.568033	4.35	0.021	0.04		A1Vn
85829	17	32	45.1	+55	9	25.4	263.187773	+55.157059	4.86	0.279	0.30		Am
85927	17	35	16.4	-37	7	9.1	263.818522	-37.119197	1.62	-0.231	-0.24		B1.5IV+...
86032	17	36	4.3	+12	32	38.4	264.018074	+12.544004	2.08	0.155	0.17		A5III
86092	17	37	29.2	-46	31	11.5	264.371628	-46.519854	4.56	-0.020	0.01		A0V
86170	17	38	14.2	-38	38	59.8	264.559040	-38.649954	4.26	1.075	1.09		G8/K0III/IV
86201	17	36	48.7	+68	44	47.0	264.202817	+68.746378	4.77	0.430	0.49		F5V
86228	17	39	4.9	-43	0	38.8	264.770271	-43.010781	1.86	0.406	0.48		F1II
86263	17	38	59.4	-15	24	42.7	264.747696	-15.411865	3.54	0.262	0.29		F0IIp
86284	17	39	10.7	-8	7	54.0	264.794495	-8.131673	4.58	0.132	0.22		B8II-III M Np
86414	17	40	9.4	+45	59	39.7	265.039330	+45.994362	3.82	-0.179	-0.21		B3V SB
86486	17	42	17.5	-49	25	40.3	265.572943	-49.427857	4.76	0.415	0.49		F3IV
86565	17	42	47.5	-12	53	10.7	265.698122	-12.886313	4.24	0.086	0.10		A2Va
86614	17	41	30.6	+72	8	10.3	265.377340	+72.136184	4.57	0.434	0.50		F5IV-V
86670	17	44	11.1	-39	2	24.2	266.046092	-39.040059	2.39	-0.171	-0.22		B1.5III
86736	17	44	53.9	-21	41	34.5	266.224765	-21.692906	4.86	0.469	0.54		F6/F7V
86742	17	44	41.0	+4	33	32.0	266.170891	+4.558896	2.76	1.168	1.10		K2III
86929	17	48	8.5	-64	43	55.3	267.035404	-64.732015	3.61	1.161	1.09		K1III
86974	17	47	25.2	+27	42	28.5	266.854865	+27.707907	3.42	0.750	0.71		G5IV
87072	17	49	6.2	-27	50	16.1	267.275876	-27.837798	4.53	0.600	0.76		F7II
87073	17	49	18.0	-40	8	2.1	267.324881	-40.133913	2.99	0.509	0.64		F3Ia
87108	17	49	7.3	+2	41	59.8	267.280467	+2.699941	3.75	0.043	0.05		A0V
87220	17	50	46.0	-31	42	33.2	267.691738	-31.709221	4.79	-0.028	0.01		B8Ib/II
87261	17	51	31.6	-37	2	55.2	267.881600	-37.048654	3.19	1.192	1.15		K0/K1III
87294	17	51	54.0	-40	5	44.8	267.974946	-40.095780	4.78	0.259	0.41		A6Ib
87585	17	53	57.2	+56	52	10.0	268.488334	+56.869445	3.73	1.177	1.11		K2III
87808	17	57	5.6	+37	14	55.0	269.273467	+37.248610	3.86	1.350	1.17		K1IIvar
87833	17	57	10.6	+51	29	12.8	269.293972	+51.486893	2.24	1.521	1.54		K5III
87846	17	58	34.7	-44	20	37.5	269.644732	-44.343752	4.85	1.176	1.15		K2III
87933	17	58	43.0	+29	14	48.2	269.679339	+29.246711	3.70	0.935	0.89		K0III
87936	17	59	32.3	-41	43	1.9	269.884637	-41.717187	4.88	1.617	1.88		M0III
87998	17	59	26.4	+30	11	19.3	269.860164	+30.188688	4.41	0.380	0.51		F2II
88048	18	0	22.5	-9	46	28.5	270.093940	-9.774582	3.32	0.987	0.95		K0III
88060	18	0	39.7	-30	15	11.4	270.165454	-30.253153	5.00	1.654	2.00		K5/M0III
88116	18	1	17.3	-23	48	58.1	270.322181	-23.816145	4.74	-0.030	-0.01		B9V
88128	18	1	8.9	+16	45	4.4	270.287018	+16.751208	4.67	1.254	1.12		K0II-III
88149	18	1	28.6	+4	22	8.6	270.369305	+4.369049	4.79	-0.100	-0.08		B2Ve
88175	18	1	46.7	-3	41	23.6	270.444588	-3.689889	4.62	0.390	0.45		F3V
88192	18	1	52.4	+2	55	56.1	270.468218	+2.932264	3.93	0.029	0.10		B5Ib
88267	18	2	32.8	+21	35	50.1	270.636652	+21.597249	4.26	0.406	0.47		G5
88290	18	2	59.8	+1	18	23.0	270.749206	+1.306401	4.42	0.046	0.06		A2Vn
88404	18	4	25.0	-8	10	42.1	271.104085	-8.178367	4.77	0.410	0.45		F5V+...
88567	18	6	35.1	-29	34	36.0	271.646402	-29.576664	4.66	0.774	0.81		G0Ib/II
88601	18	6	41.4	+2	29	50.3	271.672464	+2.497297	4.03	0.860	0.96		K0V SB
88635	18	7	22.9	-30	25	17.0	271.845537	-30.421376	2.98	0.981	0.99		K0III
88657	18	7	3.8	+22	13	21.9	271.766016	+22.222742	4.96	1.656	2.18		M3IIIa+...

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
88714	18	8	32.3	-50	5	13.3	272.134550	-50.087025	3.65	-0.101	-0.06	B2Ib
88726	18	8	36.2	-43	25	16.8	272.150857	-43.421321	4.92	0.255	0.29	A5V
88765	18	8	28.7	+8	44	19.6	272.119506	+8.738766	4.64	0.951	0.92	G8III-IV
88771	18	8	30.7	+9	34	8.8	272.127931	+9.569098	3.71	0.159	0.18	A4IVs
88788	18	8	13.1	+43	27	58.2	272.054472	+43.466176	5.00	0.913	0.91	G8III...
88794	18	8	29.9	+28	46	2.3	272.124690	+28.767312	3.84	-0.018	-0.02	B9.5V
88839	18	9	38.1	-28	27	7.3	272.408673	-28.452031	4.55	0.938	1.00	K0IIICNpvar
88866	18	10	56.3	-63	39	50.9	272.734499	-63.664130	4.33	0.228	0.23	Am
88886	18	9	48.4	+20	49	12.1	272.451601	+20.820039	4.37	-0.164	-0.19	B2IV
89112	18	13	2.8	-45	56	50.8	273.261859	-45.947445	4.52	1.009	0.95	G5III
89153	18	13	13.0	-23	41	38.4	273.304267	-23.694002	4.96	1.055	1.02	K0III
89172	18	12	49.5	+31	24	46.3	273.206270	+31.412873	4.96	1.643	2.16	M3III
89341	18	15	13.7	-21	3	0.8	273.807166	-21.050221	3.84	0.195	0.21	B2III:
89348	18	14	2.3	+64	24	21.0	273.509476	+64.405842	4.99	0.440	0.51	F5V
89642	18	19	17.1	-36	45	6.6	274.821158	-36.751826	3.10	1.582	2.24	M2III
89678	18	19	35.2	-27	1	53.3	274.896579	-27.031471	4.66	1.629	1.62	K3III
89826	18	20	43.3	+36	4	36.8	275.180254	+36.076883	4.33	1.162	1.10	K2IIIVar
89861	18	21	20.1	+21	58	23.8	275.333872	+21.973274	4.92	1.594	1.82	M1III
89908	18	20	24.2	+71	21	1.0	275.100741	+71.350285	4.22	-0.093	-0.11	A0p (Si)
89918	18	22	5.5	+3	23	24.0	275.522798	+3.389986	4.85	0.911	0.90	G8III
89931	18	22	33.7	-29	48	55.2	275.640444	-29.815337	2.72	1.380	1.35	K3III
89937	18	20	36.7	+72	44	34.4	275.152866	+72.742895	3.55	0.489	0.62	F7Vvar
89962	18	22	34.7	-2	53	25.7	275.644602	-2.890461	3.23	0.941	0.96	K0III-IV
90098	18	25	28.9	-61	28	45.9	276.370271	-61.479423	4.35	1.462	1.50	M1III SB
90135	18	25	0.1	-8	55	10.5	276.250471	-8.919581	4.66	0.932	0.94	K0III
90139	18	24	44.6	+21	46	57.1	276.185652	+21.782522	3.85	1.168	1.13	K2III
90156	18	24	16.1	+58	48	55.7	276.066907	+58.815459	4.98	0.082	0.05	A3V
90185	18	25	47.8	-34	22	14.2	276.449308	-34.370604	1.79	-0.031	0.01	B9.5III
90289	18	26	48.6	-20	31	35.0	276.702365	-20.526383	4.81	1.310	1.27	A1/A2V
90344	18	26	3.3	+65	34	43.5	276.513700	+65.578754	4.82	1.179	1.16	K2III
90422	18	28	47.3	-45	57	8.1	277.197114	-45.952263	3.49	-0.179	-0.18	B3IV
90496	18	29	28.9	-25	24	21.2	277.370514	-25.405891	2.82	1.025	1.04	K1IIIb
90568	18	30	42.9	-49	3	16.0	277.678944	-49.054445	4.10	0.995	1.02	G8/K0III
90595	18	30	35.6	-14	32	53.1	277.648410	-14.548095	4.67	0.076	0.10	A1IV/V
90797	18	33	39.4	-62	15	33.6	278.414126	-62.259320	4.63	-0.116	-0.11	B8III
90830	18	33	34.2	-45	53	44.3	278.392484	-45.895633	4.92	-0.101	-0.08	B6IV
90905	18	32	59.9	+57	3	54.0	278.249433	+57.064997	4.77	0.611	0.67	F7Ib
90982	18	35	15.0	-42	17	32.2	278.812664	-42.292268	4.62	0.994	0.95	G5III
91117	18	36	32.4	-8	13	29.7	279.135032	-8.224909	3.85	1.317	1.28	K2III
91262	18	37	46.1	+38	48	27.9	279.442153	+38.807742	0.03	-0.001	-0.01	A0Vvar
91726	18	43	36.9	-9	1	37.7	280.903700	-9.027128	4.70	0.358	0.40	F2IIIp d Del
91792	18	45	53.0	-71	24	10.4	281.470822	-71.402876	4.01	1.134	1.14	K2III
91845	18	44	51.3	-8	14	56.4	281.213684	-8.249004	4.88	1.112	1.07	G8II
91918	18	45	57.7	-35	36	55.7	281.490415	-35.615476	4.86	-0.168	-0.19	B2V
91919	18	45	9.1	+39	41	49.1	281.287739	+39.696984	4.67	0.170	0.19	F1V
91926	18	45	11.5	+39	38	22.4	281.298074	+39.639550	4.59	0.180	0.20	A8Vn
91971	18	45	37.0	+37	37	55.3	281.404227	+37.632014	4.34	0.192	0.18	Am
92024	18	47	50.7	-64	50	40.9	281.961077	-64.844682	4.78	0.199	0.21	A7V
92041	18	47	11.1	-26	57	48.0	281.796378	-26.963338	3.17	-0.107	-0.10	B8.5III
92043	18	46	43.0	+20	34	16.9	281.679230	+20.571372	4.19	0.483	0.55	F6V
92088	18	47	3.7	+26	41	23.3	281.765581	+26.689815	4.83	1.199	1.16	K3III
92161	18	48	6.2	+18	12	37.5	282.025912	+18.210415	4.34	0.148	0.16	A5III
92175	18	48	28.4	-4	43	11.0	282.118518	-4.719719	4.22	1.087	1.09	G5II...
92420	18	50	59.1	+33	23	32.9	282.746197	+33.392466	3.52	0.003	0.02	A8:V comp SB
92512	18	51	33.7	+59	25	7.8	282.890432	+59.418843	4.63	1.185	1.20	K0II-III SB
92609	18	54	28.7	-62	9	22.4	283.619569	-62.156222	4.22	-0.150	-0.14	B2II-III
92689	18	53	50.0	+50	44	22.6	283.458136	+50.739603	4.92	0.903	0.88	G8III
92761	18	55	38.8	-22	42	45.0	283.911808	-22.712508	4.86	1.412	1.35	K1II
92782	18	54	5.4	+71	19	46.0	283.522304	+71.329454	4.82	1.151	1.10	K0III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
92791	18	55	21.7	+36	55	51.6	283.840488	+36.931013	4.22	1.575	2.60	M4IIvar
92818	18	55	47.0	+22	40	39.6	283.945659	+22.677654	4.57	0.782	0.86	G4III+...
92845	18	56	35.9	-22	38	19.0	284.149680	-22.638619	5.00	1.348	1.25	K1Ib/II
92855	18	56	47.0	-26	15	50.6	284.195688	-26.264064	2.05	-0.134	-0.13	B2.5V
92862	18	56	4.8	+43	58	46.0	284.020161	+43.979452	4.08	1.397	3.14	M5IIIvar
92946	18	57	26.2	+4	14	14.1	284.359307	+4.237248	4.62	0.161	0.20	A5V
92951	18	57	27.7	+4	14	9.0	284.365497	+4.235828	4.98	0.204	0.22	A5Vn
93015	18	59	27.8	-67	11	56.8	284.865646	-67.199116	4.40	0.530	0.59	F5Ib-II:
93026	18	58	22.3	-5	48	45.4	284.593067	-5.812601	4.83	1.057	1.03	K1III
93085	18	59	11.4	-21	4	20.4	284.797534	-21.072323	3.52	1.151	1.09	G8/K0II/III
93148	19	0	25.0	-52	54	13.4	285.104134	-52.903710	4.85	-0.051	-0.03	A0V
93174	19	0	22.4	-37	4	23.0	285.093164	-37.073055	4.83	0.396	0.44	F3IV/V
93194	18	59	51.6	+32	43	28.3	284.965138	+32.724525	3.25	-0.049	-0.03	B9III
93244	19	0	44.1	+15	6	11.5	285.183676	+15.103208	4.02	1.082	1.00	K2III
93279	19	0	56.3	+32	10	52.1	285.234581	+32.181152	4.94	1.465	1.32	K3III
93408	19	2	8.0	+46	58	14.0	285.533166	+46.970564	5.00	0.186	0.23	A7V
93429	19	2	59.3	-5	42	9.9	285.746997	-5.702741	4.02	1.079	1.08	K1IIIvar
93506	19	4	10.1	-29	50	34.2	286.042074	-29.842837	2.60	0.062	0.06	A3IV
93542	19	4	50.7	-42	3	28.2	286.211397	-42.057825	4.74	-0.027	-0.02	A0Vn
93683	19	6	9.0	-21	42	12.5	286.537325	-21.703480	3.76	1.012	0.98	K0III
93747	19	6	32.2	+13	54	5.6	286.634052	+13.901563	2.99	0.014	-0.01	A0Vn
93805	19	7	32.9	-4	50	38.1	286.887110	-4.843909	3.43	-0.096	-0.09	B9Vn
93825	19	8	4.3	-37	1	33.1	287.017861	-37.025855	4.23	0.523	0.59	F7IV-V
93864	19	8	28.1	-27	37	56.6	287.116900	-27.632387	3.32	1.169	1.15	K1/K2III
94005	19	10	3.1	-40	27	22.8	287.512797	-40.456324	4.57	1.070	1.06	K1III
94114	19	11	8.1	-37	51	50.2	287.783855	-37.863934	4.11	0.042	0.03	A0/A1V
94141	19	11	13.1	-20	58	57.3	287.804750	-20.982570	2.88	0.377	0.44	F2II/III
94160	19	11	42.6	-39	17	58.3	287.927663	-39.299536	4.10	1.163	1.11	K0II/HICN.
94376	19	12	33.3	+67	42	16.6	288.138552	+67.704618	3.07	0.990	0.94	G9III
94481	19	14	35.5	+39	11	21.6	288.648071	+39.189339	4.43	-0.150	-0.19	B2.5IV
94490	19	14	21.3	+57	44	52.9	288.588696	+57.748033	5.00	1.156	1.12	K2III
94643	19	17	2.4	-25	12	44.4	289.260098	-25.212324	4.86	0.569	0.67	K0/K1III+..
94648	19	15	4.0	+73	24	0.6	288.766504	+73.400173	4.45	1.257	1.15	K3III
94703	19	17	16.3	+21	26	6.7	289.317712	+21.435208	4.76	-0.058	-0.05	B4IV
94713	19	17	13.1	+38	10	42.9	289.304751	+38.178588	4.35	1.258	1.13	K0II
94779	19	17	40.1	+53	24	52.1	289.417047	+53.414461	3.80	0.950	0.85	K0III
94820	19	19	4.0	-18	54	26.1	289.766544	-18.907256	4.88	1.013	0.99	K0III
95066	19	21	51.3	-5	22	5.3	290.463819	-5.368149	4.98	0.937	0.93	G8III-IV...
95081	19	20	47.3	+65	45	42.7	290.197156	+65.761863	4.60	0.033	0.01	A2III _s
95168	19	23	5.5	-17	47	56.7	290.772902	-17.799074	3.92	0.228	0.25	F0III/IV
95176	19	23	7.7	-15	54	25.4	290.782098	-15.907058	4.52	0.079	0.34	F2p
95241	19	24	23.6	-44	24	37.8	291.098439	-44.410507	3.96	-0.085	-0.07	B9V
95294	19	24	59.0	-44	45	4.3	291.245799	-44.751204	4.27	0.350	0.42	F2III
95347	19	25	34.7	-40	34	2.9	291.394702	-40.567463	3.96	-0.105	-0.10	B8V
95372	19	25	5.6	+29	40	14.2	291.273155	+29.670624	4.99	-0.120	-0.11	B3IV
95501	19	26	44.0	+3	9	55.3	291.683199	+3.165364	3.36	0.319	0.38	F0IV
95585	19	27	46.2	+0	23	21.0	291.942613	+0.389173	4.64	0.576	0.75	F2Ib
95771	19	29	43.5	+24	42	57.4	292.431323	+24.715951	4.44	1.502	1.68	M0comp
95853	19	30	19.4	+51	46	58.2	292.580744	+51.782833	3.76	0.148	0.18	A5Vn
95947	19	31	42.6	+28	0	45.0	292.927360	+28.012503	3.05	1.088	1.05	K3II+...
96052	19	32	41.0	+34	30	22.9	293.170723	+34.506358	4.74	-0.150	-0.12	B3IV
96100	19	32	18.4	+69	42	11.0	293.076598	+69.703067	4.67	0.786	0.85	K0V
96229	19	35	17.1	+7	25	57.6	293.821385	+7.432665	4.45	1.176	1.14	K3III
96275	19	35	39.5	+19	49	42.3	293.914448	+19.828411	5.00	-0.093	-0.08	B8III _n
96341	19	37	1.6	-48	2	38.1	294.256615	-48.043913	4.88	1.096	1.06	G9III
96441	19	37	5.9	+50	16	43.5	294.274782	+50.278747	4.49	0.395	0.44	F4V
96465	19	38	11.7	-24	49	39.1	294.548745	-24.827517	4.59	-0.075	-0.06	B8/B9V
96468	19	37	59.3	-1	13	49.9	294.496951	-1.230532	4.36	-0.079	-0.06	B5III
96483	19	38	12.4	-6	58	16.3	294.551848	-6.971182	4.93	-0.046	0.03	B0.5III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
96683	19	40	20.7	+30	12	40.0	295.086183	+30.211125	4.68	0.971	0.89	G8III-IV...
96757	19	41	11.5	+18	4	18.3	295.297913	+18.071744	4.39	0.777	0.77	G0II
96837	19	42	9.0	+17	32	3.5	295.537339	+17.534314	4.39	1.041	0.96	G8II
97118	19	45	9.6	+37	24	53.1	296.290159	+37.414761	4.89	0.948	0.94	G8III
97165	19	45	44.4	+45	11	29.9	296.435040	+45.191644	2.86	-0.002	-0.02	B9.5III
97278	19	47	25.4	+10	40	28.4	296.856010	+10.674543	2.72	1.507	1.44	K3II
97290	19	47	47.3	-19	42	1.0	296.947224	-19.700287	4.87	1.061	1.03	K0III
97295	19	47	21.4	+33	47	9.4	296.839328	+33.785935	5.00	0.476	0.55	F5
97365	19	48	28.8	+18	35	46.5	297.119961	+18.596242	3.68	1.313	1.27	M2II+B6
97433	19	48	4.6	+70	19	48.6	297.019337	+70.330175	3.84	0.888	0.88	G8III
97649	19	51	58.7	+8	56	4.6	297.994447	+8.934598	0.76	0.221	0.27	A7IV-V
97679	19	52	7.4	+22	40	25.5	298.030897	+22.673751	4.90	-0.153	-0.12	B2.5V
97804	19	53	43.2	+1	4	12.8	298.429954	+1.070215	3.87	0.630	0.73	F6Ibv SB
97886	19	54	30.2	+24	8	41.7	298.625803	+24.144923	4.57	-0.047	-0.02	B9.5III
97938	19	55	26.1	+8	31	35.1	298.858712	+8.526427	4.71	1.023	1.03	K0III
98032	19	56	56.7	-41	48	6.4	299.236252	-41.801770	4.12	1.063	1.09	K0III
98036	19	56	31.0	+6	28	10.7	299.129042	+6.469630	3.71	0.855	0.89	G8IVvar
98055	19	56	15.7	+52	30	17.4	299.065621	+52.504832	4.91	0.124	0.12	A4Vn
98066	19	57	20.2	-26	13	57.3	299.334004	-26.232583	4.70	0.748	0.79	G3/G5III
98068	19	56	44.3	+38	33	10.7	299.184696	+38.552986	4.95	-0.086	-0.07	B5IV
98073	19	56	23.3	+58	54	43.3	299.097018	+58.912031	4.98	1.584	1.56	K5II-III
98110	19	57	13.5	+35	8	59.1	299.306431	+35.149757	3.89	1.019	0.98	K0IIIvar
98162	19	58	26.8	-27	6	10.8	299.611635	-27.102997	4.54	1.462	1.39	K3III
98337	19	59	50.8	+19	33	36.5	299.961663	+19.560130	3.51	1.571	1.65	K5III
98353	20	0	26.5	-26	7	39.2	300.110531	-26.127567	4.84	0.882	0.91	G8II/III
98412	20	1	19.5	-35	12	28.8	300.331345	-35.208008	4.37	-0.150	-0.15	B2.5IV
98495	20	3	22.9	-72	50	31.8	300.845275	-72.842164	3.97	-0.032	-0.04	A0V
98543	20	2	6.6	+27	49	21.4	300.527537	+27.822616	4.66	0.184	0.19	A4III
98608	20	3	47.6	-59	18	23.3	300.948417	-59.306459	4.95	1.356	3.25	M6III
98688	20	4	9.6	-27	38	23.3	301.040032	-27.639808	4.43	1.640	2.50	M4III
98702	20	2	55.1	+67	56	36.8	300.729780	+67.943548	4.51	1.313	1.23	K3III
98761	20	5	10.7	-37	52	15.0	301.294780	-37.870838	4.77	1.417	1.40	K4III
98842	20	5	52.5	-31	59	8.0	301.468753	-31.985564	4.99	1.208	1.17	K1III/IV
99120	20	9	15.1	-52	48	29.9	302.312713	-52.808315	4.93	1.591	1.83	M1II
99240	20	11	6.2	-66	6	58.8	302.775815	-66.116346	3.55	0.751	0.76	G5IV-Vvar
99255	20	8	1.1	+77	47	2.7	302.004590	+77.784079	4.38	-0.046	-0.06	B9III
99303	20	10	20.2	+36	54	46.5	302.584343	+36.912927	4.93	-0.139	-0.13	B2.5V
99473	20	12	34.1	-0	44	49.8	303.141877	-0.747173	3.24	-0.066	-0.06	B9.5III
99639	20	14	4.3	+46	53	26.9	303.517798	+46.890807	4.80	0.100	0.19	A5III n
99655	20	13	57.9	+56	38	36.2	303.491393	+56.643388	4.28	0.114	0.14	A3IV-Vn
99675	20	14	24.2	+46	48	59.8	303.600859	+46.816624	3.80	1.270	1.15	K2II+...
99742	20	15	24.6	+15	16	25.3	303.852617	+15.273688	4.94	0.072	0.09	A2V
99770	20	15	27.1	+36	52	57.1	303.862962	+36.882527	4.93	0.151	0.21	A2V
99824	20	16	18.2	+25	40	5.1	304.075889	+25.668081	4.79	-0.181	-0.22	B3V
99848	20	16	13.8	+47	47	25.5	304.057393	+47.790407	3.96	1.451	1.45	K3Ib-II comp
99874	20	16	47.1	+27	53	26.5	304.196159	+27.890681	4.50	1.258	1.30	K3III
100027	20	19	0.2	-12	25	50.9	304.750822	-12.430800	4.30	0.928	1.05	G3Ib
100044	20	18	41.4	+38	6	36.9	304.672555	+38.110249	4.77	0.377	0.44	B2pe
100064	20	19	24.7	-12	28	2.0	304.852745	-12.467226	3.58	0.883	0.92	G6/G8III
100310	20	22	1.2	-12	40	49.1	305.505005	-12.680299	4.77	-0.047	-0.06	B9IV
100345	20	22	23.1	-14	42	8.0	305.596275	-14.702222	3.05	0.790	0.90	A5:n
100453	20	23	6.5	+40	20	10.3	305.777047	+40.336194	2.23	0.673	0.65	F8Ib
100587	20	24	50.3	+32	16	13.7	306.209768	+32.270465	4.43	1.331	1.31	K3III
100751	20	27	34.2	-56	39	15.3	306.892419	-56.654250	1.94	-0.118	-0.10	B2IV
101027	20	30	15.3	-17	43	51.3	307.563564	-17.730923	4.77	0.386	0.44	F3V
101076	20	30	23.8	+30	27	5.5	307.599310	+30.451526	4.01	0.404	0.46	F5II
101093	20	29	59.3	+63	4	37.0	307.497075	+63.076939	4.21	0.199	0.20	A7III
101101	20	30	55.7	-2	48	9.1	307.732237	-2.802519	4.91	1.160	1.12	K2III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'	"	°				
101138	20	30	49.1	+49	2	5.5	307.704486	+49.034851	4.94	-0.087	-0.06	B2.5IV
101421	20	34	23.0	+11	23	16.4	308.595741	+11.387878	4.03	-0.123	-0.10	B6III
101474	20	34	51.4	+35	20	9.2	308.714192	+35.335893	4.61	1.593	1.78	K2Ib comp
101589	20	36	27.3	+14	45	36.2	309.113575	+14.760065	4.64	0.120	0.14	A3V
101612	20	37	35.4	-60	29	48.8	309.397296	-60.496887	4.75	0.291	0.34	F1III
101692	20	38	0.1	-2	27	49.0	309.500364	-2.463607	4.91	1.606	1.66	K5II
101769	20	38	41.9	+14	40	53.7	309.674480	+14.681576	3.64	0.425	0.50	F5IV
101772	20	39	16.8	-47	12	14.8	309.819825	-47.204117	3.11	0.998	0.98	K0III
101773	20	39	37.2	-61	26	36.1	309.905132	-61.443369	4.86	0.447	0.52	Fmdelta Del
101847	20	39	36.1	-1	1	4.9	309.900443	-1.018040	4.31	0.949	0.91	G8III SB
101867	20	39	37.0	+21	17	18.2	309.904241	+21.288397	4.81	-0.030	-0.01	A0V
101958	20	40	46.5	+15	59	59.6	310.193943	+15.999884	3.77	-0.057	-0.01	B9V
102098	20	42	16.1	+45	22	7.9	310.566934	+45.368853	1.25	0.092	0.16	A2Ia
102281	20	44	36.2	+15	9	49.6	311.150669	+15.163791	4.43	0.302	0.34	A7IIIp d Del
102333	20	45	49.4	-51	49	53.2	311.455978	-51.831435	4.51	0.278	0.30	A6:var
102388	20	45	56.2	+25	21	34.3	311.484028	+25.359536	4.92	1.183	1.11	K2III
102395	20	47	8.1	-66	6	45.9	311.783829	-66.112753	3.42	0.163	0.20	A5IV
102422	20	45	47.0	+61	56	3.8	311.445949	+61.934398	3.41	0.912	0.94	K0IV
102431	20	45	57.6	+57	40	6.1	311.489828	+57.668370	4.52	0.535	0.58	F8IV-V
102453	20	46	40.5	+30	48	37.2	311.668698	+30.810320	4.22	1.051	1.01	K0III
102485	20	47	32.5	-25	10	52.4	311.885363	-25.181209	4.13	0.426	0.49	F5V
102488	20	47	12.2	+34	3	47.3	311.800841	+34.063144	2.48	1.021	1.00	K0III
102532	20	47	47.7	+16	12	50.0	311.948825	+16.213902	4.27	1.042	1.03	K1IV
102571	20	48	9.5	+34	27	55.0	312.039466	+34.465289	4.93	1.294	1.25	K3IIIvar
102589	20	48	21.9	+36	34	54.7	312.091122	+36.581869	4.53	-0.083	-0.12	B6IV
102618	20	48	60.0	-9	24	16.6	312.249912	-9.404605	3.78	0.000	-0.01	A1V
102624	20	49	1.7	-4	56	11.6	312.257001	-4.936543	4.43	1.639	2.21	M3IIIvar
102724	20	49	46.4	+46	12	21.5	312.443428	+46.205972	4.81	0.571	0.59	B3Ia
102790	20	51	9.5	-46	8	3.7	312.789566	-46.134365	4.90	1.494	1.57	K5III
102831	20	51	29.5	-33	41	14.6	312.872870	-33.687399	4.89	1.004	0.97	G8III
102978	20	53	16.7	-26	49	33.2	313.319632	-26.825899	4.12	1.633	1.76	K4III
103004	20	53	10.6	+27	11	23.5	313.294336	+27.189868	4.56	0.835	0.87	G8III
103045	20	53	58.4	-8	53	23.8	313.493276	-8.889955	4.73	0.325	0.36	A3m
103089	20	54	6.8	+44	28	51.5	313.528348	+44.480985	4.80	-0.134	-0.16	B5V
103227	20	56	42.3	-58	21	34.9	314.176335	-58.359685	3.67	1.250	1.11	K0III
103413	20	58	5.3	+41	15	44.7	314.522036	+41.262410	3.94	0.027	0.01	A1Vn
103632	21	0	39.6	+47	37	3.0	315.165059	+47.617506	4.74	-0.084	-0.06	B1ne
103738	21	2	47.2	-32	9	37.7	315.696825	-32.160478	4.67	0.890	0.90	G8III
104019	21	5	47.7	-19	45	23.7	316.448808	-19.756596	4.82	0.169	0.18	A5V
104060	21	5	49.4	+44	1	35.5	316.455884	+44.026527	3.72	1.609	1.63	K5Ibv SB
104139	21	7	19.2	-17	8	2.7	316.830169	-17.134085	4.08	-0.010	0.00	A1V
104194	21	7	26.8	+47	44	51.9	316.861665	+47.747743	4.56	1.569	1.54	K4II
104234	21	8	33.3	-24	54	23.3	317.138951	-24.906464	4.49	1.604	1.81	K5/M0III
104459	21	10	55.6	-11	16	16.1	317.731468	-11.271142	4.50	0.926	0.92	G8III
104521	21	11	32.0	+10	13	53.4	317.883162	+10.231494	4.70	0.262	0.26	F0p
104732	21	13	58.8	+30	19	42.2	318.495148	+30.328391	3.21	0.990	0.97	G8II SB
104858	21	15	40.4	+10	6	27.1	318.918294	+10.107525	4.47	0.529	0.57	F5V+...
104887	21	15	46.3	+38	9	2.5	318.943019	+38.150699	3.74	0.393	0.46	F1IV
104987	21	17	2.9	+5	21	1.1	319.261969	+5.350314	3.92	0.549	0.62	G0III+...
105102	21	18	22.8	+39	29	54.0	319.594948	+39.498323	4.22	0.098	0.25	B9Iab
105138	21	18	55.6	+35	0	2.9	319.731701	+35.000812	4.41	-0.103	-0.09	B2Vne
105140	21	19	25.0	-32	4	7.4	319.854253	-32.068720	4.71	0.070	0.09	A0V
105199	21	19	9.7	+62	41	23.8	319.790557	+62.689937	2.45	0.257	0.26	A7IV-V
105319	21	21	35.8	-53	20	42.4	320.399282	-53.345121	4.39	0.191	0.21	A5V
105382	21	22	19.1	-40	42	15.4	320.579677	-40.704287	4.80	0.029	0.07	A2p
105502	21	23	13.2	+19	54	37.5	320.805079	+19.910408	4.08	1.108	1.05	K1III
105515	21	23	36.4	-16	43	44.1	320.901782	-16.728922	4.28	0.888	0.89	G8III
105858	21	28	26.2	-65	15	12.9	322.109213	-65.253595	4.21	0.494	0.61	F6V
105881	21	28	3.7	-22	18	14.3	322.015298	-22.303970	3.77	1.002	0.88	G4Ibp...

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
106032	21	28	58.0	+70	40	6.7	322.241592	+70.668542	3.23	-0.201	-0.25	B2IIIv SB
106039	21	30	6.9	-21	41	57.2	322.528917	-21.699228	4.50	0.889	0.89	K0III
106140	21	31	3.6	+23	44	50.1	322.764798	+23.747242	4.52	1.618	1.82	M1III
106278	21	32	50.8	-5	27	44.0	323.211680	-5.462226	2.90	0.828	0.82	G0Ib
106481	21	34	54.3	+45	42	3.6	323.726116	+45.700999	3.98	0.885	0.94	G8III
106551	21	35	46.7	+38	38	41.1	323.944655	+38.644757	4.87	1.085	1.06	K1III
106723	21	38	26.9	-19	21	18.2	324.612055	-19.355058	4.51	-0.180	-0.17	B3V:p
106786	21	39	3.2	-7	44	35.5	324.763429	-7.743195	4.68	0.175	0.19	A7V
106801	21	38	34.7	+62	11	34.9	324.644378	+62.193037	4.76	0.246	0.38	B2Ib
106985	21	41	26.7	-16	33	1.7	325.361140	-16.550478	3.69	0.320	0.32	A7III:mp...
107089	21	44	6.5	-77	16	44.3	326.027233	-77.278985	3.73	1.008	0.98	K0III
107119	21	42	16.3	+71	25	28.1	325.567799	+71.424476	4.55	1.108	1.07	K0III
107136	21	42	58.0	+51	18	7.9	325.741636	+51.302181	4.69	-0.119	-0.12	B3IV
107188	21	44	1.3	-18	45	12.7	326.005612	-18.753538	4.72	0.868	0.91	G8III
107259	21	44	15.5	+58	53	35.0	326.064674	+58.893053	4.23	2.242	3.57	M2Ia
107310	21	45	14.4	+28	51	15.5	326.309872	+28.854310	4.49	0.512	0.58	F6V
107315	21	45	23.4	+9	59	18.0	326.347295	+9.988347	2.38	1.520	1.42	K2Ibvar
107348	21	45	40.3	+17	27	48.1	326.418098	+17.463373	4.34	1.161	1.05	G5Ib
107354	21	45	45.4	+25	45	30.9	326.439204	+25.758589	4.14	0.425	0.48	F5IV
107380	21	46	23.9	-32	54	46.0	326.599776	-32.912790	4.35	-0.053	-0.05	B9.5V
107418	21	46	9.4	+61	14	4.0	326.539062	+61.234455	4.25	0.474	0.73	A2Iavar
107533	21	47	42.1	+49	25	25.3	326.925298	+49.423692	4.23	-0.120	-0.13	B3III
107556	21	48	23.4	-16	0	53.9	327.097340	-16.014974	2.85	0.180	0.35	A5mF2 (IV)
108085	21	55	24.2	-37	14	54.4	328.850912	-37.248442	3.00	-0.084	-0.10	B8III
108431	21	59	34.1	-54	52	29.5	329.891927	-54.874866	4.40	0.297	0.35	F0IV
108870	22	5	12.7	-56	41	0.6	331.302860	-56.683494	4.69	1.056	1.15	K5V
108874	22	4	34.8	-2	2	10.2	331.144988	-2.036171	4.74	-0.100	-0.03	B7IVe
108917	22	4	30.1	+64	44	52.4	331.125317	+64.747892	4.26	0.379	0.44	Am
109068	22	6	54.9	+5	10	44.9	331.728547	+5.179143	4.86	1.443	1.45	K4III
109074	22	7	2.5	-0	11	59.8	331.760280	-0.199946	2.95	0.969	0.92	G2Ib
109111	22	7	34.9	-39	25	26.7	331.895611	-39.424094	4.47	1.349	1.31	M0III
109139	22	7	45.4	-13	44	59.6	331.939307	-13.749896	4.29	-0.075	-0.06	B8V
109176	22	8	9.2	+25	27	56.1	332.038337	+25.465592	3.77	0.435	0.51	F5V
109268	22	9	45.9	-46	50	28.6	332.441263	-46.841266	1.73	-0.070	-0.05	B7IV
109285	22	9	48.4	-32	52	4.6	332.451482	-32.867939	4.50	0.054	0.06	A2V
109289	22	9	51.5	-33	55	24.4	332.464737	-33.923435	4.99	1.499	1.50	K4III
109400	22	10	16.3	+72	27	44.0	332.567951	+72.462210	4.79	0.919	0.91	G8III
109410	22	11	4.7	+33	17	57.2	332.769553	+33.299221	4.28	0.471	0.52	F5III
109422	22	11	34.5	-32	25	37.6	332.893665	-32.427106	4.94	0.489	0.54	F6V
109427	22	11	26.1	+6	19	9.4	332.858855	+6.319269	3.52	0.086	0.09	A2V
109492	22	11	42.5	+58	19	21.4	332.926993	+58.322612	3.39	1.558	1.58	K1Ibv SB
109754	22	14	56.0	+39	50	13.9	333.733444	+39.837190	4.50	1.385	1.36	K3III
109857	22	15	56.6	+57	9	58.9	333.986007	+57.166368	4.18	0.278	0.33	F0IV
109908	22	17	4.9	-41	13	26.0	334.270459	-41.223895	4.79	0.790	0.83	G8III+...
109937	22	17	2.4	+37	52	17.2	334.260181	+37.871451	4.14	1.447	1.33	K3III
110003	22	18	7.5	-7	39	37.7	334.531169	-7.660475	4.17	0.979	0.95	G8III-IV
110130	22	20	9.5	-60	8	11.1	335.039577	-60.136409	2.87	1.390	1.37	K3III
110351	22	22	2.5	+46	39	38.0	335.510472	+46.660568	4.55	-0.100	-0.10	B6V
110371	22	22	27.4	+28	27	16.7	335.613995	+28.454640	4.78	-0.010	0.06	B9III
110386	22	22	43.5	+12	19	45.7	335.681123	+12.329354	4.82	-0.132	-0.16	B2IV-V
110395	22	22	55.2	-1	15	47.2	335.730115	-1.263100	3.86	-0.057	-0.06	A0V
110538	22	24	31.7	+52	21	8.7	336.132123	+52.352404	4.42	1.015	1.03	G9III
110609	22	25	30.9	+49	36	4.3	336.378574	+49.601204	4.55	0.092	0.18	B9Iab
110672	22	26	31.7	+1	30	8.9	336.631902	+1.502469	4.80	-0.171	-0.18	B1Ve
110838	22	29	2.8	-64	50	26.5	337.261713	-64.840703	4.51	-0.029	-0.01	B8V
110882	22	29	5.9	+4	49	9.4	337.274666	+4.819265	4.78	1.039	1.07	K0III
110960	22	30	5.5	+0	6	22.2	337.523088	+0.106155	3.65	0.406	0.50	F3III-IV
110991	22	30	5.1	+58	32	28.1	337.521446	+58.541136	4.07	0.778	0.81	G2Ibvar
110997	22	30	43.4	-43	22	10.5	337.680925	-43.369595	3.97	1.022	0.98	G6/G8III

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α			δ			Espectro
	NH	h	m	s	°	'	"	°	'	"	V	U-V	
111022	22	30	33.4	+47	49	58.3	337.639002	+47.832873	4.34	1.679	1.90	M0II	
111043	22	31	12.6	-43	37	23.2	337.802647	-43.623103	4.12	1.570	2.49	M4.5IIIa	
111104	22	31	33.0	+43	14	58.4	337.887323	+43.249567	4.52	-0.086	-0.09	B2IV	
111123	22	31	56.5	-10	33	6.6	337.985278	-10.551833	4.82	-0.053	-0.04	A0IVs	
111169	22	32	18.4	+50	24	32.4	338.076470	+50.409011	3.76	0.031	0.05	A1V	
111188	22	32	53.5	-32	13	10.9	338.222938	-32.219704	4.29	0.011	0.03	A1V	
111310	22	34	38.1	-61	51	19.5	338.658597	-61.855405	4.91	1.612	2.50	M4III	
111497	22	36	36.9	+0	0	34.0	339.153607	+0.009447	4.04	-0.083	-0.07	B9IV-Vn	
111674	22	38	23.1	+51	40	19.7	339.596381	+51.672152	4.64	0.254	0.28	A8IV	
111841	22	40	21.9	+39	10	42.1	340.091200	+39.178349	4.89	-0.207	-0.23	O9V	
111944	22	41	35.6	+44	24	17.1	340.398337	+44.404741	4.50	1.318	1.25	K3III	
111954	22	42	0.3	-26	54	54.7	340.501331	-26.915199	4.18	-0.105	-0.07	B8V	
112029	22	42	41.1	+10	57	35.5	340.671158	+10.959864	3.41	-0.086	-0.06	B8.5V	
112051	22	42	54.6	+29	26	10.1	340.727555	+29.436131	4.80	-0.013	0.02	A1IV	
112122	22	44	7.1	-46	45	20.8	341.029762	-46.755774	2.07	1.610	2.60	M5III	
112158	22	44	9.2	+30	20	59.8	341.038490	+30.349939	2.93	0.852	0.87	G2II-III..	
112203	22	44	54.7	-41	17	9.5	341.227851	-41.285983	4.84	1.027	1.01	K0III	
112211	22	44	54.1	-18	42	5.6	341.225507	-18.701565	4.68	1.358	1.35	K3III	
112374	22	47	7.2	-53	22	14.2	341.780124	-53.370602	4.84	1.180	1.21	K2IIICNIV	
112405	22	48	25.2	-81	15	7.4	342.104817	-81.252045	4.13	0.208	0.24	A9IV/V	
112440	22	47	42.8	+23	41	42.5	341.928472	+23.695127	3.97	1.070	0.99	G8II-III	
112447	22	47	55.1	+12	17	57.1	341.979504	+12.299185	4.20	0.502	0.60	F7V	
112519	22	47	19.0	+83	17	1.5	341.829053	+83.283741	4.77	1.257	1.25	K3III	
112623	22	50	1.3	-51	11	14.5	342.505386	-51.187363	3.49	0.083	0.10	A3V	
112716	22	50	53.2	-13	27	46.0	342.721558	-13.462780	4.05	1.570	1.72	K5III	
112724	22	50	33.5	+66	19	46.8	342.639750	+66.329665	3.50	1.053	1.06	K0III	
112748	22	51	11.3	+24	43	53.3	342.797068	+24.731464	3.51	0.933	0.89	M2III	
112917	22	53	8.6	+43	26	35.1	343.286008	+43.443084	4.95	1.559	1.71	M0III	
112948	22	53	52.9	-32	44	42.1	343.470279	-32.745023	4.46	-0.037	-0.01	A0III	
112961	22	53	53.5	-7	26	55.5	343.472831	-7.448744	3.73	1.626	2.07	M2IIIvar	
113116	22	54	7.3	+84	28	37.7	343.530365	+84.477148	4.70	1.418	1.38	K4III	
113136	22	55	56.8	-15	41	24.0	343.986850	-15.690004	3.27	0.066	0.08	A3V	
113186	22	56	27.7	+8	56	50.8	344.115518	+8.947431	4.91	-0.003	0.00	A1V	
113246	22	57	17.9	-32	24	29.6	344.324748	-32.408227	4.20	0.952	0.96	G8III	
113288	22	57	30.8	+49	51	53.2	344.378392	+49.864780	4.99	1.778	1.87	K5Ibvar	
113368	22	58	59.9	-29	29	30.7	344.749663	-29.491859	1.17	0.145	0.16	A3V	
113638	23	2	18.8	-52	37	20.1	345.578325	-52.622248	4.11	0.960	1.01	G8III	
113726	23	3	3.2	+42	27	29.1	345.763441	+42.458089	3.62	-0.099	-0.05	B6pv SB	
113881	23	4	57.9	+28	12	57.9	346.241339	+28.216089	2.44	1.655	2.31	M2II-IIIvar	
113889	23	5	7.4	+3	57	8.6	346.280974	+3.952378	4.48	-0.115	-0.09	B6Ve	
113919	23	5	17.4	+50	11	8.3	346.322406	+50.185641	4.64	1.058	1.02	K0III	
113963	23	5	59.0	+15	20	15.0	346.495740	+15.337505	2.49	-0.002	0.00	B9.5III	
114104	23	7	39.5	+59	33	9.1	346.914480	+59.552515	4.84	-0.060	-0.02	B0.5IV	
114119	23	7	59.6	-23	36	37.1	346.998130	-23.610317	4.48	0.892	0.92	G8III	
114131	23	8	15.0	-43	23	15.5	347.062451	-43.387626	4.28	0.423	0.44	F5me...	
114144	23	8	14.4	+9	32	32.1	347.059856	+9.542240	4.54	1.559	1.79	M2III	
114155	23	8	18.5	+25	36	3.2	347.077232	+25.600882	4.76	1.285	1.30	K0IIP	
114222	23	8	41.0	+75	31	12.7	347.170841	+75.520186	4.41	0.802	0.84	G2III	
114341	23	10	45.0	-21	2	20.5	347.687310	-21.039041	3.68	1.202	1.16	K1III	
114375	23	11	13.2	-22	19	28.0	347.804916	-22.324443	4.71	0.674	0.75	A3IV:	
114421	23	11	44.2	-45	6	49.0	347.933967	-45.113605	3.88	0.998	0.95	K0III SB	
114570	23	13	40.8	+49	32	25.4	348.419913	+49.540381	4.53	0.302	0.35	F0V	
114724	23	15	35.4	-5	54	59.6	348.897651	-5.916554	4.22	1.545	1.89	M2III	
114855	23	17	10.4	-8	57	14.1	349.293348	-8.953916	4.24	1.107	1.06	K0III	
114939	23	18	7.1	-7	35	33.2	349.529390	-7.592567	4.93	1.613	2.56	M3III	
114971	23	18	26.1	+3	24	59.3	349.608909	+3.416484	3.70	0.916	0.97	G7III	
114996	23	18	50.6	-58	6	3.9	349.710735	-58.101093	3.99	0.410	0.50	F1III	
115022	23	18	53.2	+49	8	58.1	349.721806	+49.149475	4.82	1.668	2.14	M2III	
115033	23	19	10.5	-9	2	54.3	349.793851	-9.048423	4.41	-0.144	-0.14	B5Vn	

Posiciones medias de estrellas brillantes, 2024

Estrella	α			δ			α	δ	V	U-V	B-V	Espectro
	NH	h	m	s	°	'						
115088	23	19	38.6	+68	14	44.6	349.910680	+68.245735	4.75	0.836	0.86	K0III
115102	23	20	8.5	-32	23	53.9	350.035300	-32.398296	4.41	1.109	1.08	K1III
115115	23	20	14.0	-9	28	35.5	350.058519	-9.476536	4.99	-0.022	0.00	A0V
115250	23	21	51.2	+23	52	29.0	350.463325	+23.874711	4.58	0.180	0.23	A5V
115438	23	24	15.2	-19	57	59.6	351.063505	-19.966560	3.96	1.082	1.10	K0III
115590	23	25	56.2	+62	25	3.2	351.484325	+62.417546	4.96	1.676	1.94	M1III
115623	23	26	36.4	+23	32	21.2	351.651468	+23.539226	4.42	0.617	0.67	F8IV
115669	23	27	19.8	-20	30	27.0	351.832551	-20.507492	4.38	1.460	1.52	K4III
115738	23	28	11.3	+1	23	24.0	352.047158	+1.389995	4.95	0.036	0.01	A0p
115830	23	29	12.7	+6	30	49.7	352.303012	+6.513805	4.27	1.062	1.03	K1III
115919	23	30	23.7	+12	53	45.3	352.598942	+12.895917	4.54	0.939	0.93	G8III
115990	23	31	10.5	+58	41	3.1	352.793613	+58.684208	4.89	-0.122	-0.11	B3IV
116231	23	34	16.7	-37	40	57.1	353.569569	-37.682539	4.38	-0.095	-0.09	B9.5IVMNpe.
116247	23	34	33.4	-20	46	44.2	353.639028	-20.778949	4.70	0.020	0.03	A0V
116310	23	35	10.4	+31	27	38.5	353.793342	+31.460695	4.97	1.383	1.36	K4III
116389	23	36	23.2	-42	28	45.8	354.096512	-42.479387	4.69	0.078	0.10	A2V
116584	23	38	46.3	+46	35	28.0	354.692759	+46.591104	3.81	0.984	0.96	G8III-IV
116602	23	39	9.6	-45	21	24.0	354.790002	-45.356653	4.74	0.082	0.08	A2V
116631	23	39	20.7	+43	24	13.9	354.836393	+43.403859	4.29	-0.083	-0.06	B8V
116727	23	40	22.6	+77	46	8.3	355.094340	+77.768977	3.21	1.031	0.99	K1IV
116758	23	41	3.2	-14	5	12.0	355.263292	-14.086666	4.97	0.257	0.29	A7IV
116771	23	41	12.7	+5	45	33.4	355.302926	+5.759269	4.13	0.507	0.59	F7V
116805	23	41	37.4	+44	28	11.0	355.405712	+44.469717	4.15	-0.071	-0.06	B9IVn
116901	23	43	2.0	-17	40	50.0	355.758189	-17.680555	4.82	0.822	0.81	G2Ib/II
116928	23	43	17.9	+1	54	54.0	355.824381	+1.914998	4.49	0.200	0.22	A7V
116971	23	43	59.5	-14	24	33.6	355.997717	-14.409330	4.49	-0.032	-0.04	B9V
117073	23	45	13.7	+29	29	50.1	356.307127	+29.497254	4.93	0.935	0.93	K0III
117221	23	47	15.4	+46	33	23.0	356.814135	+46.556382	4.97	1.086	1.05	G5Ib
117245	23	47	38.7	+3	37	22.1	356.911157	+3.622805	4.95	2.508	2.57	C5II
117301	23	48	16.1	+58	47	18.8	357.066983	+58.788549	4.88	1.122	1.08	K1III
117452	23	50	11.9	-27	59	41.0	357.549392	-27.994723	4.59	0.001	-0.01	A0V
117863	23	55	37.2	+57	38	8.5	358.905119	+57.635706	4.51	1.190	1.15	F8Iavar
118121	23	58	51.2	-64	9	44.1	359.713443	-64.162263	5.00	0.060	0.07	A1V
118131	23	59	0.7	+25	16	39.2	359.752860	+25.277562	4.63	1.584	2.21	M3III
118209	23	59	55.6	-3	25	12.3	359.981772	-3.420087	4.88	0.930	0.92	G9III

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

950						1599					
		V		Sp				V		Sp	
		5.24		F3/F5V				4.23		F9V	
		α		α _c				α		α _c	
				δ						δ	
						Hp				Hp	
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	0.21578	0.19537	-35.00305	17.31	ene	1	0.35525	0.33485	-64.73973	17.45
ene	8	0.21574	0.19531	-35.00310	16.85	ene	8	0.35517	0.33474	-64.73964	16.99
ene	15	0.21572	0.19527	-35.00299	16.39	ene	15	0.35511	0.33465	-64.73936	16.53
ene	22	0.21569	0.19522	-35.00290	15.93	ene	22	0.35503	0.33456	-64.73909	16.07
ene	29	0.21567	0.19518	-35.00272	15.47	ene	29	0.35498	0.33448	-64.73870	15.61
feb	5	0.21564	0.19514	-35.00255	15.01	feb	5	0.35491	0.33440	-64.73831	15.15
feb	12	0.21564	0.19510	-35.00224	14.55	feb	12	0.35487	0.33434	-64.73777	14.69
feb	19	0.21562	0.19507	-35.00194	14.09	feb	19	0.35482	0.33428	-64.73723	14.23
feb	26	0.21561	0.19505	-35.00159	13.63	feb	26	0.35480	0.33424	-64.73663	13.77
mar	4	0.21560	0.19503	-35.00123	13.17	mar	4	0.35476	0.33419	-64.73602	13.31
mar	11	0.21561	0.19502	-35.00079	12.71	mar	11	0.35476	0.33417	-64.73532	12.85
mar	18	0.21561	0.19501	-35.00031	12.25	mar	18	0.35475	0.33415	-64.73461	12.39
mar	25	0.21562	0.19501	-34.99984	11.79	mar	25	0.35476	0.33415	-64.73392	11.93
abr	1	0.21563	0.19501	-34.99934	11.33	abr	1	0.35477	0.33414	-64.73320	11.47
abr	8	0.21566	0.19502	-34.99881	10.87	abr	8	0.35481	0.33417	-64.73246	11.01
abr	15	0.21569	0.19503	-34.99823	10.41	abr	15	0.35484	0.33419	-64.73170	10.55
abr	22	0.21573	0.19506	-34.99771	9.95	abr	22	0.35490	0.33423	-64.73102	10.09
abr	29	0.21577	0.19508	-34.99714	9.49	abr	29	0.35495	0.33426	-64.73031	9.63
may	6	0.21581	0.19511	-34.99659	9.03	may	6	0.35503	0.33433	-64.72965	9.17
may	13	0.21587	0.19514	-34.99599	8.57	may	13	0.35511	0.33438	-64.72896	8.71
may	20	0.21593	0.19519	-34.99550	8.11	may	20	0.35520	0.33446	-64.72841	8.25
may	27	0.21599	0.19522	-34.99495	7.65	may	27	0.35530	0.33453	-64.72782	7.79
jun	3	0.21605	0.19527	-34.99449	7.19	jun	3	0.35540	0.33462	-64.72735	7.33
jun	10	0.21613	0.19532	-34.99397	6.73	jun	10	0.35552	0.33470	-64.72684	6.87
jun	17	0.21619	0.19537	-34.99360	6.27	jun	17	0.35563	0.33480	-64.72652	6.41
jun	24	0.21627	0.19541	-34.99317	5.81	jun	24	0.35575	0.33489	-64.72616	5.95
jul	1	0.21634	0.19546	-34.99287	5.35	jul	1	0.35586	0.33499	-64.72595	5.49
jul	8	0.21642	0.19551	-34.99253	4.89	jul	8	0.35599	0.33508	-64.72572	5.03
jul	15	0.21648	0.19556	-34.99236	4.43	jul	15	0.35610	0.33518	-64.72569	4.57
jul	22	0.21655	0.19561	-34.99212	3.97	jul	22	0.35622	0.33527	-64.72562	4.11
jul	29	0.21661	0.19565	-34.99205	3.51	jul	29	0.35632	0.33536	-64.72572	3.65
ago	5	0.21668	0.19569	-34.99193	3.05	ago	5	0.35643	0.33544	-64.72579	3.19
ago	12	0.21673	0.19573	-34.99200	2.59	ago	12	0.35651	0.33552	-64.72606	2.73
ago	19	0.21679	0.19577	-34.99200	2.13	ago	19	0.35661	0.33559	-64.72627	2.27
ago	26	0.21682	0.19579	-34.99215	1.67	ago	26	0.35668	0.33565	-64.72665	1.81
sep	2	0.21687	0.19582	-34.99227	1.21	sep	2	0.35675	0.33570	-64.72699	1.35
sep	9	0.21689	0.19584	-34.99255	0.75	sep	9	0.35679	0.33574	-64.72750	0.89
sep	16	0.21692	0.19585	-34.99274	0.29	sep	16	0.35684	0.33577	-64.72792	0.43
sep	23	0.21694	0.19585	-34.99307	23.83	sep	23	0.35686	0.33578	-64.72847	23.97
sep	30	0.21696	0.19585	-34.99336	23.37	sep	30	0.35689	0.33579	-64.72897	23.51
oct	7	0.21695	0.19584	-34.99376	22.91	oct	7	0.35688	0.33577	-64.72957	23.05
oct	14	0.21696	0.19583	-34.99407	22.45	oct	14	0.35688	0.33575	-64.73007	22.59
oct	21	0.21695	0.19581	-34.99445	21.99	oct	21	0.35685	0.33571	-64.73062	22.13
oct	28	0.21694	0.19579	-34.99480	21.53	oct	28	0.35683	0.33567	-64.73111	21.67
nov	4	0.21692	0.19575	-34.99520	21.07	nov	4	0.35677	0.33560	-64.73164	21.21
nov	11	0.21691	0.19572	-34.99550	20.61	nov	11	0.35673	0.33554	-64.73204	20.75
nov	18	0.21688	0.19567	-34.99582	20.15	nov	18	0.35666	0.33545	-64.73243	20.29
nov	25	0.21686	0.19563	-34.99609	19.69	nov	25	0.35661	0.33537	-64.73275	19.83
dic	2	0.21683	0.19558	-34.99636	19.23	dic	2	0.35653	0.33527	-64.73303	19.37
dic	9	0.21681	0.19553	-34.99654	18.77	dic	9	0.35646	0.33518	-64.73319	18.91
dic	16	0.21678	0.19547	-34.99669	18.31	dic	16	0.35638	0.33507	-64.73329	18.45
dic	23	0.21675	0.19543	-34.99680	17.85	dic	23	0.35631	0.33498	-64.73333	17.99

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

2021						3419					
V			Sp			V			Sp		
2.82			G2IV			2.04			K0III		
		α	α _c	δ	Hp			α	α _c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	0.45013	0.42972	-77.12540	17.54	ene	1	0.74652	0.72611	-17.85758	17.84
ene	8	0.44994	0.42952	-77.12527	17.08	ene	8	0.74649	0.72606	-17.85773	17.38
ene	15	0.44980	0.42935	-77.12494	16.62	ene	15	0.74647	0.72602	-17.85773	16.92
ene	22	0.44963	0.42916	-77.12461	16.16	ene	22	0.74645	0.72597	-17.85778	16.46
ene	29	0.44951	0.42902	-77.12417	15.70	ene	29	0.74643	0.72593	-17.85775	16.00
feb	5	0.44937	0.42886	-77.12372	15.24	feb	5	0.74640	0.72589	-17.85775	15.54
feb	12	0.44927	0.42874	-77.12312	14.78	feb	12	0.74639	0.72586	-17.85762	15.08
feb	19	0.44916	0.42861	-77.12252	14.32	feb	19	0.74637	0.72583	-17.85751	14.62
feb	26	0.44910	0.42853	-77.12187	13.86	feb	26	0.74636	0.72580	-17.85735	14.16
mar	4	0.44901	0.42844	-77.12121	13.40	mar	4	0.74635	0.72578	-17.85719	13.70
mar	11	0.44899	0.42840	-77.12046	12.94	mar	11	0.74635	0.72576	-17.85693	13.24
mar	18	0.44895	0.42835	-77.11970	12.48	mar	18	0.74635	0.72574	-17.85666	12.78
mar	25	0.44896	0.42835	-77.11897	12.02	mar	25	0.74635	0.72574	-17.85637	12.32
abr	1	0.44896	0.42833	-77.11822	11.56	abr	1	0.74636	0.72573	-17.85606	11.86
abr	8	0.44902	0.42838	-77.11744	11.10	abr	8	0.74638	0.72574	-17.85568	11.40
abr	15	0.44906	0.42840	-77.11666	10.64	abr	15	0.74640	0.72574	-17.85527	10.94
abr	22	0.44915	0.42848	-77.11596	10.18	abr	22	0.74642	0.72576	-17.85488	10.48
abr	29	0.44923	0.42854	-77.11525	9.72	abr	29	0.74646	0.72577	-17.85444	10.02
may	6	0.44936	0.42866	-77.11458	9.26	may	6	0.74649	0.72579	-17.85399	9.56
may	13	0.44949	0.42876	-77.11390	8.80	may	13	0.74654	0.72582	-17.85349	9.10
may	20	0.44964	0.42890	-77.11335	8.34	may	20	0.74659	0.72585	-17.85305	8.64
may	27	0.44980	0.42903	-77.11279	7.88	may	27	0.74664	0.72588	-17.85255	8.18
jun	3	0.44998	0.42920	-77.11234	7.42	jun	3	0.74670	0.72591	-17.85210	7.72
jun	10	0.45017	0.42936	-77.11186	6.97	jun	10	0.74677	0.72595	-17.85159	7.26
jun	17	0.45037	0.42954	-77.11158	6.51	jun	17	0.74682	0.72599	-17.85119	6.80
jun	24	0.45057	0.42971	-77.11125	6.05	jun	24	0.74689	0.72603	-17.85071	6.34
jul	1	0.45078	0.42990	-77.11109	5.59	jul	1	0.74695	0.72608	-17.85034	5.88
jul	8	0.45099	0.43008	-77.11091	5.13	jul	8	0.74702	0.72612	-17.84990	5.42
jul	15	0.45119	0.43027	-77.11094	4.67	jul	15	0.74708	0.72616	-17.84962	4.96
jul	22	0.45139	0.43044	-77.11092	4.21	jul	22	0.74715	0.72620	-17.84926	4.50
jul	29	0.45158	0.43062	-77.11108	3.75	jul	29	0.74720	0.72624	-17.84904	4.04
ago	5	0.45177	0.43079	-77.11121	3.29	ago	5	0.74727	0.72628	-17.84876	3.58
ago	12	0.45193	0.43094	-77.11154	2.83	ago	12	0.74731	0.72632	-17.84866	3.12
ago	19	0.45209	0.43107	-77.11182	2.37	ago	19	0.74737	0.72635	-17.84848	2.66
ago	26	0.45222	0.43119	-77.11225	1.91	ago	26	0.74741	0.72638	-17.84845	2.20
sep	2	0.45235	0.43130	-77.11265	1.45	sep	2	0.74745	0.72640	-17.84837	1.74
sep	9	0.45243	0.43137	-77.11322	0.99	sep	9	0.74748	0.72642	-17.84846	1.28
sep	16	0.45251	0.43144	-77.11370	0.53	sep	16	0.74752	0.72644	-17.84846	0.82
sep	23	0.45254	0.43146	-77.11430	0.07	sep	23	0.74753	0.72645	-17.84861	0.36
sep	30	0.45258	0.43148	-77.11484	23.61	sep	30	0.74756	0.72646	-17.84871	23.90
oct	7	0.45256	0.43146	-77.11549	23.15	oct	7	0.74756	0.72646	-17.84895	23.44
oct	14	0.45255	0.43143	-77.11603	22.69	oct	14	0.74758	0.72645	-17.84910	22.98
oct	21	0.45248	0.43134	-77.11661	22.23	oct	21	0.74758	0.72644	-17.84935	22.52
oct	28	0.45243	0.43127	-77.11713	21.77	oct	28	0.74758	0.72643	-17.84956	22.06
nov	4	0.45232	0.43115	-77.11767	21.31	nov	4	0.74757	0.72640	-17.84986	21.60
nov	11	0.45222	0.43103	-77.11808	20.85	nov	11	0.74757	0.72638	-17.85007	21.14
nov	18	0.45207	0.43086	-77.11848	20.39	nov	18	0.74756	0.72635	-17.85033	20.68
nov	25	0.45195	0.43072	-77.11879	19.93	nov	25	0.74755	0.72631	-17.85056	20.22
dic	2	0.45177	0.43052	-77.11907	19.47	dic	2	0.74753	0.72627	-17.85082	19.76
dic	9	0.45163	0.43035	-77.11921	19.01	dic	9	0.74751	0.72623	-17.85100	19.30
dic	16	0.45145	0.43014	-77.11928	18.55	dic	16	0.74749	0.72619	-17.85118	18.84
dic	23	0.45129	0.42997	-77.11929	18.09	dic	23	0.74747	0.72615	-17.85134	18.38

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

3909						5364					
V			Sp			V			Sp		
5.17		F7IV-V			Hp	3.46		K2III			Hp
α	α_c	δ			α	α_c	δ				
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	0.85543	0.83503	-10.51705	17.95	ene	1	1.16328	1.14287	-10.05693	18.26
ene	8	0.85540	0.83498	-10.51723	17.49	ene	8	1.16325	1.14282	-10.05712	17.80
ene	15	0.85539	0.83494	-10.51725	17.03	ene	15	1.16324	1.14278	-10.05715	17.34
ene	22	0.85537	0.83489	-10.51735	16.57	ene	22	1.16321	1.14274	-10.05726	16.88
ene	29	0.85535	0.83485	-10.51736	16.11	ene	29	1.16319	1.14270	-10.05728	16.42
feb	5	0.85532	0.83481	-10.51742	15.65	feb	5	1.16316	1.14265	-10.05736	15.96
feb	12	0.85531	0.83478	-10.51735	15.19	feb	12	1.16315	1.14262	-10.05729	15.50
feb	19	0.85529	0.83475	-10.51731	14.73	feb	19	1.16313	1.14258	-10.05727	15.04
feb	26	0.85528	0.83472	-10.51722	14.27	feb	26	1.16311	1.14255	-10.05719	14.58
mar	4	0.85527	0.83469	-10.51715	13.81	mar	4	1.16310	1.14252	-10.05713	14.12
mar	11	0.85526	0.83468	-10.51697	13.35	mar	11	1.16309	1.14250	-10.05695	13.66
mar	18	0.85527	0.83466	-10.51679	12.89	mar	18	1.16309	1.14248	-10.05678	13.20
mar	25	0.85527	0.83465	-10.51659	12.43	mar	25	1.16308	1.14247	-10.05659	12.74
abr	1	0.85527	0.83465	-10.51636	11.97	abr	1	1.16309	1.14246	-10.05638	12.28
abr	8	0.85529	0.83465	-10.51607	11.51	abr	8	1.16310	1.14246	-10.05609	11.82
abr	15	0.85531	0.83465	-10.51573	11.05	abr	15	1.16312	1.14246	-10.05577	11.36
abr	22	0.85533	0.83467	-10.51542	10.59	abr	22	1.16314	1.14247	-10.05546	10.90
abr	29	0.85537	0.83468	-10.51506	10.13	abr	29	1.16317	1.14248	-10.05510	10.44
may	6	0.85540	0.83470	-10.51467	9.67	may	6	1.16320	1.14250	-10.05472	9.98
may	13	0.85545	0.83472	-10.51423	9.21	may	13	1.16325	1.14252	-10.05428	9.52
may	20	0.85549	0.83475	-10.51384	8.75	may	20	1.16328	1.14254	-10.05390	9.06
may	27	0.85555	0.83478	-10.51339	8.29	may	27	1.16334	1.14257	-10.05344	8.60
jun	3	0.85560	0.83482	-10.51297	7.83	jun	3	1.16339	1.14260	-10.05302	8.14
jun	10	0.85566	0.83485	-10.51248	7.37	jun	10	1.16345	1.14264	-10.05253	7.68
jun	17	0.85572	0.83489	-10.51209	6.91	jun	17	1.16350	1.14267	-10.05214	7.22
jun	24	0.85579	0.83493	-10.51162	6.45	jun	24	1.16357	1.14271	-10.05167	6.76
jul	1	0.85584	0.83497	-10.51125	5.99	jul	1	1.16363	1.14275	-10.05128	6.30
jul	8	0.85592	0.83501	-10.51080	5.53	jul	8	1.16370	1.14279	-10.05083	5.84
jul	15	0.85597	0.83505	-10.51049	5.07	jul	15	1.16375	1.14284	-10.05051	5.38
jul	22	0.85604	0.83509	-10.51010	4.61	jul	22	1.16382	1.14288	-10.05011	4.92
jul	29	0.85609	0.83513	-10.50984	4.15	jul	29	1.16388	1.14292	-10.04984	4.46
ago	5	0.85616	0.83517	-10.50952	3.69	ago	5	1.16394	1.14296	-10.04950	4.00
ago	12	0.85620	0.83520	-10.50936	3.23	ago	12	1.16399	1.14299	-10.04933	3.54
ago	19	0.85626	0.83524	-10.50911	2.77	ago	19	1.16405	1.14303	-10.04907	3.08
ago	26	0.85629	0.83527	-10.50901	2.31	ago	26	1.16409	1.14306	-10.04896	2.62
sep	2	0.85634	0.83529	-10.50886	1.85	sep	2	1.16414	1.14309	-10.04880	2.16
sep	9	0.85637	0.83531	-10.50887	1.39	sep	9	1.16417	1.14311	-10.04880	1.70
sep	16	0.85640	0.83533	-10.50880	0.93	sep	16	1.16421	1.14313	-10.04871	1.24
sep	23	0.85642	0.83534	-10.50886	0.47	sep	23	1.16423	1.14315	-10.04877	0.78
sep	30	0.85645	0.83535	-10.50888	0.01	sep	30	1.16426	1.14316	-10.04878	0.32
oct	7	0.85645	0.83535	-10.50904	23.55	oct	7	1.16427	1.14316	-10.04894	23.86
oct	14	0.85647	0.83535	-10.50911	23.09	oct	14	1.16429	1.14316	-10.04901	23.40
oct	21	0.85648	0.83534	-10.50929	22.63	oct	21	1.16430	1.14316	-10.04919	22.94
oct	28	0.85648	0.83532	-10.50943	22.17	oct	28	1.16431	1.14315	-10.04932	22.48
nov	4	0.85647	0.83530	-10.50966	21.71	nov	4	1.16430	1.14313	-10.04956	22.02
nov	11	0.85647	0.83528	-10.50981	21.25	nov	11	1.16431	1.14311	-10.04972	21.56
nov	18	0.85646	0.83525	-10.51003	20.79	nov	18	1.16430	1.14309	-10.04994	21.10
nov	25	0.85645	0.83522	-10.51020	20.33	nov	25	1.16429	1.14306	-10.05012	20.64
dic	2	0.85643	0.83518	-10.51043	19.87	dic	2	1.16428	1.14302	-10.05036	20.18
dic	9	0.85642	0.83514	-10.51059	19.41	dic	9	1.16427	1.14299	-10.05052	19.72
dic	16	0.85640	0.83510	-10.51076	18.95	dic	16	1.16425	1.14295	-10.05071	19.26
dic	23	0.85638	0.83506	-10.51091	18.49	dic	23	1.16423	1.14291	-10.05087	18.80

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

6537						7588					
V			Sp			V			Sp		
3.60			KOIII			0.45			B3Vp		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	1.42041	1.40000	-8.06098	18.51	ene	1	1.64373	1.62333	-57.12000	18.74
ene	8	1.42038	1.39995	-8.06118	18.05	ene	8	1.64367	1.62324	-57.12016	18.28
ene	15	1.42036	1.39991	-8.06122	17.59	ene	15	1.64361	1.62316	-57.12011	17.82
ene	22	1.42034	1.39986	-8.06135	17.13	ene	22	1.64354	1.62307	-57.12009	17.36
ene	29	1.42032	1.39982	-8.06138	16.67	ene	29	1.64349	1.62299	-57.11991	16.90
feb	5	1.42029	1.39978	-8.06148	16.21	feb	5	1.64342	1.62291	-57.11976	16.44
feb	12	1.42027	1.39974	-8.06143	15.75	feb	12	1.64337	1.62284	-57.11941	15.98
feb	19	1.42025	1.39970	-8.06143	15.29	feb	19	1.64331	1.62276	-57.11909	15.52
feb	26	1.42023	1.39967	-8.06137	14.83	feb	26	1.64327	1.62271	-57.11865	15.06
mar	4	1.42021	1.39964	-8.06134	14.37	mar	4	1.64322	1.62264	-57.11823	14.60
mar	11	1.42020	1.39962	-8.06118	13.91	mar	11	1.64318	1.62260	-57.11765	14.14
mar	18	1.42020	1.39959	-8.06104	13.45	mar	18	1.64315	1.62254	-57.11709	13.68
mar	25	1.42019	1.39958	-8.06087	12.99	mar	25	1.64313	1.62252	-57.11647	13.22
abr	1	1.42019	1.39957	-8.06069	12.53	abr	1	1.64311	1.62248	-57.11586	12.76
abr	8	1.42020	1.39956	-8.06043	12.07	abr	8	1.64311	1.62247	-57.11515	12.30
abr	15	1.42022	1.39956	-8.06014	11.61	abr	15	1.64311	1.62245	-57.11445	11.84
abr	22	1.42023	1.39956	-8.05985	11.15	abr	22	1.64312	1.62245	-57.11375	11.38
abr	29	1.42026	1.39957	-8.05952	10.69	abr	29	1.64314	1.62245	-57.11305	10.92
may	6	1.42029	1.39959	-8.05916	10.23	may	6	1.64317	1.62247	-57.11233	10.46
may	13	1.42033	1.39960	-8.05874	9.77	may	13	1.64321	1.62249	-57.11159	10.00
may	20	1.42037	1.39963	-8.05837	9.31	may	20	1.64326	1.62252	-57.11094	9.54
may	27	1.42042	1.39965	-8.05794	8.86	may	27	1.64332	1.62255	-57.11026	9.08
jun	3	1.42047	1.39968	-8.05753	8.40	jun	3	1.64339	1.62260	-57.10965	8.62
jun	10	1.42053	1.39972	-8.05705	7.94	jun	10	1.64346	1.62265	-57.10901	8.16
jun	17	1.42058	1.39975	-8.05666	7.48	jun	17	1.64354	1.62271	-57.10851	7.70
jun	24	1.42065	1.39979	-8.05619	7.02	jun	24	1.64363	1.62277	-57.10799	7.24
jul	1	1.42070	1.39983	-8.05581	6.56	jul	1	1.64371	1.62284	-57.10758	6.78
jul	8	1.42077	1.39987	-8.05535	6.10	jul	8	1.64381	1.62290	-57.10716	6.32
jul	15	1.42083	1.39991	-8.05502	5.64	jul	15	1.64390	1.62298	-57.10692	5.86
jul	22	1.42090	1.39995	-8.05461	5.18	jul	22	1.64400	1.62305	-57.10664	5.40
jul	29	1.42095	1.39999	-8.05433	4.72	jul	29	1.64408	1.62312	-57.10653	4.94
ago	5	1.42102	1.40003	-8.05398	4.26	ago	5	1.64418	1.62320	-57.10640	4.48
ago	12	1.42106	1.40007	-8.05378	3.80	ago	12	1.64426	1.62327	-57.10647	4.02
ago	19	1.42112	1.40011	-8.05351	3.34	ago	19	1.64435	1.62333	-57.10650	3.56
ago	26	1.42117	1.40014	-8.05338	2.88	ago	26	1.64442	1.62340	-57.10670	3.10
sep	2	1.42122	1.40017	-8.05319	2.42	sep	2	1.64450	1.62345	-57.10688	2.64
sep	9	1.42125	1.40020	-8.05317	1.96	sep	9	1.64456	1.62351	-57.10725	2.18
sep	16	1.42129	1.40022	-8.05307	1.50	sep	16	1.64462	1.62355	-57.10756	1.72
sep	23	1.42132	1.40024	-8.05310	1.04	sep	23	1.64466	1.62358	-57.10802	1.26
sep	30	1.42135	1.40025	-8.05309	0.58	sep	30	1.64471	1.62361	-57.10844	0.80
oct	7	1.42136	1.40026	-8.05323	0.12	oct	7	1.64473	1.62362	-57.10902	0.34
oct	14	1.42139	1.40026	-8.05327	23.66	oct	14	1.64476	1.62363	-57.10950	23.88
oct	21	1.42140	1.40026	-8.05344	23.20	oct	21	1.64476	1.62362	-57.11009	23.42
oct	28	1.42141	1.40025	-8.05355	22.74	oct	28	1.64477	1.62361	-57.11062	22.96
nov	4	1.42141	1.40024	-8.05378	22.28	nov	4	1.64475	1.62359	-57.11124	22.50
nov	11	1.42141	1.40022	-8.05392	21.82	nov	11	1.64475	1.62355	-57.11173	22.04
nov	18	1.42141	1.40020	-8.05414	21.36	nov	18	1.64472	1.62350	-57.11228	21.58
nov	25	1.42141	1.40017	-8.05431	20.90	nov	25	1.64469	1.62346	-57.11273	21.12
dic	2	1.42139	1.40014	-8.05455	20.44	dic	2	1.64464	1.62339	-57.11322	20.66
dic	9	1.42138	1.40011	-8.05471	19.98	dic	9	1.64461	1.62333	-57.11356	20.20
dic	16	1.42137	1.40007	-8.05490	19.52	dic	16	1.64455	1.62325	-57.11390	19.74
dic	23	1.42135	1.40003	-8.05506	19.06	dic	23	1.64450	1.62318	-57.11414	19.28

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

7884						8102					
		V		Sp				V		Sp	
		4.45		K3III				3.49		G8V	
		α		α_c		δ		Hp			
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	1.71139	1.69098	5.60877	18.81	ene	1	1.75312	1.73271	-15.81334	18.85
ene	8	1.71136	1.69094	5.60860	18.35	ene	8	1.75309	1.73266	-15.81355	18.39
ene	15	1.71135	1.69089	5.60855	17.89	ene	15	1.75307	1.73262	-15.81359	17.93
ene	22	1.71132	1.69085	5.60840	17.43	ene	22	1.75304	1.73257	-15.81371	17.47
ene	29	1.71130	1.69081	5.60833	16.97	ene	29	1.75302	1.73252	-15.81371	17.01
feb	5	1.71127	1.69076	5.60817	16.51	feb	5	1.75299	1.73248	-15.81377	16.55
feb	12	1.71125	1.69072	5.60815	16.05	feb	12	1.75297	1.73244	-15.81367	16.09
feb	19	1.71123	1.69068	5.60804	15.59	feb	19	1.75294	1.73239	-15.81363	15.63
feb	26	1.71121	1.69065	5.60800	15.13	feb	26	1.75292	1.73236	-15.81349	15.17
mar	4	1.71119	1.69062	5.60790	14.67	mar	4	1.75289	1.73232	-15.81339	14.71
mar	11	1.71118	1.69059	5.60793	14.21	mar	11	1.75288	1.73229	-15.81316	14.25
mar	18	1.71117	1.69057	5.60791	13.75	mar	18	1.75287	1.73227	-15.81294	13.79
mar	25	1.71116	1.69055	5.60794	13.29	mar	25	1.75286	1.73225	-15.81267	13.33
abr	1	1.71116	1.69053	5.60796	12.83	abr	1	1.75286	1.73223	-15.81241	12.87
abr	8	1.71117	1.69053	5.60806	12.37	abr	8	1.75286	1.73222	-15.81205	12.41
abr	15	1.71118	1.69052	5.60816	11.91	abr	15	1.75287	1.73221	-15.81168	11.95
abr	22	1.71119	1.69052	5.60830	11.45	abr	22	1.75288	1.73221	-15.81130	11.49
abr	29	1.71122	1.69053	5.60848	10.99	abr	29	1.75290	1.73222	-15.81089	11.03
may	6	1.71124	1.69054	5.60869	10.53	may	6	1.75293	1.73223	-15.81044	10.57
may	13	1.71129	1.69056	5.60896	10.07	may	13	1.75297	1.73224	-15.80996	10.11
may	20	1.71132	1.69058	5.60920	9.61	may	20	1.75300	1.73226	-15.80951	9.65
may	27	1.71137	1.69060	5.60951	9.15	may	27	1.75305	1.73228	-15.80902	9.19
jun	3	1.71141	1.69063	5.60982	8.69	jun	3	1.75309	1.73231	-15.80854	8.73
jun	10	1.71148	1.69066	5.61020	8.23	jun	10	1.75315	1.73234	-15.80802	8.27
jun	17	1.71153	1.69070	5.61052	7.77	jun	17	1.75320	1.73237	-15.80758	7.81
jun	24	1.71159	1.69074	5.61092	7.31	jun	24	1.75327	1.73241	-15.80709	7.35
jul	1	1.71165	1.69077	5.61127	6.85	jul	1	1.75332	1.73245	-15.80667	6.89
jul	8	1.71172	1.69081	5.61170	6.39	jul	8	1.75339	1.73249	-15.80620	6.43
jul	15	1.71177	1.69086	5.61203	5.93	jul	15	1.75345	1.73253	-15.80586	5.97
jul	22	1.71184	1.69090	5.61245	5.47	jul	22	1.75352	1.73257	-15.80546	5.51
jul	29	1.71190	1.69094	5.61277	5.01	jul	29	1.75357	1.73261	-15.80519	5.05
ago	5	1.71197	1.69098	5.61317	4.55	ago	5	1.75364	1.73265	-15.80486	4.59
ago	12	1.71201	1.69102	5.61344	4.09	ago	12	1.75369	1.73269	-15.80469	4.13
ago	19	1.71208	1.69106	5.61379	3.63	ago	19	1.75375	1.73273	-15.80446	3.67
ago	26	1.71212	1.69109	5.61402	3.17	ago	26	1.75379	1.73277	-15.80438	3.21
sep	2	1.71217	1.69113	5.61432	2.71	sep	2	1.75385	1.73280	-15.80424	2.75
sep	9	1.71221	1.69115	5.61447	2.25	sep	9	1.75388	1.73283	-15.80429	2.29
sep	16	1.71226	1.69118	5.61471	1.79	sep	16	1.75393	1.73285	-15.80425	1.83
sep	23	1.71229	1.69120	5.61482	1.33	sep	23	1.75396	1.73287	-15.80437	1.37
sep	30	1.71232	1.69122	5.61499	0.87	sep	30	1.75399	1.73289	-15.80443	0.91
oct	7	1.71234	1.69123	5.61500	0.41	oct	7	1.75401	1.73290	-15.80466	0.45
oct	14	1.71237	1.69124	5.61512	23.95	oct	14	1.75404	1.73291	-15.80479	23.99
oct	21	1.71238	1.69124	5.61511	23.49	oct	21	1.75405	1.73291	-15.80505	23.53
oct	28	1.71240	1.69124	5.61515	23.03	oct	28	1.75406	1.73290	-15.80525	23.07
nov	4	1.71240	1.69123	5.61507	22.57	nov	4	1.75406	1.73289	-15.80557	22.61
nov	11	1.71241	1.69122	5.61508	22.11	nov	11	1.75407	1.73288	-15.80579	22.15
nov	18	1.71241	1.69120	5.61499	21.65	nov	18	1.75407	1.73285	-15.80609	21.69
nov	25	1.71241	1.69118	5.61494	21.19	nov	25	1.75406	1.73283	-15.80633	21.23
dic	2	1.71240	1.69115	5.61481	20.73	dic	2	1.75405	1.73279	-15.80664	20.77
dic	9	1.71240	1.69112	5.61475	20.27	dic	9	1.75404	1.73276	-15.80685	20.31
dic	16	1.71239	1.69108	5.61463	19.81	dic	16	1.75402	1.73272	-15.80710	19.85
dic	23	1.71237	1.69105	5.61453	19.35	dic	23	1.75401	1.73268	-15.80729	19.39

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

10320						10670					
		V		Sp				V		Sp	
		5.27		A0V				4.03		A1Vnn	
		α		α_c		δ		α		δ	
		h		h		°		h		h	
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	2.23291	2.21250	-30.61449	19.33	ene	1	2.31250	2.29209	33.96030	19.41
ene	8	2.23288	2.21245	-30.61476	18.87	ene	8	2.31247	2.29204	33.96027	18.95
ene	15	2.23285	2.21240	-30.61484	18.41	ene	15	2.31245	2.29199	33.96033	18.49
ene	22	2.23282	2.21234	-30.61498	17.95	ene	22	2.31242	2.29194	33.96024	18.03
ene	29	2.23279	2.21229	-30.61498	17.49	ene	29	2.31238	2.29189	33.96021	17.57
feb	5	2.23275	2.21224	-30.61502	17.03	feb	5	2.31235	2.29184	33.96003	17.11
feb	12	2.23272	2.21219	-30.61489	16.57	feb	12	2.31232	2.29179	33.95995	16.65
feb	19	2.23269	2.21214	-30.61480	16.11	feb	19	2.31229	2.29174	33.95974	16.19
feb	26	2.23266	2.21210	-30.61459	15.65	feb	26	2.31225	2.29169	33.95957	15.73
mar	4	2.23262	2.21205	-30.61441	15.19	mar	4	2.31222	2.29165	33.95930	15.27
mar	11	2.23260	2.21201	-30.61407	14.73	mar	11	2.31220	2.29161	33.95912	14.81
mar	18	2.23258	2.21198	-30.61376	14.27	mar	18	2.31218	2.29158	33.95885	14.35
mar	25	2.23256	2.21195	-30.61337	13.81	mar	25	2.31216	2.29155	33.95862	13.89
abr	1	2.23255	2.21192	-30.61299	13.35	abr	1	2.31215	2.29153	33.95834	13.43
abr	8	2.23254	2.21190	-30.61250	12.89	abr	8	2.31215	2.29151	33.95814	12.97
abr	15	2.23255	2.21189	-30.61201	12.43	abr	15	2.31216	2.29150	33.95792	12.51
abr	22	2.23255	2.21188	-30.61150	11.97	abr	22	2.31216	2.29150	33.95773	12.05
abr	29	2.23256	2.21188	-30.61098	11.51	abr	29	2.31219	2.29150	33.95755	11.59
may	6	2.23258	2.21188	-30.61040	11.05	may	6	2.31221	2.29151	33.95743	11.13
may	13	2.23261	2.21189	-30.60981	10.59	may	13	2.31225	2.29153	33.95734	10.67
may	20	2.23264	2.21190	-30.60924	10.13	may	20	2.31228	2.29154	33.95726	10.21
may	27	2.23268	2.21192	-30.60866	9.67	may	27	2.31234	2.29157	33.95724	9.75
jun	3	2.23273	2.21194	-30.60808	9.21	jun	3	2.31239	2.29160	33.95726	9.29
jun	10	2.23278	2.21197	-30.60748	8.75	jun	10	2.31246	2.29164	33.95735	8.83
jun	17	2.23283	2.21200	-30.60696	8.29	jun	17	2.31251	2.29168	33.95743	8.37
jun	24	2.23290	2.21204	-30.60642	7.83	jun	24	2.31258	2.29173	33.95760	7.91
jul	1	2.23295	2.21208	-30.60595	7.37	jul	1	2.31264	2.29177	33.95776	7.45
jul	8	2.23302	2.21212	-30.60545	6.91	jul	8	2.31273	2.29182	33.95803	6.99
jul	15	2.23308	2.21217	-30.60509	6.45	jul	15	2.31279	2.29187	33.95825	6.53
jul	22	2.23316	2.21221	-30.60469	5.99	jul	22	2.31287	2.29192	33.95857	6.07
jul	29	2.23322	2.21226	-30.60442	5.53	jul	29	2.31293	2.29198	33.95885	5.61
ago	5	2.23329	2.21230	-30.60412	5.07	ago	5	2.31302	2.29203	33.95924	5.15
ago	12	2.23335	2.21235	-30.60400	4.61	ago	12	2.31307	2.29208	33.95954	4.69
ago	19	2.23342	2.21240	-30.60382	4.15	ago	19	2.31315	2.29213	33.95996	4.23
ago	26	2.23347	2.21244	-30.60381	3.69	ago	26	2.31321	2.29218	33.96029	3.77
sep	2	2.23353	2.21248	-30.60376	3.23	sep	2	2.31327	2.29222	33.96074	3.31
sep	9	2.23357	2.21252	-30.60391	2.77	sep	9	2.31332	2.29227	33.96106	2.85
sep	16	2.23363	2.21255	-30.60398	2.31	sep	16	2.31338	2.29231	33.96151	2.39
sep	23	2.23366	2.21258	-30.60423	1.85	sep	23	2.31342	2.29234	33.96185	1.93
sep	30	2.23371	2.21261	-30.60442	1.39	sep	30	2.31347	2.29237	33.96228	1.47
oct	7	2.23373	2.21263	-30.60479	0.93	oct	7	2.31350	2.29240	33.96258	1.01
oct	14	2.23377	2.21264	-30.60507	0.47	oct	14	2.31354	2.29242	33.96300	0.55
oct	21	2.23378	2.21264	-30.60549	0.01	oct	21	2.31357	2.29243	33.96329	0.09
oct	28	2.23380	2.21265	-30.60584	23.55	oct	28	2.31360	2.29244	33.96366	23.63
nov	4	2.23381	2.21264	-30.60632	23.09	nov	4	2.31361	2.29244	33.96390	23.17
nov	11	2.23382	2.21263	-30.60669	22.63	nov	11	2.31363	2.29244	33.96424	22.71
nov	18	2.23382	2.21260	-30.60715	22.17	nov	18	2.31364	2.29243	33.96446	22.25
nov	25	2.23382	2.21258	-30.60753	21.71	nov	25	2.31365	2.29241	33.96473	21.79
dic	2	2.23380	2.21255	-30.60798	21.25	dic	2	2.31364	2.29239	33.96489	21.33
dic	9	2.23379	2.21252	-30.60831	20.79	dic	9	2.31364	2.29236	33.96511	20.87
dic	16	2.23378	2.21247	-30.60868	20.33	dic	16	2.31363	2.29233	33.96522	20.41
dic	23	2.23376	2.21243	-30.60896	19.87	dic	23	2.31362	2.29229	33.96536	19.95

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

15510						17378					
V			Sp			V			Sp		
4.26			G8V			3.52			K0IV		
	α	α_c		δ	Hp		α	α_c		δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	3.34846	3.32805	-42.98124	20.44	ene	1	3.74021	3.71980	-9.68321	20.83
ene	8	3.34842	3.32800	-42.98164	19.98	ene	8	3.74019	3.71977	-9.68351	20.37
ene	15	3.34840	3.32794	-42.98184	19.52	ene	15	3.74018	3.71973	-9.68365	19.91
ene	22	3.34835	3.32788	-42.98211	19.06	ene	22	3.74016	3.71969	-9.68389	19.45
ene	29	3.34831	3.32782	-42.98220	18.60	ene	29	3.74014	3.71964	-9.68398	18.99
feb	5	3.34826	3.32775	-42.98234	18.14	feb	5	3.74011	3.71960	-9.68416	18.53
feb	12	3.34822	3.32769	-42.98227	17.68	feb	12	3.74008	3.71955	-9.68417	18.07
feb	19	3.34817	3.32762	-42.98226	17.22	feb	19	3.74005	3.71950	-9.68427	17.61
feb	26	3.34813	3.32757	-42.98208	16.76	feb	26	3.74002	3.71946	-9.68424	17.15
mar	4	3.34808	3.32750	-42.98195	16.30	mar	4	3.73998	3.71941	-9.68428	16.69
mar	11	3.34804	3.32745	-42.98162	15.84	mar	11	3.73996	3.71937	-9.68416	16.23
mar	18	3.34799	3.32739	-42.98134	15.38	mar	18	3.73993	3.71933	-9.68411	15.77
mar	25	3.34796	3.32735	-42.98093	14.92	mar	25	3.73990	3.71929	-9.68394	15.31
abr	1	3.34792	3.32730	-42.98055	14.46	abr	1	3.73988	3.71925	-9.68383	14.85
abr	8	3.34790	3.32726	-42.98002	14.00	abr	8	3.73986	3.71922	-9.68358	14.39
abr	15	3.34788	3.32722	-42.97951	13.54	abr	15	3.73985	3.71919	-9.68338	13.93
abr	22	3.34787	3.32720	-42.97893	13.08	abr	22	3.73984	3.71917	-9.68309	13.47
abr	29	3.34786	3.32717	-42.97838	12.62	abr	29	3.73984	3.71915	-9.68283	13.01
may	6	3.34786	3.32716	-42.97772	12.16	may	6	3.73984	3.71914	-9.68247	12.55
may	13	3.34788	3.32715	-42.97708	11.70	may	13	3.73986	3.71913	-9.68213	12.09
may	20	3.34789	3.32715	-42.97643	11.24	may	20	3.73987	3.71913	-9.68174	11.63
may	27	3.34792	3.32715	-42.97578	10.78	may	27	3.73990	3.71913	-9.68137	11.17
jun	3	3.34795	3.32717	-42.97511	10.32	jun	3	3.73992	3.71914	-9.68094	10.71
jun	10	3.34800	3.32718	-42.97444	9.86	jun	10	3.73996	3.71915	-9.68050	10.25
jun	17	3.34804	3.32721	-42.97382	9.40	jun	17	3.74000	3.71917	-9.68008	9.79
jun	24	3.34810	3.32724	-42.97320	8.94	jun	24	3.74005	3.71919	-9.67965	9.34
jul	1	3.34815	3.32728	-42.97264	8.48	jul	1	3.74009	3.71922	-9.67922	8.88
jul	8	3.34822	3.32732	-42.97206	8.02	jul	8	3.74015	3.71924	-9.67877	8.42
jul	15	3.34828	3.32736	-42.97160	7.56	jul	15	3.74020	3.71928	-9.67839	7.96
jul	22	3.34836	3.32741	-42.97114	7.10	jul	22	3.74026	3.71931	-9.67799	7.50
jul	29	3.34842	3.32746	-42.97079	6.64	jul	29	3.74031	3.71935	-9.67766	7.04
ago	5	3.34850	3.32752	-42.97043	6.18	ago	5	3.74038	3.71939	-9.67729	6.58
ago	12	3.34857	3.32758	-42.97023	5.72	ago	12	3.74043	3.71944	-9.67704	6.12
ago	19	3.34865	3.32763	-42.97002	5.26	ago	19	3.74050	3.71948	-9.67675	5.66
ago	26	3.34871	3.32769	-42.96997	4.80	ago	26	3.74055	3.71952	-9.67659	5.20
sep	2	3.34879	3.32774	-42.96990	4.34	sep	2	3.74062	3.71957	-9.67638	4.74
sep	9	3.34885	3.32780	-42.97002	3.88	sep	9	3.74066	3.71961	-9.67632	4.28
sep	16	3.34892	3.32785	-42.97011	3.42	sep	16	3.74072	3.71965	-9.67622	3.82
sep	23	3.34898	3.32789	-42.97037	2.96	sep	23	3.74077	3.71969	-9.67626	3.36
sep	30	3.34904	3.32794	-42.97059	2.50	sep	30	3.74082	3.71972	-9.67624	2.90
oct	7	3.34908	3.32797	-42.97101	2.04	oct	7	3.74086	3.71975	-9.67640	2.44
oct	14	3.34913	3.32800	-42.97136	1.58	oct	14	3.74091	3.71978	-9.67647	1.98
oct	21	3.34916	3.32802	-42.97186	1.12	oct	21	3.74095	3.71981	-9.67671	1.52
oct	28	3.34920	3.32804	-42.97230	0.66	oct	28	3.74098	3.71983	-9.67686	1.06
nov	4	3.34922	3.32805	-42.97290	0.20	nov	4	3.74101	3.71984	-9.67717	0.60
nov	11	3.34925	3.32805	-42.97338	23.74	nov	11	3.74104	3.71985	-9.67737	0.14
nov	18	3.34926	3.32804	-42.97399	23.28	nov	18	3.74106	3.71985	-9.67771	23.68
nov	25	3.34926	3.32803	-42.97449	22.82	nov	25	3.74108	3.71985	-9.67795	23.22
dic	2	3.34926	3.32801	-42.97510	22.36	dic	2	3.74109	3.71984	-9.67831	22.76
dic	9	3.34926	3.32798	-42.97556	21.90	dic	9	3.74110	3.71982	-9.67855	22.30
dic	16	3.34924	3.32794	-42.97609	21.44	dic	16	3.74111	3.71980	-9.67889	21.84
dic	23	3.34923	3.32790	-42.97650	20.98	dic	23	3.74111	3.71978	-9.67912	21.38

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

23693							24436						
V			Sp				V			Sp			
4.71			F7V				0.18			B8Ia			
		α	α_c	δ		Hp			α	α_c	δ		Hp
m	d	h	h	°		h	m	d	h	h	°		h
ene	1	5.09944	5.07903	-57.44068		22.19	ene	1	5.26182	5.24142	-8.17426		22.36
ene	8	5.09940	5.07898	-57.44130		21.73	ene	8	5.26182	5.24139	-8.17461		21.90
ene	15	5.09937	5.07891	-57.44177		21.27	ene	15	5.26182	5.24137	-8.17483		21.44
ene	22	5.09931	5.07884	-57.44229		20.81	ene	22	5.26181	5.24134	-8.17515		20.98
ene	29	5.09926	5.07876	-57.44263		20.35	ene	29	5.26180	5.24130	-8.17531		20.52
feb	5	5.09919	5.07868	-57.44303		19.89	feb	5	5.26177	5.24126	-8.17556		20.06
feb	12	5.09913	5.07859	-57.44323		19.43	feb	12	5.26175	5.24122	-8.17566		19.60
feb	19	5.09905	5.07850	-57.44348		18.97	feb	19	5.26173	5.24118	-8.17584		19.14
feb	26	5.09897	5.07841	-57.44354		18.51	feb	26	5.26169	5.24113	-8.17588		18.68
mar	4	5.09889	5.07832	-57.44365		18.05	mar	4	5.26166	5.24108	-8.17600		18.22
mar	11	5.09881	5.07822	-57.44354		17.59	mar	11	5.26163	5.24104	-8.17595		17.76
mar	18	5.09873	5.07813	-57.44349		17.13	mar	18	5.26159	5.24099	-8.17600		17.30
mar	25	5.09865	5.07804	-57.44326		16.67	mar	25	5.26156	5.24095	-8.17590		16.84
abr	1	5.09858	5.07795	-57.44308		16.21	abr	1	5.26153	5.24090	-8.17588		16.38
abr	8	5.09851	5.07787	-57.44270		15.75	abr	8	5.26150	5.24086	-8.17570		15.92
abr	15	5.09844	5.07778	-57.44237		15.29	abr	15	5.26148	5.24082	-8.17560		15.46
abr	22	5.09839	5.07772	-57.44189		14.83	abr	22	5.26145	5.24078	-8.17538		15.00
abr	29	5.09833	5.07765	-57.44146		14.37	abr	29	5.26144	5.24075	-8.17522		14.54
may	6	5.09829	5.07759	-57.44087		13.91	may	6	5.26142	5.24072	-8.17493		14.08
may	13	5.09826	5.07753	-57.44032		13.45	may	13	5.26142	5.24070	-8.17469		13.62
may	20	5.09824	5.07750	-57.43968		12.99	may	20	5.26142	5.24068	-8.17436		13.16
may	27	5.09822	5.07746	-57.43907		12.53	may	27	5.26143	5.24066	-8.17409		12.70
jun	3	5.09822	5.07743	-57.43838		12.07	jun	3	5.26144	5.24065	-8.17371		12.24
jun	10	5.09823	5.07741	-57.43771		11.61	jun	10	5.26146	5.24065	-8.17337		11.78
jun	17	5.09824	5.07741	-57.43702		11.15	jun	17	5.26148	5.24065	-8.17298		11.32
jun	24	5.09827	5.07741	-57.43636		10.69	jun	24	5.26152	5.24066	-8.17263		10.86
jul	1	5.09830	5.07743	-57.43568		10.23	jul	1	5.26154	5.24067	-8.17224		10.40
jul	8	5.09835	5.07744	-57.43503		9.77	jul	8	5.26159	5.24069	-8.17185		9.94
jul	15	5.09840	5.07748	-57.43442		9.31	jul	15	5.26162	5.24071	-8.17148		9.48
jul	22	5.09846	5.07751	-57.43384		8.85	jul	22	5.26168	5.24073	-8.17113		9.02
jul	29	5.09852	5.07756	-57.43333		8.39	jul	29	5.26172	5.24076	-8.17080		8.56
ago	5	5.09860	5.07761	-57.43283		7.93	ago	5	5.26178	5.24079	-8.17046		8.10
ago	12	5.09867	5.07768	-57.43244		7.47	ago	12	5.26183	5.24083	-8.17019		7.64
ago	19	5.09876	5.07774	-57.43209		7.01	ago	19	5.26189	5.24087	-8.16992		7.18
ago	26	5.09884	5.07781	-57.43185		6.55	ago	26	5.26194	5.24091	-8.16974		6.72
sep	2	5.09893	5.07788	-57.43163		6.09	sep	2	5.26200	5.24096	-8.16953		6.26
sep	9	5.09901	5.07796	-57.43157		5.63	sep	9	5.26205	5.24100	-8.16945		5.80
sep	16	5.09910	5.07803	-57.43153		5.17	sep	16	5.26212	5.24104	-8.16935		5.34
sep	23	5.09919	5.07810	-57.43165		4.71	sep	23	5.26217	5.24109	-8.16937		4.88
sep	30	5.09928	5.07818	-57.43176		4.25	sep	30	5.26223	5.24113	-8.16935		4.42
oct	7	5.09935	5.07825	-57.43207		3.79	oct	7	5.26228	5.24117	-8.16948		3.96
oct	14	5.09943	5.07831	-57.43235		3.33	oct	14	5.26234	5.24121	-8.16956		3.50
oct	21	5.09950	5.07836	-57.43282		2.87	oct	21	5.26239	5.24125	-8.16980		3.04
oct	28	5.09957	5.07841	-57.43323		2.41	oct	28	5.26244	5.24128	-8.16995		2.58
nov	4	5.09963	5.07846	-57.43383		1.95	nov	4	5.26248	5.24131	-8.17027		2.12
nov	11	5.09968	5.07849	-57.43436		1.49	nov	11	5.26253	5.24134	-8.17050		1.66
nov	18	5.09972	5.07851	-57.43505		1.03	nov	18	5.26257	5.24136	-8.17087		1.20
nov	25	5.09975	5.07852	-57.43564		0.57	nov	25	5.26261	5.24137	-8.17114		0.74
dic	2	5.09977	5.07852	-57.43638		0.11	dic	2	5.26264	5.24138	-8.17155		0.28
dic	9	5.09979	5.07851	-57.43699		23.65	dic	9	5.26266	5.24139	-8.17184		23.82
dic	16	5.09979	5.07848	-57.43772		23.19	dic	16	5.26269	5.24138	-8.17225		23.36
dic	23	5.09978	5.07846	-57.43831		22.73	dic	23	5.26270	5.24138	-8.17253		22.90

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

27288						27654					
V			Sp			V			Sp		
3.55		A2Vann		δ		3.76		G8III/IV		δ	
m	d	α	α _c	δ	Hp	m	d	α	α _c	δ	Hp
		h	h	°	h			h	h	°	h
ene	1	5.80104	5.78064	-14.81319	22.90	ene	1	5.87290	5.85249	-20.87723	22.97
ene	8	5.80104	5.78062	-14.81363	22.44	ene	8	5.87290	5.85248	-20.87773	22.51
ene	15	5.80105	5.78060	-14.81395	21.98	ene	15	5.87291	5.85245	-20.87810	22.05
ene	22	5.80104	5.78057	-14.81434	21.52	ene	22	5.87290	5.85242	-20.87855	21.59
ene	29	5.80103	5.78054	-14.81458	21.06	ene	29	5.87289	5.85239	-20.87885	21.13
feb	5	5.80101	5.78050	-14.81491	20.60	feb	5	5.87286	5.85235	-20.87922	20.67
feb	12	5.80099	5.78046	-14.81507	20.13	feb	12	5.87284	5.85231	-20.87943	20.21
feb	19	5.80096	5.78042	-14.81532	19.67	feb	19	5.87281	5.85227	-20.87971	19.75
feb	26	5.80093	5.78037	-14.81540	19.21	feb	26	5.87278	5.85222	-20.87982	19.29
mar	4	5.80090	5.78032	-14.81556	18.75	mar	4	5.87274	5.85217	-20.88001	18.83
mar	11	5.80086	5.78027	-14.81555	18.29	mar	11	5.87271	5.85212	-20.88002	18.37
mar	18	5.80083	5.78022	-14.81563	17.83	mar	18	5.87267	5.85207	-20.88011	17.91
mar	25	5.80079	5.78018	-14.81554	17.37	mar	25	5.87263	5.85202	-20.88003	17.45
abr	1	5.80075	5.78013	-14.81554	16.91	abr	1	5.87259	5.85196	-20.88002	16.99
abr	8	5.80072	5.78008	-14.81536	16.45	abr	8	5.87256	5.85192	-20.87984	16.53
abr	15	5.80070	5.78004	-14.81526	15.99	abr	15	5.87253	5.85187	-20.87973	16.07
abr	22	5.80066	5.78000	-14.81502	15.53	abr	22	5.87249	5.85183	-20.87946	15.61
abr	29	5.80065	5.77996	-14.81485	15.07	abr	29	5.87247	5.85178	-20.87927	15.15
may	6	5.80063	5.77992	-14.81453	14.61	may	6	5.87245	5.85175	-20.87892	14.69
may	13	5.80062	5.77989	-14.81428	14.15	may	13	5.87244	5.85171	-20.87863	14.23
may	20	5.80061	5.77987	-14.81391	13.69	may	20	5.87243	5.85169	-20.87822	13.77
may	27	5.80061	5.77985	-14.81360	13.24	may	27	5.87243	5.85166	-20.87788	13.31
jun	3	5.80061	5.77983	-14.81319	12.78	jun	3	5.87243	5.85164	-20.87742	12.85
jun	10	5.80063	5.77982	-14.81281	12.32	jun	10	5.87244	5.85163	-20.87700	12.39
jun	17	5.80064	5.77981	-14.81238	11.86	jun	17	5.87245	5.85162	-20.87652	11.93
jun	24	5.80067	5.77981	-14.81199	11.40	jun	24	5.87248	5.85162	-20.87608	11.47
jul	1	5.80069	5.77982	-14.81154	10.94	jul	1	5.87250	5.85162	-20.87559	11.01
jul	8	5.80073	5.77983	-14.81112	10.48	jul	8	5.87254	5.85163	-20.87512	10.55
jul	15	5.80076	5.77984	-14.81070	10.02	jul	15	5.87256	5.85165	-20.87465	10.09
jul	22	5.80081	5.77986	-14.81031	9.56	jul	22	5.87261	5.85166	-20.87423	9.63
jul	29	5.80085	5.77989	-14.80993	9.10	jul	29	5.87265	5.85169	-20.87381	9.17
ago	5	5.80090	5.77992	-14.80956	8.64	ago	5	5.87270	5.85172	-20.87340	8.71
ago	12	5.80094	5.77995	-14.80925	8.18	ago	12	5.87275	5.85175	-20.87306	8.25
ago	19	5.80100	5.77999	-14.80896	7.72	ago	19	5.87281	5.85179	-20.87274	7.79
ago	26	5.80105	5.78002	-14.80875	7.26	ago	26	5.87286	5.85183	-20.87251	7.33
sep	2	5.80112	5.78007	-14.80852	6.80	sep	2	5.87292	5.85187	-20.87226	6.87
sep	9	5.80116	5.78011	-14.80842	6.34	sep	9	5.87297	5.85192	-20.87215	6.41
sep	16	5.80123	5.78016	-14.80831	5.88	sep	16	5.87303	5.85196	-20.87204	5.95
sep	23	5.80128	5.78020	-14.80833	5.42	sep	23	5.87309	5.85201	-20.87206	5.49
sep	30	5.80135	5.78025	-14.80832	4.96	sep	30	5.87315	5.85205	-20.87206	5.03
oct	7	5.80140	5.78029	-14.80846	4.50	oct	7	5.87321	5.85210	-20.87221	4.57
oct	14	5.80146	5.78033	-14.80858	4.04	oct	14	5.87327	5.85214	-20.87235	4.11
oct	21	5.80151	5.78037	-14.80884	3.58	oct	21	5.87332	5.85218	-20.87264	3.65
oct	28	5.80157	5.78041	-14.80904	3.12	oct	28	5.87338	5.85222	-20.87287	3.19
nov	4	5.80161	5.78044	-14.80941	2.66	nov	4	5.87343	5.85226	-20.87328	2.73
nov	11	5.80167	5.78047	-14.80970	2.20	nov	11	5.87348	5.85229	-20.87362	2.27
nov	18	5.80171	5.78050	-14.81014	1.74	nov	18	5.87353	5.85231	-20.87411	1.81
nov	25	5.80175	5.78052	-14.81048	1.28	nov	25	5.87357	5.85233	-20.87450	1.35
dic	2	5.80179	5.78053	-14.81097	0.82	dic	2	5.87360	5.85235	-20.87505	0.89
dic	9	5.80182	5.78054	-14.81134	0.36	dic	9	5.87363	5.85236	-20.87548	0.43
dic	16	5.80185	5.78054	-14.81185	23.90	dic	16	5.87366	5.85236	-20.87604	23.97
dic	23	5.80187	5.78054	-14.81221	23.44	dic	23	5.87368	5.85235	-20.87647	23.51

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

28103						29271					
V			Sp			V			Sp		
		3.71	F1V			5.08		G5V			
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	5.95862	5.93822	-14.16342	23.05	ene	1	6.16022	6.13981	-74.75879	23.25
ene	8	5.95863	5.93820	-14.16386	22.59	ene	8	6.16017	6.13975	-74.75950	22.79
ene	15	5.95863	5.93818	-14.16418	22.13	ene	15	6.16010	6.13964	-74.76009	22.33
ene	22	5.95863	5.93815	-14.16457	21.67	ene	22	6.16001	6.13953	-74.76075	21.87
ene	29	5.95862	5.93812	-14.16482	21.21	ene	29	6.15989	6.13940	-74.76124	21.41
feb	5	5.95860	5.93809	-14.16515	20.75	feb	5	6.15977	6.13926	-74.76179	20.95
feb	12	5.95858	5.93805	-14.16532	20.29	feb	12	6.15962	6.13909	-74.76216	20.49
feb	19	5.95855	5.93801	-14.16557	19.83	feb	19	6.15947	6.13892	-74.76259	20.03
feb	26	5.95852	5.93796	-14.16566	19.37	feb	26	6.15930	6.13874	-74.76283	19.57
mar	4	5.95849	5.93791	-14.16583	18.91	mar	4	6.15913	6.13856	-74.76312	19.11
mar	11	5.95845	5.93787	-14.16583	18.45	mar	11	6.15895	6.13837	-74.76321	18.65
mar	18	5.95842	5.93782	-14.16592	17.99	mar	18	6.15877	6.13816	-74.76336	18.19
mar	25	5.95838	5.93777	-14.16584	17.53	mar	25	6.15859	6.13798	-74.76330	17.73
abr	1	5.95835	5.93772	-14.16584	17.07	abr	1	6.15841	6.13778	-74.76330	17.27
abr	8	5.95831	5.93767	-14.16568	16.61	abr	8	6.15823	6.13759	-74.76310	16.81
abr	15	5.95829	5.93763	-14.16559	16.15	abr	15	6.15806	6.13740	-74.76295	16.35
abr	22	5.95826	5.93759	-14.16536	15.69	abr	22	6.15790	6.13723	-74.76262	15.89
abr	29	5.95824	5.93755	-14.16521	15.23	abr	29	6.15775	6.13706	-74.76235	15.43
may	6	5.95821	5.93751	-14.16490	14.77	may	6	6.15761	6.13691	-74.76189	14.97
may	13	5.95821	5.93748	-14.16466	14.31	may	13	6.15748	6.13675	-74.76149	14.51
may	20	5.95819	5.93745	-14.16430	13.85	may	20	6.15738	6.13664	-74.76094	14.05
may	27	5.95820	5.93743	-14.16401	13.39	may	27	6.15728	6.13651	-74.76045	13.59
jun	3	5.95820	5.93741	-14.16360	12.93	jun	3	6.15721	6.13642	-74.75982	13.13
jun	10	5.95821	5.93740	-14.16325	12.47	jun	10	6.15714	6.13633	-74.75923	12.67
jun	17	5.95822	5.93739	-14.16282	12.01	jun	17	6.15711	6.13628	-74.75857	12.21
jun	24	5.95825	5.93739	-14.16244	11.55	jun	24	6.15709	6.13623	-74.75795	11.75
jul	1	5.95827	5.93739	-14.16200	11.09	jul	1	6.15709	6.13622	-74.75727	11.29
jul	8	5.95831	5.93740	-14.16160	10.63	jul	8	6.15710	6.13620	-74.75662	10.83
jul	15	5.95833	5.93742	-14.16118	10.17	jul	15	6.15715	6.13623	-74.75596	10.37
jul	22	5.95838	5.93743	-14.16080	9.71	jul	22	6.15720	6.13626	-74.75536	9.91
jul	29	5.95842	5.93746	-14.16042	9.25	jul	29	6.15728	6.13632	-74.75477	9.45
ago	5	5.95847	5.93749	-14.16006	8.79	ago	5	6.15737	6.13638	-74.75420	8.99
ago	12	5.95851	5.93752	-14.15975	8.33	ago	12	6.15748	6.13649	-74.75371	8.53
ago	19	5.95857	5.93755	-14.15946	7.87	ago	19	6.15760	6.13658	-74.75326	8.07
ago	26	5.95862	5.93759	-14.15925	7.41	ago	26	6.15774	6.13671	-74.75290	7.61
sep	2	5.95868	5.93763	-14.15903	6.95	sep	2	6.15788	6.13683	-74.75256	7.15
sep	9	5.95873	5.93768	-14.15892	6.49	sep	9	6.15804	6.13699	-74.75236	6.69
sep	16	5.95880	5.93772	-14.15881	6.03	sep	16	6.15820	6.13712	-74.75219	6.23
sep	23	5.95885	5.93777	-14.15883	5.57	sep	23	6.15836	6.13728	-74.75218	5.77
sep	30	5.95891	5.93781	-14.15881	5.11	sep	30	6.15853	6.13742	-74.75216	5.31
oct	7	5.95896	5.93786	-14.15895	4.65	oct	7	6.15869	6.13759	-74.75232	4.85
oct	14	5.95903	5.93790	-14.15906	4.19	oct	14	6.15885	6.13772	-74.75249	4.39
oct	21	5.95908	5.93794	-14.15932	3.73	oct	21	6.15900	6.13786	-74.75284	3.93
oct	28	5.95914	5.93798	-14.15951	3.27	oct	28	6.15914	6.13799	-74.75316	3.47
nov	4	5.95918	5.93801	-14.15987	2.81	nov	4	6.15928	6.13811	-74.75367	3.01
nov	11	5.95924	5.93804	-14.16016	2.35	nov	11	6.15939	6.13820	-74.75414	2.55
nov	18	5.95928	5.93807	-14.16060	1.89	nov	18	6.15949	6.13828	-74.75478	2.09
nov	25	5.95933	5.93809	-14.16093	1.43	nov	25	6.15958	6.13834	-74.75534	1.63
dic	2	5.95936	5.93811	-14.16142	0.97	dic	2	6.15964	6.13839	-74.75607	1.17
dic	9	5.95940	5.93812	-14.16179	0.51	dic	9	6.15968	6.13840	-74.75670	0.71
dic	16	5.95943	5.93812	-14.16229	0.05	dic	16	6.15970	6.13839	-74.75747	0.25
dic	23	5.95945	5.93812	-14.16265	23.59	dic	23	6.15970	6.13837	-74.75811	23.79

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

30438						32349					
		V		Sp				V		Sp	
		-0.62		FOIb				-1.44		A0m...	
m	d	α	α _c	δ	Hp	m	d	α	α _c	δ	Hp
		h	h	°	h			h	h	°	h
ene	1	6.40866	6.38825	-52.70783	23.50	ene	1	6.77041	6.75000	-16.74880	23.86
ene	8	6.40865	6.38823	-52.70854	23.04	ene	8	6.77042	6.75000	-16.74930	23.40
ene	15	6.40865	6.38819	-52.70914	22.58	ene	15	6.77044	6.74998	-16.74970	22.94
ene	22	6.40862	6.38815	-52.70980	22.12	ene	22	6.77044	6.74996	-16.75017	22.48
ene	29	6.40859	6.38810	-52.71031	21.66	ene	29	6.77043	6.74994	-16.75049	22.02
feb	5	6.40855	6.38804	-52.71087	21.20	feb	5	6.77042	6.74991	-16.75088	21.56
feb	12	6.40851	6.38798	-52.71127	20.74	feb	12	6.77041	6.74988	-16.75113	21.10
feb	19	6.40846	6.38791	-52.71173	20.28	feb	19	6.77039	6.74984	-16.75146	20.64
feb	26	6.40840	6.38783	-52.71200	19.82	feb	26	6.77036	6.74980	-16.75162	20.18
mar	4	6.40833	6.38776	-52.71232	19.36	mar	4	6.77033	6.74975	-16.75185	19.72
mar	11	6.40826	6.38768	-52.71245	18.90	mar	11	6.77029	6.74971	-16.75192	19.26
mar	18	6.40820	6.38759	-52.71263	18.44	mar	18	6.77026	6.74966	-16.75207	18.80
mar	25	6.40812	6.38751	-52.71261	17.98	mar	25	6.77022	6.74961	-16.75205	18.34
abr	1	6.40806	6.38743	-52.71265	17.52	abr	1	6.77018	6.74956	-16.75211	17.88
abr	8	6.40799	6.38735	-52.71249	17.06	abr	8	6.77015	6.74951	-16.75200	17.42
abr	15	6.40792	6.38726	-52.71239	16.60	abr	15	6.77012	6.74946	-16.75197	16.96
abr	22	6.40786	6.38719	-52.71209	16.14	abr	22	6.77008	6.74942	-16.75178	16.50
abr	29	6.40780	6.38712	-52.71186	15.68	abr	29	6.77006	6.74937	-16.75167	16.04
may	6	6.40775	6.38705	-52.71145	15.22	may	6	6.77003	6.74933	-16.75140	15.58
may	13	6.40771	6.38698	-52.71108	14.76	may	13	6.77002	6.74929	-16.75121	15.12
may	20	6.40767	6.38693	-52.71057	14.30	may	20	6.77000	6.74926	-16.75088	14.66
may	27	6.40764	6.38687	-52.71011	13.84	may	27	6.76999	6.74923	-16.75062	14.20
jun	3	6.40762	6.38683	-52.70952	13.38	jun	3	6.76998	6.74920	-16.75024	13.74
jun	10	6.40761	6.38679	-52.70897	12.92	jun	10	6.76999	6.74918	-16.74992	13.28
jun	17	6.40760	6.38677	-52.70832	12.46	jun	17	6.76999	6.74916	-16.74950	12.82
jun	24	6.40760	6.38674	-52.70773	12.00	jun	24	6.77001	6.74915	-16.74915	12.37
jul	1	6.40761	6.38674	-52.70707	11.54	jul	1	6.77002	6.74915	-16.74872	11.91
jul	8	6.40763	6.38673	-52.70644	11.08	jul	8	6.77005	6.74915	-16.74834	11.45
jul	15	6.40766	6.38674	-52.70579	10.62	jul	15	6.77007	6.74915	-16.74791	10.99
jul	22	6.40770	6.38675	-52.70520	10.16	jul	22	6.77011	6.74916	-16.74755	10.53
jul	29	6.40773	6.38677	-52.70460	9.70	jul	29	6.77014	6.74918	-16.74716	10.07
ago	5	6.40779	6.38680	-52.70404	9.24	ago	5	6.77018	6.74920	-16.74681	9.61
ago	12	6.40784	6.38684	-52.70353	8.78	ago	12	6.77022	6.74922	-16.74648	9.15
ago	19	6.40790	6.38688	-52.70308	8.32	ago	19	6.77027	6.74925	-16.74620	8.69
ago	26	6.40797	6.38694	-52.70270	7.86	ago	26	6.77031	6.74929	-16.74596	8.23
sep	2	6.40804	6.38699	-52.70234	7.40	sep	2	6.77037	6.74932	-16.74574	7.77
sep	9	6.40811	6.38706	-52.70211	6.94	sep	9	6.77042	6.74936	-16.74560	7.31
sep	16	6.40819	6.38712	-52.70192	6.48	sep	16	6.77048	6.74941	-16.74550	6.85
sep	23	6.40827	6.38719	-52.70188	6.02	sep	23	6.77053	6.74945	-16.74550	6.39
sep	30	6.40835	6.38725	-52.70183	5.56	sep	30	6.77060	6.74950	-16.74548	5.93
oct	7	6.40843	6.38732	-52.70196	5.10	oct	7	6.77065	6.74954	-16.74560	5.47
oct	14	6.40851	6.38739	-52.70210	4.64	oct	14	6.77071	6.74959	-16.74572	5.01
oct	21	6.40859	6.38745	-52.70242	4.18	oct	21	6.77077	6.74963	-16.74598	4.55
oct	28	6.40867	6.38751	-52.70271	3.72	oct	28	6.77083	6.74967	-16.74619	4.09
nov	4	6.40874	6.38757	-52.70318	3.26	nov	4	6.77088	6.74971	-16.74655	3.63
nov	11	6.40880	6.38761	-52.70362	2.80	nov	11	6.77094	6.74975	-16.74687	3.17
nov	18	6.40887	6.38765	-52.70424	2.34	nov	18	6.77099	6.74978	-16.74734	2.71
nov	25	6.40892	6.38769	-52.70478	1.88	nov	25	6.77104	6.74981	-16.74771	2.25
dic	2	6.40897	6.38771	-52.70548	1.42	dic	2	6.77109	6.74983	-16.74823	1.79
dic	9	6.40900	6.38773	-52.70610	0.96	dic	9	6.77113	6.74985	-16.74866	1.33
dic	16	6.40904	6.38773	-52.70686	0.50	dic	16	6.77117	6.74986	-16.74922	0.87
dic	23	6.40905	6.38773	-52.70749	0.04	dic	23	6.77120	6.74987	-16.74964	0.41

Posiciones aparentes de estrellas brillantes, 2024 (a las 0^h del meridiano 90° W.G.)

34834							36795						
		V		Sp					V		Sp		
		4.49		FOIV					4.44		F6V		
		α		α_c	δ	Hp			α		α_c	δ	Hp
m	d	h	h	h	°	h	m	d	h	h	h	°	h
ene	1	7.22120	7.20080	-46.79771	0.32		ene	1	7.58498	7.56457	-22.34689	0.68	
ene	8	7.22122	7.20079	-46.79843	23.86		ene	8	7.58500	7.56458	-22.34745	0.22	
ene	15	7.22123	7.20077	-46.79907	23.40		ene	15	7.58503	7.56457	-22.34795	23.76	
ene	22	7.22122	7.20075	-46.79977	22.94		ene	22	7.58504	7.56456	-22.34849	23.30	
ene	29	7.22121	7.20072	-46.80033	22.48		ene	29	7.58504	7.56455	-22.34891	22.84	
feb	5	7.22119	7.20068	-46.80095	22.02		feb	5	7.58504	7.56453	-22.34939	22.38	
feb	12	7.22116	7.20063	-46.80144	21.56		feb	12	7.58503	7.56450	-22.34975	21.92	
feb	19	7.22113	7.20058	-46.80197	21.10		feb	19	7.58502	7.56447	-22.35017	21.46	
feb	26	7.22109	7.20053	-46.80233	20.64		feb	26	7.58500	7.56443	-22.35042	21.00	
mar	4	7.22104	7.20047	-46.80275	20.18		mar	4	7.58497	7.56440	-22.35074	20.54	
mar	11	7.22099	7.20040	-46.80299	19.71		mar	11	7.58494	7.56435	-22.35091	20.08	
mar	18	7.22094	7.20033	-46.80328	19.25		mar	18	7.58491	7.56430	-22.35115	19.62	
mar	25	7.22087	7.20026	-46.80338	18.79		mar	25	7.58487	7.56426	-22.35121	19.16	
abr	1	7.22082	7.20019	-46.80354	18.33		abr	1	7.58483	7.56421	-22.35134	18.70	
abr	8	7.22076	7.20012	-46.80350	17.87		abr	8	7.58480	7.56416	-22.35131	18.24	
abr	15	7.22070	7.20005	-46.80353	17.41		abr	15	7.58477	7.56411	-22.35135	17.78	
abr	22	7.22065	7.19998	-46.80335	16.95		abr	22	7.58472	7.56406	-22.35121	17.32	
abr	29	7.22060	7.19991	-46.80324	16.49		abr	29	7.58469	7.56401	-22.35115	16.86	
may	6	7.22055	7.19984	-46.80294	16.03		may	6	7.58466	7.56396	-22.35093	16.40	
may	13	7.22051	7.19978	-46.80270	15.57		may	13	7.58464	7.56391	-22.35078	15.94	
may	20	7.22046	7.19972	-46.80229	15.11		may	20	7.58461	7.56387	-22.35048	15.48	
may	27	7.22044	7.19967	-46.80195	14.66		may	27	7.58460	7.56383	-22.35025	15.02	
jun	3	7.22041	7.19962	-46.80144	14.20		jun	3	7.58458	7.56380	-22.34988	14.56	
jun	10	7.22039	7.19958	-46.80099	13.74		jun	10	7.58458	7.56377	-22.34958	14.10	
jun	17	7.22037	7.19955	-46.80042	13.28		jun	17	7.58457	7.56374	-22.34915	13.64	
jun	24	7.22037	7.19951	-46.79991	12.82		jun	24	7.58458	7.56372	-22.34880	13.18	
jul	1	7.22037	7.19949	-46.79929	12.36		jul	1	7.58458	7.56370	-22.34835	12.72	
jul	8	7.22038	7.19948	-46.79872	11.90		jul	8	7.58460	7.56369	-22.34795	12.26	
jul	15	7.22039	7.19947	-46.79809	11.44		jul	15	7.58460	7.56369	-22.34749	11.80	
jul	22	7.22042	7.19947	-46.79753	10.98		jul	22	7.58463	7.56369	-22.34710	11.34	
jul	29	7.22044	7.19948	-46.79694	10.52		jul	29	7.58465	7.56369	-22.34666	10.88	
ago	5	7.22048	7.19950	-46.79638	10.06		ago	5	7.58469	7.56370	-22.34627	10.42	
ago	12	7.22052	7.19952	-46.79584	9.60		ago	12	7.58471	7.56372	-22.34587	9.96	
ago	19	7.22057	7.19955	-46.79537	9.14		ago	19	7.58476	7.56374	-22.34554	9.50	
ago	26	7.22062	7.19959	-46.79494	8.68		ago	26	7.58480	7.56377	-22.34524	9.04	
sep	2	7.22068	7.19963	-46.79455	8.22		sep	2	7.58485	7.56380	-22.34496	8.58	
sep	9	7.22074	7.19968	-46.79424	7.76		sep	9	7.58489	7.56384	-22.34474	8.12	
sep	16	7.22081	7.19973	-46.79399	7.30		sep	16	7.58495	7.56387	-22.34459	7.66	
sep	23	7.22087	7.19979	-46.79386	6.84		sep	23	7.58500	7.56392	-22.34452	7.20	
sep	30	7.22095	7.19984	-46.79374	6.38		sep	30	7.58506	7.56396	-22.34445	6.74	
oct	7	7.22102	7.19991	-46.79377	5.92		oct	7	7.58511	7.56401	-22.34450	6.28	
oct	14	7.22109	7.19997	-46.79384	5.46		oct	14	7.58518	7.56405	-22.34458	5.82	
oct	21	7.22117	7.20003	-46.79406	5.00		oct	21	7.58524	7.56410	-22.34479	5.36	
oct	28	7.22124	7.20008	-46.79427	4.54		oct	28	7.58530	7.56414	-22.34498	4.90	
nov	4	7.22131	7.20014	-46.79465	4.08		nov	4	7.58536	7.56419	-22.34531	4.44	
nov	11	7.22138	7.20019	-46.79502	3.62		nov	11	7.58542	7.56423	-22.34562	3.98	
nov	18	7.22145	7.20024	-46.79557	3.16		nov	18	7.58548	7.56427	-22.34608	3.52	
nov	25	7.22151	7.20028	-46.79605	2.70		nov	25	7.58554	7.56431	-22.34647	3.06	
dic	2	7.22157	7.20032	-46.79670	2.24		dic	2	7.58559	7.56434	-22.34701	2.60	
dic	9	7.22162	7.20034	-46.79728	1.78		dic	9	7.58565	7.56437	-22.34747	2.14	
dic	16	7.22166	7.20036	-46.79802	1.32		dic	16	7.58569	7.56439	-22.34807	1.68	
dic	23	7.22170	7.20037	-46.79864	0.86		dic	23	7.58573	7.56441	-22.34856	1.22	

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

44382						45238					
V			Sp			V			Sp		
4.00			Am			1.67			A2IV		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	9.04750	9.02709	-66.48732	2.14	ene	1	9.22477	9.20436	-69.81110	2.32
ene	8	9.04756	9.02714	-66.48803	1.68	ene	8	9.22485	9.20442	-69.81179	1.86
ene	15	9.04761	9.02715	-66.48878	1.22	ene	15	9.22490	9.20444	-69.81253	1.40
ene	22	9.04764	9.02717	-66.48956	0.76	ene	22	9.22494	9.20447	-69.81331	0.94
ene	29	9.04765	9.02716	-66.49029	0.30	ene	29	9.22496	9.20446	-69.81405	0.48
feb	5	9.04766	9.02715	-66.49106	23.84	feb	5	9.22497	9.20446	-69.81482	0.02
feb	12	9.04764	9.02711	-66.49179	23.38	feb	12	9.22495	9.20442	-69.81557	23.56
feb	19	9.04763	9.02708	-66.49256	22.92	feb	19	9.22493	9.20439	-69.81635	23.10
feb	26	9.04758	9.02702	-66.49320	22.46	feb	26	9.22489	9.20432	-69.81701	22.64
mar	4	9.04754	9.02696	-66.49387	22.00	mar	4	9.22484	9.20427	-69.81770	22.18
mar	11	9.04747	9.02688	-66.49445	21.54	mar	11	9.22476	9.20417	-69.81831	21.72
mar	18	9.04741	9.02680	-66.49506	21.08	mar	18	9.22469	9.20409	-69.81895	21.26
mar	25	9.04732	9.02671	-66.49550	20.62	mar	25	9.22459	9.20398	-69.81942	20.80
abr	1	9.04724	9.02661	-66.49597	20.16	abr	1	9.22451	9.20388	-69.81993	20.34
abr	8	9.04714	9.02650	-66.49630	19.70	abr	8	9.22439	9.20375	-69.82030	19.88
abr	15	9.04705	9.02639	-66.49667	19.24	abr	15	9.22429	9.20363	-69.82071	19.42
abr	22	9.04695	9.02628	-66.49683	18.78	abr	22	9.22417	9.20350	-69.82091	18.96
abr	29	9.04686	9.02617	-66.49705	18.32	abr	29	9.22406	9.20338	-69.82116	18.50
may	6	9.04675	9.02605	-66.49708	17.86	may	6	9.22394	9.20324	-69.82124	18.04
may	13	9.04666	9.02593	-66.49717	17.40	may	13	9.22383	9.20310	-69.82136	17.58
may	20	9.04656	9.02582	-66.49704	16.94	may	20	9.22371	9.20297	-69.82127	17.12
may	27	9.04647	9.02571	-66.49697	16.48	may	27	9.22361	9.20284	-69.82124	16.66
jun	3	9.04638	9.02560	-66.49671	16.02	jun	3	9.22350	9.20271	-69.82102	16.20
jun	10	9.04630	9.02549	-66.49650	15.56	jun	10	9.22340	9.20259	-69.82085	15.74
jun	17	9.04622	9.02540	-66.49611	15.10	jun	17	9.22331	9.20248	-69.82048	15.28
jun	24	9.04616	9.02531	-66.49578	14.64	jun	24	9.22323	9.20237	-69.82018	14.82
jul	1	9.04610	9.02523	-66.49529	14.18	jul	1	9.22315	9.20228	-69.81972	14.36
jul	8	9.04606	9.02515	-66.49485	13.72	jul	8	9.22309	9.20218	-69.81930	13.90
jul	15	9.04601	9.02510	-66.49426	13.26	jul	15	9.22303	9.20212	-69.81872	13.44
jul	22	9.04599	9.02505	-66.49375	12.80	jul	22	9.22300	9.20205	-69.81823	12.98
jul	29	9.04597	9.02501	-66.49313	12.34	jul	29	9.22297	9.20201	-69.81762	12.52
ago	5	9.04597	9.02498	-66.49256	11.88	ago	5	9.22295	9.20197	-69.81705	12.06
ago	12	9.04598	9.02498	-66.49191	11.42	ago	12	9.22295	9.20196	-69.81640	11.60
ago	19	9.04600	9.02498	-66.49136	10.96	ago	19	9.22297	9.20195	-69.81584	11.14
ago	26	9.04603	9.02500	-66.49076	10.50	ago	26	9.22300	9.20197	-69.81523	10.68
sep	2	9.04607	9.02502	-66.49021	10.04	sep	2	9.22304	9.20199	-69.81467	10.22
sep	9	9.04613	9.02508	-66.48967	9.58	sep	9	9.22310	9.20204	-69.81410	9.76
sep	16	9.04620	9.02512	-66.48923	9.12	sep	16	9.22317	9.20209	-69.81364	9.30
sep	23	9.04628	9.02520	-66.48882	8.66	sep	23	9.22326	9.20217	-69.81321	8.84
sep	30	9.04636	9.02526	-66.48846	8.20	sep	30	9.22335	9.20225	-69.81282	8.38
oct	7	9.04646	9.02536	-66.48818	7.74	oct	7	9.22346	9.20235	-69.81250	7.92
oct	14	9.04657	9.02544	-66.48800	7.28	oct	14	9.22357	9.20245	-69.81228	7.46
oct	21	9.04669	9.02555	-66.48792	6.82	oct	21	9.22371	9.20257	-69.81216	7.00
oct	28	9.04680	9.02564	-66.48787	6.36	oct	28	9.22383	9.20267	-69.81208	6.54
nov	4	9.04692	9.02575	-66.48796	5.90	nov	4	9.22397	9.20280	-69.81212	6.08
nov	11	9.04704	9.02585	-66.48811	5.44	nov	11	9.22410	9.20291	-69.81224	5.62
nov	18	9.04717	9.02595	-66.48841	4.98	nov	18	9.22425	9.20304	-69.81250	5.16
nov	25	9.04728	9.02604	-66.48871	4.52	nov	25	9.22437	9.20314	-69.81277	4.70
dic	2	9.04740	9.02614	-66.48917	4.06	dic	2	9.22451	9.20326	-69.81319	4.24
dic	9	9.04750	9.02622	-66.48964	3.60	dic	9	9.22463	9.20335	-69.81363	3.78
dic	16	9.04760	9.02630	-66.49026	3.14	dic	16	9.22475	9.20344	-69.81423	3.32
dic	23	9.04768	9.02635	-66.49083	2.68	dic	23	9.22484	9.20352	-69.81478	2.86

Posiciones aparentes de estrellas brillantes, 2024 (a las 0^h del meridiano 90° W.G.)

50954						51814					
V			Sp			V			Sp		
3.99			F2IV			5.16			F1V		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	10.41469	10.39428	-74.14803	3.51	ene	1	10.61196	10.59155	56.95513	3.71
ene	8	10.41482	10.39440	-74.14860	3.05	ene	8	10.61204	10.59162	56.95520	3.25
ene	15	10.41492	10.39447	-74.14928	2.59	ene	15	10.61215	10.59169	56.95528	2.79
ene	22	10.41503	10.39456	-74.14998	2.13	ene	22	10.61222	10.59175	56.95546	2.33
ene	29	10.41509	10.39460	-74.15070	1.67	ene	29	10.61230	10.59180	56.95571	1.87
feb	5	10.41516	10.39465	-74.15144	1.21	feb	5	10.61235	10.59184	56.95603	1.41
feb	12	10.41519	10.39466	-74.15223	0.75	feb	12	10.61241	10.59188	56.95637	0.95
feb	19	10.41522	10.39467	-74.15303	0.29	feb	19	10.61244	10.59190	56.95675	0.49
feb	26	10.41521	10.39465	-74.15377	23.83	feb	26	10.61248	10.59191	56.95721	0.03
mar	4	10.41520	10.39463	-74.15453	23.37	mar	4	10.61248	10.59191	56.95766	23.57
mar	11	10.41515	10.39456	-74.15526	22.91	mar	11	10.61250	10.59191	56.95813	23.11
mar	18	10.41511	10.39451	-74.15602	22.45	mar	18	10.61249	10.59188	56.95856	22.65
mar	25	10.41503	10.39442	-74.15664	21.99	mar	25	10.61247	10.59186	56.95907	22.19
abr	1	10.41496	10.39434	-74.15729	21.53	abr	1	10.61244	10.59181	56.95949	21.73
abr	8	10.41486	10.39422	-74.15785	21.07	abr	8	10.61241	10.59178	56.95994	21.27
abr	15	10.41476	10.39410	-74.15844	20.61	abr	15	10.61238	10.59172	56.96027	20.81
abr	22	10.41464	10.39397	-74.15884	20.15	abr	22	10.61233	10.59166	56.96066	20.35
abr	29	10.41453	10.39384	-74.15929	19.69	abr	29	10.61228	10.59159	56.96092	19.89
may	6	10.41438	10.39368	-74.15959	19.23	may	6	10.61223	10.59153	56.96120	19.43
may	13	10.41426	10.39353	-74.15992	18.77	may	13	10.61218	10.59145	56.96133	18.97
may	20	10.41411	10.39337	-74.16005	18.31	may	20	10.61212	10.59138	56.96152	18.51
may	27	10.41399	10.39322	-74.16023	17.85	may	27	10.61207	10.59131	56.96153	18.05
jun	3	10.41384	10.39306	-74.16023	17.39	jun	3	10.61202	10.59124	56.96159	17.59
jun	10	10.41371	10.39290	-74.16026	16.93	jun	10	10.61198	10.59117	56.96147	17.13
jun	17	10.41357	10.39274	-74.16009	16.47	jun	17	10.61193	10.59110	56.96142	16.67
jun	24	10.41345	10.39259	-74.15998	16.01	jun	24	10.61189	10.59103	56.96118	16.21
jul	1	10.41332	10.39245	-74.15969	15.55	jul	1	10.61185	10.59098	56.96100	15.75
jul	8	10.41321	10.39231	-74.15943	15.09	jul	8	10.61183	10.59092	56.96066	15.29
jul	15	10.41311	10.39219	-74.15900	14.63	jul	15	10.61179	10.59087	56.96039	14.83
jul	22	10.41302	10.39208	-74.15863	14.17	jul	22	10.61178	10.59083	56.95995	14.37
jul	29	10.41294	10.39198	-74.15811	13.71	jul	29	10.61176	10.59080	56.95957	13.91
ago	5	10.41288	10.39189	-74.15764	13.25	ago	5	10.61176	10.59077	56.95906	13.45
ago	12	10.41283	10.39184	-74.15703	12.79	ago	12	10.61175	10.59075	56.95862	12.99
ago	19	10.41280	10.39178	-74.15651	12.33	ago	19	10.61176	10.59074	56.95803	12.53
ago	26	10.41279	10.39176	-74.15589	11.87	ago	26	10.61177	10.59074	56.95751	12.07
sep	2	10.41279	10.39174	-74.15533	11.41	sep	2	10.61180	10.59075	56.95690	11.61
sep	9	10.41282	10.39177	-74.15469	10.95	sep	9	10.61181	10.59076	56.95636	11.15
sep	16	10.41287	10.39179	-74.15417	10.49	sep	16	10.61186	10.59078	56.95571	10.69
sep	23	10.41294	10.39185	-74.15363	10.03	sep	23	10.61189	10.59081	56.95511	10.23
sep	30	10.41301	10.39191	-74.15314	9.57	sep	30	10.61195	10.59085	56.95449	9.77
oct	7	10.41312	10.39201	-74.15266	9.11	oct	7	10.61200	10.59089	56.95392	9.31
oct	14	10.41323	10.39210	-74.15230	8.65	oct	14	10.61208	10.59095	56.95330	8.85
oct	21	10.41337	10.39223	-74.15200	8.19	oct	21	10.61214	10.59100	56.95273	8.39
oct	28	10.41351	10.39235	-74.15175	7.73	oct	28	10.61223	10.59107	56.95218	7.93
nov	4	10.41367	10.39250	-74.15158	7.27	nov	4	10.61231	10.59114	56.95168	7.47
nov	11	10.41383	10.39264	-74.15152	6.81	nov	11	10.61241	10.59122	56.95119	7.01
nov	18	10.41401	10.39280	-74.15156	6.35	nov	18	10.61250	10.59129	56.95074	6.55
nov	25	10.41417	10.39294	-74.15165	5.89	nov	25	10.61261	10.59138	56.95038	6.09
dic	2	10.41436	10.39311	-74.15186	5.43	dic	2	10.61270	10.59145	56.95005	5.63
dic	9	10.41452	10.39324	-74.15214	4.97	dic	9	10.61282	10.59154	56.94980	5.17
dic	16	10.41470	10.39339	-74.15256	4.51	dic	16	10.61292	10.59162	56.94958	4.71
dic	23	10.41484	10.39351	-74.15298	4.05	dic	23	10.61303	10.59170	56.94949	4.25

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

53910						54872									
		V		Sp				V		Sp					
		2.34		A1V				2.56		A4V					
		α		α_c		δ		α		α_c		δ		Hp	
m	d	h	h	h	°	h	m	d	h	h	°	h	m	d	h
ene	1	11.05496	11.03455	56.24973	4.15	ene	1	11.25646	11.23606	20.39059	4.35				
ene	8	11.05504	11.03462	56.24974	3.69	ene	8	11.25652	11.23610	20.39033	3.89				
ene	15	11.05515	11.03470	56.24975	3.23	ene	15	11.25660	11.23614	20.39003	3.43				
ene	22	11.05523	11.03475	56.24988	2.77	ene	22	11.25665	11.23617	20.38983	2.97				
ene	29	11.05531	11.03482	56.25007	2.31	ene	29	11.25670	11.23621	20.38967	2.51				
feb	5	11.05537	11.03486	56.25035	1.85	feb	5	11.25675	11.23624	20.38958	2.05				
feb	12	11.05544	11.03491	56.25065	1.39	feb	12	11.25679	11.23626	20.38949	1.59				
feb	19	11.05548	11.03493	56.25101	0.93	feb	19	11.25683	11.23628	20.38947	1.13				
feb	26	11.05552	11.03496	56.25143	0.47	feb	26	11.25685	11.23629	20.38952	0.67				
mar	4	11.05553	11.03496	56.25188	0.01	mar	4	11.25687	11.23630	20.38959	0.21				
mar	11	11.05556	11.03497	56.25234	23.55	mar	11	11.25689	11.23630	20.38969	23.75				
mar	18	11.05555	11.03495	56.25279	23.09	mar	18	11.25690	11.23629	20.38980	23.29				
mar	25	11.05555	11.03494	56.25330	22.63	mar	25	11.25690	11.23629	20.38999	22.83				
abr	1	11.05553	11.03490	56.25375	22.17	abr	1	11.25689	11.23627	20.39016	22.37				
abr	8	11.05551	11.03487	56.25422	21.71	abr	8	11.25689	11.23625	20.39037	21.91				
abr	15	11.05548	11.03482	56.25459	21.25	abr	15	11.25688	11.23622	20.39052	21.45				
abr	22	11.05544	11.03477	56.25503	20.79	abr	22	11.25686	11.23619	20.39077	20.99				
abr	29	11.05539	11.03470	56.25534	20.33	abr	29	11.25685	11.23616	20.39094	20.53				
may	6	11.05535	11.03465	56.25567	19.87	may	6	11.25683	11.23612	20.39117	20.07				
may	13	11.05530	11.03457	56.25585	19.41	may	13	11.25681	11.23608	20.39129	19.61				
may	20	11.05525	11.03451	56.25610	18.95	may	20	11.25678	11.23604	20.39152	19.15				
may	27	11.05520	11.03443	56.25617	18.49	may	27	11.25677	11.23600	20.39162	18.69				
jun	3	11.05514	11.03436	56.25629	18.03	jun	3	11.25674	11.23596	20.39179	18.23				
jun	10	11.05510	11.03429	56.25623	17.57	jun	10	11.25673	11.23591	20.39184	17.77				
jun	17	11.05505	11.03422	56.25623	17.11	jun	17	11.25670	11.23587	20.39199	17.31				
jun	24	11.05501	11.03415	56.25605	16.65	jun	24	11.25669	11.23583	20.39199	16.85				
jul	1	11.05496	11.03409	56.25593	16.19	jul	1	11.25666	11.23579	20.39208	16.39				
jul	8	11.05494	11.03403	56.25563	15.73	jul	8	11.25666	11.23575	20.39203	15.93				
jul	15	11.05489	11.03398	56.25540	15.27	jul	15	11.25663	11.23572	20.39207	15.47				
jul	22	11.05488	11.03393	56.25500	14.81	jul	22	11.25663	11.23569	20.39197	15.01				
jul	29	11.05485	11.03389	56.25465	14.35	jul	29	11.25662	11.23566	20.39194	14.55				
ago	5	11.05484	11.03385	56.25417	13.89	ago	5	11.25662	11.23563	20.39179	14.09				
ago	12	11.05482	11.03382	56.25375	13.43	ago	12	11.25660	11.23561	20.39172	13.63				
ago	19	11.05483	11.03381	56.25318	12.97	ago	19	11.25661	11.23559	20.39151	13.17				
ago	26	11.05482	11.03379	56.25267	12.51	ago	26	11.25661	11.23558	20.39136	12.71				
sep	2	11.05484	11.03379	56.25206	12.05	sep	2	11.25663	11.23558	20.39111	12.25				
sep	9	11.05484	11.03379	56.25152	11.59	sep	9	11.25663	11.23557	20.39092	11.79				
sep	16	11.05488	11.03380	56.25085	11.13	sep	16	11.25665	11.23558	20.39059	11.33				
sep	23	11.05490	11.03382	56.25025	10.67	sep	23	11.25667	11.23558	20.39031	10.87				
sep	30	11.05495	11.03385	56.24960	10.21	sep	30	11.25670	11.23560	20.38995	10.41				
oct	7	11.05499	11.03388	56.24901	9.75	oct	7	11.25672	11.23561	20.38963	9.95				
oct	14	11.05506	11.03393	56.24834	9.29	oct	14	11.25677	11.23564	20.38921	9.49				
oct	21	11.05511	11.03397	56.24774	8.83	oct	21	11.25680	11.23566	20.38881	9.03				
oct	28	11.05519	11.03403	56.24714	8.37	oct	28	11.25685	11.23570	20.38838	8.57				
nov	4	11.05526	11.03409	56.24659	7.91	nov	4	11.25690	11.23573	20.38797	8.11				
nov	11	11.05536	11.03416	56.24604	7.45	nov	11	11.25696	11.23577	20.38750	7.65				
nov	18	11.05544	11.03423	56.24554	6.99	nov	18	11.25702	11.23581	20.38704	7.19				
nov	25	11.05554	11.03431	56.24510	6.53	nov	25	11.25709	11.23586	20.38660	6.73				
dic	2	11.05563	11.03438	56.24472	6.07	dic	2	11.25715	11.23590	20.38617	6.27				
dic	9	11.05575	11.03447	56.24439	5.61	dic	9	11.25723	11.23595	20.38573	5.81				
dic	16	11.05585	11.03454	56.24410	5.15	dic	16	11.25730	11.23599	20.38530	5.35				
dic	23	11.05595	11.03463	56.24394	4.69	dic	23	11.25737	11.23604	20.38495	4.89				

Posiciones aparentes de estrellas brillantes, 2024 (a las 0^h del meridiano 90° W.G.)

58001						58803					
V			Sp			V			Sp		
2.41		AOV		SB	Hp	5.15		F6V		Hp	
α	α_c	δ		h		α	α_c	δ			h
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	11.91828	11.89788	53.55711	5.01	ene	1	12.08169	12.06128	-42.56427	5.18
ene	8	11.91837	11.89794	53.55699	4.55	ene	8	12.08176	12.06134	-42.56468	4.72
ene	15	11.91848	11.89802	53.55685	4.09	ene	15	12.08184	12.06139	-42.56524	4.26
ene	22	11.91856	11.89808	53.55687	3.63	ene	22	12.08192	12.06144	-42.56576	3.80
ene	29	11.91864	11.89815	53.55693	3.17	ene	29	12.08198	12.06149	-42.56634	3.34
feb	5	11.91871	11.89820	53.55711	2.71	feb	5	12.08204	12.06153	-42.56690	2.88
feb	12	11.91879	11.89826	53.55729	2.25	feb	12	12.08209	12.06156	-42.56754	2.42
feb	19	11.91884	11.89829	53.55757	1.79	feb	19	12.08215	12.06160	-42.56815	1.96
feb	26	11.91889	11.89833	53.55792	1.33	feb	26	12.08218	12.06162	-42.56876	1.50
mar	4	11.91892	11.89835	53.55833	0.87	mar	4	12.08221	12.06164	-42.56933	1.04
mar	11	11.91896	11.89838	53.55874	0.41	mar	11	12.08224	12.06165	-42.56995	0.58
mar	18	11.91898	11.89837	53.55918	23.95	mar	18	12.08226	12.06166	-42.57053	0.12
mar	25	11.91899	11.89838	53.55968	23.49	mar	25	12.08227	12.06166	-42.57105	23.66
abr	1	11.91898	11.89836	53.56016	23.03	abr	1	12.08228	12.06165	-42.57156	23.20
abr	8	11.91898	11.89834	53.56065	22.57	abr	8	12.08228	12.06164	-42.57205	22.74
abr	15	11.91897	11.89831	53.56108	22.11	abr	15	12.08228	12.06162	-42.57253	22.28
abr	22	11.91894	11.89827	53.56157	21.65	abr	22	12.08226	12.06159	-42.57290	21.82
abr	29	11.91891	11.89822	53.56197	21.19	abr	29	12.08226	12.06157	-42.57328	21.36
may	6	11.91888	11.89818	53.56238	20.73	may	6	12.08223	12.06153	-42.57358	20.90
may	13	11.91885	11.89812	53.56267	20.27	may	13	12.08222	12.06149	-42.57390	20.44
may	20	11.91880	11.89806	53.56301	19.81	may	20	12.08219	12.06145	-42.57407	19.98
may	27	11.91876	11.89799	53.56321	19.35	may	27	12.08217	12.06140	-42.57428	19.52
jun	3	11.91871	11.89793	53.56343	18.89	jun	3	12.08213	12.06135	-42.57437	19.06
jun	10	11.91867	11.89786	53.56349	18.43	jun	10	12.08211	12.06130	-42.57449	18.60
jun	17	11.91862	11.89779	53.56361	17.97	jun	17	12.08207	12.06124	-42.57445	18.14
jun	24	11.91858	11.89772	53.56356	17.51	jun	24	12.08205	12.06119	-42.57446	17.68
jul	1	11.91853	11.89766	53.56354	17.05	jul	1	12.08201	12.06113	-42.57433	17.22
jul	8	11.91850	11.89759	53.56336	16.59	jul	8	12.08199	12.06108	-42.57425	16.76
jul	15	11.91845	11.89753	53.56324	16.13	jul	15	12.08194	12.06103	-42.57400	16.30
jul	22	11.91842	11.89748	53.56293	15.67	jul	22	12.08192	12.06098	-42.57383	15.84
jul	29	11.91838	11.89742	53.56268	15.21	jul	29	12.08189	12.06093	-42.57351	15.38
ago	5	11.91836	11.89738	53.56228	14.75	ago	5	12.08187	12.06088	-42.57326	14.92
ago	12	11.91833	11.89733	53.56194	14.29	ago	12	12.08183	12.06084	-42.57285	14.46
ago	19	11.91832	11.89730	53.56142	13.83	ago	19	12.08182	12.06080	-42.57255	14.00
ago	26	11.91829	11.89727	53.56098	13.37	ago	26	12.08180	12.06078	-42.57212	13.54
sep	2	11.91830	11.89725	53.56040	12.91	sep	2	12.08180	12.06075	-42.57177	13.08
sep	9	11.91828	11.89723	53.55989	12.45	sep	9	12.08179	12.06073	-42.57130	12.62
sep	16	11.91830	11.89722	53.55924	11.99	sep	16	12.08180	12.06072	-42.57097	12.16
sep	23	11.91830	11.89722	53.55865	11.53	sep	23	12.08180	12.06072	-42.57056	11.70
sep	30	11.91833	11.89723	53.55797	11.07	sep	30	12.08182	12.06072	-42.57023	11.24
oct	7	11.91835	11.89724	53.55737	10.61	oct	7	12.08184	12.06073	-42.56984	10.78
oct	14	11.91839	11.89727	53.55666	10.15	oct	14	12.08187	12.06075	-42.56960	10.32
oct	21	11.91843	11.89729	53.55601	9.69	oct	21	12.08191	12.06077	-42.56933	9.86
oct	28	11.91849	11.89733	53.55534	9.23	oct	28	12.08196	12.06080	-42.56916	9.40
nov	4	11.91854	11.89737	53.55473	8.77	nov	4	12.08201	12.06084	-42.56899	8.94
nov	11	11.91862	11.89743	53.55408	8.31	nov	11	12.08208	12.06088	-42.56895	8.48
nov	18	11.91869	11.89747	53.55349	7.85	nov	18	12.08215	12.06094	-42.56895	8.02
nov	25	11.91877	11.89754	53.55293	7.39	nov	25	12.08222	12.06098	-42.56902	7.56
dic	2	11.91885	11.89760	53.55244	6.93	dic	2	12.08230	12.06104	-42.56914	7.10
dic	9	11.91895	11.89768	53.55197	6.47	dic	9	12.08238	12.06110	-42.56937	6.64
dic	16	11.91904	11.89774	53.55156	6.01	dic	16	12.08246	12.06116	-42.56966	6.18
dic	23	11.91915	11.89782	53.55125	5.55	dic	23	12.08254	12.06122	-42.56999	5.72

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

58948						59774					
		V		Sp				V		Sp	
		4.12		G8III				3.32		A3Vvar	
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	12.10717	12.08676	8.59908	5.20	ene	1	12.27694	12.25653	56.89479	5.37
ene	8	12.10723	12.08680	8.59873	4.74	ene	8	12.27703	12.25660	56.89464	4.91
ene	15	12.10730	12.08685	8.59830	4.28	ene	15	12.27714	12.25669	56.89447	4.45
ene	22	12.10736	12.08688	8.59799	3.82	ene	22	12.27723	12.25676	56.89446	3.99
ene	29	12.10742	12.08692	8.59767	3.36	ene	29	12.27733	12.25683	56.89450	3.53
feb	5	12.10746	12.08695	8.59745	2.90	feb	5	12.27740	12.25689	56.89466	3.07
feb	12	12.10752	12.08699	8.59720	2.44	feb	12	12.27749	12.25696	56.89483	2.61
feb	19	12.10756	12.08701	8.59703	1.98	feb	19	12.27755	12.25701	56.89511	2.15
feb	26	12.10759	12.08703	8.59691	1.52	feb	26	12.27762	12.25706	56.89546	1.69
mar	4	12.10762	12.08704	8.59684	1.06	mar	4	12.27766	12.25708	56.89587	1.23
mar	11	12.10765	12.08706	8.59678	0.60	mar	11	12.27770	12.25711	56.89629	0.77
mar	18	12.10767	12.08706	8.59675	0.14	mar	18	12.27773	12.25712	56.89675	0.31
mar	25	12.10767	12.08706	8.59681	23.68	mar	25	12.27774	12.25713	56.89727	23.85
abr	1	12.10768	12.08706	8.59687	23.22	abr	1	12.27774	12.25712	56.89779	23.39
abr	8	12.10769	12.08705	8.59695	22.76	abr	8	12.27775	12.25711	56.89830	22.93
abr	15	12.10769	12.08703	8.59702	22.30	abr	15	12.27773	12.25707	56.89878	22.47
abr	22	12.10768	12.08701	8.59718	21.84	abr	22	12.27771	12.25705	56.89930	22.01
abr	29	12.10767	12.08699	8.59730	21.38	abr	29	12.27768	12.25699	56.89974	21.55
may	6	12.10766	12.08696	8.59746	20.92	may	6	12.27765	12.25695	56.90019	21.09
may	13	12.10766	12.08693	8.59756	20.46	may	13	12.27762	12.25689	56.90053	20.63
may	20	12.10763	12.08689	8.59776	20.00	may	20	12.27757	12.25683	56.90091	20.17
may	27	12.10762	12.08686	8.59787	19.54	may	27	12.27752	12.25676	56.90116	19.71
jun	3	12.10760	12.08682	8.59805	19.08	jun	3	12.27747	12.25669	56.90141	19.25
jun	10	12.10759	12.08678	8.59813	18.62	jun	10	12.27743	12.25661	56.90152	18.79
jun	17	12.10756	12.08674	8.59831	18.16	jun	17	12.27737	12.25654	56.90168	18.33
jun	24	12.10755	12.08670	8.59838	17.70	jun	24	12.27732	12.25646	56.90166	17.87
jul	1	12.10753	12.08666	8.59853	17.24	jul	1	12.27727	12.25639	56.90167	17.41
jul	8	12.10752	12.08662	8.59856	16.78	jul	8	12.27722	12.25632	56.90152	16.95
jul	15	12.10749	12.08658	8.59869	16.32	jul	15	12.27717	12.25625	56.90142	16.49
jul	22	12.10749	12.08654	8.59869	15.86	jul	22	12.27713	12.25618	56.90113	16.03
jul	29	12.10746	12.08650	8.59877	15.40	jul	29	12.27708	12.25612	56.90090	15.57
ago	5	12.10746	12.08647	8.59873	14.94	ago	5	12.27705	12.25606	56.90050	15.11
ago	12	12.10744	12.08644	8.59879	14.48	ago	12	12.27700	12.25601	56.90017	14.65
ago	19	12.10744	12.08642	8.59870	14.02	ago	19	12.27698	12.25597	56.89965	14.19
ago	26	12.10743	12.08640	8.59869	13.56	ago	26	12.27695	12.25592	56.89920	13.73
sep	2	12.10743	12.08638	8.59856	13.10	sep	2	12.27694	12.25589	56.89862	13.27
sep	9	12.10742	12.08637	8.59852	12.64	sep	9	12.27692	12.25587	56.89810	12.81
sep	16	12.10744	12.08636	8.59832	12.18	sep	16	12.27693	12.25585	56.89743	12.35
sep	23	12.10744	12.08636	8.59819	11.72	sep	23	12.27692	12.25584	56.89682	11.89
sep	30	12.10746	12.08636	8.59795	11.26	sep	30	12.27694	12.25584	56.89612	11.43
oct	7	12.10747	12.08636	8.59776	10.80	oct	7	12.27695	12.25584	56.89549	10.97
oct	14	12.10750	12.08638	8.59744	10.34	oct	14	12.27699	12.25586	56.89475	10.51
oct	21	12.10753	12.08639	8.59715	9.88	oct	21	12.27702	12.25588	56.89408	10.05
oct	28	12.10757	12.08641	8.59680	9.42	oct	28	12.27708	12.25592	56.89336	9.59
nov	4	12.10761	12.08644	8.59647	8.96	nov	4	12.27712	12.25595	56.89272	9.13
nov	11	12.10766	12.08647	8.59604	8.50	nov	11	12.27720	12.25601	56.89203	8.67
nov	18	12.10771	12.08650	8.59564	8.04	nov	18	12.27727	12.25605	56.89140	8.21
nov	25	12.10777	12.08654	8.59520	7.58	nov	25	12.27735	12.25612	56.89080	7.75
dic	2	12.10783	12.08658	8.59478	7.12	dic	2	12.27743	12.25618	56.89028	7.29
dic	9	12.10790	12.08662	8.59432	6.66	dic	9	12.27754	12.25626	56.88976	6.83
dic	16	12.10796	12.08666	8.59386	6.20	dic	16	12.27763	12.25633	56.88932	6.37
dic	23	12.10803	12.08670	8.59343	5.74	dic	23	12.27774	12.25641	56.88897	5.91

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

60718						61084					
		V		Sp				V		Sp	
		0.77		B0.5IV				1.59		M4III	
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	12.46550	12.44510	-63.22657	5.56	ene	1	12.54156	12.52115	-57.24239	5.64
ene	8	12.46562	12.44519	-63.22687	5.10	ene	8	12.54166	12.52123	-57.24270	5.18
ene	15	12.46574	12.44528	-63.22735	4.64	ene	15	12.54176	12.52131	-57.24319	4.72
ene	22	12.46585	12.44538	-63.22782	4.18	ene	22	12.54186	12.52138	-57.24366	4.26
ene	29	12.46595	12.44545	-63.22838	3.72	ene	29	12.54194	12.52145	-57.24422	3.80
feb	5	12.46604	12.44553	-63.22892	3.26	feb	5	12.54203	12.52152	-57.24475	3.34
feb	12	12.46612	12.44559	-63.22960	2.80	feb	12	12.54210	12.52157	-57.24541	2.88
feb	19	12.46621	12.44566	-63.23025	2.34	feb	19	12.54217	12.52163	-57.24605	2.42
feb	26	12.46626	12.44570	-63.23093	1.88	feb	26	12.54222	12.52166	-57.24670	1.96
mar	4	12.46632	12.44575	-63.23160	1.42	mar	4	12.54228	12.52170	-57.24734	1.50
mar	11	12.46636	12.44577	-63.23233	0.96	mar	11	12.54231	12.52173	-57.24804	1.04
mar	18	12.46641	12.44580	-63.23304	0.50	mar	18	12.54236	12.52175	-57.24872	0.58
mar	25	12.46642	12.44580	-63.23372	0.04	mar	25	12.54237	12.52176	-57.24936	0.12
abr	1	12.46644	12.44581	-63.23438	23.58	abr	1	12.54239	12.52177	-57.24999	23.66
abr	8	12.46643	12.44580	-63.23505	23.12	abr	8	12.54239	12.52175	-57.25061	23.20
abr	15	12.46644	12.44578	-63.23571	22.66	abr	15	12.54240	12.52174	-57.25123	22.74
abr	22	12.46642	12.44575	-63.23627	22.20	abr	22	12.54238	12.52172	-57.25175	22.28
abr	29	12.46641	12.44572	-63.23683	21.74	abr	29	12.54238	12.52169	-57.25227	21.82
may	6	12.46637	12.44566	-63.23733	21.28	may	6	12.54235	12.52165	-57.25274	21.36
may	13	12.46634	12.44561	-63.23784	20.82	may	13	12.54234	12.52161	-57.25321	20.90
may	20	12.46629	12.44555	-63.23820	20.36	may	20	12.54229	12.52155	-57.25353	20.44
may	27	12.46625	12.44548	-63.23858	19.90	may	27	12.54227	12.52150	-57.25388	19.98
jun	3	12.46619	12.44540	-63.23885	19.44	jun	3	12.54222	12.52143	-57.25412	19.52
jun	10	12.46614	12.44533	-63.23913	18.98	jun	10	12.54219	12.52137	-57.25437	19.06
jun	17	12.46606	12.44524	-63.23923	18.52	jun	17	12.54213	12.52130	-57.25446	18.60
jun	24	12.46601	12.44515	-63.23937	18.06	jun	24	12.54209	12.52123	-57.25458	18.14
jul	1	12.46594	12.44506	-63.23936	17.60	jul	1	12.54203	12.52115	-57.25456	17.68
jul	8	12.46588	12.44497	-63.23938	17.14	jul	8	12.54199	12.52108	-57.25456	17.22
jul	15	12.46580	12.44488	-63.23921	16.68	jul	15	12.54192	12.52100	-57.25439	16.76
jul	22	12.46574	12.44480	-63.23909	16.22	jul	22	12.54188	12.52093	-57.25427	16.30
jul	29	12.46567	12.44471	-63.23881	15.76	jul	29	12.54182	12.52086	-57.25400	15.84
ago	5	12.46562	12.44463	-63.23858	15.30	ago	5	12.54178	12.52080	-57.25377	15.38
ago	12	12.46555	12.44456	-63.23816	14.84	ago	12	12.54173	12.52073	-57.25337	14.92
ago	19	12.46551	12.44449	-63.23783	14.38	ago	19	12.54170	12.52068	-57.25306	14.46
ago	26	12.46547	12.44444	-63.23735	13.92	ago	26	12.54166	12.52063	-57.25260	14.00
sep	2	12.46543	12.44438	-63.23692	13.46	sep	2	12.54163	12.52059	-57.25221	13.54
sep	9	12.46540	12.44435	-63.23636	13.00	sep	9	12.54161	12.52055	-57.25167	13.08
sep	16	12.46539	12.44432	-63.23590	12.54	sep	16	12.54160	12.52053	-57.25125	12.62
sep	23	12.46539	12.44431	-63.23535	12.08	sep	23	12.54160	12.52052	-57.25074	12.16
sep	30	12.46540	12.44430	-63.23487	11.62	sep	30	12.54161	12.52051	-57.25030	11.70
oct	7	12.46542	12.44431	-63.23431	11.16	oct	7	12.54162	12.52052	-57.24978	11.24
oct	14	12.46545	12.44433	-63.23389	10.70	oct	14	12.54166	12.52053	-57.24940	10.78
oct	21	12.46551	12.44437	-63.23343	10.24	oct	21	12.54170	12.52056	-57.24898	10.32
oct	28	12.46556	12.44440	-63.23306	9.78	oct	28	12.54175	12.52059	-57.24865	9.86
nov	4	12.46563	12.44446	-63.23267	9.32	nov	4	12.54181	12.52064	-57.24831	9.40
nov	11	12.46572	12.44452	-63.23244	8.86	nov	11	12.54188	12.52069	-57.24811	8.94
nov	18	12.46582	12.44461	-63.23222	8.40	nov	18	12.54197	12.52075	-57.24793	8.48
nov	25	12.46591	12.44468	-63.23210	7.94	nov	25	12.54205	12.52082	-57.24785	8.02
dic	2	12.46603	12.44478	-63.23202	7.48	dic	2	12.54215	12.52089	-57.24780	7.56
dic	9	12.46614	12.44486	-63.23207	7.02	dic	9	12.54224	12.52097	-57.24788	7.10
dic	16	12.46627	12.44497	-63.23219	6.56	dic	16	12.54236	12.52105	-57.24803	6.64
dic	23	12.46638	12.44506	-63.23238	6.10	dic	23	12.54245	12.52113	-57.24824	6.18

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

62896						63608					
V			Sp			V			Sp		
4.25			A4IV			2.85			G8IIIvar		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	12.91266	12.89225	-40.30546	6.01	ene	1	13.05608	13.03568	10.82914	6.15
ene	8	12.91273	12.89231	-40.30577	5.55	ene	8	13.05614	13.03572	10.82877	5.69
ene	15	12.91282	12.89236	-40.30625	5.09	ene	15	13.05622	13.03577	10.82831	5.23
ene	22	12.91289	12.89242	-40.30667	4.63	ene	22	13.05628	13.03581	10.82799	4.77
ene	29	12.91297	12.89247	-40.30719	4.17	ene	29	13.05635	13.03585	10.82765	4.31
feb	5	12.91303	12.89252	-40.30765	3.71	feb	5	13.05640	13.03589	10.82743	3.85
feb	12	12.91310	12.89257	-40.30824	3.25	feb	12	13.05646	13.03593	10.82715	3.39
feb	19	12.91316	12.89261	-40.30876	2.79	feb	19	13.05651	13.03596	10.82700	2.93
feb	26	12.91321	12.89264	-40.30932	2.33	feb	26	13.05655	13.03599	10.82686	2.47
mar	4	12.91325	12.89268	-40.30983	1.87	mar	4	13.05659	13.03602	10.82682	2.01
mar	11	12.91329	12.89270	-40.31041	1.41	mar	11	13.05663	13.03604	10.82675	1.55
mar	18	12.91333	12.89272	-40.31094	0.95	mar	18	13.05666	13.03605	10.82676	1.09
mar	25	12.91335	12.89273	-40.31144	0.49	mar	25	13.05668	13.03607	10.82682	0.63
abr	1	12.91337	12.89275	-40.31191	0.03	abr	1	13.05670	13.03607	10.82693	0.17
abr	8	12.91338	12.89274	-40.31240	23.57	abr	8	13.05671	13.03607	10.82703	23.71
abr	15	12.91340	12.89274	-40.31286	23.11	abr	15	13.05673	13.03607	10.82716	23.25
abr	22	12.91340	12.89273	-40.31324	22.65	abr	22	13.05673	13.03606	10.82735	22.79
abr	29	12.91340	12.89271	-40.31362	22.19	abr	29	13.05673	13.03604	10.82753	22.33
may	6	12.91339	12.89269	-40.31395	21.73	may	6	13.05673	13.03603	10.82772	21.87
may	13	12.91339	12.89266	-40.31429	21.27	may	13	13.05673	13.03600	10.82788	21.41
may	20	12.91337	12.89263	-40.31451	20.81	may	20	13.05671	13.03597	10.82811	20.95
may	27	12.91336	12.89260	-40.31475	20.35	may	27	13.05671	13.03594	10.82828	20.49
jun	3	12.91333	12.89255	-40.31490	19.89	jun	3	13.05669	13.03591	10.82849	20.03
jun	10	12.91332	12.89251	-40.31508	19.43	jun	10	13.05669	13.03587	10.82862	19.57
jun	17	12.91329	12.89246	-40.31511	18.97	jun	17	13.05666	13.03583	10.82883	19.11
jun	24	12.91327	12.89241	-40.31519	18.51	jun	24	13.05665	13.03579	10.82894	18.65
jul	1	12.91323	12.89236	-40.31515	18.05	jul	1	13.05663	13.03575	10.82910	18.19
jul	8	12.91321	12.89231	-40.31515	17.59	jul	8	13.05661	13.03571	10.82916	17.73
jul	15	12.91317	12.89225	-40.31498	17.13	jul	15	13.05658	13.03567	10.82931	17.27
jul	22	12.91315	12.89220	-40.31489	16.67	jul	22	13.05657	13.03563	10.82932	16.81
jul	29	12.91311	12.89215	-40.31466	16.21	jul	29	13.05655	13.03559	10.82941	16.35
ago	5	12.91309	12.89210	-40.31449	15.75	ago	5	13.05653	13.03555	10.82937	15.89
ago	12	12.91305	12.89206	-40.31417	15.29	ago	12	13.05651	13.03551	10.82943	15.43
ago	19	12.91303	12.89201	-40.31394	14.83	ago	19	13.05650	13.03548	10.82933	14.97
ago	26	12.91300	12.89198	-40.31358	14.37	ago	26	13.05648	13.03545	10.82931	14.51
sep	2	12.91299	12.89194	-40.31330	13.91	sep	2	13.05647	13.03542	10.82917	14.05
sep	9	12.91297	12.89191	-40.31289	13.45	sep	9	13.05645	13.03540	10.82911	13.59
sep	16	12.91297	12.89189	-40.31260	12.99	sep	16	13.05645	13.03538	10.82889	13.13
sep	23	12.91296	12.89188	-40.31221	12.53	sep	23	13.05645	13.03536	10.82874	12.67
sep	30	12.91297	12.89187	-40.31192	12.07	sep	30	13.05645	13.03535	10.82848	12.21
oct	7	12.91297	12.89187	-40.31153	11.61	oct	7	13.05645	13.03535	10.82828	11.75
oct	14	12.91300	12.89187	-40.31130	11.15	oct	14	13.05647	13.03535	10.82793	11.29
oct	21	12.91302	12.89188	-40.31101	10.69	oct	21	13.05649	13.03535	10.82764	10.83
oct	28	12.91306	12.89190	-40.31082	10.23	oct	28	13.05652	13.03536	10.82724	10.37
nov	4	12.91310	12.89193	-40.31060	9.77	nov	4	13.05655	13.03538	10.82691	9.91
nov	11	12.91315	12.89196	-40.31053	9.31	nov	11	13.05659	13.03540	10.82645	9.45
nov	18	12.91321	12.89200	-40.31046	8.85	nov	18	13.05663	13.03542	10.82603	8.99
nov	25	12.91328	12.89204	-40.31048	8.39	nov	25	13.05669	13.03545	10.82556	8.53
dic	2	12.91335	12.89209	-40.31051	7.93	dic	2	13.05674	13.03548	10.82513	8.07
dic	9	12.91342	12.89214	-40.31067	7.47	dic	9	13.05680	13.03552	10.82463	7.61
dic	16	12.91351	12.89220	-40.31086	7.01	dic	16	13.05686	13.03556	10.82416	7.15
dic	23	12.91358	12.89225	-40.31112	6.55	dic	23	13.05693	13.03560	10.82370	6.69

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

64394						66249					
V			Sp			V			Sp		
4.23			G0V			3.38			A3V		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	13.21645	13.19604	27.75391	6.31	ene	1	13.59845	13.57804	-0.71843	6.69
ene	8	13.21651	13.19609	27.75357	5.85	ene	8	13.59851	13.57808	-0.71878	6.23
ene	15	13.21659	13.19614	27.75315	5.39	ene	15	13.59858	13.57813	-0.71926	5.77
ene	22	13.21666	13.19618	27.75290	4.93	ene	22	13.59864	13.57817	-0.71961	5.31
ene	29	13.21673	13.19623	27.75264	4.47	ene	29	13.59871	13.57821	-0.72001	4.85
feb	5	13.21679	13.19628	27.75252	4.01	feb	5	13.59876	13.57826	-0.72030	4.39
feb	12	13.21685	13.19632	27.75236	3.55	feb	12	13.59883	13.57830	-0.72067	3.93
feb	19	13.21691	13.19636	27.75235	3.09	feb	19	13.59888	13.57833	-0.72091	3.47
feb	26	13.21696	13.19640	27.75237	2.63	feb	26	13.59893	13.57837	-0.72116	3.01
mar	4	13.21700	13.19642	27.75250	2.17	mar	4	13.59897	13.57840	-0.72131	2.55
mar	11	13.21704	13.19645	27.75260	1.71	mar	11	13.59901	13.57843	-0.72151	2.09
mar	18	13.21707	13.19647	27.75280	1.25	mar	18	13.59905	13.57845	-0.72161	1.63
mar	25	13.21710	13.19648	27.75305	0.79	mar	25	13.59908	13.57847	-0.72169	1.17
abr	1	13.21711	13.19649	27.75335	0.33	abr	1	13.59910	13.57848	-0.72170	0.71
abr	8	13.21713	13.19649	27.75363	23.87	abr	8	13.59912	13.57849	-0.72174	0.25
abr	15	13.21714	13.19649	27.75395	23.41	abr	15	13.59915	13.57849	-0.72173	23.79
abr	22	13.21715	13.19648	27.75431	22.95	abr	22	13.59915	13.57849	-0.72167	23.33
abr	29	13.21715	13.19646	27.75466	22.49	abr	29	13.59916	13.57848	-0.72159	22.87
may	6	13.21714	13.19644	27.75501	22.03	may	6	13.59917	13.57847	-0.72152	22.41
may	13	13.21714	13.19641	27.75532	21.57	may	13	13.59918	13.57845	-0.72144	21.95
may	20	13.21712	13.19638	27.75568	21.11	may	20	13.59917	13.57843	-0.72130	21.49
may	27	13.21711	13.19635	27.75597	20.65	may	27	13.59917	13.57840	-0.72120	21.03
jun	3	13.21709	13.19631	27.75627	20.19	jun	3	13.59916	13.57837	-0.72106	20.57
jun	10	13.21708	13.19627	27.75648	19.73	jun	10	13.59915	13.57834	-0.72097	20.11
jun	17	13.21705	13.19622	27.75675	19.27	jun	17	13.59913	13.57831	-0.72081	19.65
jun	24	13.21704	13.19618	27.75689	18.81	jun	24	13.59913	13.57827	-0.72072	19.19
jul	1	13.21701	13.19613	27.75708	18.35	jul	1	13.59910	13.57823	-0.72056	18.73
jul	8	13.21699	13.19608	27.75713	17.89	jul	8	13.59909	13.57819	-0.72050	18.27
jul	15	13.21695	13.19604	27.75725	17.43	jul	15	13.59906	13.57815	-0.72033	17.81
jul	22	13.21694	13.19599	27.75722	16.97	jul	22	13.59905	13.57811	-0.72028	17.35
jul	29	13.21690	13.19595	27.75724	16.51	jul	29	13.59903	13.57807	-0.72015	16.89
ago	5	13.21689	13.19590	27.75712	16.05	ago	5	13.59901	13.57803	-0.72013	16.43
ago	12	13.21685	13.19586	27.75707	15.59	ago	12	13.59898	13.57799	-0.72000	15.97
ago	19	13.21684	13.19582	27.75686	15.13	ago	19	13.59897	13.57795	-0.72001	15.51
ago	26	13.21681	13.19578	27.75671	14.67	ago	26	13.59894	13.57792	-0.71993	15.05
sep	2	13.21680	13.19575	27.75642	14.21	sep	2	13.59893	13.57789	-0.71997	14.59
sep	9	13.21678	13.19572	27.75620	13.75	sep	9	13.59891	13.57786	-0.71991	14.13
sep	16	13.21678	13.19570	27.75581	13.29	sep	16	13.59891	13.57783	-0.72001	13.67
sep	23	13.21676	13.19568	27.75550	12.83	sep	23	13.59890	13.57781	-0.72002	13.21
sep	30	13.21677	13.19567	27.75505	12.37	sep	30	13.59890	13.57780	-0.72015	12.75
oct	7	13.21677	13.19566	27.75468	11.91	oct	7	13.59889	13.57779	-0.72020	12.29
oct	14	13.21678	13.19566	27.75415	11.45	oct	14	13.59891	13.57778	-0.72041	11.83
oct	21	13.21680	13.19566	27.75369	10.99	oct	21	13.59892	13.57778	-0.72055	11.37
oct	28	13.21682	13.19567	27.75313	10.53	oct	28	13.59894	13.57778	-0.72082	10.91
nov	4	13.21685	13.19568	27.75264	10.07	nov	4	13.59896	13.57779	-0.72101	10.45
nov	11	13.21689	13.19570	27.75204	9.61	nov	11	13.59900	13.57781	-0.72135	9.99
nov	18	13.21693	13.19572	27.75150	9.15	nov	18	13.59904	13.57783	-0.72164	9.53
nov	25	13.21699	13.19575	27.75091	8.69	nov	25	13.59909	13.57785	-0.72202	9.07
dic	2	13.21704	13.19578	27.75038	8.23	dic	2	13.59913	13.57788	-0.72235	8.61
dic	9	13.21710	13.19582	27.74980	7.77	dic	9	13.59919	13.57791	-0.72278	8.15
dic	16	13.21717	13.19586	27.74929	7.31	dic	16	13.59925	13.57795	-0.72318	7.69
dic	23	13.21723	13.19591	27.74879	6.85	dic	23	13.59931	13.57799	-0.72361	7.23

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

67494						68895									
		V		Sp				V		Sp					
		4.96		K0III				3.25		K2III					
		α		α_c		δ		α		α_c		δ		Hp	
m	d	h	h	h	°	h	m	d	h	h	°	h	m	d	h
ene	1	13.85273	13.83233	-18.25198	6.95	ene	1	14.12875	14.10834	-26.79553	7.22				
ene	8	13.85280	13.83237	-18.25227	6.49	ene	8	14.12881	14.10839	-26.79577	6.76				
ene	15	13.85287	13.83242	-18.25272	6.03	ene	15	14.12889	14.10844	-26.79617	6.30				
ene	22	13.85294	13.83247	-18.25306	5.57	ene	22	14.12896	14.10849	-26.79648	5.84				
ene	29	13.85301	13.83251	-18.25349	5.11	ene	29	14.12904	14.10854	-26.79689	5.38				
feb	5	13.85307	13.83256	-18.25382	4.65	feb	5	14.12910	14.10859	-26.79721	4.92				
feb	12	13.85313	13.83260	-18.25426	4.19	feb	12	14.12917	14.10864	-26.79766	4.46				
feb	19	13.85319	13.83264	-18.25460	3.73	feb	19	14.12923	14.10869	-26.79801	4.00				
feb	26	13.85324	13.83268	-18.25498	3.27	feb	26	14.12929	14.10873	-26.79842	3.54				
mar	4	13.85329	13.83272	-18.25526	2.81	mar	4	14.12934	14.10877	-26.79875	3.08				
mar	11	13.85334	13.83275	-18.25562	2.35	mar	11	14.12939	14.10881	-26.79917	2.62				
mar	18	13.85338	13.83278	-18.25589	1.89	mar	18	14.12944	14.10884	-26.79950	2.16				
mar	25	13.85341	13.83280	-18.25616	1.43	mar	25	14.12948	14.10886	-26.79984	1.70				
abr	1	13.85344	13.83281	-18.25636	0.97	abr	1	14.12951	14.10889	-26.80012	1.24				
abr	8	13.85347	13.83283	-18.25661	0.51	abr	8	14.12954	14.10891	-26.80045	0.78				
abr	15	13.85349	13.83283	-18.25679	0.05	abr	15	14.12958	14.10892	-26.80073	0.32				
abr	22	13.85350	13.83284	-18.25694	23.59	abr	22	14.12959	14.10892	-26.80097	23.86				
abr	29	13.85352	13.83283	-18.25706	23.13	abr	29	14.12961	14.10893	-26.80119	23.40				
may	6	13.85353	13.83282	-18.25718	22.67	may	6	14.12962	14.10892	-26.80141	22.94				
may	13	13.85354	13.83281	-18.25729	22.21	may	13	14.12964	14.10891	-26.80161	22.48				
may	20	13.85353	13.83279	-18.25734	21.75	may	20	14.12964	14.10890	-26.80175	22.02				
may	27	13.85354	13.83277	-18.25739	21.29	may	27	14.12965	14.10888	-26.80189	21.56				
jun	3	13.85353	13.83274	-18.25741	20.83	jun	3	14.12964	14.10885	-26.80199	21.10				
jun	10	13.85353	13.83272	-18.25745	20.37	jun	10	14.12964	14.10883	-26.80211	20.64				
jun	17	13.85351	13.83268	-18.25740	19.91	jun	17	14.12962	14.10879	-26.80214	20.18				
jun	24	13.85350	13.83265	-18.25740	19.45	jun	24	14.12962	14.10876	-26.80220	19.72				
jul	1	13.85348	13.83261	-18.25733	18.99	jul	1	14.12959	14.10872	-26.80219	19.26				
jul	8	13.85347	13.83257	-18.25731	18.53	jul	8	14.12958	14.10868	-26.80222	18.80				
jul	15	13.85344	13.83252	-18.25718	18.07	jul	15	14.12955	14.10863	-26.80214	18.34				
jul	22	13.85343	13.83248	-18.25714	17.61	jul	22	14.12953	14.10859	-26.80212	17.88				
jul	29	13.85340	13.83244	-18.25699	17.15	jul	29	14.12950	14.10854	-26.80199	17.42				
ago	5	13.85338	13.83240	-18.25693	16.69	ago	5	14.12948	14.10850	-26.80194	16.96				
ago	12	13.85335	13.83235	-18.25674	16.23	ago	12	14.12944	14.10845	-26.80175	16.50				
ago	19	13.85333	13.83231	-18.25666	15.77	ago	19	14.12943	14.10841	-26.80165	16.04				
ago	26	13.85330	13.83228	-18.25648	15.31	ago	26	14.12940	14.10837	-26.80144	15.58				
sep	2	13.85329	13.83224	-18.25640	14.85	sep	2	14.12938	14.10833	-26.80132	15.12				
sep	9	13.85326	13.83221	-18.25619	14.39	sep	9	14.12935	14.10829	-26.80107	14.66				
sep	16	13.85326	13.83218	-18.25613	13.93	sep	16	14.12934	14.10826	-26.80094	14.20				
sep	23	13.85324	13.83216	-18.25596	13.47	sep	23	14.12932	14.10823	-26.80071	13.74				
sep	30	13.85324	13.83214	-18.25591	13.01	sep	30	14.12931	14.10821	-26.80058	13.28				
oct	7	13.85323	13.83213	-18.25576	12.55	oct	7	14.12930	14.10819	-26.80034	12.82				
oct	14	13.85325	13.83212	-18.25577	12.09	oct	14	14.12931	14.10818	-26.80025	12.36				
oct	21	13.85326	13.83212	-18.25571	11.63	oct	21	14.12932	14.10818	-26.80008	11.90				
oct	28	13.85328	13.83212	-18.25575	11.17	oct	28	14.12934	14.10818	-26.80002	11.44				
nov	4	13.85330	13.83213	-18.25571	10.71	nov	4	14.12936	14.10819	-26.79989	10.98				
nov	11	13.85334	13.83214	-18.25584	10.25	nov	11	14.12939	14.10820	-26.79991	10.52				
nov	18	13.85338	13.83216	-18.25593	9.79	nov	18	14.12943	14.10822	-26.79987	10.06				
nov	25	13.85342	13.83219	-18.25612	9.33	nov	25	14.12948	14.10824	-26.79996	9.60				
dic	2	13.85347	13.83222	-18.25627	8.87	dic	2	14.12953	14.10827	-26.80000	9.14				
dic	9	13.85353	13.83225	-18.25655	8.41	dic	9	14.12959	14.10831	-26.80018	8.68				
dic	16	13.85360	13.83229	-18.25680	7.95	dic	16	14.12965	14.10835	-26.80034	8.22				
dic	23	13.85366	13.83233	-18.25712	7.49	dic	23	14.12972	14.10839	-26.80058	7.76				

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

68933							69763						
			V		Sp					V		Sp	
			2.06		K0IIIb					5.72		B1.5III	
			α	α_c	δ	Hp				α	α_c	δ	Hp
m	d	h	h	h	°	h	m	d	h	h	°	h	h
ene	1	14.13467	14.11427	-36.48474	7.23	ene	1	14.30872	14.28832	-66.69431	7.40		
ene	8	14.13474	14.11432	-36.48493	6.77	ene	8	14.30885	14.28843	-66.69429	6.94		
ene	15	14.13483	14.11438	-36.48529	6.31	ene	15	14.30900	14.28855	-66.69448	6.48		
ene	22	14.13491	14.11443	-36.48558	5.85	ene	22	14.30914	14.28867	-66.69462	6.02		
ene	29	14.13498	14.11449	-36.48598	5.39	ene	29	14.30928	14.28878	-66.69491	5.56		
feb	5	14.13505	14.11455	-36.48630	4.93	feb	5	14.30941	14.28890	-66.69517	5.10		
feb	12	14.13513	14.11460	-36.48677	4.47	feb	12	14.30955	14.28901	-66.69561	4.64		
feb	19	14.13520	14.11465	-36.48716	4.01	feb	19	14.30968	14.28913	-66.69600	4.18		
feb	26	14.13526	14.11470	-36.48762	3.55	feb	26	14.30979	14.28923	-66.69651	3.72		
mar	4	14.13532	14.11474	-36.48800	3.09	mar	4	14.30990	14.28933	-66.69696	3.26		
mar	11	14.13537	14.11478	-36.48849	2.63	mar	11	14.31000	14.28941	-66.69757	2.80		
mar	18	14.13543	14.11482	-36.48890	2.17	mar	18	14.31011	14.28950	-66.69813	2.34		
mar	25	14.13546	14.11485	-36.48933	1.71	mar	25	14.31018	14.28956	-66.69874	1.88		
abr	1	14.13550	14.11488	-36.48970	1.25	abr	1	14.31026	14.28963	-66.69931	1.42		
abr	8	14.13554	14.11490	-36.49014	0.79	abr	8	14.31031	14.28967	-66.69997	0.96		
abr	15	14.13557	14.11491	-36.49052	0.33	abr	15	14.31038	14.28972	-66.70059	0.50		
abr	22	14.13559	14.11492	-36.49087	23.87	abr	22	14.31041	14.28974	-66.70121	0.04		
abr	29	14.13561	14.11492	-36.49119	23.41	abr	29	14.31045	14.28976	-66.70180	23.58		
may	6	14.13562	14.11492	-36.49153	22.95	may	6	14.31046	14.28976	-66.70241	23.12		
may	13	14.13564	14.11491	-36.49183	22.49	may	13	14.31049	14.28976	-66.70300	22.66		
may	20	14.13563	14.11489	-36.49208	22.03	may	20	14.31047	14.28973	-66.70353	22.20		
may	27	14.13564	14.11487	-36.49232	21.57	may	27	14.31047	14.28971	-66.70405	21.75		
jun	3	14.13563	14.11484	-36.49252	21.11	jun	3	14.31044	14.28966	-66.70453	21.29		
jun	10	14.13563	14.11482	-36.49273	20.65	jun	10	14.31042	14.28961	-66.70500	20.83		
jun	17	14.13561	14.11478	-36.49284	20.19	jun	17	14.31037	14.28954	-66.70535	20.37		
jun	24	14.13560	14.11474	-36.49297	19.73	jun	24	14.31033	14.28948	-66.70571	19.91		
jul	1	14.13557	14.11470	-36.49302	19.27	jul	1	14.31026	14.28939	-66.70597	19.45		
jul	8	14.13556	14.11465	-36.49311	18.81	jul	8	14.31021	14.28931	-66.70624	18.99		
jul	15	14.13552	14.11460	-36.49306	18.35	jul	15	14.31013	14.28921	-66.70635	18.53		
jul	22	14.13550	14.11456	-36.49307	17.89	jul	22	14.31007	14.28912	-66.70649	18.07		
jul	29	14.13546	14.11450	-36.49296	17.43	jul	29	14.30998	14.28902	-66.70648	17.60		
ago	5	14.13544	14.11446	-36.49291	16.97	ago	5	14.30991	14.28892	-66.70650	17.14		
ago	12	14.13540	14.11440	-36.49271	16.51	ago	12	14.30981	14.28882	-66.70633	16.68		
ago	19	14.13538	14.11436	-36.49259	16.05	ago	19	14.30974	14.28873	-66.70622	16.22		
ago	26	14.13534	14.11431	-36.49235	15.59	ago	26	14.30966	14.28863	-66.70594	15.76		
sep	2	14.13532	14.11427	-36.49218	15.13	sep	2	14.30959	14.28854	-66.70571	15.30		
sep	9	14.13528	14.11423	-36.49187	14.67	sep	9	14.30951	14.28846	-66.70530	14.84		
sep	16	14.13527	14.11419	-36.49168	14.21	sep	16	14.30946	14.28839	-66.70497	14.38		
sep	23	14.13525	14.11416	-36.49137	13.75	sep	23	14.30941	14.28833	-66.70450	13.92		
sep	30	14.13524	14.11414	-36.49115	13.29	sep	30	14.30937	14.28827	-66.70409	13.46		
oct	7	14.13523	14.11412	-36.49082	12.83	oct	7	14.30934	14.28824	-66.70353	13.00		
oct	14	14.13524	14.11411	-36.49063	12.37	oct	14	14.30934	14.28821	-66.70310	12.54		
oct	21	14.13524	14.11410	-36.49035	11.91	oct	21	14.30934	14.28820	-66.70255	12.08		
oct	28	14.13526	14.11410	-36.49018	11.45	oct	28	14.30936	14.28820	-66.70210	11.62		
nov	4	14.13528	14.11411	-36.48994	10.99	nov	4	14.30939	14.28822	-66.70156	11.16		
nov	11	14.13532	14.11413	-36.48985	10.53	nov	11	14.30944	14.28825	-66.70117	10.70		
nov	18	14.13536	14.11415	-36.48971	10.07	nov	18	14.30952	14.28830	-66.70072	10.24		
nov	25	14.13541	14.11418	-36.48969	9.61	nov	25	14.30959	14.28836	-66.70039	9.78		
dic	2	14.13547	14.11421	-36.48963	9.15	dic	2	14.30969	14.28843	-66.70002	9.32		
dic	9	14.13553	14.11425	-36.48972	8.69	dic	9	14.30979	14.28851	-66.69982	8.86		
dic	16	14.13560	14.11430	-36.48980	8.23	dic	16	14.30992	14.28861	-66.69961	8.40		
dic	23	14.13567	14.11435	-36.48996	7.77	dic	23	14.31003	14.28871	-66.69952	7.95		

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

71683						71957					
		V		Sp				V		Sp	
		-0.01		G2V				3.87		F2III	
m	d	α	α_c	δ	Hp	m	d	α	α_c	δ	Hp
		h	h	°	h			h	h	°	h
ene	1	14.68685	14.66645	-60.92979	7.78	ene	1	14.73850	14.71809	-5.76223	7.83
ene	8	14.68696	14.66654	-60.92976	7.32	ene	8	14.73855	14.71813	-5.76254	7.37
ene	15	14.68708	14.66663	-60.92993	6.86	ene	15	14.73863	14.71817	-5.76299	6.91
ene	22	14.68720	14.66673	-60.93005	6.40	ene	22	14.73869	14.71821	-5.76330	6.45
ene	29	14.68731	14.66682	-60.93032	5.94	ene	29	14.73875	14.71826	-5.76370	5.99
feb	5	14.68742	14.66692	-60.93054	5.48	feb	5	14.73881	14.71830	-5.76397	5.53
feb	12	14.68754	14.66701	-60.93095	5.02	feb	12	14.73888	14.71835	-5.76435	5.07
feb	19	14.68765	14.66710	-60.93129	4.56	feb	19	14.73894	14.71839	-5.76459	4.61
feb	26	14.68774	14.66718	-60.93175	4.10	feb	26	14.73900	14.71844	-5.76487	4.15
mar	4	14.68784	14.66727	-60.93216	3.64	mar	4	14.73905	14.71848	-5.76503	3.69
mar	11	14.68793	14.66734	-60.93271	3.18	mar	11	14.73910	14.71851	-5.76527	3.23
mar	18	14.68802	14.66741	-60.93320	2.72	mar	18	14.73915	14.71855	-5.76539	2.77
mar	25	14.68808	14.66747	-60.93376	2.26	mar	25	14.73919	14.71858	-5.76552	2.31
abr	1	14.68815	14.66752	-60.93426	1.80	abr	1	14.73923	14.71860	-5.76555	1.85
abr	8	14.68820	14.66756	-60.93486	1.34	abr	8	14.73926	14.71862	-5.76565	1.39
abr	15	14.68826	14.66761	-60.93541	0.88	abr	15	14.73930	14.71864	-5.76565	0.93
abr	22	14.68829	14.66762	-60.93597	0.42	abr	22	14.73932	14.71865	-5.76565	0.47
abr	29	14.68833	14.66764	-60.93650	23.96	abr	29	14.73934	14.71866	-5.76559	0.01
may	6	14.68835	14.66764	-60.93706	23.50	may	6	14.73936	14.71866	-5.76556	23.55
may	13	14.68838	14.66765	-60.93759	23.04	may	13	14.73938	14.71865	-5.76550	23.09
may	20	14.68837	14.66763	-60.93807	22.58	may	20	14.73939	14.71865	-5.76541	22.63
may	27	14.68838	14.66761	-60.93853	22.12	may	27	14.73940	14.71863	-5.76532	22.17
jun	3	14.68835	14.66757	-60.93897	21.66	jun	3	14.73940	14.71861	-5.76522	21.71
jun	10	14.68835	14.66754	-60.93940	21.20	jun	10	14.73941	14.71859	-5.76514	21.25
jun	17	14.68831	14.66748	-60.93973	20.74	jun	17	14.73939	14.71856	-5.76501	20.79
jun	24	14.68829	14.66743	-60.94006	20.28	jun	24	14.73939	14.71853	-5.76492	20.33
jul	1	14.68823	14.66736	-60.94030	19.82	jul	1	14.73938	14.71850	-5.76480	19.87
jul	8	14.68820	14.66730	-60.94056	19.36	jul	8	14.73937	14.71847	-5.76473	19.41
jul	15	14.68813	14.66721	-60.94067	18.90	jul	15	14.73934	14.71843	-5.76458	18.95
jul	22	14.68809	14.66714	-60.94080	18.44	jul	22	14.73933	14.71839	-5.76453	18.49
jul	29	14.68801	14.66706	-60.94081	17.98	jul	29	14.73930	14.71835	-5.76440	18.03
ago	5	14.68796	14.66698	-60.94084	17.52	ago	5	14.73929	14.71830	-5.76436	17.57
ago	12	14.68788	14.66689	-60.94070	17.06	ago	12	14.73925	14.71826	-5.76423	17.11
ago	19	14.68783	14.66681	-60.94061	16.60	ago	19	14.73924	14.71822	-5.76422	16.65
ago	26	14.68775	14.66673	-60.94037	16.14	ago	26	14.73921	14.71818	-5.76411	16.19
sep	2	14.68770	14.66665	-60.94017	15.68	sep	2	14.73919	14.71814	-5.76413	15.73
sep	9	14.68763	14.66657	-60.93980	15.22	sep	9	14.73916	14.71810	-5.76403	15.27
sep	16	14.68759	14.66651	-60.93951	14.76	sep	16	14.73914	14.71807	-5.76408	14.81
sep	23	14.68754	14.66646	-60.93908	14.30	sep	23	14.73912	14.71804	-5.76404	14.35
sep	30	14.68751	14.66640	-60.93872	13.84	sep	30	14.73911	14.71801	-5.76412	13.89
oct	7	14.68747	14.66636	-60.93821	13.38	oct	7	14.73909	14.71799	-5.76411	13.43
oct	14	14.68746	14.66634	-60.93782	12.92	oct	14	14.73910	14.71797	-5.76425	12.97
oct	21	14.68746	14.66632	-60.93732	12.46	oct	21	14.73910	14.71796	-5.76430	12.51
oct	28	14.68747	14.66631	-60.93692	12.00	oct	28	14.73911	14.71795	-5.76449	12.05
nov	4	14.68749	14.66632	-60.93641	11.54	nov	4	14.73911	14.71794	-5.76459	11.59
nov	11	14.68753	14.66634	-60.93606	11.08	nov	11	14.73914	14.71795	-5.76485	11.13
nov	18	14.68758	14.66637	-60.93563	10.62	nov	18	14.73917	14.71796	-5.76504	10.67
nov	25	14.68764	14.66641	-60.93534	10.16	nov	25	14.73920	14.71797	-5.76535	10.21
dic	2	14.68772	14.66646	-60.93499	9.70	dic	2	14.73924	14.71799	-5.76558	9.75
dic	9	14.68780	14.66652	-60.93480	9.24	dic	9	14.73929	14.71801	-5.76595	9.29
dic	16	14.68790	14.66660	-60.93460	8.78	dic	16	14.73934	14.71804	-5.76626	8.83
dic	23	14.68799	14.66667	-60.93451	8.32	dic	23	14.73940	14.71807	-5.76664	8.37

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

73714						74824					
V			Sp			V			Sp		
3.25			M3/M4III			4.07			A3V		
α		α _c	δ		Hp	α		α _c	δ		Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	15.09094	15.07053	-25.37435	8.18	ene	1	15.32276	15.30235	-58.88645	8.42
ene	8	15.09100	15.07057	-25.37451	7.72	ene	8	15.32285	15.30243	-58.88632	7.96
ene	15	15.09107	15.07062	-25.37483	7.27	ene	15	15.32297	15.30252	-58.88639	7.50
ene	22	15.09114	15.07067	-25.37504	6.81	ene	22	15.32308	15.30261	-58.88639	7.04
ene	29	15.09121	15.07072	-25.37538	6.35	ene	29	15.32319	15.30270	-58.88656	6.58
feb	5	15.09128	15.07077	-25.37561	5.89	feb	5	15.32330	15.30279	-58.88666	6.12
feb	12	15.09135	15.07082	-25.37599	5.43	feb	12	15.32342	15.30289	-58.88696	5.66
feb	19	15.09142	15.07087	-25.37624	4.97	feb	19	15.32353	15.30298	-58.88718	5.20
feb	26	15.09148	15.07092	-25.37658	4.51	feb	26	15.32363	15.30307	-58.88754	4.74
mar	4	15.09154	15.07097	-25.37682	4.05	mar	4	15.32373	15.30316	-58.88783	4.28
mar	11	15.09160	15.07101	-25.37717	3.59	mar	11	15.32383	15.30324	-58.88828	3.82
mar	18	15.09166	15.07106	-25.37741	3.13	mar	18	15.32393	15.30333	-58.88867	3.36
mar	25	15.09171	15.07109	-25.37770	2.67	mar	25	15.32401	15.30339	-58.88914	2.90
abr	1	15.09175	15.07113	-25.37790	2.21	abr	1	15.32409	15.30346	-58.88955	2.44
abr	8	15.09180	15.07116	-25.37818	1.75	abr	8	15.32416	15.30352	-58.89009	1.98
abr	15	15.09184	15.07118	-25.37837	1.29	abr	15	15.32424	15.30358	-58.89056	1.52
abr	22	15.09187	15.07120	-25.37858	0.83	abr	22	15.32428	15.30361	-58.89108	1.06
abr	29	15.09190	15.07121	-25.37874	0.37	abr	29	15.32434	15.30365	-58.89155	0.60
may	6	15.09192	15.07122	-25.37893	23.91	may	6	15.32438	15.30367	-58.89208	0.14
may	13	15.09195	15.07123	-25.37908	23.45	may	13	15.32443	15.30370	-58.89258	23.68
may	20	15.09196	15.07122	-25.37921	22.99	may	20	15.32444	15.30370	-58.89306	23.22
may	27	15.09198	15.07121	-25.37932	22.53	may	27	15.32447	15.30370	-58.89352	22.76
jun	3	15.09198	15.07120	-25.37944	22.07	jun	3	15.32447	15.30368	-58.89398	22.30
jun	10	15.09200	15.07118	-25.37954	21.61	jun	10	15.32448	15.30367	-58.89442	21.84
jun	17	15.09199	15.07116	-25.37959	21.15	jun	17	15.32446	15.30363	-58.89480	21.38
jun	24	15.09199	15.07113	-25.37966	20.69	jun	24	15.32446	15.30360	-58.89516	20.92
jul	1	15.09197	15.07110	-25.37968	20.23	jul	1	15.32442	15.30355	-58.89548	20.46
jul	8	15.09197	15.07107	-25.37974	19.77	jul	8	15.32441	15.30350	-58.89579	20.00
jul	15	15.09194	15.07102	-25.37970	19.31	jul	15	15.32435	15.30343	-58.89598	19.54
jul	22	15.09193	15.07099	-25.37972	18.85	jul	22	15.32432	15.30337	-58.89619	19.08
jul	29	15.09190	15.07094	-25.37965	18.39	jul	29	15.32426	15.30330	-58.89629	18.62
ago	5	15.09188	15.07090	-25.37965	17.93	ago	5	15.32422	15.30323	-58.89641	18.16
ago	12	15.09184	15.07085	-25.37953	17.47	ago	12	15.32414	15.30315	-58.89638	17.70
ago	19	15.09183	15.07081	-25.37949	17.01	ago	19	15.32410	15.30308	-58.89638	17.24
ago	26	15.09179	15.07076	-25.37934	16.55	ago	26	15.32403	15.30300	-58.89624	16.78
sep	2	15.09177	15.07072	-25.37928	16.09	sep	2	15.32398	15.30293	-58.89614	16.32
sep	9	15.09173	15.07067	-25.37909	15.63	sep	9	15.32390	15.30285	-58.89587	15.86
sep	16	15.09171	15.07064	-25.37901	15.17	sep	16	15.32386	15.30278	-58.89567	15.40
sep	23	15.09168	15.07060	-25.37882	14.71	sep	23	15.32381	15.30272	-58.89532	14.94
sep	30	15.09167	15.07057	-25.37873	14.25	sep	30	15.32377	15.30267	-58.89503	14.48
oct	7	15.09165	15.07054	-25.37853	13.79	oct	7	15.32372	15.30262	-58.89459	14.02
oct	14	15.09165	15.07052	-25.37846	13.33	oct	14	15.32371	15.30258	-58.89425	13.56
oct	21	15.09164	15.07050	-25.37830	12.87	oct	21	15.32369	15.30255	-58.89378	13.10
oct	28	15.09165	15.07049	-25.37825	12.41	oct	28	15.32369	15.30253	-58.89341	12.64
nov	4	15.09165	15.07048	-25.37812	11.95	nov	4	15.32369	15.30252	-58.89292	12.18
nov	11	15.09168	15.07048	-25.37814	11.49	nov	11	15.32372	15.30252	-58.89257	11.72
nov	18	15.09170	15.07049	-25.37806	11.03	nov	18	15.32375	15.30254	-58.89212	11.26
nov	25	15.09174	15.07050	-25.37812	10.57	nov	25	15.32380	15.30256	-58.89180	10.80
dic	2	15.09178	15.07052	-25.37810	10.11	dic	2	15.32385	15.30260	-58.89141	10.34
dic	9	15.09183	15.07055	-25.37824	9.65	dic	9	15.32392	15.30265	-58.89117	9.88
dic	16	15.09189	15.07058	-25.37832	9.19	dic	16	15.32401	15.30271	-58.89089	9.42
dic	23	15.09194	15.07062	-25.37851	8.73	dic	23	15.32409	15.30277	-58.89074	8.96

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

75458						76440					
		V		Sp				V		Sp	
		3.29		K2III				4.11		K0III	
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	15.42407	15.40366	58.87737	8.52	ene	1	15.64804	15.62763	-66.39299	8.74
ene	8	15.42414	15.40372	58.87685	8.06	ene	8	15.64816	15.62773	-66.39276	8.28
ene	15	15.42424	15.40378	58.87625	7.60	ene	15	15.64830	15.62784	-66.39273	7.82
ene	22	15.42432	15.40385	58.87586	7.14	ene	22	15.64843	15.62796	-66.39263	7.36
ene	29	15.42442	15.40393	58.87544	6.68	ene	29	15.64857	15.62808	-66.39270	6.90
feb	5	15.42452	15.40401	58.87522	6.22	feb	5	15.64871	15.62820	-66.39272	6.44
feb	12	15.42462	15.40409	58.87496	5.76	feb	12	15.64885	15.62832	-66.39294	5.98
feb	19	15.42471	15.40417	58.87491	5.30	feb	19	15.64900	15.62845	-66.39309	5.52
feb	26	15.42481	15.40425	58.87486	4.84	feb	26	15.64913	15.62857	-66.39339	5.06
mar	4	15.42490	15.40433	58.87500	4.38	mar	4	15.64926	15.62869	-66.39362	4.60
mar	11	15.42499	15.40440	58.87511	3.92	mar	11	15.64939	15.62880	-66.39404	4.14
mar	18	15.42507	15.40447	58.87541	3.46	mar	18	15.64952	15.62891	-66.39439	3.68
mar	25	15.42515	15.40453	58.87571	3.00	mar	25	15.64962	15.62901	-66.39485	3.22
abr	1	15.42521	15.40458	58.87616	2.54	abr	1	15.64973	15.62911	-66.39525	2.76
abr	8	15.42527	15.40463	58.87656	2.08	abr	8	15.64983	15.62919	-66.39579	2.30
abr	15	15.42532	15.40466	58.87710	1.62	abr	15	15.64993	15.62927	-66.39627	1.84
abr	22	15.42536	15.40469	58.87763	1.16	abr	22	15.65000	15.62933	-66.39681	1.38
abr	29	15.42539	15.40470	58.87824	0.70	abr	29	15.65008	15.62939	-66.39731	0.92
may	6	15.42541	15.40471	58.87880	0.24	may	6	15.65013	15.62943	-66.39789	0.46
may	13	15.42542	15.40469	58.87941	23.78	may	13	15.65020	15.62947	-66.39842	0.00
may	20	15.42542	15.40468	58.88001	23.32	may	20	15.65022	15.62948	-66.39897	23.54
may	27	15.42542	15.40465	58.88061	22.86	may	27	15.65027	15.62950	-66.39948	23.09
jun	3	15.42540	15.40462	58.88116	22.40	jun	3	15.65027	15.62949	-66.40001	22.63
jun	10	15.42538	15.40457	58.88168	21.94	jun	10	15.65029	15.62948	-66.40052	22.17
jun	17	15.42535	15.40452	58.88219	21.48	jun	17	15.65027	15.62944	-66.40098	21.71
jun	24	15.42531	15.40445	58.88263	21.02	jun	24	15.65027	15.62941	-66.40141	21.25
jul	1	15.42526	15.40439	58.88304	20.56	jul	1	15.65022	15.62935	-66.40181	20.79
jul	8	15.42521	15.40431	58.88335	20.10	jul	8	15.65020	15.62930	-66.40220	20.33
jul	15	15.42515	15.40424	58.88366	19.64	jul	15	15.65013	15.62922	-66.40248	19.87
jul	22	15.42509	15.40415	58.88385	19.18	jul	22	15.65010	15.62915	-66.40276	19.41
jul	29	15.42502	15.40406	58.88403	18.72	jul	29	15.65002	15.62906	-66.40294	18.95
ago	5	15.42496	15.40397	58.88408	18.26	ago	5	15.64996	15.62897	-66.40313	18.48
ago	12	15.42488	15.40389	58.88413	17.80	ago	12	15.64986	15.62887	-66.40316	18.02
ago	19	15.42481	15.40379	58.88403	17.34	ago	19	15.64980	15.62878	-66.40322	17.56
ago	26	15.42473	15.40370	58.88395	16.88	ago	26	15.64970	15.62868	-66.40314	17.10
sep	2	15.42466	15.40362	58.88370	16.42	sep	2	15.64963	15.62858	-66.40308	16.64
sep	9	15.42459	15.40353	58.88350	15.96	sep	9	15.64953	15.62848	-66.40285	16.18
sep	16	15.42452	15.40345	58.88311	15.50	sep	16	15.64947	15.62839	-66.40267	15.72
sep	23	15.42445	15.40337	58.88277	15.04	sep	23	15.64939	15.62831	-66.40233	15.26
sep	30	15.42440	15.40330	58.88226	14.58	sep	30	15.64933	15.62823	-66.40205	14.80
oct	7	15.42434	15.40323	58.88181	14.12	oct	7	15.64927	15.62816	-66.40160	14.34
oct	14	15.42430	15.40317	58.88118	13.66	oct	14	15.64923	15.62810	-66.40124	13.88
oct	21	15.42426	15.40312	58.88063	13.20	oct	21	15.64920	15.62806	-66.40073	13.42
oct	28	15.42424	15.40308	58.87992	12.74	oct	28	15.64919	15.62803	-66.40032	12.96
nov	4	15.42421	15.40304	58.87929	12.28	nov	4	15.64918	15.62801	-66.39977	12.50
nov	11	15.42421	15.40302	58.87851	11.82	nov	11	15.64920	15.62800	-66.39936	12.04
nov	18	15.42421	15.40300	58.87783	11.36	nov	18	15.64923	15.62802	-66.39883	11.58
nov	25	15.42423	15.40300	58.87703	10.90	nov	25	15.64927	15.62804	-66.39843	11.12
dic	2	15.42426	15.40300	58.87635	10.44	dic	2	15.64934	15.62808	-66.39794	10.66
dic	9	15.42430	15.40302	58.87555	9.98	dic	9	15.64941	15.62813	-66.39762	10.20
dic	16	15.42435	15.40304	58.87488	9.52	dic	16	15.64951	15.62821	-66.39723	9.74
dic	23	15.42441	15.40309	58.87415	9.06	dic	23	15.64961	15.62828	-66.39697	9.28

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

77622						81724					
V			Sp			V			Sp		
3.71			A2m			4.91			G8II/III		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	15.86654	15.84613	4.40476	8.96	ene	1	16.71559	16.69518	-17.78808	9.81
ene	8	15.86658	15.84616	4.40442	8.50	ene	8	16.71564	16.69521	-17.78820	9.35
ene	15	15.86665	15.84619	4.40395	8.04	ene	15	16.71570	16.69525	-17.78844	8.89
ene	22	15.86671	15.84623	4.40363	7.58	ene	22	16.71576	16.69528	-17.78857	8.43
ene	29	15.86677	15.84627	4.40323	7.12	ene	29	16.71582	16.69533	-17.78882	7.97
feb	5	15.86683	15.84632	4.40297	6.66	feb	5	16.71588	16.69537	-17.78894	7.51
feb	12	15.86689	15.84636	4.40261	6.20	feb	12	16.71595	16.69542	-17.78920	7.05
feb	19	15.86696	15.84641	4.40243	5.74	feb	19	16.71601	16.69547	-17.78931	6.59
feb	26	15.86702	15.84645	4.40218	5.28	feb	26	16.71608	16.69552	-17.78953	6.13
mar	4	15.86707	15.84650	4.40210	4.82	mar	4	16.71614	16.69556	-17.78962	5.67
mar	11	15.86713	15.84654	4.40192	4.36	mar	11	16.71620	16.69562	-17.78982	5.21
mar	18	15.86719	15.84658	4.40192	3.90	mar	18	16.71627	16.69566	-17.78988	4.75
mar	25	15.86723	15.84662	4.40187	3.44	mar	25	16.71632	16.69571	-17.79003	4.29
abr	1	15.86728	15.84665	4.40196	2.98	abr	1	16.71638	16.69575	-17.79004	3.83
abr	8	15.86733	15.84669	4.40198	2.52	abr	8	16.71644	16.69580	-17.79017	3.37
abr	15	15.86737	15.84671	4.40213	2.06	abr	15	16.71649	16.69584	-17.79017	2.91
abr	22	15.86740	15.84674	4.40225	1.60	abr	22	16.71654	16.69587	-17.79023	2.45
abr	29	15.86744	15.84675	4.40247	1.14	abr	29	16.71659	16.69590	-17.79020	1.99
may	6	15.86747	15.84677	4.40263	0.68	may	6	16.71663	16.69592	-17.79025	1.53
may	13	15.86750	15.84677	4.40286	0.22	may	13	16.71667	16.69595	-17.79022	1.07
may	20	15.86752	15.84678	4.40308	23.76	may	20	16.71670	16.69596	-17.79023	0.61
may	27	15.86754	15.84677	4.40333	23.30	may	27	16.71674	16.69597	-17.79018	0.15
jun	3	15.86755	15.84676	4.40355	22.84	jun	3	16.71676	16.69598	-17.79019	23.69
jun	10	15.86756	15.84675	4.40378	22.38	jun	10	16.71679	16.69598	-17.79015	23.23
jun	17	15.86756	15.84673	4.40402	21.92	jun	17	16.71680	16.69597	-17.79014	22.77
jun	24	15.86757	15.84671	4.40424	21.46	jun	24	16.71682	16.69596	-17.79010	22.31
jul	1	15.86756	15.84669	4.40446	21.00	jul	1	16.71682	16.69594	-17.79008	21.85
jul	8	15.86756	15.84665	4.40463	20.54	jul	8	16.71683	16.69592	-17.79007	21.39
jul	15	15.86754	15.84662	4.40483	20.08	jul	15	16.71681	16.69590	-17.79003	20.93
jul	22	15.86753	15.84658	4.40497	19.62	jul	22	16.71681	16.69587	-17.79002	20.47
jul	29	15.86750	15.84655	4.40514	19.16	jul	29	16.71679	16.69583	-17.78998	20.01
ago	5	15.86749	15.84650	4.40522	18.70	ago	5	16.71678	16.69580	-17.78998	19.55
ago	12	15.86745	15.84646	4.40535	18.24	ago	12	16.71675	16.69576	-17.78993	19.09
ago	19	15.86744	15.84642	4.40539	17.78	ago	19	16.71673	16.69572	-17.78993	18.63
ago	26	15.86740	15.84637	4.40547	17.32	ago	26	16.71670	16.69567	-17.78986	18.17
sep	2	15.86738	15.84633	4.40544	16.86	sep	2	16.71668	16.69563	-17.78987	17.71
sep	9	15.86734	15.84629	4.40549	16.40	sep	9	16.71663	16.69558	-17.78979	17.25
sep	16	15.86732	15.84625	4.40541	15.94	sep	16	16.71661	16.69554	-17.78980	16.79
sep	23	15.86729	15.84621	4.40540	15.48	sep	23	16.71658	16.69549	-17.78971	16.33
sep	30	15.86727	15.84617	4.40525	15.02	sep	30	16.71655	16.69545	-17.78973	15.87
oct	7	15.86724	15.84613	4.40519	14.56	oct	7	16.71652	16.69541	-17.78963	15.41
oct	14	15.86723	15.84610	4.40497	14.10	oct	14	16.71650	16.69537	-17.78966	14.95
oct	21	15.86722	15.84608	4.40484	13.64	oct	21	16.71648	16.69534	-17.78958	14.49
oct	28	15.86721	15.84606	4.40457	13.18	oct	28	16.71647	16.69531	-17.78962	14.03
nov	4	15.86721	15.84604	4.40438	12.72	nov	4	16.71646	16.69529	-17.78956	13.57
nov	11	15.86722	15.84603	4.40404	12.26	nov	11	16.71646	16.69527	-17.78963	13.11
nov	18	15.86723	15.84602	4.40379	11.80	nov	18	16.71647	16.69526	-17.78960	12.65
nov	25	15.86725	15.84602	4.40339	11.34	nov	25	16.71648	16.69525	-17.78971	12.19
dic	2	15.86728	15.84602	4.40309	10.88	dic	2	16.71650	16.69525	-17.78969	11.73
dic	9	15.86731	15.84603	4.40265	10.42	dic	9	16.71653	16.69525	-17.78986	11.27
dic	16	15.86735	15.84605	4.40231	9.96	dic	16	16.71657	16.69526	-17.78992	10.81
dic	23	15.86740	15.84607	4.40185	9.50	dic	23	16.71660	16.69528	-17.79010	10.35

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

81833						82396					
V			Sp			V			Sp		
3.48			G8III-IV			2.29			K2IIIb		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	16.72821	16.70780	38.87383	9.82	ene	1	16.86147	16.84106	-34.33544	9.96
ene	8	16.72825	16.70783	38.87326	9.36	ene	8	16.86152	16.84110	-34.33537	9.50
ene	15	16.72831	16.70786	38.87260	8.90	ene	15	16.86159	16.84114	-34.33544	9.04
ene	22	16.72837	16.70789	38.87212	8.44	ene	22	16.86166	16.84118	-34.33541	8.58
ene	29	16.72843	16.70794	38.87157	7.98	ene	29	16.86173	16.84123	-34.33552	8.12
feb	5	16.72849	16.70798	38.87120	7.52	feb	5	16.86179	16.84128	-34.33553	7.66
feb	12	16.72857	16.70803	38.87077	7.06	feb	12	16.86187	16.84134	-34.33569	7.20
feb	19	16.72863	16.70809	38.87055	6.60	feb	19	16.86194	16.84140	-34.33573	6.74
feb	26	16.72870	16.70814	38.87029	6.14	feb	26	16.86202	16.84146	-34.33590	6.28
mar	4	16.72877	16.70820	38.87024	5.68	mar	4	16.86209	16.84151	-34.33596	5.82
mar	11	16.72884	16.70825	38.87013	5.22	mar	11	16.86216	16.84157	-34.33617	5.36
mar	18	16.72891	16.70830	38.87024	4.76	mar	18	16.86224	16.84163	-34.33625	4.90
mar	25	16.72897	16.70836	38.87032	4.30	mar	25	16.86230	16.84169	-34.33645	4.44
abr	1	16.72903	16.70840	38.87058	3.84	abr	1	16.86237	16.84174	-34.33654	3.98
abr	8	16.72909	16.70845	38.87080	3.38	abr	8	16.86243	16.84179	-34.33675	3.52
abr	15	16.72914	16.70848	38.87119	2.92	abr	15	16.86250	16.84184	-34.33686	3.06
abr	22	16.72919	16.70852	38.87155	2.46	abr	22	16.86255	16.84188	-34.33706	2.60
abr	29	16.72924	16.70855	38.87204	2.00	abr	29	16.86261	16.84192	-34.33717	2.14
may	6	16.72927	16.70857	38.87248	1.54	may	6	16.86265	16.84195	-34.33738	1.68
may	13	16.72931	16.70858	38.87303	1.08	may	13	16.86271	16.84198	-34.33751	1.22
may	20	16.72934	16.70860	38.87354	0.62	may	20	16.86274	16.84200	-34.33770	0.76
may	27	16.72936	16.70859	38.87412	0.16	may	27	16.86279	16.84202	-34.33783	0.30
jun	3	16.72938	16.70859	38.87465	23.70	jun	3	16.86281	16.84203	-34.33803	23.84
jun	10	16.72939	16.70858	38.87521	23.24	jun	10	16.86285	16.84204	-34.33818	23.38
jun	17	16.72939	16.70856	38.87574	22.78	jun	17	16.86286	16.84203	-34.33835	22.92
jun	24	16.72939	16.70853	38.87626	22.32	jun	24	16.86288	16.84202	-34.33849	22.46
jul	1	16.72938	16.70851	38.87674	21.86	jul	1	16.86288	16.84201	-34.33865	22.00
jul	8	16.72937	16.70847	38.87719	21.40	jul	8	16.86290	16.84199	-34.33881	21.54
jul	15	16.72935	16.70843	38.87761	20.94	jul	15	16.86288	16.84196	-34.33893	21.08
jul	22	16.72933	16.70838	38.87798	20.48	jul	22	16.86288	16.84193	-34.33906	20.62
jul	29	16.72929	16.70833	38.87831	20.02	jul	29	16.86286	16.84190	-34.33915	20.16
ago	5	16.72926	16.70828	38.87856	19.56	ago	5	16.86285	16.84186	-34.33926	19.70
ago	12	16.72922	16.70823	38.87880	19.10	ago	12	16.86281	16.84181	-34.33930	19.24
ago	19	16.72918	16.70816	38.87893	18.64	ago	19	16.86279	16.84177	-34.33937	18.78
ago	26	16.72913	16.70811	38.87907	18.18	ago	26	16.86275	16.84172	-34.33936	18.32
sep	2	16.72909	16.70804	38.87906	17.72	sep	2	16.86272	16.84167	-34.33941	17.86
sep	9	16.72904	16.70798	38.87909	17.26	sep	9	16.86267	16.84162	-34.33933	17.40
sep	16	16.72900	16.70792	38.87896	16.80	sep	16	16.86265	16.84157	-34.33932	16.94
sep	23	16.72895	16.70786	38.87886	16.34	sep	23	16.86260	16.84152	-34.33920	16.48
sep	30	16.72891	16.70780	38.87860	15.88	sep	30	16.86257	16.84147	-34.33916	16.02
oct	7	16.72886	16.70775	38.87839	15.42	oct	7	16.86253	16.84143	-34.33898	15.56
oct	14	16.72882	16.70770	38.87800	14.96	oct	14	16.86251	16.84139	-34.33890	15.10
oct	21	16.72879	16.70765	38.87768	14.50	oct	21	16.86249	16.84135	-34.33870	14.64
oct	28	16.72876	16.70760	38.87719	14.04	oct	28	16.86247	16.84132	-34.33860	14.18
nov	4	16.72873	16.70757	38.87676	13.58	nov	4	16.86246	16.84129	-34.33838	13.72
nov	11	16.72872	16.70753	38.87616	13.12	nov	11	16.86246	16.84127	-34.33828	13.26
nov	18	16.72872	16.70750	38.87566	12.66	nov	18	16.86246	16.84125	-34.33806	12.80
nov	25	16.72872	16.70748	38.87499	12.20	nov	25	16.86248	16.84124	-34.33798	12.34
dic	2	16.72872	16.70747	38.87442	11.74	dic	2	16.86250	16.84124	-34.33778	11.88
dic	9	16.72874	16.70747	38.87370	11.28	dic	9	16.86253	16.84125	-34.33773	11.42
dic	16	16.72877	16.70746	38.87311	10.82	dic	16	16.86257	16.84126	-34.33757	10.96
dic	23	16.72880	16.70748	38.87239	10.36	dic	23	16.86261	16.84128	-34.33754	10.50

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

86796						91262									
		V		Sp				V		Sp					
		5.12		G5V				0.03		AOVvar					
		α		α_c		δ		α		α_c		δ		Hp	
m	d	h	h	h	h	°	h	m	d	h	h	°	h	h	h
ene	1	17.76679	17.74638	-51.84544	10.86			ene	1	18.62863	18.60822	38.80462	11.72		
ene	8	17.76684	17.74641	-51.84511	10.40			ene	8	18.62864	18.60822	38.80403	11.26		
ene	15	17.76692	17.74646	-51.84490	9.94			ene	15	18.62867	18.60822	38.80338	10.80		
ene	22	17.76699	17.74651	-51.84461	9.48			ene	22	18.62871	18.60823	38.80284	10.34		
ene	29	17.76707	17.74657	-51.84446	9.02			ene	29	18.62875	18.60825	38.80222	9.88		
feb	5	17.76714	17.74663	-51.84424	8.56			feb	5	18.62879	18.60828	38.80174	9.42		
feb	12	17.76724	17.74671	-51.84416	8.10			feb	12	18.62884	18.60831	38.80121	8.96		
feb	19	17.76733	17.74678	-51.84399	7.64			feb	19	18.62890	18.60835	38.80086	8.50		
feb	26	17.76742	17.74686	-51.84398	7.18			feb	26	18.62896	18.60840	38.80045	8.04		
mar	4	17.76751	17.74693	-51.84387	6.72			mar	4	18.62902	18.60845	38.80022	7.58		
mar	11	17.76761	17.74702	-51.84393	6.26			mar	11	18.62908	18.60850	38.79996	7.12		
mar	18	17.76771	17.74710	-51.84389	5.80			mar	18	18.62915	18.60855	38.79991	6.66		
mar	25	17.76779	17.74718	-51.84400	5.34			mar	25	18.62922	18.60860	38.79981	6.20		
abr	1	17.76789	17.74726	-51.84401	4.88			abr	1	18.62928	18.60866	38.79991	5.74		
abr	8	17.76798	17.74734	-51.84419	4.42			abr	8	18.62935	18.60871	38.79997	5.28		
abr	15	17.76807	17.74742	-51.84427	3.96			abr	15	18.62942	18.60876	38.80025	4.82		
abr	22	17.76815	17.74748	-51.84449	3.50			abr	22	18.62948	18.60881	38.80047	4.36		
abr	29	17.76824	17.74755	-51.84462	3.04			abr	29	18.62954	18.60886	38.80087	3.90		
may	6	17.76831	17.74761	-51.84489	2.58			may	6	18.62960	18.60890	38.80121	3.44		
may	13	17.76839	17.74767	-51.84509	2.12			may	13	18.62966	18.60893	38.80173	2.98		
may	20	17.76845	17.74771	-51.84539	1.66			may	20	18.62971	18.60897	38.80219	2.52		
may	27	17.76852	17.74775	-51.84562	1.20			may	27	18.62976	18.60899	38.80278	2.06		
jun	3	17.76857	17.74778	-51.84596	0.74			jun	3	18.62980	18.60901	38.80330	1.60		
jun	10	17.76863	17.74781	-51.84625	0.28			jun	10	18.62984	18.60903	38.80394	1.14		
jun	17	17.76865	17.74782	-51.84660	23.82			jun	17	18.62986	18.60904	38.80450	0.68		
jun	24	17.76869	17.74784	-51.84689	23.36			jun	24	18.62989	18.60903	38.80515	0.22		
jul	1	17.76871	17.74783	-51.84724	22.90			jul	1	18.62990	18.60903	38.80571	23.76		
jul	8	17.76874	17.74783	-51.84757	22.44			jul	8	18.62992	18.60901	38.80632	23.30		
jul	15	17.76872	17.74781	-51.84789	21.98			jul	15	18.62991	18.60900	38.80687	22.84		
jul	22	17.76873	17.74779	-51.84819	21.52			jul	22	18.62992	18.60897	38.80743	22.38		
jul	29	17.76871	17.74775	-51.84848	21.06			jul	29	18.62990	18.60894	38.80793	21.92		
ago	5	17.76870	17.74772	-51.84876	20.60			ago	5	18.62989	18.60890	38.80841	21.46		
ago	12	17.76866	17.74767	-51.84899	20.14			ago	12	18.62986	18.60886	38.80884	21.00		
ago	19	17.76864	17.74762	-51.84920	19.68			ago	19	18.62983	18.60881	38.80922	20.54		
ago	26	17.76859	17.74756	-51.84935	19.22			ago	26	18.62980	18.60877	38.80957	20.08		
sep	2	17.76855	17.74750	-51.84952	18.76			sep	2	18.62976	18.60871	38.80983	19.62		
sep	9	17.76849	17.74744	-51.84957	18.30			sep	9	18.62971	18.60866	38.81007	19.16		
sep	16	17.76845	17.74737	-51.84964	17.84			sep	16	18.62967	18.60859	38.81021	18.70		
sep	23	17.76839	17.74731	-51.84959	17.38			sep	23	18.62962	18.60853	38.81035	18.24		
sep	30	17.76834	17.74724	-51.84959	16.92			sep	30	18.62957	18.60847	38.81035	17.78		
oct	7	17.76828	17.74717	-51.84945	16.46			oct	7	18.62952	18.60841	38.81036	17.32		
oct	14	17.76824	17.74712	-51.84934	16.00			oct	14	18.62947	18.60835	38.81024	16.86		
oct	21	17.76820	17.74706	-51.84910	15.54			oct	21	18.62943	18.60829	38.81014	16.40		
oct	28	17.76817	17.74701	-51.84893	15.08			oct	28	18.62938	18.60823	38.80988	15.94		
nov	4	17.76813	17.74696	-51.84862	14.62			nov	4	18.62934	18.60817	38.80965	15.48		
nov	11	17.76811	17.74692	-51.84838	14.16			nov	11	18.62931	18.60812	38.80926	15.02		
nov	18	17.76810	17.74689	-51.84801	13.70			nov	18	18.62928	18.60807	38.80894	14.56		
nov	25	17.76810	17.74687	-51.84774	13.24			nov	25	18.62926	18.60802	38.80844	14.10		
dic	2	17.76811	17.74685	-51.84734	12.78			dic	2	18.62924	18.60798	38.80800	13.64		
dic	9	17.76813	17.74685	-51.84707	12.32			dic	9	18.62923	18.60795	38.80741	13.18		
dic	16	17.76816	17.74686	-51.84667	11.86			dic	16	18.62923	18.60792	38.80691	12.72		
dic	23	17.76820	17.74687	-51.84640	11.40			dic	23	18.62923	18.60791	38.80626	12.26		

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

92262						97649					
V			Sp			V			Sp		
6.86			F6V			0.76			A7IV-V		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	18.82554	18.80514	-14.68314	11.92	ene	1	19.86543	19.84502	8.93088	12.96
ene	8	18.82556	18.80514	-14.68321	11.46	ene	8	19.86544	19.84501	8.93058	12.50
ene	15	18.82561	18.80515	-14.68335	11.00	ene	15	19.86546	19.84501	8.93024	12.04
ene	22	18.82564	18.80517	-14.68338	10.54	ene	22	19.86548	19.84501	8.92997	11.58
ene	29	18.82568	18.80519	-14.68352	10.08	ene	29	19.86551	19.84501	8.92963	11.12
feb	5	18.82572	18.80522	-14.68355	9.62	feb	5	19.86553	19.84503	8.92937	10.66
feb	12	18.82578	18.80525	-14.68366	9.16	feb	12	19.86557	19.84504	8.92908	10.20
feb	19	18.82583	18.80528	-14.68364	8.70	feb	19	19.86561	19.84507	8.92891	9.74
feb	26	18.82589	18.80533	-14.68373	8.24	feb	26	19.86566	19.84509	8.92867	9.28
mar	4	18.82594	18.80537	-14.68369	7.78	mar	4	19.86570	19.84513	8.92856	8.82
mar	11	18.82600	18.80541	-14.68374	7.32	mar	11	19.86575	19.84516	8.92841	8.36
mar	18	18.82606	18.80546	-14.68363	6.86	mar	18	19.86581	19.84520	8.92843	7.90
mar	25	18.82612	18.80551	-14.68364	6.40	mar	25	19.86586	19.84524	8.92837	7.44
abr	1	18.82618	18.80556	-14.68350	5.94	abr	1	19.86591	19.84529	8.92848	6.98
abr	8	18.82624	18.80561	-14.68347	5.48	abr	8	19.86597	19.84533	8.92852	6.52
abr	15	18.82631	18.80565	-14.68329	5.02	abr	15	19.86603	19.84537	8.92875	6.06
abr	22	18.82637	18.80570	-14.68321	4.56	abr	22	19.86609	19.84542	8.92889	5.60
abr	29	18.82643	18.80574	-14.68301	4.10	abr	29	19.86615	19.84546	8.92920	5.14
may	6	18.82649	18.80578	-14.68291	3.64	may	6	19.86621	19.84550	8.92943	4.68
may	13	18.82655	18.80582	-14.68269	3.18	may	13	19.86627	19.84554	8.92982	4.22
may	20	18.82660	18.80586	-14.68258	2.72	may	20	19.86632	19.84558	8.93011	3.76
may	27	18.82665	18.80589	-14.68236	2.26	may	27	19.86638	19.84561	8.93055	3.30
jun	3	18.82670	18.80591	-14.68225	1.80	jun	3	19.86643	19.84565	8.93089	2.84
jun	10	18.82675	18.80594	-14.68206	1.34	jun	10	19.86649	19.84567	8.93135	2.38
jun	17	18.82678	18.80595	-14.68195	0.88	jun	17	19.86652	19.84570	8.93171	1.92
jun	24	18.82682	18.80596	-14.68178	0.42	jun	24	19.86657	19.84571	8.93218	1.46
jul	1	18.82684	18.80597	-14.68169	23.96	jul	1	19.86660	19.84573	8.93254	1.00
jul	8	18.82688	18.80597	-14.68156	23.50	jul	8	19.86664	19.84573	8.93298	0.54
jul	15	18.82688	18.80597	-14.68149	23.04	jul	15	19.86665	19.84574	8.93332	0.08
jul	22	18.82690	18.80596	-14.68139	22.58	jul	22	19.86668	19.84573	8.93373	23.62
jul	29	18.82690	18.80594	-14.68134	22.12	jul	29	19.86669	19.84573	8.93405	23.16
ago	5	18.82691	18.80592	-14.68130	21.66	ago	5	19.86670	19.84572	8.93438	22.70
ago	12	18.82689	18.80590	-14.68127	21.20	ago	12	19.86669	19.84570	8.93465	22.24
ago	19	18.82689	18.80587	-14.68125	20.74	ago	19	19.86670	19.84568	8.93494	21.78
ago	26	18.82686	18.80584	-14.68122	20.28	ago	26	19.86668	19.84565	8.93517	21.32
sep	2	18.82685	18.80580	-14.68125	19.82	sep	2	19.86667	19.84562	8.93536	20.86
sep	9	18.82681	18.80576	-14.68124	19.36	sep	9	19.86664	19.84559	8.93552	20.40
sep	16	18.82679	18.80572	-14.68127	18.90	sep	16	19.86662	19.84555	8.93566	19.94
sep	23	18.82676	18.80567	-14.68126	18.44	sep	23	19.86659	19.84551	8.93578	19.48
sep	30	18.82673	18.80563	-14.68132	17.98	sep	30	19.86657	19.84547	8.93582	19.02
oct	7	18.82669	18.80558	-14.68132	17.52	oct	7	19.86653	19.84542	8.93586	18.56
oct	14	18.82667	18.80554	-14.68138	17.06	oct	14	19.86650	19.84538	8.93584	18.10
oct	21	18.82663	18.80549	-14.68136	16.60	oct	21	19.86647	19.84533	8.93584	17.64
oct	28	18.82661	18.80545	-14.68145	16.14	oct	28	19.86644	19.84528	8.93573	17.18
nov	4	18.82658	18.80541	-14.68145	15.68	nov	4	19.86641	19.84524	8.93566	16.72
nov	11	18.82657	18.80537	-14.68154	15.22	nov	11	19.86639	19.84519	8.93549	16.26
nov	18	18.82655	18.80534	-14.68152	14.76	nov	18	19.86636	19.84515	8.93538	15.80
nov	25	18.82654	18.80531	-14.68164	14.30	nov	25	19.86635	19.84511	8.93513	15.34
dic	2	18.82654	18.80528	-14.68164	13.84	dic	2	19.86633	19.84508	8.93495	14.88
dic	9	18.82654	18.80527	-14.68177	13.38	dic	9	19.86632	19.84504	8.93465	14.42
dic	16	18.82656	18.80525	-14.68177	12.92	dic	16	19.86632	19.84502	8.93444	13.96
dic	23	18.82657	18.80524	-14.68191	12.46	dic	23	19.86632	19.84499	8.93409	13.50

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

99240						102485					
V			Sp			V			Sp		
3.55			G5IV-Vvar			4.13			F5V		
		α	α _c	δ	Hp			α	α _c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	20.18342	20.16301	-66.12228	13.28	ene	1	20.79145	20.77104	-25.18682	13.89
ene	8	20.18341	20.16299	-66.12176	12.82	ene	8	20.79145	20.77102	-25.18674	13.43
ene	15	20.18346	20.16300	-66.12124	12.36	ene	15	20.79147	20.77101	-25.18664	12.97
ene	22	20.18349	20.16301	-66.12065	11.90	ene	22	20.79148	20.77100	-25.18650	12.51
ene	29	20.18355	20.16305	-66.12015	11.44	ene	29	20.79150	20.77101	-25.18641	12.05
feb	5	20.18360	20.16309	-66.11958	10.98	feb	5	20.79152	20.77101	-25.18624	11.59
feb	12	20.18369	20.16315	-66.11908	10.52	feb	12	20.79156	20.77103	-25.18610	11.13
feb	19	20.18376	20.16322	-66.11851	10.06	feb	19	20.79159	20.77104	-25.18587	10.67
feb	26	20.18386	20.16330	-66.11807	9.60	feb	26	20.79163	20.77107	-25.18572	10.21
mar	4	20.18395	20.16338	-66.11756	9.14	mar	4	20.79167	20.77109	-25.18548	9.75
mar	11	20.18407	20.16348	-66.11717	8.68	mar	11	20.79172	20.77113	-25.18529	9.29
mar	18	20.18419	20.16358	-66.11670	8.22	mar	18	20.79177	20.77116	-25.18499	8.83
mar	25	20.18431	20.16370	-66.11640	7.76	mar	25	20.79182	20.77121	-25.18480	8.37
abr	1	20.18443	20.16380	-66.11602	7.30	abr	1	20.79187	20.77125	-25.18450	7.91
abr	8	20.18457	20.16393	-66.11580	6.84	abr	8	20.79194	20.77130	-25.18428	7.45
abr	15	20.18471	20.16405	-66.11550	6.38	abr	15	20.79200	20.77134	-25.18393	6.99
abr	22	20.18483	20.16417	-66.11539	5.92	abr	22	20.79206	20.77139	-25.18372	6.53
abr	29	20.18497	20.16428	-66.11520	5.46	abr	29	20.79213	20.77144	-25.18339	6.07
may	6	20.18511	20.16440	-66.11518	5.00	may	6	20.79219	20.77149	-25.18317	5.61
may	13	20.18525	20.16452	-66.11509	4.54	may	13	20.79227	20.77154	-25.18284	5.15
may	20	20.18537	20.16463	-66.11519	4.08	may	20	20.79233	20.77159	-25.18265	4.69
may	27	20.18550	20.16474	-66.11522	3.62	may	27	20.79240	20.77163	-25.18236	4.23
jun	3	20.18562	20.16484	-66.11542	3.16	jun	3	20.79246	20.77168	-25.18220	3.77
jun	10	20.18575	20.16493	-66.11556	2.70	jun	10	20.79253	20.77172	-25.18194	3.31
jun	17	20.18584	20.16501	-66.11586	2.24	jun	17	20.79258	20.77176	-25.18184	2.85
jun	24	20.18595	20.16509	-66.11610	1.78	jun	24	20.79265	20.77179	-25.18164	2.39
jul	1	20.18602	20.16515	-66.11647	1.32	jul	1	20.79269	20.77182	-25.18157	1.93
jul	8	20.18611	20.16521	-66.11681	0.86	jul	8	20.79275	20.77184	-25.18144	1.47
jul	15	20.18616	20.16524	-66.11726	0.40	jul	15	20.79278	20.77186	-25.18144	1.01
jul	22	20.18622	20.16527	-66.11764	23.94	jul	22	20.79282	20.77188	-25.18137	0.55
jul	29	20.18624	20.16528	-66.11811	23.48	jul	29	20.79284	20.77189	-25.18141	0.09
ago	5	20.18628	20.16529	-66.11856	23.02	ago	5	20.79288	20.77189	-25.18141	23.63
ago	12	20.18626	20.16527	-66.11905	22.56	ago	12	20.79288	20.77189	-25.18151	23.17
ago	19	20.18627	20.16525	-66.11949	22.10	ago	19	20.79290	20.77188	-25.18156	22.71
ago	26	20.18624	20.16521	-66.11994	21.64	ago	26	20.79289	20.77186	-25.18167	22.25
sep	2	20.18622	20.16517	-66.12037	21.18	sep	2	20.79290	20.77185	-25.18178	21.79
sep	9	20.18615	20.16510	-66.12078	20.72	sep	9	20.79287	20.77182	-25.18194	21.33
sep	16	20.18611	20.16504	-66.12113	20.26	sep	16	20.79287	20.77179	-25.18205	20.87
sep	23	20.18603	20.16495	-66.12143	19.80	sep	23	20.79284	20.77176	-25.18218	20.41
sep	30	20.18597	20.16487	-66.12172	19.34	sep	30	20.79282	20.77172	-25.18234	19.95
oct	7	20.18587	20.16477	-66.12192	18.88	oct	7	20.79278	20.77168	-25.18248	19.49
oct	14	20.18581	20.16468	-66.12207	18.42	oct	14	20.79276	20.77164	-25.18260	19.03
oct	21	20.18571	20.16457	-66.12211	17.96	oct	21	20.79273	20.77159	-25.18269	18.57
oct	28	20.18564	20.16448	-66.12217	17.50	oct	28	20.79270	20.77154	-25.18282	18.11
nov	4	20.18554	20.16437	-66.12209	17.04	nov	4	20.79266	20.77149	-25.18289	17.65
nov	11	20.18548	20.16429	-66.12199	16.58	nov	11	20.79264	20.77145	-25.18297	17.19
nov	18	20.18541	20.16419	-66.12174	16.12	nov	18	20.79261	20.77140	-25.18297	16.73
nov	25	20.18535	20.16412	-66.12154	15.66	nov	25	20.79259	20.77136	-25.18304	16.27
dic	2	20.18529	20.16403	-66.12118	15.20	dic	2	20.79257	20.77131	-25.18302	15.81
dic	9	20.18526	20.16398	-66.12086	14.74	dic	9	20.79256	20.77128	-25.18305	15.35
dic	16	20.18523	20.16392	-66.12038	14.28	dic	16	20.79255	20.77124	-25.18295	14.89
dic	23	20.18521	20.16389	-66.11998	13.82	dic	23	20.79254	20.77122	-25.18296	14.43

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

105858						108870					
		V		Sp				V		Sp	
		4.21		F6V				4.69		K5V	
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	21.47271	21.45230	-65.26134	14.57	ene	1	22.08594	22.06553	-56.69153	15.18
ene	8	21.47267	21.45224	-65.26089	14.11	ene	8	22.08590	22.06548	-56.69121	14.72
ene	15	21.47267	21.45222	-65.26036	13.65	ene	15	22.08590	22.06545	-56.69080	14.26
ene	22	21.47266	21.45219	-65.25979	13.19	ene	22	22.08589	22.06541	-56.69035	13.80
ene	29	21.47268	21.45219	-65.25925	12.73	ene	29	22.08590	22.06540	-56.68990	13.34
feb	5	21.47269	21.45218	-65.25865	12.27	feb	5	22.08589	22.06538	-56.68940	12.88
feb	12	21.47274	21.45221	-65.25804	11.81	feb	12	22.08592	22.06539	-56.68887	12.42
feb	19	21.47277	21.45223	-65.25739	11.35	feb	19	22.08594	22.06539	-56.68829	11.96
feb	26	21.47283	21.45227	-65.25682	10.89	feb	26	22.08598	22.06542	-56.68776	11.50
mar	4	21.47288	21.45231	-65.25619	10.43	mar	4	22.08601	22.06544	-56.68718	11.04
mar	11	21.47297	21.45238	-65.25561	9.97	mar	11	22.08607	22.06548	-56.68662	10.58
mar	18	21.47305	21.45245	-65.25498	9.51	mar	18	22.08612	22.06552	-56.68600	10.12
mar	25	21.47314	21.45253	-65.25448	9.05	mar	25	22.08618	22.06557	-56.68549	9.66
abr	1	21.47323	21.45260	-65.25392	8.59	abr	1	22.08625	22.06562	-56.68492	9.20
abr	8	21.47334	21.45271	-65.25346	8.13	abr	8	22.08633	22.06569	-56.68442	8.74
abr	15	21.47346	21.45280	-65.25295	7.67	abr	15	22.08641	22.06575	-56.68386	8.28
abr	22	21.47357	21.45290	-65.25261	7.21	abr	22	22.08650	22.06583	-56.68346	7.82
abr	29	21.47369	21.45300	-65.25220	6.75	abr	29	22.08659	22.06590	-56.68298	7.36
may	6	21.47382	21.45312	-65.25194	6.29	may	6	22.08668	22.06598	-56.68264	6.90
may	13	21.47395	21.45322	-65.25161	5.83	may	13	22.08679	22.06606	-56.68222	6.44
may	20	21.47407	21.45333	-65.25149	5.37	may	20	22.08689	22.06615	-56.68199	5.98
may	27	21.47420	21.45344	-65.25130	4.91	may	27	22.08699	22.06623	-56.68170	5.52
jun	3	21.47433	21.45355	-65.25127	4.45	jun	3	22.08709	22.06631	-56.68156	5.06
jun	10	21.47446	21.45365	-65.25120	3.99	jun	10	22.08720	22.06639	-56.68136	4.60
jun	17	21.47457	21.45374	-65.25131	3.53	jun	17	22.08730	22.06647	-56.68136	4.14
jun	24	21.47469	21.45383	-65.25137	3.07	jun	24	22.08740	22.06654	-56.68129	3.68
jul	1	21.47479	21.45391	-65.25158	2.61	jul	1	22.08749	22.06661	-56.68139	3.22
jul	8	21.47490	21.45399	-65.25176	2.15	jul	8	22.08758	22.06668	-56.68144	2.76
jul	15	21.47497	21.45405	-65.25210	1.69	jul	15	22.08765	22.06674	-56.68167	2.30
jul	22	21.47506	21.45411	-65.25237	1.23	jul	22	22.08773	22.06679	-56.68184	1.84
jul	29	21.47511	21.45415	-65.25277	0.77	jul	29	22.08779	22.06683	-56.68215	1.38
ago	5	21.47517	21.45419	-65.25315	0.31	ago	5	22.08786	22.06687	-56.68242	0.92
ago	12	21.47519	21.45420	-65.25363	23.85	ago	12	22.08789	22.06689	-56.68284	0.46
ago	19	21.47523	21.45421	-65.25404	23.39	ago	19	22.08793	22.06691	-56.68318	0.00
ago	26	21.47523	21.45420	-65.25453	22.93	ago	26	22.08795	22.06692	-56.68363	23.54
sep	2	21.47524	21.45419	-65.25499	22.47	sep	2	22.08797	22.06692	-56.68404	23.08
sep	9	21.47520	21.45415	-65.25549	22.01	sep	9	22.08796	22.06691	-56.68453	22.62
sep	16	21.47519	21.45412	-65.25591	21.55	sep	16	22.08796	22.06689	-56.68495	22.16
sep	23	21.47514	21.45405	-65.25634	21.09	sep	23	22.08794	22.06685	-56.68540	21.70
sep	30	21.47510	21.45400	-65.25674	20.63	sep	30	22.08792	22.06682	-56.68582	21.24
oct	7	21.47502	21.45391	-65.25712	20.17	oct	7	22.08787	22.06677	-56.68625	20.78
oct	14	21.47496	21.45384	-65.25741	19.71	oct	14	22.08785	22.06672	-56.68660	20.32
oct	21	21.47488	21.45374	-65.25764	19.25	oct	21	22.08779	22.06665	-56.68691	19.86
oct	28	21.47481	21.45366	-65.25785	18.79	oct	28	22.08775	22.06659	-56.68720	19.40
nov	4	21.47472	21.45355	-65.25797	18.33	nov	4	22.08769	22.06652	-56.68744	18.94
nov	11	21.47465	21.45346	-65.25803	17.87	nov	11	22.08764	22.06645	-56.68760	18.48
nov	18	21.47456	21.45335	-65.25797	17.41	nov	18	22.08758	22.06637	-56.68767	18.02
nov	25	21.47450	21.45326	-65.25791	16.95	nov	25	22.08754	22.06631	-56.68774	17.56
dic	2	21.47442	21.45316	-65.25773	16.49	dic	2	22.08748	22.06623	-56.68770	17.10
dic	9	21.47436	21.45309	-65.25752	16.03	dic	9	22.08744	22.06616	-56.68762	16.64
dic	16	21.47431	21.45300	-65.25717	15.57	dic	16	22.08740	22.06609	-56.68742	16.18
dic	23	21.47426	21.45294	-65.25686	15.11	dic	23	22.08736	22.06604	-56.68724	15.72

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

111449						112440									
		V		Sp				V		Sp					
		5.21		F7V				3.97		G8II-III					
		α		α_c		δ		α		α_c		δ		Hp	
m	d	h	h	h	h	°	h	m	d	h	h	°	h	h	
ene	1	22.59980	22.57939	-20.58810	15.69			ene	1	22.79449	22.77408	23.69290	15.89		
ene	8	22.59977	22.57935	-20.58812	15.23			ene	8	22.79446	22.77404	23.69261	15.43		
ene	15	22.59978	22.57932	-20.58805	14.77			ene	15	22.79445	22.77400	23.69236	14.97		
ene	22	22.59977	22.57929	-20.58798	14.31			ene	22	22.79444	22.77397	23.69205	14.51		
ene	29	22.59977	22.57927	-20.58790	13.85			ene	29	22.79443	22.77394	23.69173	14.05		
feb	5	22.59976	22.57925	-20.58779	13.39			feb	5	22.79442	22.77391	23.69138	13.59		
feb	12	22.59977	22.57924	-20.58764	12.93			feb	12	22.79442	22.77389	23.69107	13.13		
feb	19	22.59978	22.57923	-20.58744	12.47			feb	19	22.79443	22.77388	23.69076	12.67		
feb	26	22.59980	22.57923	-20.58727	12.01			feb	26	22.79443	22.77387	23.69043	12.21		
mar	4	22.59981	22.57924	-20.58703	11.55			mar	4	22.79444	22.77387	23.69015	11.75		
mar	11	22.59984	22.57925	-20.58678	11.09			mar	11	22.79446	22.77387	23.68989	11.29		
mar	18	22.59987	22.57926	-20.58645	10.63			mar	18	22.79449	22.77389	23.68971	10.83		
mar	25	22.59990	22.57928	-20.58618	10.17			mar	25	22.79451	22.77390	23.68949	10.37		
abr	1	22.59993	22.57930	-20.58583	9.71			abr	1	22.79455	22.77392	23.68938	9.91		
abr	8	22.59997	22.57934	-20.58551	9.25			abr	8	22.79459	22.77395	23.68928	9.45		
abr	15	22.60003	22.57937	-20.58508	8.79			abr	15	22.79464	22.77398	23.68931	8.99		
abr	22	22.60007	22.57940	-20.58475	8.33			abr	22	22.79468	22.77401	23.68930	8.53		
abr	29	22.60013	22.57944	-20.58433	7.87			abr	29	22.79474	22.77405	23.68942	8.07		
may	6	22.60018	22.57948	-20.58397	7.41			may	6	22.79479	22.77409	23.68953	7.61		
may	13	22.60025	22.57952	-20.58351	6.95			may	13	22.79486	22.77413	23.68980	7.15		
may	20	22.60031	22.57957	-20.58317	6.49			may	20	22.79492	22.77418	23.69000	6.69		
may	27	22.60038	22.57961	-20.58274	6.04			may	27	22.79499	22.77422	23.69035	6.23		
jun	3	22.60044	22.57966	-20.58241	5.58			jun	3	22.79505	22.77426	23.69065	5.77		
jun	10	22.60052	22.57970	-20.58199	5.12			jun	10	22.79512	22.77431	23.69111	5.31		
jun	17	22.60057	22.57975	-20.58172	4.66			jun	17	22.79518	22.77435	23.69148	4.85		
jun	24	22.60065	22.57979	-20.58136	4.20			jun	24	22.79525	22.77439	23.69199	4.39		
jul	1	22.60070	22.57983	-20.58113	3.74			jul	1	22.79530	22.77443	23.69242	3.93		
jul	8	22.60077	22.57987	-20.58083	3.28			jul	8	22.79537	22.77447	23.69298	3.47		
jul	15	22.60082	22.57990	-20.58069	2.82			jul	15	22.79542	22.77450	23.69342	3.01		
jul	22	22.60088	22.57993	-20.58046	2.36			jul	22	22.79547	22.77453	23.69400	2.55		
jul	29	22.60092	22.57996	-20.58037	1.90			jul	29	22.79551	22.77455	23.69447	2.09		
ago	5	22.60097	22.57998	-20.58024	1.44			ago	5	22.79556	22.77457	23.69503	1.63		
ago	12	22.60099	22.58000	-20.58025	0.98			ago	12	22.79558	22.77459	23.69547	1.17		
ago	19	22.60103	22.58001	-20.58018	0.52			ago	19	22.79562	22.77460	23.69601	0.71		
ago	26	22.60104	22.58002	-20.58024	0.06			ago	26	22.79563	22.77461	23.69644	0.25		
sep	2	22.60107	22.58002	-20.58026	23.60			sep	2	22.79566	22.77461	23.69692	23.79		
sep	9	22.60107	22.58001	-20.58040	23.14			sep	9	22.79566	22.77460	23.69729	23.33		
sep	16	22.60108	22.58001	-20.58048	22.68			sep	16	22.79567	22.77459	23.69772	22.87		
sep	23	22.60107	22.57999	-20.58063	22.22			sep	23	22.79566	22.77458	23.69805	22.41		
sep	30	22.60107	22.57997	-20.58077	21.76			sep	30	22.79566	22.77456	23.69839	21.95		
oct	7	22.60105	22.57995	-20.58098	21.30			oct	7	22.79564	22.77454	23.69863	21.49		
oct	14	22.60105	22.57992	-20.58113	20.84			oct	14	22.79564	22.77451	23.69890	21.03		
oct	21	22.60102	22.57988	-20.58131	20.38			oct	21	22.79562	22.77448	23.69910	20.57		
oct	28	22.60101	22.57985	-20.58149	19.92			oct	28	22.79560	22.77444	23.69926	20.11		
nov	4	22.60098	22.57981	-20.58168	19.46			nov	4	22.79557	22.77440	23.69935	19.65		
nov	11	22.60096	22.57977	-20.58183	19.00			nov	11	22.79555	22.77436	23.69944	19.19		
nov	18	22.60093	22.57972	-20.58196	18.54			nov	18	22.79552	22.77431	23.69948	18.73		
nov	25	22.60091	22.57968	-20.58211	18.08			nov	25	22.79550	22.77426	23.69945	18.27		
dic	2	22.60088	22.57963	-20.58222	17.62			dic	2	22.79547	22.77422	23.69939	17.81		
dic	9	22.60086	22.57958	-20.58232	17.16			dic	9	22.79545	22.77417	23.69928	17.35		
dic	16	22.60084	22.57954	-20.58235	16.70			dic	16	22.79543	22.77412	23.69917	16.89		
dic	23	22.60082	22.57950	-20.58243	16.24			dic	23	22.79540	22.77407	23.69896	16.43		

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

112623						112724					
		V		Sp				V		Sp	
		3.49		A3V				3.50		K0III	
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	22.83299	22.81258	-51.19552	15.93	ene	1	22.84153	22.82112	66.33032	15.94
ene	8	22.83295	22.81252	-51.19532	15.47	ene	8	22.84145	22.82102	66.32999	15.48
ene	15	22.83294	22.81248	-51.19499	15.01	ene	15	22.84137	22.82092	66.32966	15.02
ene	22	22.83291	22.81244	-51.19464	14.55	ene	22	22.84132	22.82084	66.32923	14.56
ene	29	22.83290	22.81241	-51.19425	14.09	ene	29	22.84125	22.82076	66.32874	14.10
feb	5	22.83288	22.81237	-51.19383	13.63	feb	5	22.84121	22.82070	66.32820	13.64
feb	12	22.83289	22.81236	-51.19334	13.17	feb	12	22.84117	22.82064	66.32765	13.18
feb	19	22.83289	22.81234	-51.19280	12.71	feb	19	22.84116	22.82061	66.32709	12.72
feb	26	22.83291	22.81235	-51.19229	12.25	feb	26	22.84114	22.82058	66.32647	12.26
mar	4	22.83292	22.81234	-51.19174	11.79	mar	4	22.84115	22.82058	66.32588	11.80
mar	11	22.83295	22.81236	-51.19116	11.33	mar	11	22.84116	22.82058	66.32529	11.34
mar	18	22.83298	22.81238	-51.19053	10.87	mar	18	22.84121	22.82060	66.32478	10.88
mar	25	22.83302	22.81241	-51.18998	10.41	mar	25	22.84124	22.82063	66.32422	10.42
abr	1	22.83306	22.81243	-51.18938	9.95	abr	1	22.84131	22.82068	66.32377	9.96
abr	8	22.83312	22.81248	-51.18881	9.49	abr	8	22.84137	22.82073	66.32334	9.50
abr	15	22.83318	22.81252	-51.18818	9.03	abr	15	22.84147	22.82081	66.32304	9.04
abr	22	22.83324	22.81258	-51.18769	8.57	abr	22	22.84155	22.82088	66.32271	8.58
abr	29	22.83331	22.81262	-51.18712	8.11	abr	29	22.84166	22.82097	66.32254	8.12
may	6	22.83339	22.81269	-51.18666	7.65	may	6	22.84176	22.82105	66.32237	7.66
may	13	22.83348	22.81275	-51.18613	7.19	may	13	22.84188	22.82115	66.32239	7.20
may	20	22.83355	22.81281	-51.18576	6.73	may	20	22.84199	22.82125	66.32237	6.74
may	27	22.83364	22.81288	-51.18533	6.27	may	27	22.84212	22.82135	66.32253	6.28
jun	3	22.83373	22.81295	-51.18505	5.81	jun	3	22.84223	22.82145	66.32268	5.82
jun	10	22.83383	22.81301	-51.18470	5.35	jun	10	22.84236	22.82155	66.32302	5.36
jun	17	22.83391	22.81308	-51.18455	4.89	jun	17	22.84247	22.82164	66.32330	4.90
jun	24	22.83400	22.81315	-51.18433	4.43	jun	24	22.84259	22.82173	66.32377	4.44
jul	1	22.83408	22.81321	-51.18427	3.97	jul	1	22.84269	22.82181	66.32419	3.98
jul	8	22.83418	22.81327	-51.18417	3.51	jul	8	22.84279	22.82189	66.32478	3.52
jul	15	22.83424	22.81333	-51.18426	3.05	jul	15	22.84287	22.82196	66.32530	3.06
jul	22	22.83433	22.81338	-51.18428	2.59	jul	22	22.84296	22.82202	66.32598	2.60
jul	29	22.83438	22.81342	-51.18446	2.13	jul	29	22.84303	22.82207	66.32659	2.14
ago	5	22.83445	22.81347	-51.18461	1.67	ago	5	22.84310	22.82211	66.32733	1.68
ago	12	22.83449	22.81350	-51.18492	1.21	ago	12	22.84314	22.82215	66.32798	1.22
ago	19	22.83454	22.81353	-51.18516	0.75	ago	19	22.84318	22.82216	66.32876	0.76
ago	26	22.83457	22.81354	-51.18553	0.29	ago	26	22.84321	22.82218	66.32945	0.30
sep	2	22.83460	22.81355	-51.18586	23.83	sep	2	22.84322	22.82217	66.33021	23.84
sep	9	22.83460	22.81355	-51.18631	23.37	sep	9	22.84322	22.82216	66.33088	23.38
sep	16	22.83462	22.81355	-51.18668	22.91	sep	16	22.84321	22.82214	66.33163	22.92
sep	23	22.83461	22.81353	-51.18712	22.45	sep	23	22.84319	22.82211	66.33230	22.46
sep	30	22.83461	22.81351	-51.18753	21.99	sep	30	22.84316	22.82206	66.33297	22.00
oct	7	22.83458	22.81347	-51.18799	21.53	oct	7	22.84312	22.82201	66.33355	21.54
oct	14	22.83456	22.81343	-51.18836	21.07	oct	14	22.84306	22.82194	66.33416	21.08
oct	21	22.83452	22.81338	-51.18873	20.61	oct	21	22.84301	22.82187	66.33468	20.62
oct	28	22.83449	22.81334	-51.18908	20.15	oct	28	22.84294	22.82178	66.33516	20.16
nov	4	22.83444	22.81327	-51.18940	19.69	nov	4	22.84287	22.82170	66.33555	19.70
nov	11	22.83441	22.81322	-51.18964	19.23	nov	11	22.84279	22.82159	66.33590	19.24
nov	18	22.83436	22.81314	-51.18982	18.77	nov	18	22.84271	22.82150	66.33619	18.78
nov	25	22.83432	22.81308	-51.18998	18.31	nov	25	22.84262	22.82138	66.33638	18.32
dic	2	22.83426	22.81301	-51.19006	17.85	dic	2	22.84253	22.82128	66.33650	17.86
dic	9	22.83423	22.81295	-51.19008	17.39	dic	9	22.84244	22.82116	66.33653	17.40
dic	16	22.83418	22.81288	-51.19000	16.93	dic	16	22.84236	22.82106	66.33652	16.94
dic	23	22.83415	22.81282	-51.18992	16.47	dic	23	22.84226	22.82094	66.33636	16.48

Posiciones aparentes de estrellas brillantes, 2024

(a las 0^h del meridiano 90° W.G.)

112748						115102					
V			Sp			V			Sp		
3.51			M2III			4.41			K1III		
		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	22.85240	22.83199	24.72935	15.95	ene	1	23.33509	23.31468	-32.40527	16.43
ene	8	22.85237	22.83195	24.72906	15.49	ene	8	23.33506	23.31463	-32.40525	15.97
ene	15	22.85236	22.83190	24.72881	15.03	ene	15	23.33505	23.31459	-32.40511	15.51
ene	22	22.85234	22.83187	24.72850	14.57	ene	22	23.33503	23.31455	-32.40496	15.05
ene	29	22.85233	22.83184	24.72817	14.11	ene	29	23.33502	23.31452	-32.40477	14.59
feb	5	22.85232	22.83182	24.72782	13.65	feb	5	23.33500	23.31449	-32.40457	14.13
feb	12	22.85232	22.83179	24.72750	13.19	feb	12	23.33500	23.31447	-32.40427	13.67
feb	19	22.85233	22.83178	24.72719	12.73	feb	19	23.33500	23.31445	-32.40395	13.21
feb	26	22.85233	22.83177	24.72685	12.27	feb	26	23.33500	23.31444	-32.40362	12.75
mar	4	22.85234	22.83177	24.72656	11.81	mar	4	23.33501	23.31443	-32.40326	12.29
mar	11	22.85236	22.83177	24.72629	11.35	mar	11	23.33503	23.31444	-32.40285	11.83
mar	18	22.85239	22.83178	24.72610	10.89	mar	18	23.33505	23.31444	-32.40239	11.37
mar	25	22.85241	22.83180	24.72587	10.43	mar	25	23.33507	23.31446	-32.40197	10.91
abr	1	22.85245	22.83182	24.72574	9.97	abr	1	23.33510	23.31447	-32.40150	10.45
abr	8	22.85248	22.83185	24.72563	9.51	abr	8	23.33513	23.31449	-32.40103	9.99
abr	15	22.85254	22.83188	24.72565	9.05	abr	15	23.33518	23.31452	-32.40048	9.53
abr	22	22.85258	22.83191	24.72563	8.59	abr	22	23.33522	23.31455	-32.40003	9.07
abr	29	22.85264	22.83195	24.72574	8.13	abr	29	23.33527	23.31458	-32.39951	8.61
may	6	22.85269	22.83199	24.72584	7.67	may	6	23.33533	23.31463	-32.39905	8.15
may	13	22.85276	22.83203	24.72610	7.21	may	13	23.33540	23.31467	-32.39850	7.69
may	20	22.85281	22.83207	24.72629	6.75	may	20	23.33545	23.31471	-32.39809	7.23
may	27	22.85289	22.83212	24.72663	6.29	may	27	23.33552	23.31476	-32.39761	6.77
jun	3	22.85295	22.83216	24.72693	5.83	jun	3	23.33559	23.31481	-32.39723	6.31
jun	10	22.85302	22.83221	24.72738	5.37	jun	10	23.33567	23.31486	-32.39678	5.85
jun	17	22.85308	22.83225	24.72774	4.91	jun	17	23.33573	23.31491	-32.39649	5.39
jun	24	22.85315	22.83229	24.72826	4.45	jun	24	23.33581	23.31495	-32.39612	4.93
jul	1	22.85320	22.83233	24.72869	3.99	jul	1	23.33587	23.31500	-32.39590	4.47
jul	8	22.85327	22.83237	24.72925	3.53	jul	8	23.33595	23.31505	-32.39562	4.01
jul	15	22.85332	22.83240	24.72970	3.07	jul	15	23.33601	23.31509	-32.39552	3.55
jul	22	22.85338	22.83243	24.73028	2.61	jul	22	23.33608	23.31513	-32.39534	3.09
jul	29	22.85341	22.83246	24.73075	2.15	jul	29	23.33613	23.31517	-32.39532	2.63
ago	5	22.85346	22.83248	24.73132	1.69	ago	5	23.33619	23.31520	-32.39525	2.17
ago	12	22.85349	22.83249	24.73177	1.23	ago	12	23.33622	23.31523	-32.39535	1.71
ago	19	22.85352	22.83250	24.73232	0.77	ago	19	23.33627	23.31525	-32.39538	1.25
ago	26	22.85354	22.83251	24.73276	0.31	ago	26	23.33630	23.31527	-32.39554	0.79
sep	2	22.85356	22.83251	24.73325	23.85	sep	2	23.33633	23.31528	-32.39568	0.33
sep	9	22.85356	22.83251	24.73362	23.39	sep	9	23.33634	23.31529	-32.39595	23.87
sep	16	22.85358	22.83250	24.73406	22.93	sep	16	23.33637	23.31529	-32.39614	23.41
sep	23	22.85357	22.83249	24.73441	22.47	sep	23	23.33637	23.31528	-32.39643	22.95
sep	30	22.85357	22.83247	24.73476	22.01	sep	30	23.33637	23.31527	-32.39669	22.49
oct	7	22.85355	22.83245	24.73501	21.55	oct	7	23.33636	23.31525	-32.39704	22.03
oct	14	22.85354	22.83242	24.73529	21.09	oct	14	23.33636	23.31523	-32.39731	21.57
oct	21	22.85353	22.83239	24.73550	20.63	oct	21	23.33634	23.31520	-32.39762	21.11
oct	28	22.85351	22.83235	24.73567	20.17	oct	28	23.33632	23.31517	-32.39790	20.65
nov	4	22.85348	22.83231	24.73578	19.71	nov	4	23.33629	23.31512	-32.39821	20.19
nov	11	22.85346	22.83227	24.73587	19.25	nov	11	23.33628	23.31508	-32.39845	19.73
nov	18	22.85344	22.83222	24.73593	18.79	nov	18	23.33625	23.31503	-32.39867	19.27
nov	25	22.85341	22.83217	24.73591	18.33	nov	25	23.33622	23.31499	-32.39887	18.81
dic	2	22.85338	22.83213	24.73585	17.87	dic	2	23.33619	23.31493	-32.39905	18.35
dic	9	22.85336	22.83208	24.73575	17.41	dic	9	23.33617	23.31489	-32.39916	17.89
dic	16	22.85334	22.83203	24.73564	16.95	dic	16	23.33614	23.31483	-32.39921	17.43
dic	23	22.85331	22.83198	24.73544	16.49	dic	23	23.33611	23.31479	-32.39927	16.97

Posiciones aparentes de estrellas brillantes, 2024
(a las 0^h del meridiano 90° W.G.)

115623						115623							
V			Sp			V			Sp				
4.42			F8IV			4.42			F8IV				
α		α _c		δ		α		α _c		δ		Hp	
m	d	h	h	°	h	m	d	h	h	°	h		h
ene	1	23.44274	23.42233	23.53737	16.54	jul	1	23.44344	23.42256	23.53677	4.58		
ene	8	23.44271	23.42228	23.53712	16.08	jul	8	23.44351	23.42260	23.53730	4.12		
ene	15	23.44269	23.42224	23.53693	15.62	jul	15	23.44356	23.42264	23.53772	3.66		
ene	22	23.44267	23.42220	23.53666	15.16	jul	22	23.44362	23.42268	23.53828	3.20		
ene	29	23.44266	23.42217	23.53638	14.70	jul	29	23.44367	23.42271	23.53873	2.74		
feb	5	23.44264	23.42213	23.53607	14.24	ago	5	23.44372	23.42273	23.53928	2.28		
feb	12	23.44264	23.42211	23.53580	13.78	ago	12	23.44375	23.42276	23.53970	1.82		
feb	19	23.44264	23.42209	23.53551	13.32	ago	19	23.44380	23.42278	23.54024	1.36		
feb	26	23.44263	23.42207	23.53521	12.86	ago	26	23.44382	23.42279	23.54066	0.90		
mar	4	23.44264	23.42206	23.53493	12.40	sep	2	23.44385	23.42280	23.54115	0.44		
mar	11	23.44265	23.42206	23.53469	11.94	sep	9	23.44386	23.42281	23.54151	23.98		
mar	18	23.44267	23.42206	23.53450	11.48	sep	16	23.44388	23.42281	23.54196	23.52		
mar	25	23.44268	23.42207	23.53429	11.02	sep	23	23.44388	23.42280	23.54229	23.06		
abr	1	23.44271	23.42208	23.53415	10.56	sep	30	23.44389	23.42279	23.54265	22.60		
abr	8	23.44274	23.42210	23.53405	10.10	oct	7	23.44388	23.42277	23.54290	22.14		
abr	15	23.44279	23.42213	23.53405	9.64	oct	14	23.44388	23.42275	23.54320	21.68		
abr	22	23.44282	23.42216	23.53401	9.18	oct	21	23.44387	23.42273	23.54342	21.22		
abr	29	23.44288	23.42219	23.53409	8.72	oct	28	23.44386	23.42270	23.54362	20.76		
may	6	23.44293	23.42222	23.53418	8.26	nov	4	23.44383	23.42267	23.54374	20.30		
may	13	23.44299	23.42226	23.53440	7.80	nov	11	23.44382	23.42263	23.54386	19.84		
may	20	23.44304	23.42230	23.53456	7.34	nov	18	23.44380	23.42259	23.54394	19.38		
may	27	23.44311	23.42235	23.53487	6.88	nov	25	23.44378	23.42254	23.54396	18.92		
jun	3	23.44317	23.42239	23.53514	6.42	dic	2	23.44375	23.42250	23.54393	18.46		
jun	10	23.44325	23.42244	23.53556	5.96	dic	9	23.44373	23.42245	23.54388	18.00		
jun	17	23.44331	23.42248	23.53589	5.50	dic	16	23.44371	23.42240	23.54381	17.54		
jun	24	23.44338	23.42252	23.53637	5.04	dic	23	23.44368	23.42236	23.54366	17.08		

Posiciones aparentes de la estrella Polar, 2024

(a las 0^h del meridiano 90° W.G.)

11767

(V = 1.97Sp = F7:Ib-IIv SB)

		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
ene	1	3.05746	3.03705	89.36959	20.15	feb	23	3.03125	3.01069	89.37097	16.64
ene	2	3.05700	3.03659	89.36966	20.08	feb	24	3.03066	3.01010	89.37095	16.58
ene	3	3.05654	3.03613	89.36972	20.02	feb	25	3.03007	3.00951	89.37092	16.51
ene	4	3.05610	3.03569	89.36977	19.95	feb	26	3.02948	3.00892	89.37089	16.44
ene	5	3.05569	3.03528	89.36982	19.89	feb	27	3.02892	3.00836	89.37086	16.38
ene	6	3.05530	3.03489	89.36988	19.82	feb	28	3.02838	3.00782	89.37082	16.31
ene	7	3.05494	3.03452	89.36993	19.75	feb	29	3.02789	3.00732	89.37077	16.24
ene	8	3.05460	3.03418	89.36998	19.69	mar	1	3.02742	3.00686	89.37073	16.18
ene	9	3.05426	3.03383	89.37004	19.62	mar	2	3.02699	3.00643	89.37068	16.11
ene	10	3.05391	3.03347	89.37011	19.56	mar	3	3.02659	3.00602	89.37064	16.05
ene	11	3.05352	3.03307	89.37018	19.49	mar	4	3.02619	3.00561	89.37061	15.98
ene	12	3.05307	3.03262	89.37025	19.42	mar	5	3.02578	3.00520	89.37058	15.91
ene	13	3.05256	3.03211	89.37032	19.36	mar	6	3.02535	3.00477	89.37055	15.85
ene	14	3.05202	3.03157	89.37038	19.29	mar	7	3.02488	3.00429	89.37053	15.78
ene	15	3.05145	3.03100	89.37044	19.23	mar	8	3.02436	3.00378	89.37050	15.72
ene	16	3.05090	3.03044	89.37048	19.16	mar	9	3.02382	3.00323	89.37047	15.65
ene	17	3.05038	3.02992	89.37051	19.09	mar	10	3.02327	3.00268	89.37042	15.58
ene	18	3.04989	3.02943	89.37054	19.03	mar	11	3.02275	3.00217	89.37037	15.52
ene	19	3.04945	3.02899	89.37057	18.96	mar	12	3.02229	3.00170	89.37030	15.45
ene	20	3.04903	3.02856	89.37060	18.89	mar	13	3.02188	3.00129	89.37024	15.38
ene	21	3.04862	3.02815	89.37064	18.83	mar	14	3.02152	3.00093	89.37017	15.32
ene	22	3.04820	3.02772	89.37067	18.76	mar	15	3.02120	3.00061	89.37011	15.25
ene	23	3.04775	3.02727	89.37072	18.70	mar	16	3.02089	3.00029	89.37005	15.19
ene	24	3.04728	3.02679	89.37076	18.63	mar	17	3.02056	2.99996	89.37000	15.12
ene	25	3.04676	3.02627	89.37081	18.56	mar	18	3.02022	2.99962	89.36995	15.05
ene	26	3.04621	3.02572	89.37085	18.50	mar	19	3.01985	2.99924	89.36991	14.99
ene	27	3.04563	3.02514	89.37088	18.43	mar	20	3.01945	2.99884	89.36986	14.92
ene	28	3.04503	3.02454	89.37091	18.37	mar	21	3.01903	2.99842	89.36980	14.86
ene	29	3.04443	3.02393	89.37094	18.30	mar	22	3.01860	2.99799	89.36975	14.79
ene	30	3.04383	3.02334	89.37095	18.23	mar	23	3.01817	2.99755	89.36968	14.72
ene	31	3.04325	3.02276	89.37097	18.17	mar	24	3.01774	2.99713	89.36962	14.66
feb	1	3.04270	3.02220	89.37097	18.10	mar	25	3.01735	2.99673	89.36954	14.59
feb	2	3.04218	3.02168	89.37098	18.03	mar	26	3.01698	2.99637	89.36946	14.53
feb	3	3.04168	3.02118	89.37098	17.97	mar	27	3.01665	2.99604	89.36938	14.46
feb	4	3.04122	3.02071	89.37099	17.90	mar	28	3.01637	2.99575	89.36930	14.39
feb	5	3.04077	3.02026	89.37100	17.83	mar	29	3.01612	2.99550	89.36922	14.33
feb	6	3.04031	3.01980	89.37102	17.77	mar	30	3.01590	2.99528	89.36914	14.26
feb	7	3.03984	3.01932	89.37104	17.70	mar	31	3.01570	2.99507	89.36907	14.20
feb	8	3.03932	3.01880	89.37106	17.64	abr	1	3.01549	2.99486	89.36901	14.13
feb	9	3.03876	3.01823	89.37108	17.57	abr	2	3.01527	2.99464	89.36895	14.06
feb	10	3.03814	3.01761	89.37110	17.50	abr	3	3.01502	2.99438	89.36889	14.00
feb	11	3.03751	3.01698	89.37111	17.44	abr	4	3.01473	2.99410	89.36883	13.93
feb	12	3.03687	3.01634	89.37111	17.37	abr	5	3.01442	2.99378	89.36876	13.87
feb	13	3.03627	3.01574	89.37109	17.30	abr	6	3.01409	2.99346	89.36869	13.80
feb	14	3.03572	3.01519	89.37107	17.24	abr	7	3.01379	2.99315	89.36861	13.73
feb	15	3.03522	3.01469	89.37105	17.17	abr	8	3.01352	2.99288	89.36852	13.67
feb	16	3.03475	3.01422	89.37103	17.11	abr	9	3.01332	2.99268	89.36843	13.60
feb	17	3.03431	3.01377	89.37102	17.04	abr	10	3.01318	2.99254	89.36833	13.54
feb	18	3.03386	3.01332	89.37101	16.97	abr	11	3.01309	2.99245	89.36824	13.47
feb	19	3.03340	3.01285	89.37100	16.91	abr	12	3.01302	2.99238	89.36816	13.40
feb	20	3.03290	3.01235	89.37099	16.84	abr	13	3.01296	2.99231	89.36808	13.34
feb	21	3.03238	3.01183	89.37099	16.78	abr	14	3.01287	2.99222	89.36801	13.27
feb	22	3.03183	3.01127	89.37098	16.71	abr	15	3.01276	2.99210	89.36794	13.21

Posiciones aparentes de la estrella Polar, 2024 (a las 0^h del meridiano 90° W.G.)

11767

(V = 1.97Sp = F7: Ib- IIv SB)

		α		α_c	δ	Hp			α		α_c	δ	Hp
m	d	h	h	h	°	h	m	d	h	h	h	°	h
abr	16	3.01262	2.99196	89.36787	13.14	jun	8	3.01998	2.99918	89.36373	9.67		
abr	17	3.01246	2.99180	89.36780	13.08	jun	9	3.02038	2.99957	89.36368	9.60		
abr	18	3.01229	2.99162	89.36772	13.01	jun	10	3.02075	2.99993	89.36363	9.54		
abr	19	3.01211	2.99144	89.36764	12.94	jun	11	3.02109	3.00027	89.36359	9.47		
abr	20	3.01194	2.99128	89.36756	12.88	jun	12	3.02142	3.00060	89.36353	9.40		
abr	21	3.01180	2.99113	89.36746	12.81	jun	13	3.02175	3.00092	89.36348	9.34		
abr	22	3.01169	2.99102	89.36737	12.75	jun	14	3.02209	3.00126	89.36342	9.27		
abr	23	3.01162	2.99095	89.36727	12.68	jun	15	3.02245	3.00162	89.36336	9.21		
abr	24	3.01159	2.99092	89.36718	12.61	jun	16	3.02284	3.00202	89.36329	9.14		
abr	25	3.01160	2.99093	89.36708	12.55	jun	17	3.02327	3.00245	89.36323	9.08		
abr	26	3.01165	2.99097	89.36699	12.48	jun	18	3.02374	3.00291	89.36317	9.01		
abr	27	3.01171	2.99103	89.36690	12.42	jun	19	3.02425	3.00342	89.36311	8.95		
abr	28	3.01178	2.99109	89.36683	12.35	jun	20	3.02478	3.00394	89.36306	8.88		
abr	29	3.01183	2.99114	89.36675	12.29	jun	21	3.02532	3.00448	89.36301	8.82		
abr	30	3.01186	2.99117	89.36668	12.22	jun	22	3.02585	3.00500	89.36298	8.75		
may	1	3.01186	2.99116	89.36661	12.15	jun	23	3.02636	3.00551	89.36295	8.69		
may	2	3.01183	2.99113	89.36654	12.09	jun	24	3.02683	3.00597	89.36292	8.62		
may	3	3.01178	2.99109	89.36647	12.02	jun	25	3.02726	3.00640	89.36289	8.56		
may	4	3.01175	2.99105	89.36638	11.96	jun	26	3.02767	3.00680	89.36286	8.49		
may	5	3.01174	2.99104	89.36629	11.89	jun	27	3.02807	3.00720	89.36283	8.43		
may	6	3.01179	2.99109	89.36619	11.83	jun	28	3.02848	3.00761	89.36279	8.36		
may	7	3.01191	2.99120	89.36609	11.76	jun	29	3.02893	3.00806	89.36274	8.29		
may	8	3.01207	2.99137	89.36600	11.70	jun	30	3.02943	3.00856	89.36269	8.23		
may	9	3.01228	2.99157	89.36591	11.63	jul	1	3.02998	3.00911	89.36264	8.16		
may	10	3.01250	2.99178	89.36583	11.56	jul	2	3.03058	3.00970	89.36260	8.10		
may	11	3.01270	2.99198	89.36575	11.50	jul	3	3.03119	3.01031	89.36256	8.03		
may	12	3.01288	2.99216	89.36568	11.43	jul	4	3.03181	3.01092	89.36254	7.97		
may	13	3.01303	2.99230	89.36561	11.37	jul	5	3.03240	3.01151	89.36252	7.90		
may	14	3.01316	2.99242	89.36555	11.30	jul	6	3.03297	3.01207	89.36250	7.84		
may	15	3.01326	2.99253	89.36547	11.24	jul	7	3.03350	3.01260	89.36249	7.77		
may	16	3.01336	2.99262	89.36540	11.17	jul	8	3.03400	3.01309	89.36248	7.71		
may	17	3.01346	2.99273	89.36532	11.11	jul	9	3.03448	3.01357	89.36246	7.64		
may	18	3.01359	2.99285	89.36523	11.04	jul	10	3.03495	3.01404	89.36244	7.58		
may	19	3.01374	2.99300	89.36515	10.97	jul	11	3.03542	3.01451	89.36242	7.51		
may	20	3.01393	2.99319	89.36506	10.91	jul	12	3.03591	3.01500	89.36239	7.45		
may	21	3.01416	2.99342	89.36497	10.84	jul	13	3.03643	3.01552	89.36237	7.38		
may	22	3.01443	2.99368	89.36488	10.78	jul	14	3.03698	3.01606	89.36234	7.32		
may	23	3.01473	2.99399	89.36480	10.71	jul	15	3.03756	3.01664	89.36231	7.25		
may	24	3.01506	2.99431	89.36472	10.65	jul	16	3.03818	3.01726	89.36229	7.19		
may	25	3.01540	2.99464	89.36465	10.58	jul	17	3.03882	3.01789	89.36227	7.12		
may	26	3.01572	2.99496	89.36459	10.52	jul	18	3.03947	3.01854	89.36226	7.06		
may	27	3.01602	2.99525	89.36453	10.45	jul	19	3.04012	3.01919	89.36226	6.99		
may	28	3.01629	2.99551	89.36447	10.39	jul	20	3.04075	3.01981	89.36226	6.93		
may	29	3.01652	2.99574	89.36442	10.32	jul	21	3.04134	3.02040	89.36227	6.86		
may	30	3.01673	2.99596	89.36436	10.25	jul	22	3.04189	3.02094	89.36228	6.80		
may	31	3.01695	2.99617	89.36429	10.19	jul	23	3.04240	3.02145	89.36229	6.73		
jun	1	3.01719	2.99641	89.36421	10.12	jul	24	3.04289	3.02194	89.36230	6.67		
jun	2	3.01747	2.99669	89.36413	10.06	jul	25	3.04339	3.02244	89.36229	6.60		
jun	3	3.01781	2.99703	89.36405	9.99	jul	26	3.04392	3.02297	89.36228	6.54		
jun	4	3.01821	2.99742	89.36397	9.93	jul	27	3.04449	3.02354	89.36227	6.47		
jun	5	3.01864	2.99785	89.36390	9.86	jul	28	3.04512	3.02416	89.36226	6.41		
jun	6	3.01910	2.99831	89.36383	9.80	jul	29	3.04578	3.02482	89.36226	6.34		
jun	7	3.01955	2.99875	89.36378	9.73	jul	30	3.04646	3.02550	89.36226	6.28		

Posiciones aparentes de la estrella Polar, 2024

(a las 0^h del meridiano 90° W.G.)

11767

(V = 1.97Sp = F7:Ib-IIv SB)

α α _c δ Hp						α α _c δ Hp					
m	d	h	h	°	h	m	d	h	h	°	h
jul	31	3.04715	3.02618	89.36227	6.21	sep	22	3.07681	3.05573	89.36461	2.76
ago	1	3.04782	3.02685	89.36228	6.15	sep	23	3.07738	3.05630	89.36469	2.69
ago	2	3.04846	3.02748	89.36230	6.08	sep	24	3.07794	3.05685	89.36477	2.63
ago	3	3.04906	3.02808	89.36233	6.02	sep	25	3.07846	3.05737	89.36486	2.56
ago	4	3.04962	3.02864	89.36236	5.95	sep	26	3.07894	3.05785	89.36495	2.50
ago	5	3.05016	3.02917	89.36238	5.89	sep	27	3.07938	3.05828	89.36504	2.43
ago	6	3.05068	3.02969	89.36240	5.82	sep	28	3.07978	3.05868	89.36513	2.37
ago	7	3.05120	3.03021	89.36242	5.75	sep	29	3.08015	3.05905	89.36522	2.30
ago	8	3.05173	3.03074	89.36243	5.69	sep	30	3.08050	3.05940	89.36530	2.24
ago	9	3.05228	3.03129	89.36244	5.62	oct	1	3.08085	3.05975	89.36538	2.17
ago	10	3.05285	3.03186	89.36245	5.56	oct	2	3.08121	3.06011	89.36546	2.11
ago	11	3.05346	3.03246	89.36246	5.49	oct	3	3.08159	3.06049	89.36553	2.04
ago	12	3.05409	3.03310	89.36248	5.43	oct	4	3.08198	3.06088	89.36561	1.97
ago	13	3.05475	3.03375	89.36250	5.36	oct	5	3.08241	3.06131	89.36568	1.91
ago	14	3.05542	3.03442	89.36252	5.30	oct	6	3.08285	3.06175	89.36576	1.84
ago	15	3.05609	3.03509	89.36255	5.23	oct	7	3.08330	3.06220	89.36584	1.78
ago	16	3.05675	3.03574	89.36259	5.17	oct	8	3.08376	3.06265	89.36593	1.71
ago	17	3.05737	3.03636	89.36264	5.10	oct	9	3.08420	3.06309	89.36602	1.65
ago	18	3.05795	3.03693	89.36269	5.04	oct	10	3.08461	3.06350	89.36612	1.58
ago	19	3.05848	3.03746	89.36274	4.97	oct	11	3.08499	3.06387	89.36623	1.52
ago	20	3.05898	3.03796	89.36279	4.91	oct	12	3.08532	3.06420	89.36634	1.45
ago	21	3.05947	3.03845	89.36282	4.84	oct	13	3.08560	3.06448	89.36644	1.39
ago	22	3.05998	3.03896	89.36286	4.78	oct	14	3.08585	3.06472	89.36654	1.32
ago	23	3.06054	3.03951	89.36288	4.71	oct	15	3.08609	3.06496	89.36664	1.26
ago	24	3.06114	3.04012	89.36291	4.65	oct	16	3.08634	3.06522	89.36672	1.19
ago	25	3.06178	3.04076	89.36294	4.58	oct	17	3.08664	3.06551	89.36680	1.12
ago	26	3.06245	3.04142	89.36297	4.52	oct	18	3.08699	3.06586	89.36688	1.06
ago	27	3.06312	3.04209	89.36302	4.45	oct	19	3.08737	3.06624	89.36697	0.99
ago	28	3.06377	3.04274	89.36307	4.39	oct	20	3.08778	3.06664	89.36706	0.93
ago	29	3.06439	3.04335	89.36313	4.32	oct	21	3.08817	3.06703	89.36716	0.86
ago	30	3.06497	3.04393	89.36319	4.26	oct	22	3.08853	3.06738	89.36727	0.80
ago	31	3.06551	3.04447	89.36325	4.19	oct	23	3.08884	3.06769	89.36738	0.73
sep	1	3.06602	3.04498	89.36331	4.13	oct	24	3.08909	3.06794	89.36749	0.67
sep	2	3.06651	3.04546	89.36337	4.06	oct	25	3.08931	3.06815	89.36760	0.60
sep	3	3.06699	3.04594	89.36342	4.00	oct	26	3.08949	3.06833	89.36771	0.54
sep	4	3.06747	3.04642	89.36347	3.93	oct	27	3.08965	3.06849	89.36781	0.47
sep	5	3.06796	3.04691	89.36352	3.87	oct	28	3.08980	3.06864	89.36791	0.40
sep	6	3.06847	3.04742	89.36357	3.80	oct	29	3.08995	3.06879	89.36800	0.34
sep	7	3.06902	3.04797	89.36361	3.74	oct	30	3.09012	3.06896	89.36809	0.27
sep	8	3.06958	3.04853	89.36366	3.67	oct	31	3.09030	3.06914	89.36818	0.21
sep	9	3.07017	3.04912	89.36371	3.61	nov	1	3.09051	3.06935	89.36827	0.14
sep	10	3.07077	3.04972	89.36377	3.54	nov	2	3.09074	3.06957	89.36836	0.08
sep	11	3.07138	3.05032	89.36383	3.48	nov	3	3.09097	3.06981	89.36846	0.01
sep	12	3.07197	3.05090	89.36390	3.41	nov	4	3.09121	3.07004	89.36856	23.95
sep	13	3.07253	3.05146	89.36398	3.34	nov	5	3.09144	3.07027	89.36866	23.88
sep	14	3.07305	3.05198	89.36407	3.28	nov	6	3.09164	3.07046	89.36878	23.82
sep	15	3.07352	3.05244	89.36415	3.21	nov	7	3.09180	3.07062	89.36889	23.75
sep	16	3.07395	3.05287	89.36423	3.15	nov	8	3.09191	3.07073	89.36901	23.68
sep	17	3.07435	3.05328	89.36431	3.08	nov	9	3.09198	3.07079	89.36913	23.62
sep	18	3.07476	3.05369	89.36437	3.02	nov	10	3.09201	3.07082	89.36924	23.55
sep	19	3.07520	3.05413	89.36443	2.95	nov	11	3.09202	3.07083	89.36934	23.49
sep	20	3.07570	3.05462	89.36449	2.89	nov	12	3.09203	3.07084	89.36944	23.42
sep	21	3.07624	3.05516	89.36455	2.82	nov	13	3.09207	3.07087	89.36953	23.36

Posiciones aparentes de la estrella Polar, 2024 (a las 0^h del meridiano 90° W.G.)

11767

(V = 1.97Sp = F7:lb-IIv SB)

		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
nov	14	3.09215	3.07096	89.36962	23.29	dic	8	3.09116	3.06988	89.37206	21.71
nov	15	3.09228	3.07108	89.36971	23.22	dic	9	3.09090	3.06962	89.37215	21.65
nov	16	3.09244	3.07123	89.36980	23.16	dic	10	3.09066	3.06938	89.37223	21.58
nov	17	3.09260	3.07139	89.36990	23.09	dic	11	3.09046	3.06918	89.37231	21.51
nov	18	3.09273	3.07151	89.37001	23.03	dic	12	3.09030	3.06902	89.37238	21.45
nov	19	3.09281	3.07160	89.37013	22.96	dic	13	3.09018	3.06889	89.37246	21.38
nov	20	3.09284	3.07162	89.37025	22.90	dic	14	3.09006	3.06877	89.37255	21.32
nov	21	3.09282	3.07160	89.37036	22.83	dic	15	3.08994	3.06864	89.37264	21.25
nov	22	3.09276	3.07153	89.37047	22.76	dic	16	3.08978	3.06848	89.37274	21.18
nov	23	3.09267	3.07144	89.37058	22.70	dic	17	3.08957	3.06826	89.37284	21.12
nov	24	3.09257	3.07134	89.37068	22.63	dic	18	3.08930	3.06799	89.37294	21.05
nov	25	3.09246	3.07123	89.37078	22.57	dic	19	3.08899	3.06767	89.37303	20.99
nov	26	3.09237	3.07113	89.37087	22.50	dic	20	3.08864	3.06732	89.37313	20.92
nov	27	3.09229	3.07105	89.37096	22.44	dic	21	3.08828	3.06696	89.37321	20.86
nov	28	3.09223	3.07099	89.37104	22.37	dic	22	3.08791	3.06659	89.37329	20.79
nov	29	3.09219	3.07095	89.37113	22.30	dic	23	3.08755	3.06622	89.37336	20.72
nov	30	3.09217	3.07093	89.37122	22.24	dic	24	3.08721	3.06588	89.37343	20.66
dic	1	3.09215	3.07090	89.37132	22.17	dic	25	3.08688	3.06555	89.37349	20.59
dic	2	3.09212	3.07087	89.37142	22.11	dic	26	3.08658	3.06525	89.37356	20.52
dic	3	3.09206	3.07080	89.37152	22.04	dic	27	3.08630	3.06496	89.37363	20.46
dic	4	3.09197	3.07071	89.37163	21.98	dic	28	3.08603	3.06469	89.37369	20.39
dic	5	3.09183	3.07056	89.37174	21.91	dic	29	3.08575	3.06441	89.37377	20.33
dic	6	3.09164	3.07037	89.37185	21.84	dic	30	3.08546	3.06411	89.37385	20.26
dic	7	3.09141	3.07014	89.37196	21.78	dic	31	3.08513	3.06377	89.37393	20.20

Constelaciones, 2024

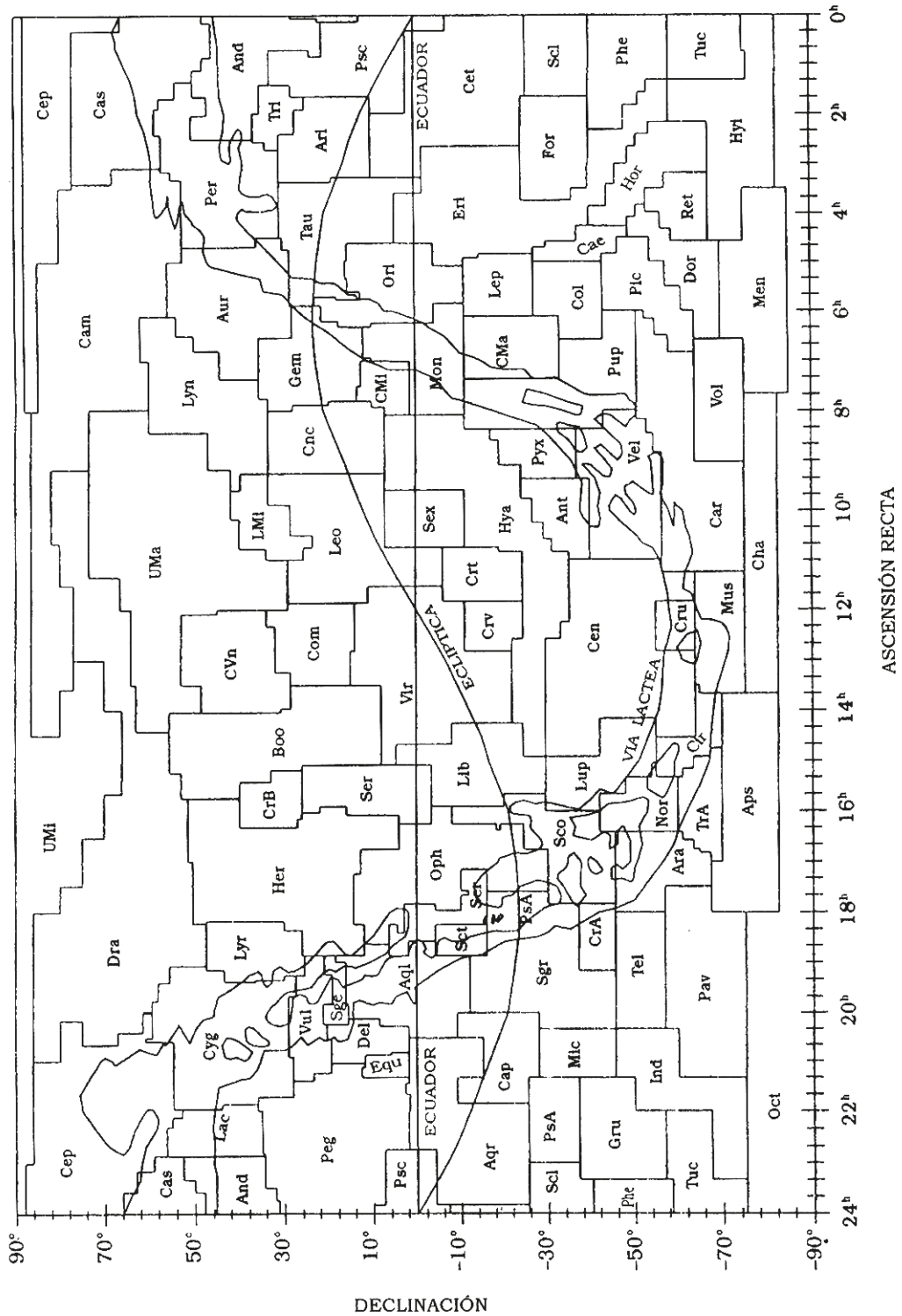
Nombres y significados

Nominativo	Genitivo	Abreviatura	Significado
Andromeda	Andromedae	And	Andrómeda, hija de Casiopea y Cefeo
Antlia	Antliae	Ant	Máquina neumática
Apus	Apodis	Aps	Ave del paraíso
Aquarius	Aquarii	Aqr	Aguador
Aquila	Aquilae	Aql	Aguila
Ara	Arae	Ara	Altar
Aries	Arietis	Ari	Carnero
Auriga	Aurigae	Aur	Cochero
Bootes	Bootis	Boo	Boyero o pastor
Caelum	Caeli	Cae	Buril
Camelopardalis	Camaleopardalis	Cam	Jirafa
Cancer	Cancri	Cnc	Cangrejo
Canes Venatici	Canum Venaticorum	CVn	Lebrelas o perros de caza
Canis Major	Canis Majoris	CMa	Can mayor
Canis Minor	Canis Minoris	CMi	Can menor
Capricornus	Capricorni	Cap	Cabra marina
Carina	Carinae	Car	Carena o quilla
Cassiopeia	Cassiopeiae	Cas	Casiopea, reina
Centaurus	Centauri	Cen	Centauro
Cepheus	Cephei	Cep	Cefeo, rey
Cetus	Ceti	Cet	Cetáceo o ballena
Chamaleon	Chamaleontis	Cha	Camaleón
Circinus	Circini	Cir	Compás
Columba	Columbae	Col	Paloma
Coma Berenices	Comae Berenices	Com	Cabellera de Berenice
Corona Australis	Coronae Australis	CrA	Corona austral
Corona Borealis	Coronae Borealis	CrB	Corona boreal
Corvus	Corvi	Crv	Cuervo
Crater	Crateris	Crt	Copa
Crux	Crucis	Cru	Cruz del sur
Cygnus	Cygni	Cyg	Cisne
Delphinus	Delphini	Del	Delfín
Dorado	Doradus	Dor	Pez dorado
Draco	Draconis	Dra	Dragón
Equuleus	Equulei	Equ	Caballo menor
Eridanus	Eridani	Eri	Río
Fornax	Fornacis	For	Horno
Gemini	Geminorum	Gem	Gemelos
Grus	Gruis	Gru	Grulla
Hercules	Herculis	Her	Hércules
Horologium	Horologii	Hor	Reloj
Hydra	Hydrae	Hya	Serpiente marina hembra
Hydrus	Hydri	Hyi	Serpiente marina macho
Indus	Indi	Ind	Indio
Lacerta	Lacertae	Lac	Lagartija
Leo	Leonis	Leo	León
Leo Minor	Leonis Minoris	LMi	León menor
Lepus	Leporis	Lep	Liebre
Libra	Librae	Lib	Balanza
Lupus	Lupi	Lup	Lobo
Lynx	Lyncis	Lyn	Lince

Constelaciones, 2024

Nominativo	Genitivo	Abreviatura	Significado
Lyra	Lyrae	Lyr	Lira
Mensa	Mensae	Men	Mesa o altiplano
Microscopium	Microscopii	Mic	Microscopio
Monoceros	Monocerotis	Mon	Unicornio
Musca	Muscae	Mus	Mosca
Norma	Normae	Nor	Escuadra o regla
Octantis	Octantis	Oct	Octante
Ophiuchus	Ophiuchi	Oph	Serpentero, Ofiuco
Orionis	Orionis	Ori	Cazador
Pavo	Pavonis	Pav	Pavo real, pavón
Pegasus	Pegasi	Peg	Pegaso
Perseus	Persei	Per	Salvador de Andrómeda
Phoenix	Phoenicis	Phe	Fénix
Pictor	Pictoris	Pic	Caballete de pintor
Pisces	Piscium	Psc	Peces
Piscis Austrinus	Piscis Austrini	PsA	Pez austral
Puppis	Puppis	Pup	Popa
Pyxis	Pyxidis	Pyx	Compás o brújula
Reticulum	Reticuli	Ret	Reticula
Sagitta	Sagittae	Sge	Flecha
Sagittarius	Sagittarii	Sgr	Arquero
Scorpius	Scorpii	Sco	Escorpión
Sculptor	Sculptoris	Scl	Escultor
Scutum	Scuti	Sct	Escudo
Serpents	Serpentis	Ser	Serpiente
Sextans	Sextantis	Sex	Sextante
Taurus	Tauri	Tau	Toro
Telescopium	Telescopii	Tel	Telescopio
Triangulum	Trianguli	Tri	Triángulo
Triangulum-Australe	Trianguli-Australis	TrA	Triángulo austral
Tucana	Tucanae	Tuc	Tucán
Ursa Major	Ursae Majoris	UMa	Osa mayor
Ursa Minor	Ursae Minoris	UMi	Osa menor
Vela	Velorum	Vel	Vela
Virgo	Virginis	Vir	Virgen
Volans	Volantis	Vol	Pez volador
Vulpecula	Vulpeculae	Vul	Zorra

Diagrama de constelaciones, 2024



Objetos Messier, 2024

M	NGC	α			δ			const	v	tipo	descripción
		h	m	s	°	'	"				
110	205	0	40	24	+ 41	41	37	And	8	E6	Satélite de M31
032	221	0	42	42	+ 40	52	36	And	8	E2	Satélite de M31
031	224	0	42	42	+ 41	16	36	And	4	S	Galaxia de Andrómeda
103	581	1	33	12	+ 60	42	8	Cas	7	ca	
033	598	1	33	54	+ 30	39	17	Tri	7	Sc	
074	628	1	36	42	+ 15	47	26	Psc	10	Sc	
076	650	1	42	18	+ 51	34	9	Per	12	np	Nebulosa, Pequeña Mancuerna
077	1068	2	42	42	- 0	1	22	Cet	9	Sbp	Galaxia Seyfert
034	1039	2	42	0	+ 42	47	4	Per	6	ca	
045		3	47	18	+ 24	5	56	Tau	1	ca	Pléyades
079	1904	5	24	30	- 24	33	6	Lep	8	cg	
038	1912	5	28	42	+ 35	50	15	Aur	6	ca	
001	1952	5	34	30	+ 22	1	13	Tau	8	rsn	Nebulosa del Cangrejo
042	1976	5	35	24	- 5	27	2	Ori		ne	Nebulosa de Orión
036	1960	5	36	6	+ 34	8	3	Aur	6	ca	
078	2068	5	46	42	+ 0	3	5	Ori		nr	
037	2099	5	52	24	+ 32	33	10	Aur	6	ca	
035	2168	6	8	54	+ 24	20	5	Gem	5	ca	
041	2287	6	47	0	- 20	44	5	CMa	5	ca	
050	2323	7	3	12	- 8	20	1	Mon	7	ca	
047*	2422	7	36	36	- 14	30	4	Pup	5	ca	
046	2437	7	41	48	- 14	49	6	Pup	6	ca	
093	2447	7	44	42	- 23	52	13	Pup	6	ca	
048*	2548	8	13	48	- 5	48	3	Hya	5	ca	
044	2632	8	40	1	+ 19	59	1	Cnc	4	ca	El Pesebre o La Colmena
067	2682	8	50	24	+ 11	49	5	Cnc	6	ca	Cúmulo muy viejo
081	3031	9	55	30	+ 69	4	0	UMa	8	Sb	
082	3034	9	55	48	+ 69	41	1	UMa	9	gPec	
095	3351	10	40	0	+ 11	42	3	Leo	10	SBb	Miembro del grupo de Leo
096	3368	10	46	48	+ 11	49	14	Leo	9	Sbp	Miembro del grupo de Leo
105	3379	10	47	48	+ 12	35	3	Leo	9	E1	
108	3556	11	11	30	+ 55	40	2	UMa	11	Sc	
097	3587	11	14	48	+ 55	1	5	UMa	12	np	Nebulosa de la Lechuza
065	3623	11	18	54	+ 13	5	14	Leo	9	Sa	Miembro del grupo de Leo
066	3627	11	20	12	+ 12	59	3	Leo	8	Sb	Miembro del grupo de Leo
109	3992	11	57	42	+ 53	23	1	UMa	11	Sb	
098	4192	12	13	48	+ 14	54	2	Com	11	Sb	
099	4254	12	18	48	+ 14	25	12	Com	10	Sc	Miembro del cúmulo de Virgo
106	4258	12	19	0	+ 47	18	2	CVn	9	Sbp	Gran espiral
061	4303	12	21	54	+ 4	28	3	Vir	10	Sc	Miembro del cúmulo de Virgo
040		12	22	24	+ 58	5	13	UMa	9		Estrella binaria
100	4321	12	22	54	+ 15	49	2	Com	11	Sc	Miembro del cúmulo de Virgo
084	4374	12	25	6	+ 12	53	12	Vir	9	S0	Miembro del cúmulo de Virgo
085	4382	12	25	24	+ 18	11	2	Com	9	S0	Miembro del cúmulo de Virgo
086	4406	12	26	6	+ 13	7	12	Vir	10	E3	
049	4472	12	29	48	+ 8	0	12	Vir	9	E4	Elíptica gigante, cúmulo de Virgo
087	4486	12	30	48	+ 12	24	22	Vir	9	E0	Elíptica gigante, cúmulo de Virgo
088	4501	12	32	0	+ 14	25	3	Com	10	Sc	Espiral, cúmulo de Virgo
091*	4548	12	35	24	+ 14	30	21	Com	11	SBb	
089	4552	12	35	42	+ 12	33	22	Vir	10	E0	
090	4569	12	36	48	+ 13	10	3	Vir	10	Sb	Miembro del cúmulo de Virgo
058	4579	12	37	42	+ 11	49	12	Vir	9	SB	Miembro del cúmulo de Virgo
068	4590	12	39	30	- 26	45	7	Hya	8	cg	
104	4594	12	40	0	- 11	37	3	Vir	9	Sb	Galaxia del Sombrero, en Virgo
059	4621	12	42	0	+ 11	39	2	Vir	10	E5	Probable miembro de Virgo

Objetos Messier, 2024

M	NGC	h	α m	s	δ °	'	"	const	v	tipo	descripción
060	4649	12	43	42	+ 11	33	20	Vir	9	E2	Elíptica del cúmulo de Virgo
094	4736	12	50	54	+ 41	7	26	CVn	8	Sbp	
064	4826	12	56	42	+ 21	41	2	Com	9	Sb	Con región oscura en el centro
053	5024	13	12	54	+ 18	10	13	Com	8	cg	
063	5055	13	15	48	+ 42	2	4	CVn	10	Sb	Galaxia de la Margarita
051	5194	13	29	54	+ 47	12	4	CVn	8	Sc	Galaxia del Remolino
083	5236	13	37	0	- 29	52	6	Hya	10	Sc	
003	5272	13	42	12	+ 28	23	26	CVn	6	cg	Contiene muchas variables
101	5457	14	3	12	+ 54	21	9	UMa	10	Sc	
102*	5866	15	6	30	+ 55	46	4	Dra	11	E6p	
005	5904	15	18	36	+ 2	5	15	Ser	6	cg	Con asimetría poco común
080	6093	16	17	3	- 22	58	3	Sco	8	cg	
004	6121	16	23	36	- 26	32	5	Sco	6	cg	Cúmulo más cercano a la Tie-
	rra										
107	6171	16	32	30	- 13	3	15	Oph	9	cg	
013	6205	16	41	42	+ 36	28	2	Her	6	cg	Gran cúmulo globular
012	6218	16	47	12	- 1	57	2	Oph	7	cg	
010	6254	16	57	64	- 4	6	7	Oph	7	cg	
062	6266	17	1	12	- 30	7	11	Oph	7	cg	
019	6273	17	2	36	- 26	16	11	Oph	7	cg	Cúmulo elongado
092	6341	17	17	6	+ 43	8	12	Her	6	cg	
009	6333	17	19	12	- 18	30	59	Oph	7	cg	
014	6402	17	37	36	- 3	15	2	Oph	8	cg	
006	6405	17	40	6	- 32	13	5	Sco	5	ca	
023	6494	17	56	48	- 19	1	5	Sgr	7	ca	
020	6514	18	2	18	- 23	2	5	Sgr	0	ne	Nebulosa Trífida
008	6523	18	3	48	- 24	22	59	Sgr	0	ne	Nebulosa de la Laguna
021	6531	18	4	36	- 22	30	5	Sgr	7	ca	
024		18	16	54	- 18	29	3	Sgr	5		Parte del bulbo de la Via Láctea
016	6611	18	18	48	- 13	47	8	Ser		ne	
018	6613	18	19	54	- 17	8	3	Sgr	8	ca	
017	6618	18	20	48	- 16	11	5	Sgr		ne	Nebulosa Omega
028	6626	18	24	30	- 24	52	10	Sgr	7	cg	
069	6637	18	31	24	- 32	21	2	Sgr	9	cg	Pequeño
025	4725	18	31	36	- 19	15	12	Sgr	7	ca	
022	6656	18	36	24	- 23	54	1	Sgr	6	cg	
070	6681	18	43	12	- 32	18	8	Sgr	10	cg	Cercano a M69
026	6694	18	45	12	- 9	24	16	Sct	9	ca	Brillante
011	6705	18	51	6	- 6	16	15	Sct	6	ca	Gran cúmulo
057	6720	18	53	36	+ 33	2	5	Lyr	9	np	Nebulosa del Anillo
054	6715	18	55	6	- 30	29	5	Sgr	9	cg	Difícil observación
056	6779	19	16	36	+ 30	11	3	Lyr	8	cg	
055	6809	19	40	0	- 30	58	13	Sgr	7	cg	
071	6838	19	53	48	+ 18	47	1	Sge	9	cg	
027	6853	19	59	36	+ 22	43	11	Vul	8	np	Nebulosa de la Mancuerna
075	6864	20	6	6	- 21	55	32	Sgr	8	cg	Cúmulo lejano
029	6913	20	23	54	+ 38	32	5	Cyg	7	ca	
072	6981	20	53	30	- 12	32	18	Aqr	10	cg	Nebulosa Saturno
073	6994	20	59	0	- 12	38	13	Aqr	11	ca	Cuatro estrellas
015	7078	21	30	0	+ 12	10	21	Peg	6	cg	Cúmulo compacto
039	7092	21	32	12	+ 48	26	24	Cyg	5	ca	Cúmulo disperso
002	7089	21	33	30	- 0	49	11	Aqr	6	cg	
030	7099	21	40	24	- 23	11	15	Cap	8	cg	Cuasi elíptico
052	7654	23	24	12	+ 61	35	7	Cas	7	ca	Cúmulo rico

*Existe controversia en la identificación de estos objetos.

Lluvias de estrellas, 2024

Lluvias de estrellas observables a simple vista

Nombre	inicia		máximo		termina		α		δ		obj./h	Cometa asociado
	m	d	m	d	m	d	h	m	°	'		
Cuadrántidas	ene	01	ene	03	ene	05	15	18	+49	41	120	
Cancerínidas	ene	01	ene	17	ene	24	08	42	+20	28	4	
Centáuridas	ene	28	feb	07	feb	21	14	00	-59	56	6	
Leónidas	feb	15	feb	24	mar	10	11	12	+16	23	2	
Nórmidas	feb	25	mar	13	mar	22	16	36	-51	56	8	
Virginidas	ene	25	mar	25		15	13	00	-04	30	5	
Líridas		16		22		25	18	06	+34	49	15	C/Thatcher (1861 G1)
Púpidas		15		24		28	07	18	-45	18	26	P/Grigg-Skjellerup
Acuáridas		19		06		28	22	30	-01	66	60	P/Halley
Sagitáridas		15		20	jul	15	16	30	-22	30	5	
Pegásidas	jul	07	jul	10	jul	13	22	42	+15	70	3	
Fenícidas	jul	10	jul	13	jul	16	02	06	-48	47		
Piscis Austrínidas	jul	15	jul	28	ago	10	22	42	-30	35	5	
Acuáridas	jul	12	jul	28	ago	19	22	36	-16	41	20	
Capricórnidas	jul	03	jul	30	ago	15	20	30	-10	23	4	
Acuáridas(sur)	jul	25	ago	04	ago	15	22	18	-15	34	2	
Acuáridas(norte)	jul	15	ago	09	ago	25	22	18	-05	42	4	
Perséidas	jul	17	ago	12	ago	24	03	06	+58	59	140	P/Swift-Tuttle
Cígnidas	ago	03	ago	18	ago	25	19	06	+59	25	3	
Acuáridas(norte)	ago	11	ago	20	ago	31	21	48	-06	31	3	
Aurígidas	ago	25	sep	01	sep	05	05	36	+42	66	10	
Aurígidas	sep	05	sep	09	oct	10	04	00	+47	64	6	
Piscidas	sep	01	sep	20	sep	30	00	18	-01	26	3	
Dracónidas	oct	06	oct	09	oct	10	17	30	+54	20	21	P/Giacobini-Zinner
Gemínidas	oct	14	oct	18	oct	27	06	48	+27	70	2	C/Ikeya (1964 N1)
Oriónidas	oct	02	oct	21	nov	07	06	18	+16	66	20	P/Halley
Táuridas (sur)	oct	01	nov	05	nov	25	03	30	+13	27	5	P/Encke
Táuridas (norte)	oct	01	nov	12	nov	25	03	54	+22	29	5	P/Encke
Leonidas	nov	14	nov	17	nov	21	10	12	+22	71	100	P/Tempel-Tuttle
Monocéridas	nov	15	nov	22	nov	25	07	48	+01	65		
Oriónidas	nov	26	dic	02	dic	15	05	30	+23	28	3	
Fenícidas	nov	28	dic	06	dic	09	01	12	-53	18		D/Blanpain (1819 W1)
Pupí vélidas	dic	01	dic	07	dic	15	08	12	-45	40	10	
Monocéridas	nov	27	dic	09	dic	17	15	00	+08	42	3	D/Mellish (1917 F1)
Hídridas	dic	03	dic	12	dic	15	08	30	+02	58	2	
Gemínidas	dic	07	dic	14	dic	17	07	30	+33	35	120	Phaethon
Coma Berenícidas	dic	12	dic	20	ene	23	11	42	+25	65	5	
Úrsidas	dic	17	dic	22	dic	26	15	00	+76	33	10	P/Tuttle

Eventos Planetarios, 2024

Hora del meridiano 90° W.G.

Mes				Eventos				Mes				Eventos			
d	h	objeto	suceso	d	h	objeto	suceso	d	h	objeto	suceso	d	h	objeto	suceso
Enero															
1	9	Luna	Apogeo	8	12	Luna	Luna Nueva ecl								
1	22	Mercurio	Estacionario	10	15	Júpiter	4° al sur de la Luna								
2	19	Tierra	Perihelio	10	18	Urano	4° al sur de la Luna								
3	22	Luna	Cuarto Menguante	10	21	Marte	0.5° al norte de Saturno								
6	2	Venus	6° al norte de Antares	11	17	Mercurio	Conjunción Inferior								
8	9	Antares	0.8° al sur de la Luna ocu	15	13	Luna	Cuarto Creciente								
8	14	Venus	6° al norte de la Luna	18	9	Juno	Estacionario								
9	13	Mercurio	7° al norte de la Luna	18	17	Mercurio	2° al norte de Venus								
10	3	Marte	4° al norte de la Luna	19	20	Luna	Apogeo								
11	6	Luna	Luna Nueva	20	2	Júpiter	0.5° al sur de Urano								
12	9	Mercurio	Elongación máxima al Oeste (24°)	23	18	Luna	Luna Llena								
13	5	Luna	Perigeo	24	2	Mercurio	Estacionario								
14	4	Saturno	2° al norte de la Luna	26	15	Antares	0.3° al sur de la Luna ocu								
15	5	Juno	Estacionario	28	22	Marte	0.04° al sur de Neptuno								
15	14	Neptuno	0.9° al norte de la Luna ocu	Mayo											
17	22	Luna	Cuarto Creciente	1	5	Luna	Cuarto Menguante								
18	15	Júpiter	3° al sur de la Luna	3	17	Saturno	0.8° al norte de la Luna ocu								
19	14	Urano	3° al sur de la Luna	3	21	Plutón	Estacionario								
20	8	Plutón	Conjunción con el Sol	4	13	Neptuno	0.3° al norte de la Luna ocu								
25	12	Luna	Luna llena	4	20	Marte	0.2° al sur de la Luna ocu								
27	5	Urano	Estacionario	5	16	Luna	Perigeo								
27	10	Mercurio	0.2° al norte de Marte	6	2	Mercurio	4° al sur de la Luna								
29	2	Luna	Apogeo	7	21	Luna	Luna Nueva								
Febrero															
2	17	Luna	Cuarto Menguante	9	16	Mercurio	Elongación máxima al Oeste (26°)								
4	19	Antares	0.6° al sur de la Luna ocu	13	3	Urano	Conjunción con el Sol								
7	13	Venus	5° al norte de la Luna	15	6	Luna	Cuarto Creciente								
8	1	Marte	4° al norte de la Luna	16	7	Juno	1.2° al sur de la Luna ocu								
8	12	Venus	Estacionario	16	17	Ceres	Estacionario								
9	17	Luna	Luna Nueva	17	13	Luna	Apogeo								
10	13	Luna	Perigeo	18	13	Júpiter	Conjunción con el Sol								
10	19	Saturno	1.8° al norte de la Luna	19	9	Palas	Oposición								
12	1	Neptuno	0.7° al norte de la Luna ocu	23	8	Luna	Luna llena								
15	2	Júpiter	3° al sur de la Luna	23	21	Antares	0.4° al sur de la Luna ocu								
15	20	Urano	3° al sur de la Luna	26	23	Ceres	1.9° al norte de la Luna ocu								
16	9	Luna	Cuarto Creciente	30	11	Luna	Cuarto Menguante								
22	10	Venus	0.6° al norte de Marte	31	2	Saturno	0.4° al norte de la Luna ocu								
24	7	Luna	Luna Llena	Junio											
25	9	Luna	Apogeo	0	21	Neptuno	0.02° al norte de la Luna ocu								
28	3	Mercurio	Conjunción Superior	2	1	Luna	Perigeo								
28	15	Saturno	Conjunción con el Sol	2	18	Marte	2° al sur de la Luna								
Marzo															
3	3	Antares	0.3° al sur de la Luna ocu	4	4	Mercurio	0.1sJúpiter								
3	9	Luna	Cuarto Menguante	4	10	Venus	Conjunción Superior								
3	12	Juno	Oposición	4	19	Urano	4° al sur de la Luna								
7	23	Marte	4° al norte de la Luna	5	8	Júpiter	5° al sur de la Luna								
8	11	Venus	3° al norte de la Luna	6	7	Luna	Luna Nueva								
10	1	Luna	Perigeo 10 3 Luna Luna Nueva	13	3	Juno	0.5° al norte de la Luna ocu								
13	19	Júpiter	Júpiter	13	23	Luna	Cuarto Creciente								
14	6	Urano	3° al sur de la Luna	14	8	Luna	Apogeo								
16	22	Luna	Cuarto Creciente	14	11	Mercurio	Conjunción Superior								
17	5	Neptuno	Conjunción con el Sol	16	12	Espiga	1.2° al sur de la Luna ocu								
19	21	Sol	Equinoccio	20	5	Antares	0.3° al sur de la Luna ocu								
21	20	Venus	0.3° al norte de Saturno	20	15	Sol	Solsticio								
23	10	Luna	Apogeo	21	19	Luna	Luna Llena								
24	17	Mercurio	Elongación máxima al Este (19°)	22	23	Ceres	1.08° al sur de la Luna ocu								
25	1	Luna	Luna Llena ecl	27	6	Luna	Perigeo								
30	9	Antares	0.3° al sur de la Luna ocu	27	9	Saturno	0.08° al sur de la Luna ocu								
Abril															
abr	1	14	Mercurio Estacionario	28	3	Neptuno	0.3° al sur de la Luna								
abr	1	21	Luna Cuarto Menguante	28	16	Luna	Cuarto Menguante								
4	13	Palas	Estacionario	29	4	Mercurio	5° al sur de Polux								
5	22	Marte	2° al norte de la Luna	30	15	Saturno	Estacionario								
6	3	Saturno	1.2° al norte de la Luna ocu	Julio											
7	2	Neptuno	0.4° al norte de la Luna ocu	1	12	Marte	4° al sur de la Luna								
7	11	Venus	0.4° al sur de la Luna ocu	2	4	Urano	4° al sur de la Luna								
7	12	Luna	Perigeo	2	21	Neptuno	Estacionario								
Mayo															
8	12	Luna	Luna Nueva ecl	3	2	Júpiter	5° al sur de la Luna								
10	15	Júpiter	4° al sur de la Luna	4	23	Tierra	Afelio° al norte de Aldebarán								
10	18	Urano	4° al sur de la Luna	5	17	Luna	Luna Nueva								
10	21	Marte	0.5° al norte de Saturno	5	18	Ceres	Oposición								
11	17	Mercurio	Conjunción Inferior												
15	13	Luna	Cuarto Creciente												
18	9	Juno	Estacionario												
18	17	Mercurio	2° al norte de Venus												
19	20	Luna	Apogeo												
20	2	Júpiter	0.5° al sur de Urano												
23	18	Luna	Luna Llena												
24	2	Mercurio	Estacionario												
26	15	Antares	0.3° al sur de la Luna ocu												
28	22	Marte	0.04° al sur de Neptuno												

Eventos Planetarios, 2024

Hora del meridiano 90° W.G.

Mes				Eventos				Mes				Eventos			
d	h	objeto	suceso	d	h	objeto	suceso	d	h	objeto	suceso	d	h	objeto	suceso
7	13	Mercurio	3° al sur de la Luna	30	15	Mercurio	Conjunción Superior								
12	2	Luna	Apogeo					Octubre							
13	1	Júpiter	5° al norte de Aldebarán	2	13	Luna	Luna Nueva	2	14	Luna	Apogeo				
13	17	Luna	Cuarto Creciente	5	14	Venus	3° al norte de la Luna	7	13	Antares	0.2° al norte de la Luna ocu				
13	21	Espiga	0.9° al sur de la Luna ocu	9	1	Júpiter	Estacionario	10	13	Luna	Cuarto Creciente				
15	3	Marte	0.6° al sur de Urano	11	20	Plutón	Estacionario	14	12	Saturno	0.1° al sur de la Luna ocu				
17	14	Antares	0.2° al sur de la Luna ocu	15	12	Neptuno	0.6° al sur de la Luna ocu	16	9	Juno	Conjunción con el Sol				
18	15	Palas	Estacionario	16	19	Luna	Perigeo	17	5	Luna	Luna llena				
21	4	Luna	Luna Llena	19	10	Urano	4° al sur de la Luna	21	0	Marte	6° al sur de Polux				
22	1	Mercurio	Elongación máxima al Este (27°)	21	2	Júpiter	6° al sur de la Luna	23	14	Marte	4° al sur de la Luna				
23	0	Plutón	Oposición	23	2	Luna	Cuarto Menguante	24	2	Luna	Cuarto Menguante				
24	0	Luna	Perigeo	25	13	Venus	3° al norte de Antares	29	17	Luna	Apogeo				
24	15	Saturno	0.4° al sur de la Luna ocu												
25	9	Neptuno	0.6° al sur de la Luna ocu	Agosto											
27	6	Mercurio	3° al sur de Régulo	4	2	Mercurio	Estacionario	4	5	Luna	Luna Nueva				
27	21	Luna	Cuarto Menguante	4	16	Venus	1.1° al norte de Régulo	5	13	Marte	5° al norte de Aldebarán				
29	12	Urano	4° al sur de la Luna	5	16	Venus	1.7° al sur de la Luna	5	18	Mercurio	7° al sur de la Luna				
30	5	Marte	5° al sur de la Luna	6	9	Mercurio	6° al sur de la Luna	6	9	Mercurio	6° al sur de la Luna				
30	18	Júpiter	5° al sur de la Luna	8	20	Luna	Apogeo	8	20	Luna	Apogeo				
				10	4	Espiga	0.7° al sur de la Luna ocu	11	16	Mercurio	6° al sur de Régulo				
				11	16	Mercurio	6° al sur de Régulo	12	9	Luna	Cuarto Creciente				
				12	9	Luna	Cuarto Creciente	13	23	Antares	0.004° al norte de la Luna ocu				
				13	23	Antares	0.004° al norte de la Luna ocu	14	11	Marte	0.3° al norte de Júpiter				
				14	11	Marte	0.3° al norte de Júpiter	18	20	Mercurio	Conjunción Inferior				
				18	20	Mercurio	Conjunción Inferior	19	12	Luna	Luna Llena				
				19	12	Luna	Luna Llena	20	3	V Estacionario	Conjunción con el Sol				
				20	3	V Estacionario	Conjunción con el Sol	20	21	Saturno	0.5° al sur de la Luna ocu				
				20	21	Saturno	0.5° al sur de la Luna ocu	20	23	Luna	Perigeo				
				20	23	Luna	Perigeo	21	16	Neptuno	0.7° al sur de la Luna ocu				
				21	16	Neptuno	0.7° al sur de la Luna ocu	25	18	Urano	4° al sur de la Luna				
				25	18	Urano	4° al sur de la Luna	26	2	Ceres	Estacionario				
				26	2	Ceres	Estacionario	26	3	Luna	Cuarto Menguante				
				26	3	Luna	Cuarto Menguante	27	7	Júpiter	6° al sur de la Luna				
				27	7	Júpiter	6° al sur de la Luna	27	18	Marte	5° al sur de la Luna				
				27	18	Marte	5° al sur de la Luna	27	21	Mercurio	Estacionario				
				27	21	Mercurio	Estacionario								
				Septiembre											
				1	3	Mercurio	5° al sur de la Luna	1	0	Luna	Luna Nueva				
				1	10	Urano	Estacionario	4	17	Venus	2° al norte de la Luna				
				2	20	Luna	Luna Nueva	5	20	Mercurio	Conjunción Inferior				
				4	21	Mercurio	Elongación máxima al Oeste (18°)	7	15	Júpiter	Oposición				
				5	4	Venus	1.2° al norte de la Luna ocu	7	15	Marte	Estacionario				
				5	9	Luna	Apogeo	8	3	Saturno	0.3° al sur de la Luna ocu				
				6	11	Espiga	0.5° al sur de la Luna ocu	8	5	Neptuno	Estacionario				
				7	23	Saturno	Oposición	8	9	Luna	Cuarto Creciente				
				9	1	Mercurio	0.5° al norte de Régulo	9	3	Neptuno	0.8° al sur de la Luna ocu				
				10	7	Antares	0.1° al norte de la Luna ocu	10	5	Mercurio	7° al norte de Antares				
				11	0	Luna	Cuarto Creciente	12	7	Luna	Perigeo				
				17	4	Saturno	0.3° al sur de la Luna ocu	13	4	Urano	4° al sur de la Luna				
				17	7	Venus	3nspi	14	14	Júpiter	5° al sur de la Luna				
				17	21	Luna	Luna Nueva ecl	15	3	Luna	Luna llena				
				18	2	Neptuno	0.7° al sur de la Luna ocu	15	15	Mercurio	Estacionario				
				18	7	Luna	Perigeo	18	3	Marte	0.9° al sur de la Luna ocu				
				20	18	Neptuno	Oposición	21	3	Sol	Solsticio				
				22	1	Urano	5° al sur de la Luna	21	18	Mercurio	7° al norte de Antares				
				22	7	Sol	Equinoccio	22	16	Luna	Cuarto Menguante				
				23	17	Júpiter	6° al sur de la Luna	24	1	Luna	Apogeo				
				24	13	Luna	Cuarto Menguante	24	14	Espiga	0.2° al sur de la Luna ocu				
				25	6	Marte	5° al sur de la Luna	24	21	Mercurio	Elongación máxima al Oeste (22°)				
								28	9	Antares	0.09° al norte de la Luna ocu				
								28	22	Mercurio	6° al norte de la Luna				
								30	16	Luna	Luna Nueva				

Pasos cenitales del sol, 2024

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes	día	$\varphi = \delta$		Paso cenital	
			h	m	h	m
Aguascalientes						
Calvillo	may	29	23	41.7	12	35.6
Aguascalientes	may	30	5	13.3	12	34
Puertecitos	may	30	19	43.9	12	33.8
Puertecitos	jul	11	11	18.6	12	41.9
Aguascalientes	jul	12	2	0.2	12	42.1
Calvillo	jul	12	7	24.4	12	43.9
Baja-California-Sur						
San-Jose-del-Cabo	jun	10	6	11.2	13	5.5
San-Jose-del-Cabo	jul	1	0	4.7	13	9.9
Campeche						
Lerma	may	11	23	12.9	11	46
Carmen-Isla	may	13	12	56.2	11	50.9
Escarcega	may	13	9	5.7	11	46.5
Champoton	may	16	13	38.3	11	46.5
Dzibalchen	may	17	1	26	11	42.6
Iturbide	may	17	14	42.2	11	42.1
Campeche	may	18	20	2	11	45.8
Bolonchenticul	may	19	14	17.9	11	42.7
Becal	may	21	18	19.3	11	44
Becal	jul	20	14	6.7	11	53.7
Bolonchenticul	jul	22	18	35.1	11	52.7
Campeche	jul	23	12	56.7	11	55.9
Iturbide	jul	24	18	34.7	11	52.2
Champoton	jul	25	19	52.4	11	56.7
Dzibalchen	jul	25	7	53.7	11	52.7
Carmen-Isla	jul	28	21	15.3	12	1.1
Escarcega	jul	29	1	8.6	11	56.7
Lerma	jul	30	11	14.9	11	56.1
Chiapas						
Las-Margaritas	may	2	0	37.3	11	56.5
Jaltenango	may	3	3	21.4	11	55
Comitan	may	4	11	17.3	11	52.5
Chiapa-de-Corzo	may	6	1	58.2	11	55.9
Ocosingo	may	6	19	35.9	11	52.2
Catazaja	may	9	21	22.9	11	51.8
Pichucalco	may	9	2	47	11	56.1
Catazaja	ago	1	13	36.2	12	1.7
Pichucalco	ago	2	8	24	12	6
Ocosingo	ago	4	16	11	12	1.7
Chiapa-de-Corzo	ago	5	9	59	12	5.3
Comitan	ago	7	1	9.9	12	1.5
Jaltenango	ago	8	9	23.9	12	3.8
Las-Margaritas	ago	9	12	25.4	12	5.1
Cacahuaton	ago	11	9	2.4	12	1.1
Puerto-Madero	ago	12	6	56.6	12	6
Suchiate	ago	12	10	21.4	12	0.9
Puerto-Madero	abr	29	6	54.6	11	58.2
Suchiate	abr	29	3	31	11	53.1
Cacahuaton	abr	30	4	32.6	11	53.1
Ciudad-de-Mexico						
Chapultepec	may	16	20	57.3	12	20.3
Cd.-Universitaria	may	16	11	46.4	12	20.3
Ixtapalapa						
Ixtapalapa	may	16	14	10.3	12	20
Mexico	may	16	22	22.6	12	20.1
Tacubaya	may	16	19	8.9	12	20.4
Tlalpan	may	16	6	53.1	12	20.3
Atzacapotzalco	may	17	3	28.1	12	20.4
Atzacapotzalco	jul	25	5	52.5	12	30.5
Chapultepec	jul	25	12	25.3	12	30.5
C.d-Universitaria	jul	25	21	46.5	12	30.5
Ixtapalapa	jul	25	19	19.8	12	30.2
Mexico	jul	25	10	58.4	12	30.3
Tacubaya	jul	25	14	15.7	12	30.6
Tlalpan	jul	26	2	41.3	12	30.4
Colima						
Manzanillo	may	15	6	24.1	12	40.9
Colima	may	16	1	56.3	12	38.5
Colima	jul	26	7	36.5	12	48.7
Manzanillo	jul	27	3	23.1	12	51.1
Sta.-Maria-Ocotlan	jun	8	5	53.1	12	44.8
Sta.-Maria-Ocotlan	jul	3	0	28.9	12	49.9
Guanajuato						
Abasolo	may	21	19	10.2	12	26
Celaya	may	22	4	16.5	12	27.2
Irapuato	may	22	23	16.4	12	29.3
Salamanca	may	22	10	29.5	12	28.7
Guanajuato	may	24	20	20.6	12	29.1
Sn-Miguel-de-Allende	may	24	6	36.1	12	27.1
Dolores-Hidalgo	may	25	15	54.5	12	27.9
Leon	may	25	10	53.9	12	30.9
Xichu	may	26	11	54.3	12	24.5
Xichu	jul	15	19	50	12	33.5
Dolores-Hidalgo	jul	16	15	54.4	12	37.1
Leon	jul	16	21	0.4	12	40.1
Guanajuato	jul	17	11	32.9	12	38.4
Sn-Miguel-de-Allende	jul	18	1	29.2	12	36.5
Irapuato	jul	19	8	53.7	12	39
Salamanca	jul	19	21	54.4	12	38.4
Abasolo	jul	20	13	15	12	35.7
Celaya	jul	20	4	6.5	12	36.9
Guerrero						
Acapulco	may	6	13	23.5	12	23.5
San-Marcos	may	6	9	17.2	12	21.2
Chilpancingo	may	9	4	55.4	12	21.6
Petatlan	may	9	3	20.6	12	28.8
Zihuatanejo	may	9	12	40.1	12	29.9
Coyuca-de-Catalan	may	12	6	18.8	12	26.2
Teloloapan	may	12	9	40	12	23.1
Taxco	may	13	3	52.3	12	22
Taxco	jul	29	6	21.1	12	32.1
Coyuca-de-Catalan	jul	30	4	8.9	12	36.3
Teloloapan	jul	30	0	48	12	33.2
Zihuatanejo	ago	1	22	29	12	39.8
Chilpancingo	ago	2	6	15.5	12	31.5
Petatlan	ago	2	7	50.4	12	38.6
Acapulco	ago	4	22	30.5	12	33
San-Marcos	ago	5	2	38.9	12	30.6

Pasos cenitales del sol, 2024

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes día		$\varphi = \delta$		Paso cenital		Población	mes día		$\varphi = \delta$		Paso cenital	
			h	m	h	m				h	m	h	m
Hidalgo													
Apan	may	17	23	6.9	12	17.3	Chalco	jul	26	5	8	12	29.4
Tezontepec	may	18	23	40.7	12	19	Tlalmanalco	jul	26	10	56.2	12	29
Tulancingo	may	19	23	9.9	12	17.2	Ozumba	jul	27	5	27.4	12	28.9
Nopala	may	20	19	34.8	12	18.3	Popocatepetl	jul	27	6	46.9	12	28.3
Pachuca	may	20	4	36.3	12	18.7	Tenancingo	jul	27	12	42.7	12	32.1
Real-del-Monte	may	20	5	53.3	12	18.4	Ixtapan-de-la-Sal	jul	28	1	51.3	12	32.4
Huichapan	may	21	10	17.5	12	22.5	Sn-Antonio-del-Rosa	jul	29	21	33.9	12	35
Pisa-Flores	may	25	20	59.7	12	20.2	Michoacan						
Pisa-Flores	jul	16	10	43.8	12	29.4	Tacambaro	may	16	0	50.6	12	29.4
Huichapan	jul	20	22	17.2	12	32.2	Uruapan	may	16	20	30.7	12	31.8
Nopala	jul	21	13	0.9	12	28.2	Janitzio	may	17	13	45.7	12	30.3
Pachuca	jul	22	4	8.8	12	28.7	Patzcuaro	may	17	10	1.6	12	30.1
Real-del-Monte	jul	22	2	52.5	12	28.4	Cotija	may	18	16	6.4	12	34.5
Tulancingo	jul	22	9	33.4	12	27.2	Morelia	may	18	4	6.5	12	28.4
Tezontepec	jul	23	9	13.9	12	29	Zacapu	may	18	17	2.5	12	30.9
Apan	jul	24	10	0.6	12	27.4	Maravatio	may	19	1	14.3	12	25.5
Jalisco													
Cihuatlan	may	16	1	19	12	41.8	Cotija	jul	23	16	56.6	12	44.6
Tecatitlan	may	17	2	29.8	12	36.9	Maravatio	jul	23	7	40.6	12	35.5
Cocula	may	21	12	56.1	12	39.2	Zacapu	jul	23	15	59.5	12	40.9
Puerto-Vallarta	may	22	15	52.2	12	44.9	Janitzio	jul	24	19	32.2	12	40.4
Guadalajara	may	23	3	43.2	12	37.5	Morelia	jul	24	5	1.8	12	38.5
Lagos-de-Moreno	may	26	19	53.6	12	32	Patzcuaro	jul	24	23	20.5	12	40.2
Colotlan	may	31	22	1.9	12	38	Uruapan	jul	25	12	52.4	12	42
Colotlan	jul	10	8	50.4	12	45.7	Tacambaro	jul	26	8	41.9	12	39.6
Lagos-de-Moreno	jul	15	11	42.1	12	41	Morelos						
Guadalajara	jul	19	4	29.2	12	47.1	Cuautla	may	14	4	57.9	12	19.4
Puerto-Vallarta	jul	19	16	25.9	12	54.6	Cuernavaca	may	14	16	5.9	12	20.5
Cocula	jul	20	19	35.8	12	48.9	Oaxtepec	may	14	14	37.7	12	19.5
Tecatitlan	jul	25	6	50.4	12	47	Huitzilac	may	15	3	37.6	12	20.7
Cihuatlan	jul	26	8	13.6	12	52	Cuernavaca	jul	27	17	48.4	12	30.7
Mexico													
Sn-Antonio-del-Rosa	may	12	12	51.5	12	24.8	Huitzilac	jul	27	6	8.9	12	30.8
Ixtapan-de-la-Sal	may	14	8	9.5	12	22.3	Oaxtepec	jul	27	19	18.2	12	29.6
Tenancingo	may	14	21	6	12	22	Cuautla	jul	28	5	2.2	12	29.5
Amecameca	may	15	13	57	12	18.7	Nayarit						
Ozumba	may	15	4	19.2	12	18.8	Ixtlan-del-Rio	may	24	22	52.5	12	41.6
Popocatepetl	may	15	2	59.4	12	18.1	San-BLas	may	27	23	23.8	12	45.6
Tlalmanalco	may	15	22	37.5	12	18.8	Tepic	may	27	19	15	12	44
Chalco	may	16	4	25.6	12	19.2	Mezcaltitan	may	30	9	41	12	46.7
Huexotla	may	17	3	31.7	12	19.2	Acaponeta	jun	3	23	8.7	12	46.9
Naucalpan	may	17	3	6.2	12	20.6	Acaponeta	jul	7	7	20.8	12	53.6
Texcoco	may	17	7	14	12	19.2	Mezcaltitan	jul	11	21	32.9	12	54.7
Tlalnepantla	may	17	9	54.3	12	20.4	San-BLas	jul	14	7	59.3	12	54.3
Atlacomulco	may	18	15	2.8	12	19.2	Tepic	jul	14	12	12.7	12	52.7
Otumba	may	18	3	34.8	12	18.7	Ixtlan-del-Rio	jul	17	8	58.3	12	50.9
Tecamac	may	18	4	15.9	12	19.6	Oaxaca						
Atlacomulco	jul	23	18	1.4	12	29.3	Huautulco	may	2	23	57.1	12	9.4
Otumba	jul	24	5	33.4	12	28.8	Puerto-Angel	may	2	9	53.6	12	10.1
Tecamac	jul	24	4	52.6	12	29.6	Miahuatlan	may	4	18	2.6	12	10.4
Tlalnepantla	jul	24	23	27.9	12	30.5	Salinas-Cruz	may	4	3	27.5	12	4.8
Huexotla	jul	25	5	48.8	12	29.3	Tehuantepec	may	4	17	57	12	4.9
Naucalpan	jul	25	6	14.2	12	30.7	Juchitan-de-Zaragoza	may	5	2	22.7	12	4
Texcoco	jul	25	2	8	12	29.3	Etla	may	7	21	32.3	12	11
Amecameca	jul	26	19	46.5	12	28.8	Guichicovi	may	7	1	20.7	12	4.7

Pasos cenitales del sol, 2024

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes	día	$\varphi = \delta$		Paso cenital	
			h	m	h	m
Oaxaca-de-Juarez	may	7	8	54.7	12	10.7
Putla	may	7	5	35.7	12	15.5
Guelatao	may	8	7	58	12	9.7
Tlaxiaco	may	8	3	2.8	12	14.4
Valle-Nacional	may	9	16	27.9	12	8.8
Ocotepc	may	10	3	29.2	12	9.2
Huautla	may	11	10	52.1	12	11
Huautla	jul	30	23	49.8	12	21
Ocotepc	ago	1	7	26.9	12	19.2
Valle-Nacional	ago	1	18	36.8	12	18.8
Etla	ago	3	13	56.8	12	20.6
Guelatao	ago	3	3	27.8	12	19.4
Tlaxiaco	ago	3	8	23.3	12	24.1
Guichicovi	ago	4	10	21	12	14.2
Oaxaca-de-Juarez	ago	4	2	46.2	12	20.2
Putla	ago	4	6	5.5	12	25
Juchitan-de-Zaragoza	ago	6	9	50.4	12	13.2
Miahuatlan	ago	6	18	17.9	12	19.5
Tehuantepec	ago	6	18	23.6	12	14
Salinas-Cruz	ago	7	9	1.5	12	13.8
Huatulco	ago	8	12	49.2	12	18.2
Puerto-Angel	ago	9	3	6.3	12	18.7
Puebla						
Chila-Asuncion	may	10	19	55.7	12	15.1
Izucar-de-Matamoros	may	13	8	34.2	12	17.4
Tepeji-de-Rodriguez	may	13	6	23.2	12	15.3
Atlixco	may	14	15	28.6	12	17.4
Tecali	may	14	14	31	12	15.5
Cholula	may	15	7	16.2	12	16.8
Cuautlancingo	may	15	9	54.1	12	16.7
Huejotzingo	may	15	17	13.1	12	17.2
Popocatepetl	may	15	2	59.4	12	18.1
Puebla-de-Zaragoza	may	15	5	6	12	16.4
Tlaltenango	may	15	18	24.2	12	17
Tonantzintla	may	15	4	10.5	12	16.8
Sn-Martin-Textmeluca	may	16	6	22.9	12	17.3
Huauchinango	may	20	10	45.6	12	15.9
Huauchinango	jul	21	21	59.8	12	25.9
Cuautlancingo	jul	26	23	53.9	12	26.9
Huejotzingo	jul	26	16	26.7	12	27.4
Sn-Martin-Textmeluca	jul	26	3	11.3	12	27.5
Tlaltenango	jul	26	15	14.3	12	27.2
Atlixco	jul	27	18	26.4	12	27.5
Cholula	jul	27	2	31.2	12	27
Popocatepetl	jul	27	6	46.9	12	28.3
Puebla-de-Zaragoza	jul	27	4	40.8	12	26.5
Tecali	jul	27	19	25.2	12	25.6
Tonantzintla	jul	27	5	36.1	12	27
Izucar-de-Matamoros	jul	29	1	40	12	27.6
Tepeji-de-Rodriguez	jul	29	3	50.6	12	25.4
Chila-Asuncion	jul	31	14	50.4	12	25
Queretaro						
San-Juan-del-Rio	may	21	12	5.3	12	23.8
Queretaro	may	22	13	4.6	12	25.5
Cadereyta	may	23	1	52.9	12	23.2
Jalpan	may	26	0	14.5	12	22.2
Quintana-Roo						
Xkalak	may	11	19	51	11	35
Chetumal	may	12	21	55.2	11	36.8
Santa-Cruz-Chico	may	14	18	2.9	11	36.2
Carrillo-Puerto	may	17	14	27.7	11	35.8
Cozumel	may	22	4	8.2	11	31.7
Kantunil-Kin	may	25	8	16.7	11	34.1
Cabo-Catoche	may	28	9	38.3	11	33
Cabo-Catoche	jul	13	21	51.4	11	41.5
Kantunil-Kin	jul	16	23	40.4	11	43.3
Cozumel	jul	20	4	14.8	11	41.4
Carrillo-Puerto	jul	24	18	49.5	11	45.9
Santa-Cruz-Chico	jul	27	15	49.2	11	46.4
Chetumal	jul	29	12	20	11	46.9
Xkalak	jul	30	14	40.6	11	45.1
San-Luis-Potosi						
Tamanzuchale	may	26	7	6.7	12	19.4
Rio-Verde	may	30	14	5.8	12	24.8
San-Luis-Potosi	jun	1	5	6.5	12	29
Arista	jun	5	10	4.1	12	29.2
Arista	jun	5	20	29.3	12	35.3
San-Luis-Potosi	jul	10	1	52.5	12	36.6
Rio-Verde	jul	11	17	3.1	12	32.8
Tamanzuchale	jul	16	0	41.3	12	28.5
Sinaloa						
Rosario	jun	9	5	13.2	12	49.9
Mazatlan	jun	12	6	43.1	12	52.8
Mazatlan	jun	28	23	26.7	12	56.3
Rosario	jul	2	1	2.6	12	54.8
Tabasco						
Tapijulapa	may	8	20	52.8	11	54.8
Astapa	may	10	1	38.6	11	55.6
Tierr-Colorada	may	10	18	15.9	11	54.2
Villahermosa	may	10	21	12	11	55.3
Comalcalco	may	11	23	36.8	11	56.5
Ignacio-Allende	may	12	11	23.9	11	55
Ignacio-Allende	jul	29	23	3.2	12	5.1
Comalcalco	jul	30	10	50.6	12	6.5
Tierr-Colorada	jul	31	16	32	12	4.1
Villahermosa	jul	31	13	32.6	12	5.3
Astapa	ago	1	9	17.6	12	5.5
Tapijulapa	ago	2	14	21.9	12	4.6
Tamaulipas						
Ocampo	may	23	21	1.1	12	21.3
Jaumave	jun	17	16	52.3	12	25.7

Pasos cenitales del sol, 2024

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes día		$\varphi = \delta$		Paso cenital		Población	mes día		$\varphi = \delta$		Paso cenital	
			h	m	h	m				h	m	h	m
Jaumave	jun	23	12	34.4	12	27	Cordoba	jul	27	20	6.6	12	21.5
Ocampo	jul	18	11	1.4	12	30.9	Pico-de-Orizaba	jul	27	5	32.6	12	22.8
Tlaxcala							Rizo	jul	27	3	19.6	12	17.4
Cuahutotohuatlan	may	15	13	6.7	12	16.3	Alvarado	jul	28	8	35	12	16.8
Huamantla	may	16	9	45.5	12	15.3	Orizaba	jul	28	0	35.3	12	22.1
Tlaxcala	may	16	10	5.1	12	16.5	Tamarindo	jul	28	10	1.2	12	19.2
Huamantla	jul	25	23	49.6	12	25.5	Tehuipango	jul	29	9	42.9	12	22
Tlaxcala	jul	25	23	29.7	12	26.7	Tierra-Blanca	jul	29	16	37.9	12	19.2
Cuahutotohuatlan	jul	26	20	37.7	12	26.5	Tlacotalpan	jul	29	0	43.8	12	16.4
Veracruz							Coatzacoalcos	jul	30	22	7.7	12	11.3
Minatitlan	may	10	20	28.4	12	1.8	Minatitlan	jul	31	14	17	12	11.8
Pl.-Vicente	may	10	6	54.9	12	6.9	Pl.-Vicente	ago	1	4	1.3	12	16.8
Coatzacoalcos	may	11	12	32.3	12	1.2	Yucatan						
Tierra-Blanca	may	12	17	42.1	12	9	Becanchen	may	18	23	18.3	11	40.6
Tamarindo	may	13	23	57.8	12	9.1	Maxcanu	may	22	12	12.2	11	43.9
Tehuipango	may	13	0	30	12	11.8	Celestum	may	23	23	19.5	11	45.6
Tlacotalpan	may	13	9	30.6	12	6.2	Merida	may	24	15	50.2	11	42.7
Alvarado	may	14	1	24.3	12	6.7	Tzimin	may	25	12	24.1	11	36.8
Cordoba	may	14	13	50.3	12	11.3	Chavihau	may	26	20	12.8	11	40.8
Orizaba	may	14	9	25.8	12	12	Progreso	may	26	11	54.3	11	42.9
Huatusco	may	15	16	24.5	12	11.4	Telchac	may	26	18	5.8	11	41.3
Pico-de-Orizaba	may	15	4	14	12	12.6	Chavihau	jul	15	11	22.6	11	49.8
Rizo	may	15	6	27.6	12	7.3	Progreso	jul	15	19	50	11	51.9
Veracruz	may	15	21	38.5	12	8.1	Telchac	jul	15	13	31.9	11	50.3
Actopan	may	17	5	59.3	12	10.1	Tzimin	jul	16	19	28.6	11	46
Jalapa	may	17	8	32.4	12	11.3	Merida	jul	17	16	8.1	11	52
Martines-de-la-Torre	may	19	21	14.6	12	11.9	Celestum	jul	18	8	40.5	11	55.1
Coatzintla	may	21	23	28.4	12	13.6	Maxcanu	jul	19	20	9.9	11	53.6
Papantla	may	21	18	58	12	13.1	Becanchen	jul	23	9	36.8	11	50.6
Tehuacan	may	23	5	39.9	12	14.1	Zacatecas						
Chicontepec	may	24	14	45.4	12	16.8	Nochistlan	may	26	20	58.3	12	35.7
Tuxpan	may	24	12	2.3	12	13.7	Juchipila	may	27	4	16.7	12	36.9
Ixcatepec	may	26	3	14.2	12	16.3	Villanueva	jun	2	19	33.6	12	36.8
Tantoyuca	may	26	19	22.4	12	17.2	Jerez	jun	5	10	23.6	12	37.8
Tantoyuca	jul	15	12	13.8	12	26.2	Observatorio-Astrono	jun	6	6	33.6	12	36.1
Ixcatepec	jul	16	4	29.5	12	25.4	Panuco	jun	7	20	35.7	12	36.3
Chicontepec	jul	17	17	14.1	12	26.1	Calera	jun	8	16	58.7	12	37.2
Tuxpan	jul	17	20	0.1	12	23	Fresnillo	jun	11	21	27.9	12	38.5
Tehuacan	jul	19	2	34.1	12	23.7	Fresnillo	jun	29	8	17.3	12	42.3
Coatzintla	jul	20	8	52.1	12	23.4	Calera	jul	2	13	9.1	12	42.2
Papantla	jul	20	13	27.4	12	22.9	Panuco	jul	3	9	32.3	12	41.7
Martines-de-la-Torre	jul	22	11	30.8	12	21.9	Observatorio-Astrono	jul	4	23	59.2	12	41.9
Actopan	jul	25	3	22.2	12	20.2	Jerez	jul	5	20	9.5	12	43.9
Jalapa	jul	25	0	50.1	12	21.5	Villanueva	jul	8	11	7.1	12	43.9
Huatusco	jul	26	17	16.2	12	21.6	Juchipila	jul	15	3	19.5	12	45.8
Veracruz	jul	26	11	56.3	12	18.3	Nochistlan	jul	15	10	36.2	12	44.7

Fases de la Luna, 2024

Hora del meridiano 0° W.G.

Luna Nueva				Cuarto Creciente				Luna Llena				Cuarto Menguante			
mes	día	h	m	mes	día	h	m	mes	día	h	m	mes	día	h	m
Jan	11	5	57	Jan	17	21	52	Jan	25	11	54	Feb	2	17	18
Feb	9	16	59	Feb	16	9	1	Feb	24	6	30	Mar	3	9	23
Mar	10	3	0	Mar	16	22	11	Mar	25	1	0	Apr	1	21	15
Apr	8	12	21	Apr	15	13	13	Apr	23	17	49	May	1	5	27
May	7	21	22	May	15	5	48	May	23	7	53	May	30	11	13
Jun	6	6	38	Jun	13	19	18	Jun	21	19	8	Jun	28	15	53
Jul	5	16	57	Jul	13	16	49	Jul	21	4	17	Jul	27	20	51
Aug	4	5	13	Aug	12	9	19	Aug	19	12	26	Aug	26	3	26
Sep	2	19	55	Sep	11	0	5	Sep	17	20	34	Sep	24	12	50
Oct	2	12	49	Oct	10	12	55	Oct	17	5	26	Oct	24	2	3
Nov	1	6	47	Nov	8	19	55	Nov	15	15	28	Nov	22	19	28
Dec	1	0	21	Dec	8	9	26	Dec	15	3	2	Dec	22	16	18
Dec	30	16	27	--	--	--	--	--	--	--	--	--	--	--	--

Crepúsculos, salidas y puestas de Sol, 2024

Hora local

LATITUD 30°

	AM	CM	SS	PS	CV	AV		AM	CM	SS	PS	CV	AV
	h m	h m	h m	h m	h m	h m		h m	h m	h m	h m	h m	h m
Ene 1	5 31	6 30	6 56	17 12	17 38	18 37	Jul 6	3 29	4 37	5 05	19 05	19 32	20 40
7	5 32	6 31	6 57	17 16	17 42	18 41	12	3 33	4 41	5 08	19 04	19 30	20 38
13	5 33	6 31	6 57	17 21	17 47	18 45	18	3 38	4 44	5 11	19 01	19 28	20 34
19	5 32	6 30	6 56	17 26	17 52	18 50	24	3 43	4 48	5 14	18 58	19 25	20 30
25	5 31	6 28	6 54	17 31	17 57	18 54	30	3 48	4 52	5 18	18 55	19 21	20 24
31	5 29	6 26	6 51	17 37	18 02	18 59	Ago 5	3 53	4 56	5 22	18 50	19 16	20 18
Feb 6	5 26	6 22	6 47	17 42	18 07	19 03	11	3 58	5 00	5 25	18 45	19 10	20 12
12	5 22	6 18	6 42	17 47	18 11	19 07	17	4 03	5 04	5 29	18 39	19 04	20 04
18	5 17	6 13	6 37	17 51	18 16	19 11	23	4 08	5 07	5 32	18 33	18 57	19 57
24	5 11	6 07	6 31	17 56	18 20	19 15	29	4 12	5 11	5 35	18 26	18 50	19 49
Mar 2	5 05	6 01	6 25	18 00	18 24	19 19	Sep 4	4 17	5 14	5 39	18 19	18 43	19 40
8	4 59	5 54	6 18	18 04	18 28	19 23	10	4 21	5 18	5 42	18 11	18 35	19 32
14	4 52	5 47	6 11	18 08	18 32	19 27	16	4 25	5 21	5 45	18 04	18 28	19 24
20	4 44	5 40	6 04	18 12	18 35	19 31	22	4 29	5 25	5 48	17 56	18 20	19 16
26	4 36	5 33	5 56	18 15	18 39	19 36	28	4 32	5 28	5 52	17 49	18 13	19 08
Abr 1	4 28	5 25	5 49	18 19	18 43	19 40	Oct 4	4 36	5 31	5 55	17 42	18 06	19 01
7	4 20	5 18	5 42	18 22	18 47	19 44	10	4 39	5 35	5 59	17 35	17 59	18 54
13	4 13	5 11	5 35	18 26	18 51	19 49	16	4 43	5 39	6 03	17 28	17 52	18 48
19	4 05	5 04	5 29	18 30	18 55	19 54	22	4 47	5 42	6 07	17 22	17 46	18 42
25	3 57	4 58	5 23	18 34	18 59	19 59	28	4 50	5 47	6 11	17 16	17 41	18 37
May 1	3 50	4 52	5 17	18 38	19 03	20 05	Nov 3	4 54	5 51	6 16	17 11	17 36	18 33
7	3 44	4 46	5 12	18 41	19 07	20 10	9	4 58	5 55	6 20	17 07	17 32	18 29
13	3 38	4 42	5 08	18 45	19 11	20 16	15	5 03	6 00	6 25	17 04	17 29	18 27
19	3 33	4 38	5 04	18 49	19 16	20 21	21	5 07	6 05	6 30	17 02	17 27	18 25
25	3 28	4 35	5 02	18 53	19 19	20 26	27	5 11	6 09	6 35	17 00	17 26	18 24
31	3 25	4 33	5 00	18 56	19 23	20 31	Dic 3	5 15	6 14	6 40	17 00	17 26	18 25
6	3 23	4 31	4 59	18 59	19 26	20 35	9	5 19	6 18	6 44	17 01	17 27	18 26
12	3 22	4 31	4 58	19 02	19 29	20 38	15	5 23	6 22	6 48	17 02	17 29	18 28
18	3 22	4 31	4 59	19 04	19 31	20 40	21	5 26	6 25	6 52	17 05	17 31	18 30
24	3 24	4 33	5 00	19 05	19 32	20 41	27	5 29	6 28	6 54	17 08	17 35	18 34
30	3 26	4 35	5 02	19 05	19 33	20 41	Ene 2	5 31	6 30	6 56	17 12	17 38	18 37

LATITUD 25°

	AM	CM	SS	PS	CV	AV		AM	CM	SS	PS	CV	AV
	h m	h m	h m	h m	h m	h m		h m	h m	h m	h m	h m	h m
Ene 1	5 24	6 20	6 45	17 22	17 47	18 44	7	4 28	5 22	5 45	18 19	18 42	19 37
7	5 26	6 22	6 47	17 27	17 51	18 48	13	4 21	5 16	5 40	18 22	18 45	19 40
13	5 27	6 22	6 47	17 31	17 56	18 51	19	4 15	5 11	5 34	18 25	18 48	19 44
19	5 27	6 22	6 47	17 36	18 00	18 55	25	4 08	5 05	5 29	18 27	18 51	19 48
25	5 26	6 21	6 45	17 40	18 04	18 59	May 1	4 03	5 00	5 24	18 30	18 54	19 52
31	5 25	6 19	6 43	17 44	18 08	19 03	7	3 57	4 56	5 20	18 33	18 58	19 56
Feb 6	5 22	6 16	6 40	17 49	18 12	19 06	13	3 52	4 52	5 17	18 36	19 01	20 01
12	5 19	6 13	6 36	17 53	18 16	19 10	19	3 48	4 49	5 14	18 39	19 04	20 05
18	5 15	6 09	6 32	17 56	18 19	19 13	25	3 45	4 47	5 12	18 42	19 08	20 09
24	5 11	6 04	6 27	18 00	18 23	19 16	31	3 43	4 45	5 10	18 45	19 11	20 13
Mar 2	5 06	5 59	6 22	18 03	18 26	19 19	Jun 6	3 41	4 44	5 10	18 48	19 14	20 16
8	5 00	5 53	6 16	18 06	18 29	19 22	12	3 41	4 44	5 10	18 50	19 16	20 19
14	4 54	5 47	6 10	18 09	18 31	19 25	18	3 41	4 45	5 10	18 52	19 18	20 21
20	4 48	5 41	6 04	18 11	18 34	19 27	24	3 42	4 46	5 12	18 53	19 19	20 22
26	4 41	5 35	5 58	18 14	18 37	19 30	30	3 45	4 48	5 14	18 54	19 20	20 23
Abr 1	4 35	5 29	5 52	18 17	18 40	19 34	Jul 6	3 47	4 50	5 16	18 54	19 19	20 22

Crepúsculos, salidas y puestas de Sol, 2024

Hora local

LATITUD 25°

	AM	CM	SS	PS	CV	AV		AM	CM	SS	PS	CV	AV	
	h m	h m	h m	h m	h m	h m		h m	h m	h m	h m	h m	h m	
	12	3 51	4 53	5 18	18 53	19 18	20 20	10	4 40	5 33	5 56	17 38	18 01	18 54
	18	3 54	4 56	5 21	18 51	19 16	20 18	16	4 43	5 36	5 59	17 32	17 55	18 48
	24	3 58	4 59	5 24	18 49	19 14	20 14	22	4 45	5 39	6 02	17 27	17 50	18 43
	30	4 02	5 02	5 27	18 46	19 10	20 10	28	4 48	5 42	6 05	17 22	17 46	18 39
Ago 5	4 07	5 05	5 30	18 42	19 06	20 05	Nov 3	4 51	5 45	6 09	17 18	17 42	18 36	
	11	4 10	5 08	5 32	18 38	19 02	19 59	9	4 54	5 49	6 13	17 15	17 39	18 33
	17	4 14	5 11	5 35	18 33	18 57	19 53	15	4 58	5 53	6 17	17 12	17 37	18 31
	23	4 18	5 14	5 37	18 27	18 51	19 47	21	5 01	5 57	6 21	17 11	17 35	18 30
	29	4 21	5 16	5 40	18 22	18 45	19 40	27	5 05	6 01	6 25	17 10	17 35	18 30
Sep 4	4 24	5 19	5 42	18 15	18 39	19 33	Dic 3	5 09	6 05	6 30	17 10	17 35	18 31	
	10	4 27	5 21	5 44	18 09	18 32	19 26	9	5 12	6 09	6 34	17 11	17 36	18 33
	16	4 30	5 24	5 46	18 03	18 26	19 19	15	5 16	6 12	6 37	17 13	17 38	18 35
	22	4 33	5 26	5 49	17 56	18 19	19 12	21	5 19	6 16	6 41	17 16	17 41	18 37
	28	4 35	5 28	5 51	17 50	18 13	19 06	27	5 22	6 18	6 43	17 19	17 44	18 41
Oct 4	4 38	5 31	5 53	17 44	18 06	18 59	Ene 2	5 24	6 21	6 45	17 23	17 48	18 44	

LATITUD 20°

	AM	CM	SS	PS	CV	AV		AM	CM	SS	PS	CV	AV	
	h m	h m	h m	h m	h m	h m		h m	h m	h m	h m	h m	h m	
Ene 1	5 17	6 11	6 35	17 32	17 56	18 51	May 1	4 13	5 08	5 31	18 24	18 47	19 42	
	7	5 19	6 13	6 37	17 36	18 00	7	4 09	5 04	5 27	18 26	18 49	19 45	
	13	5 20	6 14	6 38	17 40	18 04	13	4 05	5 01	5 25	18 28	18 52	19 48	
	19	5 21	6 14	6 38	17 44	18 08	19 01	19	4 02	4 59	5 23	18 31	18 55	19 52
	25	5 21	6 14	6 37	17 48	18 11	19 04	25	3 59	4 57	5 21	18 33	18 57	19 55
	31	5 20	6 13	6 36	17 52	18 15	19 07	31	3 57	4 56	5 20	18 36	19 00	19 58
Feb 6	5 19	6 11	6 34	17 55	18 18	19 10	Jun 6	3 56	4 55	5 20	18 38	19 02	20 01	
	12	5 16	6 08	6 31	17 58	18 21	19 13	12	3 56	4 56	5 20	18 40	19 04	20 04
	18	5 13	6 05	6 27	18 01	18 23	19 15	18	3 57	4 56	5 21	18 41	19 06	20 06
	24	5 10	6 01	6 23	18 03	18 26	19 17	24	3 58	4 58	5 22	18 43	19 07	20 07
Mar 2	5 06	5 57	6 19	18 06	18 28	19 19	30	4 00	4 59	5 24	18 43	19 08	20 07	
	8	5 01	5 52	6 14	18 08	18 30	19 21	Jul 6	4 03	5 02	5 26	18 44	19 08	20 07
	14	4 56	5 47	6 09	18 09	18 31	19 23	12	4 05	5 04	5 28	18 43	19 07	20 06
	20	4 51	5 42	6 04	18 11	18 33	19 24	18	4 08	5 06	5 30	18 42	19 06	20 04
	26	4 45	5 37	5 59	18 13	18 35	19 26	24	4 12	5 09	5 33	18 40	19 04	20 01
Abr 1	4 40	5 31	5 54	18 14	18 37	19 28	30	4 15	5 11	5 35	18 38	19 01	19 58	
	7	4 34	5 26	5 48	18 16	18 38	19 31	Ago 5	4 18	5 14	5 37	18 35	18 58	19 54
	13	4 28	5 21	5 44	18 18	18 40	19 33	11	4 21	5 16	5 39	18 31	18 54	19 49
	19	4 23	5 16	5 39	18 20	18 42	19 36	17	4 24	5 18	5 41	18 27	18 50	19 44
	25	4 18	5 12	5 35	18 22	18 44	19 39	23	4 26	5 20	5 42	18 23	18 45	19 39

Crepúsculos, salidas y puestas de Sol, 2024

Hora local

LATITUD 20°

	AM	CM	SS	PS	CV	AV		AM	CM	SS	PS	CV	AV
	h m	h m	h m	h m	h m	h m		h m	h m	h m	h m	h m	h m
29	4 28	5 21	5 44	18 18	18 40	19 33	Nov 3	4 48	5 40	6 03	17 24	17 47	18 39
Sep 4	4 31	5 23	5 45	18 13	18 35	19 27	9	4 50	5 43	6 06	17 22	17 45	18 38
10	4 32	5 24	5 46	18 07	18 29	19 21	15	4 53	5 46	6 09	17 20	17 43	18 37
16	4 34	5 26	5 48	18 02	18 24	19 15	21	4 56	5 49	6 13	17 19	17 43	18 36
22	4 36	5 27	5 49	17 56	18 18	19 09	27	4 59	5 53	6 16	17 19	17 43	18 37
28	4 37	5 28	5 50	17 51	18 13	19 04	Dic 3	5 02	5 56	6 20	17 20	17 44	18 38
Oct 4	4 39	5 30	5 52	17 45	18 07	18 58	9	5 05	6 00	6 24	17 21	17 45	18 40
10	4 40	5 31	5 53	17 40	18 02	18 54	15	5 09	6 03	6 27	17 23	17 47	18 42
16	4 42	5 33	5 55	17 36	17 58	18 49	21	5 12	6 07	6 31	17 26	17 50	18 45
22	4 43	5 35	5 57	17 31	17 54	18 45	27	5 15	6 09	6 33	17 29	17 53	18 48
28	4 45	5 37	6 00	17 28	17 50	18 42	Ene 2	5 17	6 12	6 36	17 33	17 57	18 51

LATITUD 15°

	AM	CM	SS	PS	CV	AV		AM	CM	SS	PS	CV	AV
	h m	h m	h m	h m	h m	h m		h m	h m	h m	h m	h m	h m
Ene 1	5 10	6 03	6 26	17 42	18 05	18 58	Jul 6	4 16	5 12	5 35	18 34	18 58	19 54
7	5 12	6 05	6 28	17 45	18 08	19 01	12	4 18	5 14	5 37	18 34	18 57	19 53
13	5 14	6 06	6 29	17 49	18 12	19 04	18	4 20	5 16	5 39	18 33	18 57	19 52
19	5 15	6 07	6 30	17 52	18 15	19 07	24	4 23	5 18	5 41	18 32	18 55	19 50
25	5 15	6 07	6 30	17 55	18 18	19 10	30	4 25	5 20	5 42	18 30	18 53	19 47
31	5 15	6 07	6 29	17 58	18 21	19 12	Ago 5	4 28	5 21	5 44	18 28	18 51	19 44
Feb 6	5 14	6 05	6 28	18 01	18 23	19 14	11	4 30	5 23	5 45	18 25	18 48	19 40
12	5 13	6 04	6 26	18 03	18 25	19 16	17	4 32	5 24	5 46	18 22	18 44	19 36
18	5 11	6 01	6 23	18 05	18 27	19 17	23	4 33	5 25	5 47	18 18	18 40	19 32
24	5 08	5 58	6 20	18 07	18 28	19 18	29	4 35	5 26	5 47	18 14	18 36	19 27
Mar 2	5 05	5 55	6 16	18 08	18 30	19 19	Sep 4	4 36	5 26	5 48	18 10	18 31	19 22
8	5 01	5 51	6 12	18 09	18 31	19 20	10	4 37	5 27	5 48	18 05	18 27	19 17
14	4 57	5 47	6 08	18 10	18 32	19 21	16	4 37	5 27	5 49	18 01	18 22	19 12
20	4 53	5 43	6 04	18 11	18 32	19 22	22	4 38	5 28	5 49	17 56	18 17	19 07
26	4 48	5 38	6 00	18 12	18 33	19 23	28	4 38	5 28	5 50	17 51	18 13	19 03
Abr 1	4 44	5 34	5 55	18 12	18 34	19 24	Oct 4	4 39	5 29	5 50	17 47	18 08	18 58
7	4 39	5 30	5 51	18 13	18 35	19 25	10	4 39	5 29	5 51	17 43	18 04	18 54
13	4 34	5 25	5 47	18 14	18 36	19 27	16	4 40	5 30	5 52	17 39	18 01	18 51
19	4 30	5 21	5 43	18 15	18 37	19 29	22	4 41	5 31	5 53	17 36	17 57	18 48
25	4 26	5 18	5 40	18 16	18 38	19 30	28	4 42	5 33	5 55	17 33	17 55	18 45
May 1	4 22	5 15	5 37	18 17	18 40	19 33	Nov 3	4 44	5 35	5 57	17 30	17 53	18 44
7	4 18	5 12	5 34	18 19	18 42	19 35	9	4 45	5 37	5 59	17 29	17 51	18 42
13	4 15	5 09	5 32	18 21	18 44	19 38	15	4 47	5 39	6 02	17 28	17 50	18 42
19	4 13	5 08	5 31	18 23	18 46	19 40	21	4 50	5 42	6 05	17 27	17 50	18 42
25	4 11	5 06	5 30	18 24	18 48	19 43	27	4 52	5 45	6 08	17 28	17 51	18 43
31	4 10	5 06	5 29	18 26	18 50	19 46	Dic 3	4 55	5 48	6 11	17 29	17 52	18 45
Jun 6	4 09	5 06	5 29	18 28	18 52	19 48	9	4 58	5 51	6 15	17 30	17 54	18 47
12	4 10	5 06	5 30	18 30	18 54	19 50	15	5 01	5 55	6 18	17 33	17 56	18 49
18	4 10	5 07	5 31	18 32	18 55	19 52	21	5 04	5 58	6 21	17 36	17 59	18 52
24	4 12	5 08	5 32	18 33	18 57	19 53	27	5 07	6 01	6 24	17 39	18 02	18 55
30	4 13	5 10	5 34	18 34	18 57	19 54	Ene 2	5 10	6 03	6 26	17 42	18 05	18 58

Eclipses 2024

Hora del meridiano 90° W.G.

En este año 2024 ocurrirán cuatro eclipses, dos de luna y dos de sol. El primero será un eclipse penumbral del 24 al 25 de marzo, el segundo un eclipse total de sol el día 8 de abril, el tercero un eclipse parcial de luna el 18 de septiembre y el cuarto será un eclipse anular de sol el día 2 de octubre.

I.- Eclipse penumbral de luna del 24 al 25 de marzo de 2024, se observará en la República Mexicana.

Este eclipse se observará, en su fase penumbral inicial, en las regiones occidentales de los continentes África y Europa, y la región oriental de Brasil. Su fase penumbral final se observará en Papua y las regiones central y oriental de Australia. El máximo del eclipse penumbral se observará en el Continente Americano y el Océano Pacífico, exceptuando la región oriental de Brasil y Groenlandia.

Circunstancias del eclipse

<i>Fase</i>	<i>mes</i>	<i>d</i>	<i>h</i>	<i>m</i>	<i>s</i>
Inicia el eclipse parcial penumbral	mar	24	22	51	00
Máximo del eclipse	mar	25	1	12	47
Fin del eclipse parcial penumbral	mar	25	3	34	42

II.- Eclipse total de sol el 8 de abril de 2024, se observará en la República Mexicana.

La franja de totalidad iniciará en la región central del Océano Pacífico casi a novecientos kilómetros al sur del Ecuador, y cruzará su región ecuatorial dirigiéndose a las costas del Continente Americano. Tocaré tierra en la República Mexicana en el Estado de Sinaloa, dirigiéndose hacia Durango, Coahuila y Nuevo León. Cruzará la región oriental de Estados Unidos para salir en la costa este de Canadá y terminar en la región central del norte del Océano Atlántico.

Circunstancias del eclipse

<i>Fase</i>	<i>mes</i>	<i>d</i>	<i>h</i>	<i>m</i>	<i>s</i>
Iniciará el eclipse umbral	abr	8	9	42	11
Iniciará el eclipse central	abr	8	10	39	59
Máximo del eclipse	abr	8	12	36	01
Fin del eclipse central	abr	8	13	54	31
Fin del eclipse umbral	abr	8	14	52	18

Eclipses 2024

Hora del meridiano 90° W.G.

III.- Eclipse parcial de Luna el 17 de septiembre de 2024, se observará en la República Mexicana.

El inicio de la fase penumbral se observará en la costa occidental de la India, África, Arabia, Asia central, Europa, Groenlandia y el Continente Americano. La fase umbral se observará en África, Europa, el Océano Atlántico, Groenlandia y el Continente Americano con excepción de la costa del Pacífico de Estados Unidos, el extremo occidental de Canadá y Alaska.

Circunstancias del eclipse

<i>Fase</i>	<i>mes</i>	<i>d</i>	<i>h</i>	<i>m</i>	<i>s</i>
Inicia eclipse penumbral	sep	17	18	39	18
Inicial el eclipse umbral	sep	17	20	11	48
Máximo del eclipse	sep	17	20	44	18
Fin del eclipse umbral	sep	17	21	16	47
Fin del eclipse penumbral	sep	17	22	49	18

IV.- Eclipse anular de sol el 2 de octubre de 2024, se observará como parcial en la República Mexicana.

Iniciará la franja de anularidad en la región central del Océano Pacífico, a uno novecientos kilómetros al norte del Ecuador. Continuará su recorrido por el Océano Pacífico en dirección al sur de Chile, donde cruzará el continente Americano en dirección de la Provincia de Santa Cruz, Argentina. El eclipse terminará a unos dos mil kilómetros al Este de las Islas Malvinas.

Circunstancias del eclipse

<i>Fase</i>	<i>mes</i>	<i>d</i>	<i>h</i>	<i>m</i>	<i>s</i>
Inicia el eclipse parcial	oct	2	9	43	00
Inicia el eclipse anular	oct	2	10	53	36
Máximo del eclipse anular	oct	2	13	08	06
Fin del eclipse anular	oct	2	14	36	12
Fin del eclipse parcial	oct	2	15	47	01

Eclipse total de sol, trayecto del 8 de abril de 2024

(Hora del meridiano 90°W.G.)

λ °	Limite norte		centralidad		Limite sur		hora del total		dur m	alt °	ancho km	
	'	φ °	'	φ °	'	φ °	Tc h	m				
106	57	23	39.1	22	17.3	20	55.4	12	06.9	4.4	69.0	199.4
106	54	23	42.4	22	20.6	20	58.7	12	07.1	4.4	69.0	199.3
106	51	23	45.6	22	23.8	21	02.0	12	07.2	4.4	69.0	199.3
106	48	23	48.8	22	27.1	21	05.2	12	07.4	4.4	69.0	199.3
106	45	23	52.0	22	30.3	21	08.5	12	07.6	4.4	69.1	199.2
106	42	23	55.2	22	33.6	21	11.8	12	07.8	4.4	69.1	199.2
106	39	23	58.5	22	36.8	21	15.0	12	08.0	4.4	69.1	199.2
106	36	24	01.7	22	40.1	21	18.3	12	08.2	4.4	69.2	199.1
106	33	24	04.9	22	43.3	21	21.5	12	08.4	4.4	69.2	199.1
106	30	24	08.1	22	46.5	21	24.8	12	08.6	4.4	69.2	199.1
106	27	24	11.3	22	49.8	21	28.0	12	08.7	4.4	69.2	199.0
106	24	24	14.5	22	53.0	21	31.3	12	08.9	4.4	69.3	199.0
106	21	24	17.7	22	56.2	21	34.5	12	09.1	4.4	69.3	199.0
106	18	24	20.9	22	59.4	21	37.8	12	09.3	4.4	69.3	198.9
106	15	24	24.1	23	02.7	21	41.0	12	09.5	4.4	69.3	198.9
106	12	24	27.3	23	05.9	21	44.3	12	09.7	4.4	69.4	198.9
106	09	24	30.5	23	09.1	21	47.5	12	09.9	4.4	69.4	198.8
106	06	24	33.7	23	12.3	21	50.8	12	10.1	4.5	69.4	198.8
106	03	24	36.9	23	15.6	21	54.0	12	10.2	4.5	69.4	198.8
106	00	24	40.0	23	18.8	21	57.2	12	10.4	4.5	69.4	198.7
105	57	24	43.2	23	22.0	22	00.5	12	10.6	4.5	69.5	198.7
105	54	24	46.4	23	25.2	22	03.7	12	10.8	4.5	69.5	198.6
105	51	24	49.6	23	28.4	22	07.0	12	11.0	4.5	69.5	198.6
105	48	24	52.8	23	31.6	22	10.2	12	11.2	4.5	69.5	198.6
105	45	24	55.9	23	34.8	22	13.4	12	11.4	4.5	69.5	198.5
105	42	24	59.1	23	38.0	22	16.6	12	11.6	4.5	69.6	198.5
105	39	25	02.3	23	41.2	22	19.9	12	11.7	4.5	69.6	198.5
105	36	25	05.4	23	44.4	22	23.1	12	11.9	4.5	69.6	198.4
105	33	25	08.6	23	47.6	22	26.3	12	12.1	4.5	69.6	198.4
105	30	25	11.7	23	50.8	22	29.5	12	12.3	4.5	69.6	198.4
105	27	25	14.9	23	54.0	22	32.8	12	12.5	4.5	69.6	198.3
105	24	25	18.1	23	57.2	22	36.0	12	12.7	4.5	69.6	198.3
105	21	25	21.2	24	00.4	22	39.2	12	12.9	4.5	69.7	198.2
105	18	25	24.3	24	03.5	22	42.4	12	13.0	4.5	69.7	198.2
105	15	25	27.5	24	06.7	22	45.6	12	13.2	4.5	69.7	198.2
105	12	25	30.6	24	09.9	22	48.8	12	13.4	4.5	69.7	198.1
105	09	25	33.8	24	13.1	22	52.0	12	13.6	4.5	69.7	198.1
105	06	25	36.9	24	16.2	22	55.2	12	13.8	4.5	69.7	198.1
105	03	25	40.0	24	19.4	22	58.4	12	14.0	4.5	69.7	198.0
105	00	25	43.2	24	22.6	23	01.6	12	14.2	4.5	69.7	198.0
104	57	25	46.3	24	25.7	23	04.8	12	14.3	4.5	69.7	198.0
104	54	25	49.4	24	28.9	23	08.0	12	14.5	4.5	69.7	197.9
104	51	25	52.5	24	32.1	23	11.2	12	14.7	4.5	69.8	197.9
104	48	25	55.6	24	35.2	23	14.4	12	14.9	4.5	69.8	197.8
104	45	25	58.8	24	38.4	23	17.6	12	15.1	4.5	69.8	197.8
104	42	26	01.9	24	41.5	23	20.8	12	15.3	4.5	69.8	197.8
104	39	26	05.0	24	44.7	23	24.0	12	15.4	4.5	69.8	197.7
104	36	26	08.1	24	47.8	23	27.2	12	15.6	4.5	69.8	197.7
104	33	26	11.2	24	51.0	23	30.3	12	15.8	4.5	69.8	197.7
104	30	26	14.3	24	54.1	23	33.5	12	16.0	4.5	69.8	197.6
104	27	26	17.4	24	57.2	23	36.7	12	16.2	4.5	69.8	197.6
104	24	26	20.4	25	00.4	23	39.9	12	16.4	4.5	69.8	197.5

Eclipse total de sol, trayecto del 8 de abril de 2024

(Hora del meridiano 90°W.G.)

λ °	Limite norte		centralidad	Limite sur		hora del total		dur m	alt °	ancho km		
	'	φ °	φ °	'	φ °	Tc h	m					
104	21	26	23.5	25	03.5	23	43.0	12	16.5	4.5	69.8	197.5
104	18	26	26.6	25	06.6	23	46.2	12	16.7	4.5	69.8	197.5
104	15	26	29.7	25	09.8	23	49.3	12	16.9	4.5	69.8	197.4
104	12	26	32.8	25	12.9	23	52.5	12	17.1	4.5	69.8	197.4
104	09	26	35.8	25	16.0	23	55.7	12	17.3	4.5	69.8	197.4
104	06	26	38.9	25	19.1	23	58.8	12	17.5	4.5	69.8	197.3
104	03	26	42.0	25	22.2	24	02.0	12	17.6	4.5	69.8	197.3
104	00	26	45.0	25	25.3	24	05.1	12	17.8	4.5	69.8	197.2
103	57	26	48.1	25	28.4	24	08.3	12	18.0	4.5	69.8	197.2
103	54	26	51.2	25	31.5	24	11.4	12	18.2	4.5	69.8	197.2
103	51	26	54.2	25	34.6	24	14.5	12	18.4	4.5	69.8	197.1
103	48	26	57.3	25	37.7	24	17.7	12	18.5	4.5	69.8	197.1
103	45	27	00.3	25	40.8	24	20.8	12	18.7	4.5	69.8	197.0
103	42	27	03.3	25	43.9	24	24.0	12	18.9	4.5	69.8	197.0
103	39	27	06.4	25	47.0	24	27.1	12	19.1	4.5	69.8	197.0
103	36	27	09.4	25	50.1	24	30.2	12	19.3	4.5	69.8	196.9
103	33	27	12.4	25	53.1	24	33.3	12	19.4	4.5	69.8	196.9
103	30	27	15.5	25	56.2	24	36.4	12	19.6	4.5	69.8	196.9
103	27	27	18.5	25	59.3	24	39.6	12	19.8	4.5	69.7	196.8
103	24	27	21.5	26	02.4	24	42.7	12	20.0	4.5	69.7	196.8
103	21	27	24.5	26	05.4	24	45.8	12	20.2	4.5	69.7	196.7
103	18	27	27.5	26	08.5	24	48.9	12	20.3	4.5	69.7	196.7
103	15	27	30.5	26	11.5	24	52.0	12	20.5	4.5	69.7	196.7
103	12	27	33.5	26	14.6	24	55.1	12	20.7	4.5	69.7	196.6
103	09	27	36.5	26	17.6	24	58.2	12	20.9	4.5	69.7	196.6
103	06	27	39.5	26	20.7	25	01.3	12	21.1	4.5	69.7	196.5
103	03	27	42.5	26	23.7	25	04.4	12	21.2	4.5	69.7	196.5
103	00	27	45.5	26	26.8	25	07.5	12	21.4	4.5	69.7	196.5
102	57	27	48.5	26	29.8	25	10.6	12	21.6	4.5	69.6	196.4
102	54	27	51.5	26	32.8	25	13.6	12	21.8	4.5	69.6	196.4
102	51	27	54.5	26	35.9	25	16.7	12	21.9	4.5	69.6	196.4
102	48	27	57.4	26	38.9	25	19.8	12	22.1	4.5	69.6	196.3
102	45	28	00.4	26	41.9	25	22.9	12	22.3	4.5	69.6	196.3
102	42	28	03.4	26	44.9	25	25.9	12	22.5	4.5	69.6	196.2
102	39	28	06.3	26	48.0	25	29.0	12	22.7	4.5	69.6	196.2
102	36	28	09.3	26	51.0	25	32.0	12	22.8	4.5	69.5	196.2
102	33	28	12.2	26	54.0	25	35.1	12	23.0	4.5	69.5	196.1
102	30	28	15.2	26	57.0	25	38.2	12	23.2	4.5	69.5	196.1
102	27	28	18.1	26	60.0	25	41.2	12	23.4	4.5	69.5	196.0
102	24	28	21.1	27	03.0	25	44.3	12	23.5	4.5	69.5	196.0
102	21	28	24.0	27	06.0	25	47.3	12	23.7	4.5	69.4	196.0
102	18	28	26.9	27	08.9	25	50.3	12	23.9	4.5	69.4	195.9
102	15	28	29.9	27	11.9	25	53.4	12	24.1	4.5	69.4	195.9
102	12	28	32.8	27	14.9	25	56.4	12	24.2	4.5	69.4	195.8
102	09	28	35.7	27	17.9	25	59.4	12	24.4	4.5	69.4	195.8
102	06	28	38.6	27	20.9	26	02.5	12	24.6	4.5	69.3	195.8
102	03	28	41.5	27	23.8	26	05.5	12	24.8	4.5	69.3	195.7
102	00	28	44.4	27	26.8	26	08.5	12	24.9	4.5	69.3	195.7
101	57	28	47.3	27	29.8	26	11.5	12	25.1	4.5	69.3	195.6
101	54	28	50.2	27	32.7	26	14.5	12	25.3	4.5	69.3	195.6
101	51	28	53.1	27	35.7	26	17.5	12	25.5	4.5	69.2	195.6
101	48	28	56.0	27	38.6	26	20.5	12	25.6	4.5	69.2	195.5

Eclipse total de sol, trayecto del 8 de abril de 2024

(Hora del meridiano 90°W.G.)

λ °	Limite norte		centralidad		Limite sur		hora del total		dur m	alt °	ancho km	
	'	"	'	"	'	"	Tc h	m				
101	45	28	58.9	27	41.6	26	23.5	12	25.8	4.5	69.2	195.5
101	42	29	01.8	27	44.5	26	26.5	12	26.0	4.5	69.2	195.4
101	39	29	04.7	27	47.4	26	29.5	12	26.1	4.5	69.1	195.4
101	36	29	07.6	27	50.4	26	32.5	12	26.3	4.5	69.1	195.4
101	33	29	10.4	27	53.3	26	35.5	12	26.5	4.5	69.1	195.3
101	30	29	13.3	27	56.2	26	38.5	12	26.7	4.5	69.1	195.3
101	27	29	16.1	27	59.1	26	41.4	12	26.8	4.5	69.0	195.3
101	24	29	19.0	28	02.0	26	44.4	12	27.0	4.5	69.0	195.2
101	21	29	21.9	28	05.0	26	47.4	12	27.2	4.5	69.0	195.2
101	18	29	24.7	28	07.9	26	50.3	12	27.3	4.5	69.0	195.1
101	15	29	27.6	28	10.8	26	53.3	12	27.5	4.5	68.9	195.1
101	12	29	30.4	28	13.7	26	56.3	12	27.7	4.5	68.9	195.1
101	09	29	33.2	28	16.6	26	59.2	12	27.9	4.5	68.9	195.0
101	06	29	36.1	28	19.5	27	02.2	12	28.0	4.5	68.8	195.0
101	03	29	38.9	28	22.3	27	05.1	12	28.2	4.5	68.8	194.9
101	00	29	41.7	28	25.2	27	08.0	12	28.4	4.5	68.8	194.9
100	57	29	44.5	28	28.1	27	11.0	12	28.5	4.5	68.7	194.9
100	54	29	47.3	28	31.0	27	13.9	12	28.7	4.5	68.7	194.8
100	51	29	50.1	28	33.8	27	16.8	12	28.9	4.5	68.7	194.8
100	48	29	53.0	28	36.7	27	19.8	12	29.0	4.5	68.7	194.7
100	45	29	55.8	28	39.6	27	22.7	12	29.2	4.4	68.6	194.7
100	42	29	58.5	28	42.4	27	25.6	12	29.4	4.4	68.6	194.7
100	39	30	01.3	28	45.3	27	28.5	12	29.5	4.4	68.6	194.6
100	36	30	04.1	28	48.1	27	31.4	12	29.7	4.4	68.5	194.6
100	33	30	06.9	28	51.0	27	34.3	12	29.9	4.4	68.5	194.5
100	30	30	09.7	28	53.8	27	37.2	12	30.0	4.4	68.5	194.5
100	27	30	12.5	28	56.7	27	40.1	12	30.2	4.4	68.4	194.5
100	24	30	15.2	28	59.5	27	43.0	12	30.4	4.4	68.4	194.4
100	21	30	18.0	29	02.3	27	45.9	12	30.5	4.4	68.4	194.4
100	18	30	20.8	29	05.1	27	48.8	12	30.7	4.4	68.3	194.3
100	15	30	23.5	29	08.0	27	51.6	12	30.9	4.4	68.3	194.3
100	12	30	26.3	29	10.8	27	54.5	12	31.0	4.4	68.2	194.3
100	09	30	29.0	29	13.6	27	57.4	12	31.2	4.4	68.2	194.2
100	06	30	31.8	29	16.4	28	00.3	12	31.4	4.4	68.2	194.2
100	03	30	34.5	29	19.2	28	03.1	12	31.5	4.4	68.1	194.1
100	00	30	37.2	29	22.0	28	06.0	12	31.7	4.4	68.1	194.1
99	57	30	40.0	29	24.8	28	08.8	12	31.9	4.4	68.1	194.1
99	54	30	42.7	29	27.6	28	11.7	12	32.0	4.4	68.0	194.0
99	51	30	45.4	29	30.3	28	14.5	12	32.2	4.4	68.0	194.0
99	48	30	48.1	29	33.1	28	17.4	12	32.4	4.4	68.0	193.9
99	45	30	50.8	29	35.9	28	20.2	12	32.5	4.4	67.9	193.9
99	42	30	53.5	29	38.7	28	23.0	12	32.7	4.4	67.9	193.9
99	39	30	56.2	29	41.4	28	25.8	12	32.9	4.4	67.8	193.8
99	36	30	58.9	29	44.2	28	28.7	12	33.0	4.4	67.8	193.8
99	33	31	01.6	29	46.9	28	31.5	12	33.2	4.4	67.8	193.7
99	30	31	04.3	29	49.7	28	34.3	12	33.3	4.4	67.7	193.7
99	27	31	07.0	29	52.4	28	37.1	12	33.5	4.4	67.7	193.7
99	24	31	09.7	29	55.2	28	39.9	12	33.7	4.4	67.6	193.6
99	21	31	12.4	29	57.9	28	42.7	12	33.8	4.4	67.6	193.6
99	18	31	15.0	30	00.7	28	45.5	12	34.0	4.4	67.6	193.5
99	15	31	17.7	30	03.4	28	48.3	12	34.1	4.4	67.5	193.5
99	12	31	20.4	30	06.1	28	51.1	12	34.3	4.4	67.5	193.5

Eclipse total de sol, trayecto del 8 de abril de 2024

(Hora del meridiano 90°W.G.)

λ °	Limite norte		centralidad	Limite sur		hora del total		dur m	alt °	ancho km		
	φ °	φ °	φ °	φ °	Tc h	m						
99	09	31	23.0	30	08.8	28	53.9	12	34.5	4.4	67.4	193.4
99	06	31	25.7	30	11.5	28	56.7	12	34.6	4.4	67.4	193.4
99	03	31	28.3	30	14.3	28	59.4	12	34.8	4.4	67.3	193.3
99	00	31	31.0	30	17.0	29	02.2	12	34.9	4.4	67.3	193.3
98	57	31	33.6	30	19.7	29	05.0	12	35.1	4.4	67.3	193.3
98	54	31	36.2	30	22.4	29	07.7	12	35.3	4.4	67.2	193.2
98	51	31	38.9	30	25.1	29	10.5	12	35.4	4.4	67.2	193.2
98	48	31	41.5	30	27.7	29	13.2	12	35.6	4.4	67.1	193.1
98	45	31	44.1	30	30.4	29	16.0	12	35.7	4.4	67.1	193.1
98	42	31	46.7	30	33.1	29	18.7	12	35.9	4.4	67.0	193.1
98	39	31	49.3	30	35.8	29	21.5	12	36.1	4.4	67.0	193.0
98	36	31	51.9	30	38.5	29	24.2	12	36.2	4.4	67.0	193.0
98	33	31	54.5	30	41.1	29	26.9	12	36.4	4.4	66.9	192.9
98	30	31	57.1	30	43.8	29	29.6	12	36.5	4.4	66.9	192.9
98	27	31	59.7	30	46.4	29	32.4	12	36.7	4.4	66.8	192.9

Eclipse total de sol, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur m
	h	m	h	m	h	m		
Coahuila								
Cd. Acuña	12	28.4	12	30.0	12	31.6	67	3.2
Allende	12	26.3	12	28.5	12	30.7	68	4.4
Francisco I. Madero	12	17.6	12	19.7	12	21.8	69	4.3
Frontera	12	23.6	12	24.9	12	26.2	69	2.6
Matamoros	12	17.4	12	19.3	12	21.2	70	3.9
Cd. Melchor Múzquiz	12	24.3	12	26.5	12	28.8	69	4.5
Palaú	12	24.5	12	26.7	12	28.9	69	4.4
Nava	12	26.6	12	28.8	12	31.0	68	4.4
Piedras Negras	12	27.5	12	29.7	12	31.9	68	4.4
Sabinas	12	25.0	12	27.1	12	29.2	69	4.2
San Buenaventura	12	23.2	12	25.0	12	26.7	69	3.5
Nueva Rosita	12	25.0	12	27.1	12	29.3	69	4.4
San Pedro	12	18.2	12	20.1	12	22.0	70	3.8
Torreón	12	16.8	12	19.0	12	21.1	70	4.2
Durango								
Victoria de Durango	12	12.1	12	14.0	12	15.9	70	3.9
Gómez Palacio	12	16.8	12	18.9	12	21.1	70	4.3
Guadalupe Victoria	12	14.0	12	15.7	12	17.5	70	3.5
Lerdo	12	16.7	12	18.8	12	21.0	70	4.3
El Salto	12	10.2	12	12.4	12	14.6	69	4.4
Santiago Papasquiaro	12	13.5	12	14.8	12	16.0	69	2.6
Sinaloa								
Escuinapa	12	08.0	12	09.9	12	11.8	69	3.8
Mazatlán	12	07.4	12	09.5	12	11.7	69	4.3
Villa Unión	12	07.6	12	09.8	12	12.1	69	4.4
El Rosario	12	07.9	12	10.0	12	12.1	69	4.2

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Aguascalientes								
Aguascalientes	10	54.40	12	13.70	13	36.70	73	2.7
Calvillo	10	53.70	12	12.90	13	36.00	72	2.7
Jesús María	10	54.50	12	13.80	13	36.80	73	2.7
Pabellón de Arteaga	10	55.00	12	14.30	13	37.30	73	2.7
Rincón de Romos	10	55.00	12	14.40	13	37.40	72	2.7
San Francisco los Romo	10	54.80	12	14.20	13	37.20	73	2.7
Baja California								
Ensenada	11	01.60	12	10.50	13	23.50	56	2.4
El Maneadero	11	01.40	12	10.40	13	23.50	56	2.4
Mexicali	11	04.20	12	13.60	13	26.90	57	2.4
Cd. Guadalupe Victoria	11	03.60	12	13.50	13	27.30	57	2.4
San Felipe	11	00.80	12	11.60	13	26.50	58	2.4
Tecate	11	03.40	12	11.90	13	24.30	56	2.3
Tijuana	11	03.10	12	11.30	13	23.30	56	2.3
Villa del Campo	11	03.20	12	11.60	13	23.90	56	2.3
Playas de Rosarito	11	02.70	12	10.90	13	23.10	56	2.3
Lázaro Cárdenas	10	58.90	12	09.10	13	23.50	57	2.4
Baja California Sur								
Cd. Constitución	10	49.60	12	04.90	13	25.10	63	2.6
La Paz	10	49.00	12	05.30	13	26.40	65	2.6
San José del Cabo	10	47.30	12	04.10	13	25.70	66	2.6
Cabo San Lucas	10	46.70	12	03.40	13	25.00	65	2.6
Loreto	10	52.10	12	07.30	13	27.20	63	2.6
Campeche								
Calkiní	11	16.50	12	33.10	13	50.30	75	2.6
Campeche	11	14.60	12	31.10	13	48.50	76	2.6
Cd. del Carmen	11	09.80	12	26.20	13	43.90	78	2.6
Champotón	11	13.50	12	29.80	13	47.00	76	2.6
Coahuila								
Cd. Acuña	11	10.80	12	30.00	13	51.40	67	2.7
Allende	11	09.00	12	28.50	13	50.30	68	2.7
Arteaga	11	03.40	12	23.10	13	45.70	71	2.7
Francisco I. Madero	11	00.60	12	19.70	13	42.10	69	2.7
Frontera	11	05.40	12	24.90	13	47.10	69	2.7
Matamoros	11	00.20	12	19.30	13	41.80	70	2.7
Cd. Melchor Múzquiz	11	07.20	12	26.50	13	48.40	69	2.7
Palaú	11	07.30	12	26.70	13	48.60	69	2.7
Nava	11	09.30	12	28.80	13	50.50	68	2.7
Parras de la Fuente	11	01.40	12	20.90	13	43.40	70	2.7
Piedras Negras	11	10.20	12	29.70	13	51.30	68	2.7
Ramos Arizpe	11	03.40	12	23.10	13	45.70	71	2.7
Sabinas	11	07.70	12	27.10	13	49.10	69	2.7
Saltillo	11	03.10	12	22.80	13	45.40	71	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
San Buenaventura	11	05.50	12	25.00	13	47.10	69	2.7
Nueva Rosita	11	07.70	12	27.10	13	49.00	69	2.7
San Pedro	11	00.90	12	20.10	13	42.60	70	2.7
Torreón	10	59.90	12	19.00	13	41.40	70	2.7
Colima								
Cd. de Armería	10	46.50	12	05.00	13	28.00	72	2.7
Colima	10	47.40	12	06.00	13	29.00	73	2.7
Manzanillo	10	46.20	12	04.60	13	27.70	72	2.7
Tecomán	10	46.60	12	05.10	13	28.10	73	2.7
Cd. de Villa de Álvarez	10	47.40	12	06.00	13	29.10	73	2.7
Chiapas								
Acala	11	04.80	12	20.00	13	37.20	80	2.5
Berriozábal	11	03.90	12	19.70	13	37.40	80	2.6
Cacahoatán	11	04.60	12	18.00	13	33.40	82	2.5
Cintalapa	11	02.70	12	18.60	13	36.60	80	2.6
Comitán de Domínguez	11	06.10	12	20.70	13	37.10	80	2.5
Chiapa de Corzo	11	04.50	12	20.00	13	37.40	80	2.5
Frontera Comalapa	11	05.40	12	19.50	13	35.40	81	2.5
Huixtla	11	04.00	12	17.80	13	33.50	82	2.5
Mapastepec	11	03.20	12	17.60	13	34.00	82	2.5
Las Margaritas	11	06.60	12	21.20	13	37.40	80	2.5
Motozintla de Mendoza	11	04.80	12	18.70	13	34.40	81	2.5
Ocosingo	11	07.00	12	22.20	13	39.00	80	2.5
Ocozocoautla de Espinosa	11	03.60	12	19.40	13	37.20	80	2.6
Palenque	11	08.10	12	23.60	13	40.70	79	2.5
Pichucalco	11	05.20	12	21.40	13	39.50	79	2.6
Pijijiapan	11	02.70	12	17.50	13	34.40	81	2.5
Reforma	11	05.60	12	22.10	13	40.40	79	2.6
Las Rosas	11	05.70	12	20.50	13	37.20	80	2.5
San Cristóbal las Casas	11	05.40	12	20.80	13	37.90	80	2.5
Suchiapa	11	04.10	12	19.60	13	37.10	80	2.5
Cd. Hidalgo	11	04.30	12	17.40	13	32.40	82	2.5
Tapachula	11	04.30	12	17.70	13	33.00	82	2.5
Teopisca	11	05.60	12	20.70	13	37.50	80	2.5
Tonalá	11	01.80	12	17.30	13	34.90	81	2.6
Tuxtla Gutiérrez	11	04.30	12	19.90	13	37.40	80	2.6
Venustiano Carranza	11	05.10	12	20.10	13	36.90	81	2.5
Villaflores	11	03.20	12	18.50	13	35.80	81	2.5
Yajalón	11	06.70	12	22.30	13	39.40	80	2.5
Chihuahua								
Juan Aldama	11	03.70	12	21.10	13	41.90	66	2.6
Santa Eulalia	11	03.20	12	20.70	13	41.60	66	2.6
Ascensión	11	06.40	12	22.00	13	40.70	63	2.6
Santa Rosalía de Camargo	11	02.10	12	20.20	13	41.70	67	2.7
Cuauhtémoc	11	01.70	12	18.80	13	39.50	66	2.6
Chihuahua	11	03.10	12	20.50	13	41.30	66	2.6

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Delicias	11	02.80	12	20.70	13	41.80	67	2.6
Guachochi	10	58.10	12	15.50	13	36.80	66	2.6
Hidalgo del Parral	10	59.90	12	18.00	13	39.60	67	2.7
José Mariano Jiménez	11	01.20	12	19.60	13	41.30	68	2.7
Juárez	11	09.40	12	25.50	13	44.40	63	2.6
Pedro Meoqui	11	03.00	12	20.80	13	41.90	66	2.6
Nuevo Casas Grandes	11	05.00	12	20.90	13	40.10	64	2.6
Manuel Ojinaga	11	06.90	12	24.80	13	45.70	66	2.6
Cd. de México								
Azcapotzalco	10	55.40	12	14.30	13	36.50	76	2.7
Coyoacán	10	55.20	12	14.00	13	36.20	76	2.7
Cuajimalpa	10	54.90	12	13.80	13	36.10	76	2.7
Acopilco	10	54.80	12	13.70	13	36.00	76	2.7
Gustavo A. Madero	10	55.50	12	14.40	13	36.60	76	2.7
Iztacalco	10	55.40	12	14.30	13	36.40	76	2.7
Iztapalapa	10	55.30	12	14.20	13	36.40	76	2.7
La Magdalena Contreras	10	54.90	12	13.80	13	36.00	76	2.7
Villa Milpa Alta	10	55.20	12	14.00	13	36.10	77	2.7
San Antonio Tecómitl	10	55.30	12	14.10	13	36.20	77	2.7
Oztotepec	10	55.10	12	13.90	13	36.00	77	2.7
San Salvador Cuauhtenco	10	55.00	12	13.90	13	36.00	77	2.7
Álvaro Obregón	10	55.20	12	14.10	13	36.30	76	2.7
Tláhuac	10	55.30	12	14.20	13	36.30	77	2.7
San Juan Ixtayopan	10	55.30	12	14.10	13	36.20	77	2.7
Tlalpan	10	55.10	12	13.90	13	36.10	76	2.7
San Miguel Ajusco	10	54.90	12	13.70	13	35.90	76	2.7
San Miguel Topilejo	10	55.00	12	13.80	13	35.90	76	2.7
Xochimilco	10	55.10	12	14.00	13	36.10	76	2.7
Benito Juárez	10	55.20	12	14.10	13	36.30	76	2.7
Cuauhtémoc	10	55.30	12	14.30	13	36.50	76	2.7
Miguel Hidalgo	10	55.20	12	14.10	13	36.30	76	2.7
Venustiano Carranza	10	55.40	12	14.30	13	36.50	76	2.7
Durango								
Victoria de Durango	10	55.20	12	14.00	13	36.70	70	2.7
Gómez Palacio	10	59.90	12	18.90	13	41.40	70	2.7
Guadalupe Victoria	10	56.80	12	15.70	13	38.40	70	2.7
Lerdo	10	59.80	12	18.80	13	41.30	70	2.7
El Salto	10	53.80	12	12.40	13	35.00	69	2.7
Santiago Papasquiaro	10	56.30	12	14.80	13	37.10	69	2.7
Vicente Guerrero	10	55.60	12	14.60	13	37.40	70	2.7
Guanajuato								
Abasolo	10	53.00	12	12.20	13	35.10	74	2.7
Acámbaro	10	53.60	12	12.70	13	35.40	75	2.7
San Miguel de Allende	10	55.20	12	14.50	13	37.30	74	2.7
Apaseo el Alto	10	54.50	12	13.70	13	36.50	75	2.7
Apaseo el Grande	10	54.60	12	13.80	13	36.60	75	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Villas de la Estancia	10	54.90	12	14.20	13	36.90	75	2.7
Celaya	10	54.30	12	13.50	13	36.30	75	2.7
Cd. Manuel Doblado	10	52.80	12	12.00	13	35.00	74	2.7
Comonfort	10	54.70	12	14.00	13	36.80	74	2.7
Cortazar	10	54.00	12	13.20	13	36.00	74	2.7
Cuerámara	10	53.10	12	12.30	13	35.20	74	2.7
Dolores Hidalgo	10	55.30	12	14.60	13	37.50	74	2.7
Guanajuato	10	54.50	12	13.80	13	36.70	74	2.7
Marfil	10	54.40	12	13.70	13	36.60	74	2.7
Yerbabuena	10	54.30	12	13.60	13	36.50	74	2.7
Irapuato	10	53.70	12	12.90	13	35.80	74	2.7
Jaral del Progreso	10	53.60	12	12.80	13	35.60	74	2.7
León de los Aldama	10	54.00	12	13.30	13	36.20	74	2.7
Moroleón	10	53.00	12	12.10	13	34.90	74	2.7
Pénjamo	10	52.70	12	11.80	13	34.70	74	2.7
Purísima de Bustos	10	53.50	12	12.70	13	35.70	73	2.7
Romita	10	53.80	12	13.00	13	36.00	74	2.7
Salamanca	10	53.80	12	13.00	13	35.80	74	2.7
Salvatierra	10	53.70	12	12.80	13	35.60	75	2.7
San Felipe	10	55.40	12	14.80	13	37.70	74	2.7
San Francisco del Rincón	10	53.50	12	12.70	13	35.70	73	2.7
San José Iturbide	10	55.90	12	15.20	13	38.00	74	2.7
San Luis de la Paz	10	56.20	12	15.60	13	38.40	74	2.7
Juventino Rosas	10	54.20	12	13.50	13	36.30	74	2.7
Silao de la Victoria	10	54.10	12	13.30	13	36.30	74	2.7
Uriangato	10	53.00	12	12.10	13	35.00	74	2.7
Valle de Santiago	10	53.50	12	12.60	13	35.50	74	2.7
Villagrán	10	54.00	12	13.20	13	36.00	74	2.7
Yuriria	10	53.20	12	12.40	13	35.20	74	2.7
Guerrero								
Acapulco	10	49.70	12	07.60	13	29.40	77	2.7
Arcelia	10	51.40	12	10.00	13	32.20	76	2.7
Atoyac de Álvarez	10	49.30	12	07.40	13	29.40	76	2.7
Ayutla de los Libres	10	51.40	12	09.20	13	30.70	78	2.7
Chilapa de Álvarez	10	52.20	12	10.40	13	32.10	77	2.7
Chilpancingo	10	51.60	12	09.70	13	31.60	77	2.7
Cd. de Huitzucó	10	53.10	12	11.60	13	33.60	77	2.7
Iguala	10	52.80	12	11.30	13	33.40	77	2.7
Zihuatanejo	10	48.10	12	06.40	13	28.90	75	2.7
Ometepec	10	52.30	12	09.90	13	30.90	78	2.6
Petatlán	10	48.40	12	06.60	13	29.00	76	2.7
Cd. Altamirano	10	50.80	12	09.40	13	31.80	76	2.7
Taxco de Alarcón	10	53.00	12	11.60	13	33.80	77	2.7
Técpan de Galeana	10	49.00	12	07.10	13	29.20	76	2.7
Teloloapan	10	52.20	12	10.80	13	33.00	76	2.7
Tixtla de Guerrero	10	51.80	12	10.00	13	31.80	77	2.7
Tlapa de Comonfort	10	53.30	12	11.40	13	32.80	78	2.7
Zumpango del Río	10	51.70	12	09.90	13	31.80	77	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Hidalgo								
Actopan	10	57.10	12	16.30	13	38.60	76	2.7
Apan	10	57.10	12	16.00	13	38.10	77	2.7
Paseos de la Pradera	10	56.00	12	15.00	13	37.40	76	2.7
Cuautepec	10	57.90	12	17.00	13	39.00	76	2.7
Huejutla de Reyes	10	59.60	12	19.00	13	41.20	75	2.7
Ixmiquilpan	10	57.00	12	16.20	13	38.70	76	2.7
Mixquiahuala	10	56.60	12	15.70	13	38.10	76	2.7
Pachuca de Soto	10	57.20	12	16.40	13	38.60	76	2.7
Progreso de Obregón	10	56.60	12	15.80	13	38.20	76	2.7
La Providencia Siglo XXI	10	57.20	12	16.30	13	38.50	76	2.7
Paseos de Chavarría	10	57.10	12	16.20	13	38.40	76	2.7
Santiago Tulantepec	10	57.80	12	16.90	13	38.90	76	2.7
Tepeapulco	10	57.00	12	16.00	13	38.10	76	2.7
Cd. Sahagún	10	56.90	12	15.90	13	38.00	76	2.7
Tepeji del Río	10	55.80	12	14.90	13	37.20	76	2.7
Tizayuca	10	56.30	12	15.40	13	37.60	76	2.7
Don Antonio	10	56.50	12	15.50	13	37.70	76	2.7
Haciendas de Tizayuca	10	56.40	12	15.50	13	37.70	76	2.7
Tula de Allende	10	56.00	12	15.20	13	37.50	76	2.7
El Llano	10	56.10	12	15.20	13	37.60	76	2.7
Tulancingo	10	57.90	12	16.90	13	39.00	76	2.7
Zacualtipán	10	58.30	12	17.60	13	39.80	76	2.7
Privadas Santa Matilde	10	57.00	12	16.10	13	38.30	76	2.7
Jalisco								
Ahualulco de Mercado	10	49.70	12	08.50	13	31.60	72	2.7
Ameca	10	49.30	12	08.10	13	31.20	72	2.7
Arandas	10	52.20	12	11.30	13	34.30	73	2.7
Atotonilco el Alto	10	51.60	12	10.70	13	33.70	73	2.7
Autlán de Navarro	10	47.40	12	06.00	13	29.10	72	2.7
La Barca	10	51.10	12	10.10	13	33.10	73	2.7
Cihuatlán	10	46.10	12	04.60	13	27.70	72	2.7
Cd. Guzmán	10	48.60	12	07.40	13	30.40	73	2.7
Cocula	10	49.30	12	08.10	13	31.20	72	2.7
Colotlán	10	53.40	12	12.60	13	35.60	72	2.7
Chapala	10	50.10	12	09.00	13	32.10	73	2.7
Encarnación de Díaz	10	53.90	12	13.10	13	36.10	73	2.7
El Grull	10	47.70	12	06.30	13	29.40	72	2.7
Guadalajara	10	50.60	12	09.50	13	32.60	72	2.7
Los Freseros	10	50.40	12	09.30	13	32.40	73	2.7
Jalostotitlán	10	52.80	12	12.00	13	35.10	73	2.7
Jamay	10	50.90	12	09.80	13	32.90	73	2.7
Jocotepec	10	49.70	12	08.60	13	31.70	72	2.7
La Aurora	10	50.70	12	09.70	13	32.70	73	2.7
Lagos de Moreno	10	54.00	12	13.30	13	36.30	73	2.7
Magdalena	10	50.10	12	09.00	13	32.00	72	2.7
Ocotlán	10	50.90	12	09.90	13	32.90	73	2.7
Puerto Vallarta	10	47.80	12	06.30	13	29.30	71	2.7
Ixtapa	10	48.00	12	06.50	13	29.60	71	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
El Salto	10	50.50	12	09.50	13	32.60	73	2.7
Las Pintas	10	50.40	12	09.40	13	32.50	72	2.7
Las Pintitas	10	50.50	12	09.40	13	32.50	72	2.7
San José del Castillo	10	50.40	12	09.40	13	32.50	73	2.7
San José el Verde	10	50.50	12	09.40	13	32.50	73	2.7
El Quince	10	50.40	12	09.40	13	32.50	73	2.7
Galaxia Bonito Jalisco	10	50.50	12	09.40	13	32.50	73	2.7
San Juan de los Lagos	10	53.20	12	12.40	13	35.40	73	2.7
San Miguel el Alto	10	52.70	12	11.90	13	34.90	73	2.7
Sayula	10	48.70	12	07.50	13	30.60	72	2.7
Tala	10	50.00	12	08.90	13	32.00	72	2.7
Los Ruiseñores	10	50.10	12	09.00	13	32.10	72	2.7
Tamazula	10	48.90	12	07.70	13	30.70	73	2.7
Teocaltiche	10	53.20	12	12.40	13	35.40	73	2.7
Tepatitlán	10	51.70	12	10.80	13	33.90	73	2.7
Capilla de Guadalupe	10	52.00	12	11.10	13	34.20	73	2.7
Tequila	10	50.30	12	09.10	13	32.20	72	2.7
Tizapán el Alto	10	50.10	12	09.00	13	32.10	73	2.7
Tlajomulco de Zúñiga	10	50.10	12	09.00	13	32.00	72	2.7
Cajititlán	10	50.20	12	09.10	13	32.20	73	2.7
El Capulín	10	50.30	12	09.30	13	32.30	73	2.7
San Agustín	10	50.20	12	09.10	13	32.20	72	2.7
San Sebastián el Grande	10	50.20	12	09.10	13	32.20	72	2.7
Santa Cruz del Valle	10	50.40	12	09.30	13	32.40	72	2.7
La Tijera	10	50.30	12	09.20	13	32.30	72	2.7
Hacienda Santa Fe	10	50.20	12	09.20	13	32.20	72	2.7
Real del Valle	10	50.30	12	09.20	13	32.30	72	2.7
Villas de la Hacienda	10	50.30	12	09.20	13	32.30	72	2.7
Lomas del Sur	10	50.10	12	09.00	13	32.10	72	2.7
Colinas del Roble	10	50.20	12	09.10	13	32.20	72	2.7
Los Cantaros	10	50.30	12	09.20	13	32.30	72	2.7
Tlaquepaque	10	50.60	12	09.50	13	32.60	72	2.7
Santa Anita	10	50.20	12	09.10	13	32.20	72	2.7
Tonalá	10	50.60	12	09.60	13	32.70	73	2.7
Coyula	10	50.70	12	09.70	13	32.80	73	2.7
Tuxpan	10	48.50	12	07.20	13	30.30	73	2.7
Villa Hidalgo	10	53.60	12	12.80	13	35.90	73	2.7
Zacoalco de Torres	10	49.40	12	08.30	13	31.30	72	2.7
Zapopan	10	50.60	12	09.60	13	32.60	72	2.7
Tesistán	10	50.60	12	09.60	13	32.60	72	2.7
Valle de los Molinos	10	50.80	12	09.80	13	32.80	72	2.7
Zapotiltic	10	48.60	12	07.30	13	30.30	73	2.7
Zapotlanejo	10	50.90	12	09.90	13	33.00	73	2.7
México								
Tepexpan	10	56.00	12	15.00	13	37.20	76	2.7
Tlalcilalcalpan	10	54.00	12	12.90	13	35.20	76	2.7
Amecameca	10	55.50	12	14.30	13	36.30	77	2.7
Apaxco	10	56.20	12	15.30	13	37.60	76	2.7
San Salvador Atenco	10	56.00	12	14.90	13	37.10	76	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Cd. López Mateos	10	55.40	12	14.30	13	36.60	76	2.7
Atacomulco de Fabela	10	54.60	12	13.70	13	36.20	76	2.7
Capulhuac de Mirafuentes	10	54.30	12	13.20	13	35.50	76	2.7
San Francisco Coacalco	10	55.70	12	14.70	13	37.00	76	2.7
Coyotepec	10	55.80	12	14.80	13	37.10	76	2.7
Cuautitlán	10	55.70	12	14.70	13	36.90	76	2.7
Galaxia Cuautitlán	10	55.70	12	14.70	13	37.00	76	2.7
Chalco	10	55.50	12	14.30	13	36.40	77	2.7
Cuautlalpan	10	55.60	12	14.50	13	36.50	77	2.7
Atlazalpan	10	55.40	12	14.20	13	36.30	77	2.7
Santa María Huexoculco	10	55.60	12	14.50	13	36.50	77	2.7
Pueblo Nuevo	10	55.60	12	14.40	13	36.50	77	2.7
Chalco	10	55.60	12	14.40	13	36.50	77	2.7
Chicoloapan	10	55.80	12	14.60	13	36.80	76	2.7
Chiconcuac	10	56.00	12	14.90	13	37.10	76	2.7
Chimalhuacán	10	55.70	12	14.60	13	36.70	76	2.7
Ecatepec	10	55.80	12	14.80	13	37.00	76	2.7
Huehuetoca	10	56.00	12	15.10	13	37.40	76	2.7
Santa Teresa	10	55.90	12	14.90	13	37.20	76	2.7
Jesús del Monte	10	55.00	12	13.90	13	36.10	76	2.7
Magdalena Chichicaspa	10	55.00	12	13.90	13	36.20	76	2.7
Naucalpan	10	55.00	12	14.00	13	36.20	76	2.7
Ixtapaluca	10	55.60	12	14.50	13	36.60	77	2.7
San Buenaventura	10	55.60	12	14.50	13	36.60	77	2.7
Acuautla	10	55.70	12	14.60	13	36.70	77	2.7
San Jerónimo	10	55.70	12	14.50	13	36.60	77	2.7
Ixtapan de la Sal	10	53.40	12	12.10	13	34.30	76	2.7
Xalatlaco	10	54.40	12	13.30	13	35.50	76	2.7
Alborada Jaltenco	10	55.90	12	14.80	13	37.10	76	2.7
Juchitepec	10	55.30	12	14.00	13	36.10	77	2.7
Lerma de Villada	10	54.40	12	13.30	13	35.60	76	2.7
San Pedro Tultepec	10	54.40	12	13.30	13	35.50	76	2.7
Santa María Atarasquillo	10	54.60	12	13.50	13	35.80	76	2.7
Melchor Ocampo	10	55.80	12	14.80	13	37.10	76	2.7
Metepc	10	54.20	12	13.10	13	35.40	76	2.7
San Francisco Coaxusco	10	54.20	12	13.10	13	35.40	76	2.7
San Jerónimo Chicahualco	10	54.30	12	13.10	13	35.50	76	2.7
San Jorge Pueblo Nuevo	10	54.20	12	13.00	13	35.30	76	2.7
San Salvador Tizatlalli	10	54.30	12	13.20	13	35.50	76	2.7
Naucalpan	10	55.30	12	14.20	13	36.40	76	2.7
Cd. Nezahualcóyotl	10	55.50	12	14.40	13	36.60	76	2.7
Santa Ana Nextlalpan	10	56.00	12	15.00	13	37.20	76	2.7
Ex Hacienda Santa Inés	10	55.90	12	14.90	13	37.20	76	2.7
Cd. Nicolás Romero	10	55.40	12	14.30	13	36.60	76	2.7
Veintidós de Febrero	10	55.30	12	14.30	13	36.60	76	2.7
Ocoyoacac	10	54.50	12	13.40	13	35.60	76	2.7
Ozumba de Alzate	10	55.30	12	14.10	13	36.10	77	2.7
Los Reyes Acaquilpan	10	55.50	12	14.40	13	36.50	76	2.7
La Magdalena Atlicpac	10	55.60	12	14.50	13	36.60	76	2.7
Emiliano Zapata	10	55.50	12	14.40	13	36.50	76	2.7
Lomas de San Sebastián	10	55.70	12	14.50	13	36.60	76	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
San Isidro	10	55.50	12	14.40	13	36.50	76	2.7
San Antonio la Isla	10	54.10	12	12.90	13	35.20	76	2.7
Atenco	10	54.40	12	13.20	13	35.50	76	2.7
Tecámac	10	56.10	12	15.10	13	37.30	76	2.7
Los Reyes Acozac	10	56.20	12	15.20	13	37.40	76	2.7
Santa María Ajoloapan	10	56.20	12	15.20	13	37.50	76	2.7
Ojo de Agua	10	56.00	12	15.00	13	37.20	76	2.7
San Martín Azcatepec	10	56.10	12	15.10	13	37.30	76	2.7
Santo Tomás Chiconautla	10	56.00	12	15.00	13	37.20	76	2.7
Tejupilco	10	52.60	12	11.40	13	33.80	76	2.7
Tenango	10	54.00	12	12.80	13	35.10	76	2.7
Teoloyucan	10	55.80	12	14.80	13	37.10	76	2.7
Teotihuacán	10	56.30	12	15.30	13	37.40	76	2.7
Tepoztlán	10	55.70	12	14.70	13	37.00	76	2.7
Tequixquiac	10	56.10	12	15.20	13	37.50	76	2.7
Texcoco de Mora	10	56.00	12	14.90	13	37.00	76	2.7
Tezoyuca	10	56.00	12	15.00	13	37.10	76	2.7
Tequisistlán	10	56.00	12	14.90	13	37.10	76	2.7
San Rafael	10	55.70	12	14.50	13	36.50	77	2.7
Tlalnepantla	10	55.40	12	14.40	13	36.60	76	2.7
Toluca de Lerdo	10	54.20	12	13.10	13	35.40	76	2.7
Capultitlán	10	54.10	12	13.00	13	35.30	76	2.7
San Andrés Cuexcontitlán	10	54.30	12	13.20	13	35.60	76	2.7
San Buenaventura	10	54.10	12	12.90	13	35.30	76	2.7
Huichochitlán	10	54.30	12	13.20	13	35.50	76	2.7
Tepaltitlán	10	54.30	12	13.20	13	35.50	76	2.7
Otzacatipan	10	54.30	12	13.20	13	35.50	76	2.7
Oxtotitlán	10	54.10	12	13.00	13	35.40	76	2.7
Autopan	10	54.30	12	13.20	13	35.50	76	2.7
Totoltepec	10	54.40	12	13.20	13	35.60	76	2.7
Tlapaltitlán	10	54.20	12	13.10	13	35.40	76	2.7
Totoltepec	10	54.30	12	13.20	13	35.50	76	2.7
Tlacotepec	10	54.00	12	12.90	13	35.20	76	2.7
Crespa Floresta	10	54.30	12	13.20	13	35.50	76	2.7
Sauces	10	54.40	12	13.30	13	35.60	76	2.7
Tultepec	10	55.80	12	14.80	13	37.00	76	2.7
Santiago Teyahualco	10	55.80	12	14.70	13	37.00	76	2.7
Tultitlán	10	55.70	12	14.60	13	36.90	76	2.7
Buenavista	10	55.60	12	14.60	13	36.80	76	2.7
las Salinas	10	55.80	12	14.80	13	37.10	76	2.7
Fuentes del Valle	10	55.70	12	14.70	13	36.90	76	2.7
Ampliación San Mateo Valle	10	55.60	12	14.60	13	36.90	76	2.7
Valle	10	53.20	12	12.00	13	34.50	76	2.7
Xonacatlán	10	54.60	12	13.50	13	35.80	76	2.7
San Miguel Zinacantepec	10	54.00	12	12.90	13	35.30	76	2.7
San Antonio Acahualco	10	53.90	12	12.80	13	35.20	76	2.7
San Luis Mextepec	10	54.00	12	12.90	13	35.30	76	2.7
Zumpango	10	56.00	12	15.10	13	37.30	76	2.7
San Juan Zitlattepec	10	56.00	12	15.00	13	37.30	76	2.7
Villas de la Laguna	10	56.10	12	15.20	13	37.40	76	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Cuautitlán Izcalli	10	55.60	12	14.60	13	36.90	76	2.7
Xico	10	55.40	12	14.30	13	36.40	77	2.7
Michoacán								
Apatzingán	10	49.20	12	08.00	13	30.90	74	2.7
Ario de Rosales	10	50.50	12	09.30	13	32.10	74	2.7
Cherán	10	50.90	12	09.90	13	32.80	74	2.7
Cd. Hidalgo	10	53.30	12	12.30	13	34.90	75	2.7
Huetamo de Núñez	10	50.90	12	09.50	13	32.10	75	2.7
Jacona	10	50.90	12	09.80	13	32.80	74	2.7
Jiquilpan	10	50.30	12	09.20	13	32.20	73	2.7
Maravatío	10	53.80	12	12.90	13	35.60	75	2.7
Cd. Lázaro Cárdenas	10	47.50	12	05.90	13	28.60	75	2.7
Las Guacamayas	10	47.60	12	06.00	13	28.70	74	2.7
La Orilla	10	47.50	12	05.90	13	28.60	74	2.7
Morelia	10	52.20	12	11.20	13	34.00	75	2.7
Morelos	10	52.00	12	11.00	13	33.80	75	2.7
Nueva Italia	10	49.60	12	08.30	13	31.20	74	2.7
Nuevo Parangaricutiro	10	50.20	12	09.00	13	31.90	74	2.7
Paracho	10	50.70	12	09.60	13	32.60	74	2.7
Pátzcuaro	10	51.20	12	10.10	13	33.00	74	2.7
Peribán de Ramos	10	49.90	12	08.80	13	31.70	74	2.7
La Piedad	10	52.00	12	11.10	13	34.10	74	2.7
Puruándiro	10	52.40	12	11.50	13	34.30	74	2.7
Quiroga	10	51.60	12	10.60	13	33.40	74	2.7
Los Reyes	10	49.90	12	08.80	13	31.80	74	2.7
Sahuayo	10	50.40	12	09.30	13	32.40	73	2.7
Santa Clara del Cobre	10	51.00	12	09.90	13	32.70	74	2.7
Tacámbaro de Codallos	10	51.00	12	09.80	13	32.60	75	2.7
Tangancicuaro	10	50.90	12	09.90	13	32.80	74	2.7
Tepalcatepec	10	48.60	12	07.40	13	30.30	73	2.7
Uruapan	10	50.30	12	09.20	13	32.00	74	2.7
Yurécuaro	10	51.60	12	10.70	13	33.70	73	2.7
Zacapu	10	51.40	12	10.40	13	33.30	74	2.7
Zamora	10	50.90	12	09.90	13	32.90	74	2.7
Zinapécuaro	10	53.10	12	12.20	13	34.90	75	2.7
Heróica Zitácuaro	10	53.20	12	12.10	13	34.70	75	2.7
Morelos								
Axochiapan	10	54.50	12	13.00	13	34.90	77	2.7
Cuautla	10	54.70	12	13.30	13	35.30	77	2.7
Cuernavaca	10	54.30	12	13.00	13	35.20	77	2.7
Emiliano Zapata	10	54.30	12	13.00	13	35.00	77	2.7
Tres de Mayo	10	54.30	12	13.00	13	35.10	77	2.7
Jiutepec	10	54.40	12	13.10	13	35.10	77	2.7
Progreso	10	54.40	12	13.10	13	35.20	77	2.7
Jojutla	10	53.90	12	12.50	13	34.50	77	2.7
Puente de Ixtla	10	53.70	12	12.30	13	34.30	77	2.7
Temixco	10	54.20	12	12.90	13	35.00	77	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Santa Rosa	10	54.10	12	12.70	13	34.70	77	2.7
Tlaquiltenango	10	54.00	12	12.60	13	34.60	77	2.7
Xochitepec	10	54.10	12	12.80	13	34.80	77	2.7
Yautepec	10	54.60	12	13.30	13	35.30	77	2.7
Yecapixtla	10	54.90	12	13.60	13	35.60	77	2.7
Zacatepec	10	54.00	12	12.60	13	34.60	77	2.7
Xoxocotla Centro	10	53.90	12	12.50	13	34.60	77	2.7
Nayarit								
Acaponeta	10	51.30	12	09.80	13	32.70	70	2.7
Compostela	10	49.40	12	08.10	13	31.10	71	2.7
Ixtlán del Río	10	49.80	12	08.60	13	31.60	71	2.7
Xalisco	10	49.80	12	08.50	13	31.50	71	2.7
Santiago Ixcuintla	10	50.10	12	08.70	13	31.70	70	2.7
Tepic	10	50.00	12	08.60	13	31.70	71	2.7
Tuxpan	10	50.30	12	08.90	13	31.80	70	2.7
Bucerías	10	47.90	12	06.40	13	29.40	71	2.7
Mezcales	10	47.90	12	06.40	13	29.50	71	2.7
San José del Valle	10	48.10	12	06.60	13	29.60	71	2.7
San Vicente	10	48.00	12	06.50	13	29.60	71	2.7
Nuevo León								
Cd. de Allende	11	04.40	12	24.30	13	46.80	71	2.7
Anáhuac	11	07.90	12	27.70	13	49.80	70	2.7
Cd. Apodaca	11	05.00	12	24.90	13	47.30	71	2.7
Santa Rosa	11	05.00	12	24.90	13	47.30	71	2.7
Ex Hacienda Santa Rosa	11	05.00	12	24.90	13	47.30	71	2.7
Cadereyta	11	04.90	12	24.90	13	47.30	71	2.7
Valle del Roble	11	04.90	12	24.80	13	47.20	71	2.7
Buena Vista	11	04.90	12	24.70	13	47.20	71	2.7
El Jaral	11	05.00	12	24.80	13	47.20	71	2.7
Villas del Arco	11	05.00	12	24.80	13	47.30	71	2.7
Ciénega de Flores	11	05.40	12	25.20	13	47.70	71	2.7
Real del Sol	11	05.30	12	25.20	13	47.60	71	2.7
García	11	04.50	12	24.30	13	46.70	71	2.7
Valle de Lincoln	11	04.60	12	24.40	13	46.90	71	2.7
Cd. Mitras	11	04.70	12	24.50	13	46.90	71	2.7
Mitras Poniente	11	04.70	12	24.50	13	46.90	71	2.7
San Pedro Garza García	11	04.50	12	24.30	13	46.80	71	2.7
Cd. General Escobedo	11	04.90	12	24.70	13	47.20	71	2.7
Praderas San Francisco	11	04.80	12	24.60	13	47.00	71	2.7
Valle Santa Elena	11	05.20	12	25.10	13	47.50	71	2.7
Real Palmas	11	05.30	12	25.10	13	47.60	71	2.7
Guadalupe	11	04.70	12	24.60	13	47.00	71	2.7
Cd. Benito Juárez	11	04.90	12	24.80	13	47.30	71	2.7
Jardines de la Silla	11	04.80	12	24.60	13	47.10	71	2.7
Arboledas de San Roque	11	04.80	12	24.60	13	47.10	71	2.7
Linares	11	04.30	12	24.20	13	46.70	72	2.7
Montemorelos	11	04.50	12	24.40	13	46.90	71	2.7

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(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Monterrey	11	04.60	12	24.50	13	46.90	71	2.7
Pesquería	11	05.20	12	25.10	13	47.60	71	2.7
Colinas del Aeropuerto	11	05.20	12	25.10	13	47.50	71	2.7
Valle de Santa María	11	05.00	12	24.90	13	47.40	71	2.7
Cd. Sabinas Hidalgo	11	06.40	12	26.20	13	48.50	70	2.7
Los Pilares	11	05.20	12	25.00	13	47.50	71	2.7
San Nicolás de los Garza	11	04.80	12	24.70	13	47.10	71	2.7
Hidalgo	11	05.00	12	24.80	13	47.20	71	2.7
Cd. Santa Catarina	11	04.40	12	24.20	13	46.70	71	2.7
Santiago	11	04.40	12	24.30	13	46.80	71	2.7
Oaxaca								
Asunción Nochixtlán	10	55.90	12	13.60	13	34.40	79	2.6
Cd. Ixtepec	10	59.30	12	15.70	13	34.70	80	2.6
Cuixtlan de Guerrero	10	56.10	12	13.50	13	33.80	79	2.6
Huajuapán de León	10	55.30	12	13.40	13	34.50	78	2.7
Juchitán	10	59.30	12	15.60	13	34.40	81	2.6
Loma Bonita	10	59.70	12	17.40	13	37.70	79	2.6
Matías Romero	10	59.80	12	16.50	13	35.60	80	2.6
Miahuatlán	10	55.60	12	12.40	13	32.30	80	2.6
Oaxaca	10	56.40	12	13.70	13	34.00	79	2.6
Ocotlán	10	56.10	12	13.30	13	33.40	80	2.6
Salina Cruz	10	58.50	12	14.70	13	33.50	81	2.6
San Antonio de la Cal	10	56.40	12	13.70	13	34.00	79	2.6
San Jacinto Amilpas	10	56.30	12	13.70	13	34.10	79	2.6
Tuxtepec	10	59.20	12	16.90	13	37.40	79	2.6
Puerto Escondido	10	53.90	12	10.60	13	30.50	80	2.6
Río Grande Piedra Parada	10	53.30	12	10.20	13	30.40	80	2.6
Xoxocotlán	10	56.30	12	13.60	13	33.90	79	2.6
Santa Lucía del Camino	10	56.40	12	13.80	13	34.10	79	2.6
Tlaxiaco	10	54.70	12	12.40	13	33.30	79	2.6
Santa María Atzompa	10	56.30	12	13.70	13	34.10	79	2.6
Crucecita	10	55.80	12	12.10	13	31.30	81	2.6
Pinotepa Nacional	10	52.50	12	09.80	13	30.50	79	2.6
Tehuantepec	10	58.60	12	15.00	13	33.90	81	2.6
Tlacolula	10	56.70	12	14.00	13	34.10	80	2.6
Villa de Zaachila	10	56.10	12	13.40	13	33.70	79	2.6
Vicente Guerrero	10	56.20	12	13.50	13	33.70	79	2.6
Puebla								
Acatlán	10	55.40	12	13.70	13	35.10	78	2.7
Acatzingo	10	57.20	12	15.70	13	37.30	77	2.7
Cd. de Ajalpan	10	57.30	12	15.50	13	36.60	78	2.7
Altepexi	10	57.20	12	15.40	13	36.50	78	2.7
Amozoc	10	56.80	12	15.40	13	37.10	77	2.7
Atlixco	10	55.80	12	14.40	13	36.30	77	2.7
Santa María Coronango	10	56.40	12	15.10	13	37.00	77	2.7
Ocotlán	10	56.40	12	15.20	13	37.00	77	2.7
Cuautlancingo	10	56.40	12	15.10	13	36.90	77	2.7

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(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Sanctorum	10	56.40	12	15.10	13	36.90	77	2.7
Almecatla	10	56.60	12	15.30	13	37.10	77	2.7
San Jacinto	10	56.50	12	15.30	13	37.10	77	2.7
Cd. Serdán	10	57.80	12	16.40	13	37.80	78	2.7
Chignahuapan	10	58.10	12	17.10	13	39.00	77	2.7
Huauchinango	10	58.60	12	17.70	13	39.70	76	2.7
Huejotzingo	10	56.30	12	15.00	13	36.90	77	2.7
Xalmimitulco	10	56.40	12	15.10	13	37.00	77	2.7
Izúcar	10	55.20	12	13.80	13	35.50	77	2.7
Cd. de Libres	10	58.10	12	16.90	13	38.60	77	2.7
Puebla	10	56.50	12	15.10	13	36.90	77	2.7
Canoa	10	56.80	12	15.50	13	37.30	77	2.7
Xonacatepec	10	56.70	12	15.40	13	37.10	77	2.7
Tochapan	10	57.30	12	15.90	13	37.40	78	2.7
Los Reyes	10	57.10	12	15.60	13	37.20	77	2.7
Cholula	10	56.30	12	15.00	13	36.80	77	2.7
Tlaxcalancingo	10	56.30	12	15.00	13	36.80	77	2.7
San Martín Texmelucan	10	56.40	12	15.20	13	37.10	77	2.7
San Rafael Tlanalapan	10	56.40	12	15.20	13	37.10	77	2.7
Santa María Moyotzingo	10	56.40	12	15.20	13	37.10	77	2.7
Cholula	10	56.30	12	15.00	13	36.80	77	2.7
Santiago Momoxpan	10	56.40	12	15.10	13	36.90	77	2.7
El Seco	10	57.70	12	16.30	13	37.90	77	2.7
Santiago Miahuatlán	10	57.20	12	15.50	13	36.80	78	2.7
Tecamachalco	10	57.10	12	15.70	13	37.20	77	2.7
Tehuacán	10	57.10	12	15.40	13	36.60	78	2.7
Tepatlaxco	10	57.00	12	15.60	13	37.30	77	2.7
Tepeaca	10	56.90	12	15.50	13	37.10	77	2.7
Teziutlán	10	59.40	12	18.20	13	39.80	77	2.7
Xicotepec	10	59.00	12	18.10	13	40.00	76	2.7
Zacatlán	10	58.40	12	17.40	13	39.30	77	2.7
Zinacatepec	10	57.20	12	15.40	13	36.50	78	2.7
Querétaro								
Cadereyta	10	56.30	12	15.60	13	38.20	75	2.7
El Pueblito	10	55.00	12	14.20	13	37.00	75	2.7
La Negreta	10	54.90	12	14.20	13	36.90	75	2.7
San José los Olvera	10	55.00	12	14.30	13	37.00	75	2.7
Venceremos	10	55.10	12	14.30	13	37.00	75	2.7
Ezequiel Montes	10	56.10	12	15.40	13	38.00	75	2.7
Saldarriaga	10	55.40	12	14.70	13	37.40	75	2.7
La Pradera	10	55.30	12	14.60	13	37.30	75	2.7
Santiago de Querétaro	10	55.10	12	14.40	13	37.10	75	2.7
Juriquilla	10	55.20	12	14.50	13	37.30	75	2.7
Montenegro	10	55.40	12	14.70	13	37.40	75	2.7
San José el Alto	10	55.30	12	14.60	13	37.30	75	2.7
San Pedro Mártir	10	55.10	12	14.30	13	37.10	75	2.7
Santa Rosa Jáuregui	10	55.30	12	14.60	13	37.40	75	2.7
San Juan del Río	10	55.50	12	14.70	13	37.30	75	2.7
Tequisquiapan	10	55.90	12	15.10	13	37.70	75	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Quintana Roo								
Cozumel	11	24.80	12	39.50	13	54.00	72	2.5
Felipe Carrillo Puerto	11	20.80	12	35.60	13	50.40	74	2.5
Chetumal	11	19.00	12	33.00	13	47.20	75	2.5
Cancún	11	25.80	12	41.00	13	55.80	71	2.5
Alfredo V. Bonfil	11	25.70	12	40.90	13	55.60	71	2.5
Playa del Carmen	11	24.60	12	39.50	13	54.20	72	2.5
Puerto Aventuras	11	24.00	12	39.00	13	53.70	72	2.5
Tulum	11	23.10	12	38.00	13	52.70	73	2.5
Puerto Morelos	11	25.40	12	40.40	13	55.00	71	2.5
San Luis Potosí								
Cárdenas	10	58.90	12	18.50	13	41.20	74	2.7
Cerritos	10	58.60	12	18.30	13	41.10	74	2.7
Cd. Fernández	10	58.20	12	17.80	13	40.50	74	2.7
Cd. Valles	10	60.00	12	19.60	13	42.10	74	2.7
Ebano	11	01.50	12	21.20	13	43.50	74	2.7
Matehuala	11	00.30	12	20.00	13	42.80	72	2.7
Rioverde	10	58.20	12	17.80	13	40.50	74	2.7
Salinas	10	56.70	12	16.20	13	39.10	73	2.7
San Luis Potosí	10	57.00	12	16.50	13	39.40	73	2.7
Soledad	10	57.10	12	16.70	13	39.50	73	2.7
Tamazunchale	10	59.10	12	18.60	13	40.90	75	2.7
Tamuín	11	00.40	12	20.10	13	42.50	75	2.7
Sinaloa								
Los Mochis	10	53.80	12	10.50	13	31.50	65	2.6
Culiacán	10	53.50	12	11.10	13	33.00	67	2.7
Costa Rica	10	53.10	12	10.70	13	32.70	67	2.7
La Cruz	10	52.20	12	10.20	13	32.50	68	2.7
Escuinapa	10	51.40	12	09.90	13	32.60	69	2.7
Guasave	10	53.90	12	10.90	13	32.20	66	2.6
Gabriel Leyva Solano	10	54.00	12	10.80	13	32.00	66	2.6
Juan José Ríos	10	54.00	12	10.70	13	31.80	65	2.6
Mazatlán	10	51.30	12	09.50	13	32.10	69	2.7
Villa Unión	10	51.60	12	09.80	13	32.40	69	2.7
El Rosario	10	51.60	12	10.00	13	32.70	69	2.7
Guamúchil	10	54.10	12	11.30	13	32.80	66	2.6
Navolato	10	53.10	12	10.60	13	32.40	67	2.7
Benito Juárez	10	53.00	12	10.60	13	32.50	67	2.7
Sonora								
Agua Prieta	11	05.50	12	20.00	13	37.90	62	2.5
Caborca	11	02.00	12	15.00	13	31.90	60	2.5
Cd. Obregón	10	56.60	12	12.30	13	32.20	64	2.6
Esperanza	10	56.80	12	12.50	13	32.30	64	2.6
Cananea	11	04.10	12	18.20	13	36.00	62	2.5
Empalme	10	56.90	12	11.90	13	31.10	63	2.6

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Guaymas	10	56.70	12	11.70	13	30.90	63	2.6
Hermosillo	10	59.20	12	13.70	13	32.30	62	2.6
Miguel Alemán	10	58.30	12	12.50	13	30.90	62	2.5
Huatabampo	10	55.40	12	11.50	13	31.80	64	2.6
Magdalena	11	02.70	12	16.60	13	34.20	61	2.5
Navojoa	10	56.20	12	12.30	13	32.60	64	2.6
Nogales	11	04.30	12	17.90	13	35.10	61	2.5
Puerto Peñasco	11	02.30	12	14.00	13	29.60	59	2.5
San Luis Río Colorado	11	04.30	12	14.40	13	28.20	58	2.4
Tabasco								
Cárdenas	11	05.20	12	21.90	13	40.40	79	2.6
Frontera	11	07.70	12	24.40	13	42.70	78	2.6
Villahermosa	11	06.30	12	22.80	13	41.00	79	2.6
Playas del Rosario	11	06.10	12	22.50	13	40.60	79	2.6
Ocuilzapotlán	11	06.70	12	23.20	13	41.40	79	2.6
Comalcalco	11	06.00	12	22.80	13	41.30	79	2.6
Cunduacán	11	05.80	12	22.40	13	40.90	79	2.6
Emiliano Zapata	11	08.90	12	24.50	13	41.60	79	2.5
Huimanguillo	11	05.00	12	21.60	13	40.00	79	2.6
Jalpa	11	06.20	12	22.90	13	41.30	79	2.6
Macuspana	11	06.80	12	22.90	13	40.70	79	2.6
Pomoca	11	06.40	12	22.90	13	41.10	79	2.6
Paraiso	11	06.20	12	23.00	13	41.70	78	2.6
Teapa	11	05.70	12	21.80	13	39.80	79	2.6
Tenosique	11	09.40	12	24.70	13	41.20	79	2.5
Tamaulipas								
Altamira	11	02.60	12	22.30	13	44.60	74	2.7
Miramar	11	02.60	12	22.30	13	44.50	75	2.7
Cd. Madero	11	02.50	12	22.20	13	44.40	75	2.7
Cd. Mante	11	01.40	12	21.20	13	43.70	74	2.7
Matamoros	11	09.50	12	29.70	13	51.80	71	2.7
Cd. Miguel Alemán	11	08.00	12	28.00	13	50.30	71	2.7
Nuevo Laredo	11	09.30	12	29.20	13	51.20	69	2.7
Reynosa	11	08.60	12	28.80	13	50.90	71	2.7
Cd. Río Bravo	11	08.70	12	28.90	13	51.00	71	2.7
San Fernando	11	06.50	12	26.60	13	48.90	72	2.7
Tampico	11	02.40	12	22.10	13	44.30	75	2.7
Valle Hermoso	11	08.60	12	28.80	13	50.90	71	2.7
Cd. Victoria	11	02.90	12	22.80	13	45.30	73	2.7
Tlaxcala								
Cd. de Apizaco	10	57.20	12	16.00	13	37.80	77	2.7
Calpulalpan	10	56.70	12	15.60	13	37.60	77	2.7
Chiautempan	10	56.90	12	15.70	13	37.50	77	2.7
Huamantla	10	57.40	12	16.20	13	37.90	77	2.7
Contla	10	57.00	12	15.80	13	37.60	77	2.7
Cd. del Monte	10	56.60	12	15.30	13	37.10	77	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Teolocholco	10	56.80	12	15.60	13	37.40	77	2.7
Tetla	10	57.30	12	16.10	13	38.00	77	2.7
Ocotlán	10	56.90	12	15.60	13	37.50	77	2.7
Acuitlapilco	10	56.80	12	15.50	13	37.40	77	2.7
Tlaxco	10	57.60	12	16.40	13	38.30	77	2.7
Papalotla	10	56.70	12	15.40	13	37.20	77	2.7
Zacatelco	10	56.70	12	15.40	13	37.20	77	2.7
Tlaltelulco	10	56.90	12	15.60	13	37.40	77	2.7
Veracruz								
Acayucan	11	01.60	12	18.90	13	38.50	79	2.6
Altotonga	10	59.50	12	18.30	13	39.90	77	2.7
Alvarado	11	01.00	12	19.00	13	39.50	78	2.6
Naranjos	11	01.30	12	20.70	13	42.70	75	2.7
José Cardel	11	00.60	12	19.10	13	40.10	78	2.7
Banderilla	10	59.80	12	18.50	13	39.90	77	2.7
Veracruz	11	00.80	12	19.10	13	39.90	78	2.7
Cd. Mendoza	10	58.10	12	16.50	13	37.70	78	2.7
Catemaco	11	01.90	12	19.50	13	39.50	79	2.6
Cerro Azul	11	00.90	12	20.30	13	42.30	76	2.7
Coatepec	10	59.60	12	18.20	13	39.60	77	2.7
Coatzacoalcos	11	02.90	12	20.20	13	39.60	79	2.6
Allende	11	03.10	12	20.30	13	39.70	79	2.6
Cd. Olmeca	11	02.70	12	20.00	13	39.50	79	2.6
Villa San Martín	11	02.80	12	20.00	13	39.50	79	2.6
Coatzintla	11	00.30	12	19.40	13	41.20	76	2.7
Córdoba	10	58.70	12	17.10	13	38.30	78	2.7
Cosamaloapan	11	00.30	12	18.10	13	38.50	79	2.6
Coscomatepec	10	58.80	12	17.30	13	38.50	78	2.7
Cosoleacaque	11	02.30	12	19.50	13	39.00	79	2.6
Minatitlán	11	02.50	12	19.70	13	39.10	79	2.6
Las Choapas	11	03.50	12	20.40	13	39.40	79	2.6
Filomeno Mata	10	59.30	12	18.40	13	40.20	76	2.7
Fortín las Flores	10	58.60	12	17.00	13	38.20	78	2.7
Huatusco	10	59.10	12	17.60	13	38.80	78	2.7
Isla	11	00.40	12	17.90	13	38.00	79	2.6
Ixtaczoquitlán	10	58.40	12	16.80	13	38.00	78	2.7
Jalacingo	10	59.40	12	18.30	13	39.90	77	2.7
Xalapa	10	59.80	12	18.40	13	39.80	77	2.7
Jáltipan	11	02.10	12	19.30	13	38.80	79	2.6
Xico	10	59.40	12	18.10	13	39.40	77	2.7
Juan Rodríguez	11	00.60	12	18.10	13	38.00	79	2.6
Lerdo de Tejada	11	01.30	12	19.20	13	39.50	78	2.6
Palmira	10	58.40	12	16.80	13	38.00	78	2.7
Martínez la Torre	11	00.40	12	19.30	13	40.80	77	2.7
Independencia	11	00.40	12	19.30	13	40.80	77	2.7
Puente Moreno	11	00.70	12	19.00	13	39.80	78	2.7
Minatitlán	11	02.50	12	19.70	13	39.10	79	2.6
Misantla	11	00.50	12	19.40	13	40.80	77	2.7
Nogales	10	58.20	12	16.60	13	37.80	78	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Orizaba	10	58.30	12	16.70	13	37.90	78	2.7
Pánuco	11	01.60	12	21.20	13	43.50	75	2.7
Papantla	11	00.50	12	19.60	13	41.30	76	2.7
Perote	10	59.20	12	17.90	13	39.40	77	2.7
Poza Rica	11	00.40	12	19.50	13	41.30	76	2.7
Benito Juárez	11	02.40	12	22.10	13	44.30	75	2.7
Río Blanco	10	58.20	12	16.60	13	37.90	78	2.7
San Andrés Tuxtla	11	01.70	12	19.40	13	39.40	79	2.6
Santiago Tuxtla	11	01.50	12	19.20	13	39.30	79	2.6
Sayula	11	01.40	12	18.70	13	38.30	79	2.6
Tantoyuca	11	00.30	12	19.70	13	42.00	75	2.7
Álamo	11	00.60	12	19.90	13	41.80	76	2.7
Tierra Blanca	10	59.20	12	17.20	13	37.90	78	2.6
Tehuacán	11	00.50	12	19.70	13	41.60	76	2.7
Tlapacoyan	10	59.90	12	18.80	13	40.40	77	2.7
Tüxpam	11	01.20	12	20.40	13	42.30	76	2.7
Alto Lucero	11	01.10	12	20.40	13	42.20	76	2.7
Veracruz	11	00.80	12	19.10	13	40.00	78	2.7
Las Amapolas	11	00.60	12	19.00	13	39.80	78	2.7
Valente Díaz	11	00.60	12	19.00	13	39.80	78	2.7
Geovillas los Pinos	11	00.70	12	19.10	13	40.00	78	2.7
Lomas de Río Medio	11	00.70	12	19.00	13	39.90	78	2.7
Agua Dulce	11	03.60	12	20.70	13	39.90	79	2.6
Nanchital	11	02.90	12	20.10	13	39.40	79	2.6
Tres Valles	10	59.40	12	17.20	13	37.70	79	2.6
Carlos A. Carrillo	11	00.40	12	18.20	13	38.50	79	2.6
Yucatán								
Chemax	11	22.30	12	37.90	13	53.40	73	2.5
Hunucmá	11	17.70	12	34.70	13	52.10	74	2.6
Izamal	11	19.80	12	36.20	13	52.90	73	2.6
Kanasín	11	18.40	12	35.20	13	52.30	74	2.6
Mérida	11	18.30	12	35.10	13	52.30	74	2.6
Motul	11	19.30	12	36.00	13	53.00	73	2.6
Oxkutzcab	11	18.00	12	34.20	13	50.90	74	2.5
Peto	11	19.10	12	34.90	13	51.00	74	2.5
Progreso	11	18.60	12	35.60	13	53.00	73	2.6
Tekax	11	18.20	12	34.30	13	50.80	74	2.5
Ticul	11	17.80	12	34.20	13	51.00	74	2.6
Tizimin	11	22.30	12	38.30	13	54.40	72	2.5
Umán	11	17.90	12	34.70	13	51.90	74	2.6
Valladolid	11	21.60	12	37.40	13	53.20	73	2.5
Zacatecas								
Victor Rosales	10	55.80	12	15.20	13	38.10	72	2.7
Fresnillo	10	56.00	12	15.30	13	38.30	71	2.7
Guadalupe	10	55.70	12	15.10	13	38.10	72	2.7
Jalpa	10	52.90	12	12.10	13	35.10	72	2.7
Jerez	10	54.90	12	14.10	13	37.10	72	2.7

Eclipse total de sol, como parcial, el 8 de abril de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur h
	h	m	h	m	h	m		
Juan Aldama	10	57.50	12	16.60	13	39.40	70	2.7
Loreto	10	55.60	12	15.00	13	38.00	73	2.7
Nochistlán	10	52.60	12	11.80	13	34.80	73	2.7
Ojocaliente	10	55.80	12	15.20	13	38.20	72	2.7
Río Grande	10	57.10	12	16.30	13	39.20	71	2.7
Sombrerete	10	55.80	12	14.90	13	37.80	71	2.7
Tlaltenango	10	52.70	12	11.80	13	34.90	72	2.7
Zacatecas	10	55.70	12	15.00	13	38.00	72	2.7
Trancoso	10	55.90	12	15.30	13	38.30	72	2.7

Eclipse anular de sol, el 2 de octubre de 2024 (trayectoria de la franja de anularidad, límite norte)

(Hora del meridiano 90°W.G.)

λ	φ	hora		dur	alt	ancho		λ	φ	hora		dur	alt	ancho				
°	'	°	'	h	m	h	°	km	°	'	°	'	h	m	h	°	'	km
117	3	29	16.0	10	59.5	3.1	40.3	8788.8	114	27	27	36.2	11	03.0	3.2	43.8	8843.7	
117	0	29	14.2	10	59.6	3.1	40.4	8789.9	114	24	27	34.2	11	03.0	3.2	43.8	8844.7	
116	57	29	12.4	10	59.6	3.1	40.5	8791.1	114	21	27	32.2	11	03.1	3.2	43.9	8845.6	
116	54	29	10.5	10	59.7	3.1	40.5	8792.3	114	18	27	30.2	11	03.2	3.2	44.0	8846.5	
116	51	29	08.7	10	59.8	3.1	40.6	8793.4	114	15	27	28.1	11	03.2	3.2	44.0	8847.4	
116	48	29	06.9	10	59.8	3.1	40.7	8794.6	114	12	27	26.1	11	03.3	3.2	44.1	8848.3	
116	45	29	05.0	10	59.9	3.1	40.7	8795.7	114	9	27	24.0	11	03.4	3.2	44.2	8849.2	
116	42	29	03.2	10	59.9	3.1	40.8	8796.9	114	6	27	22.0	11	03.5	3.2	44.3	8850.1	
116	39	29	01.3	11	00.0	3.1	40.8	8798.0	114	3	27	19.9	11	03.5	3.2	44.3	8850.9	
116	36	28	59.5	11	00.1	3.1	40.9	8799.2	114	0	27	17.9	11	03.6	3.2	44.4	8851.8	
116	33	28	57.6	11	00.1	3.1	41.0	8800.3	113	57	27	15.8	11	03.7	3.2	44.5	8852.7	
116	30	28	55.8	11	00.2	3.1	41.0	8801.4	113	54	27	13.7	11	03.8	3.2	44.5	8853.5	
116	27	28	53.9	11	00.3	3.1	41.1	8802.5	113	51	27	11.7	11	03.8	3.2	44.6	8854.4	
116	24	28	52.0	11	00.3	3.1	41.2	8803.7	113	48	27	09.6	11	03.9	3.2	44.7	8855.2	
116	21	28	50.2	11	00.4	3.1	41.2	8804.8	113	45	27	07.5	11	04.0	3.2	44.7	8856.0	
116	18	28	48.3	11	00.4	3.1	41.3	8805.9	113	42	27	05.4	11	04.1	3.2	44.8	8856.9	
116	15	28	46.4	11	00.5	3.1	41.4	8807.0	113	39	27	03.4	11	04.1	3.2	44.9	8857.7	
116	12	28	44.5	11	00.6	3.1	41.4	8808.1	113	36	27	01.3	11	04.2	3.2	45.0	8858.5	
116	9	28	42.6	11	00.6	3.1	41.5	8809.2	113	33	26	59.2	11	04.3	3.2	45.0	8859.3	
116	6	28	40.8	11	00.7	3.1	41.6	8810.3	113	30	26	57.1	11	04.4	3.2	45.1	8860.1	
116	3	28	38.9	11	00.8	3.1	41.6	8811.4	113	27	26	55.0	11	04.4	3.2	45.2	8860.9	
116	0	28	37.0	11	00.8	3.1	41.7	8812.5	113	24	26	52.9	11	04.5	3.2	45.2	8861.7	
115	57	28	35.1	11	00.9	3.1	41.8	8813.6	113	21	26	50.7	11	04.6	3.2	45.3	8862.5	
115	54	28	33.2	11	01.0	3.1	41.8	8814.7	113	18	26	48.6	11	04.7	3.2	45.4	8863.2	
115	51	28	31.3	11	01.0	3.1	41.9	8815.7	113	15	26	46.5	11	04.8	3.2	45.4	8864.0	
115	48	28	29.3	11	01.1	3.1	42.0	8816.8	113	12	26	44.4	11	04.8	3.2	45.5	8864.8	
115	45	28	27.4	11	01.2	3.1	42.0	8817.9	113	9	26	42.3	11	04.9	3.2	45.6	8865.5	
115	42	28	25.5	11	01.2	3.1	42.1	8818.9	113	6	26	40.1	11	05.0	3.2	45.7	8866.2	
115	39	28	23.6	11	01.3	3.1	42.2	8820.0	113	3	26	38.0	11	05.1	3.2	45.7	8867.0	
115	36	28	21.7	11	01.4	3.1	42.2	8821.0	113	0	26	35.8	11	05.2	3.2	45.8	8867.7	
115	33	28	19.7	11	01.4	3.1	42.3	8822.1	112	57	26	33.7	11	05.2	3.2	45.9	8868.4	
115	30	28	17.8	11	01.5	3.1	42.4	8823.1	112	54	26	31.5	11	05.3	3.2	45.9	8869.1	
115	27	28	15.9	11	01.6	3.1	42.4	8824.2	112	51	26	29.4	11	05.4	3.2	46.0	8869.8	
115	24	28	13.9	11	01.6	3.1	42.5	8825.2	112	48	26	27.2	11	05.5	3.2	46.1	8870.5	
115	21	28	12.0	11	01.7	3.1	42.6	8826.2	112	45	26	25.1	11	05.6	3.2	46.2	8871.2	
115	18	28	10.0	11	01.8	3.1	42.6	8827.2	112	42	26	22.9	11	05.6	3.2	46.2	8871.9	
115	15	28	08.1	11	01.8	3.1	42.7	8828.3	112	39	26	20.7	11	05.7	3.2	46.3	8872.6	
115	12	28	06.1	11	01.9	3.1	42.8	8829.3	112	36	26	18.5	11	05.8	3.2	46.4	8873.2	
115	9	28	04.1	11	02.0	3.1	42.8	8830.3	112	33	26	16.3	11	05.9	3.2	46.4	8873.9	
115	6	28	02.2	11	02.0	3.1	42.9	8831.3	112	30	26	14.2	11	06.0	3.2	46.5	8874.5	
115	3	28	00.2	11	02.1	3.1	43.0	8832.3	112	27	26	12.0	11	06.0	3.2	46.6	8875.1	
115	0	27	58.2	11	02.2	3.1	43.0	8833.2	112	24	26	09.8	11	06.1	3.2	46.7	8875.8	
114	57	27	56.2	11	02.2	3.1	43.1	8834.2	112	21	26	07.6	11	06.2	3.2	46.7	8876.4	
114	54	27	54.3	11	02.3	3.2	43.2	8835.2	112	18	26	05.4	11	06.3	3.2	46.8	8877.0	
114	51	27	52.3	11	02.4	3.2	43.2	8836.2	112	15	26	03.1	11	06.4	3.2	46.9	8877.6	
114	48	27	50.3	11	02.5	3.2	43.3	8837.1	112	12	26	00.9	11	06.5	3.2	47.0	8878.2	
114	45	27	48.3	11	02.5	3.2	43.4	8838.1	112	9	25	58.7	11	06.5	3.2	47.0	8878.8	
114	42	27	46.3	11	02.6	3.2	43.4	8839.1	112	6	25	56.5	11	06.6	3.2	47.1	8879.4	
114	39	27	44.3	11	02.7	3.2	43.5	8840.0	112	3	25	54.3	11	06.7	3.2	47.2	8879.9	
114	36	27	42.3	11	02.7	3.2	43.6	8841.0	112	0	25	52.0	11	06.8	3.2	47.2	8880.5	
114	33	27	40.3	11	02.8	3.2	43.6	8841.9	111	57	25	49.8	11	06.9	3.2	47.3	8881.0	
114	30	27	38.3	11	02.9	3.2	43.7	8842.8	111	54	25	47.5	11	07.0	3.2	47.4	8881.6	

Eclipse anular de sol, el 2 de octubre de 2024 (trayectoria de la franja de anularidad, límite norte)

(Hora del meridiano 90°W.G.)

λ	ϕ		hora		dur	alt	ancho	λ	ϕ		hora		dur	alt	ancho		
°	'	°	'	h	m	h	°	km	°	'	°	'	h	m	h	°	km
111	51	25	45.3	11	07.1	3.2	47.5	8882.1	109	15	23	41.7	11	12.0	3.3	51.5	8895.0
111	48	25	43.0	11	07.1	3.2	47.5	8882.6	109	12	23	39.2	11	12.1	3.3	51.5	8895.0
111	45	25	40.8	11	07.2	3.2	47.6	8883.1	109	9	23	36.6	11	12.2	3.3	51.6	8894.9
111	42	25	38.5	11	07.3	3.2	47.7	8883.6	109	6	23	34.1	11	12.3	3.3	51.7	8894.8
111	39	25	36.3	11	07.4	3.2	47.8	8884.1	109	3	23	31.6	11	12.4	3.3	51.8	8894.7
111	36	25	34.0	11	07.5	3.2	47.8	8884.6	109	0	23	29.1	11	12.5	3.3	51.9	8894.6
111	33	25	31.7	11	07.6	3.2	47.9	8885.1	108	57	23	26.5	11	12.6	3.3	51.9	8894.4
111	30	25	29.4	11	07.7	3.2	48.0	8885.5	108	54	23	24.0	11	12.7	3.3	52.0	8894.3
111	27	25	27.1	11	07.8	3.3	48.1	8886.0	108	51	23	21.4	11	12.8	3.3	52.1	8894.1
111	24	25	24.8	11	07.8	3.3	48.1	8886.4	108	48	23	18.9	11	12.9	3.3	52.2	8893.9
111	21	25	22.6	11	07.9	3.3	48.2	8886.9	108	45	23	16.3	11	13.0	3.3	52.3	8893.7
111	18	25	20.3	11	08.0	3.3	48.3	8887.3	108	42	23	13.8	11	13.1	3.3	52.3	8893.5
111	15	25	17.9	11	08.1	3.3	48.4	8887.7	108	39	23	11.2	11	13.2	3.3	52.4	8893.3
111	12	25	15.6	11	08.2	3.3	48.4	8888.1	108	36	23	08.6	11	13.3	3.3	52.5	8893.1
111	9	25	13.3	11	08.3	3.3	48.5	8888.5	108	33	23	06.0	11	13.4	3.3	52.6	8892.8
111	6	25	11.0	11	08.4	3.3	48.6	8888.9	108	30	23	03.4	11	13.6	3.3	52.7	8892.6
111	3	25	08.7	11	08.5	3.3	48.7	8889.2	108	27	23	00.8	11	13.7	3.3	52.8	8892.3
111	0	25	06.4	11	08.6	3.3	48.7	8889.6	108	24	22	58.2	11	13.8	3.3	52.8	8892.0
110	57	25	04.0	11	08.7	3.3	48.8	8890.0	108	21	22	55.6	11	13.9	3.3	52.9	8891.7
110	54	25	01.7	11	08.7	3.3	48.9	8890.3	108	18	22	53.0	11	14.0	3.3	53.0	8891.4
110	51	24	59.3	11	08.8	3.3	49.0	8890.6	108	15	22	50.4	11	14.1	3.3	53.1	8891.0
110	48	24	57.0	11	08.9	3.3	49.0	8890.9	108	12	22	47.8	11	14.2	3.4	53.2	8890.7
110	45	24	54.6	11	09.0	3.3	49.1	8891.2	108	9	22	45.2	11	14.3	3.4	53.2	8890.3
110	42	24	52.3	11	09.1	3.3	49.2	8891.5	108	6	22	42.5	11	14.4	3.4	53.3	8890.0
110	39	24	49.9	11	09.2	3.3	49.3	8891.8	108	3	22	39.9	11	14.6	3.4	53.4	8889.6
110	36	24	47.5	11	09.3	3.3	49.3	8892.1	108	0	22	37.3	11	14.7	3.4	53.5	8889.1
110	33	24	45.2	11	09.4	3.3	49.4	8892.4	107	57	22	34.6	11	14.8	3.4	53.6	8888.7
110	30	24	42.8	11	09.5	3.3	49.5	8892.6	107	54	22	32.0	11	14.9	3.4	53.7	8888.3
110	27	24	40.4	11	09.6	3.3	49.6	8892.9	107	51	22	29.3	11	15.0	3.4	53.7	8887.8
110	24	24	38.0	11	09.7	3.3	49.7	8893.1	107	48	22	26.6	11	15.1	3.4	53.8	8887.4
110	21	24	35.6	11	09.8	3.3	49.7	8893.3	107	45	22	24.0	11	15.2	3.4	53.9	8886.9
110	18	24	33.2	11	09.9	3.3	49.8	8893.5	107	42	22	21.3	11	15.3	3.4	54.0	8886.4
110	15	24	30.8	11	10.0	3.3	49.9	8893.7	107	39	22	18.6	11	15.5	3.4	54.1	8885.8
110	12	24	28.4	11	10.1	3.3	50.0	8893.9	107	36	22	15.9	11	15.6	3.4	54.2	8885.3
110	9	24	26.0	11	10.2	3.3	50.0	8894.1	107	33	22	13.2	11	15.7	3.4	54.2	8884.8
110	6	24	23.6	11	10.3	3.3	50.1	8894.2	107	30	22	10.5	11	15.8	3.4	54.3	8884.2
110	3	24	21.2	11	10.4	3.3	50.2	8894.4	107	27	22	07.8	11	15.9	3.4	54.4	8883.6
110	0	24	18.7	11	10.5	3.3	50.3	8894.5	107	24	22	05.1	11	16.0	3.4	54.5	8883.0
109	57	24	16.3	11	10.6	3.3	50.4	8894.6	107	21	22	02.4	11	16.2	3.4	54.6	8882.4
109	54	24	13.9	11	10.7	3.3	50.4	8894.7	107	18	21	59.7	11	16.3	3.4	54.7	8881.8
109	51	24	11.4	11	10.8	3.3	50.5	8894.8	107	15	21	56.9	11	16.4	3.4	54.8	8881.1
109	48	24	09.0	11	10.9	3.3	50.6	8894.9	107	12	21	54.2	11	16.5	3.4	54.8	8880.5
109	45	24	06.5	11	11.0	3.3	50.7	8895.0	107	9	21	51.5	11	16.6	3.4	54.9	8879.8
109	42	24	04.0	11	11.1	3.3	50.7	8895.0	107	6	21	48.7	11	16.8	3.4	55.0	8879.1
109	39	24	01.6	11	11.2	3.3	50.8	8895.1	107	3	21	46.0	11	16.9	3.4	55.1	8878.4
109	36	23	59.1	11	11.3	3.3	50.9	8895.1	107	0	21	43.2	11	17.0	3.4	55.2	8877.6
109	33	23	56.6	11	11.4	3.3	51.0	8895.2	106	57	21	40.5	11	17.1	3.4	55.3	8876.9
109	30	23	54.2	11	11.5	3.3	51.1	8895.2	106	54	21	37.7	11	17.2	3.4	55.4	8876.1
109	27	23	51.7	11	11.6	3.3	51.1	8895.2	106	51	21	34.9	11	17.4	3.4	55.4	8875.3
109	24	23	49.2	11	11.7	3.3	51.2	8895.1	106	48	21	32.1	11	17.5	3.4	55.5	8874.5
109	21	23	46.7	11	11.8	3.3	51.3	8895.1	106	45	21	29.4	11	17.6	3.4	55.6	8873.7
109	18	23	44.2	11	11.9	3.3	51.4	8895.1	106	42	21	26.6	11	17.7	3.4	55.7	8872.9

Eclipse anular de sol, el 2 de octubre de 2024 (trayectoria de la franja de anularidad, límite norte)

(Hora del meridiano 90°W.G.)

λ	φ			hora		dur	alt	ancho	λ	φ			hora		dur	alt	ancho
	°	'	°	'	h					m	h	°	'	°			
106	39	21	23.8	11	17.9	3.4	55.8	8872.0	105	9	19	57.0	11	21.8	3.4	58.5	8838.1
106	36	21	21.0	11	18.0	3.4	55.9	8871.2	105	6	19	54.1	11	21.9	3.4	58.5	8836.7
106	33	21	18.1	11	18.1	3.4	56.0	8870.3	105	3	19	51.1	11	22.1	3.4	58.6	8835.3
106	30	21	15.3	11	18.2	3.4	56.0	8869.4	105	0	19	48.1	11	22.2	3.4	58.7	8833.8
106	27	21	12.5	11	18.4	3.4	56.1	8868.5	104	57	19	45.1	11	22.4	3.5	58.8	8832.3
106	24	21	09.7	11	18.5	3.4	56.2	8867.5	104	54	19	42.1	11	22.5	3.5	58.9	8830.8
106	21	21	06.9	11	18.6	3.4	56.3	8866.6	104	51	19	39.0	11	22.6	3.5	59.0	8829.3
106	18	21	04.0	11	18.7	3.4	56.4	8865.6	104	48	19	36.0	11	22.8	3.5	59.1	8827.8
106	15	21	01.2	11	18.9	3.4	56.5	8864.6	104	45	19	33.0	11	22.9	3.5	59.2	8826.2
106	12	20	58.3	11	19.0	3.4	56.6	8863.6	104	42	19	29.9	11	23.1	3.5	59.3	8824.6
106	9	20	55.5	11	19.1	3.4	56.7	8862.6	104	39	19	26.9	11	23.2	3.5	59.4	8823.0
106	6	20	52.6	11	19.3	3.4	56.7	8861.5	104	36	19	23.9	11	23.3	3.5	59.5	8821.4
106	3	20	49.7	11	19.4	3.4	56.8	8860.5	104	33	19	20.8	11	23.5	3.5	59.6	8819.8
106	0	20	46.9	11	19.5	3.4	56.9	8859.4	104	30	19	17.7	11	23.6	3.5	59.7	8818.1
105	57	20	44.0	11	19.6	3.4	57.0	8858.3	104	27	19	14.7	11	23.8	3.5	59.7	8816.4
105	54	20	41.1	11	19.8	3.4	57.1	8857.2	104	24	19	11.6	11	23.9	3.5	59.8	8814.7
105	51	20	38.2	11	19.9	3.4	57.2	8856.0	104	21	19	08.5	11	24.1	3.5	59.9	8813.0
105	48	20	35.3	11	20.0	3.4	57.3	8854.9	104	18	19	05.4	11	24.2	3.5	60.0	8811.3
105	45	20	32.4	11	20.2	3.4	57.4	8853.7	104	15	19	02.3	11	24.4	3.5	60.1	8809.5
105	42	20	29.5	11	20.3	3.4	57.5	8852.5	104	12	18	59.2	11	24.5	3.5	60.2	8807.7
105	39	20	26.6	11	20.4	3.4	57.5	8851.3	104	9	18	56.1	11	24.7	3.5	60.3	8805.9
105	36	20	23.6	11	20.6	3.4	57.6	8850.1	104	6	18	53.0	11	24.8	3.5	60.4	8804.1
105	33	20	20.7	11	20.7	3.4	57.7	8848.8	104	3	18	49.9	11	25.0	3.5	60.5	8802.3
105	30	20	17.8	11	20.8	3.4	57.8	8847.5	104	0	18	46.8	11	25.1	3.5	60.6	8800.4
105	27	20	14.8	11	21.0	3.4	57.9	8846.3	103	57	18	43.7	11	25.3	3.5	60.7	8798.5
105	24	20	11.9	11	21.1	3.4	58.0	8845.0	103	54	18	40.5	11	25.4	3.5	60.8	8796.6
105	21	20	08.9	11	21.2	3.4	58.1	8843.6	103	51	18	37.4	11	25.6	3.5	60.9	8794.7
105	18	20	06.0	11	21.4	3.4	58.2	8842.3	103	48	18	34.2	11	25.7	3.5	61.0	8792.7
105	15	20	03.0	11	21.5	3.4	58.3	8840.9	103	45	18	31.1	11	25.9	3.5	61.1	8790.8
105	12	20	00.0	11	21.7	3.4	58.4	8839.5									

Eclipse anular de sol, como parcial, el 2 de octubre de 2024

(Hora del meridian 90°W.G.)

Población	inicia		max		termina		alt °	dur m
	h	m	h	m	h	m		
Baja-California-Sur								
La Paz	10	56.9	11	10	11	23	49	24
San José del Cabo	10	51.8	11	12	11	33	50	42
Cabo San Lucas	10	48.6	11	12	11	36	50	48
Todos los Santos	10	50.4	11	11	11	32	50	42
Colima								
Manzanillo	11	18.4	11	24	11	30	59	12
Aeropuerto Costa Alegre	11	13.8	11	24	11	33	59	18
La Esmeralda	11	21.1	11	24	11	27	59	6
El Naranjo	11	17.2	11	24	11	30	59	12
Jalisco								
Cihuatlán	11	15.7	11	24	11	31	58	18
Tequesquite	11	16.4	11	21	11	26	57	12
Barra de Navidad	11	12.3	11	23	11	34	58	24
Nacastillo	11	14.8	11	22	11	30	58	18

Poblaciones de la República Mexicana, 2024

Coordenadas geográficas (INEGI-2020)

ESTADO Población	latitud			longitud			alt m	δm		Δδm ‘/año
	°	′	“	°	′	“		°	′	
Aguascalientes										
Aguascalientes	21	52	43	102	18	4	1888	5	11	-7
Asientos	22	14	18	102	5	29	2164	5	6	-7
Calvillo	21	50	45	102	44	14	1702	5	20	-7
Jesus Maria	21	57	45	102	20	48	1907	5	12	-7
Puertecito	21	57	52	102	15	15	2052	5	10	-7
Rincón de Romos	22	13	49	102	19	22	1957	5	11	-7
Baja California										
Bailador Isla	31	56	56	116	5	12	0	10	37	-6
Cedros Isla	28	3	53	115	11	35	0	9	42	-6
Ensenada	31	51	10	116	38	9	2	10	43	-6
Granito Isla	29	33	0	113	32	0	0	9	32	-6
Guadalupe Isla	29	10	45	118	19	30	0	10	35	-5
Mejía Isla	29	33	8	113	35	18	0	9	33	-6
Mexicali	32	40	0	115	27	0	0	10	35	-6
Miramar Isla	30	2	30	114	31	30	0	9	53	-6
Salsipuedes Isla	28	44	0	112	50	30	0	9	13	-6
San Benito Isla	28	18	8	115	36	12	0	9	51	-6
San Felipe	31	1	36	114	49	46	0	10	8	-6
San Jerónimo Isla	29	47	20	115	48	14	0	10	9	-6
San Pedro Martir	31	2	39	115	27	49	2800	10	17	-6
San Quintín	30	22	16	115	59	10	0	10	18	-6
Baja California Sur										
Asunción Isla	27	6	21	114	18	15	0	9	20	-6
Catalina Isla	25	35	35	110	47	48	0	8	13	-7
Cerralvo Isla	24	22	0	109	55	29	0	7	50	-7
Coronados Isla	26	6	12	111	15	38	0	8	24	-7
Danaznte Isla	25	48	0	111	12	0	0	8	21	-7
El Triunfo	23	48	13	110	8	41	432	7	49	-7
Espíritu Santo Isla	24	34	43	110	21	30	0	7	58	-7
José del Cabo	23	4	8	109	40	36	7	7	37	-7
La Paz	24	9	41	110	20	44	10	7	55	-7
Miraflores	23	22	25	109	48	33	183	7	41	-7
Muleje	26	53	33	111	46	41	35	8	39	-7
Roca Alijos Isla	24	58	6	113	44	47	0	8	53	-6
San Bartolo	23	44	16	109	52	15	353	7	45	-7
San Marcos Isla	27	14	35	112	5	23	0	8	48	-6
Santa Inés Isla	27	2	34	111	53	28	0	8	43	-7
Santiago	23	28	24	109	43	21	98	7	41	-7
Tortugas Isla	27	26	59	111	52	59	0	8	46	-7
Campeche										
Becal	20	26	34	90	1	36	12	0	-36	-7
Bolonchenticul	20	0	21	89	44	53	14	0	-43	-7
Calkini	20	22	21	90	3	3	52	0	-35	-7
Campeche	19	50	47	90	32	14	5	0	-15	-7
Carmen	18	38	22	91	50	16	3	0	34	-7
Carmen Isla	18	38	44	91	50	16	0	0	34	-7
Champotón	19	21	4	90	43	0	27	0	-6	-7
Dzibalchén	19	27	41	89	43	55	100	0	-40	-7

Poblaciones de la República Mexicana, 2024

Coordenadas geográficas (INEGI-2020)

ESTADO Población	latitud			longitud			alt m	δm		Δδm '/año
	°	'	“	°	'	“		°	'	
Escárcega	18	36	25	90	43	55	75	0	-1	-7
Hontún	19	34	49	90	11	12	50	0	-25	-7
Holpechén	19	44	47	89	50	35	56	0	-38	-7
Iturbide	19	34	58	89	36	4	110	0	-45	-7
Lerma	18	15	39	90	36	12	5	0	-3	-7
Palizada	19	6	13	92	4	42	46	0	39	-7
Pital	18	33	3	91	7	41	20	0	12	-7
Río Desempeño	18	29	50	89	54	6	200	0	-27	-7
Sabancuy	18	58	34	91	10	51	2	0	11	-7
Xicalango	18	37	55	91	53	38	2	0	36	-7
Coahuila										
Acuña	29	19	33	100	55	51	200	4	49	-7
Allende	28	20	36	100	51	6	374	4	44	-7
Cuatro Ciénegas	26	58	19	102	4	9	742	5	14	-7
Jiménez	29	4	21	100	40	21	290	4	41	-7
Laguna de Jaco	27	57	28	103	57	6	1350	6	6	-7
Monclova	26	54	14	101	25	8	586	4	57	-7
Múzquiz	27	52	51	101	30	56	504	5	2	-7
Parras	25	27	0	102	10	0	1683	5	13	-7
Piedras Negras	28	42	25	100	31	2	220	4	35	-7
Sabinas	27	50	34	101	7	23	340	4	51	-7
Saltillo	25	26	37	100	59	22	1599	4	43	-7
San Pedro de las Colonias	25	45	24	102	59	1	1103	5	34	-7
Sierra Mojada	27	17	8	103	42	7	1256	5	57	-7
Torreón	25	32	18	103	27	55	1140	5	45	-7
Unión	28	14	0	100	44	30	0	4	41	-7
Viesca	25	20	46	102	48	19	1093	5	29	-7
Zaragoza	28	30	36	100	52	8	540	4	45	-7
Colima										
Colima	19	14	29	103	43	47	508	5	38	-7
Madrid	19	4	57	103	52	38	120	5	41	-7
Manzanillo	19	3	15	104	19	46	3	5	50	-7
Socorro Isla	18	42	57	110	56	53	0	7	32	-7
Tecomán	18	54	31	103	52	38	80	5	41	-7
Chiapas										
Acapetahua	15	16	20	92	41	59	23	1	23	-8
Arista	15	56	8	93	48	41	0	1	51	-8
Cacahuanton	14	59	31	92	9	46	630	1	9	-8
Catazaja	17	43	56	92	1	57	7	0	46	-7
Cintalapa	16	41	58	93	43	24	545	1	43	-8
Comitán	16	15	12	92	7	41	1530	0	59	-8
Chiapa de Corzo	16	42	28	93	1	5	415	1	23	-8
Escuintla	15	18	53	92	39	58	110	1	21	-8
Huixtla	15	7	41	92	28	34	28	1	17	-8
Jaltenango	15	52	12	92	43	35	677	1	19	-8
Juárez	17	39	8	93	9	47	152	1	21	-7
La Gradeza	15	30	46	92	13	38	1950	1	7	-8
Las Margaritas	15	32	35	93	5	46	1512	1	32	-8
Mapastepec	15	25	52	92	54	27	85	1	28	-8
Mazatán	14	51	43	92	25	59	35	1	18	-8

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ESTADO Población	latitud			longitud			alt m	δm		Δδm ‘/año
	°	′	“	°	′	“		°	′	
Ocosingo	16	54	38	92	5	45	908	0	53	-7
Ocozacoautla	16	45	55	93	22	37	864	1	33	-8
Pichucalco	17	31	46	93	7	24	100	1	21	-7
Pueblo Nuevo	15	12	37	92	35	7	28	1	20	-8
Puerto Madero	14	42	59	93	25	37	2	1	47	-8
San Bartolomé	16	19	29	92	33	36	804	1	11	-8
Suchiate	14	40	23	92	9	12	22	1	11	-8
Tonalá	16	5	14	93	45	21	55	1	48	-8
Tuxtla Gutiérrez	16	45	20	93	6	46	528	1	25	-8
Villa Flores	16	14	8	93	16	3	610	1	33	-8
Yajalón	17	10	57	92	20	24	849	0	59	-7
Chihuahua										
Ahumada	30	37	18	106	31	12	1181	7	22	-7
Camargo	27	41	49	105	10	9	1653	6	34	-7
Ciénaga de Ortiz	28	8	15	106	12	11	1300	7	0	-7
Ciudad Guerrero	28	32	57	107	29	27	2000	7	31	-7
Ciudad Jiménez	27	7	52	104	55	29	1381	6	25	-7
Ciudad Juárez	31	44	19	106	29	15	1144	7	28	-7
Coyame	29	27	42	105	5	44	1062	6	41	-7
Cuchillo Parado	29	26	34	104	52	58	0	6	36	-7
Cusihuirachi	28	14	25	106	50	13	1985	7	15	-7
Chihuahua	28	38	12	106	4	42	1430	7	0	-7
Chinipas	27	23	34	108	32	22	1640	7	45	-7
Galeana	30	6	52	107	37	51	1431	7	44	-7
Guadalupe	31	23	27	106	6	13	1113	7	17	-7
Guadalupe y Calvo	26	6	6	106	58	2	0	7	5	-7
Guerrero	28	32	57	107	29	18	2000	7	31	-7
Meoqui	28	16	36	105	29	16	1155	6	44	-7
Namiquipa	29	15	5	107	24	34	1828	7	33	-7
Ocampo	28	10	59	108	22	27	1732	7	47	-7
Ojinaga	29	33	53	104	25	23	841	6	25	-7
Parral Hidalgo del	26	56	4	105	39	58	1661	6	41	-7
Placer de Guadalupe	29	9	41	105	22	57	0	6	46	-7
San Buenaventura	29	50	47	107	29	10	1574	7	39	-7
San Ignacio	27	10	21	106	19	28	970	6	57	-7
Santa Bárbara	26	48	13	105	49	1	1969	6	44	-7
Santa Isabel	28	20	34	106	22	1	1630	7	5	-7
Satevo	27	57	17	106	6	32	1368	6	57	-7
Temosachic	28	57	12	107	49	50	1900	7	41	-7
Valle de Zaragoza	27	27	40	105	48	35	0	6	47	-7
Valle del Rosario	27	19	5	106	17	41	1480	6	57	-7
Distrito Federal										
Alamo	19	23	55	99	8	30	2246	3	57	-8
Atzacapotzalco	19	28	48	99	11	7	2277	3	58	-8
Ciudad Universitaria	19	20	1	99	10	54	2280	3	58	-8
Ciudad Universitaria	19	19	50	99	11	3	2280	3	59	-8
Coyoacán	19	20	54	99	9	45	2278	3	58	-8
Cuajimalpa	19	21	33	99	18	1	2783	4	1	-8
Chapultepec	19	25	11	99	10	52	2310	3	58	-8
Churubusco	19	21	17	99	8	56	2260	3	58	-8
Guadalupe Hidalgo	19	29	9	99	6	56	0	3	57	-8

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	°	'	“	°	'	“		°	'	
Ixtacalco	19	23	22	99	7	16	2261	3	57	-8
Ixtapalapa	19	21	22	99	5	30	2280	3	56	-8
La Piedad	19	24	3	99	9	20	2253	3	58	-8
México	19	25	59	99	7	58	2233	3	57	-8
Mixcoac	19	22	37	99	10	55	0	3	58	-8
Mixquic	19	13	28	98	57	52	2260	3	53	-8
Nativitas	19	23	12	99	8	48	2246	3	57	-8
San Jerónimo	19	19	33	99	13	20	2394	3	59	-8
San Simón	19	22	36	99	8	39	0	3	58	-8
Tacubaya	19	24	10	99	11	40	2298	3	59	-8
Tláhuac	19	16	6	99	0	16	2264	3	54	-8
Tlalpan	19	17	16	99	9	57	2294	3	58	-8
Villa Obregón	19	20	41	99	11	21	2340	3	59	-8
Xochimilco	19	15	44	99	6	7	2274	3	57	-8
Durango										
Ciudad Lerdo	25	32	14	103	31	28	1135	5	46	-7
Cuencamé	24	52	18	103	38	6	1889	5	47	-7
Durango	24	1	31	104	40	11	1889	6	7	-7
Gomez Palacio	25	34	18	103	30	17	1195	5	46	-7
Guanacevi	25	55	59	105	57	31	2230	6	43	-7
Inde	25	54	45	105	10	16	2049	6	26	-7
Llano Grande	23	52	2	105	12	7	2406	6	18	-7
Mezquital	23	28	57	104	22	18	1468	5	59	-7
Nazas	25	13	40	104	6	53	1264	5	59	-7
Nombre de Dios	23	51	4	104	15	25	1855	5	58	-7
Pueblo Nuevo	23	22	35	105	22	18	1982	6	20	-7
San Juan de Guadalupe	24	37	0	102	45	8	1520	5	26	-7
San Juan del Río	24	46	45	104	23	22	1737	6	4	-7
Santa María del Oro	25	56	53	105	19	56	1871	6	29	-7
Santa María Ocotlán	22	54	44	104	36	10	365	6	3	-7
Santiago Papasquiaro	25	2	47	105	25	30	1716	6	28	-7
Tamazula	24	58	11	106	58	13	240	6	59	-7
Tayoltita	24	6	27	105	55	30	500	6	34	-7
Tepehuanes	25	21	19	105	47	9	1967	6	37	-7
Tizonazo	25	58	4	105	15	33	1981	6	28	-7
Topia	25	12	19	106	34	34	1851	6	52	-7
Tlahualilo	26	6	31	103	26	21	1132	5	46	-7
Guerrero										
Acapulco	16	50	21	99	55	1	82	4	21	-8
Acayahualco	18	13	30	99	28	52	790	4	8	-8
Coahuayutla	18	18	52	101	48	37	358	5	0	-7
Coatepec	18	20	22	99	42	56	1260	4	13	-8
Coyuca de Catalán	18	20	2	100	39	0	210	4	35	-8
Chaucingo	18	18	7	99	6	53	810	3	59	-8
Chilpancingo	17	33	10	99	30	3	1360	4	10	-8
Huamuxtitlán	17	48	37	99	34	2	1125	4	11	-8
Iguana	18	21	1	99	32	24	731	4	9	-8
La Unión	17	58	52	101	48	49	174	5	0	-7
Mayanalan	18	10	29	99	26	1	0	4	7	-8
Mezcala	17	56	13	99	36	6	420	4	12	-8
Pericotepec	17	57	40	100	13	0	770	4	26	-8

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	°	′	“	°	′	“		°	′	
Petatlán	17	32	8	101	17	0	0	4	50	-7
Placeres del Oro	18	14	31	100	53	57	0	4	40	-8
San Jerónimo	17	5	55	100	28	26	0	4	33	-8
San Luis de la Loma	17	15	42	100	53	48	0	4	42	-8
San Marcos	16	47	31	99	20	41	210	4	9	-8
Santa Fe Tepetlapa	18	33	5	99	25	19	1090	4	6	-8
Taxco	18	33	16	99	36	20	1755	4	10	-8
Teloloapan	18	22	6	99	52	31	1620	4	17	-8
Tonalapa del Río	18	20	38	99	41	6	750	4	13	-8
Tepantitlancoa	18	0	26	100	17	6	820	4	27	-8
Tepecoacuilco	18	17	10	99	27	55	1012	4	8	-8
Tetela del Río	17	59	7	100	4	50	350	4	22	-8
Tlacoztotlán	17	53	29	99	7	51	560	4	1	-8
Tlapehuala	18	14	21	100	31	18	235	4	32	-8
Zihuatanejo	17	38	14	101	33	48	0	4	55	-7
Zirándaro	18	29	4	100	58	0	193	4	41	-8
Guanajuato										
Abasolo	20	26	59	100	31	48	1760	4	29	-8
Acámbaro	20	2	1	100	43	24	1947	4	34	-8
Apaseo	20	32	37	100	41	7	1767	4	33	-8
Apaseo el Alto	20	27	25	100	37	13	1853	4	31	-8
Atargea	21	16	5	99	43	5	1258	4	9	-8
C. Gonzalez	21	28	44	101	12	52	2140	4	45	-8
Celaya	20	31	24	100	48	55	1808	4	36	-8
Cerano	20	6	41	101	23	26	0	4	49	-8
Comonfort	20	43	15	100	45	51	1795	4	35	-8
Coroneo	20	11	42	100	21	59	1998	4	26	-8
Cortazar	20	28	59	100	52	58	1800	4	38	-8
Cubilete El	21	0	25	101	22	30	2480	4	49	-8
Cuerámara	20	37	36	101	40	23	1785	4	56	-8
Dolores Hidalgo	21	9	32	100	56	0	1987	4	39	-8
Guanajuato	21	1	1	101	15	20	2050	4	46	-8
Huanímaro	20	22	1	101	29	45	2459	4	52	-8
Ibarra	21	28	53	101	32	23	2110	4	53	-8
Irapuato	20	40	28	101	20	51	1795	4	48	-8
Iturbide	21	0	3	100	23	4	0	4	26	-8
Jaral del Progreso	20	22	11	101	13	45	1743	4	46	-8
Jerécuaro	20	9	3	100	30	43	0	4	29	-8
León	21	7	22	101	41	0	1885	4	56	-8
Manuel Doblado	20	43	49	101	57	14	1795	5	2	-8
Mora	21	8	47	100	19	0	2128	4	24	-8
Moroleón	20	7	54	101	11	36	1772	4	45	-8
Pénjamo	20	25	44	101	43	22	1700	4	57	-8
Pueblo Nuevo	20	31	35	101	22	18	1714	4	49	-8
Purísima de Bustos	21	1	48	101	52	36	1780	5	0	-8
Romita	20	52	14	101	31	7	1792	4	52	-8
Salamanca	20	34	22	101	11	39	1721	4	45	-8
Salvatierra	20	12	56	100	53	46	1749	4	38	-8
San Diego de la Unión	21	27	56	100	52	25	2080	4	37	-8
San Fco. del Rincón	21	1	2	101	51	36	1721	5	0	-8
San Juan de los Llanos	21	16	47	101	19	4	0	4	48	-8

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	°	'	“	°	'	“		°	'	
San José	20	56	13	100	58	32	2002	4	40	-8
San Luis de la Paz	21	17	57	100	30	52	2020	4	28	-8
San Miguel de Allende	20	54	52	100	44	47	1870	4	34	-8
Santa Catarina	21	8	27	100	14	10	1845	4	22	-8
Santa Cruz Galeana	20	38	35	100	59	50	0	4	40	-8
Santiago Maravatío	20	10	28	100	59	38	1790	4	40	-8
Silao	20	56	24	101	25	59	1780	4	50	-8
Tarandacua	20	1	14	100	32	3	1920	4	30	-8
Tarimoro	20	17	39	100	45	20	1790	4	35	-8
Tierra Blanca	21	6	9	100	4	44	1760	4	18	-8
Uriangato	20	8	46	100	8	10	1800	4	20	-8
Valle de Santiago	20	23	31	101	11	21	1760	4	45	-8
Victoria	21	12	23	100	13	9	1760	4	21	-8
Villa Ocampo	21	38	52	101	28	50	2420	4	51	-8
Villagrán	20	29	40	100	59	52	1790	4	40	-8
Xichu	21	18	0	100	3	37	1334	4	17	-8
Yuriria	20	12	51	100	8	19	1882	4	20	-8
Hidalgo										
Acayuca	20	1	48	98	50	30	2570	3	49	-8
Actopan	20	16	12	96	56	42	2069	2	58	-8
Ahuehuevo	21	1	43	98	54	24	2500	3	49	-8
Altajayucan	20	24	40	99	20	59	1898	4	1	-8
Apan	19	39	35	98	24	10	2493	3	38	-8
Atotonilco Grande	20	17	6	98	40	13	2138	3	44	-8
Bonanza	20	43	12	99	14	36	0	3	58	-8
Chapantongo	20	17	16	99	24	50	2145	4	2	-8
Chapulhuacan	21	9	29	98	54	22	150	3	48	-8
Chicautla	20	19	54	99	13	49	1884	3	58	-8
Epazoyuca	20	1	33	98	37	26	2461	3	43	-8
Huasca	20	12	12	98	34	42	0	3	42	-8
Huautla	21	2	3	98	16	54	0	3	32	-8
Huejutla	21	8	43	98	24	58	249	3	36	-8
Huichapan	20	22	37	99	38	58	2102	4	8	-8
Ixmiquilpan	20	29	4	99	13	5	1745	3	57	-8
Metxtitlán	20	35	45	98	45	30	1353	3	45	-8
MexQUITILÁN	20	32	0	98	38	27	1421	3	43	-8
Nopala	20	15	19	98	38	52	2437	3	43	-8
Orizatlán	21	10	35	98	36	40	0	3	41	-8
Pachuca	20	7	44	98	43	54	2426	3	46	-8
Pisaflores	21	11	44	99	0	15	0	3	51	-8
Real del Monte	20	8	23	98	40	21	2679	3	44	-8
San Agustín Tlaxiaca	20	7	5	98	53	6	2372	3	50	-8
San Gabriel	19	52	44	98	36	58	0	3	43	-8
San Juanico	19	54	14	98	40	17	0	3	45	-8
San Pablo	20	38	38	98	55	21	0	3	50	-8
Santa Mónica	19	58	55	98	37	16	0	3	43	-8
Singuilucan	20	1	52	98	19	59	2714	3	36	-8
Tasquillo	20	33	7	99	18	21	1720	3	59	-8
Tepetitlán	20	11	14	99	22	59	2000	4	2	-8
Tezontepec	19	52	44	98	49	10	2326	3	48	-8
Tianguistengo	20	44	0	98	37	34	1687	3	42	-8

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Tulancingo	20	4	58	98	22	8	2222	3	36	-8
Tlaxcoapan	20	5	40	99	13	29	2100	3	58	-8
Yolotepec	20	23	36	99	4	31	0	3	54	-8
Zempoala	19	54	54	98	40	2	2532	3	44	-8
Zimapán	20	44	20	99	22	58	1813	4	1	-8
Jalisco										
Ameca	20	32	47	104	2	46	1235	5	46	-7
Atoyac	20	0	40	103	31	12	1350	5	35	-7
Autlán de Navarro	19	46	13	104	22	4	688	5	51	-7
Bolaños	21	46	31	103	46	58	910	5	43	-7
Cabo Corriente	20	24	42	105	40	50	81	6	17	-7
Carranza	19	44	46	103	46	18	0	5	40	-7
Cihuatlán	19	14	8	104	33	36	0	5	54	-7
Ciudad Guzmán	19	42	13	103	27	53	1507	5	33	-7
Cocula	20	23	55	103	49	27	1432	5	41	-7
Colotlán	22	6	51	103	16	8	0	5	32	-7
Encarnación de Díaz	21	31	37	102	14	6	1814	5	9	-7
Guachinango	20	34	38	104	22	59	1285	5	53	-7
Guadalajara	20	42	32	103	23	9	1567	5	33	-7
Guerrero	21	59	4	103	35	52	1785	5	39	-7
Hostotipaquillo	21	3	46	104	4	21	1079	5	47	-7
Huejuquilla	22	37	42	103	53	58	1480	5	47	-7
La Barca	20	16	37	102	32	53	1517	5	15	-7
La Rosa	19	45	7	103	10	2	0	5	28	-7
Lagos de Moreno	21	21	20	101	55	24	1942	5	2	-8
Ojuelos	21	52	5	101	35	20	2254	4	54	-8
Puerto Vallarta	20	36	56	105	14	42	5	6	10	-7
San Miguel del Alto	21	1	52	102	24	12	2385	5	12	-7
San Pedro Anasco	21	14	54	103	57	57	0	5	46	-7
Talpa de Allende	20	23	41	104	49	52	1039	6	1	-7
Tapatitlán	20	48	48	102	45	41	1764	5	20	-7
Tecatitlán	19	28	16	103	18	30	1036	5	30	-7
Tecomates	19	33	8	104	29	18	0	5	53	-7
Tecaltiche	21	26	11	102	34	32	2240	5	16	-7
Tequila	20	53	33	103	50	8	1215	5	42	-7
Unión de Tula	19	57	37	104	16	7	1385	5	50	-7
Mexico										
Acambay	19	57	18	99	50	47	2552	4	14	-8
Amecameca	19	7	36	98	46	0	2468	3	49	-8
Analco de Becerra	19	15	34	100	1	26	2511	4	19	-8
Atacomulco	19	48	7	98	52	48	2526	3	50	-8
Ayotla	19	18	55	98	56	8	2251	3	52	-8
Chalco	19	15	53	98	54	12	2280	3	52	-8
Chapa de Mota	19	47	24	99	31	23	3070	4	6	-8
Chicoloapan	19	25	3	98	54	11	2235	3	51	-8
Chimalhuacán	19	25	45	98	56	57	2255	3	53	-8
Coatlichan	19	27	4	98	52	34	0	3	51	-8
Ecatzingo de Hidalgo	18	57	2	98	45	29	2340	3	49	-8
Huexotla	19	28	50	98	52	25	0	3	51	-8
Huizquilucan	19	21	47	99	21	39	2750	4	3	-8
Ixtapan de la Sal	18	50	13	99	40	28	1900	4	11	-8

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Ixtlahuaca	19	52	54	98	51	39	2640	3	49	-8
Jilotepec	19	57	13	99	31	45	2525	4	6	-8
Lerma	19	17	16	99	30	34	2599	4	6	-8
Los Reyes	19	21	27	98	52	42	0	3	51	-8
Naucalpan	19	28	36	99	13	45	2298	3	59	-8
Otumba	19	41	59	98	45	33	2349	3	47	-8
Ozumba	19	2	3	98	47	50	2500	3	50	-8
Progreso Industrial	19	37	37	99	20	32	2449	4	2	-8
Popocatepetl	19	1	17	98	37	34	5452	3	45	-8
Popocatepetl	19	5	3	98	39	12	0	3	46	-8
Remedios	19	28	25	99	15	2	2383	4	0	-8
San Antonio del Rosario	18	24	4	100	18	43	335	4	27	-8
San Cristóbal	19	24	24	99	19	40	2239	4	2	-8
San Pedro Azcapotzaltongo	19	37	38	99	18	54	2420	4	1	-8
San Pedro Atzompa	19	40	56	99	0	36	2243	3	54	-8
Sultepec	18	50	0	99	51	44	2336	4	16	-8
Tecamac	19	42	21	98	58	10	2300	3	52	-8
Temascalapa	19	49	37	98	54	11	2347	3	51	-8
Temascaltepec	19	2	24	100	2	47	1640	4	20	-8
Tenancingo	18	57	51	99	35	45	2022	4	9	-8
Teoloyucan	19	44	48	99	10	53	2280	3	58	-8
Texcoco	19	30	52	98	52	57	2278	3	51	-8
Tlalmanalco	19	12	36	98	48	27	2412	3	49	-8
Tlalnepantla	19	32	20	99	11	39	2278	3	58	-8
Toluca	19	17	33	99	39	38	2680	4	10	-8
Michoacán										
Aguililla	18	44	17	102	44	9	970	5	18	-7
Agostitlán	19	32	6	100	37	13	2500	4	32	-8
Apatzingán	19	4	54	102	15	31	682	5	9	-7
Apo	19	26	38	102	25	2	0	5	12	-7
Ario de Rosales	19	12	21	101	44	19	2050	4	57	-7
Buenavista	19	12	3	102	35	35	586	5	16	-7
Coahuayana	18	45	9	103	40	30	20	5	37	-7
Cotija	19	48	41	102	42	26	1751	5	18	-7
Hidalgo	19	41	19	100	33	23	2360	4	31	-8
Huajumbaro	19	40	52	100	44	29	2390	4	35	-8
Irimbo	19	41	54	100	28	58	2015	4	29	-8
Janitzio	19	34	27	101	39	11	2120	4	55	-8
Jiquilpan	19	59	31	102	43	16	1654	5	18	-7
La Huacana	18	57	36	101	48	39	550	4	59	-7
Los Reyes	19	35	23	102	28	57	1280	5	13	-7
Maravatio	19	53	33	100	26	43	2080	4	28	-8
Morelia	19	42	16	101	11	30	1941	4	45	-8
Ostula	18	29	50	103	28	19	229	5	33	-7
Panindicuaro	19	59	7	102	45	40	1638	5	19	-7
Parácuaro	19	8	46	103	13	32	586	5	28	-7
Paracho	19	38	44	102	3	1	1567	5	4	-7
Patzcuaro	19	32	24	101	37	0	2174	4	55	-8
Penjamillo	20	6	31	101	55	40	1645	5	1	-7
Piedad de Cabadas	20	20	44	102	1	32	1696	5	3	-7
Pueblo Viejo	19	46	16	101	34	3	2210	4	53	-8

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ESTADO Población	latitud			longitud			alt m	δm		Δδm ‘/año
	°	′	“	°	′	“		°	′	
Puruándiro	20	5	21	101	30	59	1994	4	52	-8
San Pedro Jácuaró	19	43	1	100	38	49	2004	4	33	-8
Senguio	19	44	11	100	21	31	2030	4	26	-8
Tacámbaro	19	13	52	101	27	34	1577	4	51	-8
Tequicheo	18	54	0	100	44	21	440	4	36	-8
Tepalcatepec	19	11	31	102	50	35	320	5	21	-7
Tumbiscatio	18	31	33	102	22	28	820	5	11	-7
Turicato	19	3	0	101	25	14	795	4	51	-8
Tuzantla	19	12	19	100	34	39	640	4	32	-8
Uruapan	19	24	56	102	3	46	1634	5	4	-7
Villa Madero	19	23	30	101	16	34	0	4	47	-8
Zacapu	19	49	11	101	47	34	1980	4	58	-8
Zamora	19	59	17	102	18	52	1567	5	10	-7
Zinapécuaro	19	53	5	100	40	32	1920	4	33	-8
Zitácuaro	19	25	51	100	21	50	1781	4	26	-8
Morelos										
Acapatzingo	18	54	11	99	13	17	1465	4	0	-8
Acatlipa	18	49	30	99	13	42	1215	4	1	-8
Ahuacatlán	18	58	42	99	15	19	1955	4	1	-8
Atlatlahuacan	18	56	5	98	53	53	1656	3	52	-8
Coatetelco	18	43	55	99	19	48	1029	4	3	-8
Cuajomulco	19	2	2	99	12	17	2651	4	0	-8
Cuautla	18	48	20	98	57	13	1309	3	54	-8
Cuernavaca	18	54	54	99	14	14	1542	4	1	-8
Chapultepec	18	55	11	99	12	49	1492	4	0	-8
Huautla	18	26	24	99	1	44	1075	3	57	-8
Huitzilac	19	1	39	99	16	2	2540	4	1	-8
Itzamatitlán	18	53	58	99	1	30	1235	3	56	-8
Jojutla	18	36	39	99	10	52	890	4	0	-8
Oaxtepec	18	54	2	98	58	11	1385	3	54	-8
San Miguel	18	41	42	98	48	40	1403	3	51	-8
Tejalpa	18	53	43	99	9	57	1337	3	59	-8
Tepalcingo	18	35	34	98	50	43	1220	3	52	-8
Tetelcingo	18	51	55	98	55	47	1425	3	53	-8
Xiutepec	18	52	31	99	10	27	1355	3	59	-8
Xochitepec	18	47	4	99	13	50	1154	4	1	-8
Yautepec	18	52	38	99	3	46	1282	3	57	-8
Yecapixtla	18	52	56	98	51	55	1603	3	52	-8
Nayarit										
Acaponeta	22	29	21	105	21	41	30	6	17	-7
Amatlán de Jara	21	23	9	104	8	47	1150	5	50	-7
Huajimic	21	41	29	104	18	18	1170	5	53	-7
Ixtapan	21	18	16	105	9	44	0	6	10	-7
Ixtlan del Río	21	2	9	104	22	16	1042	5	53	-7
Jesus María	22	15	9	104	31	10	610	5	59	-7
Mexcaltitán	21	54	18	105	28	39	0	6	17	-7
Ruiz	21	57	29	105	8	35	24	6	11	-7
San Blas	21	32	27	105	17	16	2	6	13	-7
San Martín de Bolaños	21	29	42	104	1	35	0	5	47	-7
Tepic	21	30	47	104	53	42	915	6	5	-7
Tuxpan	21	54	10	104	8	6	39	5	50	-7

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ESTADO Población	latitud			longitud			alt m	δm	$\Delta \delta m$ /año	
	°	'	"	°	'	"		°	'	
Nuevo Leon										
Agualeguas	26	18	38	99	33	3	207	4	4	-7
Aramberri	24	6	10	99	49	3	1076	4	11	-7
Cadereyta Jiménez	25	35	34	99	59	54	360	4	16	-7
Cerralvo	26	5	32	99	36	29	345	4	6	-7
China	25	42	30	99	13	55	163	3	55	-7
Doctor Arroyo	23	40	23	100	10	52	1766	4	20	-7
Galeana	24	49	41	100	3	53	1654	4	17	-7
García	25	48	49	100	35	21	697	4	33	-7
Lampazos de Naranjo	27	1	32	100	30	33	340	4	32	-7
Linares	24	51	39	99	34	5	684	4	4	-7
Los Aldamas	26	3	58	99	11	30	288	3	54	-7
Mier y Noriega	23	25	19	100	7	11	1681	4	18	-8
Monte Morelos	25	11	34	99	49	31	432	4	11	-7
Monterrey	25	40	11	100	18	26	538	4	25	-7
Parás	26	30	5	99	31	5	165	4	3	-7
Sabinas Hidalgo	26	29	59	100	10	9	313	4	22	-7
Salinas Victoria	25	57	34	100	18	0	464	4	25	-7
Santiago Huajuco	25	25	35	100	8	17	445	4	20	-7
Vallecillo	26	39	41	99	58	2	274	4	16	-7
Villaldama	26	29	49	100	25	50	469	4	29	-7
Zaragoza	23	50	52	99	36	19	1377	4	5	-7
Oaxaca										
Ayutla	18	1	48	96	39	46	733	2	58	-8
Ayoquezco	16	41	13	96	50	2	0	3	8	-8
Ayotzintepec	17	40	38	96	8	17	64	2	46	-8
Coatzopan	18	2	56	96	45	31	1922	3	1	-8
Colotepec	15	53	33	96	56	28	0	3	15	-8
Cuicatlán	17	48	11	96	57	36	595	3	7	-8
Chacalapa	15	55	20	95	55	48	555	2	49	-8
Chalcatongo	17	1	57	97	34	24	2365	3	26	-8
Ecatepec	16	17	8	95	52	39	1690	2	45	-8
Ejutla de Crespo	16	33	48	96	43	44	1440	3	6	-8
Etla	17	12	17	96	47	49	1640	3	5	-8
Guichicovi	16	58	35	95	13	52	297	2	24	-8
Guelatao	17	19	15	96	29	34	1698	2	57	-8
Guelatao	17	19	10	96	29	31	0	2	57	-8
Huajuapán de León	17	48	30	97	46	31	1680	3	28	-8
Huamelula San Pedro	16	1	39	95	40	1	1030	2	41	-8
Huatulco	15	49	44	96	19	11	325	2	59	-8
Huautla	18	7	53	96	50	45	1714	3	3	-8
Jamiltepec	16	16	33	97	49	23	240	3	35	-8
Juchitlán de Zaragoza	16	25	56	95	1	31	38	2	22	-8
Juguila	16	14	6	97	17	45	1500	3	22	-8
Juchitlán de Zaragoza	17	20	11	98	0	56	1650	3	35	-8
La Chiguiri	16	23	9	97	20	8	1780	3	22	-8
Loxicha	16	0	31	96	37	20	1885	3	6	-8
Mazatlán	17	2	11	95	26	48	642	2	30	-8
Miahuatlán	16	20	1	96	35	44	1607	3	4	-8
Nejapa	16	36	50	95	58	48	1000	2	46	-8
Niltepec	16	33	47	94	36	48	110	2	10	-8

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ESTADO Población	latitud			longitud			alt m	δm		Δδm ‘/año
	°	′	″	°	′	″		°	′	
Nochixtlán	17	27	33	97	13	29	2200	3	15	-8
Oaxaca de Juárez	17	3	43	96	43	18	1550	3	4	-8
Ocotepéc	17	47	53	96	23	47	1636	2	52	-8
Ojitlán	18	3	42	96	23	31	0	2	51	-8
Ojitlán	18	3	35	96	23	34	233	2	51	-8
Pluma Hidalgo	15	54	50	96	25	30	1475	3	1	-8
Pochutla	15	44	21	96	27	57	163	3	3	-8
Puerto Angel	15	39	24	96	29	35	20	3	5	-8
Putla	17	1	28	97	56	2	1248	3	35	-8
Quiéchapa	16	25	34	96	14	54	1900	2	54	-8
Quiotepec	17	54	8	96	59	0	845	3	7	-8
Salina Cruz	16	9	37	95	12	11	70	2	28	-8
San Jerónimo Ixtepec	16	33	58	95	6	1	121	2	23	-8
San Miguel Peras	16	56	22	97	0	16	50	3	12	-8
San Vicente Coatlán	16	23	15	96	50	42	0	3	10	-8
Santa María del Mar	16	13	24	94	51	33	0	2	18	-8
Silacayoápam	17	30	14	98	8	38	1720	3	38	-8
Sola de Vega	16	31	1	96	58	22	1580	3	13	-8
Soyaltepec	18	12	12	96	28	57	0	2	53	-8
Suchixtepec	17	58	28	97	39	26	2842	3	24	-8
Tamazulapan	17	40	30	97	34	19	0	3	23	-8
Tecomavaca	17	57	34	97	1	5	660	3	8	-8
Tehuantepec	16	19	57	95	13	46	100	2	28	-8
Teotitlán del Camino	18	7	53	97	4	26	1067	3	9	-8
Teposcolula	17	30	45	97	29	16	2155	3	22	-8
Tequisistlán	16	24	21	95	36	2	1000	2	37	-8
Teutla	17	59	0	96	42	54	1338	3	0	-8
Tezoatlán	17	40	24	97	48	42	1500	3	29	-8
Tlaxiaco	17	15	59	97	40	58	1210	3	27	-8
Tlucula de Matamoros	16	57	19	96	28	43	1650	2	58	-8
Tololapan	16	40	4	96	18	12	0	2	55	-8
Tuxtepec	18	5	24	96	6	50	91	2	43	-8
Valle Nacional	17	40	43	96	17	59	65	2	50	-8
Villa Alta	17	20	41	96	9	8	1138	2	48	-8
Yacuane	17	14	25	97	27	3	0	3	22	-8
Yautepec	16	25	52	95	58	11	1100	2	47	-8
Yautepec	16	30	15	96	6	18	1000	2	50	-8
Yalalag	17	11	20	96	10	48	1186	2	49	-8
Zaniza	16	39	7	97	20	19	0	3	21	-8
Zimatlán	16	52	0	96	46	34	1609	3	6	-8
Puebla										
Acatepec	19	1	16	98	18	24	2174	3	37	-8
Acatlán de Osorio	18	12	6	98	3	6	1213	3	33	-8
Ahuatempan	18	24	47	98	0	58	1810	3	32	-8
Atezcal	18	23	51	97	43	28	1847	3	25	-8
Atlixco	18	54	32	98	26	27	1881	3	41	-8
Cacalotepec	19	0	3	98	17	28	2337	3	37	-8
Canoa	19	8	55	98	6	4	0	3	32	-8
Cañada Morelos	18	44	8	97	25	20	2337	3	16	-8
Coronanc	19	7	11	98	17	58	2230	3	37	-8
Coxcatlán	18	15	55	97	8	55	1217	3	10	-8

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ESTADO Población	latitud			longitud			alt m	δm		$\Delta \delta m$ '/año
	°	'	“	°	'	“		°	'	
Oyotzingo	19	11	49	98	26	18	2322	3	40	-8
Cuatlancingo	19	5	16	98	16	14	2118	3	36	-8
Chachapa	19	2	47	98	5	35	2298	3	32	-8
Chiautla de Tapia	18	17	28	98	35	55	1025	3	47	-8
Chila Asunción	17	58	26	97	51	11	1676	3	29	-8
Cholula	19	3	45	98	18	15	2150	3	37	-8
Huauchinango	20	10	51	98	2	58	1472	3	28	-8
Huejotzingo	19	9	29	98	24	22	2291	3	40	-8
Hueyotlipan	19	5	6	98	12	32	2195	3	35	-8
Ixtaccihuatl	19	11	11	98	38	38	5146	3	45	-8
Izucar de Matamoros	18	36	6	98	27	42	1326	3	42	-8
La Malinche	19	13	48	98	1	47	4461	3	30	-8
Loreto	19	3	24	98	11	5	2221	3	34	-8
Molcaxac	18	44	9	97	54	8	1874	3	28	-8
Momoxpan	19	4	13	98	15	54	2159	3	36	-8
Moyotzingo	19	14	35	98	24	11	2271	3	39	-8
Nextetelco	19	7	13	98	20	21	0	3	38	-8
Nopalucan	19	12	59	97	49	10	2490	3	24	-8
Ocotlán	19	8	37	98	17	3	2243	3	37	-8
Ocoyucan	18	58	30	98	17	58	2152	3	37	-8
Pantepec	20	31	29	97	56	14	738	3	24	-8
Petlaltzingo	18	4	59	97	55	12	1325	3	31	-8
Popocatepetl	19	1	17	98	37	34	5452	3	45	-8
Puebla de Zaragoza	19	2	30	98	11	48	2162	3	35	-8
Resurrección	19	6	4	98	7	36	2366	3	33	-8
San Andres Chalchico	18	59	10	97	26	52	2540	3	15	-8
San Aparicio	18	29	42	97	16	51	1771	3	13	-8
San Baltazar	19	1	24	98	12	18	2142	3	35	-8
Sanctorum	19	5	51	98	15	8	0	3	36	-8
San Juan de los Llanos	19	27	54	97	41	3	2380	3	20	-8
San Martín Texmelucan	19	16	59	98	25	59	2278	3	40	-8
San Salvador el Seco	19	8	7	97	38	32	2450	3	20	-8
Santa María Chiamecatí	18	38	47	98	4	46	0	3	33	-8
Santa Rita Tlahuapan	19	19	56	98	35	9	2291	3	44	-8
Santiago Xalitzintla	19	4	36	98	30	53	0	3	43	-8
Tecali	18	53	58	97	57	59	2240	3	29	-8
Tecamachalco	18	52	57	97	43	49	2055	3	23	-8
Tehuacán de las Granadas	18	27	51	97	23	20	1676	3	16	-8
Temextatiloyan	19	5	22	98	12	46	2183	3	35	-8
Tepeaca	18	57	43	97	54	8	2257	3	27	-8
Tepeji Rodríguez	18	34	47	97	55	45	1746	3	29	-8
Tetela de Ocampo	19	49	15	97	48	10	1790	3	22	-8
Teziutlán	19	49	30	97	21	17	1990	3	10	-8
Tlacotepec	18	40	54	97	39	9	1977	3	22	-8
Tlaltenango	19	10	10	98	20	36	2246	3	38	-8
Tlancualpican	18	25	41	98	41	41	1100	3	49	-8
Tlaxcalanzingo	19	1	44	98	16	24	2173	3	37	-8
Tonantzintla	19	1	58	98	18	50	0	3	38	-8
Xalmimilulco	18	12	32	98	22	46	2248	3	42	-8
Xochimehuacán	19	5	23	98	11	51	0	3	35	-8
Xonacatepec	19	5	12	98	6	8	2209	3	32	-8
Zacapoaxtla	19	52	49	97	35	2	2045	3	16	-8

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ESTADO Población	latitud			longitud			alt m	δm		Δδm ‘/año
	°	′	“	°	′	“		°	′	
Zacatlán de las Manzanas	19	56	7	97	57	27	2059	3	26	-8
Zapotitlán	18	19	56	97	28	23	2407	3	18	-8
Zautla	19	43	6	97	40	21	2020	3	19	-8
Zinacatepec	18	19	57	97	14	41	1139	3	12	-8
Queretaro										
Amealco	20	11	17	100	8	38	2075	4	20	-8
Arroyo Seco	21	32	54	99	41	13	1008	4	8	-8
Boyé	20	40	58	99	44	47	0	4	10	-8
Cadereyta	20	41	41	99	48	58	2077	4	12	-8
Ezequiel Montes	20	40	2	99	53	54	0	4	14	-8
Huimilpan	20	22	39	100	16	32	2307	4	23	-8
Jalpan	21	13	8	99	28	16	860	4	3	-8
Querétaro	20	35	36	100	23	11	0	4	26	-8
San Juan del Río	20	23	30	99	59	49	1978	4	17	-8
Tequisquiapan	20	31	26	99	53	42	1717	4	14	-8
Tolimán	20	54	35	99	55	45	1535	4	14	-8
Quintana Roo										
Ascensión	19	46	31	87	28	0	0	-2	0	-7
Cabo Catoche	21	36	25	87	6	21	157	-2	26	-7
Carrillo Puerto	19	34	50	88	2	38	30	-1	38	-7
Contoy	21	31	45	86	48	12	0	-2	36	-7
Cozumel	20	31	20	86	57	12	0	-2	24	-7
Chetumal	18	29	39	88	17	56	0	-1	22	-7
Filomeno Mata	19	52	8	88	23	47	0	-1	28	-7
Icaiche	18	4	17	89	10	7	183	0	-49	-7
Kantunil Kin	21	6	14	87	29	12	20	-2	9	-7
Leona Vicario	20	59	23	87	12	22	0	-2	18	-7
Polyuc	19	36	50	88	33	58	0	-1	21	-7
Put	19	39	8	89	24	46	0	0	-52	-7
Saban	20	2	12	88	32	16	0	-1	24	-7
Santa Cruz Chico	18	56	3	88	9	44	0	-1	30	-7
Tulum	20	12	34	87	25	34	150	-2	5	-7
Vigia Chico	19	46	27	87	35	2	0	-1	56	-7
Xkalak	18	13	32	87	50	50	0	-1	35	-7
Xkanha	19	6	13	89	20	5	0	0	-51	-7
San Luis Potosí										
Ahualco	22	23	56	101	9	58	1902	4	44	-8
Alaquines	22	7	41	99	35	27	1300	4	5	-8
Arista	22	38	46	100	51	2	1560	4	37	-8
Arriaga	21	54	44	101	22	58	2660	4	49	-8
Cárdenas	21	59	49	99	38	28	1201	4	6	-8
Catorce	23	41	34	100	53	23	2756	4	38	-7
Cerritos	22	25	55	100	16	51	1153	4	22	-8
Cd del Maíz	22	24	8	99	36	9	1239	4	5	-8
Charcas	23	7	47	101	6	37	2057	4	43	-8
Guadalcazar	22	37	1	100	23	56	1673	4	25	-8
Matehuala	23	38	41	100	38	26	1615	4	32	-8
Moctezuma	22	45	7	101	5	0	1777	4	42	-8
Pastora	22	8	2	100	3	25	920	4	17	-8
Ramos	22	49	59	101	55	3	2210	5	3	-7

Poblaciones de la República Mexicana, 2024

Coordenadas geográficas (INEGI-2020)

ESTADO Población	latitud			longitud			alt m	δm		Δδm '/año
	°	'	“	°	'	“		°	'	
Río Verde	21	55	52	99	59	38	991	4	15	-8
Salinas del Peñón Blanco	22	37	44	101	43	0	2099	4	58	-8
San Luis Potosí	22	9	10	100	58	38	1877	4	40	-8
Santa Catarina	21	39	37	99	29	36	898	4	3	-8
Santa María del Río	21	48	4	100	44	9	1703	4	34	-8
Santo Domingo	23	19	35	101	44	6	1971	4	59	-7
Tamazunchale	21	16	0	98	47	18	206	3	45	-8
Tamuín	21	0	18	98	46	30	275	3	45	-8
Tancanhuitz	21	36	11	98	57	57	241	3	49	-8
Valles	21	59	4	99	0	58	95	3	50	-8
Vieja	22	2	29	99	25	16	0	4	1	-8
Villa de Reyes	21	48	19	100	56	0	1819	4	39	-8
Zaragozas Jose de San Luis	22	2	8	100	43	53	1925	4	34	-8
Sinaloa										
Altata	24	38	0	107	55	53	2	7	16	-7
Badiraguato	25	21	40	107	33	7	300	7	13	-7
Cosala	24	24	38	106	41	44	300	6	51	-7
Culiacán	24	48	36	107	23	57	84	7	7	-7
El Fuerte	26	25	14	108	39	0	0	7	40	-7
La Laguna	26	34	58	108	27	25	600	7	38	-7
Mazatlán	23	11	55	106	25	20	3	6	40	-7
Mocorito	25	29	0	107	55	13	838	7	21	-7
Navolato	24	45	57	107	41	48	12	7	12	-7
Rosario	22	59	29	105	51	13	32	6	28	-7
San Blas	26	4	38	108	45	53	37	7	40	-7
San Jose de Gracia	26	8	38	107	53	38	750	7	24	-7
Santa María	25	33	56	109	10	26	46	7	45	-7
Sinaloa	25	49	26	108	13	29	55	7	28	-7
Soyatita	25	44	21	107	18	36	1200	7	10	-7
Topolobampo	25	36	1	109	2	52	3	7	42	-7
Sonora										
Agua Prieta	31	19	42	109	33	44	1050	8	35	-7
Aguiabampo	26	21	58	109	8	59	7	7	49	-7
Alamos	27	1	16	108	56	2	410	7	50	-7
Altar	30	42	46	111	44	12	0	9	12	-6
Antimonio	30	44	34	112	36	49	61	9	28	-6
Arizpe	30	20	9	110	10	22	870	8	39	-7
Bacanora	28	59	2	109	23	21	446	8	13	-7
Bacerac	30	21	41	108	49	25	937	8	12	-7
Baroyeca	27	38	32	109	29	33	0	8	5	-7
Buenavista	27	51	3	109	52	24	111	8	14	-7
Caborca	30	41	50	112	9	29	305	9	20	-6
Cananea	30	58	57	110	18	1	1489	8	47	-7
Carbo	29	41	0	110	57	29	464	8	49	-7
Carbon	29	41	0	110	57	29	464	8	49	-7
Cedros	27	45	39	109	17	26	475	8	2	-7
Ciudad Obregón	27	29	35	109	56	0	100	8	12	-7
Conicarit	27	14	18	109	5	5	145	7	54	-7
Cucurpe	30	19	51	110	42	18	803	8	50	-7
Guaymas	27	55	28	110	53	31	0	8	33	-7
Hermosillo	29	4	29	110	57	36	237	8	44	-7

Poblaciones de la República Mexicana, 2024

Coordenadas geográficas (INEGI-2020)

ESTADO Población	latitud			longitud			alt m	δm		Δδm ‘/año
	°	′	“	°	′	“		°	′	
Huatabampo	26	49	36	109	38	46	20	8	2	-7
Imuris	30	46	38	110	51	58	826	8	57	-7
Libertad	29	54	12	112	45	7	0	9	23	-6
Macoyahui	27	19	36	108	54	28	201	7	52	-7
Magdalena	30	37	45	111	3	42	693	8	59	-7
Moctezuma	29	48	10	109	41	41	677	8	25	-7
Minas Nuevas	27	3	29	109	0	33	520	7	52	-7
Movas	28	9	40	109	26	34	260	8	8	-7
Naco	31	19	53	109	57	5	1340	8	43	-7
Nacori Grande	29	3	37	110	2	44	634	8	26	-7
Nacozari	30	22	25	109	41	28	1040	8	30	-7
Navojoa	27	4	52	109	27	13	40	8	0	-7
Nogales	31	19	49	110	56	42	1120	9	3	-7
Nabas	28	27	40	109	31	35	170	8	12	-7
Puerto Libertad	29	54	34	102	40	52	8	5	40	-7
Punta Peñasco	31	18	9	113	32	57	61	9	50	-6
Quiriego	27	31	11	109	15	7	251	7	59	-7
Rayón	29	42	47	110	34	36	560	8	42	-7
Sahuaripa	29	3	18	109	13	31	460	8	10	-7
San José de Pimas	28	42	47	110	21	2	415	8	29	-7
Santa Ana	30	32	38	111	7	26	687	8	59	-7
Santa Clara	31	40	41	114	29	30	0	10	9	-6
Soyopa	28	45	49	109	38	7	272	8	16	-7
Suaqui Grande	28	23	44	109	53	30	272	8	18	-7
Tiburón	28	45	55	112	41	56	0	9	11	-6
Torín	27	34	30	110	13	19	64	8	18	-7
Tubutama	30	53	4	111	28	16	682	9	9	-6
Ures	29	25	45	110	23	29	432	8	36	-7
Yabaros	26	42	12	109	30	45	2	7	59	-7
Tabasco										
Álvaro Obregón	18	13	19	92	40	4	33	1	3	-7
Astapa	17	46	42	92	59	18	134	1	15	-7
Cárdenas	18	0	42	93	22	10	4	1	25	-7
Comalcalco	18	15	54	93	13	7	5	1	19	-7
Francisco I. Madero	18	25	18	92	44	28	72	1	4	-7
Huimanquillo	17	52	10	93	27	31	193	1	29	-7
Ignacio Allende	18	23	10	92	50	51	32	1	7	-7
Tacotalpa	17	35	47	92	49	26	60	1	11	-7
Tapijulapa	17	27	52	92	46	50	0	1	11	-7
Teapa	17	33	14	92	57	12	50	1	16	-7
Tenosique	17	28	45	91	25	33	60	0	29	-7
Tierra Colorada	17	57	22	92	37	46	144	1	3	-7
Villahermosa	17	59	15	92	55	0	10	1	12	-7
Xicoténcatl	17	30	35	92	40	52	206	1	8	-7
Tamaulipas										
Abasolo	24	4	0	98	22	38	61	3	31	-7
Aldama Presas	22	55	6	98	4	12	98	3	24	-7
Altamira	22	23	40	97	55	47	26	3	20	-7
Antiguo Morelos	22	33	3	99	5	9	178	3	52	-8
Burgos	24	57	1	98	46	57	193	3	42	-7
Camargo	26	19	1	98	49	55	68	3	44	-7

Poblaciones de la República Mexicana, 2024

Coordenadas geográficas (INEGI-2020)

ESTADO Población	latitud			longitud			alt m	δm		Δδm '/año
	°	'	“	°	'	“		°	'	
Casas	23	43	44	98	44	27	120	3	41	-7
Ciudad Victoria	23	44	6	99	7	51	321	3	52	-7
Cruillas	24	45	32	98	30	59	265	3	34	-7
Guemes	23	55	18	99	0	28	220	3	49	-7
Guerrero	26	46	45	99	20	22	34	3	59	-7
Jaumave	23	24	30	99	22	28	735	3	59	-7
Jiménez	24	12	56	99	28	44	101	4	1	-7
Llera	23	19	11	99	1	15	290	3	49	-7
Magiscatzin	22	48	29	98	42	1	56	3	41	-8
Matamoros	25	52	45	97	31	9	12	3	5	-7
Méndez	25	7	11	98	34	12	128	3	36	-7
Mier	26	25	57	99	8	41	80	3	53	-7
Miquihuana	23	34	15	99	46	32	1892	4	9	-7
Ocampo	20	50	32	99	20	14	348	4	0	-8
Padilla	24	0	39	98	46	27	153	3	42	-7
Reynosa	26	5	50	98	16	42	38	3	27	-7
San Carlos	24	34	50	98	56	26	432	3	47	-7
San Fernando	24	50	56	98	9	30	55	3	24	-7
Tampico	22	13	0	97	51	19	12	3	19	-7
Tula	22	59	50	99	42	55	1173	4	8	-8
Villagran	24	28	33	99	20	21	363	3	58	-7
Xicoténcatl	22	59	48	98	56	35	131	3	47	-8
Tlaxcala										
Apizaco	19	24	59	98	8	27	2408	3	32	-8
Calpulalpam	19	35	37	98	34	18	2578	3	43	-8
Cuauila	19	36	10	98	38	44	2703	3	45	-8
Cuauhtotoatla	19	7	7	98	10	9	2308	3	34	-8
Huamantla	19	18	53	97	55	39	2553	3	27	-8
Tenancingo	19	8	47	98	11	57	2281	3	34	-8
Tlaxcala	19	19	4	98	14	9	2252	3	35	-8
San Aparicio	19	6	0	98	9	30	2293	3	33	-8
San Juan de los Llanos	19	27	54	97	41	0	2448	3	20	-8
San Martín Texmelucan	19	16	59	98	25	59	2278	3	40	-8
Veracruz										
Acayucan	17	56	42	95	54	43	88	2	39	-8
Acayucan	17	56	34	94	54	13	88	2	10	-8
Acayucan	17	56	42	94	54	48	158	2	11	-8
Actopan	19	30	11	96	36	45	311	2	52	-8
Alvarado	18	46	14	95	45	56	9	2	31	-8
Ciudad Azueta	18	4	43	95	42	18	0	2	32	-8
Coatepec	19	27	8	96	57	1	1252	3	1	-8
Coatzacoalcos	18	8	56	94	24	40	2	1	55	-8
Coatzintla	20	29	6	97	26	12	144	3	11	-8
Córdoba	18	53	34	96	55	52	924	3	2	-8
Cosamaloapan	18	21	46	95	48	32	96	2	34	-8
Coscomatepec	19	4	23	97	2	5	1588	3	4	-8
Cuatotolapan	18	7	16	95	18	7	23	2	21	-8
Cuichapa	18	46	28	96	52	8	642	3	1	-8
Chiconamel	21	14	0	98	27	36	158	3	37	-8
Chicontepec	20	58	31	98	9	54	595	3	29	-8
Gral Alemán	18	11	32	96	5	44	18	2	42	-8

Poblaciones de la República Mexicana, 2024

Coordenadas geográficas (INEGI-2020)

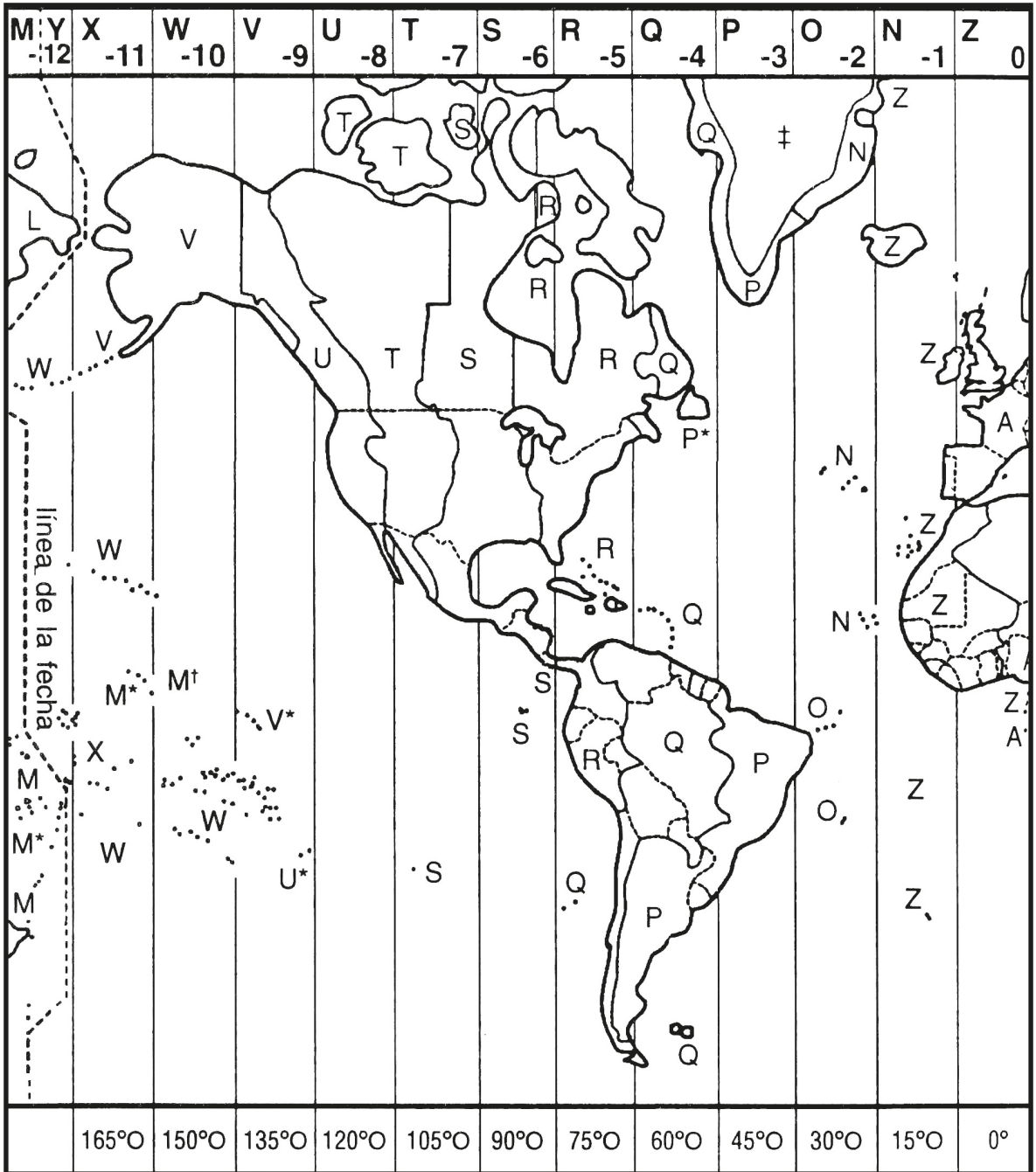
ESTADO Población	latitud			longitud			alt m	δm		Δδm €/año
	°	'	“	°	'	“		°	'	
Hidalgotitlán	17	46	20	94	38	47	77	2	4	-8
Huatusco	19	9	1	96	57	9	1344	3	2	-8
Huayacocotla	20	32	27	98	28	38	2100	3	38	-8
Inalambrica	19	10	50	96	7	36	0	2	39	-8
Ixcatepec	21	14	23	98	0	14	295	3	24	-8
Ixhuatlán	20	41	30	98	0	35	306	3	26	-8
Jalapa	19	31	35	96	54	51	1427	3	0	-8
Lobos	21	28	0	97	13	3	0	3	2	-7
Martínez de la Torre	20	3	58	97	2	36	151	3	1	-8
Minatitlán	17	58	47	94	32	27	64	2	0	-8
Misantla	19	56	2	96	50	24	410	2	56	-8
Mocayapan	18	12	49	94	50	17	340	2	7	-8
Naolingó	19	39	15	96	51	51	1605	2	58	-8
Nautla	20	12	43	95	45	38	4	2	25	-7
Orizaba	18	50	58	97	5	47	1284	3	7	-8
Ozuluama	21	39	46	97	51	0	229	3	19	-8
Pantepec	20	31	29	97	56	14	738	3	24	-8
Papantla	20	26	53	97	19	7	298	3	8	-8
Perote	19	33	52	97	14	24	2465	3	8	-8
Pico Orizaba	19	2	0	97	15	42	5700	3	10	-8
Playa Vicente	17	50	5	95	48	35	95	2	36	-8
Rizo	19	3	17	95	55	8	0	2	34	-8
Rodríguez Clara	17	59	28	95	24	9	148	2	24	-8
Sacrificios	19	10	26	96	5	27	0	2	38	-8
San Andrés Tuxtla	18	26	42	95	11	53	361	2	16	-8
San Andrés Tuxtla	18	26	40	95	13	1	323	2	17	-8
San Carlos	19	24	17	96	21	25	136	2	45	-8
San Juan de Ulua	19	12	26	96	7	46	0	2	39	-8
San Juan Evangelista	17	52	59	95	8	12	88	2	17	-8
San Martín	18	33	48	95	10	48	1738	2	15	-8
Santiagoullo	19	8	29	95	48	23	0	2	31	-8
Tamarindo	18	45	23	96	22	49	80	2	48	-8
Tamiahua	21	16	26	97	26	29	4	3	9	-8
Tantoyucan	21	21	7	98	13	31	217	3	30	-8
Tehuipango	18	31	14	97	3	31	2382	3	7	-8
Teocelo de Díaz	19	23	8	96	57	47	1218	3	1	-8
Tepetzintla	21	10	43	96	49	48	351	2	52	-7
Tesechoacan	18	8	12	95	39	47	0	2	31	-8
Tierra Blanca	18	27	3	96	21	28	60	2	48	-8
Tihuatlán	20	43	26	97	32	23	222	3	13	-8
Tlacojalpan	18	13	57	95	57	13	91	2	38	-8
Tlacotalpan	18	36	40	95	39	54	320	2	29	-8
Tliscoyan	18	48	7	96	3	26	84	2	39	-8
Tlapacoyan	19	58	13	97	12	35	504	3	6	-8
Tonayan	19	40	54	96	54	45	0	2	59	-8
Tuxpan	20	57	18	97	23	59	14	3	9	-8
Veracruz	19	12	2	96	8	13	14	2	40	-8
Verde	19	11	50	96	3	59	0	2	38	-8
Xico	19	25	17	97	0	11	0	3	2	-8
Zongolica	18	40	10	96	59	26	1294	3	5	-8

Poblaciones de la República Mexicana, 2024

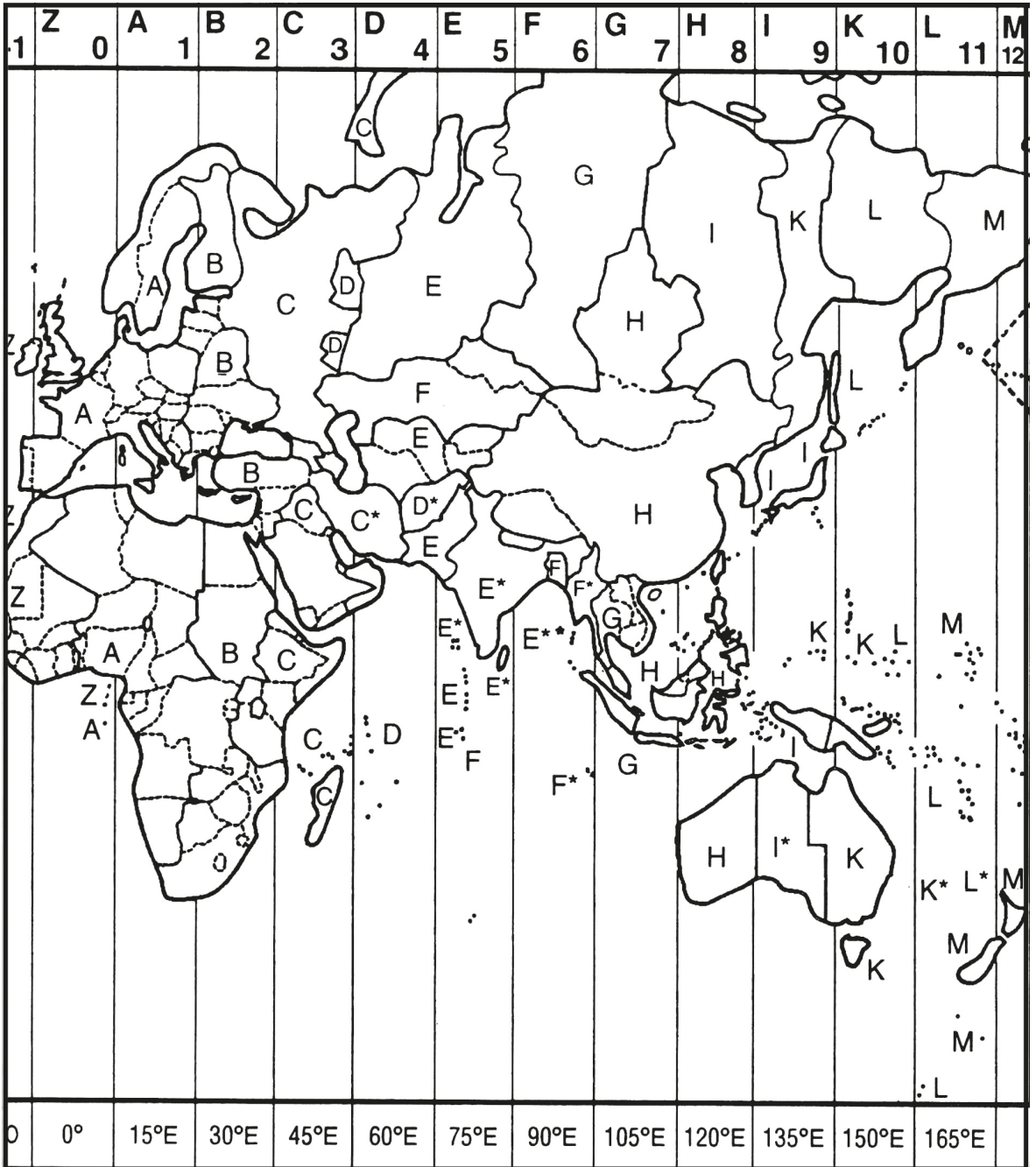
Coordenadas geográficas (INEGI-2020)

ESTADO Población	latitud			longitud			alt m	δm		Δδm /año
	°	'	“	°	'	“		°	'	
Yucatan										
Becanchen	19	52	32	89	13	3	0	-1	0	-7
Celestum	20	51	36	90	24	5	3	0	-26	-7
Cuyo	21	31	9	87	40	48	8	-2	5	-7
Chancenote	20	59	36	87	46	56	0	-1	58	-7
Chavihau	21	21	28	89	7	7	0	-1	13	-7
Espita	21	0	36	88	18	27	22	-1	39	-7
Halacho	20	28	44	90	4	51	6	0	-35	-7
Huhi	20	43	42	89	10	0	15	-1	7	-7
Izamal	20	56	16	88	57	14	14	-1	16	-7
Maxcanu	20	35	11	89	59	55	8	0	-38	-7
Mérida	20	59	0	89	38	43	9	0	-53	-7
Molas	20	49	0	89	37	48	10	0	-52	-7
Progreso	21	18	0	89	39	30	8	0	-54	-7
San Felipe	21	34	8	88	13	58	0	-1	46	-7
Sisal	21	9	59	90	1	55	0	0	-41	-7
Tekax	20	12	18	98	17	20	35	3	34	-8
Telchac	21	20	35	89	15	50	10	-1	8	-7
Tzimin	21	8	1	88	9	6	17	-1	46	-7
Valladolid	20	41	24	88	12	23	20	-1	41	-7
Yalkubul	21	31	26	88	36	55	0	-1	32	-7
Zacatecas										
Calera	22	57	2	102	42	10	2236	5	21	-7
Concepción del Oro	24	36	54	101	25	43	2070	4	53	-7
Chalchihuites	23	28	42	103	53	15	2321	5	49	-7
Fresnillo	23	10	35	102	52	39	2250	5	25	-7
Guadalupe	22	45	30	102	31	9	2265	5	17	-7
Jerez	22	38	51	102	59	48	2027	5	27	-7
Juchipila	21	24	46	103	7	29	1350	5	28	-7
Nieves	23	59	41	103	1	12	2017	5	30	-7
Nochistlán	21	21	47	102	50	55	1930	5	22	-7
Observatorio Astronómico	22	43	56	102	32	26	2717	5	17	-7
Observatorio Astronómico	22	46	1	102	32	56	2425	5	17	-7
Ojo Caliente	22	34	44	102	15	20	2114	5	10	-7
Ojuelos	21	52	5	101	35	20	0	4	54	-8
Pánuco	22	52	45	102	32	30	2321	5	17	-7
Pinos	22	17	54	101	34	23	2419	4	54	-8
Río Grande	23	49	40	103	2	17	0	5	31	-7
San Juan del Mezquital	24	17	28	103	23	47	0	5	40	-7
Sombrerete	23	37	53	103	38	30	2351	5	44	-7
Tlaltenango	21	47	0	103	18	44	1724	5	33	-7
Valparaíso	22	46	13	103	34	5	2140	5	40	-7
Villa de Cos	23	17	40	102	20	55	2050	5	13	-7
Villanueva	22	21	16	102	53	13	1955	5	24	-7

Mapa de zonas horarias



Mapa de zonas horarias



Zonas horarias

Las zonas horarias dividen a la Tierra en 24 franjas de 15° de anchura; las letras representan el código de uso con los que se corrige la hora del Meridiano de Greenwich. Además de señalarse en el encabezado del mapa, en la tabla se indica el número de horas que deberán sumarse, algebraicamente, a la hora del Meridiano de Greenwich. El mapa se tomó del Standard Time Zones, del Astronomical Phenomena, 1998.

° ' zona h m	° ' zona h m	° ' zona h m	° ' zona h m
00 Z 0	+90 F + 6	+180 M + 12	
+15 A + 1	+97 30 F* + 6 30	+187 30 M* + 12 30	-105 T - 7
+30 B + 2	+105 G + 7	-15 N - 1	-120 U - 8
+45 C + 3	+120 H + 8	-30 O - 2	-127 30 U* - 8 30
+52 30 C* + 3 30	+135 I + 9	-45 P - 3	-135 V - 9
+60 D + 4	+142 30 I* + 9 30	-52 30 P* - 3 30	-142 30 V* - 9 30
+67 30 D* + 4 30	+150 K + 10	-60 Q - 4	-150 W - 10
+75 E + 5	+157 30 K* + 10 30	-75 R - 5	-165 X - 11
+82 30 E* + 5 30	+165 L + 11	-90 S - 6	-180 Y - 12

Hora Legal en los Estados Unidos Mexicanos

Ley de los Husos Horarios en los Estados Unidos Mexicanos. Decreto DOF:28/10/2022

Capítulo Primero Disposiciones Generales

Artículo 1. La presente Ley es de observancia obligatoria en todo el territorio nacional; sus disposiciones son de orden público e interés general; su aplicación y vigilancia está a cargo del Ejecutivo Federal por conducto de las dependencias que conforme a la Ley Orgánica de la Administración Pública Federal tengan asignada competencia sobre la materia que regula el presente ordenamiento.

Artículo 2. Se reconoce para los Estados Unidos Mexicanos la aplicación y vigencia de los husos horarios 75 grados, 90 grados, 105 grados y 120 grados oeste del meridiano de Greenwich, y los horarios que les corresponden conforme a su ubicación, aceptando los acuerdos tomados en la Conferencia Internacional de Meridianos de 1884, que establece el meridiano cero.

Artículo 3. Para efectos de esta Ley, se establecen dentro del territorio nacional las siguientes zonas y se reconocen los meridianos que les correspondan:

I.- Zona Centro: Referida al meridiano 90 grados al oeste de Greenwich, que comprende la mayor parte del territorio nacional, con la salvedad de lo establecido en las fracciones II, III, IV y V de este artículo;

II. Zona Pacífico: Referida al meridiano 105 grados al oeste de Greenwich, que comprende los territorios de los estados de Baja California Sur; Nayarit, con excepción del municipio de Bahía de Banderas, el cual se regirá conforme a la fracción anterior en lo relativo a la zona centro; Sinaloa y Sonora;

III.-Zona Noroeste: Referida al meridiano 120 grados al oeste de Greenwich, que comprende el territorio del estado de Baja California;

IV.- Zona Sureste: Referida al meridiano 75 grados al oeste de Greenwich, que comprende el territorio del estado de Quintana Roo, y

V.-Las islas, arrecifes y cayos quedarán comprendidos dentro del meridiano al cual corresponda su situación geográfica, y de acuerdo con los instrumentos de derecho internacional aceptados.

Artículo 4. En el territorio nacional habrá un horario estándar que se establecerá de acuerdo con las zonas horarias que correspondan de conformidad con el artículo anterior. Únicamente se aplicará un horario estacional para los estados y municipios de la frontera norte, conforme a lo señalado por el capítulo segundo de la presente Ley.

Capítulo Segundo Del Horario Estacional en la Frontera Norte

Artículo 5. Únicamente en la frontera norte del territorio nacional se aplicará un horario estacional conforme a las siguientes reglas:

I.- Para los municipios de Acuña, Allende, Guerrero, Hidalgo, Jiménez, Morelos, Nava, Ocampo, Piedras Negras, Villa Unión y Zaragoza, en el estado de Coahuila de Zaragoza; Anáhuac, en el estado de Nuevo León; Nuevo Laredo, Guerrero, Mier, Miguel Alemán, Camargo, Gustavo Díaz Ordaz, Reynosa, Río Bravo, Valle Hermoso y Matamoros, en el estado de Tamaulipas, se aplica el meridiano 75 grados al oeste de Greenwich;

II.- Para el estado de Baja California se aplica el meridiano 105 grados al oeste de Greenwich.

El horario estacional fronterizo norte surtirá efecto desde las dos horas del segundo domingo de marzo, y concluirá a las dos horas del primer domingo de noviembre.

Capítulo Tercero De las modificaciones a los husos horarios en las Entidades Federativas y Municipios

Artículo 6. Para el caso de que una entidad federativa pretenda adoptar una de las zonas horarias o los horarios estacionales a los que se refiere la presente Ley, el Congreso local correspondiente podrá enviar al Congreso de la Unión, la iniciativa por la https://dof.gob.mx/nota_detalle.php?codigo=5670045&fecha=28/10/2022&print=true 1/22/24/23, 1:12 AM DOF - Diario Oficial de la Federación que se modifica la zona horaria o el horario estacional que deba aplicarse a la entidad o municipio.

Para tal efecto, a propuesta de la mayoría de los integrantes del Congreso local o la persona titular del Ejecutivo local de la entidad federativa que así lo solicite, podrán realizar foros y/o consultas ciudadanas, a efecto de conocer la zona horaria o el horario estacional que, conforme a la opinión de la ciudadanía, deba aplicarse a la entidad o municipio.

El Congreso de la Unión, una vez recibidas las iniciativas relacionadas con el párrafo anterior, deberá solicitar la opinión de la Secretaría de Gobernación previo a iniciar el trámite a que se refiere el artículo 72 Constitucional.

Tratándose de entidades federativas o municipios que colinden con otra entidad federativa o demarcación territorial extranjera, con un huso horario distinto de aquel que actualmente le corresponde conforme a la presente Ley, el Congreso de la Unión deberá realizar las modificaciones correspondientes a la Ley de los Husos Horarios en los Estados Unidos Mexicanos, dentro de los noventa días siguientes a la presentación de la iniciativa formulada en términos del presente artículo.

Artículo 7. En las iniciativas presentadas de conformidad con las fracciones I y II del artículo 71 Constitucional, por las que se proponga modificar la zona horaria o el horario estacional en donde se ubique alguna entidad federativa o municipio, el Congreso de la Unión deberá requerir la opinión del Congreso local de dicha entidad, la cual será aprobada por la mayoría de sus integrantes.

Centros astronómicos en la República Mexicana

Centro Astronómico	latitud ° ' "	longitud ° ' "	altura s.n.m.m.	ubicación
Universidad Nacional Autónoma de México Instituto de Astronomía				
BAJA CALIFORNIA				
San Pedro Mártir	31 02 39	115 27 49	2800	Telescopio 2.12 m
	31 02 43	115 28 00	2790	Telescopio 1.50 m
PUEBLA				
Tonantzintla	19 01 58	98 18 50	2147	Telescopio 1 m
Observatorio Astronómico Universum (DGDC-UNAM)				
Casita de las ciencias, Museo Universum DGDC-UNAM, Ciudad Universitaria, Coyoacán, CdMx.	19° 18' 42"	99° 10' 53"	2310	
Centro de Radioastronomía y Astrofísica, UNAM.				
MICHOACÁN				
Morelia	19 42 16	101 11 30	1941	
Instituto Nacional de Astrofísica, Óptica y Electrónica, SEP.				
PUEBLA				
Tonantzintla	19 01 58	98 18 50	2147	
SONORA				
Observatorio Cananea Guillermo Haro	31 03 10	110 18 19	2480	Telescopio 2.1 m
Departamento de Astronomía, Universidad de Guanajuato				
GUANAJUATO				
Guanajuato	21 03 10	101 19 28	2425	Mineral de la Luz
Universidad Autónoma de Zacatecas				
ZACATECAS				
Observatorio astronómico	22 43 56	102 32 26	2425	Cd. Universitaria
Observatorio astronómico	22 46 01	102 32 56	2714	Cerro de la Virgen
Sociedad Astronómica de México				
CIUDAD DE MÉXICO				
Observatorio Luis G. León	19 23 56	99 8 29	2246	Col. Álamos, Cd. de México
ESTADO DE MÉXICO				
Observatorio Chapa de Mota	19 47 24	99 31 23	3070	Municipio de Chapa de Mota
Universidad Autónoma de Sinaloa				
SINALOA				
Observatorio Cosala	24 24 5	106 36 36	595	Municipio de Cosala
Instituto de Geofísica				
MEXART*:	19 48 39	101 41 39		Michoacán Coeneo
Observatorio de centelleo interplanetario * Mexican Array Radiotelescope				

Refracción

Presentamos un método gráfico para determinar la refracción atmosférica en función de la distancia cenital, temperatura o presión. Las gráficas se obtuvieron mediante interpolación polinomial de quinto, sexto, séptimo y noveno orden, de los valores tabulados y publicados por el Observatorio Pulkovo, en el Anuario Astronómico de la URSS, y por Pulkova, 1956, cuarta edición (Academia de Ciencias de la URSS, Moscú, Leningrado); y Abalakin, 1985, quinta edición (Observatorio Astronómico Central, Academia de Ciencias de la URSS, Leningrado).

De la gráfica de corrección por distancia cenital obtenemos la refracción media r dada en minutos de arco, en función de la distancia cenital dada en grados. Ésta se obtiene de la regresión polinomial de noveno orden, dada por la ecuación

$$r = a + b_1 z + b_2 z^2 + b_3 z^3 + b_4 z^4 + b_5 z^5 + b_6 z^6 + b_7 z^7 + b_8 z^8 + b_9 z^9,$$

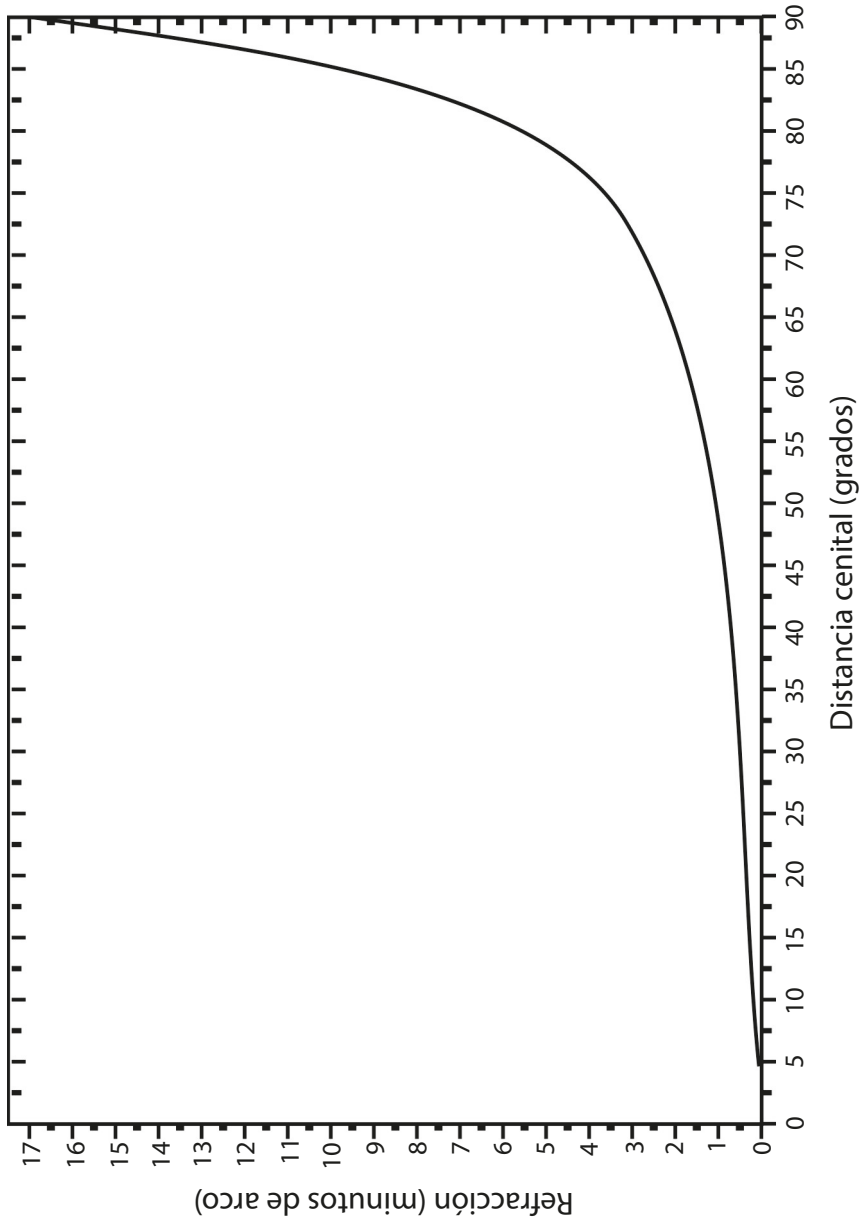
donde r está dada en minutos de arco, y sus coeficientes son:

a	$-7.64878 \cdot 10^{-4}$	b_5	$1.22379 \cdot 10^{-6}$
b_1	0.02752	b_6	$-2.70552 \cdot 10^{-8}$
b_2	-0.00384	b_7	$3.52568 \cdot 10^{-10}$
b_3	$5.03936 \cdot 10^{-4}$	b_8	$-2.50309 \cdot 10^{-12}$
b_4	$-3.28953 \cdot 10^{-5}$	b_9	$7.48708 \cdot 10^{-15}$

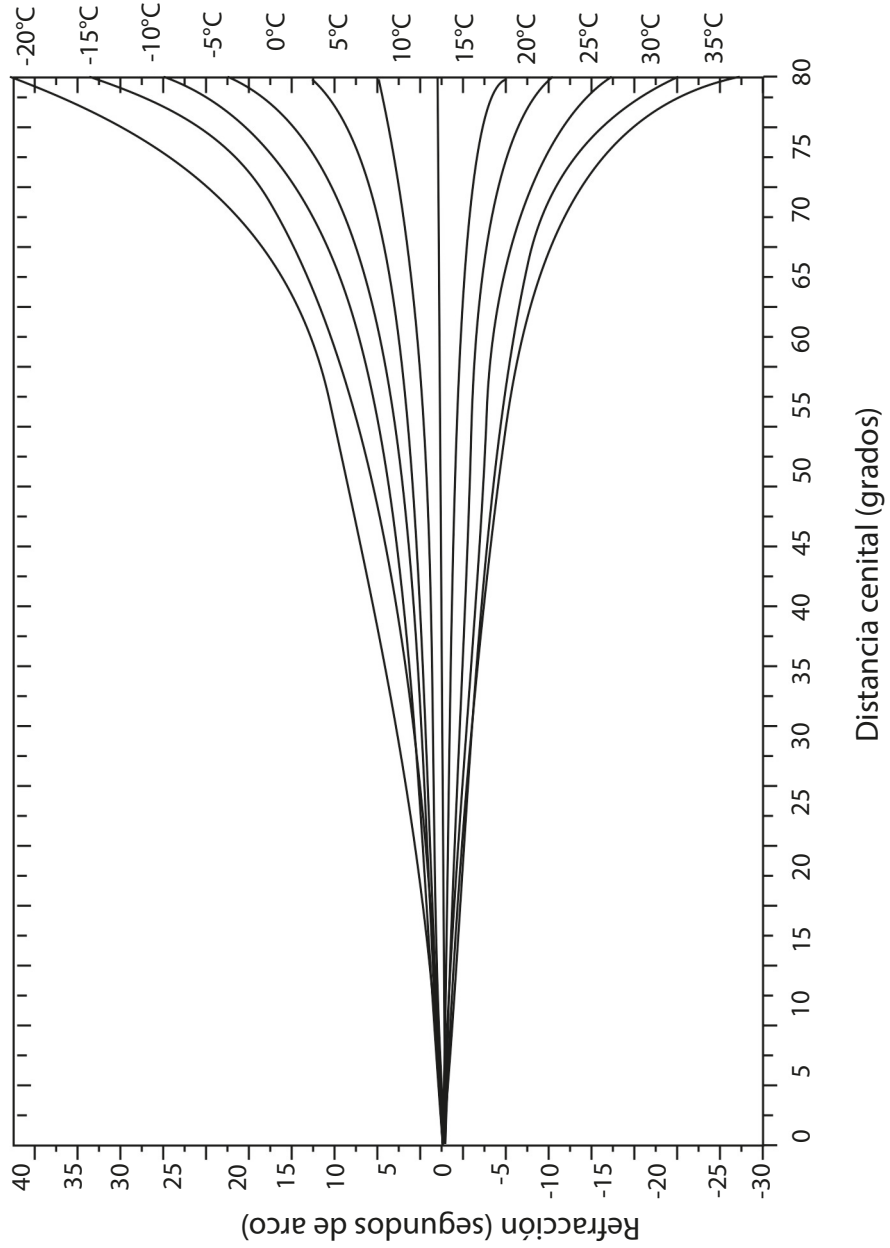
Con la gráfica de corrección por temperatura, se determina el valor en segundos de arco, que se deberá sumar algebraicamente a la refracción media. Cada curva corresponde a las temperaturas, en grados centígrados, señaladas al extremo derecho de cada una de ellas.

De la gráfica de corrección por presión se obtienen los valores en segundos de arco, que se deberán sumar algebraicamente a la refracción media. A la derecha de cada curva se muestran las variaciones de la refracción en función de la presión barométrica B , en mm.

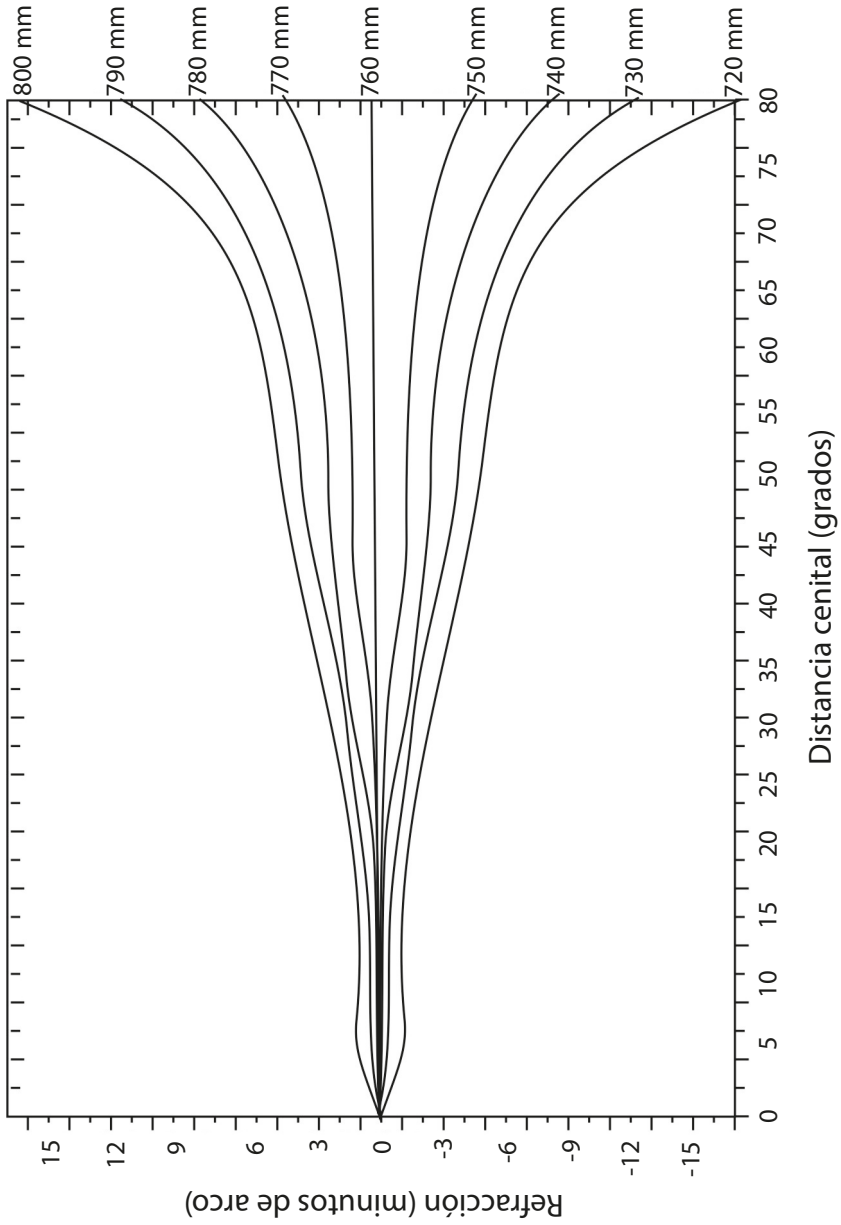
Corrección por distancia cenital



Corrección por temperatura



Corrección por presión



Abreviaturas

Día juliano

Abreviaturas:

d: día

ds: día de la semana

dj: día juliano

Hora sideral

Abreviaturas:

dj: día juliano

Sol

Abreviaturas:

α : ascensión recta

δ : declinación

hp: hora del paso por el meridiano

vh: variación horaria

Δ : distancia geocéntrica

UA: unidad astronómica

Luna

Abreviaturas:

dj: día juliano

α : ascensión recta

δ : declinación

hp: hora del paso por el meridiano

Δ : distancia geocéntrica en radios terrestres

sd: semidiámetro

pax: paralaje horizontal

DT: diámetro terrestre

Planetas

Abreviaturas:

α : ascensión recta

δ : declinación

Δ : distancia geocéntrica

UA: unidad astronómica

hp: hora del paso por el meridiano

Sistema de constantes y parámetros

Abreviaturas:

α : ascensión recta, d : declinación, f : latitud

UA: unidad astronómica, rad: radianes

DJ: día Juliano

lg: aceleración de la gravedad en la superficie terrestre o Normal

Nomenclatura de las estrellas brillantes

Abreviaturas:

α : ascensión recta

δ : declinación

N: número del catálogo de estrellas brillantes en el Bright Star Catalog de la Universidad de Yale. E.U.A.

Posiciones medias de estrellas brillantes

Abreviaturas:

NBSC: número de estrella en: Bright Star Catalog.

Yale University, EUA

NH: número en el Catálogo Hiparco

V: magnitud

SP: tipo espectral

nom: nombre de la estrella en clasificación Bayer

Posiciones aparentes de estrellas brillantes

Abreviaturas de términos astronómicos:

α : ascensión recta

α_c : ascensión recta en el sistema de referencia intermedio

δ : declinación

Hp: hora del paso

Posiciones aparentes de la polar

Abreviaturas:

α : ascensión recta

α_c : ascensión recta coordenadas intermedias

δ : declinación

hp: hora del paso por el meridiano

Lluvias de estrellas

Abreviaturas:

α : ascensión recta

δ : declinación

vel: velocidad de incidencia en km/s

Núm: número de estrellas fugaces por hora

Eventos planetarios

Abreviaturas:

E: Separación angular al Este (E).

Medida geocéntrica que se refiere a la separación angular entre los centros de los objetos (véase sección de explicaciones).

O: Separación angular al Oeste(O).

AC: acimut

a: altura

*: ocultación

** : eclipse

Crepúsculos Salidas y puestas del Sol

AM: inicia el crepúsculo astronómico matutino; CM:

inicia el crepúsculo civil matutino;

SS: salida del Sol; PS: puesta del Sol; CV: termina el crepúsculo civil vespertino;

AV: termina el crepúsculo astronómico vespertino.

(Para el cálculo de la hora legal, véase la sección *Explicaciones*).

Objetos Messier

Abreviaturas:

M: número de objeto Messier; NGC: número en el Nuevo Catálogo General

const: constelación; v: magnitud; tipo: tipo morfológico;

α : ascensión recta; d : declinación (ambas para J2000)

E: galaxia elíptica; S: galaxia espiral; SB: galaxia

espiral barrada; Pec: peculiar

ca: cúmulo abierto; cg: cúmulo globular;

rsn: remanente de supernova; np: nebulosa planetaria;

nr: nebulosa de reflexión; ne: nebulosa de emisión;

(véase la sección de explicaciones para obtener r información sobre morfología).

Poblaciones de la República Mexicana

Abreviaturas:

alt: altura sobre el nivel del mar

δ_m : declinación magnética para el 1 de del 2006

$\Delta\delta_m$: Variación de la declinación magnética por año

Glosario: Términos astronómicos básicos

Acimut o azimut. Distancia angular medida hacia el Este, desde el Norte geográfico, hasta el punto definido por la intersección con el horizonte del círculo vertical que pasa por un objeto celeste. También es común referirla al Sur geográfico.

Adviento. Período litúrgico de cuatro semanas que precede a la Navidad.

Afelio. Punto en el cual un cuerpo en órbita en torno al Sol alcanza su r distancia a éste.

Altitud o Altura. Distancia angular entre el horizonte y el cuerpo celeste. Se mide a lo largo del gran círculo que pasa por el objeto astronómico y el cenit del lugar. Es positiva cuando el objeto está sobre el horizonte y negativa cuando está por debajo.

Ángulo horario. Distancia angular entre el meridiano del lugar y el círculo horario que pasa por el objeto celeste. Se mide en el plano del ecuador celeste.

Anuario astronómico. Guía de posiciones de objetos celestes y acontecimientos astronómicos que se publica cada año.

Año anomalístico. Paso sucesivo de la Tierra por su perihelio. Su duración es de 365.25964 días.

Año civil. Intervalo de 365 días que rige las actividades civiles, sociales o religiosas de la ría de los países del mundo; y es la parte entera de la duración del año trópico. Para su buen funcionamiento es necesario que en cada año, la posición del Sol en el cielo corresponda al mismo día. Para lograrlo se agrega el día 29 de cada cuatro años, omitiéndose para aquellos años seculares (múltiplos de 100), que no sean divisibles entre 400. (Véase la sección *Explicaciones*, en Calendarios)

Año sideral. Tiempo que le toma a la Tierra en dar una vuelta completa alrededor del Sol, respecto de las estrellas fijas. Su duración es de 365.25636 días.

Año trópico. Tiempo que transcurre entre los dos equinoccios o bien el tiempo que le toma al Sol pasar dos veces consecutivas por el primer punto de Aries. Su duración es de 365.24219 días.

Apogeo. Punto orbital más alejado de un cuerpo, respecto de la Tierra.

Ascensión recta. Ángulo en el plano del ecuador celeste, que mide la separación entre los círculos horarios del punto Vernal y de un objeto celeste.

Asteroides. Pequeños objetos rocosos del Sistema Solar, cuyos diámetros son del orden de 400 km, en promedio. Se les localiza principalmente en el llamado Cinturón de Asteroides, entre las órbitas de Marte y Júpiter. Otros grupos se identifican como los Apolo, Amor y Trollanos.

Astrología. Un sistema de fundamentos subjetivos, no científico, con el que se pretende explicar el carácter y comportamiento humanos, tomando como base las posiciones de los astros.

Azimut. Véase Acimut.

Calendario. Conjunto de normas establecidas para medir el transcurso del tiempo en años, meses y días.

Calendario Gregoriano. Calendario introducido por el Papa Gregorio XIII en 1582, con el que modificó el calendario Juliano. Consiste en agregar un día en todos los años que sean divisibles por cuatro; a estos se les llaman años bisiestos. Se exceptúan aquellos años seculares, o de final de siglo, que no sean divisibles por cuatrocientos. Los años 1800, 1900 y 2100 no son años bisiestos, en cambio 1600 y 2000 sí lo son.

Calendario Juliano. Año de 365.25 días exactamente; según la tradición, César lo instituyó en el año 45 a.C. y fue modificado por el papa Gregorio XIII en 1582 d.C.

Carnaval. Los tres días que preceden a la cuaresma. Fiestas celebradas durante estos días, consistentes en mascaradas, bailes y otros regocijos bulliciosos.

Catálogo. En Astronomía, tabla en la que se enumeran y enlistan objetos astronómicos, y en la que se caracterizan sus propiedades.

Cenit o Zenit. Punto de la esfera celeste que se encuentra exactamente encima del observador.

Ciclo Solar. Relativo al calendario, es el período de veintiocho años al final del cual el año comienza con el mismo día.

Ciclo de actividad solar. Ciclo cuya duración es de 11 años aproximadamente. Se percibe por el aumento en la cantidad de manchas, ráfagas y protuberancias solares.

Círculo horario. Gran círculo en la bóveda celeste, que contiene a los polos celestes y algún objeto astronómico.

Conjunción. Evento que se produce cuando dos objetos celestes alcanzan la misma longitud eclíptica o ascensión recta.

Conjunción inferior. Suceso astronómico de Mercurio o Venus cuando alguno de ellos se encuentra exactamente entre el Sol y la Tierra.

Conjunción superior. Evento astronómico de Mercurio o Venus cuando el Sol se encuentra entre el planeta y la Tierra.

Cometa. Cuerpo que orbita alrededor del Sol, con núcleo de polvo y hielos de unos 10 km de diámetro. Cuando se acerca al Sol, sus materiales sólidos se su-

Glosario: Términos astronómicos básicos

bliman, de tal modo que al ser arrastrados por el viento solar producen una cauda cometaria; sus dimensiones pueden alcanzar más de cien millones de kilómetros.

Constelación. Grupo de estrellas cuya asociación esquemática o mítica, sirve para identificar cierta región de la esfera celeste; en la actualidad, dichos grupos han sido definidos por la Unión Astronómica Internacional, para delimitar con precisión las regiones de la esfera celeste. El cielo se ha dividido en 88 constelaciones.

Coordenadas geográficas. Latitud y longitud de un punto de la superficie terrestre, relativas al centro de la Tierra.

Coordenadas celestes eclípticas. Latitud y longitud de un punto de la bóveda celeste relativas al plano de la órbita de la Tierra. Pueden ser geocéntricas o heliocéntricas.

Coordenadas celestes ecuatoriales. Ascensión Recta y Declinación de un punto de la bóveda celeste relativas al plano del ecuador terrestre. Pueden ser geocéntricas o heliocéntricas.

Corona solar. Región más externa de la atmósfera solar, caracterizada por una temperatura de varios millones de grados. Se logra observar durante los eclipses totales de Sol. Otras estrellas también poseen corona.

Crepúsculo. Intervalo de tiempo que precede a la salida del Sol o que sigue después de su puesta, durante el cual el cielo está parcialmente iluminado. Puede ser crepúsculo civil, cuando se habla del tiempo que ocupa el Sol en recorrer la distancia cenital entre 90° y 50' y 96°; náutico entre 96° y 102°, y astronómico, entre 102° y 108°.

Culminación. Paso de un objeto celeste por el meridiano del observador. Punto en el que alcanza la máxima altura en su movimiento diurno.

Cúmulo abierto o galáctico. Conglomerado estelar de cientos de estrellas cuya distribución tiende hacia el plano de la Galaxia.

Cúmulo globular. Grupo estelar de forma casi esférica que se encuentra fuera del plano de la Galaxia. Su número de estrellas va de unos cientos de miles a decenas de millones, muchas de ellas son estrellas tardías.

Declinación. Distancia angular en la esfera celeste que se mide desde el ecuador celeste, a lo largo del círculo horario definido por el objeto celeste. Es positiva al norte y negativa al sur.

Declinación magnética. Desviación de las líneas del campo magnético de la Tierra, respecto de la línea norte sur geográfica. Esta es una propiedad física que varía con el tiempo y depende del lugar donde se mide.

Deflexión de la vertical. Diferencia angular entre el cenit astronómico y el cenit geodésico.

Día Juliano. Intervalo de tiempo en días, a partir del 1 de del año 4713 a.C., al medio día del meridiano de Greenwich.

Día medio. Tiempo transcurrido entre dos pasos sucesivos del Sol medio o ficticio, por el meridiano. Su duración es de 24 horas.

Día sideral. Tiempo que transcurre entre dos pasos sucesivos del punto vernal o de alguna estrella por el meridiano. Su duración es de 23 horas, 56 minutos, 4.098904 segundos.

Día solar. Tiempo transcurrido entre dos tránsitos consecutivos del Sol por el meridiano. Por su variación durante el año, se hizo necesario definir el día solar medio. Dicha variación es causada por la irregularidad de la rotación de la Tierra y de su movimiento en torno al Sol.

Diámetro angular. Ángulo que subtende el diámetro aparente de un cuerpo celeste cercano. Para la Luna y el Sol dicho ángulo es de 30' aproximadamente.

Distancia cenital. Distancia angular de un cuerpo celeste, medida desde el cenit.

Distancia media. Parámetro de una órbita elíptica, definido por la longitud del semieje r .

Eclipse. Paso de un cuerpo celeste por la sombra de otro, haciendo que la fuente que lo ilumina quede oculta por el primero.

Eclipse anular de Sol. Ocurre cuando el diámetro aparente de la Luna es menor que el solar. Parte del disco solar se muestra como un anillo alrededor de la Luna.

Eclipse lunar. Paso de la Luna por la sombra de la Tierra. Puede ser total umbral, cuando la Luna se encuentra dentro de la umbra de la Tierra; parcial umbral cuando parte del disco lunar se encuentra dentro de ella. Será total penumbral, cuando el disco de la Luna sólo se encuentra en la penumbra de la Tierra; y parcial penumbral o simplemente parcial, cuando parte del disco lunar se encuentra en la penumbra terrestre.

Eclíptica, plano de la. Plano medio de la órbita de la Tierra alrededor del Sol.

Eclíptica. Trayectoria aparente que describe el Sol en la bóveda celeste, a lo largo del año. Es llamada así porque los eclipses ocurren cuando la Luna se encuentra en el plano que la contiene.

Ecuación del tiempo. Diferencia entre los ángulos horarios del Sol verdadero y el Sol medio o ficticio. Dife-

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rencia entre el tiempo solar aparente y el tiempo solar medio.

Ecuador. Gran círculo en la superficie de un cuerpo, que resulta de la intersección de ésta con el plano que pasa por su centro y es perpendicular al eje de rotación del cuerpo.

Ecuador celeste. Proyección del ecuador de la Tierra, en la bóveda celeste.

Edad de la Luna. Término dado en astronomía para el número de días transcurridos después de la Luna Nueva.

Efemérides. Predicción de la posición de un astro. Lista de posiciones astronómicas y otros datos que cambian con el tiempo.

Elementos orbitales. Parámetros que caracterizan la órbita de un cuerpo que se mueve en torno a otro.

Elongación. Ángulo geocéntrico entre un planeta y el Sol medido en el plano definido por el planeta, el Sol y la Tierra. Las elongaciones planetarias fluctúan entre 0° y 180°, al Este o al Oeste del Sol.

Elongación máxima. Valor máximo de la elongación de un planeta interior.

Epacta. Número de días en que el año solar excede al lunar (casi 11 días). Edad de la Luna el 1 de de cada año.

Epifanía. Fiesta que celebra la iglesia cristiana el día 6 de , para conmemorar la adoración de Jesucristo por los Reyes Magos. Manifestación de Dios a los paganos.

Equinoccio Vernal. Día del año en el que se inicia la primavera en el hemisferio norte. La duración del día y la noche son iguales. Nodo ascendente de la eclíptica sobre el ecuador celeste. Momento en el que la longitud aparente del Sol es cero.

Era. Sistema de notación cronológica, relativa a la fecha en que ocurrió algún suceso importante.

Esfera celeste. Esfera imaginaria donde parecen estar colocados a la misma distancia todos los objetos celestes. En su centro está la Tierra cuyo plano ecuatorial contiene al ecuador terrestre; sus polos son la intersección de la proyección del eje de rotación de la Tierra con dicha esfera.

Espectral, tipo. Clasificación de las estrellas con base en su espectro, de acuerdo con su temperatura superficial. Se han caracterizado los tipos principales: O, B, A, F, G, K, M y además C(R y N) y S. También se puede clasificar por su luminosidad como 0, I, II, III, IV, V, VI y VII.

Estacionario, punto. Posición en la cual la variación de la ascensión recta de un planeta es momentáneamente nula.

Estaciones. Intervalos del año definidos por el tiempo en que el Sol permanece entre aquellos puntos orbitales caracterizados por los solsticios y equinoccios. Son llamadas Primavera, Verano, Otoño e Invierno. El clima en la Tierra es diferente en cada una de ellas, debido a la inclinación de su eje de rotación respecto del plano de la eclíptica.

Estrella. Esfera de gas incandescente cuya fuente de energía son las reacciones termonucleares.

Excentricidad de una órbita. Para una órbita elíptica, el cociente de la distancia entre los focos y el diámetro r de la órbita. Parámetro que especifica la forma de una sección cónica.

Fase. Se dice del aspecto o forma aparente que presenta un planeta o luna, visto a distancia. Es la fracción del disco iluminado por el Sol.

Fases de la Luna. Forma aparente de la Luna. Luna nueva, cuarto creciente, luna llena y cuarto menguante, se definen como los tiempos en los que la longitud de la Luna difieren de las del Sol en 0°, 90°, 180° y 270°, respectivamente.

Galaxia. Conglomerado de millones de estrellas, gas y polvo. Se clasifican según su morfología en: elípticas (E), espirales (S) e irregulares (I). Las espirales también pueden presentar núcleos que tienen forma de barra (SB).

Geocéntrico. Con referencia o perteneciente al centro de la Tierra.

Geodesia. Ciencia que trata de la forma y las medidas de la Tierra.

Gravitación. Campo de fuerza al que se debe la atracción de las masas en el Universo.

Greenwich. Región conurbada de Londres donde se encontraba el observatorio astronómico. El meridiano de este lugar se toma como origen de los meridianos, por lo que es llamado meridiano cero.

Hégira o Hégira. Era de los mahometanos, que se cuenta desde la puesta del Sol del 16 de de año 622 d.C., día en que Mahoma huyó de la Meca al salir hacia la ciudad de Medina.

Heliocéntrico. Con referencia o perteneciente al centro del Sol.

Hora civil o legal. Hora regida por el Sol medio o ficticio. Hora referida a un meridiano horario o huso horario. La Tierra se divide en 24 husos horarios, que se

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obtienen al dividir entre 15 los 360° de la circunferencia del ecuador.

Hora local. Hora regida por la posición del Sol verdadero. Cuando éste pasa por el meridiano del lugar, define las 12 horas o el mediodía locales.

Hora sideral. Tiempo transcurrido desde el paso del meridiano del lugar por el primer punto de Aries. El día sideral es 3m 55.91s menor que el día solar. Se refiere al tiempo medido basado en las estrellas fijas. Véase tiempo sideral.

Hora universal. Hora local de Greenwich. La hora local de algún punto de la superficie de la Tierra se obtiene restando a la hora de Greenwich la longitud del lugar convertida a horas.

Horizonte. Plano perpendicular a la línea que va del observador al cenit del lugar. Gran círculo formado por la intersección de la esfera celeste con el plano perpendicular a la línea que une al observador con el cenit del lugar, llamado horizonte astronómico u horizonte del observador.

Inclinación. En Astronomía, ángulo entre el plano de una órbita y otro de referencia. Elemento orbital que especifica la orientación de una órbita.

Júpiter. Planeta gigante del Sistema Solar. Después de Venus es el planeta más brillante del sistema solar. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Latitud celeste. Distancia angular en la esfera celeste medida al norte o al sur del plano de la eclíptica. Se mide a lo largo del gran círculo que pasa por los polos de la eclíptica y el cuerpo celeste.

Latitud terrestre. Distancia angular en la Tierra, medida al norte o al sur del ecuador, a lo largo de algún meridiano.

Lluvia de estrellas. Fenómeno luminoso causado por la caída de pequeñísimas partículas dejadas por los cometas. Se observan como estelas luminosas a las que, tradicionalmente, se los nombran estrellas fugaces, las cuales parecen surgir de un punto en el cielo llamado radiante. Se han clasificado unas 18 lluvias de estrellas, las cuales reciben el nombre de la constelación donde se ubica su respectivo radiante.

Longitud (geográfica). Distancia angular medida en el plano del ecuador, al Este o al Oeste del meridiano de Greenwich.

Longitud eclíptica. Distancia angular de un cuerpo celeste medida sobre el plano de la eclíptica, a partir del primer punto de Aries.

Luminosidad. Cantidad total de energía radiada por un cuerpo celeste en la unidad de tiempo.

Luna. Satélite natural de la Tierra. Después del Sol es el objeto más brillante del cielo. Véase tabla de satélites de los planetas.

Lunación. Periodo de tiempo entre dos lunas nuevas consecutivas. Su duración aproximada es de 29.5 días.

Luna llena. Fase durante la cual el disco lunar está totalmente iluminado; ocurre cuando la luna se encuentra en oposición al Sol respecto de la Tierra.

Luna nueva. Fase durante la cual el disco lunar no se ve iluminado ocurre cuando la Luna se encuentra en conjunción con el Sol.

Magnitud. Medida logarítmica del brillo de un objeto celeste, considerado como una fuente puntual.

Magnitud de un eclipse de Luna. Fracción del diámetro lunar oscurecido por la sombra de la Tierra, en el máximo del eclipse lunar.

Magnitud de un eclipse de Sol. Fracción del diámetro solar ocultado por la Luna, en el máximo del eclipse de Sol.

Marte. Planeta rocoso del Sistema Solar que, a simple vista, se aprecia de color rojizo. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Masa. Medida inherente a la cantidad de materia de un cuerpo.

Mercurio. Planeta rocoso del Sistema Solar que por su distancia heliocéntrica es el más cercano al Sol. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Meridiano. Círculo máximo en la esfera celeste que pasa por los polos y el cenit del observador.

Meridiano 90° W.G. Meridiano que atraviesa la Península de Yucatán. Se encuentra 90° al Oeste del meridiano de Greenwich en Inglaterra. Define al huso horario (S) de 6 horas al Oeste de Greenwich, llamado Hora del Centro en la República Mexicana. Difiere de la hora local de la ciudad de México en 36 minutos 37 segundos.

Meteorito. Dícese de algún fragmento de roca o metal del medio interplanetario, una vez que ha sufrido una colisión contra un planeta, satélite o, en general, con algún cuerpo del Sistema Solar.

Messier, catálogo. Enlistado de aquellos objetos celestes que al ser vistos con telescopios pequeños, son de aspecto difuso. Contiene cúmulos estelares, nebulosas y galaxias. Fue elaborado por Charles Messier.

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Movimiento directo. Dirección de la rotación o del movimiento de traslación de un planeta o satélite, visto desde el polo norte de la eclíptica, cuyo sentido es contrario al de las manecillas del reloj.

Movimiento retrógrado. Dirección de la rotación de un planeta o satélite visto desde el polo norte de la eclíptica, cuyo sentido es el de las manecillas del reloj.

Nadir. Punto de la esfera celeste diametralmente opuesto al cenit. Dicese de aquel punto, del otro lado de la Tierra, ubicado por debajo de nosotros.

Nebulosa. Nube de materia interestelar.

Nebulosa planetaria. Envoltente de gas alrededor de una estrella con masa parecida a la del Sol, arrojada por ella misma a consecuencia de un estado avanzado de su evolución.

Neptuno. Planeta gaseoso del Sistema Solar. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Nodo. El punto de intersección entre dos grandes círculos celestes. Los eclipses de Luna y de Sol ocurren cuando ambos se encuentran cerca de los nodos de intersección de sus trayectorias orbitales.

Número de Oro, o Áureo. En terminos astronómicos, ciclo lunar de diez y nueve años, al cabo de los cuales las fases de la Luna vuelven a sucederse en los mismos días del año.

Ocultación. Efecto de cubrimiento de un objeto celeste por otro de r diámetro aparente, específicamente el paso de la Luna frente a una estrella o planeta.

Oposición. Configuración geocéntrica del Sol y un planeta exterior en la que sus longitudes aparentes difieren en 180° .

Órbita. Trayectoria de un cuerpo celeste en torno a otro.

Paso superior por el meridiano. Tránsito de un objeto celeste por el meridiano del observador.

Pentecostés. Fiesta de los judíos instituida en memoria de la ley de Jehová, que les fue dada en el Monte Sinaí. En la Iglesia Católica festividad de la venida del Espíritu Santo.

Perigeo. Punto en el cual un cuerpo en órbita en torno a la Tierra alcanza su menor distancia a ésta.

Perihelio. Punto en el cual un cuerpo en órbita en torno al Sol alcanza su menor distancia a éste.

Penumbra. Región intermedia entre la sombra y la zona iluminada. También se refiere a la región desde la que un eclipse se ve como parcial. Componente

exterior de la sombra que proyecta un objeto iluminado por una fuente de luz.

Planeta. Cuerpo celeste esférico cuyo tamaño es r de 1000 km de diámetro. No emite luz propia. Su masa es tal que la energía liberada por las reacciones nucleares en su interior no son suficientes para que se convierta en estrella. Actualmente se han encontrado evidencias de la existencia de planetas que orbitan algunas estrellas.

Plutón. Planeta del Sistema Solar cuya órbita es la más alejada del Sol. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Polar. Estrella Polar (a UMi). Se localiza a sólo 0.9o del Polo Norte Celeste.

Precesión. Movimiento progresivo y uniforme del eje de rotación de un cuerpo que rota libremente, sujeto a la torca ejercida por una fuerza gravitatoria externa. En la Tierra, la precesión es causada por la acción de la fuerza gravitatoria del Sol y la Luna sobre su deformación ecuatorial .

Primer punto de Aries. Punto imaginario donde se intersectan el ecuador celeste y la eclíptica. Cuando el Sol pasa por dicho punto, su declinación cambia de negativa a positiva. No existe ninguna estrella en esta posición.

Puesta del Sol. Momento en que el limbo superior del Sol desaparece bajo el horizonte del observador.

Polo norte celeste. Punto de intersección de la proyección del eje de rotación terrestre con la esfera celeste.

Punto Vernal. Véase primer punto de Aries.

Quincuagésima. Dominica que precede a la Cuaresma.

Ramadán. Noveno mes del año lunar de los musulmanes.

Revolución. Órbita de un cuerpo alrededor de otro.

Rosh Hashanah. Año Nuevo de los Judíos.

Salida del Sol. Momento en que el limbo superior del Sol sale por el horizonte del observador.

Saros. Ciclo lunar babilónico de 6585.32 días, o 18 años, 11.33 días o 223 lunaciones, después del cual el Sol y la Luna regresan a una misma posición relativa en el cielo. Significa repetición en griego.

Satélite. Cuerpo en órbita alrededor de otro. Luna de un planeta.

Saturno. Planeta gaseoso del Sistema Solar con un gran número de anillos. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

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Segundo. En el sistema internacional, duración de 9 192 631 770 ciclos de la radiación dada por la transición entre los dos niveles hiperfinos del estado base del Cesio 133.

Semana Santa. Semana que culmina con la Pascua, la cual se festeja en el primer domingo que sigue a la primera luna llena, después del equinoccio de primavera.

Septuagésima. Dominica que celebra la Iglesia Católica tres semanas antes de la primera de cuaresma.

Sidereal. Relativo a las estrellas.

Sistema de referencia. Lugar y tiempo desde donde se mide o registra un evento.

Sol. Estrella más cercana a la Tierra.

Sol medio. Sol imaginario o ficticio, que se desplaza en la bóveda celeste a velocidad constante. No está sujeto a las variaciones del Sol verdadero debidas a la elipticidad de la órbita terrestre. Se usa para definir el tiempo solar medio.

Solsticio. Uno de dos puntos en los cuales el Sol parece estar en sus puntos Norte y Sur más extremos. Puntos de la eclíptica que están a la máxima distancia del ecuador celeste. En el hemisferio norte, el solsticio de verano ocurre alrededor del 21 de y el de invierno cerca del 22 de aproximadamente. Estas fechas corresponden al día más largo y corto del año, respectivamente.

Sombras volantes. Franjas de luz y sombra que se observan justo antes y después de la fase de totalidad de un eclipse de Sol.

Sucot. Fiesta judía de la cosecha.

Tiempo atómico internacional. Escala de tiempo que resulta del análisis de las mediciones de tiempos atómicos en varias ciudades del mundo, regulada por el Bureau International des Poids et Mesures. La unidad de tiempo es el segundo internacional de tiempo.

Tiempo solar medio. Medida de tiempo basada en el movimiento diario de Sol medio o ficticio, suponiendo un movimiento de rotación terrestre uniforme.

Tiempo sideral. Medida de tiempo basada en el movimiento diario del punto Vernal. Está dado por la razón de rotación terrestre respecto a las estrellas.

Tiempo universal. Medida de tiempo basada en el movimiento diario del Sol. Hora local en el meridiano de Greenwich; se determina por la observación del movimiento diario de las estrellas.

Tierra. Planeta rocoso del Sistema Solar. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Tránsito. Paso de un objeto celeste por un meridiano. Paso de un cuerpo frente a otro de r diámetro aparente.

Umbral. En un eclipse, la región desde donde se observa al cuerpo celeste totalmente oculto. Umbral, en latín, significa sombra.

Unidad astronómica o U.A. Distancia media entre la Tierra y el Sol; 150 millones de kilómetros, aproximadamente.

Urano. Planeta gaseoso del Sistema Solar con 9 anillos. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Venus. Planeta rocoso del Sistema Solar que se muestra desde la Tierra como el de r brillo. Véanse tablas de parámetros físicos y orbitales de planetas, y satélites de los planetas.

Yom Kippur. Día del perdón entre los judíos.

Zenit o Cenit. Ver Cenit.

Zodiaco. Banda imaginaria de constelaciones a través de la cual se mueve el Sol, la Luna y los planetas durante el año.

Apéndice

Explicaciones generales al contenido del Anuario

Con la abreviatura W. G., debemos leer Oeste del meridiano de Greenwich, ésta se mantiene en toda la publicación, a menos que se indique otra referencia.

Calendario

En un sentido general los calendarios son sistemas de cómputo de días, con ellos se rige la vida social, civil y religiosa de los grupos humanos. Se construyen mediante la combinación de diferentes unidades de tiempo. Se han ideado diversas estructuras funcionales por medio de la aplicación de ciertos algoritmos o procedimientos matemáticos, con los que se pretende seguir la duración de diversos ciclos astronómicos. Ejemplos de ellos son los relacionados al movimiento aparente del Sol, la Luna, Venus o algunas estrellas brillantes, los cuales contienen implícitamente el movimiento de traslación y rotación de la Tierra, así como el de la Luna en torno a la Tierra.

El *año civil*, es el intervalo de 365 días que se utiliza en la ría de los países del mundo, y es la parte entera de la duración del año trópico (el ciclo de las estaciones). Para su buen funcionamiento se requiere que cada año para una fecha dada, la posición aproximada del Sol corresponda a la del año anterior. Para lograrlo se hace necesario corregirlo de acuerdo a las siguientes reglas:

Si el año es divisible exactamente entre 4, durará 366 días, al cual se le llama año *bisiesto*.

Los años seculares (múltiplos de 100) no serán bisiestos, excepto si son divisibles entre 400.

Como ejemplos de ello tenemos que los años 1700, 1800 y 1900 no fueron bisiestos; en cambio el año 1600 y el 2000 sí lo fueron.

Aquellos años contados de acuerdo a la Era Cristiana tienen su origen numérico en el año 1; este y los años subsecuentes se nombran después de Cristo (d. C.) y los precedentes como antes de Cristo (a.C.). En nuestros días, el calendario adoptado por la ría de los países del mundo es el Calendario Gregoriano, instituido por el Papa Gregorio XIII en 1582. En aquel año introdujo la corrección al calendario Juliano en 10 días, al decretar que al día 4 de le seguiría el 15 de .

En Astronomía, con el propósito de manejar los años numéricamente, el año 1 a.C. se define como el año cero. Los años contados antes de la era cristiana serán negativos, con la regla de restar uno al número del año, y el resultado escribirlo sin el sufijo a.C., anteponiendo el signo menos.

Como ejemplos: el año 2 a.C. será -1 en la notación astronómica; el año 23 a.C. será el -22, el año 115 a.C. será el -114, etc. Para los años posteriores a la era cristiana, simplemente se quita el sufijo d.C. y se tendrá la notación astronómica. Con esta representación se pueden manejar numéricamente los años y se puede obtener fácilmente, de acuerdo con el procedimiento ya mencionado, la secuencia de años bisiestos en cualquier época.

En la región geográfica comprendida entre el occidente de la República Mexicana hasta las que se encuentran entre las Repúblicas de Nicaragua y Costa Rica en centro América, a la

que se da el nombre de Mesoamérica, florecieron las culturas americanas desarrolladas por los huicholes, mexicas, huastecos, zapotecos, mayas, olmecas, etc. En ésta región de América se desarrolló un sistema de dos calendarios con los que se contaban, independientemente, intervalos de 365 y 260 días. El primer intervalo se daba mediante la combinación de 18 meses de 20 días, más cinco días adicionales con los que se completaba la cuenta; evidentemente se reproduce el ciclo anual del Sol. El segundo se obtenía mediante la combinación de 13 meses de 20 días, del cual se desconoce una contraparte en ciclos astronómicos. Hasta el momento se conoce con certeza por la existencia de los códices, el calendario mexica, maya y zapoteca, aunque existen evidencias de la calendárica olmeca, teotihuacana y otras. Entre las épocas más antiguas de esta calendárica, se encuentra la referida por la Estela 12 de Monte alban, para el año -591. Como resultado del estudio del calendario maya, se ha inferido la existencia de una fecha Era que corresponde al 13 de de -3112. Finalmente en base a estudios etnográficos, se ha detectado el uso actual de esta calendárica en las regiones Mixe de Oaxaca y la Maya entre México y Guatemala.

Día Juliano

Sistema de numeración sucesiva de días, establecido arbitrariamente para que todas las fechas históricas tengan un número progresivo. Así el día juliano queda definido como el número de días solares medios, transcurridos desde el 1 de de -4712, a partir del medio día del meridiano de Greenwich.

En la tabla se dan para cada mes, grupos de tres columnas; el número del día en la primera; en la segunda, el nombre del día y en la tercera el día juliano correspondiente al mediodía del meridiano 90°W.G.

Eras, ciclos cronológicos, cómputo, fiestas y aniversarios

Las Eras son épocas definidas por algún suceso cultural de importancia, las cuales referimos aquí al calendario gregoriano. Los ciclos cronológicos y el cómputo son reglas eclesiásticas que ordenan las celebraciones religiosas. Se rigen por los ciclos "solar", "número de oro" e "indicción romana", equivalentes a 28, 19 y 15 años respectivamente. La pascua corresponde al primer domingo, en el calendario gregoriano, después de la Luna Llena tabular que ocurre después del equinoccio vernal tabular (21 de). La Luna Llena tabular o eclesiástica, se basa en el ciclo Metónico de 235 meses sinódicos.

En la tabla de fiestas y aniversarios se dan las fechas de algunos acontecimientos históricos de importancia en la República Mexicana. También se dan algunas fechas de las celebraciones religiosas importantes de diferentes grupos sociales del País.

Estaciones del año

Se dan los instantes (mes, día, hora y minuto) en los que el Sol inicia su recorrido a través de cada una de las Constelaciones del Zodíaco. Señalamos los intervalos trimestrales de las estaciones del año y las longitudes eclípticas que delimitan cada constelación zodiacal. La primavera se inicia en , en el instante en que ocurre el equinoccio del Nodo Ascendente; el Verano en , en el instante en que ocurre el Solsticio; el Otoño en , en el instante en que ocurre el equinoccio del Nodo Descendente; y el Invierno que se inicia en , en el instante del Solsticio.

Nomenclatura de estrellas

Se dan los nombres propios de algunas estrellas, la extensión de la clasificación Bayer, y su correspondiente número secuencial del Bright Star Catalog. Conviene señalar que dicha clasificación fue desarrollada por el bávaro John Bayer (1572-1631), cuando publicó su atlas Uranometría en el año de 1603. De acuerdo a los modos de clasificación que él conocía, dio un nombre a las estrellas de acuerdo a seis órdenes de magnitud entre el brillo relativo de las estrellas, para cada constelación. Así a las estrellas más brillantes les asignó una letra griega, además del nombre de la constelación, de acuerdo al mencionado brillo y dependiendo de su posición dentro del grupo de estrellas.

Clasificación espectral de las estrellas

Clase espectral	Color	Temperatura superficial °K	Carácter
O	Blanco-azul	35 000	Líneas de helio ionizado, nitrógeno, oxígeno e hidrógeno.
B	Blanco-azul	20 000	Líneas de helio neutro.
A	Blanca	10 000	Líneas intensas de hidrógeno, no tiene helio.
F	Blanco-amarillo	7 000	Líneas intensas de calcio y débiles de hidrógeno
G	Amarilla	6 000	Líneas débiles de hidrógeno y líneas intensas de metales. La clase espectral de nuestro Sol es G2V.
K	Naranja	4 000 a 4 700	Espectro muy complejo con líneas de metales.
M	Roja	2 500 a 3 000	Espectro muy complejo con líneas intensas de metales y anchas bandas moleculares, en especial de óxido de titanio.
N y R	Rojo intenso Roja	2 500	Con bandas espectrales de compuestos de carbón. Semejantes a las N, con bandas de óxido de zirconio, y líneas de emisión del hidrógeno.
W	Azul	50 000	Muestran emisión debido a la expansión de sus capas externas y atmósferas muy turbulentas.

Subclase

Ia	supergigante brillante
Ib	supergigante poco luminosa
II	gigante brillante
III	gigante normal
IV	subgigante
V	secuencia principal
VI	subenana

Catálogo Messier

Es una selección de objetos astronómicos brillantes y difusos, creado por Charles Messier, quien pretendía identificarlos plenamente, para evitar confundirlos con los cometas. Messier era conocido por sus observaciones astronómicas en la búsqueda de este tipo de objetos, actividad que desarrolló desde fines del siglo XVIII, hasta su muerte en 1817, llegando a descubrir trece cometas. Los primeros ochenta objetos (del M1 al M80) fueron clasificados por el propio Messier.

Entre los elementos del catálogo se pueden distinguir objetos que pertenecen a nuestra Galaxia, y los que no, son llamados extragalácticos. Como parte de la Galaxia se encuentran los cúmulos abiertos (ca), que son grupos de unos cientos de estrellas ligados gravitatoriamente; cúmulos globulares o galácticos (cg), son conjuntos de cientos de miles de estrellas; remanentes de supernovas (rsn), so restos de estrellas cuyos procesos evolutivos terminan como supernovas; nebulosas planetarias (np), son estrellas cuyos procesos evolutivos terminan con la eyección de materia a velocidades moderadas; nebulosas de reflexión (nr), son aquellas nubes de material interestelar que reflejan la luz de las estrellas vecinas; y nebulosas de emisión (ne), son aquellas nubes que al estar sometidas a la radiación de estrellas muy caliente, ionizan el material interestelar del que están formadas.

Los objetos extragalácticos del catálogo son galaxias del tipo elíptico (E), espirales (S), o espirales barradas (SB).

Eventos astronómicos

Lluvias de estrellas. Son restos de cometas que al penetrar la atmósfera terrestre, se disuelven en ella dejando una estela luminosa comúnmente conocida como estrella fugaz. Como se trata de enjambres de materiales muy pequeños que inciden sobre la Tierra con trayectorias casi paralelas, las estrellas fugaces parecen surgir del mismo punto en la bóveda celeste, llamado radiante. En esta sección se dan las principales lluvias de estrellas, cuyos nombres se asocian a la constelación en la que se encuentra el radiante;

los días en que se pueden observar; y el número promedio de estrellas fugaces por hora.

Crepúsculos, salidas y puestas del sol y de la luna. Los crepúsculos, salidas y puestas del sol, son eventos astronómicos locales que dependen de la latitud del lugar de observación. La salida o puesta del sol está definida para el instante en el cual el centro del Sol se encuentra a 0.5° bajo el horizonte del observador, de tal manera que considerando la refracción y el semidiámetro solar, el limbo superior del Sol se encuentra a una altura de 0° sobre el horizonte. Los crepúsculos que se dan en estas tablas, son el astronómico y civil que corresponden a la posición del centro del disco solar, se encuentra bajo el horizonte a 18° y 6° respectivamente.

La hora en que ocurre cada evento está dada en *hora local*; la hora legal se obtiene al sumar a la hora local, la diferencia en horas entre la longitud del lugar de observación y el meridiano horario.

Por ejemplo, evaluemos para el meridiano 90° W. G. la salida del Sol el día 6 de , en un lugar cuya latitud es 30° y longitud $97^\circ 30'$. En la tabla dada para latitud 30° , la salida del Sol (SS) indicada para el 6 de , es 4h 59m.

La diferencia en longitud (DI) será:

$$\Delta\lambda = (97.5^\circ - 90^\circ)/15$$

$\Delta\lambda = 7.5^\circ/15$ donde obtenemos DI = 30 m; así, la hora de la salida del Sol será:

$$T = 4h\ 59m + 30m \quad \text{es decir} \quad T = 5h\ 29m.$$

Hora en la República Mexicana (Hora Legal en México)

La hora legal se adoptó en la República Mexicana el 1 de de 1922, actualmente se tienen cuatro husos horarios de referencia, los meridianos 75° , 90° , 105° y 120° al W. G. El 13 de de 1998 se modificó en México el horario de Verano, decretándose los cuatro husos horarios para la República Mexicana.

Los husos horarios en el mundo (ver mapa de zonas horarias), son franjas de 15° centradas en el meridiano horario de referencia, el meridiano de la ciudad de Greenwich, Inglaterra se ha definido como el meridiano 0° . Los meridianos se miden a partir del meridiano de Greenwich al Este o al Oeste y se escriben las siglas E.G. y W. G. precediéndolas el valor numérico de la longitud geográfica. También con el propósito de manejar numéricamente, los valores de las longitudes geográficas serán positivos para las longitudes medidas al Este de Greenwich y negativos para los que se determinan al Oeste. Por ejemplo el meridiano 90° W.G. se escribe numéricamente como -90° . Los meridianos horarios hacia el Este o al Oeste son: 15° , 30° , 45° , 60° , 75° , 90° , 105° , 120° , 135° , 150° , 165° . Al meridiano 180° se le llama Línea Internacional del Tiempo.

El tiempo referido al meridiano de Greenwich o simplemente meridiano 0° , es llamado Tiempo Universal. Los husos horarios en que se divide la Tierra son adaptados por los países según sus propias necesidades, esto se puede observar en el mapa de zonas horarias, donde las franjas de los husos horarios son modificadas por accidentes orográficos o hidrográficos o bien por las fronteras entre países vecinos o por límites entre sus propias divisiones políticas. La hora así definida es llamada también hora legal o civil. En algunos países, según sea la época del año, se suele modificar los horarios legales que les corresponden, por horarios llamados de Verano o Invierno, con el propósito de aprovechar mejor la iluminación de la luz solar.

Anuario del Observatorio Astronómico Nacional,

calculado y editado por el Instituto
de Astronomía de la UNAM,
se terminó la edición
en el mes de diciembre de 2023,
en los talleres de Impretei S.A. de C.V.,
Almería No. 17, Col. Postal,
Ciudad de México, C.P. 03410,
Tel. 56 96 25 03,
impreteisa@prodigy.net.mx

En su composición se utilizaron
tipos Bookman Old Style.

MAPA DE ESTRELLAS 2024

