ANUARIO DEL OBSERVATORIO ASTRONÓMICO NACIONAL

Edición CXL

2021

INSTITUTO DE ASTRONOMÍA

UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

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Ciudad Universitaria, 04510. Ciudad de México.
Instituto de Astronomía
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Prefacio, 2021

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 90º al oeste del meridiano efemérico de Greenwich, y la diferencia entre el tiempo de las efemérides y el Universal se estima en $\Delta T = 71.0s$. 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 las 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 Geomagnetic 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 asigandos en el Bright Star Catalog de la Universidad de Yale (NBSC). En la tabla de posiciones medias se presentan las coordenadas ascensión recta en unidades (h, m, s), y declinación (º, ‘, “), y en decimales de grado (º). Debemos señalar que en el futuro próximo las tablas de efemérides se darán en decimales de grado.

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.

En esta edición se ha incluído la tabla de Pasos cenitales del Sol para algunas Poblaciones de la República Méxicana.

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Día Juliano, 2021

A las 0^h del meridiano 90º W.G.

d	ds	dj
Enero		
1	vie	2459215.75
2	sab	2459216.75
3	dom	2459217.75
4	lun	2459218.75
5	mar	2459219.75
6	mie	2459220.75
7	jue	2459221.75
8	vie	2459222.75
9	sab	2459223.75
10	dom	2459224.75
11	lun	2459225.75
12	mar	2459226.75
13	mie	2459227.75
14	jue	2459228.75
15	vie	2459229.75
16	sab	2459230.75
17	dom	2459231.75
18	lun	2459232.75
19	mar	2459233.75
20	mie	2459234.75
21	jue	2459235.75
22	vie	2459236.75
23	sab	2459237.75
24	dom	2459238.75
25	lun	2459239.75
26	mar	2459240.75
27	mie	2459241.75
28	jue	2459242.75
29	vie	2459243.75
30	sab	2459244.75
31	dom	2459245.75
Febrero		
1	lun	2459246.75
2	mar	2459247.75
3	mie	2459248.75
4	jue	2459249.75
5	vie	2459250.75
6	sab	2459251.75
7	dom	2459252.75
8	lun	2459253.75
9	mar	2459254.75
10	mie	2459255.75
11	jue	2459256.75
12	vie	2459257.75
13	sab	2459258.75
14	dom	2459259.75
15	lun	2459260.75
16	mar	2459261.75
17	mie	2459262.75
18	jue	2459263.75
19	vie	2459264.75
20	sab	2459265.75
21	dom	2459266.75
22	lun	2459267.75
23	mar	2459268.75
24	mie	2459269.75
25	jue	2459270.75
26	vie	2459271.75
27	sab	2459272.75
28	dom	2459273.75
Marzo		
1	lun	2459274.75
2	mar	2459275.75
3	mie	2459276.75
4	jue	2459277.75
5	vie	2459278.75
6	sab	2459279.75
7	dom	2459280.75
8	lun	2459281.75
9	mar	2459282.75
10	mie	2459283.75
11	jue	2459284.75
12	vie	2459285.75
13	sab	2459286.75
14	dom	2459287.75
15	lun	2459288.75
16	mar	2459289.75
17	mie	2459290.75
18	jue	2459291.75
19	vie	2459292.75
20	sab	2459293.75
21	dom	2459294.75
22	lun	2459295.75
23	mar	2459296.75
24	mie	2459297.75
25	jue	2459298.75
26	vie	2459299.75
27	sab	2459300.75
28	dom	2459301.75
29	lun	2459302.75
30	mar	2459303.75
31	mie	2459304.75
Abril		
1	jue	2459305.75
2	vie	2459306.75
3	sab	2459307.75
4	dom	2459308.75
5	lun	2459309.75
6	mar	2459310.75
7	mie	2459311.75
8	jue	2459312.75
9	vie	2459313.75
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12	lun	2459316.75
13	mar	2459317.75
14	mie	2459318.75
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16	vie	2459320.75
17	sab	2459321.75
18	dom	2459322.75
19	lun	2459323.75
20	mar	2459324.75
21	mie	2459325.75
22	jue	2459326.75
23	vie	2459327.75
24	sab	2459328.75
25	dom	2459329.75
26	lun	2459330.75
27	mar	2459331.75
28	mie	2459332.75
29	jue	2459333.75
30	vie	2459334.75
Mayo		
1	sab	2459335.75
2	dom	2459336.75
3	lun	2459337.75
4	mar	2459338.75
5	mie	2459339.75
6	jue	2459340.75
7	vie	2459341.75
8	sab	2459342.75
9	dom	2459343.75
10	lun	2459344.75
11	mar	2459345.75
12	mie	2459346.75
13	jue	2459347.75
14	vie	2459348.75
15	sab	2459349.75
16	dom	2459350.75
17	lun	2459351.75
18	mar	2459352.75
19	mie	2459353.75
20	jue	2459354.75
21	vie	2459355.75
22	sab	2459356.75
23	dom	2459357.75
24	lun	2459358.75
25	mar	2459359.75
26	mie	2459360.75
27	jue	2459361.75
28	vie	2459362.75
29	sab	2459363.75
30	dom	2459364.75
31	lun	2459365.75
Junio		
1	mar	2459366.75
2	mie	2459367.75
3	jue	2459368.75
4	vie	2459369.75
5	sab	2459370.75
6	dom	2459371.75
7	lun	2459372.75
8	mar	2459373.75
9	mie	2459374.75
10	jue	2459375.75
11	vie	2459376.75
12	sab	2459377.75
13	dom	2459378.75
14	lun	2459379.75
15	mar	2459380.75
16	mie	2459381.75
17	jue	2459382.75
18	vie	2459383.75
19	sab	2459384.75
20	dom	2459385.75
21	lun	2459386.75
22	mar	2459387.75
23	mie	2459388.75
24	jue	2459389.75
25	vie	2459390.75
26	sab	2459391.75
27	dom	2459392.75
28	lun	2459393.75
29	mar	2459394.75
30	mie	2459395.75
Julio		
1	jue	2459396.75
2	vie	2459397.75
3	sab	2459398.75
4	dom	2459399.75
5	lun	2459400.75
6	mar	2459401.75
7	mie	2459402.75
8	jue	2459403.75
9	vie	2459404.75
10	sab	2459405.75
11	dom	2459406.75
12	lun	2459407.75
13	mar	2459408.75
14	mie	2459409.75
15	jue	2459410.75
16	vie	2459411.75
17	sab	2459412.75
18	dom	2459413.75
19	lun	2459414.75
20	mar	2459415.75

d	ds	dj
21	mie	2459416.75
22	jue	2459417.75
23	vie	2459418.75
24	sab	2459419.75
25	dom	2459420.75
26	lun	2459421.75
27	mar	2459422.75
28	mie	2459423.75
29	jue	2459424.75
30	vie	2459425.75
31	sab	2459426.75
Agosto		
1	dom	2459427.75
2	lun	2459428.75
3	mar	2459429.75
4	mie	2459430.75
5	jue	2459431.75
6	vie	2459432.75
7	sab	2459433.75
8	dom	2459434.75
9	lun	2459435.75
10	mar	2459436.75
11	mie	2459437.75
12	jue	2459438.75
13	vie	2459439.75
14	sab	2459440.75
15	dom	2459441.75
16	lun	2459442.75
17	mar	2459443.75
18	mie	2459444.75
19	jue	2459445.75
20	vie	2459446.75
21	sab	2459447.75
22	dom	2459448.75
23	lun	2459449.75
24	mar	2459450.75
25	mie	2459451.75
26	jue	2459452.75
27	vie	2459453.75
28	sab	2459454.75
29	dom	2459455.75
30	lun	2459456.75
31	mar	2459457.75

d	ds	dj
Septiembre		
1	mie	2459458.75
2	jue	2459459.75
3	vie	2459460.75
4	sab	2459461.75
5	dom	2459462.75
6	lun	2459463.75
7	mar	2459464.75
8	mie	2459465.75
9	jue	2459466.75
10	vie	2459467.75
11	sab	2459468.75
12	dom	2459469.75
13	lun	2459470.75
14	mar	2459471.75
15	mie	2459472.75
16	jue	2459473.75
17	vie	2459474.75
18	sab	2459475.75
19	dom	2459476.75
20	lun	2459477.75
21	mar	2459478.75
22	mie	2459479.75
23	jue	2459480.75
24	vie	2459481.75
25	sab	2459482.75
26	dom	2459483.75
27	lun	2459484.75
28	mar	2459485.75
29	mie	2459486.75
30	jue	2459487.75
Octubre		
1	vie	2459488.75
2	sab	2459489.75
3	dom	2459490.75
4	lun	2459491.75
5	mar	2459492.75
6	mie	2459493.75
7	jue	2459494.75
8	vie	2459495.75
9	sab	2459496.75
10	dom	2459497.75
11	lun	2459498.75

d	ds	dj
12	mar	2459499.75
13	mie	2459500.75
14	jue	2459501.75
15	vie	2459502.75
16	sab	2459503.75
17	dom	2459504.75
18	lun	2459505.75
19	mar	2459506.75
20	mie	2459507.75
21	jue	2459508.75
22	vie	2459509.75
23	sab	2459510.75
24	dom	2459511.75
25	lun	2459512.75
26	mar	2459513.75
27	mie	2459514.75
28	jue	2459515.75
29	vie	2459516.75
30	sab	2459517.75
31	dom	2459518.75
Noviembre		
1	lun	2459519.75
2	mar	2459520.75
3	mie	2459521.75
4	jue	2459522.75
5	vie	2459523.75
6	sab	2459524.75
7	dom	2459525.75
8	lun	2459526.75
9	mar	2459527.75
10	mie	2459528.75
11	jue	2459529.75
12	vie	2459530.75
13	sab	2459531.75
14	dom	2459532.75
15	lun	2459533.75
16	mar	2459534.75
17	mie	2459535.75
18	jue	2459536.75
19	vie	2459537.75
20	sab	2459538.75
21	dom	2459539.75
22	lun	2459540.75

d	ds	dj
23	mar	2459541.75
24	mie	2459542.75
25	jue	2459543.75
26	vie	2459544.75
27	sab	2459545.75
28	dom	2459546.75
29	lun	2459547.75
30	mar	2459548.75
Diciembre		
1	mie	2459549.75
2	jue	2459550.75
3	vie	2459551.75
4	sab	2459552.75
5	dom	2459553.75
6	lun	2459554.75
7	mar	2459555.75
8	mie	2459556.75
9	jue	2459557.75
10	vie	2459558.75
11	sab	2459559.75
12	dom	2459560.75
13	lun	2459561.75
14	mar	2459562.75
15	mie	2459563.75
16	jue	2459564.75
17	vie	2459565.75
18	sab	2459566.75
19	dom	2459567.75
20	lun	2459568.75
21	mar	2459569.75
22	mie	2459570.75
23	jue	2459571.75
24	vie	2459572.75
25	sab	2459573.75
26	dom	2459574.75
27	lun	2459575.75
28	mar	2459576.75
29	mie	2459577.75
30	jue	2459578.75
31	vie	2459579.75

Eras y ciclos cronológicos: 2021

Cómputo

Letra Dominical C

Epacta 16

Ciclo lunar (Número de Oro) VIII

Ciclo solar 14

Indicción Romana 14

Eras

El año 2021, es el vigésimo primero del siglo XXI de la era Cristiana.

El 14 de enero del año 2021, corresponde al 1 de enero del año 6734 del Período Juliano.

El 1 de enero del año 2021 del Calendario Juliano, corresponde al 14 de enero.

Año	Era	Inicia
2774	Romana	enero 14
2681	Japonesa	enero 1
5782	Judía	septiembre 6
2333	Griega	septiembre 14
1443	Hégira	agosto 9
7530	Bizantina	septiembre 14
	China	febrero 12

Fiestas y aniversarios para el año 2021

Año Nuevo	viernes 1 de enero
Epifanía	miércoles 6 de enero
Septuagésima	domingo 31 de enero
Proclamación de la Constitución de 1917	viernes 5 de febrero
Quinquagésima	domingo 14 de febrero
Carnaval	martes 16 de febrero
Miércoles de ceniza	miércoles 17 de febrero
Día de la Bandera	miércoles 24 de febrero
Aniversario del Natalicio de Benito Juárez	domingo 21de marzo
Domingo de Ramos	domingo 28 de marzo
Viernes Santo	viernes 2 de abril
Pascua	domingo 4 de abril
Primer día de Ramadán	martes 13 de abril
Día del Trabajo	sábado 1 de mayo
Aniversario de la Batalla de Puebla	miércoles 5 de mayo
Ascensión	jueves 13 de mayo
Pentecostés	domingo 23 de mayo
Trinidad	domingo 30 de mayo
Corpus Christi	jueves 3 de junio
Domingo de Corpus	domingo 6 de junio
San Pedro y San Pablo	martes 29 de junio
Aniversario de la Muerte de Benito Juárez	domingo 18 de julio
Aniversario de la Muerte de Miguel Hidalgo	viernes 30 de julio
Año nuevo Islámico	martes 10 de agosto
Año Nuevo Judío	martes 7 de septiembre
Aniversario de la Independencia de México	jueves 16 de septiembre
Yom Kipur	jueves 16 de septiembre
Día de la Raza	martes 12 de octubre
Conmemoración de los Difuntos	martes 2 de noviembre
Aniversario de la Revolución Mexicana	sábado 20 de noviembre
Adviento	domingo 28 de noviembre
Navidad	sábado 25 de diciembre

Estaciones del año, 2021

Hora del meridiano 90º W.G.

mes	día	h	m	longitud λ(º)	Constelación
Invierno					
enero	18	2	31	300	Capricornio
febrero	16	14	1	330	Acuario
Primavera					
marzo	20	3	37	0	Piscis
abril	21	20	11	30	Aries
mayo	22	17	45	60	Tauro
Verano					
junio	20	21	32	90	Geminis
julio	20	3	54	120	Cáncer
agosto	20	9	11	150	Leo
Otoño					
septiembre	22	13	21	180	Virgo
octubre	25	3	24	210	Libra
noviembre	23	22	11	240	Escorpión
Invierno					
diciembre	21	9	59	270	Sagitario

Hora sideral, 2021

A las 0^h del meridiano 90° W.G.

d	dj	h	m	s
Ene				
1	2459215.75	6	44	26.65
2	2459216.75	6	48	23.21
3	2459217.75	6	52	19.77
4	2459218.75	6	56	16.32
5	2459219.75	7	0	12.88
6	2459220.75	7	4	9.42
7	2459221.75	7	8	5.97
8	2459222.75	7	12	2.53
9	2459223.75	7	15	59.09
10	2459224.75	7	19	55.65
11	2459225.75	7	23	52.22
12	2459226.75	7	27	48.79
13	2459227.75	7	31	45.35
14	2459228.75	7	35	41.91
15	2459229.75	7	39	38.47
16	2459230.75	7	43	35.03
17	2459231.75	7	47	31.58
18	2459232.75	7	51	28.13
19	2459233.75	7	55	24.68
20	2459234.75	7	59	21.23
21	2459235.75	8	3	17.78
22	2459236.75	8	7	14.34
23	2459237.75	8	11	10.90
24	2459238.75	8	15	7.46
25	2459239.75	8	19	4.02
26	2459240.75	8	23	0.58
27	2459241.75	8	26	57.14
28	2459242.75	8	30	53.70
29	2459243.75	8	34	50.26
30	2459244.75	8	38	46.82
31	2459245.75	8	42	43.37
Feb				
1	2459246.75	8	46	39.92
2	2459247.75	8	50	36.47
3	2459248.75	8	54	33.02
4	2459249.75	8	58	29.57
5	2459250.75	9	2	26.13
6	2459251.75	9	6	22.68
7	2459252.75	9	10	19.25
8	2459253.75	9	14	15.81
9	2459254.75	9	18	12.37
10	2459255.75	9	22	8.93
11	2459256.75	9	26	5.49
12	2459257.75	9	30	2.04
13	2459258.75	9	33	58.59
14	2459259.75	9	37	55.14
15	2459260.75	9	41	51.69
16	2459261.75	9	45	48.24
17	2459262.75	9	49	44.79
18	2459263.75	9	53	41.34
19	2459264.75	9	57	37.89
20	2459265.75	10	1	34.45
21	2459266.75	10	5	31.01
22	2459267.75	10	9	27.57
23	2459268.75	10	13	24.12
24	2459269.75	10	17	20.69
25	2459270.75	10	21	17.24
26	2459271.75	10	25	13.80
27	2459272.75	10	29	10.35
28	2459273.75	10	33	6.90
Mar				
1	2459274.75	10	37	3.45
2	2459275.75	10	40	59.98
3	2459276.75	10	44	56.53
4	2459277.75	10	48	53.09
5	2459278.75	10	52	49.65
6	2459279.75	10	56	46.21
7	2459280.75	11	0	42.77
8	2459281.75	11	4	39.33
9	2459282.75	11	8	35.89
10	2459283.75	11	12	32.44
11	2459284.75	11	16	29.00
12	2459285.75	11	20	25.55
13	2459286.75	11	24	22.10
14	2459287.75	11	28	18.64
15	2459288.75	11	32	15.19
16	2459289.75	11	36	11.74
17	2459290.75	11	40	8.29
18	2459291.75	11	44	4.83
19	2459292.75	11	48	1.39
20	2459293.75	11	51	57.94
21	2459294.75	11	55	54.50
22	2459295.75	11	59	51.06
23	2459296.75	12	3	47.62
24	2459297.75	12	7	44.18
25	2459298.75	12	11	40.73
26	2459299.75	12	15	37.28
27	2459300.75	12	19	33.83
28	2459301.75	12	23	30.37
29	2459302.75	12	27	26.92
30	2459303.75	12	31	23.47
31	2459304.75	12	35	20.02
Abr				
1	2459305.75	12	39	16.58
2	2459306.75	12	43	13.14
3	2459307.75	12	47	9.70
4	2459308.75	12	51	6.25
5	2459309.75	12	55	2.82
6	2459310.75	12	58	59.37
7	2459311.75	13	2	55.93
8	2459312.75	13	6	52.49
9	2459313.75	13	10	49.03
10	2459314.75	13	14	45.57
11	2459315.75	13	18	42.12
12	2459316.75	13	22	38.67
13	2459317.75	13	26	35.22
14	2459318.75	13	30	31.77
15	2459319.75	13	34	28.33
16	2459320.75	13	38	24.88
17	2459321.75	13	42	21.43
18	2459322.75	13	46	18.00
19	2459323.75	13	50	14.56
20	2459324.75	13	54	11.11
21	2459325.75	13	58	7.67
22	2459326.75	14	2	4.23
23	2459327.75	14	6	0.78
24	2459328.75	14	9	57.33
25	2459329.75	14	13	53.88
26	2459330.75	14	17	50.43
27	2459331.75	14	21	46.98
28	2459332.75	14	25	43.53
29	2459333.75	14	29	40.09
30	2459334.75	14	33	36.66
May				
1	2459335.75	14	37	33.22
2	2459336.75	14	41	29.78
3	2459337.75	14	45	26.34
4	2459338.75	14	49	22.90
5	2459339.75	14	53	19.45
6	2459340.75	14	57	16.01
7	2459341.75	15	1	12.56
8	2459342.75	15	5	9.11
9	2459343.75	15	9	5.66
10	2459344.75	15	13	2.20
11	2459345.75	15	16	58.76
12	2459346.75	15	20	55.31
13	2459347.75	15	24	51.87
14	2459348.75	15	28	48.43
15	2459349.75	15	32	44.99
16	2459350.75	15	36	41.56
17	2459351.75	15	40	38.12
18	2459352.75	15	44	34.67
19	2459353.75	15	48	31.23
20	2459354.75	15	52	27.79
21	2459355.75	15	56	24.34
22	2459356.75	16	0	20.89
23	2459357.75	16	4	17.44

Hora sideral, 2021

A las 0^h del meridiano 90° W.G.

d	dj	h	m	s
24	2459358.75	16	8	13.99
25	2459359.75	16	12	10.55
26	2459360.75	16	16	7.11
27	2459361.75	16	20	3.67
28	2459362.75	16	24	0.24
29	2459363.75	16	27	56.81
30	2459364.75	16	31	53.37
31	2459365.75	16	35	49.93
Jun				
1	2459366.75	16	39	46.49
2	2459367.75	16	43	43.04
3	2459368.75	16	47	39.59
4	2459369.75	16	51	36.14
5	2459370.75	16	55	32.69
6	2459371.75	16	59	29.25
7	2459372.75	17	3	25.80
8	2459373.75	17	7	22.36
9	2459374.75	17	11	18.92
10	2459375.75	17	15	15.48
11	2459376.75	17	19	12.04
12	2459377.75	17	23	8.60
13	2459378.75	17	27	5.17
14	2459379.75	17	31	1.73
15	2459380.75	17	34	58.29
16	2459381.75	17	38	54.85
17	2459382.75	17	42	51.40
18	2459383.75	17	46	47.95
19	2459384.75	17	50	44.50
20	2459385.75	17	54	41.05
21	2459386.75	17	58	37.61
22	2459387.75	18	2	34.17
23	2459388.75	18	6	30.73
24	2459389.75	18	10	27.30
25	2459390.75	18	14	23.87
26	2459391.75	18	18	20.43
27	2459392.75	18	22	17.00
28	2459393.75	18	26	13.56
29	2459394.75	18	30	10.11
30	2459395.75	18	34	6.66
Jul				
1	2459396.75	18	38	3.22
2	2459397.75	18	41	59.77
3	2459398.75	18	45	56.32
4	2459399.75	18	49	52.87
5	2459400.75	18	53	49.43
6	2459401.75	18	57	45.99
7	2459402.75	19	1	42.55
8	2459403.75	19	5	39.11
9	2459404.75	19	9	35.67
10	2459405.75	19	13	32.24
11	2459406.75	19	17	28.80
12	2459407.75	19	21	25.36
13	2459408.75	19	25	21.91
14	2459409.75	19	29	18.47
15	2459410.75	19	33	15.02
16	2459411.75	19	37	11.57
17	2459412.75	19	41	8.12
18	2459413.75	19	45	4.67
19	2459414.75	19	49	1.23
20	2459415.75	19	52	57.79
21	2459416.75	19	56	54.35
22	2459417.75	20	0	50.92
23	2459418.75	20	4	47.49
24	2459419.75	20	8	44.05
25	2459420.75	20	12	40.61
26	2459421.75	20	16	37.16
27	2459422.75	20	20	33.72
28	2459423.75	20	24	30.27
29	2459424.75	20	28	26.82
30	2459425.75	20	32	23.37
31	2459426.75	20	36	19.92
Ago				
1	2459427.75	20	40	16.47
2	2459428.75	20	44	13.03
3	2459429.75	20	48	9.58
4	2459430.75	20	52	6.15
5	2459431.75	20	56	2.71
6	2459432.75	20	59	59.27
7	2459433.75	21	3	55.83
8	2459434.75	21	7	52.39
9	2459435.75	21	11	48.94
10	2459436.75	21	15	45.49
11	2459437.75	21	19	42.04
12	2459438.75	21	23	38.59
13	2459439.75	21	27	35.14
14	2459440.75	21	31	31.69
15	2459441.75	21	35	28.24
16	2459442.75	21	39	24.80
17	2459443.75	21	43	21.36
18	2459444.75	21	47	17.92
19	2459445.75	21	51	14.49
20	2459446.75	21	55	11.05
21	2459447.75	21	59	7.61
22	2459448.75	22	3	4.16
23	2459449.75	22	7	0.71
24	2459450.75	22	10	57.26
25	2459451.75	22	14	53.81
26	2459452.75	22	18	50.36
27	2459453.75	22	22	46.90
28	2459454.75	22	26	43.46
29	2459455.75	22	30	40.01
30	2459456.75	22	34	36.56
31	2459457.75	22	38	33.12
Sep				
1	2459458.75	22	42	29.68
2	2459459.75	22	46	26.24
3	2459460.75	22	50	22.80
4	2459461.75	22	54	19.35
5	2459462.75	22	58	15.91
6	2459463.75	23	2	12.46
7	2459464.75	23	6	9.01
8	2459465.75	23	10	5.55
9	2459466.75	23	14	2.10
10	2459467.75	23	17	58.65
11	2459468.75	23	21	55.20
12	2459469.75	23	25	51.76
13	2459470.75	23	29	48.31
14	2459471.75	23	33	44.87
15	2459472.75	23	37	41.44
16	2459473.75	23	41	38.00
17	2459474.75	23	45	34.55
18	2459475.75	23	49	31.11
19	2459476.75	23	53	27.66
20	2459477.75	23	57	24.21
21	2459478.75	0	1	20.75
22	2459479.75	0	5	17.30
23	2459480.75	0	9	13.85
24	2459481.75	0	13	10.40
25	2459482.75	0	17	6.95
26	2459483.75	0	21	3.50
27	2459484.75	0	25	0.06
28	2459485.75	0	28	56.61
29	2459486.75	0	32	53.17
30	2459487.75	0	36	49.73
Oct				
1	2459488.75	0	40	46.29
2	2459489.75	0	44	42.84
3	2459490.75	0	48	39.40
4	2459491.75	0	52	35.94
5	2459492.75	0	56	32.49
6	2459493.75	1	0	29.04
7	2459494.75	1	4	25.59
8	2459495.75	1	8	22.14
9	2459496.75	1	12	18.69
10	2459497.75	1	16	15.25
11	2459498.75	1	20	11.81
12	2459499.75	1	24	8.37
13	2459500.75	1	28	4.93

Hora sideral, 2021

A las 0^h del meridiano 90° W.G.

d	dj	h	m	s
14	2459501.75	1	32	1.49
15	2459502.75	1	35	58.05
16	2459503.75	1	39	54.60
17	2459504.75	1	43	51.15
18	2459505.75	1	47	47.70
19	2459506.75	1	51	44.24
20	2459507.75	1	55	40.79
21	2459508.75	1	59	37.34
22	2459509.75	2	3	33.90
23	2459510.75	2	7	30.45
24	2459511.75	2	11	27.01
25	2459512.75	2	15	23.56
26	2459513.75	2	19	20.12
27	2459514.75	2	23	16.68
28	2459515.75	2	27	13.24
29	2459516.75	2	31	9.80
30	2459517.75	2	35	6.35
31	2459518.75	2	39	2.91
Nov				
1	2459519.75	2	42	59.46
2	2459520.75	2	46	56.00
3	2459521.75	2	50	52.55
4	2459522.75	2	54	49.10
5	2459523.75	2	58	45.66
6	2459524.75	3	2	42.22
7	2459525.75	3	6	38.78
8	2459526.75	3	10	35.35
9	2459527.75	3	14	31.91
10	2459528.75	3	18	28.48
11	2459529.75	3	22	25.03
12	2459530.75	3	26	21.59
13	2459531.75	3	30	18.14
14	2459532.75	3	34	14.70
15	2459533.75	3	38	11.24
16	2459534.75	3	42	7.79
17	2459535.75	3	46	4.34
18	2459536.75	3	50	0.90
19	2459537.75	3	53	57.45
20	2459538.75	3	57	54.01
21	2459539.75	4	1	50.58
22	2459540.75	4	5	47.14
23	2459541.75	4	9	43.70
24	2459542.75	4	13	40.26
25	2459543.75	4	17	36.82
26	2459544.75	4	21	33.38
27	2459545.75	4	25	29.93
28	2459546.75	4	29	26.49
29	2459547.75	4	33	23.04
30	2459548.75	4	37	19.59
Dic				
1	2459549.75	4	41	16.14
2	2459550.75	4	45	12.70
3	2459551.75	4	49	9.26
4	2459552.75	4	53	5.82
5	2459553.75	4	57	2.39
6	2459554.75	5	0	58.96
7	2459555.75	5	4	55.53
8	2459556.75	5	8	52.09
9	2459557.75	5	12	48.65
10	2459558.75	5	16	45.20
11	2459559.75	5	20	41.76
12	2459560.75	5	24	38.31
13	2459561.75	5	28	34.86
14	2459562.75	5	32	31.42
15	2459563.75	5	36	27.97
16	2459564.75	5	40	24.52
17	2459565.75	5	44	21.09
18	2459566.75	5	48	17.65
19	2459567.75	5	52	14.21
20	2459568.75	5	56	10.78
21	2459569.75	6	0	7.34
22	2459570.75	6	4	3.90
23	2459571.75	6	8	0.46
24	2459572.75	6	11	57.02
25	2459573.75	6	15	53.57
26	2459574.75	6	19	50.13
27	2459575.75	6	23	46.68
28	2459576.75	6	27	43.23
29	2459577.75	6	31	39.78
30	2459578.75	6	35	36.34
31	2459579.75	6	39	32.90

Sol, 2021

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
ene	1	2459215.75	18	47	59.79	11.0	-22	58	42.25	13.2	0.98326	12	3	33.2
ene	2	2459216.75	18	52	24.34	11.0	-22	53	25.18	14.3	0.98326	12	4	1.1
ene	3	2459217.75	18	56	48.56	11.0	-22	47	40.80	15.5	0.98326	12	4	28.8
ene	4	2459218.75	19	1	12.40	11.0	-22	41	29.27	16.6	0.98327	12	4	56.1
ene	5	2459219.75	19	5	35.84	11.0	-22	34	50.74	17.7	0.98328	12	5	22.9
ene	6	2459220.75	19	9	58.86	10.9	-22	27	45.40	18.8	0.98330	12	5	49.5
ene	7	2459221.75	19	14	21.44	10.9	-22	20	13.44	19.9	0.98332	12	6	15.4
ene	8	2459222.75	19	18	43.55	10.9	-22	12	15.07	21.0	0.98335	12	6	41.1
ene	9	2459223.75	19	23	5.16	10.9	-22	3	50.52	22.1	0.98338	12	7	6.1
ene	10	2459224.75	19	27	26.25	10.9	-21	55	0.04	23.2	0.98342	12	7	30.5
ene	11	2459225.75	19	31	46.78	10.8	-21	45	43.89	24.2	0.98346	12	7	54.6
ene	12	2459226.75	19	36	6.73	10.8	-21	36	2.34	25.3	0.98350	12	8	17.9
ene	13	2459227.75	19	40	26.07	10.8	-21	25	55.67	26.3	0.98355	12	8	40.8
ene	14	2459228.75	19	44	44.77	10.8	-21	15	24.19	27.3	0.98360	12	9	2.9
ene	15	2459229.75	19	49	2.80	10.7	-21	4	28.18	28.3	0.98366	12	9	24.3
ene	16	2459230.75	19	53	20.15	10.7	-20	53	7.95	29.3	0.98372	12	9	45.1
ene	17	2459231.75	19	57	36.78	10.7	-20	41	23.82	30.3	0.98378	12	10	5.2
ene	18	2459232.75	20	1	52.69	10.6	-20	29	16.11	31.3	0.98385	12	10	24.6
ene	19	2459233.75	20	6	7.86	10.6	-20	16	45.17	32.2	0.98392	12	10	43.2
ene	20	2459234.75	20	10	22.28	10.6	-20	3	51.34	33.2	0.98400	12	11	1.1
ene	21	2459235.75	20	14	35.92	10.5	-19	50	34.98	34.1	0.98408	12	11	18.1
ene	22	2459236.75	20	18	48.79	10.5	-19	36	56.46	35.0	0.98416	12	11	34.5
ene	23	2459237.75	20	23	0.87	10.5	-19	22	56.14	35.9	0.98425	12	11	50.0
ene	24	2459238.75	20	27	12.16	10.4	-19	8	34.40	36.8	0.98435	12	12	4.7
ene	25	2459239.75	20	31	22.64	10.4	-18	53	51.62	37.6	0.98445	12	12	18.6
ene	26	2459240.75	20	35	32.32	10.4	-18	38	48.19	38.5	0.98456	12	12	31.7
ene	27	2459241.75	20	39	41.18	10.3	-18	23	24.50	39.3	0.98467	12	12	44.1
ene	28	2459242.75	20	43	49.23	10.3	-18	7	40.94	40.1	0.98479	12	12	55.5
ene	29	2459243.75	20	47	56.47	10.3	-17	51	37.88	40.9	0.98492	12	13	6.2
ene	30	2459244.75	20	52	2.89	10.2	-17	35	15.70	41.7	0.98505	12	13	16.1
ene	31	2459245.75	20	56	8.49	10.2	-17	18	34.79	42.5	0.98519	12	13	25.1
feb	1	2459246.75	21	0	13.29	10.2	-17	1	35.51	43.2	0.98533	12	13	33.4
feb	2	2459247.75	21	4	17.29	10.1	-16	44	18.24	44.0	0.98548	12	13	40.8
feb	3	2459248.75	21	8	20.49	10.1	-16	26	43.36	44.7	0.98563	12	13	47.5
feb	4	2459249.75	21	12	22.90	10.1	-16	8	51.25	45.4	0.98579	12	13	53.3
feb	5	2459250.75	21	16	24.52	10.0	-15	50	42.32	46.1	0.98595	12	13	58.4
feb	6	2459251.75	21	20	25.37	10.0	-15	32	16.96	46.7	0.98612	12	14	2.7
feb	7	2459252.75	21	24	25.44	10.0	-15	13	35.61	47.4	0.98629	12	14	6.2
feb	8	2459253.75	21	28	24.73	9.9	-14	54	38.68	48.0	0.98647	12	14	8.9
feb	9	2459254.75	21	32	23.24	9.9	-14	35	26.60	48.6	0.98664	12	14	10.8
feb	10	2459255.75	21	36	20.99	9.9	-14	15	59.81	49.2	0.98682	12	14	12.1
feb	11	2459256.75	21	40	17.96	9.8	-13	56	18.74	49.8	0.98701	12	14	12.5
feb	12	2459257.75	21	44	14.17	9.8	-13	36	23.82	50.3	0.98719	12	14	12.2
feb	13	2459258.75	21	48	9.61	9.8	-13	16	15.48	50.9	0.98738	12	14	11.0
feb	14	2459259.75	21	52	4.31	9.7	-12	55	54.13	51.4	0.98757	12	14	9.2
feb	15	2459260.75	21	55	58.26	9.7	-12	35	20.23	51.9	0.98776	12	14	6.6

Sol, 2021

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
feb	16	2459261.75	21	59	51.47	9.7	-12	14	34.18	52.4	0.98796	12	14	3.3
feb	17	2459262.75	22	3	43.97	9.7	-11	53	36.42	52.9	0.98816	12	13	59.2
feb	18	2459263.75	22	7	35.76	9.6	-11	32	27.39	53.3	0.98836	12	13	54.5
feb	19	2459264.75	22	11	26.85	9.6	-11	11	7.50	53.8	0.98856	12	13	48.9
feb	20	2459265.75	22	15	17.26	9.6	-10	49	37.18	54.2	0.98877	12	13	42.9
feb	21	2459266.75	22	19	7.00	9.5	-10	27	56.85	54.6	0.98898	12	13	36.0
feb	22	2459267.75	22	22	56.08	9.5	-10	6	6.95	55.0	0.98920	12	13	28.5
feb	23	2459268.75	22	26	44.53	9.5	-9	44	7.87	55.3	0.98941	12	13	20.4
feb	24	2459269.75	22	30	32.37	9.5	-9	22	0.04	55.7	0.98964	12	13	11.7
feb	25	2459270.75	22	34	19.59	9.4	-8	59	43.86	56.0	0.98986	12	13	2.4
feb	26	2459271.75	22	38	6.24	9.4	-8	37	19.73	56.3	0.99009	12	12	52.4
feb	27	2459272.75	22	41	52.32	9.4	-8	14	48.02	56.6	0.99033	12	12	42.0
feb	28	2459273.75	22	45	37.85	9.4	-7	52	9.11	56.9	0.99057	12	12	31.0
mar	1	2459274.75	22	49	22.87	9.4	-7	29	23.37	57.2	0.99081	12	12	19.5
mar	2	2459275.75	22	53	7.40	9.3	-7	6	31.13	57.4	0.99106	12	12	7.4
mar	3	2459276.75	22	56	51.46	9.3	-6	43	32.77	57.7	0.99131	12	11	55.0
mar	4	2459277.75	23	0	35.07	9.3	-6	20	28.63	57.9	0.99157	12	11	42.0
mar	5	2459278.75	23	4	18.26	9.3	-5	57	19.10	58.1	0.99183	12	11	28.7
mar	6	2459279.75	23	8	1.05	9.3	-5	34	4.55	58.3	0.99209	12	11	14.8
mar	7	2459280.75	23	11	43.44	9.3	-5	10	45.38	58.5	0.99235	12	11	0.6
mar	8	2459281.75	23	15	25.47	9.2	-4	47	21.97	58.6	0.99262	12	10	46.2
mar	9	2459282.75	23	19	7.14	9.2	-4	23	54.73	58.8	0.99288	12	10	31.2
mar	10	2459283.75	23	22	48.47	9.2	-4	0	24.04	58.9	0.99315	12	10	16.1
mar	11	2459284.75	23	26	29.48	9.2	-3	36	50.32	59.0	0.99342	12	10	0.5
mar	12	2459285.75	23	30	10.18	9.2	-3	13	13.95	59.1	0.99369	12	9	44.7
mar	13	2459286.75	23	33	50.60	9.2	-2	49	35.33	59.2	0.99396	12	9	28.5
mar	14	2459287.75	23	37	30.74	9.2	-2	25	54.85	59.2	0.99423	12	9	12.1
mar	15	2459288.75	23	41	10.63	9.2	-2	2	12.90	59.3	0.99450	12	8	55.4
mar	16	2459289.75	23	44	50.29	9.1	-1	38	29.86	59.3	0.99477	12	8	38.6
mar	17	2459290.75	23	48	29.73	9.1	-1	14	46.14	59.3	0.99505	12	8	21.4
mar	18	2459291.75	23	52	8.97	9.1	-0	51	2.10	59.3	0.99532	12	8	4.2
mar	19	2459292.75	23	55	48.04	9.1	-0	27	18.15	59.3	0.99559	12	7	46.6
mar	20	2459293.75	23	59	26.94	9.1	-0	3	34.65	59.3	0.99586	12	7	29.0
mar	21	2459294.75	0	3	5.71	9.1	+0	20	8.01	59.2	0.99614	12	7	11.2
mar	22	2459295.75	0	6	44.36	9.1	+0	43	49.46	59.2	0.99641	12	6	53.3
mar	23	2459296.75	0	10	22.90	9.1	+1	7	29.31	59.1	0.99669	12	6	35.3
mar	24	2459297.75	0	14	1.36	9.1	+1	31	7.21	59.0	0.99697	12	6	17.2
mar	25	2459298.75	0	17	39.76	9.1	+1	54	42.79	58.9	0.99725	12	5	59.1
mar	26	2459299.75	0	21	18.12	9.1	+2	18	15.70	58.7	0.99753	12	5	40.8
mar	27	2459300.75	0	24	56.46	9.1	+2	41	45.59	58.6	0.99781	12	5	22.7
mar	28	2459301.75	0	28	34.81	9.1	+3	5	12.13	58.5	0.99810	12	5	4.4
mar	29	2459302.75	0	32	13.19	9.1	+3	28	35.02	58.3	0.99838	12	4	46.3
mar	30	2459303.75	0	35	51.62	9.1	+3	51	53.95	58.1	0.99867	12	4	28.1
mar	31	2459304.75	0	39	30.15	9.1	+4	15	8.62	57.9	0.99896	12	4	10.1
abr	1	2459305.75	0	43	8.78	9.1	+4	38	18.71	57.7	0.99925	12	3	52.2
abr	2	2459306.75	0	46	47.55	9.1	+5	1	23.91	57.5	0.99955	12	3	34.5

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
abr	3	2459307.75	0	50	26.47	9.1	+5	24	23.89	57.3	0.99984	12	3	16.8
abr	4	2459308.75	0	54	5.55	9.1	+5	47	18.30	57.0	1.00014	12	2	59.3
abr	5	2459309.75	0	57	44.83	9.1	+6	10	6.80	56.8	1.00043	12	2	42.0
abr	6	2459310.75	1	1	24.30	9.2	+6	32	49.02	56.5	1.00072	12	2	24.9
abr	7	2459311.75	1	5	4.00	9.2	+6	55	24.62	56.2	1.00102	12	2	8.1
abr	8	2459312.75	1	8	43.93	9.2	+7	17	53.22	55.9	1.00131	12	1	51.4
abr	9	2459313.75	1	12	24.11	9.2	+7	40	14.49	55.6	1.00160	12	1	35.1
abr	10	2459314.75	1	16	4.55	9.2	+8	2	28.05	55.2	1.00189	12	1	19.0
abr	11	2459315.75	1	19	45.28	9.2	+8	24	33.55	54.9	1.00217	12	1	3.2
abr	12	2459316.75	1	23	26.30	9.2	+8	46	30.65	54.5	1.00246	12	0	47.6
abr	13	2459317.75	1	27	7.64	9.2	+9	8	18.97	54.1	1.00274	12	0	32.4
abr	14	2459318.75	1	30	49.29	9.2	+9	29	58.17	53.7	1.00302	12	0	17.5
abr	15	2459319.75	1	34	31.28	9.3	+9	51	27.88	53.3	1.00330	12	0	3.0
abr	16	2459320.75	1	38	13.63	9.3	+10	12	47.76	52.9	1.00358	11	59	48.7
abr	17	2459321.75	1	41	56.33	9.3	+10	33	57.45	52.5	1.00385	11	59	34.9
abr	18	2459322.75	1	45	39.41	9.3	+10	54	56.60	52.0	1.00413	11	59	21.4
abr	19	2459323.75	1	49	22.87	9.3	+11	15	44.86	51.5	1.00440	11	59	8.3
abr	20	2459324.75	1	53	6.73	9.3	+11	36	21.87	51.1	1.00467	11	58	55.6
abr	21	2459325.75	1	56	50.99	9.4	+11	56	47.30	50.6	1.00493	11	58	43.3
abr	22	2459326.75	2	0	35.68	9.4	+12	17	0.80	50.1	1.00520	11	58	31.5
abr	23	2459327.75	2	4	20.79	9.4	+12	37	2.04	49.5	1.00547	11	58	20.0
abr	24	2459328.75	2	8	6.35	9.4	+12	56	50.69	49.0	1.00573	11	58	9.1
abr	25	2459329.75	2	11	52.37	9.4	+13	16	26.44	48.4	1.00600	11	57	58.5
abr	26	2459330.75	2	15	38.87	9.5	+13	35	49.01	47.9	1.00626	11	57	48.5
abr	27	2459331.75	2	19	25.87	9.5	+13	54	58.10	47.3	1.00652	11	57	38.9
abr	28	2459332.75	2	23	13.37	9.5	+14	13	53.44	46.7	1.00678	11	57	29.9
abr	29	2459333.75	2	27	1.40	9.5	+14	32	34.76	46.1	1.00705	11	57	21.3
abr	30	2459334.75	2	30	49.96	9.5	+14	51	1.77	45.5	1.00731	11	57	13.3
may	1	2459335.75	2	34	39.08	9.6	+15	9	14.16	44.9	1.00757	11	57	5.9
may	2	2459336.75	2	38	28.74	9.6	+15	27	11.63	44.3	1.00783	11	56	58.9
may	3	2459337.75	2	42	18.96	9.6	+15	44	53.87	43.6	1.00809	11	56	52.7
may	4	2459338.75	2	46	9.75	9.6	+16	2	20.54	42.9	1.00834	11	56	46.9
may	5	2459339.75	2	50	1.12	9.7	+16	19	31.34	42.3	1.00859	11	56	41.7
may	6	2459340.75	2	53	53.05	9.7	+16	36	25.94	41.6	1.00884	11	56	37.1
may	7	2459341.75	2	57	45.56	9.7	+16	53	4.02	40.9	1.00909	11	56	33.0
may	8	2459342.75	3	1	38.66	9.7	+17	9	25.27	40.2	1.00933	11	56	29.6
may	9	2459343.75	3	5	32.33	9.8	+17	25	29.38	39.4	1.00957	11	56	26.6
may	10	2459344.75	3	9	26.59	9.8	+17	41	16.03	38.7	1.00981	11	56	24.4
may	11	2459345.75	3	13	21.43	9.8	+17	56	44.92	38.0	1.01004	11	56	22.6
may	12	2459346.75	3	17	16.84	9.8	+18	11	55.75	37.2	1.01026	11	56	21.5
may	13	2459347.75	3	21	12.83	9.9	+18	26	48.21	36.4	1.01049	11	56	20.9
may	14	2459348.75	3	25	9.39	9.9	+18	41	21.99	35.6	1.01070	11	56	21.0
may	15	2459349.75	3	29	6.50	9.9	+18	55	36.82	34.8	1.01092	11	56	21.5
may	16	2459350.75	3	33	4.18	9.9	+19	9	32.39	34.0	1.01113	11	56	22.6
may	17	2459351.75	3	37	2.40	9.9	+19	23	8.41	33.2	1.01133	11	56	24.3
may	18	2459352.75	3	41	1.16	10.0	+19	36	24.61	32.3	1.01153	11	56	26.5

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
may	19	2459353.75	3	45	0.45	10.0	+19	49	20.70	31.5	1.01173	11	56	29.3
may	20	2459354.75	3	49	0.27	10.0	+20	1	56.42	30.6	1.01193	11	56	32.5
may	21	2459355.75	3	53	0.60	10.0	+20	14	11.50	29.8	1.01212	11	56	36.3
may	22	2459356.75	3	57	1.44	10.1	+20	26	5.70	28.9	1.01230	11	56	40.5
may	23	2459357.75	4	1	2.78	10.1	+20	37	38.78	28.0	1.01249	11	56	45.4
may	24	2459358.75	4	5	4.62	10.1	+20	48	50.52	27.1	1.01267	11	56	50.6
may	25	2459359.75	4	9	6.96	10.1	+20	59	40.73	26.2	1.01285	11	56	56.5
may	26	2459360.75	4	13	9.78	10.1	+21	10	9.21	25.3	1.01303	11	57	2.7
may	27	2459361.75	4	17	13.09	10.2	+21	20	15.79	24.4	1.01321	11	57	9.4
may	28	2459362.75	4	21	16.87	10.2	+21	30	0.29	23.4	1.01338	11	57	16.7
may	29	2459363.75	4	25	21.11	10.2	+21	39	22.50	22.5	1.01355	11	57	24.3
may	30	2459364.75	4	29	25.80	10.2	+21	48	22.25	21.5	1.01372	11	57	32.4
may	31	2459365.75	4	33	30.93	10.2	+21	56	59.33	20.6	1.01388	11	57	41.0
jun	1	2459366.75	4	37	36.48	10.2	+22	5	13.55	19.6	1.01404	11	57	50.0
jun	2	2459367.75	4	41	42.44	10.3	+22	13	4.73	18.7	1.01420	11	57	59.4
jun	3	2459368.75	4	45	48.79	10.3	+22	20	32.68	17.7	1.01436	11	58	9.2
jun	4	2459369.75	4	49	55.52	10.3	+22	27	37.24	16.7	1.01450	11	58	19.4
jun	5	2459370.75	4	54	2.61	10.3	+22	34	18.24	15.7	1.01465	11	58	29.9
jun	6	2459371.75	4	58	10.03	10.3	+22	40	35.54	14.7	1.01479	11	58	40.8
jun	7	2459372.75	5	2	17.78	10.3	+22	46	28.99	13.7	1.01492	11	58	52.0
jun	8	2459373.75	5	6	25.81	10.3	+22	51	58.45	12.7	1.01505	11	59	3.4
jun	9	2459374.75	5	10	34.12	10.4	+22	57	3.80	11.7	1.01518	11	59	15.2
jun	10	2459375.75	5	14	42.68	10.4	+23	1	44.93	10.7	1.01530	11	59	27.2
jun	11	2459376.75	5	18	51.46	10.4	+23	6	1.73	9.7	1.01541	11	59	39.5
jun	12	2459377.75	5	23	0.43	10.4	+23	9	54.09	8.7	1.01551	11	59	51.8
jun	13	2459378.75	5	27	9.58	10.4	+23	13	21.94	7.6	1.01562	12	0	4.4
jun	14	2459379.75	5	31	18.86	10.4	+23	16	25.19	6.6	1.01571	12	0	17.2
jun	15	2459380.75	5	35	28.26	10.4	+23	19	3.76	5.6	1.01580	12	0	30.0
jun	16	2459381.75	5	39	37.74	10.4	+23	21	17.60	4.5	1.01589	12	0	42.9
jun	17	2459382.75	5	43	47.29	10.4	+23	23	6.66	3.5	1.01597	12	0	55.9
jun	18	2459383.75	5	47	56.87	10.4	+23	24	30.89	2.5	1.01604	12	1	9.0
jun	19	2459384.75	5	52	6.47	10.4	+23	25	30.28	1.4	1.01611	12	1	22.0
jun	20	2459385.75	5	56	16.06	10.4	+23	26	4.81	0.4	1.01618	12	1	35.1
jun	21	2459386.75	6	0	25.62	10.4	+23	26	14.51	-0.6	1.01624	12	1	48.0
jun	22	2459387.75	6	4	35.13	10.4	+23	25	59.39	-1.7	1.01630	12	2	0.9
jun	23	2459388.75	6	8	44.58	10.4	+23	25	19.49	-2.7	1.01635	12	2	13.9
jun	24	2459389.75	6	12	53.94	10.4	+23	24	14.88	-3.7	1.01640	12	2	26.6
jun	25	2459390.75	6	17	3.19	10.4	+23	22	45.60	-4.7	1.01645	12	2	39.3
jun	26	2459391.75	6	21	12.31	10.4	+23	20	51.70	-5.8	1.01650	12	2	51.9
jun	27	2459392.75	6	25	21.29	10.4	+23	18	33.23	-6.8	1.01654	12	3	4.3
jun	28	2459393.75	6	29	30.10	10.4	+23	15	50.26	-7.8	1.01658	12	3	16.5
jun	29	2459394.75	6	33	38.72	10.4	+23	12	42.82	-8.8	1.01661	12	3	28.6
jun	30	2459395.75	6	37	47.14	10.3	+23	9	10.99	-9.8	1.01664	12	3	40.4
jul	1	2459396.75	6	41	55.33	10.3	+23	5	14.86	-10.8	1.01667	12	3	52.1
jul	2	2459397.75	6	46	3.28	10.3	+23	0	54.51	-11.9	1.01669	12	4	3.5
jul	3	2459398.75	6	50	10.97	10.3	+22	56	10.04	-12.9	1.01671	12	4	14.7

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
jul	4	2459399.75	6	54	18.37	10.3	+22	51	1.57	-13.8	1.01672	12	4	25.5
jul	5	2459400.75	6	58	25.47	10.3	+22	45	29.22	-14.8	1.01673	12	4	36.1
jul	6	2459401.75	7	2	32.24	10.3	+22	39	33.13	-15.8	1.01673	12	4	46.2
jul	7	2459402.75	7	6	38.66	10.3	+22	33	13.44	-16.8	1.01672	12	4	56.2
jul	8	2459403.75	7	10	44.71	10.2	+22	26	30.31	-17.8	1.01671	12	5	5.6
jul	9	2459404.75	7	14	50.36	10.2	+22	19	23.90	-18.7	1.01670	12	5	14.7
jul	10	2459405.75	7	18	55.61	10.2	+22	11	54.38	-19.7	1.01667	12	5	23.4
jul	11	2459406.75	7	23	0.41	10.2	+22	4	1.93	-20.6	1.01665	12	5	31.6
jul	12	2459407.75	7	27	4.75	10.2	+21	55	46.73	-21.6	1.01661	12	5	39.4
jul	13	2459408.75	7	31	8.62	10.1	+21	47	8.99	-22.5	1.01657	12	5	46.7
jul	14	2459409.75	7	35	11.99	10.1	+21	38	8.89	-23.4	1.01652	12	5	53.5
jul	15	2459410.75	7	39	14.85	10.1	+21	28	46.65	-24.3	1.01647	12	5	59.9
jul	16	2459411.75	7	43	17.18	10.1	+21	19	2.47	-25.2	1.01642	12	6	5.6
jul	17	2459412.75	7	47	18.98	10.1	+21	8	56.58	-26.1	1.01635	12	6	10.9
jul	18	2459413.75	7	51	20.22	10.0	+20	58	29.23	-27.0	1.01629	12	6	15.5
jul	19	2459414.75	7	55	20.90	10.0	+20	47	40.64	-27.9	1.01621	12	6	19.7
jul	20	2459415.75	7	59	21.01	10.0	+20	36	31.07	-28.8	1.01614	12	6	23.2
jul	21	2459416.75	8	3	20.55	10.0	+20	25	0.79	-29.6	1.01606	12	6	26.2
jul	22	2459417.75	8	7	19.51	9.9	+20	13	10.05	-30.5	1.01598	12	6	28.6
jul	23	2459418.75	8	11	17.88	9.9	+20	0	59.12	-31.3	1.01589	12	6	30.4
jul	24	2459419.75	8	15	15.67	9.9	+19	48	28.23	-32.1	1.01580	12	6	31.7
jul	25	2459420.75	8	19	12.86	9.9	+19	35	37.64	-32.9	1.01571	12	6	32.3
jul	26	2459421.75	8	23	9.46	9.8	+19	22	27.59	-33.7	1.01561	12	6	32.3
jul	27	2459422.75	8	27	5.47	9.8	+19	8	58.32	-34.5	1.01552	12	6	31.8
jul	28	2459423.75	8	31	0.89	9.8	+18	55	10.07	-35.3	1.01541	12	6	30.6
jul	29	2459424.75	8	34	55.72	9.8	+18	41	3.11	-36.1	1.01531	12	6	28.9
jul	30	2459425.75	8	38	49.96	9.7	+18	26	37.69	-36.8	1.01520	12	6	26.6
jul	31	2459426.75	8	42	43.61	9.7	+18	11	54.09	-37.6	1.01509	12	6	23.7
ago	1	2459427.75	8	46	36.68	9.7	+17	56	52.58	-38.3	1.01497	12	6	20.2
ago	2	2459428.75	8	50	29.15	9.7	+17	41	33.45	-39.0	1.01485	12	6	16.2
ago	3	2459429.75	8	54	21.04	9.6	+17	25	56.99	-39.7	1.01472	12	6	11.4
ago	4	2459430.75	8	58	12.35	9.6	+17	10	3.49	-40.4	1.01459	12	6	6.2
ago	5	2459431.75	9	2	3.06	9.6	+16	53	53.26	-41.1	1.01445	12	6	0.4
ago	6	2459432.75	9	5	53.19	9.6	+16	37	26.59	-41.8	1.01431	12	5	53.9
ago	7	2459433.75	9	9	42.73	9.5	+16	20	43.81	-42.4	1.01416	12	5	46.9
ago	8	2459434.75	9	13	31.68	9.5	+16	3	45.21	-43.1	1.01401	12	5	39.3
ago	9	2459435.75	9	17	20.04	9.5	+15	46	31.13	-43.7	1.01385	12	5	31.1
ago	10	2459436.75	9	21	7.82	9.5	+15	29	1.87	-44.3	1.01369	12	5	22.3
ago	11	2459437.75	9	24	55.02	9.4	+15	11	17.75	-44.9	1.01352	12	5	13.0
ago	12	2459438.75	9	28	41.64	9.4	+14	53	19.09	-45.5	1.01335	12	5	3.0
ago	13	2459439.75	9	32	27.68	9.4	+14	35	6.22	-46.1	1.01317	12	4	52.6
ago	14	2459440.75	9	36	13.16	9.4	+14	16	39.46	-46.7	1.01299	12	4	41.5
ago	15	2459441.75	9	39	58.09	9.3	+13	57	59.13	-47.2	1.01280	12	4	29.9
ago	16	2459442.75	9	43	42.47	9.3	+13	39	5.58	-47.8	1.01261	12	4	17.7
ago	17	2459443.75	9	47	26.31	9.3	+13	19	59.13	-48.3	1.01242	12	4	4.9
ago	18	2459444.75	9	51	9.63	9.3	+13	0	40.12	-48.8	1.01222	12	3	51.7

Sol, 2021

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
ago	19	2459445.75	9	54	52.43	9.3	+12	41	8.86	-49.3	1.01202	12	3	37.9
ago	20	2459446.75	9	58	34.74	9.2	+12	21	25.69	-49.8	1.01182	12	3	23.7
ago	21	2459447.75	10	2	16.56	9.2	+12	1	30.91	-50.3	1.01161	12	3	9.0
ago	22	2459448.75	10	5	57.92	9.2	+11	41	24.82	-50.7	1.01140	12	2	53.7
ago	23	2459449.75	10	9	38.82	9.2	+11	21	7.76	-51.2	1.01120	12	2	38.1
ago	24	2459450.75	10	13	19.29	9.2	+11	0	40.16	-51.6	1.01099	12	2	22.0
ago	25	2459451.75	10	16	59.32	9.2	+10	40	1.83	-52.0	1.01077	12	2	5.5
ago	26	2459452.75	10	20	38.97	9.1	+10	19	13.13	-52.4	1.01056	12	1	48.6
ago	27	2459453.75	10	24	18.26	9.1	+9	58	14.66	-52.8	1.01034	12	1	31.4
ago	28	2459454.75	10	27	57.18	9.1	+9	37	6.67	-53.2	1.01012	12	1	13.7
ago	29	2459455.75	10	31	35.77	9.1	+9	15	49.43	-53.6	1.00990	12	0	55.8
ago	30	2459456.75	10	35	14.03	9.1	+8	54	23.25	-54.0	1.00968	12	0	37.4
ago	31	2459457.75	10	38	51.98	9.1	+8	32	48.44	-54.3	1.00945	12	0	18.9
sep	1	2459458.75	10	42	29.63	9.1	+8	11	5.32	-54.6	1.00922	11	59	59.9
sep	2	2459459.75	10	46	7.01	9.0	+7	49	14.21	-54.9	1.00899	11	59	40.8
sep	3	2459460.75	10	49	44.12	9.0	+7	27	15.44	-55.3	1.00875	11	59	21.3
sep	4	2459461.75	10	53	20.99	9.0	+7	5	9.35	-55.5	1.00851	11	59	1.6
sep	5	2459462.75	10	56	57.62	9.0	+6	42	56.28	-55.8	1.00827	11	58	41.7
sep	6	2459463.75	11	0	34.02	9.0	+6	20	36.55	-56.1	1.00802	11	58	21.5
sep	7	2459464.75	11	4	10.23	9.0	+5	58	10.52	-56.3	1.00777	11	58	1.2
sep	8	2459465.75	11	7	46.24	9.0	+5	35	38.53	-56.6	1.00751	11	57	40.6
sep	9	2459466.75	11	11	22.07	9.0	+5	13	0.92	-56.8	1.00726	11	57	20.0
sep	10	2459467.75	11	14	57.75	9.0	+4	50	18.04	-57.0	1.00699	11	56	59.2
sep	11	2459468.75	11	18	33.29	9.0	+4	27	30.24	-57.2	1.00673	11	56	38.1
sep	12	2459469.75	11	22	8.70	9.0	+4	4	37.88	-57.4	1.00646	11	56	16.9
sep	13	2459470.75	11	25	44.01	9.0	+3	41	41.30	-57.5	1.00619	11	55	55.7
sep	14	2459471.75	11	29	19.22	9.0	+3	18	40.86	-57.7	1.00592	11	55	34.3
sep	15	2459472.75	11	32	54.37	9.0	+2	55	36.91	-57.8	1.00564	11	55	13.0
sep	16	2459473.75	11	36	29.46	9.0	+2	32	29.79	-57.9	1.00537	11	54	51.5
sep	17	2459474.75	11	40	4.52	9.0	+2	9	19.83	-58.0	1.00509	11	54	29.9
sep	18	2459475.75	11	43	39.58	9.0	+1	46	7.36	-58.1	1.00481	11	54	8.5
sep	19	2459476.75	11	47	14.65	9.0	+1	22	52.68	-58.2	1.00454	11	53	46.9
sep	20	2459477.75	11	50	49.75	9.0	+0	59	36.11	-58.3	1.00426	11	53	25.5
sep	21	2459478.75	11	54	24.92	9.0	+0	36	17.95	-58.3	1.00398	11	53	4.1
sep	22	2459479.75	11	58	0.18	9.0	+0	12	58.50	-58.4	1.00370	11	52	42.9
sep	23	2459480.75	12	1	35.56	9.0	-0	10	21.93	-58.4	1.00343	11	52	21.8
sep	24	2459481.75	12	5	11.07	9.0	-0	33	43.03	-58.4	1.00315	11	52	0.7
sep	25	2459482.75	12	8	46.75	9.0	-0	57	4.49	-58.4	1.00287	11	51	39.9
sep	26	2459483.75	12	12	22.61	9.0	-1	20	25.98	-58.4	1.00260	11	51	19.1
sep	27	2459484.75	12	15	58.68	9.0	-1	43	47.18	-58.4	1.00232	11	50	58.6
sep	28	2459485.75	12	19	34.97	9.0	-2	7	7.74	-58.3	1.00204	11	50	38.4
sep	29	2459486.75	12	23	11.51	9.0	-2	30	27.32	-58.3	1.00176	11	50	18.3
sep	30	2459487.75	12	26	48.32	9.0	-2	53	45.59	-58.2	1.00148	11	49	58.6
oct	1	2459488.75	12	30	25.42	9.1	-3	17	2.18	-58.1	1.00120	11	49	39.1
oct	2	2459489.75	12	34	2.82	9.1	-3	40	16.73	-58.0	1.00092	11	49	20.0
oct	3	2459490.75	12	37	40.55	9.1	-4	3	28.89	-57.9	1.00064	11	49	1.1

Sol, 2021

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
oct	4	2459491.75	12	41	18.62	9.1	-4	26	38.27	-57.8	1.00036	11	48	42.7
oct	5	2459492.75	12	44	57.04	9.1	-4	49	44.51	-57.6	1.00007	11	48	24.5
oct	6	2459493.75	12	48	35.85	9.1	-5	12	47.21	-57.4	0.99979	11	48	6.8
oct	7	2459494.75	12	52	15.05	9.2	-5	35	46.01	-57.3	0.99950	11	47	49.4
oct	8	2459495.75	12	55	54.66	9.2	-5	58	40.51	-57.1	0.99921	11	47	32.6
oct	9	2459496.75	12	59	34.70	9.2	-6	21	30.31	-56.9	0.99892	11	47	16.0
oct	10	2459497.75	13	3	15.18	9.2	-6	44	15.03	-56.6	0.99863	11	46	60.0
oct	11	2459498.75	13	6	56.12	9.2	-7	6	54.26	-56.4	0.99834	11	46	44.3
oct	12	2459499.75	13	10	37.53	9.2	-7	29	27.60	-56.1	0.99804	11	46	29.1
oct	13	2459500.75	13	14	19.43	9.3	-7	51	54.64	-55.8	0.99775	11	46	14.5
oct	14	2459501.75	13	18	1.84	9.3	-8	14	15.01	-55.6	0.99746	11	46	0.3
oct	15	2459502.75	13	21	44.77	9.3	-8	36	28.32	-55.2	0.99717	11	45	46.8
oct	16	2459503.75	13	25	28.24	9.3	-8	58	34.20	-54.9	0.99688	11	45	33.6
oct	17	2459504.75	13	29	12.27	9.4	-9	20	32.28	-54.6	0.99660	11	45	21.1
oct	18	2459505.75	13	32	56.90	9.4	-9	42	22.19	-54.2	0.99631	11	45	9.2
oct	19	2459506.75	13	36	42.12	9.4	-10	4	3.59	-53.9	0.99603	11	44	57.9
oct	20	2459507.75	13	40	27.98	9.4	-10	25	36.12	-53.5	0.99575	11	44	47.2
oct	21	2459508.75	13	44	14.48	9.5	-10	46	59.41	-53.1	0.99547	11	44	37.2
oct	22	2459509.75	13	48	1.65	9.5	-11	8	13.11	-52.7	0.99519	11	44	27.7
oct	23	2459510.75	13	51	49.50	9.5	-11	29	16.84	-52.2	0.99492	11	44	19.1
oct	24	2459511.75	13	55	38.06	9.6	-11	50	10.25	-51.8	0.99465	11	44	11.1
oct	25	2459512.75	13	59	27.33	9.6	-12	10	52.93	-51.3	0.99438	11	44	3.7
oct	26	2459513.75	14	3	17.34	9.6	-12	31	24.53	-50.8	0.99411	11	43	57.2
oct	27	2459514.75	14	7	8.10	9.6	-12	51	44.63	-50.3	0.99385	11	43	51.4
oct	28	2459515.75	14	10	59.62	9.7	-13	11	52.86	-49.8	0.99359	11	43	46.4
oct	29	2459516.75	14	14	51.91	9.7	-13	31	48.80	-49.3	0.99333	11	43	42.1
oct	30	2459517.75	14	18	44.99	9.7	-13	51	32.05	-48.8	0.99307	11	43	38.6
oct	31	2459518.75	14	22	38.86	9.8	-14	11	2.20	-48.2	0.99282	11	43	36.0
nov	1	2459519.75	14	26	33.53	9.8	-14	30	18.84	-47.6	0.99256	11	43	34.0
nov	2	2459520.75	14	30	29.02	9.8	-14	49	21.54	-47.0	0.99231	11	43	33.0
nov	3	2459521.75	14	34	25.33	9.9	-15	8	9.88	-46.4	0.99206	11	43	32.7
nov	4	2459522.75	14	38	22.47	9.9	-15	26	43.45	-45.8	0.99181	11	43	33.4
nov	5	2459523.75	14	42	20.44	10.0	-15	45	1.82	-45.1	0.99156	11	43	34.7
nov	6	2459524.75	14	46	19.25	10.0	-16	3	4.56	-44.4	0.99131	11	43	37.0
nov	7	2459525.75	14	50	18.88	10.0	-16	20	51.24	-43.8	0.99106	11	43	40.1
nov	8	2459526.75	14	54	19.35	10.1	-16	38	21.42	-43.1	0.99081	11	43	44.1
nov	9	2459527.75	14	58	20.65	10.1	-16	55	34.68	-42.3	0.99057	11	43	48.7
nov	10	2459528.75	15	2	22.77	10.1	-17	12	30.59	-41.6	0.99032	11	43	54.3
nov	11	2459529.75	15	6	25.72	10.2	-17	29	8.72	-40.8	0.99008	11	44	0.7
nov	12	2459530.75	15	10	29.49	10.2	-17	45	28.68	-40.1	0.98984	11	44	7.9
nov	13	2459531.75	15	14	34.09	10.2	-18	1	30.07	-39.3	0.98961	11	44	16.0
nov	14	2459532.75	15	18	39.52	10.3	-18	17	12.51	-38.5	0.98938	11	44	24.8
nov	15	2459533.75	15	22	45.78	10.3	-18	32	35.61	-37.6	0.98915	11	44	34.6
nov	16	2459534.75	15	26	52.86	10.3	-18	47	39.03	-36.8	0.98893	11	44	45.1
nov	17	2459535.75	15	31	0.78	10.4	-19	2	22.40	-36.0	0.98871	11	44	56.5
nov	18	2459536.75	15	35	9.53	10.4	-19	16	45.36	-35.1	0.98849	11	45	8.6

Sol, 2021

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	m	hp s
nov	19	2459537.75	15	39	19.10	10.4	-19	30	47.56	-34.2	0.98828	11	45	21.6
nov	20	2459538.75	15	43	29.50	10.5	-19	44	28.65	-33.3	0.98808	11	45	35.5
nov	21	2459539.75	15	47	40.71	10.5	-19	57	48.30	-32.4	0.98788	11	45	50.1
nov	22	2459540.75	15	51	52.73	10.5	-20	10	46.14	-31.5	0.98768	11	46	5.6
nov	23	2459541.75	15	56	5.55	10.6	-20	23	21.85	-30.6	0.98749	11	46	21.8
nov	24	2459542.75	16	0	19.15	10.6	-20	35	35.07	-29.6	0.98730	11	46	38.9
nov	25	2459543.75	16	4	33.54	10.6	-20	47	25.48	-28.6	0.98712	11	46	56.7
nov	26	2459544.75	16	8	48.69	10.7	-20	58	52.72	-27.7	0.98695	11	47	15.3
nov	27	2459545.75	16	13	4.59	10.7	-21	9	56.48	-26.7	0.98677	11	47	34.7
nov	28	2459546.75	16	17	21.23	10.7	-21	20	36.42	-25.7	0.98660	11	47	54.7
nov	29	2459547.75	16	21	38.59	10.8	-21	30	52.21	-24.6	0.98644	11	48	15.6
nov	30	2459548.75	16	25	56.65	10.8	-21	40	43.56	-23.6	0.98628	11	48	37.0
dic	1	2459549.75	16	30	15.39	10.8	-21	50	10.14	-22.6	0.98612	11	48	59.3
dic	2	2459550.75	16	34	34.80	10.8	-21	59	11.66	-21.5	0.98596	11	49	22.1
dic	3	2459551.75	16	38	54.84	10.9	-22	7	47.84	-20.4	0.98581	11	49	45.5
dic	4	2459552.75	16	43	15.49	10.9	-22	15	58.41	-19.4	0.98566	11	50	9.7
dic	5	2459553.75	16	47	36.72	10.9	-22	23	43.10	-18.3	0.98552	11	50	34.3
dic	6	2459554.75	16	51	58.49	10.9	-22	31	1.66	-17.2	0.98537	11	50	59.5
dic	7	2459555.75	16	56	20.77	10.9	-22	37	53.82	-16.1	0.98523	11	51	25.3
dic	8	2459556.75	17	0	43.53	11.0	-22	44	19.36	-14.9	0.98509	11	51	51.4
dic	9	2459557.75	17	5	6.73	11.0	-22	50	18.04	-13.8	0.98496	11	52	18.1
dic	10	2459558.75	17	9	30.34	11.0	-22	55	49.66	-12.7	0.98483	11	52	45.1
dic	11	2459559.75	17	13	54.34	11.0	-23	0	54.05	-11.5	0.98470	11	53	12.5
dic	12	2459560.75	17	18	18.70	11.0	-23	5	31.04	-10.4	0.98458	11	53	40.4
dic	13	2459561.75	17	22	43.38	11.0	-23	9	40.48	-9.2	0.98447	11	54	8.5
dic	14	2459562.75	17	27	8.37	11.1	-23	13	22.26	-8.1	0.98436	11	54	37.0
dic	15	2459563.75	17	31	33.63	11.1	-23	16	36.25	-6.9	0.98425	11	55	5.6
dic	16	2459564.75	17	35	59.12	11.1	-23	19	22.38	-5.8	0.98415	11	55	34.6
dic	17	2459565.75	17	40	24.83	11.1	-23	21	40.55	-4.6	0.98406	11	56	3.7
dic	18	2459566.75	17	44	50.72	11.1	-23	23	30.70	-3.4	0.98397	11	56	33.1
dic	19	2459567.75	17	49	16.76	11.1	-23	24	52.77	-2.2	0.98389	11	57	2.6
dic	20	2459568.75	17	53	42.93	11.1	-23	25	46.71	-1.1	0.98382	11	57	32.1
dic	21	2459569.75	17	58	9.17	11.1	-23	26	12.50	0.1	0.98375	11	58	1.9
dic	22	2459570.75	18	2	35.48	11.1	-23	26	10.10	1.3	0.98368	11	58	31.6
dic	23	2459571.75	18	7	1.81	11.1	-23	25	39.50	2.4	0.98363	11	59	1.3
dic	24	2459572.75	18	11	28.13	11.1	-23	24	40.70	3.6	0.98358	11	59	31.1
dic	25	2459573.75	18	15	54.41	11.1	-23	23	13.70	4.8	0.98353	12	0	0.8
dic	26	2459574.75	18	20	20.62	11.1	-23	21	18.54	6.0	0.98349	12	0	30.5
dic	27	2459575.75	18	24	46.73	11.1	-23	18	55.24	7.1	0.98346	12	1	0.0
dic	28	2459576.75	18	29	12.71	11.1	-23	16	3.86	8.3	0.98343	12	1	29.5
dic	29	2459577.75	18	33	38.53	11.1	-23	12	44.45	9.5	0.98340	12	1	58.7
dic	30	2459578.75	18	38	4.15	11.1	-23	8	57.12	10.6	0.98338	12	2	27.9
dic	31	2459579.75	18	42	29.55	11.0	-23	4	41.96	11.8	0.98337	12	2	56.6

Luna, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis DT	´	´	fase	hp h
ene	1	2459215.75	8	37	35.03	+22	26	0.73	60.5	15.5	56.9	95.2	0.0
ene	2	2459216.75	9	32	38.55	+19	19	58.05	60.0	15.6	57.3	89.6	***
ene	3	2459217.75	10	26	5.18	+15	10	42.47	59.5	15.8	57.8	82.1	1.0
ene	4	2459218.75	11	17	58.57	+10	12	2.48	59.0	15.9	58.2	72.9	1.9
ene	5	2459219.75	12	8	50.15	+4	39	20.56	58.6	16.0	58.6	62.5	2.7
ene	6	2459220.75	12	59	30.27	-1	11	6.68	58.3	16.1	59.0	51.3	3.6
ene	7	2459221.75	13	50	58.89	-7	2	1.79	57.9	16.2	59.3	39.9	4.4
ene	8	2459222.75	14	44	16.34	-12	34	36.20	57.7	16.2	59.5	28.9	5.1
ene	9	2459223.75	15	40	11.27	-17	28	9.61	57.6	16.3	59.7	19.0	5.9
ene	10	2459224.75	16	39	3.72	-21	21	2.68	57.6	16.3	59.7	10.8	6.7
ene	11	2459225.75	17	40	27.02	-23	53	25.18	57.8	16.2	59.5	4.7	7.5
ene	12	2459226.75	18	43	1.17	-24	51	46.56	58.1	16.1	59.1	1.0	8.4
ene	13	2459227.75	19	44	51.75	-24	13	12.29	58.7	16.0	58.6	0.0	9.3
ene	14	2459228.75	20	44	10.74	-22	6	17.57	59.3	15.8	57.9	1.5	10.3
ene	15	2459229.75	21	39	52.42	-18	47	52.17	60.1	15.6	57.2	5.3	11.3
ene	16	2459230.75	22	31	43.19	-14	37	45.77	60.8	15.4	56.5	11.0	12.2
ene	17	2459231.75	23	20	9.34	-9	54	43.27	61.6	15.2	55.8	18.2	13.1
ene	18	2459232.75	0	5	59.16	-4	54	20.98	62.3	15.0	55.2	26.5	14.0
ene	19	2459233.75	0	50	9.95	+0	10	56.60	62.8	14.9	54.7	35.5	14.8
ene	20	2459234.75	1	33	40.53	+5	11	11.17	63.2	14.8	54.4	44.9	15.5
ene	21	2459235.75	2	17	27.92	+9	57	38.84	63.4	14.8	54.2	54.4	16.2
ene	22	2459236.75	3	2	25.60	+14	21	45.77	63.3	14.8	54.3	63.7	16.9
ene	23	2459237.75	3	49	20.06	+18	14	5.78	63.1	14.8	54.5	72.5	17.6
ene	24	2459238.75	4	38	45.98	+21	23	49.02	62.7	14.9	54.8	80.6	18.2
ene	25	2459239.75	5	30	57.45	+23	38	54.43	62.1	15.1	55.3	87.7	18.9
ene	26	2459240.75	6	25	40.06	+24	47	19.42	61.5	15.2	55.9	93.5	19.6
ene	27	2459241.75	7	22	7.57	+24	39	16.97	60.8	15.4	56.5	97.6	20.4
ene	28	2459242.75	8	19	11.40	+23	9	58.64	60.1	15.6	57.1	99.8	21.2
ene	29	2459243.75	9	15	41.50	+20	21	23.41	59.5	15.7	57.7	99.6	22.0
ene	30	2459244.75	10	10	48.41	+16	22	27.72	59.0	15.9	58.2	97.1	22.9
ene	31	2459245.75	11	4	15.85	+11	27	26.69	58.6	16.0	58.6	92.2	23.8
feb	1	2459246.75	11	56	19.65	+5	53	39.41	58.3	16.1	59.0	85.0	***
feb	2	2459247.75	12	47	39.53	-0	0	14.80	58.1	16.1	59.1	76.0	1.5
feb	3	2459248.75	13	39	8.68	-5	55	17.29	58.0	16.1	59.2	65.5	2.4
feb	4	2459249.75	14	31	43.81	-11	32	27.11	58.0	16.1	59.2	54.3	3.2
feb	5	2459250.75	15	26	14.63	-16	32	28.83	58.1	16.1	59.2	42.9	4.0
feb	6	2459251.75	16	23	10.65	-20	36	20.03	58.2	16.1	59.0	31.9	4.7
feb	7	2459252.75	17	22	26.03	-23	26	30.29	58.4	16.0	58.8	21.9	5.6
feb	8	2459253.75	18	23	10.54	-24	49	43.59	58.7	15.9	58.5	13.4	6.4
feb	9	2459254.75	19	23	56.42	-24	40	20.38	59.1	15.8	58.1	6.7	7.3
feb	10	2459255.75	20	23	6.22	-23	2	8.70	59.6	15.7	57.7	2.3	8.2
feb	11	2459256.75	21	19	25.73	-20	7	17.62	60.1	15.6	57.2	0.2	9.1
feb	12	2459257.75	22	12	22.37	-16	12	58.53	60.7	15.4	56.6	0.4	10.1
feb	13	2459258.75	23	2	2.99	-11	37	31.57	61.3	15.3	56.0	2.8	11.0
feb	14	2459259.75	23	49	1.37	-6	37	52.51	61.9	15.1	55.5	7.1	11.9
feb	15	2459260.75	0	34	5.19	-1	28	24.29	62.5	15.0	55.0	13.0	12.7

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mes	día	dj	h	α m	s	°	δ `	“	dis DT	sd ´	pax ´	fase	hp h
feb	16	2459261.75	1	18	7.00	+3	38	57.99	62.9	14.9	54.6	20.2	13.5
feb	17	2459262.75	2	1	60.00	+8	34	13.70	63.3	14.8	54.3	28.4	14.2
feb	18	2459263.75	2	46	35.28	+13	8	17.64	63.4	14.8	54.2	37.3	14.9
feb	19	2459264.75	3	32	39.34	+17	12	8.83	63.3	14.8	54.3	46.6	15.5
feb	20	2459265.75	4	20	50.51	+20	36	7.49	63.1	14.8	54.5	56.0	16.2
feb	21	2459266.75	5	11	32.60	+23	9	34.36	62.6	15.0	54.9	65.4	16.9
feb	22	2459267.75	6	4	47.45	+24	41	19.82	62.0	15.1	55.5	74.4	17.6
feb	23	2459268.75	7	0	9.43	+25	1	2.85	61.2	15.3	56.1	82.6	18.3
feb	24	2459269.75	7	56	47.39	+24	1	23.47	60.4	15.5	56.9	89.7	19.1
feb	25	2459270.75	8	53	38.18	+21	40	15.66	59.6	15.7	57.7	95.3	19.9
feb	26	2459271.75	9	49	46.58	+18	2	15.66	58.8	15.9	58.5	98.8	20.8
feb	27	2459272.75	10	44	41.97	+13	18	30.86	58.1	16.1	59.1	100.0	21.7
feb	28	2459273.75	11	38	24.06	+7	45	27.41	57.7	16.2	59.6	98.5	22.5
mar	1	2459274.75	12	31	19.03	+1	43	1.71	57.4	16.3	59.9	94.3	23.4
mar	2	2459275.75	13	24	10.17	-4	26	56.55	57.3	16.4	60.0	87.6	***
mar	3	2459276.75	14	17	47.13	-10	22	10.41	57.4	16.3	59.9	78.8	1.1
mar	4	2459277.75	15	12	54.93	-15	40	52.51	57.6	16.2	59.6	68.5	1.9
mar	5	2459278.75	16	10	0.53	-20	2	50.26	58.0	16.1	59.3	57.4	2.7
mar	6	2459279.75	17	9	0.09	-23	10	45.90	58.4	16.0	58.8	46.0	3.5
mar	7	2459280.75	18	9	10.84	-24	52	26.13	58.9	15.9	58.4	35.1	4.4
mar	8	2459281.75	19	9	17.73	-25	2	45.41	59.4	15.8	57.9	25.0	5.3
mar	9	2459282.75	20	7	55.98	-23	44	57.46	59.9	15.6	57.4	16.3	6.2
mar	10	2459283.75	21	3	58.69	-21	9	31.08	60.5	15.5	56.9	9.3	7.1
mar	11	2459284.75	21	56	54.09	-17	31	24.70	61.0	15.4	56.4	4.1	8.1
mar	12	2459285.75	22	46	45.12	-13	7	17.55	61.5	15.2	55.9	1.0	9.0
mar	13	2459286.75	23	33	59.97	-8	13	17.57	62.0	15.1	55.4	0.0	9.9
mar	14	2459287.75	0	19	20.44	-3	3	55.14	62.5	15.0	55.0	1.0	10.7
mar	15	2459288.75	1	3	34.05	+2	8	4.40	62.9	14.9	54.6	3.9	11.4
mar	16	2459289.75	1	47	29.26	+7	11	30.55	63.2	14.8	54.4	8.5	12.2
mar	17	2459290.75	2	31	52.47	+11	56	14.30	63.4	14.8	54.2	14.6	12.9
mar	18	2459291.75	3	17	26.34	+16	12	35.42	63.5	14.7	54.1	21.8	13.5
mar	19	2459292.75	4	4	46.27	+19	50	55.01	63.4	14.8	54.2	30.0	14.2
mar	20	2459293.75	4	54	16.24	+22	41	14.03	63.1	14.8	54.4	39.0	14.9
mar	21	2459294.75	5	46	2.79	+24	33	29.23	62.7	14.9	54.8	48.5	15.6
mar	22	2459295.75	6	39	50.90	+25	18	10.53	62.0	15.1	55.4	58.2	16.3
mar	23	2459296.75	7	35	4.04	+24	47	51.08	61.2	15.3	56.1	67.9	17.0
mar	24	2459297.75	8	30	52.73	+22	58	37.00	60.3	15.5	57.0	77.1	17.8
mar	25	2459298.75	9	26	29.48	+19	51	33.02	59.4	15.8	57.9	85.5	18.7
mar	26	2459299.75	10	21	23.72	+15	33	14.84	58.5	16.0	58.8	92.4	19.5
mar	27	2459300.75	11	15	29.79	+10	15	47.36	57.6	16.2	59.6	97.4	20.4
mar	28	2459301.75	12	9	6.71	+4	16	10.52	57.0	16.4	60.3	99.8	21.2
mar	29	2459302.75	13	2	52.44	-2	4	22.20	56.6	16.5	60.7	99.4	22.1
mar	30	2459303.75	13	57	33.47	-8	21	36.63	56.5	16.6	60.9	96.1	22.9
mar	31	2459304.75	14	53	53.60	-14	9	49.63	56.6	16.5	60.7	90.0	23.8
abr	1	2459305.75	15	52	19.19	-19	4	3.99	57.0	16.4	60.3	81.7	***
abr	2	2459306.75	16	52	43.32	-22	42	50.53	57.5	16.3	59.8	71.8	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	´	´	fase	hp h
abr	3	2459307.75	17	54	17.01	-24	51	14.76	58.2	16.1	59.1	61.0	2.3
abr	4	2459308.75	18	55	36.78	-25	23	28.07	58.9	15.9	58.4	49.8	3.2
abr	5	2459309.75	19	55	10.65	-24	23	22.80	59.6	15.7	57.6	39.0	4.2
abr	6	2459310.75	20	51	49.42	-22	2	32.62	60.4	15.5	56.9	28.9	5.1
abr	7	2459311.75	21	45	3.13	-18	36	43.66	61.0	15.3	56.3	19.9	6.1
abr	8	2459312.75	22	34	59.26	-14	22	32.74	61.6	15.2	55.8	12.4	7.0
abr	9	2459313.75	23	22	10.19	-9	35	35.70	62.1	15.1	55.3	6.6	7.9
abr	10	2459314.75	0	7	21.13	-4	29	43.50	62.6	15.0	54.9	2.5	8.7
abr	11	2459315.75	0	51	21.58	+0	42	45.65	63.0	14.9	54.5	0.4	9.5
abr	12	2459316.75	1	35	0.40	+5	50	43.70	63.3	14.8	54.3	0.1	10.2
abr	13	2459317.75	2	19	3.64	+10	43	40.83	63.5	14.7	54.1	1.7	10.9
abr	14	2459318.75	3	4	12.37	+15	11	21.33	63.6	14.7	54.0	5.0	11.5
abr	15	2459319.75	3	50	59.84	+19	3	30.03	63.6	14.7	54.0	9.8	12.2
abr	16	2459320.75	4	39	47.62	+22	9	46.40	63.5	14.8	54.1	16.1	12.9
abr	17	2459321.75	5	30	40.70	+24	20	10.27	63.2	14.8	54.4	23.6	13.6
abr	18	2459322.75	6	23	23.93	+25	25	41.48	62.8	14.9	54.8	32.2	14.3
abr	19	2459323.75	7	17	23.47	+25	19	28.95	62.1	15.1	55.3	41.6	15.0
abr	20	2459324.75	8	11	54.50	+23	57	51.07	61.4	15.3	56.0	51.6	15.8
abr	21	2459325.75	9	6	14.71	+21	21	5.10	60.5	15.5	56.8	61.8	16.6
abr	22	2459326.75	9	59	57.31	+17	33	37.34	59.5	15.7	57.8	71.8	17.5
abr	23	2459327.75	10	52	58.51	+12	43	53.76	58.5	16.0	58.7	81.2	18.3
abr	24	2459328.75	11	45	38.24	+7	4	20.71	57.6	16.2	59.6	89.3	19.1
abr	25	2459329.75	12	38	35.79	+0	51	38.46	56.9	16.5	60.5	95.5	20.0
abr	26	2459330.75	13	32	42.10	-5	33	8.86	56.3	16.6	61.0	99.2	20.8
abr	27	2459331.75	14	28	49.37	-11	44	40.01	56.0	16.7	61.3	99.9	21.6
abr	28	2459332.75	15	27	36.06	-17	14	53.62	56.1	16.7	61.3	97.6	22.4
abr	29	2459333.75	16	29	7.07	-21	36	17.64	56.4	16.6	60.9	92.4	23.2
abr	30	2459334.75	17	32	36.31	-24	26	42.93	57.0	16.4	60.3	84.9	***
may	1	2459335.75	18	36	26.74	-25	34	19.70	57.7	16.2	59.5	75.5	1.0
may	2	2459336.75	19	38	40.22	-25	0	13.83	58.6	16.0	58.6	65.2	2.0
may	3	2459337.75	20	37	40.72	-22	56	32.85	59.5	15.7	57.7	54.4	3.0
may	4	2459338.75	21	32	42.38	-19	41	26.06	60.4	15.5	56.9	43.7	4.0
may	5	2459339.75	22	23	49.05	-15	34	5.25	61.2	15.3	56.1	33.6	5.0
may	6	2459340.75	23	11	37.72	-10	51	41.29	61.9	15.1	55.5	24.4	5.9
may	7	2459341.75	23	57	0.80	-5	48	38.27	62.5	15.0	55.0	16.5	6.7
may	8	2459342.75	0	40	54.82	-0	36	58.60	63.0	14.9	54.6	9.9	7.5
may	9	2459343.75	1	24	14.93	+4	32	44.50	63.3	14.8	54.3	4.9	8.2
may	10	2459344.75	2	7	52.01	+9	30	35.38	63.6	14.7	54.1	1.6	8.9
may	11	2459345.75	2	52	31.08	+14	6	33.83	63.7	14.7	54.0	0.1	9.6
may	12	2459346.75	3	38	48.41	+18	10	16.36	63.7	14.7	54.0	0.4	10.3
may	13	2459347.75	4	27	7.66	+21	30	55.20	63.6	14.7	54.0	2.4	10.9
may	14	2459348.75	5	17	34.27	+23	57	50.60	63.4	14.8	54.2	6.1	11.6
may	15	2459349.75	6	9	51.91	+25	21	29.52	63.1	14.8	54.5	11.4	12.3
may	16	2459350.75	7	3	23.33	+25	34	45.78	62.7	14.9	54.8	18.2	13.0
may	17	2459351.75	7	57	19.19	+24	34	8.39	62.1	15.1	55.3	26.4	13.8
may	18	2459352.75	8	50	52.50	+22	20	15.88	61.4	15.2	56.0	35.6	14.6

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mes	día	dj	h	α m	s	°	δ `	“	dis DT	sd ´	pax ´	fase	hp h
may	19	2459353.75	9	43	32.95	+18	57	43.25	60.6	15.4	56.7	45.7	15.4
may	20	2459354.75	10	35	15.01	+14	34	12.79	59.7	15.7	57.5	56.4	16.3
may	21	2459355.75	11	26	18.21	+9	20	1.41	58.8	15.9	58.4	67.0	17.1
may	22	2459356.75	12	17	23.22	+3	28	5.92	57.9	16.2	59.4	77.2	17.9
may	23	2459357.75	13	9	25.16	-2	45	19.01	57.1	16.4	60.2	86.2	18.7
may	24	2459358.75	14	3	25.99	-8	59	48.04	56.5	16.6	60.8	93.4	19.5
may	25	2459359.75	15	0	22.60	-14	50	15.94	56.1	16.7	61.3	98.1	20.3
may	26	2459360.75	16	0	47.75	-19	48	15.16	56.0	16.7	61.4	100.0	21.1
may	27	2459361.75	17	4	25.26	-23	25	46.63	56.2	16.7	61.1	98.8	21.9
may	28	2459362.75	18	9	52.74	-25	21	46.46	56.7	16.5	60.6	94.7	22.8
may	29	2459363.75	19	14	56.01	-25	28	29.17	57.4	16.3	59.8	88.1	23.7
may	30	2459364.75	20	17	18.49	-23	53	19.19	58.3	16.1	58.9	79.7	***
may	31	2459365.75	21	15	32.59	-20	54	38.20	59.3	15.8	58.0	70.0	1.8
jun	1	2459366.75	22	9	16.38	-16	54	47.65	60.3	15.5	57.0	59.7	2.8
jun	2	2459367.75	22	58	58.25	-12	14	38.63	61.2	15.3	56.2	49.3	3.8
jun	3	2459368.75	23	45	32.73	-7	11	14.90	61.9	15.1	55.5	39.3	4.7
jun	4	2459369.75	0	30	2.92	-1	57	59.67	62.6	15.0	54.9	29.9	5.5
jun	5	2459370.75	1	13	31.40	+3	14	18.22	63.1	14.8	54.5	21.5	6.3
jun	6	2459371.75	1	56	56.42	+8	16	12.43	63.4	14.8	54.2	14.2	7.0
jun	7	2459372.75	2	41	9.91	+12	58	28.62	63.6	14.7	54.0	8.3	7.6
jun	8	2459373.75	3	26	55.30	+17	11	22.16	63.7	14.7	54.0	3.9	8.3
jun	9	2459374.75	4	14	43.63	+20	44	21.97	63.6	14.7	54.0	1.1	9.0
jun	10	2459375.75	5	4	47.36	+23	26	26.22	63.4	14.8	54.2	0.0	9.6
jun	11	2459376.75	5	56	54.86	+25	7	6.72	63.1	14.8	54.4	0.8	10.3
jun	12	2459377.75	6	50	29.41	+25	38	6.02	62.8	14.9	54.8	3.3	11.1
jun	13	2459378.75	7	44	36.19	+24	54	55.28	62.3	15.0	55.1	7.7	11.8
jun	14	2459379.75	8	38	18.49	+22	57	55.11	61.8	15.2	55.6	13.9	12.6
jun	15	2459380.75	9	30	54.99	+19	52	2.19	61.2	15.3	56.2	21.6	13.5
jun	16	2459381.75	10	22	10.66	+15	45	42.48	60.5	15.5	56.8	30.7	14.3
jun	17	2459382.75	11	12	18.72	+10	49	38.66	59.8	15.7	57.5	40.9	15.1
jun	18	2459383.75	12	1	55.84	+5	16	3.67	59.0	15.9	58.2	51.8	15.9
jun	19	2459384.75	12	51	55.80	-0	41	7.03	58.3	16.1	59.0	62.9	16.7
jun	20	2459385.75	13	43	22.76	-6	45	26.55	57.6	16.3	59.7	73.6	17.5
jun	21	2459386.75	14	37	23.09	-12	36	55.06	57.0	16.4	60.3	83.3	18.3
jun	22	2459387.75	15	34	51.48	-17	51	24.49	56.6	16.6	60.7	91.2	19.0
jun	23	2459388.75	16	36	9.01	-22	1	55.91	56.4	16.6	60.9	96.8	19.8
jun	24	2459389.75	17	40	36.95	-24	43	2.36	56.5	16.6	60.8	99.7	20.6
jun	25	2459390.75	18	46	26.61	-25	37	44.25	56.9	16.5	60.4	99.6	21.5
jun	26	2459391.75	19	51	8.36	-24	43	32.48	57.5	16.3	59.8	96.7	22.5
jun	27	2459392.75	20	52	31.21	-22	13	1.04	58.3	16.1	59.0	91.3	23.5
jun	28	2459393.75	21	49	27.30	-18	28	4.83	59.2	15.8	58.1	84.0	***
jun	29	2459394.75	22	41	55.30	-13	52	36.08	60.1	15.6	57.2	75.3	1.5
jun	30	2459395.75	23	30	37.26	-8	47	36.12	61.0	15.3	56.3	65.7	2.5
jul	1	2459396.75	0	16	34.90	-3	29	38.18	61.9	15.1	55.6	55.8	3.4
jul	2	2459397.75	1	0	54.08	+1	48	35.31	62.5	15.0	55.0	45.9	4.2
jul	3	2459398.75	1	44	38.22	+6	56	58.16	63.1	14.8	54.5	36.4	4.9

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

mes	día	dj	h	α m	s	°	δ `	“	dis DT	´	´	fase	hp h
jul	4	2459399.75	2	28	45.27	+11	46	31.65	63.4	14.8	54.2	27.6	5.6
jul	5	2459400.75	3	14	5.76	+16	8	18.98	63.5	14.7	54.1	19.6	6.3
jul	6	2459401.75	4	1	19.47	+19	52	40.89	63.5	14.8	54.1	12.7	7.0
jul	7	2459402.75	4	50	49.49	+22	49	4.31	63.3	14.8	54.3	7.1	7.6
jul	8	2459403.75	5	42	35.89	+24	46	42.83	63.1	14.8	54.5	3.0	8.3
jul	9	2459404.75	6	36	10.68	+25	36	6.07	62.6	14.9	54.9	0.6	9.1
jul	10	2459405.75	7	30	41.65	+25	10	57.79	62.2	15.1	55.2	0.0	9.8
jul	11	2459406.75	8	25	6.11	+23	29	57.16	61.7	15.2	55.7	1.5	10.6
jul	12	2459407.75	9	18	30.28	+20	37	9.62	61.2	15.3	56.2	5.0	11.4
jul	13	2459408.75	10	10	24.90	+16	41	15.10	60.7	15.4	56.7	10.5	12.3
jul	14	2459409.75	11	0	50.70	+11	53	59.42	60.1	15.6	57.2	17.8	13.1
jul	15	2459410.75	11	50	15.04	+6	28	45.16	59.5	15.7	57.7	26.8	14.0
jul	16	2459411.75	12	39	25.26	+0	39	55.74	59.0	15.9	58.3	37.0	14.8
jul	17	2459412.75	13	29	21.24	-5	16	56.63	58.5	16.0	58.8	48.1	15.5
jul	18	2459413.75	14	21	8.41	-11	4	24.08	57.9	16.2	59.3	59.4	16.3
jul	19	2459414.75	15	15	47.79	-16	22	19.06	57.6	16.3	59.7	70.4	17.0
jul	20	2459415.75	16	14	0.51	-20	47	48.94	57.2	16.4	60.0	80.5	17.8
jul	21	2459416.75	17	15	44.62	-23	57	14.85	57.1	16.4	60.1	88.9	18.6
jul	22	2459417.75	18	19	55.66	-25	30	40.78	57.2	16.4	60.1	95.2	19.4
jul	23	2459418.75	19	24	31.61	-25	18	11.84	57.5	16.3	59.8	99.0	20.4
jul	24	2459419.75	20	27	14.03	-23	23	47.76	57.9	16.2	59.3	100.0	21.3
jul	25	2459420.75	21	26	21.40	-20	3	49.17	58.6	16.0	58.6	98.3	22.3
jul	26	2459421.75	22	21	14.86	-15	41	3.12	59.4	15.8	57.9	94.3	23.3
jul	27	2459422.75	23	12	10.53	-10	38	36.29	60.2	15.6	57.1	88.2	***
jul	28	2459423.75	23	59	56.58	-5	16	22.82	61.0	15.3	56.3	80.6	1.2
jul	29	2459424.75	0	45	33.85	+0	9	54.18	61.8	15.2	55.6	72.0	2.1
jul	30	2459425.75	1	30	5.14	+5	28	1.63	62.5	15.0	55.0	62.8	2.9
jul	31	2459426.75	2	14	29.93	+10	28	1.69	63.0	14.9	54.6	53.2	3.6
ago	1	2459427.75	2	59	41.91	+15	0	56.06	63.3	14.8	54.3	43.7	4.3
ago	2	2459428.75	3	46	26.19	+18	57	45.79	63.4	14.8	54.2	34.5	5.0
ago	3	2459429.75	4	35	14.75	+22	8	51.54	63.3	14.8	54.3	25.9	5.6
ago	4	2459430.75	5	26	19.67	+24	24	2.50	63.1	14.8	54.5	18.0	6.3
ago	5	2459431.75	6	19	27.43	+25	33	30.38	62.6	14.9	54.9	11.2	7.0
ago	6	2459432.75	7	13	57.67	+25	29	30.97	62.1	15.1	55.3	5.8	7.8
ago	7	2459433.75	8	8	52.10	+24	8	24.08	61.6	15.2	55.8	2.0	8.6
ago	8	2459434.75	9	3	11.80	+21	31	49.97	61.0	15.4	56.4	0.2	9.4
ago	9	2459435.75	9	56	15.30	+17	46	59.67	60.4	15.5	56.9	0.4	10.2
ago	10	2459436.75	10	47	49.08	+13	5	23.51	59.8	15.7	57.4	3.0	11.1
ago	11	2459437.75	11	38	8.01	+7	41	22.88	59.3	15.8	57.9	7.8	11.9
ago	12	2459438.75	12	27	49.32	+1	50	57.98	58.9	15.9	58.3	14.8	12.7
ago	13	2459439.75	13	17	45.37	-4	8	51.72	58.6	16.0	58.7	23.5	13.5
ago	14	2459440.75	14	8	55.50	-10	0	6.81	58.3	16.1	59.0	33.8	14.3
ago	15	2459441.75	15	2	17.81	-15	23	31.41	58.1	16.1	59.2	44.9	15.1
ago	16	2459442.75	15	58	36.56	-19	58	31.40	57.9	16.2	59.3	56.3	15.8
ago	17	2459443.75	16	58	4.48	-23	24	11.71	57.8	16.2	59.4	67.4	16.6
ago	18	2459444.75	18	0	4.97	-25	22	5.22	57.9	16.2	59.4	77.7	17.4

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

mes	día	dj	h	α m	s	°	δ `	“	dis DT	sd ´	pax ´	fase	hp h
ago	19	2459445.75	19	3	8.67	-25	40	34.94	58.1	16.1	59.2	86.5	18.3
ago	20	2459446.75	20	5	17.35	-24	18	50.08	58.3	16.1	58.9	93.3	19.2
ago	21	2459447.75	21	4	47.06	-21	27	23.75	58.7	15.9	58.5	97.8	20.2
ago	22	2459448.75	22	0	40.72	-17	24	49.36	59.3	15.8	58.0	99.9	21.2
ago	23	2459449.75	22	52	52.75	-12	32	46.05	59.9	15.6	57.4	99.5	22.2
ago	24	2459450.75	23	41	54.65	-7	11	59.07	60.6	15.4	56.7	96.8	23.1
ago	25	2459451.75	0	28	36.67	-1	40	17.58	61.3	15.3	56.0	92.1	***
ago	26	2459452.75	1	13	55.49	+3	47	42.02	62.0	15.1	55.4	85.8	0.8
ago	27	2459453.75	1	58	47.22	+9	0	7.73	62.6	15.0	54.9	78.3	1.5
ago	28	2459454.75	2	44	3.87	+13	46	51.23	63.0	14.9	54.5	69.9	2.2
ago	29	2459455.75	3	30	30.65	+17	58	31.03	63.3	14.8	54.3	60.8	2.9
ago	30	2459456.75	4	18	42.21	+21	25	55.22	63.3	14.8	54.3	51.5	3.6
ago	31	2459457.75	5	8	57.40	+23	59	36.05	63.2	14.8	54.4	42.0	4.3
sep	1	2459458.75	6	1	13.83	+25	30	20.03	62.9	14.9	54.7	32.8	5.0
sep	2	2459459.75	6	55	4.89	+25	50	7.84	62.4	15.0	55.1	24.1	5.7
sep	3	2459460.75	7	49	44.21	+24	53	50.01	61.8	15.2	55.6	16.1	6.5
sep	4	2459461.75	8	44	18.35	+22	40	35.09	61.0	15.3	56.3	9.4	7.3
sep	5	2459462.75	9	38	3.17	+19	14	35.18	60.3	15.5	57.0	4.2	8.1
sep	6	2459463.75	10	30	36.73	+14	44	57.32	59.6	15.7	57.7	1.0	9.0
sep	7	2459464.75	11	22	3.19	+9	24	51.43	59.0	15.9	58.3	0.0	9.8
sep	8	2459465.75	12	12	50.25	+3	30	33.54	58.5	16.0	58.8	1.6	10.7
sep	9	2459466.75	13	3	42.21	-2	39	25.35	58.1	16.1	59.2	5.7	11.5
sep	10	2459467.75	13	55	32.19	-8	44	53.20	57.8	16.2	59.4	12.2	12.3
sep	11	2459468.75	14	49	13.17	-14	24	32.48	57.8	16.2	59.5	20.7	13.0
sep	12	2459469.75	15	45	25.84	-19	16	38.61	57.8	16.2	59.5	30.8	13.8
sep	13	2459470.75	16	44	23.17	-23	0	16.24	57.9	16.2	59.3	41.9	14.6
sep	14	2459471.75	17	45	34.93	-25	17	49.65	58.2	16.1	59.1	53.3	15.5
sep	15	2459472.75	18	47	44.56	-25	58	23.73	58.5	16.0	58.8	64.4	16.3
sep	16	2459473.75	19	49	8.26	-25	0	31.87	58.8	15.9	58.5	74.7	17.2
sep	17	2459474.75	20	48	11.44	-22	32	44.08	59.2	15.8	58.1	83.7	18.2
sep	18	2459475.75	21	43	58.11	-18	50	47.90	59.6	15.7	57.6	91.0	19.2
sep	19	2459476.75	22	36	17.98	-14	13	54.63	60.1	15.6	57.1	96.2	20.1
sep	20	2459477.75	23	25	35.83	-9	1	23.18	60.7	15.4	56.6	99.2	21.0
sep	21	2459478.75	0	12	35.98	-3	30	53.79	61.3	15.3	56.1	100.0	21.9
sep	22	2459479.75	0	58	10.30	+2	2	11.82	61.9	15.1	55.6	98.7	22.7
sep	23	2459480.75	1	43	11.03	+7	24	38.81	62.3	15.0	55.1	95.4	23.5
sep	24	2459481.75	2	28	27.01	+12	24	52.43	62.8	14.9	54.7	90.5	***
sep	25	2459482.75	3	14	40.83	+16	52	23.02	63.2	14.8	54.4	84.1	0.9
sep	26	2459483.75	4	2	25.43	+20	37	20.79	63.4	14.8	54.2	76.6	1.6
sep	27	2459484.75	4	51	59.90	+23	30	18.92	63.4	14.8	54.2	68.2	2.3
sep	28	2459485.75	5	43	25.10	+25	22	27.61	63.2	14.8	54.3	59.1	3.0
sep	29	2459486.75	6	36	21.12	+26	6	12.69	62.9	14.9	54.6	49.7	3.7
sep	30	2459487.75	7	30	10.36	+25	36	20.65	62.3	15.0	55.1	40.0	4.4
oct	1	2459488.75	8	24	7.62	+23	50	54.60	61.6	15.2	55.8	30.5	5.2
oct	2	2459489.75	9	17	33.38	+20	51	56.03	60.8	15.4	56.5	21.6	6.1
oct	3	2459490.75	10	10	5.72	+16	45	28.98	59.9	15.6	57.3	13.5	6.9

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

mes	día	dj	h	α m	s	°	δ `	“	dis DT	´	´	fase	hp h
oct	4	2459491.75	11	1	46.09	+11	41	30.30	59.1	15.8	58.2	7.0	7.7
oct	5	2459492.75	11	52	57.99	+5	53	33.99	58.3	16.1	59.0	2.4	8.5
oct	6	2459493.75	12	44	22.41	-0	21	9.25	57.6	16.2	59.6	0.1	9.4
oct	7	2459494.75	13	36	50.65	-6	42	4.96	57.2	16.4	60.1	0.6	10.2
oct	8	2459495.75	14	31	15.50	-12	45	39.67	57.0	16.4	60.3	3.9	10.9
oct	9	2459496.75	15	28	18.43	-18	6	39.85	57.0	16.4	60.3	9.9	11.7
oct	10	2459497.75	16	28	12.20	-22	20	20.71	57.2	16.4	60.1	18.0	12.5
oct	11	2459498.75	17	30	23.69	-25	6	4.31	57.6	16.3	59.7	27.8	13.4
oct	12	2459499.75	18	33	29.99	-26	11	17.93	58.1	16.1	59.2	38.7	14.3
oct	13	2459500.75	19	35	40.11	-25	34	31.21	58.6	16.0	58.6	49.9	15.2
oct	14	2459501.75	20	35	14.29	-23	24	55.01	59.2	15.8	58.0	61.0	16.2
oct	15	2459502.75	21	31	15.96	-19	58	48.40	59.8	15.7	57.5	71.3	17.2
oct	16	2459503.75	22	23	37.46	-15	35	17.10	60.4	15.5	56.9	80.4	18.1
oct	17	2459504.75	23	12	47.28	-10	32	55.63	61.0	15.4	56.4	88.0	19.1
oct	18	2459505.75	23	59	33.19	-5	8	23.64	61.5	15.2	55.9	93.9	19.9
oct	19	2459506.75	0	44	49.29	+0	23	38.98	62.0	15.1	55.5	97.8	20.7
oct	20	2459507.75	1	29	29.35	+5	50	13.69	62.4	15.0	55.0	99.8	21.5
oct	21	2459508.75	2	14	22.86	+10	59	24.81	62.8	14.9	54.7	99.8	22.2
oct	22	2459509.75	3	0	12.38	+15	39	58.87	63.2	14.8	54.4	97.9	22.9
oct	23	2459510.75	3	47	30.35	+19	41	9.87	63.4	14.8	54.2	94.3	23.6
oct	24	2459511.75	4	36	35.11	+22	52	40.41	63.6	14.7	54.1	89.2	***
oct	25	2459512.75	5	27	26.38	+25	5	10.51	63.5	14.7	54.1	82.7	0.9
oct	26	2459513.75	6	19	43.58	+26	11	0.80	63.4	14.8	54.2	75.0	1.7
oct	27	2459514.75	7	12	49.04	+26	5	8.33	63.0	14.9	54.5	66.3	2.4
oct	28	2459515.75	8	5	58.18	+24	45	44.94	62.5	15.0	55.0	56.9	3.2
oct	29	2459516.75	8	58	32.79	+22	14	33.60	61.7	15.2	55.7	47.0	4.0
oct	30	2459517.75	9	50	12.05	+18	36	26.13	60.9	15.4	56.4	37.0	4.8
oct	31	2459518.75	10	40	58.15	+13	58	56.62	60.0	15.6	57.3	27.2	5.6
nov	1	2459519.75	11	31	15.57	+8	32	15.27	59.0	15.9	58.3	18.0	6.5
nov	2	2459520.75	12	21	46.77	+2	29	31.37	58.1	16.1	59.2	10.2	7.3
nov	3	2459521.75	13	13	27.04	-3	52	17.03	57.2	16.4	60.0	4.3	8.0
nov	4	2459522.75	14	7	16.74	-10	11	36.24	56.7	16.5	60.7	0.8	8.8
nov	5	2459523.75	15	4	9.80	-16	2	24.70	56.3	16.6	61.0	0.1	9.6
nov	6	2459524.75	16	4	34.51	-20	55	50.95	56.2	16.6	61.1	2.4	10.4
nov	7	2459525.75	17	8	9.01	-24	24	34.88	56.5	16.6	60.8	7.6	11.2
nov	8	2459526.75	18	13	26.70	-26	8	59.62	57.0	16.4	60.3	15.2	12.1
nov	9	2459527.75	19	18	13.44	-26	2	47.66	57.6	16.2	59.6	24.5	13.0
nov	10	2459528.75	20	20	17.95	-24	14	11.38	58.4	16.0	58.9	35.0	14.0
nov	11	2459529.75	21	18	19.33	-21	1	33.25	59.2	15.8	58.0	46.0	15.0
nov	12	2459530.75	22	12	0.70	-16	46	50.00	60.0	15.6	57.3	56.8	16.1
nov	13	2459531.75	23	1	52.66	-11	50	43.91	60.8	15.4	56.5	67.0	17.0
nov	14	2459532.75	23	48	50.27	-6	30	44.10	61.4	15.2	55.9	76.3	17.9
nov	15	2459533.75	0	33	55.83	-1	1	13.93	62.1	15.1	55.4	84.3	18.8
nov	16	2459534.75	1	18	10.22	+4	25	33.62	62.6	15.0	55.0	90.8	19.5
nov	17	2459535.75	2	2	29.04	+9	38	34.25	62.9	14.9	54.6	95.6	20.2

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mes	día	dj	h	α m	s	°	δ `	“	dis DT	sd ´	pax ´	fase	hp h
nov	18	2459536.75	2	47	40.29	+14	27	3.10	63.3	14.8	54.3	98.7	20.9
nov	19	2459537.75	3	34	21.26	+18	40	9.85	63.5	14.8	54.1	100.0	21.6
nov	20	2459538.75	4	22	54.27	+22	7	5.21	63.6	14.7	54.0	99.4	22.3
nov	21	2459539.75	5	13	21.47	+24	37	30.65	63.7	14.7	54.0	97.2	23.0
nov	22	2459540.75	6	5	21.87	+26	2	47.52	63.6	14.7	54.0	93.2	23.7
nov	23	2459541.75	6	58	14.16	+26	17	9.27	63.4	14.8	54.2	87.7	***
nov	24	2459542.75	7	51	7.19	+25	18	39.81	63.1	14.8	54.5	80.8	1.2
nov	25	2459543.75	8	43	15.34	+23	9	21.24	62.6	15.0	55.0	72.6	2.0
nov	26	2459544.75	9	34	11.60	+19	54	32.95	61.9	15.1	55.5	63.4	2.8
nov	27	2459545.75	10	23	54.16	+15	41	49.45	61.1	15.3	56.2	53.4	3.6
nov	28	2459546.75	11	12	45.50	+10	40	15.07	60.2	15.6	57.1	43.0	4.4
nov	29	2459547.75	12	1	28.12	+5	0	22.36	59.2	15.8	58.0	32.5	5.2
nov	30	2459548.75	12	50	59.60	-1	5	3.87	58.3	16.1	59.0	22.6	6.0
dic	1	2459549.75	13	42	26.91	-7	19	41.37	57.4	16.3	59.9	13.7	6.7
dic	2	2459550.75	14	36	59.08	-13	22	9.08	56.6	16.5	60.7	6.6	7.5
dic	3	2459551.75	15	35	31.41	-18	45	39.74	56.1	16.7	61.2	1.9	8.2
dic	4	2459552.75	16	38	19.68	-22	59	52.20	55.9	16.7	61.5	0.0	9.0
dic	5	2459553.75	17	44	29.75	-25	36	39.84	56.0	16.7	61.3	1.2	9.9
dic	6	2459554.75	18	51	49.40	-26	18	42.90	56.4	16.6	60.9	5.4	10.8
dic	7	2459555.75	19	57	29.89	-25	5	53.43	57.1	16.4	60.2	12.1	11.8
dic	8	2459556.75	20	59	16.46	-22	14	20.58	57.9	16.2	59.3	20.7	12.8
dic	9	2459557.75	21	56	11.42	-18	8	51.76	58.9	15.9	58.4	30.6	13.8
dic	10	2459558.75	22	48	27.77	-13	14	48.83	59.8	15.7	57.4	41.1	14.9
dic	11	2459559.75	23	36	59.55	-7	53	32.97	60.7	15.4	56.6	51.6	15.8
dic	12	2459560.75	0	22	55.67	-2	21	41.46	61.6	15.2	55.8	61.8	16.7
dic	13	2459561.75	1	7	25.64	+3	7	53.60	62.3	15.0	55.2	71.2	17.5
dic	14	2459562.75	1	51	33.55	+8	24	33.63	62.8	14.9	54.7	79.5	18.3
dic	15	2459563.75	2	36	15.77	+13	18	31.96	63.2	14.8	54.4	86.7	19.0
dic	16	2459564.75	3	22	18.06	+17	39	57.15	63.5	14.8	54.1	92.4	19.6
dic	17	2459565.75	4	10	11.86	+21	18	30.45	63.7	14.7	54.0	96.7	20.3
dic	18	2459566.75	5	0	8.57	+24	3	43.46	63.7	14.7	54.0	99.2	21.0
dic	19	2459567.75	5	51	54.34	+25	45	59.16	63.6	14.7	54.0	100.0	21.7
dic	20	2459568.75	6	44	49.98	+26	18	7.75	63.4	14.8	54.2	99.0	22.4
dic	21	2459569.75	7	37	59.68	+25	36	54.65	63.2	14.8	54.4	96.2	23.2
dic	22	2459570.75	8	30	27.41	+23	43	44.81	62.8	14.9	54.7	91.7	***
dic	23	2459571.75	9	21	33.63	+20	44	15.60	62.4	15.0	55.1	85.5	0.8
dic	24	2459572.75	10	11	5.20	+16	46	58.07	61.8	15.2	55.6	77.8	1.6
dic	25	2459573.75	10	59	16.15	+12	1	51.79	61.2	15.3	56.2	68.9	2.4
dic	26	2459574.75	11	46	43.01	+6	39	41.11	60.4	15.5	56.9	58.9	3.2
dic	27	2459575.75	12	34	19.33	+0	51	58.20	59.6	15.7	57.7	48.2	4.0
dic	28	2459576.75	13	23	10.53	-5	8	3.62	58.7	16.0	58.6	37.3	4.7
dic	29	2459577.75	14	14	28.97	-11	4	6.09	57.8	16.2	59.4	26.8	5.4
dic	30	2459578.75	15	9	24.79	-16	35	15.19	57.1	16.4	60.2	17.2	6.2
dic	31	2459579.75	16	8	47.79	-21	15	34.25	56.5	16.6	60.8	9.1	6.9

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2459215.75	19	19	45.81	-24	18	1.85	1.3874	12.6
ene	2	2459216.75	19	26	50.97	-24	5	18.67	1.3783	12.7
ene	3	2459217.75	19	33	55.36	-23	51	2.36	1.3683	12.7
ene	4	2459218.75	19	40	58.68	-23	35	12.73	1.3577	12.8
ene	5	2459219.75	19	48	0.60	-23	17	49.78	1.3463	12.8
ene	6	2459220.75	19	55	0.77	-22	58	53.75	1.3341	12.9
ene	7	2459221.75	20	1	58.76	-22	38	25.14	1.3210	12.9
ene	8	2459222.75	20	8	54.14	-22	16	24.81	1.3072	13.0
ene	9	2459223.75	20	15	46.39	-21	52	54.00	1.2925	13.0
ene	10	2459224.75	20	22	34.92	-21	27	54.41	1.2769	13.1
ene	11	2459225.75	20	29	19.07	-21	1	28.31	1.2604	13.1
ene	12	2459226.75	20	35	58.11	-20	33	38.58	1.2430	13.2
ene	13	2459227.75	20	42	31.17	-20	4	28.88	1.2246	13.2
ene	14	2459228.75	20	48	57.28	-19	34	3.71	1.2053	13.3
ene	15	2459229.75	20	55	15.37	-19	2	28.60	1.1850	13.3
ene	16	2459230.75	21	1	24.17	-18	29	50.23	1.1638	13.3
ene	17	2459231.75	21	7	22.30	-17	56	16.64	1.1416	13.4
ene	18	2459232.75	21	13	8.15	-17	21	57.37	1.1185	13.4
ene	19	2459233.75	21	18	39.96	-16	47	3.63	1.0945	13.4
ene	20	2459234.75	21	23	55.75	-16	11	48.52	1.0696	13.5
ene	21	2459235.75	21	28	53.32	-15	36	27.09	1.0440	13.5
ene	22	2459236.75	21	33	30.27	-15	1	16.55	1.0176	13.5
ene	23	2459237.75	21	37	44.01	-14	26	36.19	0.9907	13.5
ene	24	2459238.75	21	41	31.80	-13	52	47.44	0.9634	13.5
ene	25	2459239.75	21	44	50.78	-13	20	13.63	0.9358	13.5
ene	26	2459240.75	21	47	38.03	-12	49	19.75	0.9081	13.5
ene	27	2459241.75	21	49	50.73	-12	20	31.91	0.8806	13.4
ene	28	2459242.75	21	51	26.20	-11	54	16.75	0.8534	13.4
ene	29	2459243.75	21	52	22.12	-11	31	0.51	0.8270	13.3
ene	30	2459244.75	21	52	36.68	-11	11	8.07	0.8014	13.3
ene	31	2459245.75	21	52	8.76	-10	55	1.65	0.7771	13.2
feb	1	2459246.75	21	50	58.13	-10	42	59.57	0.7542	13.1
feb	2	2459247.75	21	49	5.64	-10	35	14.88	0.7331	13.0
feb	3	2459248.75	21	46	33.36	-10	31	54.12	0.7140	12.9
feb	4	2459249.75	21	43	24.63	-10	32	56.40	0.6970	12.8
feb	5	2459250.75	21	39	44.09	-10	38	12.80	0.6824	12.7
feb	6	2459251.75	21	35	37.54	-10	47	26.41	0.6703	12.5
feb	7	2459252.75	21	31	11.74	-11	0	13.05	0.6608	12.4
feb	8	2459253.75	21	26	34.07	-11	16	2.50	0.6538	12.3
feb	9	2459254.75	21	21	52.18	-11	34	20.40	0.6493	12.1
feb	10	2459255.75	21	17	13.56	-11	54	30.27	0.6473	12.0
feb	11	2459256.75	21	12	45.19	-12	15	55.65	0.6476	11.8
feb	12	2459257.75	21	8	33.24	-12	38	1.92	0.6501	11.7
feb	13	2459258.75	21	4	42.85	-13	0	17.70	0.6547	11.6
feb	14	2459259.75	21	1	18.05	-13	22	15.71	0.6610	11.4
feb	15	2459260.75	20	58	21.74	-13	43	33.16	0.6690	11.3

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2459261.75	20	55	55.77	-14	3	51.70	0.6784	11.2
feb	17	2459262.75	20	54	1.07	-14	22	57.08	0.6890	11.1
feb	18	2459263.75	20	52	37.79	-14	40	38.61	0.7007	11.0
feb	19	2459264.75	20	51	45.46	-14	56	48.63	0.7133	11.0
feb	20	2459265.75	20	51	23.14	-15	11	21.88	0.7266	10.9
feb	21	2459266.75	20	51	29.59	-15	24	15.02	0.7406	10.8
feb	22	2459267.75	20	52	3.30	-15	35	26.16	0.7551	10.8
feb	23	2459268.75	20	53	2.69	-15	44	54.46	0.7699	10.7
feb	24	2459269.75	20	54	26.08	-15	52	39.89	0.7851	10.7
feb	25	2459270.75	20	56	11.80	-15	58	42.94	0.8004	10.6
feb	26	2459271.75	20	58	18.23	-16	3	4.49	0.8159	10.6
feb	27	2459272.75	21	0	43.80	-16	5	45.65	0.8315	10.6
feb	28	2459273.75	21	3	27.02	-16	6	47.68	0.8472	10.6
mar	1	2459274.75	21	6	26.50	-16	6	11.93	0.8628	10.5
mar	2	2459275.75	21	9	40.94	-16	3	59.77	0.8784	10.5
mar	3	2459276.75	21	13	9.13	-16	0	12.63	0.8940	10.5
mar	4	2459277.75	21	16	49.95	-15	54	51.88	0.9094	10.5
mar	5	2459278.75	21	20	42.38	-15	47	58.93	0.9247	10.5
mar	6	2459279.75	21	24	45.49	-15	39	35.11	0.9399	10.5
mar	7	2459280.75	21	28	58.40	-15	29	41.76	0.9549	10.5
mar	8	2459281.75	21	33	20.34	-15	18	20.14	0.9697	10.5
mar	9	2459282.75	21	37	50.59	-15	5	31.48	0.9844	10.5
mar	10	2459283.75	21	42	28.51	-14	51	16.97	0.9988	10.5
mar	11	2459284.75	21	47	13.52	-14	35	37.75	1.0131	10.6
mar	12	2459285.75	21	52	5.09	-14	18	34.92	1.0272	10.6
mar	13	2459286.75	21	57	2.75	-14	0	9.53	1.0411	10.6
mar	14	2459287.75	22	2	6.08	-13	40	22.60	1.0547	10.6
mar	15	2459288.75	22	7	14.72	-13	19	15.13	1.0682	10.6
mar	16	2459289.75	22	12	28.32	-12	56	48.07	1.0814	10.7
mar	17	2459290.75	22	17	46.61	-12	33	2.36	1.0945	10.7
mar	18	2459291.75	22	23	9.32	-12	7	58.89	1.1073	10.7
mar	19	2459292.75	22	28	36.24	-11	41	38.56	1.1198	10.7
mar	20	2459293.75	22	34	7.19	-11	14	2.23	1.1322	10.8
mar	21	2459294.75	22	39	42.00	-10	45	10.75	1.1443	10.8
mar	22	2459295.75	22	45	20.54	-10	15	4.95	1.1563	10.8
mar	23	2459296.75	22	51	2.73	-9	43	45.67	1.1679	10.8
mar	24	2459297.75	22	56	48.48	-9	11	13.72	1.1794	10.9
mar	25	2459298.75	23	2	37.74	-8	37	29.93	1.1905	10.9
mar	26	2459299.75	23	8	30.49	-8	2	35.10	1.2015	10.9
mar	27	2459300.75	23	14	26.73	-7	26	30.07	1.2121	11.0
mar	28	2459301.75	23	20	26.48	-6	49	15.67	1.2225	11.0
mar	29	2459302.75	23	26	29.78	-6	10	52.76	1.2326	11.0
mar	30	2459303.75	23	32	36.70	-5	31	22.25	1.2425	11.1
mar	31	2459304.75	23	38	47.32	-4	50	45.10	1.2520	11.1
abr	1	2459305.75	23	45	1.73	-4	9	2.33	1.2611	11.1
abr	2	2459306.75	23	51	20.05	-3	26	15.10	1.2699	11.2

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
abr	3	2459307.75	23	57	42.40	-2	42	24.64	1.2784	11.2
abr	4	2459308.75	0	4	8.92	-1	57	32.34	1.2864	11.3
abr	5	2459309.75	0	10	39.78	-1	11	39.75	1.2940	11.3
abr	6	2459310.75	0	17	15.12	-0	24	48.61	1.3012	11.4
abr	7	2459311.75	0	23	55.12	+0	22	59.14	1.3078	11.4
abr	8	2459312.75	0	30	39.97	+1	11	41.27	1.3139	11.4
abr	9	2459313.75	0	37	29.84	+2	1	15.25	1.3194	11.5
abr	10	2459314.75	0	44	24.92	+2	51	38.20	1.3243	11.5
abr	11	2459315.75	0	51	25.37	+3	42	46.78	1.3285	11.6
abr	12	2459316.75	0	58	31.36	+4	34	37.19	1.3319	11.6
abr	13	2459317.75	1	5	43.03	+5	27	5.08	1.3346	11.7
abr	14	2459318.75	1	13	0.48	+6	20	5.44	1.3363	11.8
abr	15	2459319.75	1	20	23.78	+7	13	32.58	1.3372	11.8
abr	16	2459320.75	1	27	52.95	+8	7	20.05	1.3370	11.9
abr	17	2459321.75	1	35	27.94	+9	1	20.55	1.3358	11.9
abr	18	2459322.75	1	43	8.63	+9	55	25.91	1.3334	12.0
abr	19	2459323.75	1	50	54.83	+10	49	27.08	1.3298	12.1
abr	20	2459324.75	1	58	46.18	+11	43	14.40	1.3250	12.1
abr	21	2459325.75	2	6	42.28	+12	36	36.75	1.3189	12.2
abr	22	2459326.75	2	14	42.59	+13	29	22.81	1.3113	12.3
abr	23	2459327.75	2	22	46.43	+14	21	20.53	1.3024	12.3
abr	24	2459328.75	2	30	53.01	+15	12	17.50	1.2921	12.4
abr	25	2459329.75	2	39	1.41	+16	2	1.16	1.2805	12.5
abr	26	2459330.75	2	47	10.62	+16	50	19.14	1.2674	12.5
abr	27	2459331.75	2	55	19.52	+17	36	59.51	1.2530	12.6
abr	28	2459332.75	3	3	26.94	+18	21	51.06	1.2373	12.7
abr	29	2459333.75	3	11	31.64	+19	4	43.64	1.2204	12.7
abr	30	2459334.75	3	19	32.37	+19	45	28.29	1.2025	12.8
may	1	2459335.75	3	27	27.90	+20	23	57.49	1.1835	12.9
may	2	2459336.75	3	35	17.00	+21	0	5.19	1.1636	12.9
may	3	2459337.75	3	42	58.49	+21	33	46.91	1.1430	13.0
may	4	2459338.75	3	50	31.26	+22	4	59.65	1.1217	13.1
may	5	2459339.75	3	57	54.27	+22	33	41.84	1.0999	13.1
may	6	2459340.75	4	5	6.55	+22	59	53.23	1.0777	13.2
may	7	2459341.75	4	12	7.19	+23	23	34.70	1.0552	13.2
may	8	2459342.75	4	18	55.36	+23	44	48.12	1.0325	13.3
may	9	2459343.75	4	25	30.29	+24	3	36.19	1.0098	13.3
may	10	2459344.75	4	31	51.29	+24	20	2.26	0.9870	13.4
may	11	2459345.75	4	37	57.68	+24	34	10.20	0.9643	13.4
may	12	2459346.75	4	43	48.86	+24	46	4.25	0.9417	13.4
may	13	2459347.75	4	49	24.25	+24	55	48.94	0.9194	13.5
may	14	2459348.75	4	54	43.30	+25	3	28.97	0.8974	13.5
may	15	2459349.75	4	59	45.48	+25	9	9.11	0.8757	13.5
may	16	2459350.75	5	4	30.28	+25	12	54.20	0.8544	13.5
may	17	2459351.75	5	8	57.23	+25	14	49.03	0.8335	13.5
may	18	2459352.75	5	13	5.87	+25	14	58.33	0.8131	13.5

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	19	2459353.75	5	16	55.73	+25	13	26.78	0.7932	13.5
may	20	2459354.75	5	20	26.41	+25	10	18.92	0.7739	13.5
may	21	2459355.75	5	23	37.50	+25	5	39.22	0.7552	13.5
may	22	2459356.75	5	26	28.65	+24	59	32.03	0.7370	13.5
may	23	2459357.75	5	28	59.54	+24	52	1.62	0.7196	13.5
may	24	2459358.75	5	31	9.91	+24	43	12.20	0.7028	13.4
may	25	2459359.75	5	32	59.56	+24	33	7.95	0.6867	13.4
may	26	2459360.75	5	34	28.38	+24	21	53.05	0.6714	13.4
may	27	2459361.75	5	35	36.34	+24	9	31.75	0.6568	13.3
may	28	2459362.75	5	36	23.54	+23	56	8.37	0.6430	13.3
may	29	2459363.75	5	36	50.20	+23	41	47.42	0.6301	13.2
may	30	2459364.75	5	36	56.69	+23	26	33.60	0.6180	13.1
may	31	2459365.75	5	36	43.55	+23	10	31.97	0.6069	13.1
jun	1	2459366.75	5	36	11.50	+22	53	47.96	0.5966	13.0
jun	2	2459367.75	5	35	21.45	+22	36	27.49	0.5873	12.9
jun	3	2459368.75	5	34	14.54	+22	18	37.04	0.5790	12.8
jun	4	2459369.75	5	32	52.09	+22	0	23.69	0.5718	12.7
jun	5	2459370.75	5	31	15.66	+21	41	55.17	0.5655	12.6
jun	6	2459371.75	5	29	26.97	+21	23	19.87	0.5603	12.5
jun	7	2459372.75	5	27	27.97	+21	4	46.78	0.5562	12.5
jun	8	2459373.75	5	25	20.74	+20	46	25.42	0.5532	12.3
jun	9	2459374.75	5	23	7.50	+20	28	25.75	0.5512	12.2
jun	10	2459375.75	5	20	50.55	+20	10	57.96	0.5505	12.1
jun	11	2459376.75	5	18	32.25	+19	54	12.33	0.5508	12.0
jun	12	2459377.75	5	16	14.96	+19	38	18.97	0.5522	11.9
jun	13	2459378.75	5	14	1.01	+19	23	27.63	0.5548	11.8
jun	14	2459379.75	5	11	52.62	+19	9	47.41	0.5585	11.7
jun	15	2459380.75	5	9	51.93	+18	57	26.62	0.5633	11.6
jun	16	2459381.75	5	8	0.90	+18	46	32.54	0.5691	11.5
jun	17	2459382.75	5	6	21.34	+18	37	11.33	0.5760	11.4
jun	18	2459383.75	5	4	54.87	+18	29	27.85	0.5840	11.4
jun	19	2459384.75	5	3	42.90	+18	23	25.69	0.5930	11.3
jun	20	2459385.75	5	2	46.65	+18	19	7.10	0.6029	11.2
jun	21	2459386.75	5	2	7.17	+18	16	33.05	0.6139	11.1
jun	22	2459387.75	5	1	45.29	+18	15	43.26	0.6257	11.0
jun	23	2459388.75	5	1	41.71	+18	16	36.28	0.6385	11.0
jun	24	2459389.75	5	1	56.96	+18	19	9.61	0.6521	10.9
jun	25	2459390.75	5	2	31.43	+18	23	19.73	0.6666	10.9
jun	26	2459391.75	5	3	25.42	+18	29	2.28	0.6819	10.8
jun	27	2459392.75	5	4	39.10	+18	36	12.13	0.6980	10.8
jun	28	2459393.75	5	6	12.60	+18	44	43.47	0.7148	10.7
jun	29	2459394.75	5	8	5.98	+18	54	29.92	0.7323	10.7
jun	30	2459395.75	5	10	19.23	+19	5	24.60	0.7506	10.7
jul	1	2459396.75	5	12	52.33	+19	17	20.18	0.7695	10.6
jul	2	2459397.75	5	15	45.24	+19	30	8.96	0.7890	10.6
jul	3	2459398.75	5	18	57.90	+19	43	42.84	0.8091	10.6

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
jul	4	2459399.75	5	22	30.22	+19	57	53.39	0.8297	10.6
jul	5	2459400.75	5	26	22.14	+20	12	31.85	0.8509	10.6
jul	6	2459401.75	5	30	33.58	+20	27	29.10	0.8725	10.6
jul	7	2459402.75	5	35	4.44	+20	42	35.69	0.8946	10.6
jul	8	2459403.75	5	39	54.62	+20	57	41.80	0.9170	10.6
jul	9	2459404.75	5	45	4.01	+21	12	37.26	0.9398	10.6
jul	10	2459405.75	5	50	32.45	+21	27	11.52	0.9628	10.7
jul	11	2459406.75	5	56	19.77	+21	41	13.69	0.9860	10.7
jul	12	2459407.75	6	2	25.73	+21	54	32.52	1.0092	10.7
jul	13	2459408.75	6	8	50.01	+22	6	56.46	1.0325	10.8
jul	14	2459409.75	6	15	32.22	+22	18	13.75	1.0558	10.8
jul	15	2459410.75	6	22	31.87	+22	28	12.48	1.0788	10.9
jul	16	2459411.75	6	29	48.31	+22	36	40.75	1.1016	10.9
jul	17	2459412.75	6	37	20.80	+22	43	26.84	1.1239	11.0
jul	18	2459413.75	6	45	8.39	+22	48	19.39	1.1458	11.1
jul	19	2459414.75	6	53	10.00	+22	51	7.71	1.1670	11.1
jul	20	2459415.75	7	1	24.37	+22	51	41.97	1.1874	11.2
jul	21	2459416.75	7	9	50.07	+22	49	53.52	1.2069	11.3
jul	22	2459417.75	7	18	25.53	+22	45	35.12	1.2254	11.3
jul	23	2459418.75	7	27	9.07	+22	38	41.20	1.2429	11.4
jul	24	2459419.75	7	35	58.90	+22	29	8.00	1.2591	11.5
jul	25	2459420.75	7	44	53.20	+22	16	53.72	1.2740	11.6
jul	26	2459421.75	7	53	50.15	+22	1	58.52	1.2877	11.7
jul	27	2459422.75	8	2	47.97	+21	44	24.49	1.2999	11.8
jul	28	2459423.75	8	11	44.97	+21	24	15.47	1.3108	11.8
jul	29	2459424.75	8	20	39.58	+21	1	36.92	1.3202	11.9
jul	30	2459425.75	8	29	30.37	+20	36	35.61	1.3283	12.0
jul	31	2459426.75	8	38	16.10	+20	9	19.36	1.3351	12.1
ago	1	2459427.75	8	46	55.68	+19	39	56.76	1.3405	12.2
ago	2	2459428.75	8	55	28.24	+19	8	36.83	1.3447	12.2
ago	3	2459429.75	9	3	53.03	+18	35	28.96	1.3476	12.3
ago	4	2459430.75	9	12	9.52	+18	0	42.54	1.3495	12.4
ago	5	2459431.75	9	20	17.28	+17	24	26.82	1.3503	12.5
ago	6	2459432.75	9	28	16.05	+16	46	50.78	1.3500	12.5
ago	7	2459433.75	9	36	5.66	+16	8	3.07	1.3489	12.6
ago	8	2459434.75	9	43	46.05	+15	28	11.87	1.3469	12.6
ago	9	2459435.75	9	51	17.24	+14	47	24.93	1.3440	12.7
ago	10	2459436.75	9	58	39.30	+14	5	49.51	1.3404	12.8
ago	11	2459437.75	10	5	52.37	+13	23	32.37	1.3361	12.8
ago	12	2459438.75	10	12	56.64	+12	40	39.79	1.3312	12.9
ago	13	2459439.75	10	19	52.29	+11	57	17.60	1.3256	12.9
ago	14	2459440.75	10	26	39.57	+11	13	31.22	1.3195	13.0
ago	15	2459441.75	10	33	18.70	+10	29	25.63	1.3129	13.0
ago	16	2459442.75	10	39	49.95	+9	45	5.47	1.3058	13.1
ago	17	2459443.75	10	46	13.55	+9	0	35.03	1.2982	13.1
ago	18	2459444.75	10	52	29.76	+8	15	58.29	1.2903	13.1

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	19	2459445.75	10	58	38.82	+7	31	18.96	1.2819	13.2
ago	20	2459446.75	11	4	40.95	+6	46	40.47	1.2731	13.2
ago	21	2459447.75	11	10	36.38	+6	2	6.05	1.2640	13.2
ago	22	2459448.75	11	16	25.32	+5	17	38.70	1.2545	13.3
ago	23	2459449.75	11	22	7.98	+4	33	21.27	1.2447	13.3
ago	24	2459450.75	11	27	44.52	+3	49	16.43	1.2346	13.3
ago	25	2459451.75	11	33	15.13	+3	5	26.75	1.2242	13.4
ago	26	2459452.75	11	38	39.94	+2	21	54.68	1.2135	13.4
ago	27	2459453.75	11	43	59.09	+1	38	42.60	1.2025	13.4
ago	28	2459454.75	11	49	12.68	+0	55	52.83	1.1912	13.4
ago	29	2459455.75	11	54	20.79	+0	13	27.66	1.1797	13.4
ago	30	2459456.75	11	59	23.50	-0	28	30.65	1.1679	13.5
ago	31	2459457.75	12	4	20.82	-1	9	59.86	1.1558	13.5
sep	1	2459458.75	12	9	12.78	-1	50	57.68	1.1435	13.5
sep	2	2459459.75	12	13	59.36	-2	31	21.80	1.1309	13.5
sep	3	2459460.75	12	18	40.51	-3	11	9.85	1.1181	13.5
sep	4	2459461.75	12	23	16.15	-3	50	19.41	1.1050	13.5
sep	5	2459462.75	12	27	46.18	-4	28	47.93	1.0917	13.5
sep	6	2459463.75	12	32	10.44	-5	6	32.75	1.0782	13.5
sep	7	2459464.75	12	36	28.76	-5	43	31.07	1.0643	13.6
sep	8	2459465.75	12	40	40.91	-6	19	39.93	1.0503	13.6
sep	9	2459466.75	12	44	46.62	-6	54	56.15	1.0360	13.6
sep	10	2459467.75	12	48	45.58	-7	29	16.34	1.0215	13.6
sep	11	2459468.75	12	52	37.41	-8	2	36.82	1.0068	13.6
sep	12	2459469.75	12	56	21.68	-8	34	53.61	0.9918	13.6
sep	13	2459470.75	12	59	57.92	-9	6	2.40	0.9766	13.6
sep	14	2459471.75	13	3	25.56	-9	35	58.44	0.9613	13.5
sep	15	2459472.75	13	6	43.99	-10	4	36.56	0.9457	13.5
sep	16	2459473.75	13	9	52.49	-10	31	51.09	0.9300	13.5
sep	17	2459474.75	13	12	50.29	-10	57	35.78	0.9142	13.5
sep	18	2459475.75	13	15	36.54	-11	21	43.76	0.8982	13.5
sep	19	2459476.75	13	18	10.27	-11	44	7.49	0.8821	13.5
sep	20	2459477.75	13	20	30.46	-12	4	38.62	0.8660	13.4
sep	21	2459478.75	13	22	35.98	-12	23	7.99	0.8498	13.4
sep	22	2459479.75	13	24	25.62	-12	39	25.51	0.8337	13.4
sep	23	2459480.75	13	25	58.08	-12	53	20.16	0.8176	13.3
sep	24	2459481.75	13	27	12.02	-13	4	39.91	0.8017	13.3
sep	25	2459482.75	13	28	6.02	-13	13	11.78	0.7860	13.2
sep	26	2459483.75	13	28	38.69	-13	18	41.88	0.7706	13.2
sep	27	2459484.75	13	28	48.63	-13	20	55.61	0.7555	13.1
sep	28	2459485.75	13	28	34.56	-13	19	37.96	0.7410	13.0
sep	29	2459486.75	13	27	55.35	-13	14	33.92	0.7272	13.0
sep	30	2459487.75	13	26	50.13	-13	5	29.19	0.7140	12.9
oct	1	2459488.75	13	25	18.42	-12	52	11.07	0.7019	12.8
oct	2	2459489.75	13	23	20.23	-12	34	29.64	0.6908	12.7
oct	3	2459490.75	13	20	56.20	-12	12	19.21	0.6810	12.6

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
oct	4	2459491.75	13	18	7.76	-11	45	39.99	0.6728	12.5
oct	5	2459492.75	13	14	57.21	-11	14	39.82	0.6662	12.4
oct	6	2459493.75	13	11	27.83	-10	39	35.80	0.6615	12.2
oct	7	2459494.75	13	7	43.89	-10	0	55.61	0.6589	12.1
oct	8	2459495.75	13	3	50.58	-9	19	18.01	0.6586	12.0
oct	9	2459496.75	12	59	53.89	-8	35	32.46	0.6607	11.8
oct	10	2459497.75	12	56	0.33	-7	50	37.54	0.6653	11.7
oct	11	2459498.75	12	52	16.66	-7	5	38.28	0.6726	11.6
oct	12	2459499.75	12	48	49.53	-6	21	42.56	0.6825	11.5
oct	13	2459500.75	12	45	45.14	-5	39	57.16	0.6951	11.3
oct	14	2459501.75	12	43	8.91	-5	1	23.84	0.7101	11.2
oct	15	2459502.75	12	41	5.24	-4	26	56.06	0.7276	11.1
oct	16	2459503.75	12	39	37.41	-3	57	16.70	0.7473	11.0
oct	17	2459504.75	12	38	47.46	-3	32	56.83	0.7689	11.0
oct	18	2459505.75	12	38	36.30	-3	14	15.59	0.7922	10.9
oct	19	2459506.75	12	39	3.76	-3	1	20.92	0.8170	10.8
oct	20	2459507.75	12	40	8.80	-2	54	10.90	0.8430	10.8
oct	21	2459508.75	12	41	49.65	-2	52	35.39	0.8698	10.8
oct	22	2459509.75	12	44	4.02	-2	56	17.86	0.8973	10.7
oct	23	2459510.75	12	46	49.26	-3	4	57.10	0.9250	10.7
oct	24	2459511.75	12	50	2.54	-3	18	8.83	0.9529	10.7
oct	25	2459512.75	12	53	40.97	-3	35	27.04	0.9806	10.7
oct	26	2459513.75	12	57	41.72	-3	56	25.11	1.0080	10.7
oct	27	2459514.75	13	2	2.08	-4	20	36.73	1.0348	10.7
oct	28	2459515.75	13	6	39.53	-4	47	36.50	1.0611	10.7
oct	29	2459516.75	13	11	31.76	-5	17	0.43	1.0867	10.7
oct	30	2459517.75	13	16	36.71	-5	48	26.18	1.1114	10.7
oct	31	2459518.75	13	21	52.53	-6	21	33.28	1.1352	10.8
nov	1	2459519.75	13	27	17.62	-6	56	3.10	1.1581	10.8
nov	2	2459520.75	13	32	50.60	-7	31	38.90	1.1800	10.8
nov	3	2459521.75	13	38	30.27	-8	8	5.70	1.2010	10.8
nov	4	2459522.75	13	44	15.63	-8	45	10.17	1.2210	10.9
nov	5	2459523.75	13	50	5.83	-9	22	40.52	1.2400	10.9
nov	6	2459524.75	13	56	0.16	-10	0	26.33	1.2580	10.9
nov	7	2459525.75	14	1	58.03	-10	38	18.42	1.2750	11.0
nov	8	2459526.75	14	7	58.95	-11	16	8.70	1.2912	11.0
nov	9	2459527.75	14	14	2.54	-11	53	50.05	1.3064	11.0
nov	10	2459528.75	14	20	8.46	-12	31	16.20	1.3207	11.1
nov	11	2459529.75	14	26	16.49	-13	8	21.61	1.3341	11.1
nov	12	2459530.75	14	32	26.41	-13	45	1.41	1.3467	11.2
nov	13	2459531.75	14	38	38.10	-14	21	11.27	1.3585	11.2
nov	14	2459532.75	14	44	51.43	-14	56	47.36	1.3694	11.2
nov	15	2459533.75	14	51	6.34	-15	31	46.23	1.3796	11.3
nov	16	2459534.75	14	57	22.77	-16	6	4.82	1.3891	11.3
nov	17	2459535.75	15	3	40.70	-16	39	40.33	1.3978	11.3
nov	18	2459536.75	15	10	0.11	-17	12	30.24	1.4057	11.4

Mercurio, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	19	2459537.75	15	16	21.00	-17	44	32.22	1.4130	11.4
nov	20	2459538.75	15	22	43.38	-18	15	44.14	1.4197	11.5
nov	21	2459539.75	15	29	7.28	-18	46	3.99	1.4256	11.5
nov	22	2459540.75	15	35	32.70	-19	15	29.91	1.4309	11.5
nov	23	2459541.75	15	41	59.68	-19	44	0.13	1.4356	11.6
nov	24	2459542.75	15	48	28.24	-20	11	32.96	1.4397	11.6
nov	25	2459543.75	15	54	58.40	-20	38	6.80	1.4431	11.7
nov	26	2459544.75	16	1	30.19	-21	3	40.07	1.4459	11.7
nov	27	2459545.75	16	8	3.63	-21	28	11.29	1.4482	11.8
nov	28	2459546.75	16	14	38.73	-21	51	39.00	1.4499	11.8
nov	29	2459547.75	16	21	15.53	-22	14	1.70	1.4509	11.8
nov	30	2459548.75	16	27	54.01	-22	35	17.79	1.4514	11.9
dic	1	2459549.75	16	34	34.17	-22	55	26.05	1.4514	11.9
dic	2	2459550.75	16	41	16.01	-23	14	25.10	1.4507	12.0
dic	3	2459551.75	16	47	59.51	-23	32	13.54	1.4495	12.0
dic	4	2459552.75	16	54	44.65	-23	48	50.00	1.4477	12.1
dic	5	2459553.75	17	1	31.38	-24	4	13.12	1.4454	12.1
dic	6	2459554.75	17	8	19.65	-24	18	21.54	1.4425	12.2
dic	7	2459555.75	17	15	9.39	-24	31	13.92	1.4390	12.2
dic	8	2459556.75	17	22	0.54	-24	42	48.90	1.4349	12.3
dic	9	2459557.75	17	28	52.99	-24	53	5.16	1.4303	12.3
dic	10	2459558.75	17	35	46.67	-25	2	1.40	1.4250	12.4
dic	11	2459559.75	17	42	41.44	-25	9	36.34	1.4192	12.4
dic	12	2459560.75	17	49	37.19	-25	15	48.73	1.4127	12.5
dic	13	2459561.75	17	56	33.76	-25	20	37.36	1.4057	12.5
dic	14	2459562.75	18	3	30.99	-25	24	1.08	1.3980	12.6
dic	15	2459563.75	18	10	28.70	-25	25	58.76	1.3897	12.6
dic	16	2459564.75	18	17	26.67	-25	26	29.37	1.3807	12.7
dic	17	2459565.75	18	24	24.67	-25	25	31.93	1.3711	12.7
dic	18	2459566.75	18	31	22.43	-25	23	5.55	1.3608	12.8
dic	19	2459567.75	18	38	19.66	-25	19	9.47	1.3498	12.8
dic	20	2459568.75	18	45	16.03	-25	13	43.04	1.3381	12.9
dic	21	2459569.75	18	52	11.17	-25	6	45.76	1.3256	12.9
dic	22	2459570.75	18	59	4.66	-24	58	17.34	1.3125	13.0
dic	23	2459571.75	19	5	56.05	-24	48	17.68	1.2985	13.0
dic	24	2459572.75	19	12	44.80	-24	36	46.97	1.2838	13.1
dic	25	2459573.75	19	19	30.34	-24	23	45.68	1.2683	13.1
dic	26	2459574.75	19	26	12.01	-24	9	14.69	1.2520	13.2
dic	27	2459575.75	19	32	49.07	-23	53	15.28	1.2348	13.2
dic	28	2459576.75	19	39	20.68	-23	35	49.28	1.2169	13.2
dic	29	2459577.75	19	45	45.90	-23	16	59.13	1.1980	13.3
dic	30	2459578.75	19	52	3.66	-22	56	47.99	1.1783	13.3
dic	31	2459579.75	19	58	12.74	-22	35	19.85	1.1577	13.4

Venus, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2459215.75	17	19	49.34	-22	27	58.15	1.5607	10.6
ene	2	2459216.75	17	25	13.34	-22	35	19.30	1.5643	10.7
ene	3	2459217.75	17	30	37.94	-22	41	59.74	1.5678	10.7
ene	4	2459218.75	17	36	3.09	-22	47	59.12	1.5712	10.7
ene	5	2459219.75	17	41	28.73	-22	53	17.13	1.5747	10.7
ene	6	2459220.75	17	46	54.80	-22	57	53.47	1.5781	10.8
ene	7	2459221.75	17	52	21.27	-23	1	47.87	1.5814	10.8
ene	8	2459222.75	17	57	48.06	-23	5	0.13	1.5847	10.8
ene	9	2459223.75	18	3	15.12	-23	7	30.04	1.5880	10.8
ene	10	2459224.75	18	8	42.38	-23	9	17.47	1.5912	10.9
ene	11	2459225.75	18	14	9.79	-23	10	22.30	1.5944	10.9
ene	12	2459226.75	18	19	37.28	-23	10	44.43	1.5976	10.9
ene	13	2459227.75	18	25	4.77	-23	10	23.82	1.6007	10.9
ene	14	2459228.75	18	30	32.22	-23	9	20.43	1.6038	11.0
ene	15	2459229.75	18	35	59.54	-23	7	34.27	1.6068	11.0
ene	16	2459230.75	18	41	26.69	-23	5	5.38	1.6098	11.0
ene	17	2459231.75	18	46	53.59	-23	1	53.83	1.6128	11.0
ene	18	2459232.75	18	52	20.20	-22	57	59.75	1.6157	11.1
ene	19	2459233.75	18	57	46.45	-22	53	23.26	1.6186	11.1
ene	20	2459234.75	19	3	12.28	-22	48	4.57	1.6215	11.1
ene	21	2459235.75	19	8	37.65	-22	42	3.87	1.6243	11.1
ene	22	2459236.75	19	14	2.50	-22	35	21.43	1.6271	11.2
ene	23	2459237.75	19	19	26.77	-22	27	57.52	1.6298	11.2
ene	24	2459238.75	19	24	50.42	-22	19	52.44	1.6325	11.2
ene	25	2459239.75	19	30	13.40	-22	11	6.55	1.6352	11.2
ene	26	2459240.75	19	35	35.66	-22	1	40.20	1.6378	11.3
ene	27	2459241.75	19	40	57.15	-21	51	33.78	1.6404	11.3
ene	28	2459242.75	19	46	17.84	-21	40	47.71	1.6429	11.3
ene	29	2459243.75	19	51	37.67	-21	29	22.42	1.6455	11.3
ene	30	2459244.75	19	56	56.62	-21	17	18.36	1.6479	11.4
ene	31	2459245.75	20	2	14.65	-21	4	36.00	1.6504	11.4
feb	1	2459246.75	20	7	31.72	-20	51	15.82	1.6528	11.4
feb	2	2459247.75	20	12	47.81	-20	37	18.35	1.6552	11.4
feb	3	2459248.75	20	18	2.89	-20	22	44.10	1.6575	11.4
feb	4	2459249.75	20	23	16.93	-20	7	33.64	1.6598	11.5
feb	5	2459250.75	20	28	29.91	-19	51	47.56	1.6620	11.5
feb	6	2459251.75	20	33	41.81	-19	35	26.46	1.6643	11.5
feb	7	2459252.75	20	38	52.60	-19	18	30.96	1.6664	11.5
feb	8	2459253.75	20	44	2.27	-19	1	1.72	1.6686	11.5
feb	9	2459254.75	20	49	10.79	-18	42	59.39	1.6707	11.6
feb	10	2459255.75	20	54	18.16	-18	24	24.64	1.6727	11.6
feb	11	2459256.75	20	59	24.34	-18	5	18.16	1.6748	11.6
feb	12	2459257.75	21	4	29.34	-17	45	40.62	1.6767	11.6
feb	13	2459258.75	21	9	33.15	-17	25	32.73	1.6787	11.6
feb	14	2459259.75	21	14	35.76	-17	4	55.19	1.6806	11.7
feb	15	2459260.75	21	19	37.18	-16	43	48.71	1.6824	11.7

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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	16	2459261.75	21	24	37.40	-16	22	14.01	1.6843	11.7
feb	17	2459262.75	21	29	36.43	-16	0	11.84	1.6860	11.7
feb	18	2459263.75	21	34	34.28	-15	37	42.93	1.6878	11.7
feb	19	2459264.75	21	39	30.96	-15	14	48.01	1.6895	11.7
feb	20	2459265.75	21	44	26.48	-14	51	27.85	1.6912	11.8
feb	21	2459266.75	21	49	20.84	-14	27	43.19	1.6928	11.8
feb	22	2459267.75	21	54	14.07	-14	3	34.78	1.6944	11.8
feb	23	2459268.75	21	59	6.18	-13	39	3.39	1.6959	11.8
feb	24	2459269.75	22	3	57.20	-13	14	9.77	1.6974	11.8
feb	25	2459270.75	22	8	47.13	-12	48	54.67	1.6989	11.8
feb	26	2459271.75	22	13	36.01	-12	23	18.85	1.7003	11.9
feb	27	2459272.75	22	18	23.85	-11	57	23.04	1.7017	11.9
feb	28	2459273.75	22	23	10.69	-11	31	7.99	1.7030	11.9
mar	1	2459274.75	22	27	56.55	-11	4	34.41	1.7044	11.9
mar	2	2459275.75	22	32	41.47	-10	37	43.05	1.7056	11.9
mar	3	2459276.75	22	37	25.48	-10	10	34.62	1.7068	11.9
mar	4	2459277.75	22	42	8.61	-9	43	9.87	1.7080	11.9
mar	5	2459278.75	22	46	50.89	-9	15	29.54	1.7092	12.0
mar	6	2459279.75	22	51	32.37	-8	47	34.38	1.7103	12.0
mar	7	2459280.75	22	56	13.06	-8	19	25.15	1.7114	12.0
mar	8	2459281.75	23	0	52.99	-7	51	2.60	1.7124	12.0
mar	9	2459282.75	23	5	32.21	-7	22	27.50	1.7133	12.0
mar	10	2459283.75	23	10	10.75	-6	53	40.60	1.7143	12.0
mar	11	2459284.75	23	14	48.63	-6	24	42.65	1.7152	12.0
mar	12	2459285.75	23	19	25.89	-5	55	34.40	1.7160	12.0
mar	13	2459286.75	23	24	2.57	-5	26	16.59	1.7168	12.0
mar	14	2459287.75	23	28	38.71	-4	56	49.98	1.7176	12.1
mar	15	2459288.75	23	33	14.35	-4	27	15.30	1.7183	12.1
mar	16	2459289.75	23	37	49.53	-3	57	33.29	1.7189	12.1
mar	17	2459290.75	23	42	24.27	-3	27	44.70	1.7196	12.1
mar	18	2459291.75	23	46	58.64	-2	57	50.26	1.7201	12.1
mar	19	2459292.75	23	51	32.65	-2	27	50.71	1.7207	12.1
mar	20	2459293.75	23	56	6.37	-1	57	46.79	1.7212	12.1
mar	21	2459294.75	0	0	39.81	-1	27	39.24	1.7216	12.1
mar	22	2459295.75	0	5	13.04	-0	57	28.79	1.7220	12.1
mar	23	2459296.75	0	9	46.08	-0	27	16.17	1.7223	12.1
mar	24	2459297.75	0	14	18.98	+0	2	57.88	1.7226	12.2
mar	25	2459298.75	0	18	51.78	+0	33	12.65	1.7229	12.2
mar	26	2459299.75	0	23	24.52	+1	3	27.40	1.7231	12.2
mar	27	2459300.75	0	27	57.25	+1	33	41.44	1.7233	12.2
mar	28	2459301.75	0	32	30.00	+2	3	54.03	1.7234	12.2
mar	29	2459302.75	0	37	2.83	+2	34	4.49	1.7234	12.2
mar	30	2459303.75	0	41	35.78	+3	4	12.12	1.7235	12.2
mar	31	2459304.75	0	46	8.91	+3	34	16.22	1.7234	12.2
abr	1	2459305.75	0	50	42.24	+4	4	16.10	1.7234	12.2
abr	2	2459306.75	0	55	15.84	+4	34	11.05	1.7233	12.3

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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	3	2459307.75	0	59	49.73	+5	4	0.34	1.7231	12.3
abr	4	2459308.75	1	4	23.95	+5	33	43.24	1.7229	12.3
abr	5	2459309.75	1	8	58.55	+6	3	19.04	1.7226	12.3
abr	6	2459310.75	1	13	33.57	+6	32	46.97	1.7223	12.3
abr	7	2459311.75	1	18	9.04	+7	2	6.32	1.7219	12.3
abr	8	2459312.75	1	22	44.99	+7	31	16.33	1.7215	12.3
abr	9	2459313.75	1	27	21.48	+8	0	16.26	1.7211	12.3
abr	10	2459314.75	1	31	58.53	+8	29	5.38	1.7205	12.3
abr	11	2459315.75	1	36	36.18	+8	57	42.94	1.7200	12.3
abr	12	2459316.75	1	41	14.47	+9	26	8.20	1.7194	12.4
abr	13	2459317.75	1	45	53.43	+9	54	20.42	1.7187	12.4
abr	14	2459318.75	1	50	33.09	+10	22	18.84	1.7180	12.4
abr	15	2459319.75	1	55	13.50	+10	50	2.72	1.7172	12.4
abr	16	2459320.75	1	59	54.67	+11	17	31.30	1.7163	12.4
abr	17	2459321.75	2	4	36.64	+11	44	43.84	1.7155	12.4
abr	18	2459322.75	2	9	19.44	+12	11	39.58	1.7145	12.4
abr	19	2459323.75	2	14	3.09	+12	38	17.75	1.7135	12.4
abr	20	2459324.75	2	18	47.63	+13	4	37.61	1.7125	12.5
abr	21	2459325.75	2	23	33.07	+13	30	38.40	1.7114	12.5
abr	22	2459326.75	2	28	19.44	+13	56	19.36	1.7102	12.5
abr	23	2459327.75	2	33	6.76	+14	21	39.74	1.7090	12.5
abr	24	2459328.75	2	37	55.06	+14	46	38.78	1.7078	12.5
abr	25	2459329.75	2	42	44.36	+15	11	15.75	1.7064	12.5
abr	26	2459330.75	2	47	34.69	+15	35	29.92	1.7051	12.5
abr	27	2459331.75	2	52	26.06	+15	59	20.58	1.7037	12.6
abr	28	2459332.75	2	57	18.50	+16	22	47.02	1.7022	12.6
abr	29	2459333.75	3	2	12.02	+16	45	48.51	1.7006	12.6
abr	30	2459334.75	3	7	6.63	+17	8	24.36	1.6991	12.6
may	1	2459335.75	3	12	2.36	+17	30	33.84	1.6974	12.6
may	2	2459336.75	3	16	59.19	+17	52	16.21	1.6957	12.6
may	3	2459337.75	3	21	57.15	+18	13	30.76	1.6940	12.7
may	4	2459338.75	3	26	56.23	+18	34	16.75	1.6922	12.7
may	5	2459339.75	3	31	56.43	+18	54	33.48	1.6903	12.7
may	6	2459340.75	3	36	57.75	+19	14	20.21	1.6884	12.7
may	7	2459341.75	3	42	0.20	+19	33	36.27	1.6864	12.7
may	8	2459342.75	3	47	3.76	+19	52	20.94	1.6844	12.7
may	9	2459343.75	3	52	8.42	+20	10	33.55	1.6823	12.8
may	10	2459344.75	3	57	14.18	+20	28	13.43	1.6802	12.8
may	11	2459345.75	4	2	21.02	+20	45	19.93	1.6780	12.8
may	12	2459346.75	4	7	28.92	+21	1	52.38	1.6757	12.8
may	13	2459347.75	4	12	37.86	+21	17	50.17	1.6734	12.8
may	14	2459348.75	4	17	47.82	+21	33	12.67	1.6710	12.9
may	15	2459349.75	4	22	58.77	+21	47	59.29	1.6686	12.9
may	16	2459350.75	4	28	10.68	+22	2	9.42	1.6661	12.9
may	17	2459351.75	4	33	23.52	+22	15	42.50	1.6636	12.9
may	18	2459352.75	4	38	37.26	+22	28	37.97	1.6610	13.0

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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	19	2459353.75	4	43	51.85	+22	40	55.31	1.6583	13.0
may	20	2459354.75	4	49	7.26	+22	52	33.99	1.6556	13.0
may	21	2459355.75	4	54	23.45	+23	3	33.53	1.6528	13.0
may	22	2459356.75	4	59	40.38	+23	13	53.46	1.6500	13.0
may	23	2459357.75	5	4	58.00	+23	23	33.34	1.6471	13.1
may	24	2459358.75	5	10	16.27	+23	32	32.77	1.6441	13.1
may	25	2459359.75	5	15	35.15	+23	40	51.39	1.6411	13.1
may	26	2459360.75	5	20	54.59	+23	48	28.85	1.6380	13.1
may	27	2459361.75	5	26	14.54	+23	55	24.85	1.6349	13.2
may	28	2459362.75	5	31	34.95	+24	1	39.11	1.6318	13.2
may	29	2459363.75	5	36	55.77	+24	7	11.36	1.6285	13.2
may	30	2459364.75	5	42	16.93	+24	12	1.36	1.6252	13.2
may	31	2459365.75	5	47	38.39	+24	16	8.87	1.6219	13.2
jun	1	2459366.75	5	53	0.07	+24	19	33.70	1.6185	13.3
jun	2	2459367.75	5	58	21.94	+24	22	15.69	1.6151	13.3
jun	3	2459368.75	6	3	43.92	+24	24	14.71	1.6115	13.3
jun	4	2459369.75	6	9	5.96	+24	25	30.66	1.6080	13.3
jun	5	2459370.75	6	14	27.99	+24	26	3.47	1.6044	13.4
jun	6	2459371.75	6	19	49.96	+24	25	53.11	1.6007	13.4
jun	7	2459372.75	6	25	11.81	+24	24	59.59	1.5970	13.4
jun	8	2459373.75	6	30	33.46	+24	23	22.93	1.5932	13.4
jun	9	2459374.75	6	35	54.86	+24	21	3.22	1.5893	13.5
jun	10	2459375.75	6	41	15.94	+24	18	0.55	1.5854	13.5
jun	11	2459376.75	6	46	36.64	+24	14	15.06	1.5815	13.5
jun	12	2459377.75	6	51	56.91	+24	9	46.91	1.5775	13.5
jun	13	2459378.75	6	57	16.66	+24	4	36.30	1.5734	13.6
jun	14	2459379.75	7	2	35.85	+23	58	43.45	1.5693	13.6
jun	15	2459380.75	7	7	54.41	+23	52	8.61	1.5651	13.6
jun	16	2459381.75	7	13	12.29	+23	44	52.06	1.5609	13.6
jun	17	2459382.75	7	18	29.43	+23	36	54.12	1.5566	13.6
jun	18	2459383.75	7	23	45.78	+23	28	15.11	1.5523	13.7
jun	19	2459384.75	7	29	1.28	+23	18	55.40	1.5479	13.7
jun	20	2459385.75	7	34	15.89	+23	8	55.39	1.5434	13.7
jun	21	2459386.75	7	39	29.57	+22	58	15.50	1.5389	13.7
jun	22	2459387.75	7	44	42.28	+22	46	56.17	1.5344	13.8
jun	23	2459388.75	7	49	53.96	+22	34	57.90	1.5298	13.8
jun	24	2459389.75	7	55	4.60	+22	22	21.18	1.5251	13.8
jun	25	2459390.75	8	0	14.14	+22	9	6.53	1.5204	13.8
jun	26	2459391.75	8	5	22.57	+21	55	14.48	1.5157	13.8
jun	27	2459392.75	8	10	29.84	+21	40	45.57	1.5109	13.9
jun	28	2459393.75	8	15	35.92	+21	25	40.36	1.5061	13.9
jun	29	2459394.75	8	20	40.81	+21	9	59.39	1.5012	13.9
jun	30	2459395.75	8	25	44.47	+20	53	43.24	1.4962	13.9
jul	1	2459396.75	8	30	46.89	+20	36	52.51	1.4913	13.9
jul	2	2459397.75	8	35	48.05	+20	19	27.81	1.4862	13.9
jul	3	2459398.75	8	40	47.94	+20	1	29.76	1.4811	14.0

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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	4	2459399.75	8	45	46.53	+19	42	59.00	1.4760	14.0
jul	5	2459400.75	8	50	43.84	+19	23	56.20	1.4709	14.0
jul	6	2459401.75	8	55	39.83	+19	4	22.00	1.4656	14.0
jul	7	2459402.75	9	0	34.51	+18	44	17.10	1.4604	14.0
jul	8	2459403.75	9	5	27.88	+18	23	42.17	1.4551	14.0
jul	9	2459404.75	9	10	19.91	+18	2	37.91	1.4497	14.1
jul	10	2459405.75	9	15	10.63	+17	41	5.03	1.4443	14.1
jul	11	2459406.75	9	20	0.01	+17	19	4.23	1.4389	14.1
jul	12	2459407.75	9	24	48.07	+16	56	36.23	1.4334	14.1
jul	13	2459408.75	9	29	34.81	+16	33	41.75	1.4278	14.1
jul	14	2459409.75	9	34	20.23	+16	10	21.51	1.4222	14.1
jul	15	2459410.75	9	39	4.34	+15	46	36.22	1.4166	14.1
jul	16	2459411.75	9	43	47.16	+15	22	26.62	1.4110	14.2
jul	17	2459412.75	9	48	28.69	+14	57	53.42	1.4052	14.2
jul	18	2459413.75	9	53	8.96	+14	32	57.36	1.3995	14.2
jul	19	2459414.75	9	57	47.97	+14	7	39.17	1.3937	14.2
jul	20	2459415.75	10	2	25.75	+13	41	59.58	1.3879	14.2
jul	21	2459416.75	10	7	2.32	+13	15	59.34	1.3820	14.2
jul	22	2459417.75	10	11	37.70	+12	49	39.18	1.3761	14.2
jul	23	2459418.75	10	16	11.91	+12	22	59.83	1.3701	14.2
jul	24	2459419.75	10	20	44.98	+11	56	2.01	1.3642	14.3
jul	25	2459420.75	10	25	16.94	+11	28	46.42	1.3581	14.3
jul	26	2459421.75	10	29	47.80	+11	1	13.77	1.3521	14.3
jul	27	2459422.75	10	34	17.62	+10	33	24.74	1.3460	14.3
jul	28	2459423.75	10	38	46.41	+10	5	20.01	1.3399	14.3
jul	29	2459424.75	10	43	14.21	+9	37	0.27	1.3337	14.3
jul	30	2459425.75	10	47	41.06	+9	8	26.19	1.3275	14.3
jul	31	2459426.75	10	52	6.99	+8	39	38.47	1.3213	14.3
ago	1	2459427.75	10	56	32.04	+8	10	37.79	1.3150	14.3
ago	2	2459428.75	11	0	56.23	+7	41	24.84	1.3087	14.3
ago	3	2459429.75	11	5	19.61	+7	12	0.30	1.3024	14.3
ago	4	2459430.75	11	9	42.21	+6	42	24.85	1.2960	14.3
ago	5	2459431.75	11	14	4.06	+6	12	39.20	1.2896	14.4
ago	6	2459432.75	11	18	25.19	+5	42	44.02	1.2832	14.4
ago	7	2459433.75	11	22	45.65	+5	12	40.00	1.2768	14.4
ago	8	2459434.75	11	27	5.45	+4	42	27.84	1.2703	14.4
ago	9	2459435.75	11	31	24.65	+4	12	8.22	1.2638	14.4
ago	10	2459436.75	11	35	43.26	+3	41	41.83	1.2572	14.4
ago	11	2459437.75	11	40	1.33	+3	11	9.35	1.2506	14.4
ago	12	2459438.75	11	44	18.90	+2	40	31.48	1.2440	14.4
ago	13	2459439.75	11	48	35.99	+2	9	48.88	1.2374	14.4
ago	14	2459440.75	11	52	52.64	+1	39	2.26	1.2307	14.4
ago	15	2459441.75	11	57	8.89	+1	8	12.27	1.2240	14.4
ago	16	2459442.75	12	1	24.78	+0	37	19.62	1.2173	14.4
ago	17	2459443.75	12	5	40.34	+0	6	24.98	1.2105	14.4
ago	18	2459444.75	12	9	55.60	-0	24	30.96	1.2038	14.4

Venus, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	19	2459445.75	12	14	10.60	-0	55	27.51	1.1969	14.4
ago	20	2459446.75	12	18	25.37	-1	26	24.02	1.1901	14.4
ago	21	2459447.75	12	22	39.96	-1	57	19.80	1.1833	14.4
ago	22	2459448.75	12	26	54.40	-2	28	14.21	1.1764	14.4
ago	23	2459449.75	12	31	8.72	-2	59	6.60	1.1695	14.5
ago	24	2459450.75	12	35	22.97	-3	29	56.34	1.1626	14.5
ago	25	2459451.75	12	39	37.20	-4	0	42.80	1.1556	14.5
ago	26	2459452.75	12	43	51.43	-4	31	25.35	1.1486	14.5
ago	27	2459453.75	12	48	5.71	-5	2	3.35	1.1416	14.5
ago	28	2459454.75	12	52	20.07	-5	32	36.19	1.1346	14.5
ago	29	2459455.75	12	56	34.56	-6	3	3.21	1.1276	14.5
ago	30	2459456.75	13	0	49.21	-6	33	23.79	1.1206	14.5
ago	31	2459457.75	13	5	4.05	-7	3	37.28	1.1135	14.5
sep	1	2459458.75	13	9	19.12	-7	33	43.03	1.1064	14.5
sep	2	2459459.75	13	13	34.45	-8	3	40.39	1.0993	14.5
sep	3	2459460.75	13	17	50.08	-8	33	28.71	1.0921	14.5
sep	4	2459461.75	13	22	6.02	-9	3	7.33	1.0850	14.5
sep	5	2459462.75	13	26	22.31	-9	32	35.58	1.0778	14.5
sep	6	2459463.75	13	30	38.99	-10	1	52.79	1.0706	14.5
sep	7	2459464.75	13	34	56.07	-10	30	58.30	1.0634	14.5
sep	8	2459465.75	13	39	13.58	-10	59	51.43	1.0562	14.5
sep	9	2459466.75	13	43	31.54	-11	28	31.49	1.0490	14.5
sep	10	2459467.75	13	47	49.99	-11	56	57.82	1.0417	14.5
sep	11	2459468.75	13	52	8.93	-12	25	9.72	1.0344	14.6
sep	12	2459469.75	13	56	28.40	-12	53	6.52	1.0271	14.6
sep	13	2459470.75	14	0	48.40	-13	20	47.53	1.0198	14.6
sep	14	2459471.75	14	5	8.95	-13	48	12.06	1.0125	14.6
sep	15	2459472.75	14	9	30.06	-14	15	19.40	1.0051	14.6
sep	16	2459473.75	14	13	51.75	-14	42	8.88	0.9978	14.6
sep	17	2459474.75	14	18	14.03	-15	8	39.81	0.9904	14.6
sep	18	2459475.75	14	22	36.90	-15	34	51.52	0.9830	14.6
sep	19	2459476.75	14	27	0.39	-16	0	43.34	0.9756	14.6
sep	20	2459477.75	14	31	24.50	-16	26	14.63	0.9681	14.6
sep	21	2459478.75	14	35	49.25	-16	51	24.73	0.9607	14.6
sep	22	2459479.75	14	40	14.64	-17	16	13.03	0.9533	14.6
sep	23	2459480.75	14	44	40.68	-17	40	38.89	0.9458	14.6
sep	24	2459481.75	14	49	7.38	-18	4	41.70	0.9383	14.6
sep	25	2459482.75	14	53	34.74	-18	28	20.85	0.9309	14.7
sep	26	2459483.75	14	58	2.75	-18	51	35.72	0.9234	14.7
sep	27	2459484.75	15	2	31.43	-19	14	25.70	0.9159	14.7
sep	28	2459485.75	15	7	0.76	-19	36	50.20	0.9084	14.7
sep	29	2459486.75	15	11	30.73	-19	58	48.61	0.9009	14.7
sep	30	2459487.75	15	16	1.34	-20	20	20.34	0.8933	14.7
oct	1	2459488.75	15	20	32.56	-20	41	24.80	0.8858	14.7
oct	2	2459489.75	15	25	4.38	-21	2	1.40	0.8782	14.7
oct	3	2459490.75	15	29	36.79	-21	22	9.57	0.8707	14.7

Venus, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
oct	4	2459491.75	15	34	9.75	-21	41	48.73	0.8631	14.7
oct	5	2459492.75	15	38	43.25	-22	0	58.32	0.8556	14.8
oct	6	2459493.75	15	43	17.25	-22	19	37.79	0.8480	14.8
oct	7	2459494.75	15	47	51.71	-22	37	46.61	0.8404	14.8
oct	8	2459495.75	15	52	26.60	-22	55	24.24	0.8328	14.8
oct	9	2459496.75	15	57	1.88	-23	12	30.18	0.8252	14.8
oct	10	2459497.75	16	1	37.50	-23	29	3.93	0.8176	14.8
oct	11	2459498.75	16	6	13.39	-23	45	5.01	0.8099	14.8
oct	12	2459499.75	16	10	49.50	-24	0	32.95	0.8023	14.8
oct	13	2459500.75	16	15	25.78	-24	15	27.30	0.7947	14.8
oct	14	2459501.75	16	20	2.14	-24	29	47.63	0.7870	14.9
oct	15	2459502.75	16	24	38.54	-24	43	33.54	0.7794	14.9
oct	16	2459503.75	16	29	14.90	-24	56	44.66	0.7717	14.9
oct	17	2459504.75	16	33	51.15	-25	9	20.65	0.7641	14.9
oct	18	2459505.75	16	38	27.22	-25	21	21.20	0.7564	14.9
oct	19	2459506.75	16	43	3.05	-25	32	46.05	0.7488	14.9
oct	20	2459507.75	16	47	38.55	-25	43	34.96	0.7411	14.9
oct	21	2459508.75	16	52	13.64	-25	53	47.71	0.7334	14.9
oct	22	2459509.75	16	56	48.26	-26	3	24.15	0.7258	14.9
oct	23	2459510.75	17	1	22.30	-26	12	24.12	0.7181	14.9
oct	24	2459511.75	17	5	55.69	-26	20	47.51	0.7105	15.0
oct	25	2459512.75	17	10	28.34	-26	28	34.25	0.7028	15.0
oct	26	2459513.75	17	15	0.14	-26	35	44.28	0.6951	15.0
oct	27	2459514.75	17	19	31.01	-26	42	17.57	0.6875	15.0
oct	28	2459515.75	17	24	0.85	-26	48	14.15	0.6798	15.0
oct	29	2459516.75	17	28	29.55	-26	53	34.05	0.6722	15.0
oct	30	2459517.75	17	32	57.00	-26	58	17.33	0.6646	15.0
oct	31	2459518.75	17	37	23.11	-27	2	24.11	0.6569	15.0
nov	1	2459519.75	17	41	47.76	-27	5	54.51	0.6493	15.0
nov	2	2459520.75	17	46	10.83	-27	8	48.69	0.6417	15.0
nov	3	2459521.75	17	50	32.22	-27	11	6.88	0.6341	15.0
nov	4	2459522.75	17	54	51.80	-27	12	49.29	0.6264	15.1
nov	5	2459523.75	17	59	9.44	-27	13	56.22	0.6188	15.1
nov	6	2459524.75	18	3	25.01	-27	14	27.98	0.6113	15.1
nov	7	2459525.75	18	7	38.38	-27	14	24.95	0.6037	15.1
nov	8	2459526.75	18	11	49.40	-27	13	47.50	0.5961	15.1
nov	9	2459527.75	18	15	57.91	-27	12	36.06	0.5886	15.1
nov	10	2459528.75	18	20	3.77	-27	10	51.09	0.5810	15.1
nov	11	2459529.75	18	24	6.82	-27	8	33.06	0.5735	15.1
nov	12	2459530.75	18	28	6.91	-27	5	42.52	0.5660	15.1
nov	13	2459531.75	18	32	3.89	-27	2	20.02	0.5585	15.1
nov	14	2459532.75	18	35	57.61	-26	58	26.18	0.5510	15.1
nov	15	2459533.75	18	39	47.90	-26	54	1.62	0.5435	15.1
nov	16	2459534.75	18	43	34.62	-26	49	7.03	0.5361	15.1
nov	17	2459535.75	18	47	17.59	-26	43	43.14	0.5287	15.1
nov	18	2459536.75	18	50	56.67	-26	37	50.69	0.5213	15.1

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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
nov	19	2459537.75	18	54	31.69	-26	31	30.45	0.5139	15.1
nov	20	2459538.75	18	58	2.48	-26	24	43.25	0.5066	15.1
nov	21	2459539.75	19	1	28.86	-26	17	29.93	0.4993	15.0
nov	22	2459540.75	19	4	50.68	-26	9	51.33	0.4920	15.0
nov	23	2459541.75	19	8	7.75	-26	1	48.36	0.4848	15.0
nov	24	2459542.75	19	11	19.88	-25	53	21.91	0.4776	15.0
nov	25	2459543.75	19	14	26.90	-25	44	32.92	0.4705	15.0
nov	26	2459544.75	19	17	28.62	-25	35	22.33	0.4634	15.0
nov	27	2459545.75	19	20	24.85	-25	25	51.10	0.4563	15.0
nov	28	2459546.75	19	23	15.39	-25	16	0.21	0.4493	14.9
nov	29	2459547.75	19	26	0.04	-25	5	50.65	0.4423	14.9
nov	30	2459548.75	19	28	38.59	-24	55	23.43	0.4354	14.9
dic	1	2459549.75	19	31	10.84	-24	44	39.58	0.4286	14.9
dic	2	2459550.75	19	33	36.56	-24	33	40.13	0.4218	14.9
dic	3	2459551.75	19	35	55.53	-24	22	26.17	0.4151	14.8
dic	4	2459552.75	19	38	7.50	-24	10	58.79	0.4084	14.8
dic	5	2459553.75	19	40	12.24	-23	59	19.10	0.4019	14.8
dic	6	2459554.75	19	42	9.47	-23	47	28.23	0.3954	14.7
dic	7	2459555.75	19	43	58.94	-23	35	27.32	0.3889	14.7
dic	8	2459556.75	19	45	40.38	-23	23	17.48	0.3826	14.7
dic	9	2459557.75	19	47	13.52	-23	10	59.86	0.3763	14.6
dic	10	2459558.75	19	48	38.09	-22	58	35.57	0.3702	14.6
dic	11	2459559.75	19	49	53.83	-22	46	5.74	0.3641	14.5
dic	12	2459560.75	19	51	0.50	-22	33	31.48	0.3582	14.5
dic	13	2459561.75	19	51	57.83	-22	20	53.91	0.3523	14.4
dic	14	2459562.75	19	52	45.60	-22	8	14.10	0.3466	14.4
dic	15	2459563.75	19	53	23.57	-21	55	33.16	0.3410	14.3
dic	16	2459564.75	19	53	51.55	-21	42	52.12	0.3356	14.3
dic	17	2459565.75	19	54	9.32	-21	30	12.03	0.3303	14.2
dic	18	2459566.75	19	54	16.74	-21	17	33.88	0.3251	14.1
dic	19	2459567.75	19	54	13.66	-21	4	58.67	0.3201	14.1
dic	20	2459568.75	19	53	59.96	-20	52	27.34	0.3153	14.0
dic	21	2459569.75	19	53	35.59	-20	40	0.79	0.3106	13.9
dic	22	2459570.75	19	53	0.51	-20	27	39.93	0.3061	13.9
dic	23	2459571.75	19	52	14.75	-20	15	25.58	0.3018	13.8
dic	24	2459572.75	19	51	18.39	-20	3	18.60	0.2977	13.7
dic	25	2459573.75	19	50	11.57	-19	51	19.77	0.2939	13.6
dic	26	2459574.75	19	48	54.48	-19	39	29.88	0.2902	13.5
dic	27	2459575.75	19	47	27.41	-19	27	49.72	0.2868	13.4
dic	28	2459576.75	19	45	50.69	-19	16	20.08	0.2835	13.4
dic	29	2459577.75	19	44	4.75	-19	5	1.75	0.2806	13.3
dic	30	2459578.75	1 9	42	10.08	-18	53	55.57	0.2779	13.2
dic	31	2459579.75	19	40	7.25	-18	43	2.40	0.2754	13.1

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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	2459215.75	1	40	42.39	+11	23	17.79	0.9008	19.0
ene	2	2459216.75	1	42	20.16	+11	33	45.79	0.9099	18.9
ene	3	2459217.75	1	43	59.14	+11	44	16.12	0.9190	18.9
ene	4	2459218.75	1	45	39.30	+11	54	48.57	0.9282	18.9
ene	5	2459219.75	1	47	20.63	+12	5	22.97	0.9373	18.8
ene	6	2459220.75	1	49	3.12	+12	15	59.13	0.9465	18.8
ene	7	2459221.75	1	50	46.75	+12	26	36.87	0.9558	18.8
ene	8	2459222.75	1	52	31.50	+12	37	16.05	0.9651	18.7
ene	9	2459223.75	1	54	17.36	+12	47	56.50	0.9744	18.7
ene	10	2459224.75	1	56	4.31	+12	58	38.07	0.9837	18.7
ene	11	2459225.75	1	57	52.34	+13	9	20.58	0.9931	18.6
ene	12	2459226.75	1	59	41.43	+13	20	3.86	1.0025	18.6
ene	13	2459227.75	2	1	31.57	+13	30	47.73	1.0119	18.5
ene	14	2459228.75	2	3	22.72	+13	41	31.99	1.0214	18.5
ene	15	2459229.75	2	5	14.88	+13	52	16.44	1.0308	18.5
ene	16	2459230.75	2	7	8.02	+14	3	0.87	1.0403	18.4
ene	17	2459231.75	2	9	2.13	+14	13	45.09	1.0498	18.4
ene	18	2459232.75	2	10	57.19	+14	24	28.91	1.0594	18.4
ene	19	2459233.75	2	12	53.18	+14	35	12.12	1.0689	18.3
ene	20	2459234.75	2	14	50.09	+14	45	54.53	1.0785	18.3
ene	21	2459235.75	2	16	47.89	+14	56	35.96	1.0881	18.3
ene	22	2459236.75	2	18	46.57	+15	7	16.20	1.0977	18.2
ene	23	2459237.75	2	20	46.12	+15	17	55.07	1.1073	18.2
ene	24	2459238.75	2	22	46.52	+15	28	32.38	1.1170	18.2
ene	25	2459239.75	2	24	47.75	+15	39	7.94	1.1266	18.1
ene	26	2459240.75	2	26	49.80	+15	49	41.57	1.1363	18.1
ene	27	2459241.75	2	28	52.65	+16	0	13.08	1.1460	18.1
ene	28	2459242.75	2	30	56.28	+16	10	42.28	1.1557	18.1
ene	29	2459243.75	2	33	0.69	+16	21	8.99	1.1654	18.0
ene	30	2459244.75	2	35	5.86	+16	31	33.04	1.1751	18.0
ene	31	2459245.75	2	37	11.78	+16	41	54.26	1.1849	18.0
feb	1	2459246.75	2	39	18.43	+16	52	12.50	1.1946	17.9
feb	2	2459247.75	2	41	25.83	+17	2	27.61	1.2044	17.9
feb	3	2459248.75	2	43	33.96	+17	12	39.46	1.2141	17.9
feb	4	2459249.75	2	45	42.81	+17	22	47.94	1.2239	17.8
feb	5	2459250.75	2	47	52.38	+17	32	52.92	1.2337	17.8
feb	6	2459251.75	2	50	2.67	+17	42	54.28	1.2435	17.8
feb	7	2459252.75	2	52	13.67	+17	52	51.91	1.2533	17.7
feb	8	2459253.75	2	54	25.38	+18	2	45.67	1.2631	17.7
feb	9	2459254.75	2	56	37.77	+18	12	35.43	1.2729	17.7
feb	10	2459255.75	2	58	50.85	+18	22	21.03	1.2827	17.7
feb	11	2459256.75	3	1	4.61	+18	32	2.34	1.2925	17.6
feb	12	2459257.75	3	3	19.03	+18	41	39.20	1.3023	17.6
feb	13	2459258.75	3	5	34.11	+18	51	11.47	1.3122	17.6
feb	14	2459259.75	3	7	49.83	+19	0	38.99	1.3220	17.5
feb	15	2459260.75	3	10	6.20	+19	10	1.62	1.3318	17.5

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2459261.75	3	12	23.20	+19	19	19.21	1.3416	17.5
feb	17	2459262.75	3	14	40.81	+19	28	31.62	1.3514	17.5
feb	18	2459263.75	3	16	59.04	+19	37	38.72	1.3613	17.4
feb	19	2459264.75	3	19	17.87	+19	46	40.35	1.3711	17.4
feb	20	2459265.75	3	21	37.29	+19	55	36.38	1.3809	17.4
feb	21	2459266.75	3	23	57.28	+20	4	26.68	1.3907	17.4
feb	22	2459267.75	3	26	17.85	+20	13	11.09	1.4005	17.3
feb	23	2459268.75	3	28	38.97	+20	21	49.48	1.4102	17.3
feb	24	2459269.75	3	31	0.64	+20	30	21.72	1.4200	17.3
feb	25	2459270.75	3	33	22.84	+20	38	47.65	1.4298	17.3
feb	26	2459271.75	3	35	45.57	+20	47	7.15	1.4396	17.2
feb	27	2459272.75	3	38	8.82	+20	55	20.07	1.4493	17.2
feb	28	2459273.75	3	40	32.57	+21	3	26.30	1.4591	17.2
mar	1	2459274.75	3	42	56.83	+21	11	25.71	1.4688	17.1
mar	2	2459275.75	3	45	21.59	+21	19	18.20	1.4785	17.1
mar	3	2459276.75	3	47	46.84	+21	27	3.68	1.4882	17.1
mar	4	2459277.75	3	50	12.60	+21	34	42.06	1.4980	17.1
mar	5	2459278.75	3	52	38.84	+21	42	13.26	1.5077	17.0
mar	6	2459279.75	3	55	5.58	+21	49	37.20	1.5173	17.0
mar	7	2459280.75	3	57	32.79	+21	56	53.78	1.5270	17.0
mar	8	2459281.75	4	0	0.48	+22	4	2.92	1.5367	17.0
mar	9	2459282.75	4	2	28.64	+22	11	4.50	1.5463	16.9
mar	10	2459283.75	4	4	57.25	+22	17	58.42	1.5560	16.9
mar	11	2459284.75	4	7	26.32	+22	24	44.58	1.5656	16.9
mar	12	2459285.75	4	9	55.84	+22	31	22.87	1.5752	16.9
mar	13	2459286.75	4	12	25.79	+22	37	53.18	1.5848	16.9
mar	14	2459287.75	4	14	56.17	+22	44	15.43	1.5944	16.8
mar	15	2459288.75	4	17	26.98	+22	50	29.50	1.6039	16.8
mar	16	2459289.75	4	19	58.21	+22	56	35.30	1.6135	16.8
mar	17	2459290.75	4	22	29.84	+23	2	32.74	1.6230	16.8
mar	18	2459291.75	4	25	1.86	+23	8	21.74	1.6325	16.7
mar	19	2459292.75	4	27	34.27	+23	14	2.19	1.6419	16.7
mar	20	2459293.75	4	30	7.06	+23	19	34.02	1.6514	16.7
mar	21	2459294.75	4	32	40.22	+23	24	57.12	1.6608	16.7
mar	22	2459295.75	4	35	13.72	+23	30	11.43	1.6702	16.6
mar	23	2459296.75	4	37	47.57	+23	35	16.84	1.6796	16.6
mar	24	2459297.75	4	40	21.75	+23	40	13.28	1.6890	16.6
mar	25	2459298.75	4	42	56.25	+23	45	0.66	1.6983	16.6
mar	26	2459299.75	4	45	31.05	+23	49	38.88	1.7076	16.5
mar	27	2459300.75	4	48	6.15	+23	54	7.86	1.7169	16.5
mar	28	2459301.75	4	50	41.55	+23	58	27.53	1.7262	16.5
mar	29	2459302.75	4	53	17.22	+24	2	37.82	1.7354	16.5
mar	30	2459303.75	4	55	53.18	+24	6	38.66	1.7446	16.5
mar	31	2459304.75	4	58	29.41	+24	10	30.02	1.7538	16.4
abr	1	2459305.75	5	1	5.91	+24	14	11.86	1.7630	16.4
abr	2	2459306.75	5	3	42.67	+24	17	44.14	1.7721	16.4

Marte, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
abr	3	2459307.75	5	6	19.69	+24	21	6.82	1.7812	16.4
abr	4	2459308.75	5	8	56.96	+24	24	19.86	1.7903	16.3
abr	5	2459309.75	5	11	34.47	+24	27	23.20	1.7993	16.3
abr	6	2459310.75	5	14	12.21	+24	30	16.80	1.8083	16.3
abr	7	2459311.75	5	16	50.18	+24	33	0.60	1.8173	16.3
abr	8	2459312.75	5	19	28.37	+24	35	34.54	1.8263	16.3
abr	9	2459313.75	5	22	6.76	+24	37	58.57	1.8352	16.2
abr	10	2459314.75	5	24	45.36	+24	40	12.65	1.8441	16.2
abr	11	2459315.75	5	27	24.15	+24	42	16.74	1.8530	16.2
abr	12	2459316.75	5	30	3.13	+24	44	10.78	1.8619	16.2
abr	13	2459317.75	5	32	42.28	+24	45	54.76	1.8707	16.2
abr	14	2459318.75	5	35	21.60	+24	47	28.63	1.8794	16.1
abr	15	2459319.75	5	38	1.08	+24	48	52.37	1.8882	16.1
abr	16	2459320.75	5	40	40.70	+24	50	5.94	1.8969	16.1
abr	17	2459321.75	5	43	20.46	+24	51	9.33	1.9055	16.1
abr	18	2459322.75	5	46	0.34	+24	52	2.51	1.9142	16.0
abr	19	2459323.75	5	48	40.33	+24	52	45.45	1.9228	16.0
abr	20	2459324.75	5	51	20.42	+24	53	18.13	1.9313	16.0
abr	21	2459325.75	5	54	0.59	+24	53	40.53	1.9398	16.0
abr	22	2459326.75	5	56	40.84	+24	53	52.62	1.9483	16.0
abr	23	2459327.75	5	59	21.15	+24	53	54.38	1.9568	15.9
abr	24	2459328.75	6	2	1.51	+24	53	45.79	1.9652	15.9
abr	25	2459329.75	6	4	41.92	+24	53	26.83	1.9735	15.9
abr	26	2459330.75	6	7	22.36	+24	52	57.48	1.9818	15.9
abr	27	2459331.75	6	10	2.84	+24	52	17.75	1.9901	15.9
abr	28	2459332.75	6	12	43.35	+24	51	27.66	1.9984	15.8
abr	29	2459333.75	6	15	23.88	+24	50	27.22	2.0066	15.8
abr	30	2459334.75	6	18	4.42	+24	49	16.45	2.0148	15.8
may	1	2459335.75	6	20	44.97	+24	47	55.37	2.0229	15.8
may	2	2459336.75	6	23	25.52	+24	46	23.98	2.0310	15.7
may	3	2459337.75	6	26	6.06	+24	44	42.29	2.0391	15.7
may	4	2459338.75	6	28	46.59	+24	42	50.31	2.0471	15.7
may	5	2459339.75	6	31	27.09	+24	40	48.02	2.0551	15.7
may	6	2459340.75	6	34	7.57	+24	38	35.44	2.0630	15.7
may	7	2459341.75	6	36	48.01	+24	36	12.57	2.0709	15.6
may	8	2459342.75	6	39	28.42	+24	33	39.42	2.0787	15.6
may	9	2459343.75	6	42	8.78	+24	30	56.01	2.0865	15.6
may	10	2459344.75	6	44	49.08	+24	28	2.35	2.0943	15.6
may	11	2459345.75	6	47	29.33	+24	24	58.49	2.1020	15.6
may	12	2459346.75	6	50	9.51	+24	21	44.43	2.1097	15.5
may	13	2459347.75	6	52	49.61	+24	18	20.22	2.1173	15.5
may	14	2459348.75	6	55	29.62	+24	14	45.88	2.1249	15.5
may	15	2459349.75	6	58	9.54	+24	11	1.45	2.1324	15.5
may	16	2459350.75	7	0	49.36	+24	7	6.96	2.1399	15.5
may	17	2459351.75	7	3	29.06	+24	3	2.45	2.1474	15.4
may	18	2459352.75	7	6	8.64	+23	58	47.96	2.1548	15.4

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	19	2459353.75	7	8	48.08	+23	54	23.52	2.1621	15.4
may	20	2459354.75	7	11	27.38	+23	49	49.16	2.1694	15.4
may	21	2459355.75	7	14	6.53	+23	45	4.92	2.1767	15.3
may	22	2459356.75	7	16	45.53	+23	40	10.83	2.1839	15.3
may	23	2459357.75	7	19	24.36	+23	35	6.93	2.1910	15.3
may	24	2459358.75	7	22	3.03	+23	29	53.26	2.1981	15.3
may	25	2459359.75	7	24	41.52	+23	24	29.88	2.2052	15.3
may	26	2459360.75	7	27	19.85	+23	18	56.85	2.2122	15.2
may	27	2459361.75	7	29	58.00	+23	13	14.22	2.2191	15.2
may	28	2459362.75	7	32	35.97	+23	7	22.08	2.2260	15.2
may	29	2459363.75	7	35	13.75	+23	1	20.48	2.2329	15.2
may	30	2459364.75	7	37	51.35	+22	55	9.46	2.2397	15.1
may	31	2459365.75	7	40	28.75	+22	48	49.09	2.2465	15.1
jun	1	2459366.75	7	43	5.96	+22	42	19.38	2.2532	15.1
jun	2	2459367.75	7	45	42.96	+22	35	40.40	2.2599	15.1
jun	3	2459368.75	7	48	19.77	+22	28	52.18	2.2665	15.1
jun	4	2459369.75	7	50	56.38	+22	21	54.78	2.2730	15.0
jun	5	2459370.75	7	53	32.79	+22	14	48.24	2.2796	15.0
jun	6	2459371.75	7	56	8.99	+22	7	32.63	2.2860	15.0
jun	7	2459372.75	7	58	44.98	+22	0	8.01	2.2924	15.0
jun	8	2459373.75	8	1	20.77	+21	52	34.44	2.2988	14.9
jun	9	2459374.75	8	3	56.33	+21	44	51.99	2.3051	14.9
jun	10	2459375.75	8	6	31.68	+21	37	0.73	2.3114	14.9
jun	11	2459376.75	8	9	6.81	+21	29	0.74	2.3175	14.9
jun	12	2459377.75	8	11	41.71	+21	20	52.08	2.3237	14.9
jun	13	2459378.75	8	14	16.38	+21	12	34.83	2.3298	14.8
jun	14	2459379.75	8	16	50.81	+21	4	9.07	2.3358	14.8
jun	15	2459380.75	8	19	25.00	+20	55	34.87	2.3418	14.8
jun	16	2459381.75	8	21	58.94	+20	46	52.30	2.3477	14.8
jun	17	2459382.75	8	24	32.63	+20	38	1.42	2.3536	14.7
jun	18	2459383.75	8	27	6.07	+20	29	2.30	2.3594	14.7
jun	19	2459384.75	8	29	39.25	+20	19	55.02	2.3651	14.7
jun	20	2459385.75	8	32	12.18	+20	10	39.65	2.3708	14.7
jun	21	2459386.75	8	34	44.86	+20	1	16.25	2.3765	14.7
jun	22	2459387.75	8	37	17.28	+19	51	44.92	2.3821	14.6
jun	23	2459388.75	8	39	49.45	+19	42	5.74	2.3876	14.6
jun	24	2459389.75	8	42	21.36	+19	32	18.79	2.3931	14.6
jun	25	2459390.75	8	44	53.03	+19	22	24.18	2.3985	14.6
jun	26	2459391.75	8	47	24.43	+19	12	21.97	2.4038	14.5
jun	27	2459392.75	8	49	55.59	+19	2	12.25	2.4092	14.5
jun	28	2459393.75	8	52	26.49	+18	51	55.08	2.4144	14.5
jun	29	2459394.75	8	54	57.14	+18	41	30.51	2.4196	14.5
jun	30	2459395.75	8	57	27.54	+18	30	58.61	2.4247	14.4
jul	1	2459396.75	8	59	57.70	+18	20	19.44	2.4298	14.4
jul	2	2459397.75	9	2	27.62	+18	9	33.07	2.4349	14.4
jul	3	2459398.75	9	4	57.30	+17	58	39.57	2.4398	14.4

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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	4	2459399.75	9	7	26.74	+17	47	39.01	2.4447	14.3
jul	5	2459400.75	9	9	55.95	+17	36	31.48	2.4496	14.3
jul	6	2459401.75	9	12	24.93	+17	25	17.06	2.4544	14.3
jul	7	2459402.75	9	14	53.68	+17	13	55.82	2.4591	14.3
jul	8	2459403.75	9	17	22.19	+17	2	27.86	2.4638	14.2
jul	9	2459404.75	9	19	50.48	+16	50	53.27	2.4684	14.2
jul	10	2459405.75	9	22	18.53	+16	39	12.13	2.4730	14.2
jul	11	2459406.75	9	24	46.35	+16	27	24.53	2.4775	14.2
jul	12	2459407.75	9	27	13.94	+16	15	30.56	2.4819	14.1
jul	13	2459408.75	9	29	41.30	+16	3	30.31	2.4863	14.1
jul	14	2459409.75	9	32	8.43	+15	51	23.86	2.4906	14.1
jul	15	2459410.75	9	34	35.33	+15	39	11.30	2.4949	14.1
jul	16	2459411.75	9	37	1.99	+15	26	52.70	2.4991	14.0
jul	17	2459412.75	9	39	28.43	+15	14	28.14	2.5032	14.0
jul	18	2459413.75	9	41	54.66	+15	1	57.72	2.5073	14.0
jul	19	2459414.75	9	44	20.66	+14	49	21.52	2.5113	14.0
jul	20	2459415.75	9	46	46.44	+14	36	39.62	2.5152	13.9
jul	21	2459416.75	9	49	12.02	+14	23	52.14	2.5191	13.9
jul	22	2459417.75	9	51	37.39	+14	10	59.15	2.5229	13.9
jul	23	2459418.75	9	54	2.55	+13	58	0.76	2.5267	13.9
jul	24	2459419.75	9	56	27.50	+13	44	57.06	2.5304	13.8
jul	25	2459420.75	9	58	52.26	+13	31	48.11	2.5341	13.8
jul	26	2459421.75	10	1	16.82	+13	18	33.99	2.5376	13.8
jul	27	2459422.75	10	3	41.19	+13	5	14.77	2.5412	13.8
jul	28	2459423.75	10	6	5.39	+12	51	50.50	2.5446	13.7
jul	29	2459424.75	10	8	29.40	+12	38	21.25	2.5480	13.7
jul	30	2459425.75	10	10	53.25	+12	24	47.10	2.5514	13.7
jul	31	2459426.75	10	13	16.94	+12	11	8.12	2.5547	13.7
ago	1	2459427.75	10	15	40.47	+11	57	24.38	2.5579	13.6
ago	2	2459428.75	10	18	3.85	+11	43	35.98	2.5611	13.6
ago	3	2459429.75	10	20	27.08	+11	29	42.98	2.5642	13.6
ago	4	2459430.75	10	22	50.17	+11	15	45.48	2.5672	13.6
ago	5	2459431.75	10	25	13.12	+11	1	43.56	2.5702	13.5
ago	6	2459432.75	10	27	35.94	+10	47	37.33	2.5731	13.5
ago	7	2459433.75	10	29	58.62	+10	33	26.86	2.5759	13.5
ago	8	2459434.75	10	32	21.17	+10	19	12.26	2.5787	13.5
ago	9	2459435.75	10	34	43.59	+10	4	53.61	2.5814	13.4
ago	10	2459436.75	10	37	5.88	+9	50	31.01	2.5841	13.4
ago	11	2459437.75	10	39	28.06	+9	36	4.54	2.5867	13.4
ago	12	2459438.75	10	41	50.11	+9	21	34.29	2.5892	13.4
ago	13	2459439.75	10	44	12.06	+9	7	0.35	2.5917	13.3
ago	14	2459440.75	10	46	33.90	+8	52	22.79	2.5940	13.3
ago	15	2459441.75	10	48	55.63	+8	37	41.72	2.5964	13.3
ago	16	2459442.75	10	51	17.27	+8	22	57.22	2.5986	13.2
ago	17	2459443.75	10	53	38.83	+8	8	9.39	2.6009	13.2
ago	18	2459444.75	10	56	0.29	+7	53	18.34	2.6030	13.2

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	19	2459445.75	10	58	21.67	+7	38	24.14	2.6051	13.2
ago	20	2459446.75	11	0	42.97	+7	23	26.91	2.6071	13.1
ago	21	2459447.75	11	3	4.20	+7	8	26.73	2.6090	13.1
ago	22	2459448.75	11	5	25.37	+6	53	23.67	2.6109	13.1
ago	23	2459449.75	11	7	46.47	+6	38	17.81	2.6128	13.1
ago	24	2459450.75	11	10	7.53	+6	23	9.21	2.6145	13.0
ago	25	2459451.75	11	12	28.54	+6	7	57.95	2.6162	13.0
ago	26	2459452.75	11	14	49.52	+5	52	44.08	2.6179	13.0
ago	27	2459453.75	11	17	10.48	+5	37	27.69	2.6195	13.0
ago	28	2459454.75	11	19	31.42	+5	22	8.84	2.6210	12.9
ago	29	2459455.75	11	21	52.35	+5	6	47.62	2.6224	12.9
ago	30	2459456.75	11	24	13.28	+4	51	24.11	2.6238	12.9
ago	31	2459457.75	11	26	34.21	+4	35	58.39	2.6251	12.9
sep	1	2459458.75	11	28	55.14	+4	20	30.56	2.6264	12.8
sep	2	2459459.75	11	31	16.10	+4	5	0.70	2.6276	12.8
sep	3	2459460.75	11	33	37.07	+3	49	28.91	2.6287	12.8
sep	4	2459461.75	11	35	58.06	+3	33	55.28	2.6298	12.7
sep	5	2459462.75	11	38	19.08	+3	18	19.92	2.6308	12.7
sep	6	2459463.75	11	40	40.14	+3	2	42.92	2.6318	12.7
sep	7	2459464.75	11	43	1.23	+2	47	4.37	2.6326	12.7
sep	8	2459465.75	11	45	22.37	+2	31	24.38	2.6334	12.6
sep	9	2459466.75	11	47	43.56	+2	15	43.02	2.6342	12.6
sep	10	2459467.75	11	50	4.80	+2	0	0.40	2.6349	12.6
sep	11	2459468.75	11	52	26.10	+1	44	16.61	2.6355	12.6
sep	12	2459469.75	11	54	47.48	+1	28	31.74	2.6360	12.5
sep	13	2459470.75	11	57	8.93	+1	12	45.91	2.6365	12.5
sep	14	2459471.75	11	59	30.45	+0	56	59.21	2.6369	12.5
sep	15	2459472.75	12	1	52.07	+0	41	11.75	2.6373	12.5
sep	16	2459473.75	12	4	13.76	+0	25	23.63	2.6376	12.4
sep	17	2459474.75	12	6	35.56	+0	9	34.96	2.6378	12.4
sep	18	2459475.75	12	8	57.45	-0	6	14.16	2.6380	12.4
sep	19	2459476.75	12	11	19.45	-0	22	3.67	2.6381	12.3
sep	20	2459477.75	12	13	41.57	-0	37	53.46	2.6381	12.3
sep	21	2459478.75	12	16	3.82	-0	53	43.47	2.6381	12.3
sep	22	2459479.75	12	18	26.21	-1	9	33.62	2.6380	12.3
sep	23	2459480.75	12	20	48.74	-1	25	23.83	2.6379	12.2
sep	24	2459481.75	12	23	11.42	-1	41	14.02	2.6377	12.2
sep	25	2459482.75	12	25	34.27	-1	57	4.11	2.6374	12.2
sep	26	2459483.75	12	27	57.29	-2	12	54.01	2.6371	12.2
sep	27	2459484.75	12	30	20.49	-2	28	43.61	2.6367	12.1
sep	28	2459485.75	12	32	43.87	-2	44	32.84	2.6363	12.1
sep	29	2459486.75	12	35	7.44	-3	0	21.59	2.6358	12.1
sep	30	2459487.75	12	37	31.21	-3	16	9.76	2.6352	12.1
oct	1	2459488.75	12	39	55.18	-3	31	57.24	2.6346	12.0
oct	2	2459489.75	12	42	19.37	-3	47	43.92	2.6339	12.0
oct	3	2459490.75	12	44	43.76	-4	3	29.70	2.6331	12.0

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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	4	2459491.75	12	47	8.38	-4	19	14.45	2.6323	12.0
oct	5	2459492.75	12	49	33.23	-4	34	58.07	2.6314	11.9
oct	6	2459493.75	12	51	58.30	-4	50	40.41	2.6304	11.9
oct	7	2459494.75	12	54	23.62	-5	6	21.35	2.6294	11.9
oct	8	2459495.75	12	56	49.17	-5	22	0.84	2.6283	11.9
oct	9	2459496.75	12	59	14.97	-5	37	38.95	2.6272	11.8
oct	10	2459497.75	13	1	41.03	-5	53	15.48	2.6260	11.8
oct	11	2459498.75	13	4	7.36	-6	8	50.19	2.6247	11.8
oct	12	2459499.75	13	6	33.96	-6	24	22.95	2.6234	11.8
oct	13	2459500.75	13	9	0.83	-6	39	53.66	2.6220	11.7
oct	14	2459501.75	13	11	27.97	-6	55	22.19	2.6206	11.7
oct	15	2459502.75	13	13	55.40	-7	10	48.44	2.6191	11.7
oct	16	2459503.75	13	16	23.11	-7	26	12.30	2.6175	11.7
oct	17	2459504.75	13	18	51.12	-7	41	33.67	2.6159	11.6
oct	18	2459505.75	13	21	19.43	-7	56	52.44	2.6142	11.6
oct	19	2459506.75	13	23	48.06	-8	12	8.53	2.6125	11.6
oct	20	2459507.75	13	26	17.02	-8	27	21.83	2.6107	11.6
oct	21	2459508.75	13	28	46.30	-8	42	32.25	2.6088	11.5
oct	22	2459509.75	13	31	15.93	-8	57	39.68	2.6069	11.5
oct	23	2459510.75	13	33	45.90	-9	12	44.04	2.6049	11.5
oct	24	2459511.75	13	36	16.23	-9	27	45.20	2.6029	11.5
oct	25	2459512.75	13	38	46.92	-9	42	43.05	2.6008	11.4
oct	26	2459513.75	13	41	17.98	-9	57	37.49	2.5987	11.4
oct	27	2459514.75	13	43	49.42	-10	12	28.40	2.5965	11.4
oct	28	2459515.75	13	46	21.23	-10	27	15.64	2.5942	11.4
oct	29	2459516.75	13	48	53.43	-10	41	59.11	2.5919	11.3
oct	30	2459517.75	13	51	26.02	-10	56	38.66	2.5896	11.3
oct	31	2459518.75	13	53	59.00	-11	11	14.18	2.5871	11.3
nov	1	2459519.75	13	56	32.39	-11	25	45.53	2.5846	11.3
nov	2	2459520.75	13	59	6.18	-11	40	12.58	2.5821	11.3
nov	3	2459521.75	14	1	40.38	-11	54	35.21	2.5795	11.2
nov	4	2459522.75	14	4	15.00	-12	8	53.28	2.5769	11.2
nov	5	2459523.75	14	6	50.05	-12	23	6.67	2.5741	11.2
nov	6	2459524.75	14	9	25.53	-12	37	15.25	2.5714	11.2
nov	7	2459525.75	14	12	1.43	-12	51	18.89	2.5685	11.1
nov	8	2459526.75	14	14	37.77	-13	5	17.43	2.5657	11.1
nov	9	2459527.75	14	17	14.54	-13	19	10.73	2.5627	11.1
nov	10	2459528.75	14	19	51.74	-13	32	58.65	2.5597	11.1
nov	11	2459529.75	14	22	29.38	-13	46	41.03	2.5567	11.1
nov	12	2459530.75	14	25	7.47	-14	0	17.74	2.5536	11.0
nov	13	2459531.75	14	27	46.00	-14	13	48.66	2.5505	11.0
nov	14	2459532.75	14	30	24.99	-14	27	13.64	2.5473	11.0
nov	15	2459533.75	14	33	4.44	-14	40	32.57	2.5440	11.0
nov	16	2459534.75	14	35	44.35	-14	53	45.34	2.5407	10.9
nov	17	2459535.75	14	38	24.75	-15	6	51.81	2.5373	10.9
nov	18	2459536.75	14	41	5.62	-15	19	51.88	2.5339	10.9

Marte, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	19	2459537.75	14	43	46.98	-15	32	45.42	2.5305	10.9
nov	20	2459538.75	14	46	28.83	-15	45	32.30	2.5270	10.9
nov	21	2459539.75	14	49	11.18	-15	58	12.40	2.5234	10.8
nov	22	2459540.75	14	51	54.02	-16	10	45.59	2.5198	10.8
nov	23	2459541.75	14	54	37.36	-16	23	11.73	2.5162	10.8
nov	24	2459542.75	14	57	21.21	-16	35	30.69	2.5125	10.8
nov	25	2459543.75	15	0	5.57	-16	47	42.33	2.5088	10.8
nov	26	2459544.75	15	2	50.43	-16	59	46.50	2.5050	10.7
nov	27	2459545.75	15	5	35.81	-17	11	43.07	2.5011	10.7
nov	28	2459546.75	15	8	21.70	-17	23	31.88	2.4972	10.7
nov	29	2459547.75	15	11	8.10	-17	35	12.78	2.4933	10.7
nov	30	2459548.75	15	13	55.02	-17	46	45.64	2.4893	10.7
dic	1	2459549.75	15	16	42.47	-17	58	10.31	2.4853	10.6
dic	2	2459550.75	15	19	30.44	-18	9	26.66	2.4812	10.6
dic	3	2459551.75	15	22	18.93	-18	20	34.54	2.4771	10.6
dic	4	2459552.75	15	25	7.94	-18	31	33.81	2.4729	10.6
dic	5	2459553.75	15	27	57.47	-18	42	24.33	2.4687	10.6
dic	6	2459554.75	15	30	47.51	-18	53	5.95	2.4645	10.5
dic	7	2459555.75	15	33	38.07	-19	3	38.50	2.4601	10.5
dic	8	2459556.75	15	36	29.12	-19	14	1.83	2.4558	10.5
dic	9	2459557.75	15	39	20.69	-19	24	15.79	2.4514	10.5
dic	10	2459558.75	15	42	12.75	-19	34	20.21	2.4470	10.5
dic	11	2459559.75	15	45	5.32	-19	44	14.98	2.4425	10.5
dic	12	2459560.75	15	47	58.39	-19	53	59.95	2.4380	10.4
dic	13	2459561.75	15	50	51.98	-20	3	35.00	2.4334	10.4
dic	14	2459562.75	15	53	46.06	-20	13	0.00	2.4288	10.4
dic	15	2459563.75	15	56	40.66	-20	22	14.84	2.4242	10.4
dic	16	2459564.75	15	59	35.76	-20	31	19.38	2.4195	10.4
dic	17	2459565.75	16	2	31.37	-20	40	13.51	2.4148	10.4
dic	18	2459566.75	16	5	27.48	-20	48	57.10	2.4100	10.3
dic	19	2459567.75	16	8	24.09	-20	57	30.03	2.4053	10.3
dic	20	2459568.75	16	11	21.20	-21	5	52.18	2.4004	10.3
dic	21	2459569.75	16	14	18.80	-21	14	3.41	2.3956	10.3
dic	22	2459570.75	16	17	16.90	-21	22	3.59	2.3907	10.3
dic	23	2459571.75	16	20	15.48	-21	29	52.60	2.3858	10.3
dic	24	2459572.75	16	23	14.55	-21	37	30.30	2.3808	10.2
dic	25	2459573.75	16	26	14.09	-21	44	56.55	2.3758	10.2
dic	26	2459574.75	16	29	14.11	-21	52	11.24	2.3708	10.2
dic	27	2459575.75	16	32	14.60	-21	59	14.22	2.3657	10.2
dic	28	2459576.75	16	35	15.56	-22	6	5.37	2.3606	10.2
dic	29	2459577.75	16	38	16.98	-22	12	44.58	2.3555	10.2
dic	30	2459578.75	16	41	18.85	-22	19	11.72	2.3503	10.1
dic	31	2459579.75	16	44	21.18	-22	25	26.69	2.3451	10.1

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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	2459215.75	20	20	58.83	-19	59	58.11	5.9954	13.7
ene	2	2459216.75	20	21	55.70	-19	56	52.22	6.0009	13.6
ene	3	2459217.75	20	22	52.70	-19	53	44.77	6.0062	13.6
ene	4	2459218.75	20	23	49.80	-19	50	35.75	6.0113	13.5
ene	5	2459219.75	20	24	47.02	-19	47	25.17	6.0162	13.5
ene	6	2459220.75	20	25	44.34	-19	44	13.04	6.0209	13.4
ene	7	2459221.75	20	26	41.76	-19	40	59.35	6.0254	13.4
ene	8	2459222.75	20	27	39.27	-19	37	44.13	6.0297	13.3
ene	9	2459223.75	20	28	36.88	-19	34	27.38	6.0337	13.3
ene	10	2459224.75	20	29	34.57	-19	31	9.15	6.0376	13.2
ene	11	2459225.75	20	30	32.34	-19	27	49.47	6.0413	13.2
ene	12	2459226.75	20	31	30.18	-19	24	28.36	6.0447	13.1
ene	13	2459227.75	20	32	28.08	-19	21	5.85	6.0480	13.1
ene	14	2459228.75	20	33	26.03	-19	17	41.97	6.0510	13.0
ene	15	2459229.75	20	34	24.03	-19	14	16.74	6.0538	13.0
ene	16	2459230.75	20	35	22.06	-19	10	50.17	6.0564	12.9
ene	17	2459231.75	20	36	20.12	-19	7	22.27	6.0588	12.9
ene	18	2459232.75	20	37	18.21	-19	3	53.06	6.0610	12.8
ene	19	2459233.75	20	38	16.32	-19	0	22.56	6.0630	12.8
ene	20	2459234.75	20	39	14.45	-18	56	50.78	6.0648	12.7
ene	21	2459235.75	20	40	12.59	-18	53	17.75	6.0663	12.7
ene	22	2459236.75	20	41	10.73	-18	49	43.50	6.0677	12.6
ene	23	2459237.75	20	42	8.87	-18	46	8.05	6.0688	12.6
ene	24	2459238.75	20	43	7.02	-18	42	31.44	6.0697	12.5
ene	25	2459239.75	20	44	5.15	-18	38	53.68	6.0704	12.5
ene	26	2459240.75	20	45	3.26	-18	35	14.83	6.0709	12.4
ene	27	2459241.75	20	46	1.36	-18	31	34.91	6.0712	12.4
ene	28	2459242.75	20	46	59.44	-18	27	54.10	6.0713	12.3
ene	29	2459243.75	20	47	57.44	-18	24	12.61	6.0711	12.3
ene	30	2459244.75	20	48	55.41	-18	20	29.15	6.0708	12.2
ene	31	2459245.75	20	49	53.37	-18	16	45.02	6.0702	12.2
feb	1	2459246.75	20	50	51.27	-18	13	0.00	6.0694	12.1
feb	2	2459247.75	20	51	49.12	-18	9	14.06	6.0685	12.1
feb	3	2459248.75	20	52	46.91	-18	5	27.18	6.0673	12.0
feb	4	2459249.75	20	53	44.65	-18	1	39.38	6.0659	12.0
feb	5	2459250.75	20	54	42.32	-17	57	50.69	6.0643	11.9
feb	6	2459251.75	20	55	39.93	-17	54	1.15	6.0624	11.9
feb	7	2459252.75	20	56	37.46	-17	50	10.79	6.0604	11.8
feb	8	2459253.75	20	57	34.92	-17	46	19.67	6.0582	11.8
feb	9	2459254.75	20	58	32.29	-17	42	27.81	6.0557	11.7
feb	10	2459255.75	20	59	29.56	-17	38	35.25	6.0530	11.7
feb	11	2459256.75	21	0	26.73	-17	34	42.04	6.0502	11.6
feb	12	2459257.75	21	1	23.79	-17	30	48.19	6.0471	11.6
feb	13	2459258.75	21	2	20.74	-17	26	53.73	6.0438	11.5
feb	14	2459259.75	21	3	17.57	-17	22	58.68	6.0403	11.5
feb	15	2459260.75	21	4	14.27	-17	19	3.09	6.0366	11.4

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2459261.75	21	5	10.84	-17	15	6.96	6.0327	11.4
feb	17	2459262.75	21	6	7.29	-17	11	10.34	6.0285	11.3
feb	18	2459263.75	21	7	3.59	-17	7	13.26	6.0242	11.3
feb	19	2459264.75	21	7	59.75	-17	3	15.76	6.0197	11.2
feb	20	2459265.75	21	8	55.77	-16	59	17.87	6.0149	11.2
feb	21	2459266.75	21	9	51.63	-16	55	19.64	6.0100	11.1
feb	22	2459267.75	21	10	47.34	-16	51	21.10	6.0049	11.1
feb	23	2459268.75	21	11	42.88	-16	47	22.29	5.9996	11.0
feb	24	2459269.75	21	12	38.26	-16	43	23.26	5.9940	11.0
feb	25	2459270.75	21	13	33.46	-16	39	24.05	5.9883	10.9
feb	26	2459271.75	21	14	28.49	-16	35	24.67	5.9824	10.9
feb	27	2459272.75	21	15	23.33	-16	31	25.18	5.9763	10.8
feb	28	2459273.75	21	16	17.98	-16	27	25.58	5.9700	10.8
mar	1	2459274.75	21	17	12.44	-16	23	25.89	5.9635	10.7
mar	2	2459275.75	21	18	6.71	-16	19	26.14	5.9568	10.7
mar	3	2459276.75	21	19	0.78	-16	15	26.36	5.9499	10.6
mar	4	2459277.75	21	19	54.66	-16	11	26.57	5.9428	10.6
mar	5	2459278.75	21	20	48.33	-16	7	26.83	5.9356	10.5
mar	6	2459279.75	21	21	41.80	-16	3	27.18	5.9281	10.5
mar	7	2459280.75	21	22	35.05	-15	59	27.67	5.9205	10.4
mar	8	2459281.75	21	23	28.08	-15	55	28.35	5.9127	10.4
mar	9	2459282.75	21	24	20.88	-15	51	29.26	5.9047	10.3
mar	10	2459283.75	21	25	13.44	-15	47	30.46	5.8965	10.3
mar	11	2459284.75	21	26	5.75	-15	43	31.98	5.8881	10.2
mar	12	2459285.75	21	26	57.82	-15	39	33.85	5.8795	10.2
mar	13	2459286.75	21	27	49.64	-15	35	36.12	5.8708	10.1
mar	14	2459287.75	21	28	41.20	-15	31	38.80	5.8619	10.1
mar	15	2459288.75	21	29	32.49	-15	27	41.96	5.8528	10.0
mar	16	2459289.75	21	30	23.52	-15	23	45.61	5.8436	10.0
mar	17	2459290.75	21	31	14.27	-15	19	49.80	5.8341	9.9
mar	18	2459291.75	21	32	4.75	-15	15	54.58	5.8245	9.8
mar	19	2459292.75	21	32	54.95	-15	11	60.00	5.8148	9.8
mar	20	2459293.75	21	33	44.86	-15	8	6.09	5.8048	9.7
mar	21	2459294.75	21	34	34.48	-15	4	12.90	5.7947	9.7
mar	22	2459295.75	21	35	23.81	-15	0	20.49	5.7844	9.6
mar	23	2459296.75	21	36	12.83	-14	56	28.91	5.7740	9.6
mar	24	2459297.75	21	37	1.54	-14	52	38.18	5.7634	9.5
mar	25	2459298.75	21	37	49.94	-14	48	48.37	5.7527	9.5
mar	26	2459299.75	21	38	38.02	-14	44	59.50	5.7418	9.4
mar	27	2459300.75	21	39	25.78	-14	41	11.62	5.7308	9.4
mar	28	2459301.75	21	40	13.21	-14	37	24.75	5.7196	9.3
mar	29	2459302.75	21	41	0.32	-14	33	38.90	5.7082	9.3
mar	30	2459303.75	21	41	47.09	-14	29	54.12	5.6967	9.2
mar	31	2459304.75	21	42	33.52	-14	26	10.43	5.6851	9.2
abr	1	2459305.75	21	43	19.62	-14	22	27.88	5.6733	9.1
abr	2	2459306.75	21	44	5.38	-14	18	46.53	5.6614	9.1

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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	3	2459307.75	21	44	50.79	-14	15	6.43	5.6493	9.0
abr	4	2459308.75	21	45	35.84	-14	11	27.64	5.6371	9.0
abr	5	2459309.75	21	46	20.52	-14	7	50.21	5.6248	8.9
abr	6	2459310.75	21	47	4.83	-14	4	14.20	5.6123	8.9
abr	7	2459311.75	21	47	48.76	-14	0	39.66	5.5997	8.8
abr	8	2459312.75	21	48	32.30	-13	57	6.61	5.5870	8.7
abr	9	2459313.75	21	49	15.46	-13	53	35.11	5.5741	8.7
abr	10	2459314.75	21	49	58.21	-13	50	5.20	5.5611	8.6
abr	11	2459315.75	21	50	40.57	-13	46	36.92	5.5480	8.6
abr	12	2459316.75	21	51	22.51	-13	43	10.32	5.5347	8.5
abr	13	2459317.75	21	52	4.05	-13	39	45.43	5.5214	8.5
abr	14	2459318.75	21	52	45.17	-13	36	22.31	5.5079	8.4
abr	15	2459319.75	21	53	25.87	-13	33	1.01	5.4943	8.4
abr	16	2459320.75	21	54	6.14	-13	29	41.57	5.4806	8.3
abr	17	2459321.75	21	54	45.98	-13	26	24.05	5.4668	8.3
abr	18	2459322.75	21	55	25.38	-13	23	8.51	5.4529	8.2
abr	19	2459323.75	21	56	4.34	-13	19	54.99	5.4389	8.1
abr	20	2459324.75	21	56	42.84	-13	16	43.55	5.4248	8.1
abr	21	2459325.75	21	57	20.89	-13	13	34.23	5.4106	8.0
abr	22	2459326.75	21	57	58.47	-13	10	27.07	5.3963	8.0
abr	23	2459327.75	21	58	35.59	-13	7	22.12	5.3820	7.9
abr	24	2459328.75	21	59	12.23	-13	4	19.41	5.3675	7.9
abr	25	2459329.75	21	59	48.40	-13	1	18.97	5.3529	7.8
abr	26	2459330.75	22	0	24.09	-12	58	20.83	5.3383	7.8
abr	27	2459331.75	22	0	59.30	-12	55	25.02	5.3236	7.7
abr	28	2459332.75	22	1	34.02	-12	52	31.57	5.3088	7.6
abr	29	2459333.75	22	2	8.26	-12	49	40.54	5.2939	7.6
abr	30	2459334.75	22	2	41.99	-12	46	51.99	5.2790	7.5
may	1	2459335.75	22	3	15.23	-12	44	5.98	5.2640	7.5
may	2	2459336.75	22	3	47.95	-12	41	22.57	5.2489	7.4
may	3	2459337.75	22	4	20.15	-12	38	41.81	5.2338	7.4
may	4	2459338.75	22	4	51.82	-12	36	3.76	5.2186	7.3
may	5	2459339.75	22	5	22.95	-12	33	28.46	5.2033	7.3
may	6	2459340.75	22	5	53.54	-12	30	55.95	5.1880	7.2
may	7	2459341.75	22	6	23.59	-12	28	26.27	5.1726	7.1
may	8	2459342.75	22	6	53.08	-12	25	59.47	5.1572	7.1
may	9	2459343.75	22	7	22.01	-12	23	35.58	5.1418	7.0
may	10	2459344.75	22	7	50.38	-12	21	14.66	5.1263	7.0
may	11	2459345.75	22	8	18.19	-12	18	56.75	5.1107	6.9
may	12	2459346.75	22	8	45.42	-12	16	41.90	5.0951	6.8
may	13	2459347.75	22	9	12.06	-12	14	30.15	5.0795	6.8
may	14	2459348.75	22	9	38.13	-12	12	21.55	5.0639	6.7
may	15	2459349.75	22	10	3.60	-12	10	16.16	5.0482	6.7
may	16	2459350.75	22	10	28.47	-12	8	14.02	5.0326	6.6
may	17	2459351.75	22	10	52.74	-12	6	15.18	5.0169	6.6
may	18	2459352.75	22	11	16.40	-12	4	19.68	5.0012	6.5

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	19	2459353.75	22	11	39.44	-12	2	27.57	4.9854	6.4
may	20	2459354.75	22	12	1.86	-12	0	38.88	4.9697	6.4
may	21	2459355.75	22	12	23.66	-11	58	53.63	4.9540	6.3
may	22	2459356.75	22	12	44.83	-11	57	11.86	4.9383	6.3
may	23	2459357.75	22	13	5.36	-11	55	33.58	4.9225	6.2
may	24	2459358.75	22	13	25.26	-11	53	58.82	4.9068	6.1
may	25	2459359.75	22	13	44.53	-11	52	27.59	4.8911	6.1
may	26	2459360.75	22	14	3.16	-11	50	59.94	4.8755	6.0
may	27	2459361.75	22	14	21.14	-11	49	35.90	4.8598	6.0
may	28	2459362.75	22	14	38.47	-11	48	15.53	4.8441	5.9
may	29	2459363.75	22	14	55.14	-11	46	58.88	4.8285	5.8
may	30	2459364.75	22	15	11.14	-11	45	45.99	4.8129	5.8
may	31	2459365.75	22	15	26.47	-11	44	36.91	4.7974	5.7
jun	1	2459366.75	22	15	41.12	-11	43	31.66	4.7818	5.6
jun	2	2459367.75	22	15	55.08	-11	42	30.28	4.7663	5.6
jun	3	2459368.75	22	16	8.35	-11	41	32.80	4.7509	5.5
jun	4	2459369.75	22	16	20.93	-11	40	39.22	4.7355	5.5
jun	5	2459370.75	22	16	32.81	-11	39	49.59	4.7202	5.4
jun	6	2459371.75	22	16	43.99	-11	39	3.93	4.7049	5.3
jun	7	2459372.75	22	16	54.47	-11	38	22.26	4.6896	5.3
jun	8	2459373.75	22	17	4.23	-11	37	44.61	4.6745	5.2
jun	9	2459374.75	22	17	13.29	-11	37	11.00	4.6594	5.1
jun	10	2459375.75	22	17	21.63	-11	36	41.46	4.6444	5.1
jun	11	2459376.75	22	17	29.25	-11	36	16.03	4.6294	5.0
jun	12	2459377.75	22	17	36.15	-11	35	54.71	4.6146	5.0
jun	13	2459378.75	22	17	42.32	-11	35	37.53	4.5998	4.9
jun	14	2459379.75	22	17	47.76	-11	35	24.50	4.5851	4.8
jun	15	2459380.75	22	17	52.48	-11	35	15.65	4.5705	4.8
jun	16	2459381.75	22	17	56.46	-11	35	10.97	4.5560	4.7
jun	17	2459382.75	22	17	59.70	-11	35	10.46	4.5416	4.6
jun	18	2459383.75	22	18	2.22	-11	35	14.11	4.5273	4.6
jun	19	2459384.75	22	18	3.99	-11	35	21.92	4.5132	4.5
jun	20	2459385.75	22	18	5.04	-11	35	33.86	4.4991	4.4
jun	21	2459386.75	22	18	5.36	-11	35	49.93	4.4852	4.4
jun	22	2459387.75	22	18	4.95	-11	36	10.11	4.4713	4.3
jun	23	2459388.75	22	18	3.82	-11	36	34.39	4.4577	4.2
jun	24	2459389.75	22	18	1.96	-11	37	2.79	4.4441	4.2
jun	25	2459390.75	22	17	59.36	-11	37	35.31	4.4307	4.1
jun	26	2459391.75	22	17	56.04	-11	38	11.95	4.4174	4.0
jun	27	2459392.75	22	17	51.98	-11	38	52.72	4.4043	4.0
jun	28	2459393.75	22	17	47.19	-11	39	37.61	4.3913	3.9
jun	29	2459394.75	22	17	41.66	-11	40	26.59	4.3784	3.8
jun	30	2459395.75	22	17	35.40	-11	41	19.64	4.3657	3.8
jul	1	2459396.75	22	17	28.41	-11	42	16.74	4.3532	3.7
jul	2	2459397.75	22	17	20.69	-11	43	17.85	4.3408	3.6
jul	3	2459398.75	22	17	12.25	-11	44	22.94	4.3286	3.6

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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	4	2459399.75	22	17	3.09	-11	45	31.99	4.3166	3.5
jul	5	2459400.75	22	16	53.21	-11	46	44.96	4.3048	3.4
jul	6	2459401.75	22	16	42.63	-11	48	1.83	4.2931	3.4
jul	7	2459402.75	22	16	31.34	-11	49	22.55	4.2816	3.3
jul	8	2459403.75	22	16	19.34	-11	50	47.08	4.2703	3.2
jul	9	2459404.75	22	16	6.66	-11	52	15.40	4.2592	3.2
jul	10	2459405.75	22	15	53.28	-11	53	47.45	4.2483	3.1
jul	11	2459406.75	22	15	39.22	-11	55	23.18	4.2376	3.0
jul	12	2459407.75	22	15	24.48	-11	57	2.54	4.2271	2.9
jul	13	2459408.75	22	15	9.07	-11	58	45.47	4.2169	2.9
jul	14	2459409.75	22	14	53.01	-12	0	31.89	4.2068	2.8
jul	15	2459410.75	22	14	36.30	-12	2	21.74	4.1970	2.7
jul	16	2459411.75	22	14	18.94	-12	4	14.91	4.1873	2.7
jul	17	2459412.75	22	14	0.97	-12	6	11.33	4.1779	2.6
jul	18	2459413.75	22	13	42.38	-12	8	10.91	4.1688	2.5
jul	19	2459414.75	22	13	23.19	-12	10	13.57	4.1598	2.5
jul	20	2459415.75	22	13	3.41	-12	12	19.21	4.1511	2.4
jul	21	2459416.75	22	12	43.06	-12	14	27.77	4.1427	2.3
jul	22	2459417.75	22	12	22.14	-12	16	39.18	4.1344	2.2
jul	23	2459418.75	22	12	0.67	-12	18	53.37	4.1265	2.2
jul	24	2459419.75	22	11	38.65	-12	21	10.26	4.1187	2.1
jul	25	2459420.75	22	11	16.09	-12	23	29.76	4.1113	2.0
jul	26	2459421.75	22	10	53.02	-12	25	51.79	4.1040	2.0
jul	27	2459422.75	22	10	29.43	-12	28	16.25	4.0971	1.9
jul	28	2459423.75	22	10	5.35	-12	30	43.02	4.0904	1.8
jul	29	2459424.75	22	9	40.79	-12	33	12.01	4.0839	1.7
jul	30	2459425.75	22	9	15.77	-12	35	43.12	4.0777	1.7
jul	31	2459426.75	22	8	50.31	-12	38	16.22	4.0718	1.6
ago	1	2459427.75	22	8	24.41	-12	40	51.23	4.0662	1.5
ago	2	2459428.75	22	7	58.11	-12	43	28.03	4.0608	1.4
ago	3	2459429.75	22	7	31.41	-12	46	6.51	4.0557	1.4
ago	4	2459430.75	22	7	4.34	-12	48	46.56	4.0509	1.3
ago	5	2459431.75	22	6	36.91	-12	51	28.08	4.0463	1.2
ago	6	2459432.75	22	6	9.15	-12	54	10.96	4.0421	1.2
ago	7	2459433.75	22	5	41.06	-12	56	55.07	4.0381	1.1
ago	8	2459434.75	22	5	12.68	-12	59	40.30	4.0344	1.0
ago	9	2459435.75	22	4	44.01	-13	2	26.51	4.0311	0.9
ago	10	2459436.75	22	4	15.09	-13	5	13.59	4.0280	0.9
ago	11	2459437.75	22	3	45.93	-13	8	1.39	4.0252	0.8
ago	12	2459438.75	22	3	16.56	-13	10	49.77	4.0226	0.7
ago	13	2459439.75	22	2	46.99	-13	13	38.59	4.0204	0.6
ago	14	2459440.75	22	2	17.27	-13	16	27.70	4.0185	0.6
ago	15	2459441.75	22	1	47.40	-13	19	16.98	4.0169	0.5
ago	16	2459442.75	22	1	17.42	-13	22	6.29	4.0155	0.4
ago	17	2459443.75	22	0	47.34	-13	24	55.52	4.0145	0.3
ago	18	2459444.75	22	0	17.19	-13	27	44.55	4.0138	0.3

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	19	2459445.75	21	59	46.98	-13	30	33.28	4.0133	0.2
ago	20	2459446.75	21	59	16.74	-13	33	21.60	4.0132	0.1
ago	21	2459447.75	21	58	46.48	-13	36	9.39	4.0134	0.0
ago	22	2459448.75	21	58	16.23	-13	38	56.53	4.0138	24.0
ago	23	2459449.75	21	57	46.00	-13	41	42.90	4.0146	23.9
ago	24	2459450.75	21	57	15.83	-13	44	28.38	4.0156	23.8
ago	25	2459451.75	21	56	45.72	-13	47	12.85	4.0169	23.7
ago	26	2459452.75	21	56	15.71	-13	49	56.18	4.0186	23.7
ago	27	2459453.75	21	55	45.81	-13	52	38.26	4.0205	23.6
ago	28	2459454.75	21	55	16.06	-13	55	18.97	4.0227	23.5
ago	29	2459455.75	21	54	46.46	-13	57	58.21	4.0253	23.5
ago	30	2459456.75	21	54	17.06	-14	0	35.87	4.0281	23.4
ago	31	2459457.75	21	53	47.86	-14	3	11.85	4.0312	23.3
sep	1	2459458.75	21	53	18.89	-14	5	46.03	4.0346	23.2
sep	2	2459459.75	21	52	50.16	-14	8	18.33	4.0383	23.2
sep	3	2459460.75	21	52	21.71	-14	10	48.64	4.0423	23.1
sep	4	2459461.75	21	51	53.55	-14	13	16.86	4.0465	23.0
sep	5	2459462.75	21	51	25.71	-14	15	42.89	4.0511	22.9
sep	6	2459463.75	21	50	58.19	-14	18	6.63	4.0559	22.9
sep	7	2459464.75	21	50	31.03	-14	20	27.97	4.0610	22.8
sep	8	2459465.75	21	50	4.25	-14	22	46.80	4.0664	22.7
sep	9	2459466.75	21	49	37.87	-14	25	3.01	4.0721	22.6
sep	10	2459467.75	21	49	11.91	-14	27	16.50	4.0781	22.6
sep	11	2459468.75	21	48	46.40	-14	29	27.19	4.0843	22.5
sep	12	2459469.75	21	48	21.35	-14	31	34.98	4.0908	22.4
sep	13	2459470.75	21	47	56.78	-14	33	39.80	4.0975	22.4
sep	14	2459471.75	21	47	32.70	-14	35	41.60	4.1046	22.3
sep	15	2459472.75	21	47	9.14	-14	37	40.32	4.1119	22.2
sep	16	2459473.75	21	46	46.11	-14	39	35.90	4.1194	22.1
sep	17	2459474.75	21	46	23.61	-14	41	28.28	4.1272	22.1
sep	18	2459475.75	21	46	1.67	-14	43	17.42	4.1352	22.0
sep	19	2459476.75	21	45	40.29	-14	45	3.23	4.1435	21.9
sep	20	2459477.75	21	45	19.50	-14	46	45.68	4.1521	21.8
sep	21	2459478.75	21	44	59.29	-14	48	24.69	4.1608	21.8
sep	22	2459479.75	21	44	39.70	-14	50	0.21	4.1698	21.7
sep	23	2459480.75	21	44	20.73	-14	51	32.19	4.1791	21.6
sep	24	2459481.75	21	44	2.39	-14	53	0.59	4.1886	21.6
sep	25	2459482.75	21	43	44.71	-14	54	25.36	4.1983	21.5
sep	26	2459483.75	21	43	27.68	-14	55	46.47	4.2082	21.4
sep	27	2459484.75	21	43	11.32	-14	57	3.88	4.2183	21.4
sep	28	2459485.75	21	42	55.65	-14	58	17.57	4.2287	21.3
sep	29	2459486.75	21	42	40.66	-14	59	27.50	4.2392	21.2
sep	30	2459487.75	21	42	26.38	-15	0	33.65	4.2500	21.1
oct	1	2459488.75	21	42	12.81	-15	1	35.99	4.2610	21.1
oct	2	2459489.75	21	41	59.95	-15	2	34.48	4.2722	21.0
oct	3	2459490.75	21	41	47.81	-15	3	29.11	4.2836	20.9

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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
oct	4	2459491.75	21	41	36.42	-15	4	19.84	4.2951	20.9
oct	5	2459492.75	21	41	25.76	-15	5	6.63	4.3069	20.8
oct	6	2459493.75	21	41	15.85	-15	5	49.45	4.3188	20.7
oct	7	2459494.75	21	41	6.71	-15	6	28.26	4.3310	20.7
oct	8	2459495.75	21	40	58.33	-15	7	3.03	4.3433	20.6
oct	9	2459496.75	21	40	50.73	-15	7	33.76	4.3557	20.5
oct	10	2459497.75	21	40	43.91	-15	8	0.43	4.3684	20.5
oct	11	2459498.75	21	40	37.87	-15	8	23.06	4.3812	20.4
oct	12	2459499.75	21	40	32.61	-15	8	41.65	4.3941	20.3
oct	13	2459500.75	21	40	28.14	-15	8	56.20	4.4072	20.3
oct	14	2459501.75	21	40	24.45	-15	9	6.74	4.4205	20.2
oct	15	2459502.75	21	40	21.54	-15	9	13.26	4.4339	20.1
oct	16	2459503.75	21	40	19.42	-15	9	15.76	4.4474	20.1
oct	17	2459504.75	21	40	18.08	-15	9	14.23	4.4610	20.0
oct	18	2459505.75	21	40	17.53	-15	9	8.68	4.4748	19.9
oct	19	2459506.75	21	40	17.76	-15	8	59.11	4.4887	19.9
oct	20	2459507.75	21	40	18.78	-15	8	45.52	4.5028	19.8
oct	21	2459508.75	21	40	20.58	-15	8	27.92	4.5169	19.7
oct	22	2459509.75	21	40	23.17	-15	8	6.31	4.5311	19.7
oct	23	2459510.75	21	40	26.55	-15	7	40.71	4.5455	19.6
oct	24	2459511.75	21	40	30.71	-15	7	11.14	4.5600	19.5
oct	25	2459512.75	21	40	35.65	-15	6	37.60	4.5745	19.5
oct	26	2459513.75	21	40	41.37	-15	6	0.13	4.5892	19.4
oct	27	2459514.75	21	40	47.87	-15	5	18.73	4.6039	19.3
oct	28	2459515.75	21	40	55.15	-15	4	33.42	4.6188	19.3
oct	29	2459516.75	21	41	3.19	-15	3	44.21	4.6337	19.2
oct	30	2459517.75	21	41	12.01	-15	2	51.12	4.6487	19.2
oct	31	2459518.75	21	41	21.59	-15	1	54.16	4.6637	19.1
nov	1	2459519.75	21	41	31.93	-15	0	53.32	4.6788	19.0
nov	2	2459520.75	21	41	43.03	-14	59	48.61	4.6940	19.0
nov	3	2459521.75	21	41	54.89	-14	58	40.03	4.7093	18.9
nov	4	2459522.75	21	42	7.51	-14	57	27.59	4.7246	18.8
nov	5	2459523.75	21	42	20.88	-14	56	11.28	4.7399	18.8
nov	6	2459524.75	21	42	35.01	-14	54	51.13	4.7553	18.7
nov	7	2459525.75	21	42	49.88	-14	53	27.18	4.7708	18.7
nov	8	2459526.75	21	43	5.49	-14	51	59.46	4.7863	18.6
nov	9	2459527.75	21	43	21.83	-14	50	28.01	4.8018	18.5
nov	10	2459528.75	21	43	38.89	-14	48	52.86	4.8173	18.5
nov	11	2459529.75	21	43	56.66	-14	47	14.05	4.8329	18.4
nov	12	2459530.75	21	44	15.14	-14	45	31.58	4.8484	18.3
nov	13	2459531.75	21	44	34.32	-14	43	45.48	4.8640	18.3
nov	14	2459532.75	21	44	54.18	-14	41	55.78	4.8796	18.2
nov	15	2459533.75	21	45	14.74	-14	40	2.47	4.8952	18.2
nov	16	2459534.75	21	45	35.97	-14	38	5.60	4.9108	18.1
nov	17	2459535.75	21	45	57.87	-14	36	5.18	4.9264	18.0
nov	18	2459536.75	21	46	20.45	-14	34	1.23	4.9420	18.0

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	19	2459537.75	21	46	43.68	-14	31	53.79	4.9576	17.9
nov	20	2459538.75	21	47	7.57	-14	29	42.88	4.9732	17.9
nov	21	2459539.75	21	47	32.11	-14	27	28.54	4.9888	17.8
nov	22	2459540.75	21	47	57.29	-14	25	10.79	5.0043	17.8
nov	23	2459541.75	21	48	23.10	-14	22	49.66	5.0198	17.7
nov	24	2459542.75	21	48	49.53	-14	20	25.19	5.0353	17.6
nov	25	2459543.75	21	49	16.58	-14	17	57.40	5.0508	17.6
nov	26	2459544.75	21	49	44.24	-14	15	26.30	5.0662	17.5
nov	27	2459545.75	21	50	12.50	-14	12	51.94	5.0816	17.5
nov	28	2459546.75	21	50	41.35	-14	10	14.30	5.0970	17.4
nov	29	2459547.75	21	51	10.80	-14	7	33.43	5.1123	17.3
nov	30	2459548.75	21	51	40.83	-14	4	49.31	5.1275	17.3
dic	1	2459549.75	21	52	11.44	-14	2	1.97	5.1427	17.2
dic	2	2459550.75	21	52	42.62	-13	59	11.41	5.1579	17.2
dic	3	2459551.75	21	53	14.37	-13	56	17.66	5.1730	17.1
dic	4	2459552.75	21	53	46.68	-13	53	20.75	5.1880	17.1
dic	5	2459553.75	21	54	19.54	-13	50	20.72	5.2030	17.0
dic	6	2459554.75	21	54	52.95	-13	47	17.61	5.2178	16.9
dic	7	2459555.75	21	55	26.89	-13	44	11.48	5.2327	16.9
dic	8	2459556.75	21	56	1.34	-13	41	2.35	5.2474	16.8
dic	9	2459557.75	21	56	36.31	-13	37	50.26	5.2621	16.8
dic	10	2459558.75	21	57	11.77	-13	34	35.22	5.2766	16.7
dic	11	2459559.75	21	57	47.73	-13	31	17.27	5.2911	16.7
dic	12	2459560.75	21	58	24.18	-13	27	56.43	5.3055	16.6
dic	13	2459561.75	21	59	1.11	-13	24	32.71	5.3198	16.6
dic	14	2459562.75	21	59	38.51	-13	21	6.15	5.3340	16.5
dic	15	2459563.75	22	0	16.37	-13	17	36.78	5.3481	16.4
dic	16	2459564.75	22	0	54.70	-13	14	4.62	5.3621	16.4
dic	17	2459565.75	22	1	33.47	-13	10	29.71	5.3760	16.3
dic	18	2459566.75	22	2	12.69	-13	6	52.09	5.3898	16.3
dic	19	2459567.75	22	2	52.34	-13	3	11.78	5.4035	16.2
dic	20	2459568.75	22	3	32.42	-12	59	28.82	5.4171	16.2
dic	21	2459569.75	22	4	12.92	-12	55	43.25	5.4305	16.1
dic	22	2459570.75	22	4	53.83	-12	51	55.10	5.4439	16.1
dic	23	2459571.75	22	5	35.15	-12	48	4.38	5.4571	16.0
dic	24	2459572.75	22	6	16.86	-12	44	11.14	5.4702	16.0
dic	25	2459573.75	22	6	58.96	-12	40	15.38	5.4832	15.9
dic	26	2459574.75	22	7	41.44	-12	36	17.14	5.4960	15.8
dic	27	2459575.75	22	8	24.30	-12	32	16.41	5.5088	15.8
dic	28	2459576.75	22	9	7.54	-12	28	13.23	5.5214	15.7
dic	29	2459577.75	22	9	51.14	-12	24	7.60	5.5338	15.7
dic	30	2459578.75	22	10	35.10	-12	19	59.54	5.5461	15.6
dic	31	2459579.75	22	11	19.43	-12	15	49.08	5.5583	15.6

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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
ene	1	2459215.75	20	15	57.53	-20	10	6.77	10.9012	13.6
ene	2	2459216.75	20	16	26.05	-20	8	38.72	10.9069	13.5
ene	3	2459217.75	20	16	54.66	-20	7	10.08	10.9124	13.5
ene	4	2459218.75	20	17	23.36	-20	5	40.87	10.9176	13.4
ene	5	2459219.75	20	17	52.16	-20	4	11.07	10.9225	13.3
ene	6	2459220.75	20	18	21.03	-20	2	40.70	10.9272	13.3
ene	7	2459221.75	20	18	49.99	-20	1	9.76	10.9316	13.2
ene	8	2459222.75	20	19	19.02	-19	59	38.26	10.9358	13.2
ene	9	2459223.75	20	19	48.13	-19	58	6.21	10.9397	13.1
ene	10	2459224.75	20	20	17.31	-19	56	33.66	10.9434	13.1
ene	11	2459225.75	20	20	46.56	-19	55	0.61	10.9468	13.0
ene	12	2459226.75	20	21	15.86	-19	53	27.10	10.9500	12.9
ene	13	2459227.75	20	21	45.21	-19	51	53.16	10.9529	12.9
ene	14	2459228.75	20	22	14.60	-19	50	18.80	10.9556	12.8
ene	15	2459229.75	20	22	44.02	-19	48	44.04	10.9579	12.8
ene	16	2459230.75	20	23	13.48	-19	47	8.87	10.9601	12.7
ene	17	2459231.75	20	23	42.96	-19	45	33.32	10.9619	12.7
ene	18	2459232.75	20	24	12.46	-19	43	57.38	10.9635	12.6
ene	19	2459233.75	20	24	41.98	-19	42	21.07	10.9649	12.5
ene	20	2459234.75	20	25	11.51	-19	40	44.41	10.9659	12.5
ene	21	2459235.75	20	25	41.06	-19	39	7.41	10.9668	12.4
ene	22	2459236.75	20	26	10.61	-19	37	30.09	10.9673	12.4
ene	23	2459237.75	20	26	40.17	-19	35	52.58	10.9676	12.3
ene	24	2459238.75	20	27	9.68	-19	34	15.54	10.9676	12.3
ene	25	2459239.75	20	27	39.20	-19	32	36.63	10.9674	12.2
ene	26	2459240.75	20	28	8.73	-19	30	58.11	10.9669	12.1
ene	27	2459241.75	20	28	38.23	-19	29	19.48	10.9662	12.1
ene	28	2459242.75	20	29	7.71	-19	27	40.68	10.9652	12.0
ene	29	2459243.75	20	29	37.16	-19	26	1.72	10.9639	12.0
ene	30	2459244.75	20	30	6.57	-19	24	22.62	10.9624	11.9
ene	31	2459245.75	20	30	35.94	-19	22	43.37	10.9606	11.8
feb	1	2459246.75	20	31	5.27	-19	21	3.99	10.9586	11.8
feb	2	2459247.75	20	31	34.55	-19	19	24.47	10.9563	11.7
feb	3	2459248.75	20	32	3.78	-19	17	44.83	10.9537	11.7
feb	4	2459249.75	20	32	32.96	-19	16	5.07	10.9509	11.6
feb	5	2459250.75	20	33	2.08	-19	14	25.24	10.9479	11.6
feb	6	2459251.75	20	33	31.14	-19	12	45.34	10.9446	11.5
feb	7	2459252.75	20	34	0.14	-19	11	5.42	10.9410	11.4
feb	8	2459253.75	20	34	29.07	-19	9	25.50	10.9371	11.4
feb	9	2459254.75	20	34	57.92	-19	7	45.62	10.9331	11.3
feb	10	2459255.75	20	35	26.68	-19	6	5.79	10.9287	11.3
feb	11	2459256.75	20	35	55.35	-19	4	26.04	10.9241	11.2
feb	12	2459257.75	20	36	23.93	-19	2	46.39	10.9193	11.2
feb	13	2459258.75	20	36	52.40	-19	1	6.84	10.9142	11.1
feb	14	2459259.75	20	37	20.76	-18	59	27.41	10.9089	11.0
feb	15	2459260.75	20	37	49.02	-18	57	48.11	10.9033	11.0

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2459261.75	20	38	17.16	-18	56	8.96	10.8974	10.9
feb	17	2459262.75	20	38	45.19	-18	54	29.98	10.8913	10.9
feb	18	2459263.75	20	39	13.09	-18	52	51.19	10.8850	10.8
feb	19	2459264.75	20	39	40.87	-18	51	12.62	10.8785	10.8
feb	20	2459265.75	20	40	8.53	-18	49	34.28	10.8717	10.7
feb	21	2459266.75	20	40	36.04	-18	47	56.22	10.8646	10.6
feb	22	2459267.75	20	41	3.43	-18	46	18.45	10.8574	10.6
feb	23	2459268.75	20	41	30.67	-18	44	41.00	10.8499	10.5
feb	24	2459269.75	20	41	57.76	-18	43	3.90	10.8421	10.5
feb	25	2459270.75	20	42	24.70	-18	41	27.17	10.8342	10.4
feb	26	2459271.75	20	42	51.48	-18	39	50.84	10.8260	10.3
feb	27	2459272.75	20	43	18.09	-18	38	14.91	10.8176	10.3
feb	28	2459273.75	20	43	44.54	-18	36	39.40	10.8089	10.2
mar	1	2459274.75	20	44	10.82	-18	35	4.31	10.8001	10.2
mar	2	2459275.75	20	44	36.93	-18	33	29.65	10.7910	10.1
mar	3	2459276.75	20	45	2.87	-18	31	55.43	10.7817	10.1
mar	4	2459277.75	20	45	28.63	-18	30	21.69	10.7722	10.0
mar	5	2459278.75	20	45	54.22	-18	28	48.44	10.7625	9.9
mar	6	2459279.75	20	46	19.62	-18	27	15.72	10.7525	9.9
mar	7	2459280.75	20	46	44.83	-18	25	43.57	10.7424	9.8
mar	8	2459281.75	20	47	9.84	-18	24	12.02	10.7320	9.8
mar	9	2459282.75	20	47	34.65	-18	22	41.10	10.7215	9.7
mar	10	2459283.75	20	47	59.25	-18	21	10.83	10.7107	9.6
mar	11	2459284.75	20	48	23.64	-18	19	41.23	10.6998	9.6
mar	12	2459285.75	20	48	47.81	-18	18	12.31	10.6886	9.5
mar	13	2459286.75	20	49	11.76	-18	16	44.09	10.6773	9.5
mar	14	2459287.75	20	49	35.49	-18	15	16.58	10.6657	9.4
mar	15	2459288.75	20	49	58.98	-18	13	49.80	10.6540	9.3
mar	16	2459289.75	20	50	22.25	-18	12	23.78	10.6421	9.3
mar	17	2459290.75	20	50	45.28	-18	10	58.52	10.6300	9.2
mar	18	2459291.75	20	51	8.07	-18	9	34.07	10.6177	9.2
mar	19	2459292.75	20	51	30.62	-18	8	10.44	10.6052	9.1
mar	20	2459293.75	20	51	52.93	-18	6	47.65	10.5926	9.0
mar	21	2459294.75	20	52	14.98	-18	5	25.75	10.5798	9.0
mar	22	2459295.75	20	52	36.79	-18	4	4.75	10.5668	8.9
mar	23	2459296.75	20	52	58.33	-18	2	44.68	10.5537	8.9
mar	24	2459297.75	20	53	19.61	-18	1	25.57	10.5404	8.8
mar	25	2459298.75	20	53	40.63	-18	0	7.44	10.5270	8.7
mar	26	2459299.75	20	54	1.37	-17	58	50.31	10.5134	8.7
mar	27	2459300.75	20	54	21.84	-17	57	34.18	10.4996	8.6
mar	28	2459301.75	20	54	42.04	-17	56	19.06	10.4857	8.6
mar	29	2459302.75	20	55	1.95	-17	55	4.96	10.4717	8.5
mar	30	2459303.75	20	55	21.58	-17	53	51.88	10.4575	8.4
mar	31	2459304.75	20	55	40.94	-17	52	39.85	10.4432	8.4
abr	1	2459305.75	20	56	0.01	-17	51	28.89	10.4288	8.3
abr	2	2459306.75	20	56	18.79	-17	50	19.03	10.4142	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
abr	3	2459307.75	20	56	37.28	-17	49	10.30	10.3995	8.2
abr	4	2459308.75	20	56	55.48	-17	48	2.75	10.3846	8.1
abr	5	2459309.75	20	57	13.37	-17	46	56.39	10.3697	8.1
abr	6	2459310.75	20	57	30.95	-17	45	51.25	10.3546	8.0
abr	7	2459311.75	20	57	48.22	-17	44	47.35	10.3394	8.0
abr	8	2459312.75	20	58	5.17	-17	43	44.69	10.3241	7.9
abr	9	2459313.75	20	58	21.80	-17	42	43.29	10.3087	7.8
abr	10	2459314.75	20	58	38.11	-17	41	43.17	10.2932	7.8
abr	11	2459315.75	20	58	54.09	-17	40	44.32	10.2776	7.7
abr	12	2459316.75	20	59	9.75	-17	39	46.78	10.2619	7.7
abr	13	2459317.75	20	59	25.08	-17	38	50.56	10.2462	7.6
abr	14	2459318.75	20	59	40.07	-17	37	55.67	10.2303	7.5
abr	15	2459319.75	20	59	54.73	-17	37	2.14	10.2143	7.5
abr	16	2459320.75	21	0	9.06	-17	36	9.99	10.1983	7.4
abr	17	2459321.75	21	0	23.04	-17	35	19.24	10.1822	7.4
abr	18	2459322.75	21	0	36.68	-17	34	29.92	10.1660	7.3
abr	19	2459323.75	21	0	49.98	-17	33	42.04	10.1498	7.2
abr	20	2459324.75	21	1	2.92	-17	32	55.63	10.1335	7.2
abr	21	2459325.75	21	1	15.51	-17	32	10.70	10.1172	7.1
abr	22	2459326.75	21	1	27.75	-17	31	27.26	10.1008	7.0
abr	23	2459327.75	21	1	39.63	-17	30	45.33	10.0843	7.0
abr	24	2459328.75	21	1	51.14	-17	30	4.89	10.0678	6.9
abr	25	2459329.75	21	2	2.30	-17	29	25.97	10.0513	6.9
abr	26	2459330.75	21	2	13.09	-17	28	48.54	10.0348	6.8
abr	27	2459331.75	21	2	23.52	-17	28	12.62	10.0182	6.7
abr	28	2459332.75	21	2	33.60	-17	27	38.21	10.0015	6.7
abr	29	2459333.75	21	2	43.31	-17	27	5.34	9.9849	6.6
abr	30	2459334.75	21	2	52.65	-17	26	34.04	9.9682	6.5
may	1	2459335.75	21	3	1.63	-17	26	4.34	9.9516	6.5
may	2	2459336.75	21	3	10.23	-17	25	36.25	9.9349	6.4
may	3	2459337.75	21	3	18.45	-17	25	9.79	9.9182	6.3
may	4	2459338.75	21	3	26.29	-17	24	44.97	9.9015	6.3
may	5	2459339.75	21	3	33.75	-17	24	21.79	9.8848	6.2
may	6	2459340.75	21	3	40.82	-17	24	0.26	9.8681	6.2
may	7	2459341.75	21	3	47.50	-17	23	40.37	9.8514	6.1
may	8	2459342.75	21	3	53.80	-17	23	22.12	9.8348	6.0
may	9	2459343.75	21	3	59.71	-17	23	5.53	9.8182	6.0
may	10	2459344.75	21	4	5.23	-17	22	50.59	9.8015	5.9
may	11	2459345.75	21	4	10.36	-17	22	37.32	9.7850	5.8
may	12	2459346.75	21	4	15.11	-17	22	25.72	9.7684	5.8
may	13	2459347.75	21	4	19.46	-17	22	15.80	9.7519	5.7
may	14	2459348.75	21	4	23.43	-17	22	7.57	9.7355	5.6
may	15	2459349.75	21	4	27.00	-17	22	1.04	9.7190	5.6
may	16	2459350.75	21	4	30.18	-17	21	56.22	9.7027	5.5
may	17	2459351.75	21	4	32.97	-17	21	53.12	9.6864	5.4
may	18	2459352.75	21	4	35.36	-17	21	51.73	9.6702	5.4

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	19	2459353.75	21	4	37.36	-17	21	52.07	9.6540	5.3
may	20	2459354.75	21	4	38.96	-17	21	54.11	9.6379	5.3
may	21	2459355.75	21	4	40.16	-17	21	57.86	9.6219	5.2
may	22	2459356.75	21	4	40.98	-17	22	3.29	9.6060	5.1
may	23	2459357.75	21	4	41.40	-17	22	10.40	9.5901	5.1
may	24	2459358.75	21	4	41.43	-17	22	19.16	9.5744	5.0
may	25	2459359.75	21	4	41.07	-17	22	29.57	9.5587	4.9
may	26	2459360.75	21	4	40.33	-17	22	41.62	9.5432	4.9
may	27	2459361.75	21	4	39.21	-17	22	55.33	9.5277	4.8
may	28	2459362.75	21	4	37.70	-17	23	10.71	9.5124	4.7
may	29	2459363.75	21	4	35.81	-17	23	27.77	9.4972	4.7
may	30	2459364.75	21	4	33.52	-17	23	46.51	9.4820	4.6
may	31	2459365.75	21	4	30.85	-17	24	6.92	9.4670	4.5
jun	1	2459366.75	21	4	27.79	-17	24	29.00	9.4522	4.5
jun	2	2459367.75	21	4	24.34	-17	24	52.71	9.4374	4.4
jun	3	2459368.75	21	4	20.51	-17	25	18.04	9.4228	4.3
jun	4	2459369.75	21	4	16.29	-17	25	44.99	9.4083	4.3
jun	5	2459370.75	21	4	11.69	-17	26	13.52	9.3940	4.2
jun	6	2459371.75	21	4	6.71	-17	26	43.63	9.3798	4.1
jun	7	2459372.75	21	4	1.36	-17	27	15.31	9.3658	4.1
jun	8	2459373.75	21	3	55.64	-17	27	48.54	9.3519	4.0
jun	9	2459374.75	21	3	49.55	-17	28	23.32	9.3382	3.9
jun	10	2459375.75	21	3	43.10	-17	28	59.62	9.3247	3.9
jun	11	2459376.75	21	3	36.28	-17	29	37.45	9.3113	3.8
jun	12	2459377.75	21	3	29.10	-17	30	16.80	9.2981	3.7
jun	13	2459378.75	21	3	21.56	-17	30	57.64	9.2851	3.7
jun	14	2459379.75	21	3	13.67	-17	31	39.96	9.2722	3.6
jun	15	2459380.75	21	3	5.42	-17	32	23.74	9.2596	3.5
jun	16	2459381.75	21	2	56.83	-17	33	8.96	9.2471	3.5
jun	17	2459382.75	21	2	47.88	-17	33	55.58	9.2348	3.4
jun	18	2459383.75	21	2	38.60	-17	34	43.58	9.2228	3.3
jun	19	2459384.75	21	2	28.99	-17	35	32.91	9.2109	3.2
jun	20	2459385.75	21	2	19.04	-17	36	23.54	9.1993	3.2
jun	21	2459386.75	21	2	8.78	-17	37	15.45	9.1878	3.1
jun	22	2459387.75	21	1	58.20	-17	38	8.59	9.1766	3.0
jun	23	2459388.75	21	1	47.32	-17	39	2.96	9.1656	3.0
jun	24	2459389.75	21	1	36.12	-17	39	58.56	9.1548	2.9
jun	25	2459390.75	21	1	24.63	-17	40	55.35	9.1442	2.8
jun	26	2459391.75	21	1	12.83	-17	41	53.34	9.1338	2.8
jun	27	2459392.75	21	1	0.74	-17	42	52.50	9.1237	2.7
jun	28	2459393.75	21	0	48.35	-17	43	52.80	9.1138	2.6
jun	29	2459394.75	21	0	35.67	-17	44	54.19	9.1042	2.6
jun	30	2459395.75	21	0	22.71	-17	45	56.65	9.0947	2.5
jul	1	2459396.75	21	0	9.47	-17	47	0.13	9.0856	2.4
jul	2	2459397.75	20	59	55.96	-17	48	4.60	9.0766	2.3
jul	3	2459398.75	20	59	42.19	-17	49	10.02	9.0680	2.3

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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
jul	4	2459399.75	20	59	28.16	-17	50	16.36	9.0595	2.2
jul	5	2459400.75	20	59	13.89	-17	51	23.59	9.0514	2.1
jul	6	2459401.75	20	58	59.38	-17	52	31.68	9.0434	2.1
jul	7	2459402.75	20	58	44.63	-17	53	40.60	9.0358	2.0
jul	8	2459403.75	20	58	29.66	-17	54	50.33	9.0284	1.9
jul	9	2459404.75	20	58	14.47	-17	56	0.83	9.0213	1.9
jul	10	2459405.75	20	57	59.06	-17	57	12.08	9.0144	1.8
jul	11	2459406.75	20	57	43.45	-17	58	24.03	9.0078	1.7
jul	12	2459407.75	20	57	27.64	-17	59	36.66	9.0015	1.7
jul	13	2459408.75	20	57	11.63	-18	0	49.92	8.9955	1.6
jul	14	2459409.75	20	56	55.45	-18	2	3.77	8.9898	1.5
jul	15	2459410.75	20	56	39.08	-18	3	18.16	8.9843	1.4
jul	16	2459411.75	20	56	22.55	-18	4	33.04	8.9791	1.4
jul	17	2459412.75	20	56	5.87	-18	5	48.35	8.9742	1.3
jul	18	2459413.75	20	55	49.04	-18	7	4.06	8.9696	1.2
jul	19	2459414.75	20	55	32.07	-18	8	20.12	8.9653	1.2
jul	20	2459415.75	20	55	14.98	-18	9	36.51	8.9612	1.1
jul	21	2459416.75	20	54	57.78	-18	10	53.19	8.9575	1.0
jul	22	2459417.75	20	54	40.46	-18	12	10.14	8.9540	0.9
jul	23	2459418.75	20	54	23.04	-18	13	27.34	8.9508	0.9
jul	24	2459419.75	20	54	5.52	-18	14	44.76	8.9479	0.8
jul	25	2459420.75	20	53	47.90	-18	16	2.36	8.9454	0.7
jul	26	2459421.75	20	53	30.20	-18	17	20.09	8.9431	0.7
jul	27	2459422.75	20	53	12.43	-18	18	37.91	8.9411	0.6
jul	28	2459423.75	20	52	54.59	-18	19	55.77	8.9394	0.5
jul	29	2459424.75	20	52	36.69	-18	21	13.63	8.9379	0.5
jul	30	2459425.75	20	52	18.75	-18	22	31.43	8.9368	0.4
jul	31	2459426.75	20	52	0.77	-18	23	49.15	8.9360	0.3
ago	1	2459427.75	20	51	42.77	-18	25	6.75	8.9355	0.2
ago	2	2459428.75	20	51	24.75	-18	26	24.20	8.9353	0.2
ago	3	2459429.75	20	51	6.72	-18	27	41.45	8.9354	0.1
ago	4	2459430.75	20	50	48.70	-18	28	58.49	8.9358	0.0
ago	5	2459431.75	20	50	30.69	-18	30	15.27	8.9365	24.0
ago	6	2459432.75	20	50	12.70	-18	31	31.77	8.9374	23.9
ago	7	2459433.75	20	49	54.73	-18	32	47.96	8.9387	23.8
ago	8	2459434.75	20	49	36.81	-18	34	3.79	8.9403	23.7
ago	9	2459435.75	20	49	18.93	-18	35	19.23	8.9422	23.7
ago	10	2459436.75	20	49	1.10	-18	36	34.23	8.9444	23.6
ago	11	2459437.75	20	48	43.34	-18	37	48.75	8.9469	23.5
ago	12	2459438.75	20	48	25.66	-18	39	2.74	8.9497	23.5
ago	13	2459439.75	20	48	8.06	-18	40	16.15	8.9527	23.4
ago	14	2459440.75	20	47	50.57	-18	41	28.94	8.9561	23.3
ago	15	2459441.75	20	47	33.18	-18	42	41.07	8.9598	23.3
ago	16	2459442.75	20	47	15.91	-18	43	52.53	8.9637	23.2
ago	17	2459443.75	20	46	58.78	-18	45	3.28	8.9680	23.1
ago	18	2459444.75	20	46	41.77	-18	46	13.30	8.9725	23.0

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	19	2459445.75	20	46	24.91	-18	47	22.59	8.9773	23.0
ago	20	2459446.75	20	46	8.20	-18	48	31.12	8.9824	22.9
ago	21	2459447.75	20	45	51.65	-18	49	38.85	8.9878	22.8
ago	22	2459448.75	20	45	35.25	-18	50	45.76	8.9935	22.8
ago	23	2459449.75	20	45	19.03	-18	51	51.82	8.9994	22.7
ago	24	2459450.75	20	45	2.98	-18	52	56.97	9.0056	22.6
ago	25	2459451.75	20	44	47.12	-18	54	1.19	9.0121	22.5
ago	26	2459452.75	20	44	31.45	-18	55	4.44	9.0189	22.5
ago	27	2459453.75	20	44	15.99	-18	56	6.70	9.0259	22.4
ago	28	2459454.75	20	44	0.75	-18	57	7.94	9.0332	22.3
ago	29	2459455.75	20	43	45.73	-18	58	8.15	9.0408	22.3
ago	30	2459456.75	20	43	30.94	-18	59	7.29	9.0486	22.2
ago	31	2459457.75	20	43	16.39	-19	0	5.35	9.0567	22.1
sep	1	2459458.75	20	43	2.09	-19	1	2.32	9.0651	22.1
sep	2	2459459.75	20	42	48.03	-19	1	58.18	9.0737	22.0
sep	3	2459460.75	20	42	34.24	-19	2	52.90	9.0826	21.9
sep	4	2459461.75	20	42	20.71	-19	3	46.48	9.0917	21.9
sep	5	2459462.75	20	42	7.45	-19	4	38.87	9.1010	21.8
sep	6	2459463.75	20	41	54.48	-19	5	30.07	9.1107	21.7
sep	7	2459464.75	20	41	41.78	-19	6	20.04	9.1205	21.6
sep	8	2459465.75	20	41	29.38	-19	7	8.74	9.1306	21.6
sep	9	2459466.75	20	41	17.28	-19	7	56.14	9.1409	21.5
sep	10	2459467.75	20	41	5.50	-19	8	42.22	9.1515	21.4
sep	11	2459468.75	20	40	54.03	-19	9	26.95	9.1623	21.4
sep	12	2459469.75	20	40	42.88	-19	10	10.34	9.1733	21.3
sep	13	2459470.75	20	40	32.07	-19	10	52.36	9.1845	21.2
sep	14	2459471.75	20	40	21.59	-19	11	33.02	9.1959	21.2
sep	15	2459472.75	20	40	11.45	-19	12	12.32	9.2076	21.1
sep	16	2459473.75	20	40	1.64	-19	12	50.25	9.2194	21.0
sep	17	2459474.75	20	39	52.19	-19	13	26.81	9.2315	21.0
sep	18	2459475.75	20	39	43.07	-19	14	1.97	9.2437	20.9
sep	19	2459476.75	20	39	34.31	-19	14	35.73	9.2562	20.8
sep	20	2459477.75	20	39	25.90	-19	15	8.05	9.2688	20.8
sep	21	2459478.75	20	39	17.85	-19	15	38.93	9.2816	20.7
sep	22	2459479.75	20	39	10.16	-19	16	8.33	9.2947	20.6
sep	23	2459480.75	20	39	2.85	-19	16	36.26	9.3078	20.5
sep	24	2459481.75	20	38	55.90	-19	17	2.70	9.3212	20.5
sep	25	2459482.75	20	38	49.34	-19	17	27.66	9.3347	20.4
sep	26	2459483.75	20	38	43.16	-19	17	51.11	9.3484	20.3
sep	27	2459484.75	20	38	37.36	-19	18	13.07	9.3623	20.3
sep	28	2459485.75	20	38	31.95	-19	18	33.54	9.3763	20.2
sep	29	2459486.75	20	38	26.93	-19	18	52.50	9.3905	20.1
sep	30	2459487.75	20	38	22.31	-19	19	9.97	9.4048	20.1
oct	1	2459488.75	20	38	18.08	-19	19	25.93	9.4193	20.0
oct	2	2459489.75	20	38	14.24	-19	19	40.38	9.4339	19.9
oct	3	2459490.75	20	38	10.81	-19	19	53.31	9.4486	19.9

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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
oct	4	2459491.75	20	38	7.77	-19	20	4.72	9.4635	19.8
oct	5	2459492.75	20	38	5.14	-19	20	14.57	9.4785	19.7
oct	6	2459493.75	20	38	2.91	-19	20	22.86	9.4936	19.7
oct	7	2459494.75	20	38	1.10	-19	20	29.56	9.5089	19.6
oct	8	2459495.75	20	37	59.69	-19	20	34.68	9.5242	19.5
oct	9	2459496.75	20	37	58.71	-19	20	38.21	9.5397	19.5
oct	10	2459497.75	20	37	58.15	-19	20	40.16	9.5553	19.4
oct	11	2459498.75	20	37	58.00	-19	20	40.54	9.5709	19.3
oct	12	2459499.75	20	37	58.27	-19	20	39.37	9.5867	19.3
oct	13	2459500.75	20	37	58.95	-19	20	36.66	9.6025	19.2
oct	14	2459501.75	20	38	0.05	-19	20	32.41	9.6184	19.1
oct	15	2459502.75	20	38	1.55	-19	20	26.63	9.6344	19.1
oct	16	2459503.75	20	38	3.47	-19	20	19.29	9.6505	19.0
oct	17	2459504.75	20	38	5.80	-19	20	10.41	9.6666	19.0
oct	18	2459505.75	20	38	8.53	-19	19	59.96	9.6828	18.9
oct	19	2459506.75	20	38	11.68	-19	19	47.95	9.6991	18.8
oct	20	2459507.75	20	38	15.24	-19	19	34.37	9.7154	18.8
oct	21	2459508.75	20	38	19.22	-19	19	19.23	9.7317	18.7
oct	22	2459509.75	20	38	23.60	-19	19	2.53	9.7481	18.6
oct	23	2459510.75	20	38	28.40	-19	18	44.28	9.7646	18.6
oct	24	2459511.75	20	38	33.61	-19	18	24.49	9.7810	18.5
oct	25	2459512.75	20	38	39.22	-19	18	3.16	9.7975	18.4
oct	26	2459513.75	20	38	45.25	-19	17	40.32	9.8141	18.4
oct	27	2459514.75	20	38	51.68	-19	17	15.95	9.8306	18.3
oct	28	2459515.75	20	38	58.52	-19	16	50.08	9.8472	18.2
oct	29	2459516.75	20	39	5.76	-19	16	22.70	9.8638	18.2
oct	30	2459517.75	20	39	13.39	-19	15	53.83	9.8803	18.1
oct	31	2459518.75	20	39	21.43	-19	15	23.44	9.8969	18.1
nov	1	2459519.75	20	39	29.86	-19	14	51.55	9.9135	18.0
nov	2	2459520.75	20	39	38.69	-19	14	18.15	9.9301	17.9
nov	3	2459521.75	20	39	47.91	-19	13	43.21	9.9467	17.9
nov	4	2459522.75	20	39	57.53	-19	13	6.75	9.9632	17.8
nov	5	2459523.75	20	40	7.55	-19	12	28.76	9.9797	17.7
nov	6	2459524.75	20	40	17.96	-19	11	49.26	9.9962	17.7
nov	7	2459525.75	20	40	28.76	-19	11	8.27	10.0127	17.6
nov	8	2459526.75	20	40	39.95	-19	10	25.81	10.0291	17.6
nov	9	2459527.75	20	40	51.53	-19	9	41.91	10.0455	17.5
nov	10	2459528.75	20	41	3.47	-19	8	56.58	10.0618	17.4
nov	11	2459529.75	20	41	15.79	-19	8	9.82	10.0781	17.4
nov	12	2459530.75	20	41	28.47	-19	7	21.63	10.0944	17.3
nov	13	2459531.75	20	41	41.52	-19	6	32.02	10.1105	17.2
nov	14	2459532.75	20	41	54.92	-19	5	40.98	10.1266	17.2
nov	15	2459533.75	20	42	8.69	-19	4	48.52	10.1427	17.1
nov	16	2459534.75	20	42	22.81	-19	3	54.64	10.1586	17.1
nov	17	2459535.75	20	42	37.28	-19	2	59.34	10.1745	17.0
nov	18	2459536.75	20	42	52.11	-19	2	2.64	10.1903	16.9

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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
nov	19	2459537.75	20	43	7.28	-19	1	4.55	10.2060	16.9
nov	20	2459538.75	20	43	22.80	-19	0	5.09	10.2217	16.8
nov	21	2459539.75	20	43	38.67	-18	59	4.27	10.2372	16.7
nov	22	2459540.75	20	43	54.87	-18	58	2.10	10.2526	16.7
nov	23	2459541.75	20	44	11.40	-18	56	58.60	10.2680	16.6
nov	24	2459542.75	20	44	28.26	-18	55	53.78	10.2832	16.6
nov	25	2459543.75	20	44	45.44	-18	54	47.66	10.2983	16.5
nov	26	2459544.75	20	45	2.95	-18	53	40.24	10.3133	16.4
nov	27	2459545.75	20	45	20.77	-18	52	31.52	10.3282	16.4
nov	28	2459546.75	20	45	38.90	-18	51	21.51	10.3430	16.3
nov	29	2459547.75	20	45	57.34	-18	50	10.21	10.3577	16.3
nov	30	2459548.75	20	46	16.08	-18	48	57.62	10.3722	16.2
dic	1	2459549.75	20	46	35.13	-18	47	43.73	10.3866	16.1
dic	2	2459550.75	20	46	54.49	-18	46	28.55	10.4009	16.1
dic	3	2459551.75	20	47	14.14	-18	45	12.09	10.4150	16.0
dic	4	2459552.75	20	47	34.09	-18	43	54.37	10.4289	16.0
dic	5	2459553.75	20	47	54.34	-18	42	35.43	10.4428	15.9
dic	6	2459554.75	20	48	14.86	-18	41	15.28	10.4564	15.8
dic	7	2459555.75	20	48	35.66	-18	39	53.96	10.4699	15.8
dic	8	2459556.75	20	48	56.73	-18	38	31.49	10.4833	15.7
dic	9	2459557.75	20	49	18.07	-18	37	7.86	10.4965	15.7
dic	10	2459558.75	20	49	39.66	-18	35	43.08	10.5095	15.6
dic	11	2459559.75	20	50	1.50	-18	34	17.15	10.5224	15.5
dic	12	2459560.75	20	50	23.60	-18	32	50.08	10.5350	15.5
dic	13	2459561.75	20	50	45.94	-18	31	21.88	10.5476	15.4
dic	14	2459562.75	20	51	8.53	-18	29	52.56	10.5599	15.4
dic	15	2459563.75	20	51	31.36	-18	28	22.13	10.5720	15.3
dic	16	2459564.75	20	51	54.42	-18	26	50.61	10.5840	15.2
dic	17	2459565.75	20	52	17.71	-18	25	18.01	10.5958	15.2
dic	18	2459566.75	20	52	41.24	-18	23	44.37	10.6074	15.1
dic	19	2459567.75	20	53	4.98	-18	22	9.69	10.6188	15.1
dic	20	2459568.75	20	53	28.94	-18	20	34.00	10.6300	15.0
dic	21	2459569.75	20	53	53.11	-18	18	57.32	10.6410	14.9
dic	22	2459570.75	20	54	17.49	-18	17	19.66	10.6518	14.9
dic	23	2459571.75	20	54	42.07	-18	15	41.03	10.6624	14.8
dic	24	2459572.75	20	55	6.84	-18	14	1.45	10.6728	14.8
dic	25	2459573.75	20	55	31.81	-18	12	20.92	10.6830	14.7
dic	26	2459574.75	20	55	56.96	-18	10	39.45	10.6929	14.7
dic	27	2459575.75	20	56	22.30	-18	8	57.04	10.7027	14.6
dic	28	2459576.75	20	56	47.81	-18	7	13.70	10.7123	14.5
dic	29	2459577.75	20	57	13.51	-18	5	29.43	10.7216	14.5
dic	30	2459578.75	20	57	39.38	-18	3	44.25	10.7307	14.4
dic	31	2459579.75	20	58	5.42	-18	1	58.18	10.7396	14.4

Urano, 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2459215.75	2	18	27.15	+13	21	24.60	19.3251	19.6
ene	2	2459216.75	2	18	24.58	+13	21	13.51	19.3406	19.6
ene	3	2459217.75	2	18	22.20	+13	21	3.39	19.3562	19.5
ene	4	2459218.75	2	18	20.02	+13	20	54.25	19.3720	19.4
ene	5	2459219.75	2	18	18.03	+13	20	46.09	19.3879	19.4
ene	6	2459220.75	2	18	16.23	+13	20	38.91	19.4039	19.3
ene	7	2459221.75	2	18	14.64	+13	20	32.74	19.4200	19.2
ene	8	2459222.75	2	18	13.25	+13	20	27.59	19.4362	19.2
ene	9	2459223.75	2	18	12.06	+13	20	23.47	19.4525	19.1
ene	10	2459224.75	2	18	11.08	+13	20	20.41	19.4689	19.0
ene	11	2459225.75	2	18	10.31	+13	20	18.40	19.4854	19.0
ene	12	2459226.75	2	18	9.74	+13	20	17.45	19.5020	18.9
ene	13	2459227.75	2	18	9.37	+13	20	17.55	19.5187	18.8
ene	14	2459228.75	2	18	9.21	+13	20	18.68	19.5354	18.8
ene	15	2459229.75	2	18	9.25	+13	20	20.85	19.5522	18.7
ene	16	2459230.75	2	18	9.49	+13	20	24.03	19.5690	18.6
ene	17	2459231.75	2	18	9.93	+13	20	28.24	19.5859	18.6
ene	18	2459232.75	2	18	10.57	+13	20	33.48	19.6029	18.5
ene	19	2459233.75	2	18	11.42	+13	20	39.73	19.6199	18.4
ene	20	2459234.75	2	18	12.48	+13	20	47.02	19.6369	18.4
ene	21	2459235.75	2	18	13.74	+13	20	55.35	19.6539	18.3
ene	22	2459236.75	2	18	15.21	+13	21	4.71	19.6710	18.2
ene	23	2459237.75	2	18	16.88	+13	21	15.12	19.6881	18.2
ene	24	2459238.75	2	18	18.76	+13	21	26.56	19.7053	18.1
ene	25	2459239.75	2	18	20.85	+13	21	39.05	19.7224	18.0
ene	26	2459240.75	2	18	23.14	+13	21	52.57	19.7395	18.0
ene	27	2459241.75	2	18	25.63	+13	22	7.11	19.7567	17.9
ene	28	2459242.75	2	18	28.32	+13	22	22.67	19.7738	17.8
ene	29	2459243.75	2	18	31.20	+13	22	39.23	19.7909	17.8
ene	30	2459244.75	2	18	34.29	+13	22	56.78	19.8080	17.7
ene	31	2459245.75	2	18	37.57	+13	23	15.31	19.8251	17.6
feb	1	2459246.75	2	18	41.04	+13	23	34.80	19.8422	17.6
feb	2	2459247.75	2	18	44.71	+13	23	55.26	19.8592	17.5
feb	3	2459248.75	2	18	48.58	+13	24	16.69	19.8763	17.5
feb	4	2459249.75	2	18	52.65	+13	24	39.10	19.8932	17.4
feb	5	2459250.75	2	18	56.91	+13	25	2.49	19.9102	17.3
feb	6	2459251.75	2	19	1.38	+13	25	26.87	19.9270	17.3
feb	7	2459252.75	2	19	6.04	+13	25	52.23	19.9439	17.2
feb	8	2459253.75	2	19	10.89	+13	26	18.57	19.9606	17.1
feb	9	2459254.75	2	19	15.94	+13	26	45.88	19.9773	17.1
feb	10	2459255.75	2	19	21.18	+13	27	14.13	19.9940	17.0
feb	11	2459256.75	2	19	26.60	+13	27	43.31	20.0105	16.9
feb	12	2459257.75	2	19	32.20	+13	28	13.40	20.0270	16.9
feb	13	2459258.75	2	19	37.99	+13	28	44.40	20.0434	16.8
feb	14	2459259.75	2	19	43.96	+13	29	16.28	20.0597	16.7
feb	15	2459260.75	2	19	50.11	+13	29	49.04	20.0759	16.7

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2459261.75	2	19	56.45	+13	30	22.69	20.0920	16.6
feb	17	2459262.75	2	20	2.97	+13	30	57.22	20.1080	16.6
feb	18	2459263.75	2	20	9.66	+13	31	32.61	20.1239	16.5
feb	19	2459264.75	2	20	16.54	+13	32	8.88	20.1397	16.4
feb	20	2459265.75	2	20	23.59	+13	32	46.00	20.1554	16.4
feb	21	2459266.75	2	20	30.81	+13	33	23.97	20.1709	16.3
feb	22	2459267.75	2	20	38.21	+13	34	2.79	20.1863	16.2
feb	23	2459268.75	2	20	45.77	+13	34	42.43	20.2016	16.2
feb	24	2459269.75	2	20	53.51	+13	35	22.89	20.2168	16.1
feb	25	2459270.75	2	21	1.40	+13	36	4.13	20.2318	16.0
feb	26	2459271.75	2	21	9.45	+13	36	46.14	20.2467	16.0
feb	27	2459272.75	2	21	17.66	+13	37	28.91	20.2614	15.9
feb	28	2459273.75	2	21	26.03	+13	38	12.40	20.2760	15.9
mar	1	2459274.75	2	21	34.55	+13	38	56.62	20.2904	15.8
mar	2	2459275.75	2	21	43.22	+13	39	41.55	20.3047	15.7
mar	3	2459276.75	2	21	52.06	+13	40	27.20	20.3188	15.7
mar	4	2459277.75	2	22	1.04	+13	41	13.57	20.3328	15.6
mar	5	2459278.75	2	22	10.18	+13	42	0.67	20.3465	15.5
mar	6	2459279.75	2	22	19.47	+13	42	48.48	20.3601	15.5
mar	7	2459280.75	2	22	28.91	+13	43	37.00	20.3736	15.4
mar	8	2459281.75	2	22	38.49	+13	44	26.19	20.3868	15.3
mar	9	2459282.75	2	22	48.21	+13	45	16.05	20.3999	15.3
mar	10	2459283.75	2	22	58.07	+13	46	6.55	20.4128	15.2
mar	11	2459284.75	2	23	8.06	+13	46	57.68	20.4255	15.2
mar	12	2459285.75	2	23	18.18	+13	47	49.40	20.4380	15.1
mar	13	2459286.75	2	23	28.43	+13	48	41.71	20.4503	15.0
mar	14	2459287.75	2	23	38.81	+13	49	34.59	20.4624	15.0
mar	15	2459288.75	2	23	49.31	+13	50	28.04	20.4743	14.9
mar	16	2459289.75	2	23	59.95	+13	51	22.05	20.4860	14.8
mar	17	2459290.75	2	24	10.70	+13	52	16.61	20.4975	14.8
mar	18	2459291.75	2	24	21.58	+13	53	11.72	20.5088	14.7
mar	19	2459292.75	2	24	32.58	+13	54	7.35	20.5199	14.7
mar	20	2459293.75	2	24	43.69	+13	55	3.51	20.5307	14.6
mar	21	2459294.75	2	24	54.92	+13	56	0.18	20.5413	14.5
mar	22	2459295.75	2	25	6.25	+13	56	57.33	20.5517	14.5
mar	23	2459296.75	2	25	17.70	+13	57	54.96	20.5619	14.4
mar	24	2459297.75	2	25	29.24	+13	58	53.05	20.5718	14.3
mar	25	2459298.75	2	25	40.89	+13	59	51.57	20.5815	14.3
mar	26	2459299.75	2	25	52.62	+14	0	50.49	20.5910	14.2
mar	27	2459300.75	2	26	4.46	+14	1	49.80	20.6003	14.2
mar	28	2459301.75	2	26	16.38	+14	2	49.48	20.6093	14.1
mar	29	2459302.75	2	26	28.39	+14	3	49.52	20.6180	14.0
mar	30	2459303.75	2	26	40.50	+14	4	49.92	20.6266	14.0
mar	31	2459304.75	2	26	52.69	+14	5	50.67	20.6349	13.9
abr	1	2459305.75	2	27	4.98	+14	6	51.79	20.6429	13.8
abr	2	2459306.75	2	27	17.35	+14	7	53.26	20.6507	13.8

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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
abr	3	2459307.75	2	27	29.80	+14	8	55.08	20.6583	13.7
abr	4	2459308.75	2	27	42.33	+14	9	57.22	20.6656	13.7
abr	5	2459309.75	2	27	54.93	+14	10	59.66	20.6727	13.6
abr	6	2459310.75	2	28	7.60	+14	12	2.38	20.6795	13.5
abr	7	2459311.75	2	28	20.34	+14	13	5.36	20.6860	13.5
abr	8	2459312.75	2	28	33.14	+14	14	8.57	20.6923	13.4
abr	9	2459313.75	2	28	46.00	+14	15	12.00	20.6983	13.3
abr	10	2459314.75	2	28	58.92	+14	16	15.64	20.7041	13.3
abr	11	2459315.75	2	29	11.90	+14	17	19.47	20.7096	13.2
abr	12	2459316.75	2	29	24.94	+14	18	23.49	20.7149	13.2
abr	13	2459317.75	2	29	38.03	+14	19	27.69	20.7199	13.1
abr	14	2459318.75	2	29	51.17	+14	20	32.07	20.7246	13.0
abr	15	2459319.75	2	30	4.37	+14	21	36.60	20.7290	13.0
abr	16	2459320.75	2	30	17.61	+14	22	41.29	20.7332	12.9
abr	17	2459321.75	2	30	30.89	+14	23	46.11	20.7372	12.9
abr	18	2459322.75	2	30	44.22	+14	24	51.06	20.7408	12.8
abr	19	2459323.75	2	30	57.58	+14	25	56.11	20.7442	12.7
abr	20	2459324.75	2	31	10.97	+14	27	1.25	20.7473	12.7
abr	21	2459325.75	2	31	24.39	+14	28	6.46	20.7502	12.6
abr	22	2459326.75	2	31	37.83	+14	29	11.71	20.7527	12.5
abr	23	2459327.75	2	31	51.30	+14	30	16.98	20.7550	12.5
abr	24	2459328.75	2	32	4.79	+14	31	22.25	20.7571	12.4
abr	25	2459329.75	2	32	18.29	+14	32	27.52	20.7588	12.4
abr	26	2459330.75	2	32	31.81	+14	33	32.77	20.7603	12.3
abr	27	2459331.75	2	32	45.36	+14	34	38.00	20.7616	12.2
abr	28	2459332.75	2	32	58.92	+14	35	43.23	20.7625	12.2
abr	29	2459333.75	2	33	12.50	+14	36	48.43	20.7632	12.1
abr	30	2459334.75	2	33	26.10	+14	37	53.39	20.7636	12.0
may	1	2459335.75	2	33	39.62	+14	38	58.05	20.7638	12.0
may	2	2459336.75	2	33	53.22	+14	40	3.69	20.7636	11.9
may	3	2459337.75	2	34	6.81	+14	41	8.81	20.7633	11.9
may	4	2459338.75	2	34	20.40	+14	42	13.77	20.7626	11.8
may	5	2459339.75	2	34	33.97	+14	43	18.59	20.7617	11.7
may	6	2459340.75	2	34	47.54	+14	44	23.26	20.7605	11.7
may	7	2459341.75	2	35	1.09	+14	45	27.79	20.7590	11.6
may	8	2459342.75	2	35	14.62	+14	46	32.15	20.7572	11.6
may	9	2459343.75	2	35	28.14	+14	47	36.34	20.7552	11.5
may	10	2459344.75	2	35	41.65	+14	48	40.37	20.7529	11.4
may	11	2459345.75	2	35	55.13	+14	49	44.21	20.7504	11.4
may	12	2459346.75	2	36	8.59	+14	50	47.86	20.7476	11.3
may	13	2459347.75	2	36	22.02	+14	51	51.32	20.7445	11.2
may	14	2459348.75	2	36	35.43	+14	52	54.57	20.7411	11.2
may	15	2459349.75	2	36	48.81	+14	53	57.60	20.7375	11.1
may	16	2459350.75	2	37	2.15	+14	55	0.40	20.7336	11.1
may	17	2459351.75	2	37	15.45	+14	56	2.95	20.7295	11.0
may	18	2459352.75	2	37	28.71	+14	57	5.22	20.7251	10.9

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	19	2459353.75	2	37	41.92	+14	58	7.21	20.7204	10.9
may	20	2459354.75	2	37	55.08	+14	59	8.89	20.7155	10.8
may	21	2459355.75	2	38	8.19	+15	0	10.24	20.7103	10.7
may	22	2459356.75	2	38	21.25	+15	1	11.25	20.7049	10.7
may	23	2459357.75	2	38	34.25	+15	2	11.92	20.6992	10.6
may	24	2459358.75	2	38	47.20	+15	3	12.23	20.6933	10.6
may	25	2459359.75	2	39	0.09	+15	4	12.20	20.6871	10.5
may	26	2459360.75	2	39	12.93	+15	5	11.84	20.6806	10.4
may	27	2459361.75	2	39	25.71	+15	6	11.13	20.6740	10.4
may	28	2459362.75	2	39	38.42	+15	7	10.08	20.6670	10.3
may	29	2459363.75	2	39	51.07	+15	8	8.66	20.6599	10.2
may	30	2459364.75	2	40	3.65	+15	9	6.86	20.6525	10.2
may	31	2459365.75	2	40	16.15	+15	10	4.64	20.6448	10.1
jun	1	2459366.75	2	40	28.57	+15	11	1.99	20.6370	10.1
jun	2	2459367.75	2	40	40.91	+15	11	58.90	20.6288	10.0
jun	3	2459368.75	2	40	53.17	+15	12	55.35	20.6205	9.9
jun	4	2459369.75	2	41	5.35	+15	13	51.34	20.6119	9.9
jun	5	2459370.75	2	41	17.44	+15	14	46.85	20.6031	9.8
jun	6	2459371.75	2	41	29.44	+15	15	41.90	20.5940	9.7
jun	7	2459372.75	2	41	41.36	+15	16	36.46	20.5847	9.7
jun	8	2459373.75	2	41	53.19	+15	17	30.55	20.5752	9.6
jun	9	2459374.75	2	42	4.92	+15	18	24.14	20.5655	9.6
jun	10	2459375.75	2	42	16.56	+15	19	17.24	20.5556	9.5
jun	11	2459376.75	2	42	28.10	+15	20	9.83	20.5454	9.4
jun	12	2459377.75	2	42	39.53	+15	21	1.91	20.5350	9.4
jun	13	2459378.75	2	42	50.87	+15	21	53.45	20.5244	9.3
jun	14	2459379.75	2	43	2.09	+15	22	44.45	20.5136	9.2
jun	15	2459380.75	2	43	13.20	+15	23	34.88	20.5026	9.2
jun	16	2459381.75	2	43	24.19	+15	24	24.72	20.4914	9.1
jun	17	2459382.75	2	43	35.07	+15	25	13.97	20.4800	9.1
jun	18	2459383.75	2	43	45.82	+15	26	2.61	20.4684	9.0
jun	19	2459384.75	2	43	56.46	+15	26	50.64	20.4566	8.9
jun	20	2459385.75	2	44	6.98	+15	27	38.04	20.4446	8.9
jun	21	2459386.75	2	44	17.38	+15	28	24.84	20.4325	8.8
jun	22	2459387.75	2	44	27.66	+15	29	11.03	20.4201	8.7
jun	23	2459388.75	2	44	37.81	+15	29	56.61	20.4076	8.7
jun	24	2459389.75	2	44	47.84	+15	30	41.59	20.3949	8.6
jun	25	2459390.75	2	44	57.75	+15	31	25.96	20.3820	8.6
jun	26	2459391.75	2	45	7.51	+15	32	9.71	20.3689	8.5
jun	27	2459392.75	2	45	17.14	+15	32	52.79	20.3557	8.4
jun	28	2459393.75	2	45	26.63	+15	33	35.21	20.3423	8.4
jun	29	2459394.75	2	45	35.98	+15	34	16.94	20.3287	8.3
jun	30	2459395.75	2	45	45.19	+15	34	57.97	20.3150	8.2
jul	1	2459396.75	2	45	54.25	+15	35	38.30	20.3011	8.2
jul	2	2459397.75	2	46	3.16	+15	36	17.93	20.2871	8.1
jul	3	2459398.75	2	46	11.93	+15	36	56.85	20.2729	8.1

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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
jul	4	2459399.75	2	46	20.56	+15	37	35.06	20.2586	8.0
jul	5	2459400.75	2	46	29.03	+15	38	12.56	20.2441	7.9
jul	6	2459401.75	2	46	37.36	+15	38	49.35	20.2295	7.9
jul	7	2459402.75	2	46	45.53	+15	39	25.43	20.2148	7.8
jul	8	2459403.75	2	46	53.55	+15	40	0.78	20.1999	7.7
jul	9	2459404.75	2	47	1.41	+15	40	35.40	20.1849	7.7
jul	10	2459405.75	2	47	9.10	+15	41	9.28	20.1697	7.6
jul	11	2459406.75	2	47	16.64	+15	41	42.41	20.1545	7.5
jul	12	2459407.75	2	47	24.01	+15	42	14.77	20.1391	7.5
jul	13	2459408.75	2	47	31.20	+15	42	46.35	20.1236	7.4
jul	14	2459409.75	2	47	38.23	+15	43	17.13	20.1080	7.4
jul	15	2459410.75	2	47	45.09	+15	43	47.11	20.0924	7.3
jul	16	2459411.75	2	47	51.77	+15	44	16.27	20.0766	7.2
jul	17	2459412.75	2	47	58.28	+15	44	44.64	20.0607	7.2
jul	18	2459413.75	2	48	4.63	+15	45	12.19	20.0447	7.1
jul	19	2459414.75	2	48	10.80	+15	45	38.96	20.0286	7.0
jul	20	2459415.75	2	48	16.80	+15	46	4.93	20.0125	7.0
jul	21	2459416.75	2	48	22.62	+15	46	30.13	19.9963	6.9
jul	22	2459417.75	2	48	28.28	+15	46	54.54	19.9800	6.8
jul	23	2459418.75	2	48	33.75	+15	47	18.15	19.9636	6.8
jul	24	2459419.75	2	48	39.04	+15	47	40.96	19.9472	6.7
jul	25	2459420.75	2	48	44.14	+15	48	2.94	19.9307	6.7
jul	26	2459421.75	2	48	49.06	+15	48	24.07	19.9142	6.6
jul	27	2459422.75	2	48	53.79	+15	48	44.36	19.8976	6.5
jul	28	2459423.75	2	48	58.33	+15	49	3.79	19.8809	6.5
jul	29	2459424.75	2	49	2.69	+15	49	22.36	19.8642	6.4
jul	30	2459425.75	2	49	6.86	+15	49	40.08	19.8475	6.3
jul	31	2459426.75	2	49	10.84	+15	49	56.95	19.8307	6.3
ago	1	2459427.75	2	49	14.64	+15	50	12.97	19.8139	6.2
ago	2	2459428.75	2	49	18.25	+15	50	28.15	19.7971	6.1
ago	3	2459429.75	2	49	21.67	+15	50	42.48	19.7802	6.1
ago	4	2459430.75	2	49	24.89	+15	50	55.97	19.7633	6.0
ago	5	2459431.75	2	49	27.93	+15	51	8.61	19.7464	5.9
ago	6	2459432.75	2	49	30.77	+15	51	20.39	19.7295	5.9
ago	7	2459433.75	2	49	33.41	+15	51	31.31	19.7126	5.8
ago	8	2459434.75	2	49	35.86	+15	51	41.36	19.6957	5.7
ago	9	2459435.75	2	49	38.11	+15	51	50.53	19.6788	5.7
ago	10	2459436.75	2	49	40.15	+15	51	58.80	19.6619	5.6
ago	11	2459437.75	2	49	42.00	+15	52	6.17	19.6451	5.5
ago	12	2459438.75	2	49	43.65	+15	52	12.64	19.6282	5.5
ago	13	2459439.75	2	49	45.10	+15	52	18.22	19.6114	5.4
ago	14	2459440.75	2	49	46.35	+15	52	22.90	19.5946	5.4
ago	15	2459441.75	2	49	47.41	+15	52	26.72	19.5778	5.3
ago	16	2459442.75	2	49	48.27	+15	52	29.67	19.5611	5.2
ago	17	2459443.75	2	49	48.94	+15	52	31.78	19.5444	5.2
ago	18	2459444.75	2	49	49.42	+15	52	33.03	19.5278	5.1

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	19	2459445.75	2	49	49.70	+15	52	33.44	19.5112	5.0
ago	20	2459446.75	2	49	49.78	+15	52	32.99	19.4947	5.0
ago	21	2459447.75	2	49	49.66	+15	52	31.67	19.4783	4.9
ago	22	2459448.75	2	49	49.33	+15	52	29.47	19.4619	4.8
ago	23	2459449.75	2	49	48.81	+15	52	26.39	19.4456	4.8
ago	24	2459450.75	2	49	48.09	+15	52	22.42	19.4294	4.7
ago	25	2459451.75	2	49	47.18	+15	52	17.57	19.4132	4.6
ago	26	2459452.75	2	49	46.06	+15	52	11.84	19.3971	4.6
ago	27	2459453.75	2	49	44.76	+15	52	5.25	19.3812	4.5
ago	28	2459454.75	2	49	43.26	+15	51	57.80	19.3653	4.4
ago	29	2459455.75	2	49	41.57	+15	51	49.51	19.3495	4.4
ago	30	2459456.75	2	49	39.68	+15	51	40.37	19.3338	4.3
ago	31	2459457.75	2	49	37.61	+15	51	30.40	19.3183	4.2
sep	1	2459458.75	2	49	35.34	+15	51	19.59	19.3028	4.2
sep	2	2459459.75	2	49	32.88	+15	51	7.95	19.2875	4.1
sep	3	2459460.75	2	49	30.23	+15	50	55.48	19.2722	4.0
sep	4	2459461.75	2	49	27.39	+15	50	42.17	19.2572	4.0
sep	5	2459462.75	2	49	24.36	+15	50	28.02	19.2422	3.9
sep	6	2459463.75	2	49	21.13	+15	50	13.03	19.2274	3.8
sep	7	2459464.75	2	49	17.71	+15	49	57.20	19.2127	3.8
sep	8	2459465.75	2	49	14.11	+15	49	40.52	19.1982	3.7
sep	9	2459466.75	2	49	10.32	+15	49	23.01	19.1838	3.6
sep	10	2459467.75	2	49	6.35	+15	49	4.68	19.1696	3.6
sep	11	2459468.75	2	49	2.21	+15	48	45.56	19.1556	3.5
sep	12	2459469.75	2	48	57.89	+15	48	25.66	19.1417	3.4
sep	13	2459470.75	2	48	53.39	+15	48	5.00	19.1280	3.4
sep	14	2459471.75	2	48	48.73	+15	47	43.60	19.1144	3.3
sep	15	2459472.75	2	48	43.89	+15	47	21.46	19.1011	3.2
sep	16	2459473.75	2	48	38.88	+15	46	58.57	19.0879	3.2
sep	17	2459474.75	2	48	33.70	+15	46	34.95	19.0749	3.1
sep	18	2459475.75	2	48	28.35	+15	46	10.58	19.0621	3.0
sep	19	2459476.75	2	48	22.83	+15	45	45.46	19.0495	3.0
sep	20	2459477.75	2	48	17.14	+15	45	19.60	19.0371	2.9
sep	21	2459478.75	2	48	11.29	+15	44	53.01	19.0249	2.8
sep	22	2459479.75	2	48	5.29	+15	44	25.71	19.0129	2.8
sep	23	2459480.75	2	47	59.13	+15	43	57.70	19.0011	2.7
sep	24	2459481.75	2	47	52.82	+15	43	29.02	18.9895	2.6
sep	25	2459482.75	2	47	46.36	+15	42	59.66	18.9782	2.6
sep	26	2459483.75	2	47	39.75	+15	42	29.66	18.9671	2.5
sep	27	2459484.75	2	47	33.00	+15	41	59.01	18.9561	2.4
sep	28	2459485.75	2	47	26.10	+15	41	27.74	18.9455	2.4
sep	29	2459486.75	2	47	19.07	+15	40	55.85	18.9350	2.3
sep	30	2459487.75	2	47	11.90	+15	40	23.35	18.9248	2.2
oct	1	2459488.75	2	47	4.58	+15	39	50.24	18.9148	2.2
oct	2	2459489.75	2	46	57.14	+15	39	16.54	18.9051	2.1
oct	3	2459490.75	2	46	49.56	+15	38	42.24	18.8956	2.0

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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	4	2459491.75	2	46	41.84	+15	38	7.35	18.8864	2.0
oct	5	2459492.75	2	46	34.01	+15	37	31.89	18.8774	1.9
oct	6	2459493.75	2	46	26.05	+15	36	55.85	18.8687	1.8
oct	7	2459494.75	2	46	17.97	+15	36	19.27	18.8603	1.7
oct	8	2459495.75	2	46	9.79	+15	35	42.17	18.8521	1.7
oct	9	2459496.75	2	46	1.50	+15	35	4.59	18.8442	1.6
oct	10	2459497.75	2	45	53.10	+15	34	26.55	18.8365	1.5
oct	11	2459498.75	2	45	44.61	+15	33	48.07	18.8291	1.5
oct	12	2459499.75	2	45	36.02	+15	33	9.18	18.8220	1.4
oct	13	2459500.75	2	45	27.34	+15	32	29.86	18.8152	1.3
oct	14	2459501.75	2	45	18.56	+15	31	50.14	18.8087	1.3
oct	15	2459502.75	2	45	9.69	+15	31	10.01	18.8024	1.2
oct	16	2459503.75	2	45	0.73	+15	30	29.48	18.7964	1.1
oct	17	2459504.75	2	44	51.69	+15	29	48.57	18.7907	1.1
oct	18	2459505.75	2	44	42.57	+15	29	7.29	18.7853	1.0
oct	19	2459506.75	2	44	33.38	+15	28	25.67	18.7802	0.9
oct	20	2459507.75	2	44	24.12	+15	27	43.72	18.7754	0.9
oct	21	2459508.75	2	44	14.80	+15	27	1.46	18.7709	0.8
oct	22	2459509.75	2	44	5.42	+15	26	18.93	18.7666	0.7
oct	23	2459510.75	2	43	55.99	+15	25	36.15	18.7627	0.7
oct	24	2459511.75	2	43	46.50	+15	24	53.13	18.7591	0.6
oct	25	2459512.75	2	43	36.97	+15	24	9.90	18.7557	0.5
oct	26	2459513.75	2	43	27.39	+15	23	26.46	18.7527	0.5
oct	27	2459514.75	2	43	17.77	+15	22	42.84	18.7499	0.4
oct	28	2459515.75	2	43	8.11	+15	21	59.05	18.7475	0.3
oct	29	2459516.75	2	42	58.41	+15	21	15.11	18.7454	0.2
oct	30	2459517.75	2	42	48.69	+15	20	31.01	18.7436	0.2
oct	31	2459518.75	2	42	38.93	+15	19	46.78	18.7421	0.1
nov	1	2459519.75	2	42	29.15	+15	19	2.42	18.7408	0.0
nov	2	2459520.75	2	42	19.36	+15	18	17.96	18.7400	24.0
nov	3	2459521.75	2	42	9.55	+15	17	33.42	18.7394	23.9
nov	4	2459522.75	2	41	59.74	+15	16	48.82	18.7391	23.8
nov	5	2459523.75	2	41	49.92	+15	16	4.21	18.7391	23.8
nov	6	2459524.75	2	41	40.12	+15	15	19.62	18.7395	23.7
nov	7	2459525.75	2	41	30.32	+15	14	35.09	18.7401	23.6
nov	8	2459526.75	2	41	20.54	+15	13	50.62	18.7411	23.6
nov	9	2459527.75	2	41	10.77	+15	13	6.24	18.7424	23.5
nov	10	2459528.75	2	41	1.02	+15	12	21.96	18.7440	23.4
nov	11	2459529.75	2	40	51.29	+15	11	37.77	18.7459	23.4
nov	12	2459530.75	2	40	41.59	+15	10	53.69	18.7481	23.3
nov	13	2459531.75	2	40	31.91	+15	10	9.74	18.7506	23.2
nov	14	2459532.75	2	40	22.27	+15	9	25.93	18.7535	23.2
nov	15	2459533.75	2	40	12.67	+15	8	42.29	18.7566	23.1
nov	16	2459534.75	2	40	3.11	+15	7	58.84	18.7600	23.0
nov	17	2459535.75	2	39	53.61	+15	7	15.62	18.7638	22.9
nov	18	2459536.75	2	39	44.16	+15	6	32.63	18.7678	22.9

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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
nov	19	2459537.75	2	39	34.76	+15	5	49.92	18.7721	22.8
nov	20	2459538.75	2	39	25.44	+15	5	7.49	18.7768	22.7
nov	21	2459539.75	2	39	16.18	+15	4	25.38	18.7817	22.7
nov	22	2459540.75	2	39	6.99	+15	3	43.60	18.7870	22.6
nov	23	2459541.75	2	38	57.87	+15	3	2.17	18.7925	22.5
nov	24	2459542.75	2	38	48.83	+15	2	21.09	18.7983	22.5
nov	25	2459543.75	2	38	39.86	+15	1	40.39	18.8044	22.4
nov	26	2459544.75	2	38	30.98	+15	1	0.07	18.8108	22.3
nov	27	2459545.75	2	38	22.18	+15	0	20.15	18.8175	22.3
nov	28	2459546.75	2	38	13.48	+14	59	40.64	18.8245	22.2
nov	29	2459547.75	2	38	4.86	+14	59	1.55	18.8318	22.1
nov	30	2459548.75	2	37	56.35	+14	58	22.91	18.8393	22.1
dic	1	2459549.75	2	37	47.94	+14	57	44.73	18.8472	22.0
dic	2	2459550.75	2	37	39.64	+14	57	7.06	18.8553	21.9
dic	3	2459551.75	2	37	31.46	+14	56	29.92	18.8637	21.9
dic	4	2459552.75	2	37	23.40	+14	55	53.35	18.8723	21.8
dic	5	2459553.75	2	37	15.46	+14	55	17.37	18.8813	21.7
dic	6	2459554.75	2	37	7.65	+14	54	42.00	18.8904	21.7
dic	7	2459555.75	2	36	59.96	+14	54	7.24	18.8999	21.6
dic	8	2459556.75	2	36	52.39	+14	53	33.09	18.9096	21.5
dic	9	2459557.75	2	36	44.96	+14	52	59.55	18.9196	21.4
dic	10	2459558.75	2	36	37.66	+14	52	26.63	18.9298	21.4
dic	11	2459559.75	2	36	30.50	+14	51	54.36	18.9403	21.3
dic	12	2459560.75	2	36	23.48	+14	51	22.74	18.9510	21.2
dic	13	2459561.75	2	36	16.60	+14	50	51.79	18.9619	21.2
dic	14	2459562.75	2	36	9.87	+14	50	21.54	18.9731	21.1
dic	15	2459563.75	2	36	3.30	+14	49	52.01	18.9845	21.0
dic	16	2459564.75	2	35	56.88	+14	49	23.22	18.9962	21.0
dic	17	2459565.75	2	35	50.63	+14	48	55.18	19.0081	20.9
dic	18	2459566.75	2	35	44.53	+14	48	27.91	19.0202	20.8
dic	19	2459567.75	2	35	38.60	+14	48	1.43	19.0325	20.8
dic	20	2459568.75	2	35	32.83	+14	47	35.73	19.0450	20.7
dic	21	2459569.75	2	35	27.22	+14	47	10.83	19.0577	20.6
dic	22	2459570.75	2	35	21.79	+14	46	46.73	19.0707	20.6
dic	23	2459571.75	2	35	16.52	+14	46	23.45	19.0838	20.5
dic	24	2459572.75	2	35	11.42	+14	46	0.97	19.0971	20.4
dic	25	2459573.75	2	35	6.50	+14	45	39.31	19.1107	20.4
dic	26	2459574.75	2	35	1.75	+14	45	18.48	19.1244	20.3
dic	27	2459575.75	2	34	57.17	+14	44	58.48	19.1383	20.2
dic	28	2459576.75	2	34	52.78	+14	44	39.34	19.1524	20.2
dic	29	2459577.75	2	34	48.58	+14	44	21.06	19.1666	20.1
dic	30	2459578.75	2	34	44.57	+14	44	3.68	19.1810	20.0
dic	31	2459579.75	2	34	40.75	+14	43	47.22	19.1956	20.0

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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
ene	1	2459215.75	23	19	19.41	-5	33	5.49	30.2903	16.6
ene	2	2459216.75	23	19	23.56	-5	32	37.44	30.3063	16.6
ene	3	2459217.75	23	19	27.83	-5	32	8.70	30.3221	16.5
ene	4	2459218.75	23	19	32.20	-5	31	39.29	30.3379	16.4
ene	5	2459219.75	23	19	36.68	-5	31	9.19	30.3535	16.4
ene	6	2459220.75	23	19	41.28	-5	30	38.41	30.3689	16.3
ene	7	2459221.75	23	19	45.98	-5	30	6.95	30.3843	16.2
ene	8	2459222.75	23	19	50.79	-5	29	34.79	30.3995	16.2
ene	9	2459223.75	23	19	55.72	-5	29	1.95	30.4145	16.1
ene	10	2459224.75	23	20	0.76	-5	28	28.42	30.4294	16.1
ene	11	2459225.75	23	20	5.90	-5	27	54.23	30.4442	16.0
ene	12	2459226.75	23	20	11.15	-5	27	19.40	30.4587	15.9
ene	13	2459227.75	23	20	16.50	-5	26	43.94	30.4732	15.9
ene	14	2459228.75	23	20	21.95	-5	26	7.88	30.4874	15.8
ene	15	2459229.75	23	20	27.50	-5	25	31.22	30.5015	15.7
ene	16	2459230.75	23	20	33.14	-5	24	53.99	30.5154	15.7
ene	17	2459231.75	23	20	38.88	-5	24	16.18	30.5291	15.6
ene	18	2459232.75	23	20	44.70	-5	23	37.79	30.5426	15.5
ene	19	2459233.75	23	20	50.63	-5	22	58.84	30.5560	15.5
ene	20	2459234.75	23	20	56.64	-5	22	19.31	30.5691	15.4
ene	21	2459235.75	23	21	2.74	-5	21	39.23	30.5821	15.3
ene	22	2459236.75	23	21	8.94	-5	20	58.59	30.5948	15.3
ene	23	2459237.75	23	21	15.22	-5	20	17.40	30.6074	15.2
ene	24	2459238.75	23	21	21.60	-5	19	35.68	30.6197	15.2
ene	25	2459239.75	23	21	28.06	-5	18	53.43	30.6319	15.1
ene	26	2459240.75	23	21	34.60	-5	18	10.69	30.6438	15.0
ene	27	2459241.75	23	21	41.22	-5	17	27.45	30.6555	15.0
ene	28	2459242.75	23	21	47.92	-5	16	43.75	30.6670	14.9
ene	29	2459243.75	23	21	54.70	-5	15	59.59	30.6782	14.8
ene	30	2459244.75	23	22	1.55	-5	15	15.00	30.6893	14.8
ene	31	2459245.75	23	22	8.47	-5	14	29.98	30.7001	14.7
feb	1	2459246.75	23	22	15.47	-5	13	44.54	30.7106	14.6
feb	2	2459247.75	23	22	22.53	-5	12	58.68	30.7210	14.6
feb	3	2459248.75	23	22	29.66	-5	12	12.39	30.7311	14.5
feb	4	2459249.75	23	22	36.86	-5	11	25.68	30.7410	14.5
feb	5	2459250.75	23	22	44.14	-5	10	38.55	30.7506	14.4
feb	6	2459251.75	23	22	51.48	-5	9	51.01	30.7600	14.3
feb	7	2459252.75	23	22	58.88	-5	9	3.08	30.7691	14.3
feb	8	2459253.75	23	23	6.35	-5	8	14.78	30.7780	14.2
feb	9	2459254.75	23	23	13.88	-5	7	26.13	30.7866	14.1
feb	10	2459255.75	23	23	21.47	-5	6	37.15	30.7950	14.1
feb	11	2459256.75	23	23	29.11	-5	5	47.87	30.8031	14.0
feb	12	2459257.75	23	23	36.80	-5	4	58.30	30.8109	13.9
feb	13	2459258.75	23	23	44.54	-5	4	8.44	30.8185	13.9
feb	14	2459259.75	23	23	52.32	-5	3	18.31	30.8258	13.8
feb	15	2459260.75	23	24	0.16	-5	2	27.90	30.8329	13.8

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2459261.75	23	24	8.03	-5	1	37.22	30.8397	13.7
feb	17	2459262.75	23	24	15.96	-5	0	46.29	30.8462	13.6
feb	18	2459263.75	23	24	23.92	-4	59	55.10	30.8524	13.6
feb	19	2459264.75	23	24	31.93	-4	59	3.67	30.8584	13.5
feb	20	2459265.75	23	24	39.98	-4	58	12.02	30.8641	13.4
feb	21	2459266.75	23	24	48.07	-4	57	20.15	30.8695	13.4
feb	22	2459267.75	23	24	56.19	-4	56	28.09	30.8747	13.3
feb	23	2459268.75	23	25	4.35	-4	55	35.84	30.8795	13.2
feb	24	2459269.75	23	25	12.54	-4	54	43.44	30.8841	13.2
feb	25	2459270.75	23	25	20.75	-4	53	50.90	30.8884	13.1
feb	26	2459271.75	23	25	28.99	-4	52	58.25	30.8924	13.1
feb	27	2459272.75	23	25	37.25	-4	52	5.48	30.8962	13.0
feb	28	2459273.75	23	25	45.53	-4	51	12.62	30.8996	12.9
mar	1	2459274.75	23	25	53.83	-4	50	19.66	30.9028	12.9
mar	2	2459275.75	23	26	2.15	-4	49	26.60	30.9057	12.8
mar	3	2459276.75	23	26	10.49	-4	48	33.44	30.9083	12.7
mar	4	2459277.75	23	26	18.85	-4	47	40.19	30.9107	12.7
mar	5	2459278.75	23	26	27.23	-4	46	46.86	30.9127	12.6
mar	6	2459279.75	23	26	35.62	-4	45	53.46	30.9145	12.5
mar	7	2459280.75	23	26	44.02	-4	45	0.02	30.9159	12.5
mar	8	2459281.75	23	26	52.44	-4	44	6.56	30.9171	12.4
mar	9	2459282.75	23	27	0.86	-4	43	13.13	30.9180	12.4
mar	10	2459283.75	23	27	9.29	-4	42	19.84	30.9186	12.3
mar	11	2459284.75	23	27	17.70	-4	41	26.64	30.9190	12.2
mar	12	2459285.75	23	27	26.10	-4	40	33.13	30.9190	12.2
mar	13	2459286.75	23	27	34.52	-4	39	39.71	30.9187	12.1
mar	14	2459287.75	23	27	42.93	-4	38	46.40	30.9182	12.0
mar	15	2459288.75	23	27	51.33	-4	37	53.19	30.9174	12.0
mar	16	2459289.75	23	27	59.73	-4	37	0.06	30.9163	11.9
mar	17	2459290.75	23	28	8.12	-4	36	7.02	30.9149	11.8
mar	18	2459291.75	23	28	16.50	-4	35	14.07	30.9132	11.8
mar	19	2459292.75	23	28	24.87	-4	34	21.22	30.9112	11.7
mar	20	2459293.75	23	28	33.22	-4	33	28.49	30.9090	11.7
mar	21	2459294.75	23	28	41.56	-4	32	35.90	30.9064	11.6
mar	22	2459295.75	23	28	49.88	-4	31	43.45	30.9036	11.5
mar	23	2459296.75	23	28	58.19	-4	30	51.17	30.9005	11.5
mar	24	2459297.75	23	29	6.46	-4	29	59.08	30.8972	11.4
mar	25	2459298.75	23	29	14.72	-4	29	7.19	30.8935	11.3
mar	26	2459299.75	23	29	22.94	-4	28	15.52	30.8896	11.3
mar	27	2459300.75	23	29	31.13	-4	27	24.09	30.8854	11.2
mar	28	2459301.75	23	29	39.29	-4	26	32.89	30.8809	11.2
mar	29	2459302.75	23	29	47.42	-4	25	41.92	30.8762	11.1
mar	30	2459303.75	23	29	55.51	-4	24	51.19	30.8712	11.0
mar	31	2459304.75	23	30	3.58	-4	24	0.68	30.8659	11.0
abr	1	2459305.75	23	30	11.61	-4	23	10.41	30.8603	10.9
abr	2	2459306.75	23	30	19.61	-4	22	20.39	30.8545	10.8

Neptuno, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
abr	3	2459307.75	23	30	27.57	-4	21	30.64	30.8485	10.8
abr	4	2459308.75	23	30	35.49	-4	20	41.18	30.8421	10.7
abr	5	2459309.75	23	30	43.37	-4	19	52.04	30.8355	10.6
abr	6	2459310.75	23	30	51.20	-4	19	3.23	30.8287	10.6
abr	7	2459311.75	23	30	58.98	-4	18	14.78	30.8216	10.5
abr	8	2459312.75	23	31	6.71	-4	17	26.68	30.8142	10.5
abr	9	2459313.75	23	31	14.38	-4	16	38.96	30.8066	10.4
abr	10	2459314.75	23	31	22.01	-4	15	51.60	30.7987	10.3
abr	11	2459315.75	23	31	29.57	-4	15	4.62	30.7906	10.3
abr	12	2459316.75	23	31	37.09	-4	14	18.02	30.7822	10.2
abr	13	2459317.75	23	31	44.55	-4	13	31.80	30.7736	10.1
abr	14	2459318.75	23	31	51.95	-4	12	45.98	30.7647	10.1
abr	15	2459319.75	23	31	59.29	-4	12	0.56	30.7556	10.0
abr	16	2459320.75	23	32	6.57	-4	11	15.55	30.7463	9.9
abr	17	2459321.75	23	32	13.79	-4	10	30.98	30.7367	9.9
abr	18	2459322.75	23	32	20.95	-4	9	46.84	30.7270	9.8
abr	19	2459323.75	23	32	28.04	-4	9	3.17	30.7169	9.8
abr	20	2459324.75	23	32	35.06	-4	8	19.97	30.7067	9.7
abr	21	2459325.75	23	32	42.01	-4	7	37.26	30.6962	9.6
abr	22	2459326.75	23	32	48.88	-4	6	55.06	30.6855	9.6
abr	23	2459327.75	23	32	55.68	-4	6	13.37	30.6747	9.5
abr	24	2459328.75	23	33	2.41	-4	5	32.20	30.6636	9.4
abr	25	2459329.75	23	33	9.05	-4	4	51.55	30.6522	9.4
abr	26	2459330.75	23	33	15.62	-4	4	11.41	30.6407	9.3
abr	27	2459331.75	23	33	22.12	-4	3	31.79	30.6290	9.2
abr	28	2459332.75	23	33	28.54	-4	2	52.67	30.6171	9.2
abr	29	2459333.75	23	33	34.88	-4	2	14.06	30.6050	9.1
abr	30	2459334.75	23	33	41.15	-4	1	35.98	30.5927	9.1
may	1	2459335.75	23	33	47.33	-4	0	58.46	30.5802	9.0
may	2	2459336.75	23	33	53.43	-4	0	21.51	30.5675	8.9
may	3	2459337.75	23	33	59.45	-3	59	45.15	30.5547	8.9
may	4	2459338.75	23	34	5.37	-3	59	9.40	30.5416	8.8
may	5	2459339.75	23	34	11.20	-3	58	34.26	30.5284	8.7
may	6	2459340.75	23	34	16.94	-3	57	59.74	30.5150	8.7
may	7	2459341.75	23	34	22.58	-3	57	25.84	30.5015	8.6
may	8	2459342.75	23	34	28.13	-3	56	52.56	30.4877	8.5
may	9	2459343.75	23	34	33.59	-3	56	19.90	30.4739	8.5
may	10	2459344.75	23	34	38.95	-3	55	47.87	30.4598	8.4
may	11	2459345.75	23	34	44.22	-3	55	16.46	30.4456	8.3
may	12	2459346.75	23	34	49.40	-3	54	45.68	30.4313	8.3
may	13	2459347.75	23	34	54.48	-3	54	15.55	30.4168	8.2
may	14	2459348.75	23	34	59.46	-3	53	46.06	30.4021	8.2
may	15	2459349.75	23	35	4.34	-3	53	17.24	30.3874	8.1
may	16	2459350.75	23	35	9.12	-3	52	49.09	30.3725	8.0
may	17	2459351.75	23	35	13.80	-3	52	21.63	30.3575	8.0
may	18	2459352.75	23	35	18.37	-3	51	54.86	30.3423	7.9

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	19	2459353.75	23	35	22.84	-3	51	28.80	30.3270	7.8
may	20	2459354.75	23	35	27.20	-3	51	3.46	30.3116	7.8
may	21	2459355.75	23	35	31.45	-3	50	38.84	30.2962	7.7
may	22	2459356.75	23	35	35.59	-3	50	14.93	30.2806	7.6
may	23	2459357.75	23	35	39.62	-3	49	51.74	30.2649	7.6
may	24	2459358.75	23	35	43.54	-3	49	29.24	30.2491	7.5
may	25	2459359.75	23	35	47.36	-3	49	7.44	30.2332	7.4
may	26	2459360.75	23	35	51.08	-3	48	46.34	30.2172	7.4
may	27	2459361.75	23	35	54.69	-3	48	25.92	30.2011	7.3
may	28	2459362.75	23	35	58.19	-3	48	6.23	30.1850	7.2
may	29	2459363.75	23	36	1.58	-3	47	47.26	30.1687	7.2
may	30	2459364.75	23	36	4.86	-3	47	29.05	30.1524	7.1
may	31	2459365.75	23	36	8.02	-3	47	11.60	30.1361	7.1
jun	1	2459366.75	23	36	11.06	-3	46	54.92	30.1197	7.0
jun	2	2459367.75	23	36	13.98	-3	46	39.00	30.1032	6.9
jun	3	2459368.75	23	36	16.79	-3	46	23.86	30.0866	6.9
jun	4	2459369.75	23	36	19.48	-3	46	9.47	30.0700	6.8
jun	5	2459370.75	23	36	22.06	-3	45	55.84	30.0534	6.7
jun	6	2459371.75	23	36	24.51	-3	45	42.97	30.0367	6.7
jun	7	2459372.75	23	36	26.85	-3	45	30.85	30.0200	6.6
jun	8	2459373.75	23	36	29.08	-3	45	19.49	30.0032	6.5
jun	9	2459374.75	23	36	31.19	-3	45	8.88	29.9864	6.5
jun	10	2459375.75	23	36	33.18	-3	44	59.03	29.9696	6.4
jun	11	2459376.75	23	36	35.06	-3	44	49.95	29.9528	6.3
jun	12	2459377.75	23	36	36.81	-3	44	41.64	29.9359	6.3
jun	13	2459378.75	23	36	38.45	-3	44	34.12	29.9191	6.2
jun	14	2459379.75	23	36	39.96	-3	44	27.38	29.9023	6.1
jun	15	2459380.75	23	36	41.36	-3	44	21.44	29.8854	6.1
jun	16	2459381.75	23	36	42.63	-3	44	16.29	29.8686	6.0
jun	17	2459382.75	23	36	43.77	-3	44	11.95	29.8518	5.9
jun	18	2459383.75	23	36	44.80	-3	44	8.39	29.8349	5.9
jun	19	2459384.75	23	36	45.70	-3	44	5.61	29.8182	5.8
jun	20	2459385.75	23	36	46.48	-3	44	3.60	29.8014	5.8
jun	21	2459386.75	23	36	47.15	-3	44	2.35	29.7847	5.7
jun	22	2459387.75	23	36	47.70	-3	44	1.84	29.7680	5.6
jun	23	2459388.75	23	36	48.13	-3	44	2.08	29.7513	5.6
jun	24	2459389.75	23	36	48.45	-3	44	3.06	29.7347	5.5
jun	25	2459390.75	23	36	48.65	-3	44	4.80	29.7181	5.4
jun	26	2459391.75	23	36	48.73	-3	44	7.31	29.7016	5.4
jun	27	2459392.75	23	36	48.69	-3	44	10.61	29.6852	5.3
jun	28	2459393.75	23	36	48.53	-3	44	14.69	29.6688	5.2
jun	29	2459394.75	23	36	48.24	-3	44	19.56	29.6525	5.2
jun	30	2459395.75	23	36	47.83	-3	44	25.20	29.6362	5.1
jul	1	2459396.75	23	36	47.30	-3	44	31.61	29.6200	5.0
jul	2	2459397.75	23	36	46.66	-3	44	38.78	29.6039	5.0
jul	3	2459398.75	23	36	45.89	-3	44	46.69	29.5879	4.9

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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
jul	4	2459399.75	23	36	45.01	-3	44	55.34	29.5720	4.8
jul	5	2459400.75	23	36	44.01	-3	45	4.72	29.5561	4.8
jul	6	2459401.75	23	36	42.90	-3	45	14.82	29.5404	4.7
jul	7	2459402.75	23	36	41.67	-3	45	25.66	29.5248	4.6
jul	8	2459403.75	23	36	40.33	-3	45	37.22	29.5092	4.6
jul	9	2459404.75	23	36	38.88	-3	45	49.51	29.4938	4.5
jul	10	2459405.75	23	36	37.31	-3	46	2.53	29.4785	4.4
jul	11	2459406.75	23	36	35.62	-3	46	16.27	29.4634	4.4
jul	12	2459407.75	23	36	33.82	-3	46	30.75	29.4483	4.3
jul	13	2459408.75	23	36	31.90	-3	46	45.96	29.4334	4.2
jul	14	2459409.75	23	36	29.87	-3	47	1.88	29.4186	4.2
jul	15	2459410.75	23	36	27.73	-3	47	18.52	29.4040	4.1
jul	16	2459411.75	23	36	25.48	-3	47	35.86	29.3895	4.0
jul	17	2459412.75	23	36	23.11	-3	47	53.87	29.3751	4.0
jul	18	2459413.75	23	36	20.64	-3	48	12.54	29.3609	3.9
jul	19	2459414.75	23	36	18.07	-3	48	31.86	29.3469	3.8
jul	20	2459415.75	23	36	15.40	-3	48	51.81	29.3330	3.8
jul	21	2459416.75	23	36	12.62	-3	49	12.38	29.3193	3.7
jul	22	2459417.75	23	36	9.74	-3	49	33.58	29.3058	3.6
jul	23	2459418.75	23	36	6.77	-3	49	55.42	29.2924	3.6
jul	24	2459419.75	23	36	3.69	-3	50	17.91	29.2792	3.5
jul	25	2459420.75	23	36	0.50	-3	50	41.03	29.2662	3.4
jul	26	2459421.75	23	35	57.21	-3	51	4.79	29.2534	3.4
jul	27	2459422.75	23	35	53.83	-3	51	29.18	29.2407	3.3
jul	28	2459423.75	23	35	50.34	-3	51	54.17	29.2283	3.2
jul	29	2459424.75	23	35	46.75	-3	52	19.76	29.2160	3.2
jul	30	2459425.75	23	35	43.07	-3	52	45.92	29.2040	3.1
jul	31	2459426.75	23	35	39.30	-3	53	12.64	29.1921	3.0
ago	1	2459427.75	23	35	35.44	-3	53	39.91	29.1805	3.0
ago	2	2459428.75	23	35	31.49	-3	54	7.72	29.1690	2.9
ago	3	2459429.75	23	35	27.46	-3	54	36.05	29.1578	2.8
ago	4	2459430.75	23	35	23.33	-3	55	4.91	29.1468	2.8
ago	5	2459431.75	23	35	19.13	-3	55	34.28	29.1360	2.7
ago	6	2459432.75	23	35	14.83	-3	56	4.17	29.1254	2.6
ago	7	2459433.75	23	35	10.46	-3	56	34.56	29.1151	2.6
ago	8	2459434.75	23	35	6.00	-3	57	5.46	29.1050	2.5
ago	9	2459435.75	23	35	1.46	-3	57	36.86	29.0951	2.4
ago	10	2459436.75	23	34	56.84	-3	58	8.74	29.0855	2.4
ago	11	2459437.75	23	34	52.13	-3	58	41.09	29.0761	2.3
ago	12	2459438.75	23	34	47.36	-3	59	13.88	29.0669	2.2
ago	13	2459439.75	23	34	42.51	-3	59	47.11	29.0580	2.2
ago	14	2459440.75	23	34	37.59	-4	0	20.74	29.0494	2.1
ago	15	2459441.75	23	34	32.60	-4	0	54.74	29.0410	2.0
ago	16	2459442.75	23	34	27.56	-4	1	29.11	29.0328	2.0
ago	17	2459443.75	23	34	22.45	-4	2	3.83	29.0250	1.9
ago	18	2459444.75	23	34	17.28	-4	2	38.90	29.0173	1.8

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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	19	2459445.75	23	34	12.05	-4	3	14.31	29.0100	1.8
ago	20	2459446.75	23	34	6.77	-4	3	50.07	29.0029	1.7
ago	21	2459447.75	23	34	1.42	-4	4	26.17	28.9960	1.6
ago	22	2459448.75	23	33	56.01	-4	5	2.60	28.9895	1.6
ago	23	2459449.75	23	33	50.55	-4	5	39.35	28.9832	1.5
ago	24	2459450.75	23	33	45.04	-4	6	16.40	28.9772	1.4
ago	25	2459451.75	23	33	39.47	-4	6	53.73	28.9714	1.4
ago	26	2459452.75	23	33	33.86	-4	7	31.32	28.9659	1.3
ago	27	2459453.75	23	33	28.20	-4	8	9.14	28.9607	1.2
ago	28	2459454.75	23	33	22.50	-4	8	47.17	28.9558	1.2
ago	29	2459455.75	23	33	16.76	-4	9	25.41	28.9512	1.1
ago	30	2459456.75	23	33	10.98	-4	10	3.84	28.9468	1.0
ago	31	2459457.75	23	33	5.17	-4	10	42.45	28.9428	1.0
sep	1	2459458.75	23	32	59.33	-4	11	21.23	28.9390	0.9
sep	2	2459459.75	23	32	53.46	-4	12	0.17	28.9355	0.8
sep	3	2459460.75	23	32	47.55	-4	12	39.26	28.9323	0.8
sep	4	2459461.75	23	32	41.61	-4	13	18.49	28.9294	0.7
sep	5	2459462.75	23	32	35.65	-4	13	57.85	28.9268	0.6
sep	6	2459463.75	23	32	29.66	-4	14	37.34	28.9245	0.6
sep	7	2459464.75	23	32	23.65	-4	15	16.92	28.9224	0.5
sep	8	2459465.75	23	32	17.61	-4	15	56.59	28.9207	0.4
sep	9	2459466.75	23	32	11.56	-4	16	36.31	28.9193	0.4
sep	10	2459467.75	23	32	5.50	-4	17	16.06	28.9182	0.3
sep	11	2459468.75	23	31	59.43	-4	17	55.81	28.9173	0.2
sep	12	2459469.75	23	31	53.35	-4	18	35.54	28.9168	0.2
sep	13	2459470.75	23	31	47.28	-4	19	15.23	28.9166	0.1
sep	14	2459471.75	23	31	41.20	-4	19	54.87	28.9166	0.0
sep	15	2459472.75	23	31	35.12	-4	20	34.47	28.9170	23.9
sep	16	2459473.75	23	31	29.04	-4	21	14.02	28.9177	23.9
sep	17	2459474.75	23	31	22.97	-4	21	53.51	28.9186	23.8
sep	18	2459475.75	23	31	16.89	-4	22	32.94	28.9199	23.7
sep	19	2459476.75	23	31	10.82	-4	23	12.29	28.9215	23.7
sep	20	2459477.75	23	31	4.76	-4	23	51.54	28.9233	23.6
sep	21	2459478.75	23	30	58.71	-4	24	30.66	28.9255	23.5
sep	22	2459479.75	23	30	52.67	-4	25	9.64	28.9279	23.5
sep	23	2459480.75	23	30	46.65	-4	25	48.46	28.9306	23.4
sep	24	2459481.75	23	30	40.65	-4	26	27.09	28.9337	23.3
sep	25	2459482.75	23	30	34.67	-4	27	5.51	28.9370	23.3
sep	26	2459483.75	23	30	28.72	-4	27	43.72	28.9406	23.2
sep	27	2459484.75	23	30	22.80	-4	28	21.70	28.9446	23.1
sep	28	2459485.75	23	30	16.91	-4	28	59.44	28.9488	23.1
sep	29	2459486.75	23	30	11.05	-4	29	36.92	28.9533	23.0
sep	30	2459487.75	23	30	5.22	-4	30	14.16	28.9581	22.9
oct	1	2459488.75	23	29	59.43	-4	30	51.12	28.9632	22.9
oct	2	2459489.75	23	29	53.67	-4	31	27.81	28.9685	22.8
oct	3	2459490.75	23	29	47.95	-4	32	4.21	28.9742	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
oct	4	2459491.75	23	29	42.27	-4	32	40.31	28.9801	22.7
oct	5	2459492.75	23	29	36.63	-4	33	16.09	28.9864	22.6
oct	6	2459493.75	23	29	31.04	-4	33	51.53	28.9929	22.5
oct	7	2459494.75	23	29	25.50	-4	34	26.59	28.9997	22.5
oct	8	2459495.75	23	29	20.01	-4	35	1.25	29.0068	22.4
oct	9	2459496.75	23	29	14.58	-4	35	35.49	29.0141	22.3
oct	10	2459497.75	23	29	9.22	-4	36	9.29	29.0218	22.3
oct	11	2459498.75	23	29	3.91	-4	36	42.65	29.0297	22.2
oct	12	2459499.75	23	28	58.67	-4	37	15.57	29.0378	22.1
oct	13	2459500.75	23	28	53.49	-4	37	48.04	29.0463	22.1
oct	14	2459501.75	23	28	48.37	-4	38	20.06	29.0550	22.0
oct	15	2459502.75	23	28	43.32	-4	38	51.64	29.0639	21.9
oct	16	2459503.75	23	28	38.33	-4	39	22.74	29.0731	21.9
oct	17	2459504.75	23	28	33.42	-4	39	53.37	29.0826	21.8
oct	18	2459505.75	23	28	28.57	-4	40	23.50	29.0923	21.7
oct	19	2459506.75	23	28	23.79	-4	40	53.11	29.1023	21.7
oct	20	2459507.75	23	28	19.10	-4	41	22.18	29.1125	21.6
oct	21	2459508.75	23	28	14.48	-4	41	50.69	29.1230	21.5
oct	22	2459509.75	23	28	9.95	-4	42	18.64	29.1337	21.5
oct	23	2459510.75	23	28	5.50	-4	42	46.00	29.1446	21.4
oct	24	2459511.75	23	28	1.13	-4	43	12.78	29.1558	21.3
oct	25	2459512.75	23	27	56.86	-4	43	38.96	29.1672	21.3
oct	26	2459513.75	23	27	52.67	-4	44	4.53	29.1788	21.2
oct	27	2459514.75	23	27	48.57	-4	44	29.51	29.1907	21.1
oct	28	2459515.75	23	27	44.56	-4	44	53.87	29.2027	21.1
oct	29	2459516.75	23	27	40.65	-4	45	17.62	29.2150	21.0
oct	30	2459517.75	23	27	36.82	-4	45	40.74	29.2275	20.9
oct	31	2459518.75	23	27	33.09	-4	46	3.24	29.2403	20.9
nov	1	2459519.75	23	27	29.45	-4	46	25.10	29.2532	20.8
nov	2	2459520.75	23	27	25.92	-4	46	46.29	29.2663	20.7
nov	3	2459521.75	23	27	22.48	-4	47	6.81	29.2796	20.7
nov	4	2459522.75	23	27	19.14	-4	47	26.62	29.2932	20.6
nov	5	2459523.75	23	27	15.92	-4	47	45.71	29.3069	20.5
nov	6	2459524.75	23	27	12.80	-4	48	4.06	29.3208	20.5
nov	7	2459525.75	23	27	9.80	-4	48	21.67	29.3349	20.4
nov	8	2459526.75	23	27	6.91	-4	48	38.54	29.3491	20.3
nov	9	2459527.75	23	27	4.13	-4	48	54.69	29.3635	20.3
nov	10	2459528.75	23	27	1.46	-4	49	10.12	29.3781	20.2
nov	11	2459529.75	23	26	58.89	-4	49	24.83	29.3929	20.1
nov	12	2459530.75	23	26	56.44	-4	49	38.81	29.4078	20.1
nov	13	2459531.75	23	26	54.10	-4	49	52.05	29.4229	20.0
nov	14	2459532.75	23	26	51.87	-4	50	4.55	29.4381	19.9
nov	15	2459533.75	23	26	49.75	-4	50	16.29	29.4534	19.9
nov	16	2459534.75	23	26	47.75	-4	50	27.26	29.4689	19.8
nov	17	2459535.75	23	26	45.87	-4	50	37.44	29.4845	19.7
nov	18	2459536.75	23	26	44.12	-4	50	46.82	29.5003	19.7

Neptuno, 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	19	2459537.75	23	26	42.48	-4	50	55.41	29.5162	19.6
nov	20	2459538.75	23	26	40.97	-4	51	3.20	29.5322	19.5
nov	21	2459539.75	23	26	39.57	-4	51	10.19	29.5483	19.5
nov	22	2459540.75	23	26	38.31	-4	51	16.38	29.5645	19.4
nov	23	2459541.75	23	26	37.16	-4	51	21.77	29.5808	19.3
nov	24	2459542.75	23	26	36.14	-4	51	26.36	29.5973	19.3
nov	25	2459543.75	23	26	35.24	-4	51	30.17	29.6138	19.2
nov	26	2459544.75	23	26	34.46	-4	51	33.18	29.6304	19.1
nov	27	2459545.75	23	26	33.81	-4	51	35.40	29.6471	19.1
nov	28	2459546.75	23	26	33.27	-4	51	36.82	29.6639	19.0
nov	29	2459547.75	23	26	32.87	-4	51	37.44	29.6807	18.9
nov	30	2459548.75	23	26	32.58	-4	51	37.24	29.6977	18.9
dic	1	2459549.75	23	26	32.43	-4	51	36.21	29.7147	18.8
dic	2	2459550.75	23	26	32.40	-4	51	34.33	29.7317	18.7
dic	3	2459551.75	23	26	32.51	-4	51	31.61	29.7488	18.7
dic	4	2459552.75	23	26	32.75	-4	51	28.02	29.7660	18.6
dic	5	2459553.75	23	26	33.13	-4	51	23.59	29.7832	18.5
dic	6	2459554.75	23	26	33.63	-4	51	18.32	29.8004	18.5
dic	7	2459555.75	23	26	34.26	-4	51	12.23	29.8177	18.4
dic	8	2459556.75	23	26	35.02	-4	51	5.34	29.8350	18.3
dic	9	2459557.75	23	26	35.90	-4	50	57.66	29.8523	18.3
dic	10	2459558.75	23	26	36.91	-4	50	49.17	29.8696	18.2
dic	11	2459559.75	23	26	38.05	-4	50	39.88	29.8870	18.1
dic	12	2459560.75	23	26	39.30	-4	50	29.78	29.9043	18.1
dic	13	2459561.75	23	26	40.69	-4	50	18.85	29.9216	18.0
dic	14	2459562.75	23	26	42.21	-4	50	7.11	29.9390	18.0
dic	15	2459563.75	23	26	43.85	-4	49	54.54	29.9563	17.9
dic	16	2459564.75	23	26	45.62	-4	49	41.14	29.9736	17.8
dic	17	2459565.75	23	26	47.53	-4	49	26.93	29.9909	17.8
dic	18	2459566.75	23	26	49.56	-4	49	11.90	30.0081	17.7
dic	19	2459567.75	23	26	51.71	-4	48	56.07	30.0253	17.6
dic	20	2459568.75	23	26	54.00	-4	48	39.45	30.0425	17.6
dic	21	2459569.75	23	26	56.41	-4	48	22.03	30.0597	17.5
dic	22	2459570.75	23	26	58.94	-4	48	3.85	30.0768	17.4
dic	23	2459571.75	23	27	1.59	-4	47	44.89	30.0938	17.4
dic	24	2459572.75	23	27	4.36	-4	47	25.17	30.1108	17.3
dic	25	2459573.75	23	27	7.26	-4	47	4.69	30.1277	17.2
dic	26	2459574.75	23	27	10.27	-4	46	43.45	30.1446	17.2
dic	27	2459575.75	23	27	13.41	-4	46	21.46	30.1614	17.1
dic	28	2459576.75	23	27	16.66	-4	45	58.69	30.1781	17.0
dic	29	2459577.75	23	27	20.04	-4	45	35.15	30.1947	17.0
dic	30	2459578.75	23	27	23.54	-4	45	10.84	30.2113	16.9
dic	31	2459579.75	23	27	27.17	-4	44	45.74	30.2278	16.8

Plutón (planeta enano), 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2459215.75	19	45	16.61	-22	26	56.33	35.1483	13.0
ene	2	2459216.75	19	45	25.02	-22	26	40.38	35.1528	13.0
ene	3	2459217.75	19	45	33.45	-22	26	24.39	35.1570	12.9
ene	4	2459218.75	19	45	41.89	-22	26	8.36	35.1609	12.8
ene	5	2459219.75	19	45	50.36	-22	25	52.26	35.1645	12.8
ene	6	2459220.75	19	45	58.85	-22	25	36.12	35.1678	12.7
ene	7	2459221.75	19	46	7.35	-22	25	19.91	35.1708	12.6
ene	8	2459222.75	19	46	15.88	-22	25	3.64	35.1736	12.6
ene	9	2459223.75	19	46	24.42	-22	24	47.34	35.1760	12.5
ene	10	2459224.75	19	46	32.97	-22	24	31.01	35.1781	12.4
ene	11	2459225.75	19	46	41.54	-22	24	14.67	35.1800	12.4
ene	12	2459226.75	19	46	50.12	-22	23	58.36	35.1816	12.3
ene	13	2459227.75	19	46	58.71	-22	23	42.13	35.1828	12.3
ene	14	2459228.75	19	47	7.29	-22	23	26.02	35.1838	12.2
ene	15	2459229.75	19	47	15.85	-22	23	9.75	35.1845	12.1
ene	16	2459230.75	19	47	24.42	-22	22	53.36	35.1848	12.1
ene	17	2459231.75	19	47	32.99	-22	22	37.06	35.1849	12.0
ene	18	2459232.75	19	47	41.55	-22	22	20.82	35.1847	11.9
ene	19	2459233.75	19	47	50.10	-22	22	4.61	35.1842	11.9
ene	20	2459234.75	19	47	58.64	-22	21	48.43	35.1834	11.8
ene	21	2459235.75	19	48	7.17	-22	21	32.27	35.1823	11.7
ene	22	2459236.75	19	48	15.69	-22	21	16.15	35.1809	11.7
ene	23	2459237.75	19	48	24.19	-22	21	0.06	35.1792	11.6
ene	24	2459238.75	19	48	32.68	-22	20	44.03	35.1773	11.6
ene	25	2459239.75	19	48	41.15	-22	20	28.07	35.1750	11.5
ene	26	2459240.75	19	48	49.60	-22	20	12.18	35.1725	11.4
ene	27	2459241.75	19	48	58.02	-22	19	56.38	35.1696	11.4
ene	28	2459242.75	19	49	6.43	-22	19	40.68	35.1665	11.3
ene	29	2459243.75	19	49	14.80	-22	19	25.08	35.1631	11.2
ene	30	2459244.75	19	49	23.13	-22	19	9.59	35.1594	11.2
ene	31	2459245.75	19	49	31.44	-22	18	54.19	35.1555	11.1
feb	1	2459246.75	19	49	39.70	-22	18	38.89	35.1512	11.0
feb	2	2459247.75	19	49	47.93	-22	18	23.67	35.1467	11.0
feb	3	2459248.75	19	49	56.13	-22	18	8.54	35.1419	10.9
feb	4	2459249.75	19	50	4.29	-22	17	53.49	35.1368	10.9
feb	5	2459250.75	19	50	12.41	-22	17	38.54	35.1315	10.8
feb	6	2459251.75	19	50	20.49	-22	17	23.70	35.1258	10.7
feb	7	2459252.75	19	50	28.53	-22	17	9.00	35.1199	10.7
feb	8	2459253.75	19	50	36.53	-22	16	54.44	35.1138	10.6
feb	9	2459254.75	19	50	44.48	-22	16	40.04	35.1073	10.5
feb	10	2459255.75	19	50	52.37	-22	16	25.82	35.1006	10.5
feb	11	2459256.75	19	51	0.21	-22	16	11.76	35.0936	10.4
feb	12	2459257.75	19	51	8.00	-22	15	57.87	35.0864	10.4
feb	13	2459258.75	19	51	15.72	-22	15	44.15	35.0789	10.3
feb	14	2459259.75	19	51	23.38	-22	15	30.59	35.0712	10.2
feb	15	2459260.75	19	51	30.98	-22	15	17.19	35.0632	10.2

Plutón (planeta enano), 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2459261.75	19	51	38.52	-22	15	3.94	35.0549	10.1
feb	17	2459262.75	19	51	45.99	-22	14	50.87	35.0464	10.0
feb	18	2459263.75	19	51	53.40	-22	14	37.96	35.0377	10.0
feb	19	2459264.75	19	52	0.75	-22	14	25.23	35.0287	9.9
feb	20	2459265.75	19	52	8.03	-22	14	12.69	35.0194	9.8
feb	21	2459266.75	19	52	15.24	-22	14	0.36	35.0100	9.8
feb	22	2459267.75	19	52	22.38	-22	13	48.23	35.0003	9.7
feb	23	2459268.75	19	52	29.45	-22	13	36.33	34.9904	9.7
feb	24	2459269.75	19	52	36.45	-22	13	24.66	34.9802	9.6
feb	25	2459270.75	19	52	43.37	-22	13	13.24	34.9698	9.5
feb	26	2459271.75	19	52	50.20	-22	13	2.05	34.9592	9.5
feb	27	2459272.75	19	52	56.96	-22	12	51.10	34.9484	9.4
feb	28	2459273.75	19	53	3.63	-22	12	40.38	34.9374	9.3
mar	1	2459274.75	19	53	10.21	-22	12	29.89	34.9262	9.3
mar	2	2459275.75	19	53	16.71	-22	12	19.61	34.9147	9.2
mar	3	2459276.75	19	53	23.13	-22	12	9.54	34.9031	9.1
mar	4	2459277.75	19	53	29.46	-22	11	59.70	34.8913	9.1
mar	5	2459278.75	19	53	35.71	-22	11	50.10	34.8792	9.0
mar	6	2459279.75	19	53	41.88	-22	11	40.75	34.8670	8.9
mar	7	2459280.75	19	53	47.96	-22	11	31.68	34.8546	8.9
mar	8	2459281.75	19	53	53.94	-22	11	22.89	34.8419	8.8
mar	9	2459282.75	19	53	59.83	-22	11	14.39	34.8292	8.8
mar	10	2459283.75	19	54	5.63	-22	11	6.18	34.8162	8.7
mar	11	2459284.75	19	54	11.32	-22	10	58.27	34.8030	8.6
mar	12	2459285.75	19	54	16.91	-22	10	50.64	34.7897	8.6
mar	13	2459286.75	19	54	22.40	-22	10	43.29	34.7762	8.5
mar	14	2459287.75	19	54	27.78	-22	10	36.22	34.7626	8.4
mar	15	2459288.75	19	54	33.07	-22	10	29.42	34.7488	8.4
mar	16	2459289.75	19	54	38.25	-22	10	22.90	34.7349	8.3
mar	17	2459290.75	19	54	43.32	-22	10	16.67	34.7208	8.2
mar	18	2459291.75	19	54	48.30	-22	10	10.71	34.7065	8.2
mar	19	2459292.75	19	54	53.17	-22	10	5.06	34.6921	8.1
mar	20	2459293.75	19	54	57.94	-22	9	59.71	34.6776	8.0
mar	21	2459294.75	19	55	2.60	-22	9	54.67	34.6630	8.0
mar	22	2459295.75	19	55	7.15	-22	9	49.95	34.6482	7.9
mar	23	2459296.75	19	55	11.59	-22	9	45.57	34.6333	7.9
mar	24	2459297.75	19	55	15.93	-22	9	41.52	34.6183	7.8
mar	25	2459298.75	19	55	20.14	-22	9	37.81	34.6032	7.7
mar	26	2459299.75	19	55	24.25	-22	9	34.43	34.5880	7.7
mar	27	2459300.75	19	55	28.23	-22	9	31.38	34.5727	7.6
mar	28	2459301.75	19	55	32.10	-22	9	28.65	34.5572	7.5
mar	29	2459302.75	19	55	35.86	-22	9	26.23	34.5417	7.5
mar	30	2459303.75	19	55	39.50	-22	9	24.10	34.5261	7.4
mar	31	2459304.75	19	55	43.02	-22	9	22.27	34.5104	7.3
abr	1	2459305.75	19	55	46.44	-22	9	20.76	34.4947	7.3
abr	2	2459306.75	19	55	49.74	-22	9	19.57	34.4788	7.2

Plutón (planeta enano), 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
abr	3	2459307.75	19	55	52.93	-22	9	18.73	34.4629	7.1
abr	4	2459308.75	19	55	56.00	-22	9	18.24	34.4469	7.1
abr	5	2459309.75	19	55	58.95	-22	9	18.11	34.4309	7.0
abr	6	2459310.75	19	56	1.78	-22	9	18.35	34.4148	7.0
abr	7	2459311.75	19	56	4.49	-22	9	18.95	34.3987	6.9
abr	8	2459312.75	19	56	7.07	-22	9	19.89	34.3825	6.8
abr	9	2459313.75	19	56	9.52	-22	9	21.18	34.3662	6.8
abr	10	2459314.75	19	56	11.85	-22	9	22.80	34.3499	6.7
abr	11	2459315.75	19	56	14.06	-22	9	24.75	34.3336	6.6
abr	12	2459316.75	19	56	16.14	-22	9	27.04	34.3173	6.6
abr	13	2459317.75	19	56	18.11	-22	9	29.65	34.3010	6.5
abr	14	2459318.75	19	56	19.95	-22	9	32.59	34.2846	6.4
abr	15	2459319.75	19	56	21.67	-22	9	35.87	34.2682	6.4
abr	16	2459320.75	19	56	23.27	-22	9	39.49	34.2518	6.3
abr	17	2459321.75	19	56	24.75	-22	9	43.46	34.2354	6.2
abr	18	2459322.75	19	56	26.10	-22	9	47.78	34.2190	6.2
abr	19	2459323.75	19	56	27.33	-22	9	52.46	34.2027	6.1
abr	20	2459324.75	19	56	28.44	-22	9	57.51	34.1863	6.0
abr	21	2459325.75	19	56	29.43	-22	10	2.92	34.1700	6.0
abr	22	2459326.75	19	56	30.28	-22	10	8.69	34.1537	5.9
abr	23	2459327.75	19	56	31.01	-22	10	14.81	34.1374	5.8
abr	24	2459328.75	19	56	31.62	-22	10	21.27	34.1211	5.8
abr	25	2459329.75	19	56	32.10	-22	10	28.05	34.1049	5.7
abr	26	2459330.75	19	56	32.45	-22	10	35.15	34.0887	5.6
abr	27	2459331.75	19	56	32.69	-22	10	42.55	34.0726	5.6
abr	28	2459332.75	19	56	32.81	-22	10	50.26	34.0566	5.5
abr	29	2459333.75	19	56	32.81	-22	10	58.29	34.0405	5.4
abr	30	2459334.75	19	56	32.69	-22	11	6.66	34.0246	5.4
may	1	2459335.75	19	56	32.46	-22	11	15.37	34.0087	5.3
may	2	2459336.75	19	56	32.10	-22	11	24.44	33.9929	5.3
may	3	2459337.75	19	56	31.62	-22	11	33.87	33.9772	5.2
may	4	2459338.75	19	56	31.02	-22	11	43.64	33.9615	5.1
may	5	2459339.75	19	56	30.29	-22	11	53.74	33.9459	5.1
may	6	2459340.75	19	56	29.44	-22	12	4.17	33.9304	5.0
may	7	2459341.75	19	56	28.46	-22	12	14.91	33.9150	4.9
may	8	2459342.75	19	56	27.37	-22	12	25.95	33.8997	4.9
may	9	2459343.75	19	56	26.16	-22	12	37.29	33.8846	4.8
may	10	2459344.75	19	56	24.83	-22	12	48.93	33.8695	4.7
may	11	2459345.75	19	56	23.38	-22	13	0.86	33.8545	4.7
may	12	2459346.75	19	56	21.82	-22	13	13.09	33.8397	4.6
may	13	2459347.75	19	56	20.15	-22	13	25.61	33.8249	4.5
may	14	2459348.75	19	56	18.37	-22	13	38.43	33.8103	4.5
may	15	2459349.75	19	56	16.47	-22	13	51.56	33.7959	4.4
may	16	2459350.75	19	56	14.46	-22	14	4.99	33.7816	4.3
may	17	2459351.75	19	56	12.34	-22	14	18.73	33.7674	4.3
may	18	2459352.75	19	56	10.11	-22	14	32.78	33.7533	4.2

Plutón (planeta enano), 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	19	2459353.75	19	56	7.77	-22	14	47.12	33.7394	4.1
may	20	2459354.75	19	56	5.31	-22	15	1.75	33.7257	4.1
may	21	2459355.75	19	56	2.75	-22	15	16.65	33.7121	4.0
may	22	2459356.75	19	56	0.07	-22	15	31.82	33.6987	3.9
may	23	2459357.75	19	55	57.29	-22	15	47.23	33.6855	3.9
may	24	2459358.75	19	55	54.41	-22	16	2.87	33.6724	3.8
may	25	2459359.75	19	55	51.43	-22	16	18.73	33.6595	3.7
may	26	2459360.75	19	55	48.35	-22	16	34.83	33.6468	3.7
may	27	2459361.75	19	55	45.18	-22	16	51.16	33.6342	3.6
may	28	2459362.75	19	55	41.91	-22	17	7.75	33.6219	3.5
may	29	2459363.75	19	55	38.54	-22	17	24.61	33.6097	3.5
may	30	2459364.75	19	55	35.08	-22	17	41.72	33.5977	3.4
may	31	2459365.75	19	55	31.51	-22	17	59.09	33.5859	3.3
jun	1	2459366.75	19	55	27.85	-22	18	16.70	33.5743	3.3
jun	2	2459367.75	19	55	24.09	-22	18	34.53	33.5630	3.2
jun	3	2459368.75	19	55	20.24	-22	18	52.58	33.5518	3.1
jun	4	2459369.75	19	55	16.29	-22	19	10.81	33.5408	3.1
jun	5	2459370.75	19	55	12.26	-22	19	29.24	33.5300	3.0
jun	6	2459371.75	19	55	8.14	-22	19	47.85	33.5195	2.9
jun	7	2459372.75	19	55	3.93	-22	20	6.63	33.5092	2.9
jun	8	2459373.75	19	54	59.64	-22	20	25.60	33.4991	2.8
jun	9	2459374.75	19	54	55.27	-22	20	44.74	33.4892	2.7
jun	10	2459375.75	19	54	50.83	-22	21	4.05	33.4796	2.7
jun	11	2459376.75	19	54	46.31	-22	21	23.55	33.4702	2.6
jun	12	2459377.75	19	54	41.71	-22	21	43.22	33.4610	2.5
jun	13	2459378.75	19	54	37.03	-22	22	3.07	33.4521	2.5
jun	14	2459379.75	19	54	32.28	-22	22	23.09	33.4434	2.4
jun	15	2459380.75	19	54	27.46	-22	22	43.27	33.4349	2.3
jun	16	2459381.75	19	54	22.57	-22	23	3.61	33.4268	2.3
jun	17	2459382.75	19	54	17.60	-22	23	24.09	33.4188	2.2
jun	18	2459383.75	19	54	12.56	-22	23	44.70	33.4111	2.1
jun	19	2459384.75	19	54	7.46	-22	24	5.41	33.4037	2.1
jun	20	2459385.75	19	54	2.30	-22	24	26.21	33.3965	2.0
jun	21	2459386.75	19	53	57.08	-22	24	47.10	33.3896	1.9
jun	22	2459387.75	19	53	51.81	-22	25	8.06	33.3830	1.9
jun	23	2459388.75	19	53	46.49	-22	25	29.11	33.3766	1.8
jun	24	2459389.75	19	53	41.12	-22	25	50.26	33.3704	1.7
jun	25	2459390.75	19	53	35.69	-22	26	11.51	33.3646	1.7
jun	26	2459391.75	19	53	30.22	-22	26	32.87	33.3590	1.6
jun	27	2459392.75	19	53	24.70	-22	26	54.34	33.3537	1.5
jun	28	2459393.75	19	53	19.12	-22	27	15.89	33.3486	1.5
jun	29	2459394.75	19	53	13.49	-22	27	37.52	33.3438	1.4
jun	30	2459395.75	19	53	7.82	-22	27	59.20	33.3393	1.3
jul	1	2459396.75	19	53	2.11	-22	28	20.91	33.3351	1.2
jul	2	2459397.75	19	52	56.35	-22	28	42.66	33.3312	1.2
jul	3	2459398.75	19	52	50.56	-22	29	4.42	33.3275	1.1

Plutón (planeta enano), 2021

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
jul	4	2459399.75	19	52	44.74	-22	29	26.20	33.3241	1.0
jul	5	2459400.75	19	52	38.89	-22	29	47.99	33.3210	1.0
jul	6	2459401.75	19	52	33.00	-22	30	9.80	33.3182	0.9
jul	7	2459402.75	19	52	27.10	-22	30	31.61	33.3157	0.8
jul	8	2459403.75	19	52	21.17	-22	30	53.43	33.3135	0.8
jul	9	2459404.75	19	52	15.22	-22	31	15.27	33.3115	0.7
jul	10	2459405.75	19	52	9.24	-22	31	37.11	33.3099	0.6
jul	11	2459406.75	19	52	3.25	-22	31	58.96	33.3085	0.6
jul	12	2459407.75	19	51	57.24	-22	32	20.80	33.3074	0.5
jul	13	2459408.75	19	51	51.21	-22	32	42.64	33.3066	0.4
jul	14	2459409.75	19	51	45.17	-22	33	4.45	33.3061	0.4
jul	15	2459410.75	19	51	39.12	-22	33	26.21	33.3059	0.3
jul	16	2459411.75	19	51	33.05	-22	33	47.91	33.3060	0.2
jul	17	2459412.75	19	51	26.98	-22	34	9.54	33.3064	0.2
jul	18	2459413.75	19	51	20.92	-22	34	31.09	33.3071	0.1
jul	19	2459414.75	19	51	14.85	-22	34	52.55	33.3081	0.0
jul	20	2459415.75	19	51	8.79	-22	35	13.92	33.3093	24.0
jul	21	2459416.75	19	51	2.75	-22	35	35.21	33.3109	23.9
jul	22	2459417.75	19	50	56.71	-22	35	56.44	33.3127	23.8
jul	23	2459418.75	19	50	50.68	-22	36	17.60	33.3148	23.8
jul	24	2459419.75	19	50	44.66	-22	36	38.70	33.3173	23.7
jul	25	2459420.75	19	50	38.64	-22	36	59.72	33.3200	23.6
jul	26	2459421.75	19	50	32.64	-22	37	20.65	33.3230	23.6
jul	27	2459422.75	19	50	26.65	-22	37	41.48	33.3263	23.5
jul	28	2459423.75	19	50	20.68	-22	38	2.18	33.3298	23.4
jul	29	2459424.75	19	50	14.73	-22	38	22.74	33.3337	23.4
jul	30	2459425.75	19	50	8.80	-22	38	43.16	33.3378	23.3
jul	31	2459426.75	19	50	2.90	-22	39	3.42	33.3423	23.2
ago	1	2459427.75	19	49	57.02	-22	39	23.54	33.3470	23.2
ago	2	2459428.75	19	49	51.18	-22	39	43.50	33.3520	23.1
ago	3	2459429.75	19	49	45.38	-22	40	3.31	33.3573	23.0
ago	4	2459430.75	19	49	39.61	-22	40	22.97	33.3628	23.0
ago	5	2459431.75	19	49	33.88	-22	40	42.49	33.3687	22.9
ago	6	2459432.75	19	49	28.19	-22	41	1.85	33.3748	22.8
ago	7	2459433.75	19	49	22.54	-22	41	21.06	33.3812	22.8
ago	8	2459434.75	19	49	16.94	-22	41	40.12	33.3879	22.7
ago	9	2459435.75	19	49	11.37	-22	41	59.01	33.3949	22.6
ago	10	2459436.75	19	49	5.86	-22	42	17.72	33.4021	22.6
ago	11	2459437.75	19	49	0.38	-22	42	36.24	33.4096	22.5
ago	12	2459438.75	19	48	54.96	-22	42	54.56	33.4174	22.4
ago	13	2459439.75	19	48	49.60	-22	43	12.65	33.4254	22.4
ago	14	2459440.75	19	48	44.29	-22	43	30.51	33.4337	22.3
ago	15	2459441.75	19	48	39.04	-22	43	48.14	33.4423	22.2
ago	16	2459442.75	19	48	33.86	-22	44	5.54	33.4511	22.2
ago	17	2459443.75	19	48	28.75	-22	44	22.72	33.4602	22.1
ago	18	2459444.75	19	48	23.70	-22	44	39.68	33.4695	22.0

Plutón (planeta enano), 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	19	2459445.75	19	48	18.72	-22	44	56.44	33.4791	22.0
ago	20	2459446.75	19	48	13.81	-22	45	13.00	33.4889	21.9
ago	21	2459447.75	19	48	8.97	-22	45	29.35	33.4990	21.8
ago	22	2459448.75	19	48	4.19	-22	45	45.47	33.5093	21.8
ago	23	2459449.75	19	47	59.48	-22	46	1.37	33.5199	21.7
ago	24	2459450.75	19	47	54.84	-22	46	17.01	33.5307	21.6
ago	25	2459451.75	19	47	50.28	-22	46	32.39	33.5417	21.5
ago	26	2459452.75	19	47	45.80	-22	46	47.50	33.5530	21.5
ago	27	2459453.75	19	47	41.39	-22	47	2.34	33.5644	21.4
ago	28	2459454.75	19	47	37.08	-22	47	16.90	33.5762	21.3
ago	29	2459455.75	19	47	32.84	-22	47	31.19	33.5881	21.3
ago	30	2459456.75	19	47	28.70	-22	47	45.20	33.6003	21.2
ago	31	2459457.75	19	47	24.64	-22	47	58.96	33.6126	21.1
sep	1	2459458.75	19	47	20.68	-22	48	12.44	33.6252	21.1
sep	2	2459459.75	19	47	16.80	-22	48	25.67	33.6380	21.0
sep	3	2459460.75	19	47	13.02	-22	48	38.64	33.6510	20.9
sep	4	2459461.75	19	47	9.33	-22	48	51.34	33.6643	20.9
sep	5	2459462.75	19	47	5.74	-22	49	3.78	33.6777	20.8
sep	6	2459463.75	19	47	2.23	-22	49	15.94	33.6913	20.7
sep	7	2459464.75	19	46	58.83	-22	49	27.82	33.7051	20.7
sep	8	2459465.75	19	46	55.52	-22	49	39.39	33.7191	20.6
sep	9	2459466.75	19	46	52.31	-22	49	50.65	33.7333	20.5
sep	10	2459467.75	19	46	49.20	-22	50	1.58	33.7476	20.5
sep	11	2459468.75	19	46	46.20	-22	50	12.19	33.7621	20.4
sep	12	2459469.75	19	46	43.32	-22	50	22.48	33.7768	20.3
sep	13	2459470.75	19	46	40.54	-22	50	32.46	33.7917	20.3
sep	14	2459471.75	19	46	37.87	-22	50	42.14	33.8067	20.2
sep	15	2459472.75	19	46	35.32	-22	50	51.53	33.8219	20.1
sep	16	2459473.75	19	46	32.87	-22	51	0.64	33.8373	20.1
sep	17	2459474.75	19	46	30.53	-22	51	9.47	33.8528	20.0
sep	18	2459475.75	19	46	28.30	-22	51	18.00	33.8684	19.9
sep	19	2459476.75	19	46	26.18	-22	51	26.23	33.8842	19.9
sep	20	2459477.75	19	46	24.17	-22	51	34.15	33.9001	19.8
sep	21	2459478.75	19	46	22.26	-22	51	41.74	33.9161	19.8
sep	22	2459479.75	19	46	20.48	-22	51	48.99	33.9323	19.7
sep	23	2459480.75	19	46	18.81	-22	51	55.91	33.9486	19.6
sep	24	2459481.75	19	46	17.25	-22	52	2.49	33.9650	19.6
sep	25	2459482.75	19	46	15.82	-22	52	8.75	33.9815	19.5
sep	26	2459483.75	19	46	14.51	-22	52	14.67	33.9982	19.4
sep	27	2459484.75	19	46	13.32	-22	52	20.27	34.0149	19.4
sep	28	2459485.75	19	46	12.25	-22	52	25.56	34.0318	19.3
sep	29	2459486.75	19	46	11.31	-22	52	30.54	34.0487	19.2
sep	30	2459487.75	19	46	10.48	-22	52	35.21	34.0658	19.2
oct	1	2459488.75	19	46	9.78	-22	52	39.58	34.0829	19.1
oct	2	2459489.75	19	46	9.20	-22	52	43.64	34.1001	19.0
oct	3	2459490.75	19	46	8.73	-22	52	47.39	34.1174	19.0

Plutón (planeta enano), 2021

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
oct	4	2459491.75	19	46	8.39	-22	52	50.82	34.1347	18.9
oct	5	2459492.75	19	46	8.17	-22	52	53.92	34.1522	18.8
oct	6	2459493.75	19	46	8.08	-22	52	56.68	34.1697	18.8
oct	7	2459494.75	19	46	8.10	-22	52	59.09	34.1872	18.7
oct	8	2459495.75	19	46	8.26	-22	53	1.14	34.2048	18.6
oct	9	2459496.75	19	46	8.55	-22	53	2.84	34.2224	18.6
oct	10	2459497.75	19	46	8.97	-22	53	4.21	34.2401	18.5
oct	11	2459498.75	19	46	9.52	-22	53	5.26	34.2578	18.4
oct	12	2459499.75	19	46	10.19	-22	53	6.00	34.2756	18.4
oct	13	2459500.75	19	46	11.00	-22	53	6.44	34.2934	18.3
oct	14	2459501.75	19	46	11.92	-22	53	6.59	34.3112	18.2
oct	15	2459502.75	19	46	12.97	-22	53	6.44	34.3290	18.2
oct	16	2459503.75	19	46	14.14	-22	53	5.97	34.3468	18.1
oct	17	2459504.75	19	46	15.43	-22	53	5.19	34.3646	18.0
oct	18	2459505.75	19	46	16.85	-22	53	4.08	34.3824	18.0
oct	19	2459506.75	19	46	18.39	-22	53	2.64	34.4003	17.9
oct	20	2459507.75	19	46	20.05	-22	53	0.87	34.4181	17.8
oct	21	2459508.75	19	46	21.84	-22	52	58.76	34.4359	17.8
oct	22	2459509.75	19	46	23.76	-22	52	56.32	34.4537	17.7
oct	23	2459510.75	19	46	25.81	-22	52	53.56	34.4714	17.6
oct	24	2459511.75	19	46	27.98	-22	52	50.49	34.4891	17.6
oct	25	2459512.75	19	46	30.28	-22	52	47.11	34.5068	17.5
oct	26	2459513.75	19	46	32.70	-22	52	43.44	34.5245	17.5
oct	27	2459514.75	19	46	35.25	-22	52	39.47	34.5421	17.4
oct	28	2459515.75	19	46	37.92	-22	52	35.22	34.5597	17.3
oct	29	2459516.75	19	46	40.71	-22	52	30.68	34.5772	17.3
oct	30	2459517.75	19	46	43.62	-22	52	25.85	34.5946	17.2
oct	31	2459518.75	19	46	46.65	-22	52	20.74	34.6120	17.1
nov	1	2459519.75	19	46	49.80	-22	52	15.32	34.6294	17.1
nov	2	2459520.75	19	46	53.06	-22	52	9.60	34.6466	17.0
nov	3	2459521.75	19	46	56.45	-22	52	3.56	34.6638	16.9
nov	4	2459522.75	19	46	59.96	-22	51	57.19	34.6809	16.9
nov	5	2459523.75	19	47	3.59	-22	51	50.51	34.6979	16.8
nov	6	2459524.75	19	47	7.34	-22	51	43.52	34.7148	16.7
nov	7	2459525.75	19	47	11.22	-22	51	36.25	34.7316	16.7
nov	8	2459526.75	19	47	15.21	-22	51	28.70	34.7483	16.6
nov	9	2459527.75	19	47	19.32	-22	51	20.90	34.7649	16.5
nov	10	2459528.75	19	47	23.55	-22	51	12.85	34.7814	16.5
nov	11	2459529.75	19	47	27.88	-22	51	4.55	34.7977	16.4
nov	12	2459530.75	19	47	32.32	-22	50	56.00	34.8139	16.4
nov	13	2459531.75	19	47	36.87	-22	50	47.17	34.8301	16.3
nov	14	2459532.75	19	47	41.52	-22	50	38.08	34.8460	16.2
nov	15	2459533.75	19	47	46.28	-22	50	28.71	34.8619	16.2
nov	16	2459534.75	19	47	51.15	-22	50	19.06	34.8776	16.1
nov	17	2459535.75	19	47	56.13	-22	50	9.13	34.8931	16.0
nov	18	2459536.75	19	48	1.21	-22	49	58.94	34.9085	16.0

Plutón (planeta enano), 2021

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

mes	día	dj	α h	α m	α s	δ °	δ `	δ “	dis UA	hp h
nov	19	2459537.75	19	48	6.40	-22	49	48.48	34.9238	15.9
nov	20	2459538.75	19	48	11.69	-22	49	37.77	34.9389	15.8
nov	21	2459539.75	19	48	17.09	-22	49	26.83	34.9538	15.8
nov	22	2459540.75	19	48	22.60	-22	49	15.64	34.9686	15.7
nov	23	2459541.75	19	48	28.20	-22	49	4.24	34.9832	15.6
nov	24	2459542.75	19	48	33.90	-22	48	52.62	34.9976	15.6
nov	25	2459543.75	19	48	39.69	-22	48	40.79	35.0118	15.5
nov	26	2459544.75	19	48	45.58	-22	48	28.74	35.0259	15.5
nov	27	2459545.75	19	48	51.57	-22	48	16.48	35.0398	15.4
nov	28	2459546.75	19	48	57.64	-22	48	4.01	35.0535	15.3
nov	29	2459547.75	19	49	3.80	-22	47	51.31	35.0670	15.3
nov	30	2459548.75	19	49	10.05	-22	47	38.38	35.0803	15.2
dic	1	2459549.75	19	49	16.39	-22	47	25.22	35.0934	15.1
dic	2	2459550.75	19	49	22.82	-22	47	11.82	35.1063	15.1
dic	3	2459551.75	19	49	29.34	-22	46	58.20	35.1189	15.0
dic	4	2459552.75	19	49	35.95	-22	46	44.36	35.1314	14.9
dic	5	2459553.75	19	49	42.64	-22	46	30.34	35.1437	14.9
dic	6	2459554.75	19	49	49.43	-22	46	16.15	35.1557	14.8
dic	7	2459555.75	19	49	56.29	-22	46	1.81	35.1675	14.8
dic	8	2459556.75	19	50	3.22	-22	45	47.32	35.1791	14.7
dic	9	2459557.75	19	50	10.22	-22	45	32.67	35.1904	14.6
dic	10	2459558.75	19	50	17.30	-22	45	17.86	35.2015	14.6
dic	11	2459559.75	19	50	24.44	-22	45	2.88	35.2124	14.5
dic	12	2459560.75	19	50	31.65	-22	44	47.72	35.2230	14.4
dic	13	2459561.75	19	50	38.92	-22	44	32.39	35.2334	14.4
dic	14	2459562.75	19	50	46.27	-22	44	16.88	35.2436	14.3
dic	15	2459563.75	19	50	53.68	-22	44	1.21	35.2535	14.2
dic	16	2459564.75	19	51	1.16	-22	43	45.39	35.2631	14.2
dic	17	2459565.75	19	51	8.70	-22	43	29.42	35.2725	14.1
dic	18	2459566.75	19	51	16.30	-22	43	13.32	35.2816	14.0
dic	19	2459567.75	19	51	23.96	-22	42	57.10	35.2905	14.0
dic	20	2459568.75	19	51	31.68	-22	42	40.76	35.2992	13.9
dic	21	2459569.75	19	51	39.46	-22	42	24.32	35.3075	13.9
dic	22	2459570.75	19	51	47.28	-22	42	7.79	35.3156	13.8
dic	23	2459571.75	19	51	55.16	-22	41	51.16	35.3235	13.7
dic	24	2459572.75	19	52	3.08	-22	41	34.43	35.3310	13.7
dic	25	2459573.75	19	52	11.04	-22	41	17.62	35.3383	13.6
dic	26	2459574.75	19	52	19.05	-22	41	0.70	35.3453	13.5
dic	27	2459575.75	19	52	27.10	-22	40	43.68	35.3521	13.5
dic	28	2459576.75	19	52	35.19	-22	40	26.55	35.3586	13.4
dic	29	2459577.75	19	52	43.32	-22	40	9.32	35.3648	13.4
dic	30	2459578.75	19	52	51.49	-22	39	51.98	35.3707	13.3
dic	31	2459579.75	19	52	59.70	-22	39	34.56	35.3763	13.2

Satélite de los planetas, 2021

Planeta		Satélite	Periodo orbital (días)		Semi eje mayor (10^3 km)	Excentri-cidad de la órbita	Inclinación de la orbita		Masa (kg)	Radio (km)		Albedo
Tie	1	Luna	27.321661		384.400	0.0549	18.2-28.58	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	Ganímedes	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	Sínope	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	r	24135.610	0.31770	165.792	e		2.60		0.04
Júp	24	Iocasta	606.30000	r	20642.860	0.26860	149.906	e		2.60		0.04
Júp	25	Erinoma	661.10000	r	21867.750	0.34650	160.909	e		1.60		0.04
Júp	26	Isunoa	704.90000	r	22804.700	0.28090	165.039	e		1.90		0.04
Júp	27	Praxiodica	624.60000	r	21098.100	0.14580	146.353	e		3.40		0.04
Júp	28	Autonoa	778.00000	r	24413.090	0.45860	153.056	e		2.00		0.04
Júp	29	Tiona	610.00000	r	20769.900	0.28830	148.286	e		2.00		0.04
Júp	30	Hermipe	624.60000	r	21047.990	0.24790	149.785	e		2.00		0.04
Júp	31	Gitna	679.30000	r	22274.410	0.31120	164.343	e		1.50		0.04
Júp	32	Euridome	752.40000	r	23830.940	0.32550	150.430	e		1.50		0.04
Júp	33	Euanda	620.90000	r	20983.140	0.14270	146.030	e		1.50		0.04
Júp	36	Esponda	690.30000	r	22548.240	0.51890	155.220	e		1.00		0.04
Júp	37	Kala	679.40000	r	22300.640	0.32500	164.794	e		1.00		0.04
Júp	39	Egémona	715.00000	r	23006.330	0.24940	152.330	e		1.50		0.04
Júp	41	Oda	747.00000	r	23743.830	0.40510	159.408	e		2.00		0.04
Júp	43	Arca	748.70000	r	23765.120	0.22370	163.254	e		1.50		0.04
Júp	45	Élica	601.40000	r	20540.270	0.13750	154.587	e		2.00		0.04
Júp	46	Carpo	455.07000	r	17056.040	0.29490	55.147	e		1.50		0.04
Júp	47	Euquelade	735.27000	r	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, 2021

Planeta		Satélite	Periodo orbital (días)		Semi eje mayor (10^3 km)	Excentricidad de la órbita	Inclinación de la orbita		Masa (kg)	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	Ofelia	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 orbita relativa al ecuador del planeta
e inclinación de la orbita relativa a la eclíptica
t inclinación de la orbita relativa al ecuador terrestre

Parámetros orbitales y físicos, 2021

Parámetros de las órbitas de los planetas

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

Planetas	Semieje mayor en UA	Revolución en años trópicos	Excentricidad	Inclinación °	Aplanamiento geométrico ($x10^{-3}$)
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/cm3	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, 2021

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
Sideral (estrella fija a estrella fija)	365.256363	365	06	09	10
Anomalístico (perihelio a perihelio)	365.259636	365	06	13	53
Eclipsar (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
Sideral (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 sideral 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 sideral 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, 2021

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)	7º 15'
Longitud del Nodo Ascendente (T en siglos desde J2000.0)	75º 46' + 84' T
Período sinódico de rotación (f: latitud en el Sol)	(26.90 + 5.2 sen2f) días
Período sideral de rotación (para longitudes heliográficas)	25.38 días
Apex	a = 18h 10' δ = +37º
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	23º 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 "/s = 7.29211510x10-5 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, 2021

Unión Astronómica Internacional (IAU 1976)

Figura y campo de gravedad	
Radio ecuatorial (a)	6378140 m
Radio polar (b)	6356755 m
Masa	$5.9742\ 10^{24}$g
Densidad media	5.52 g/cm^3
Factor dinámico (J2)	0.00108263x10-11 años-1
Gravedad normal (g), latitud (f)	g = 9.80621-0.02593 cos(2f)+0.00003 cos(4f) m/s^2
Constante de gravitación geocéntrica	$3.986005x10^{14}$ m^{3}s^{-2}

Luna

Radio medio	1738 km
Semidiámetro a la distancia media	15' 32.6"
Masa	$7.3483x10^{22}$ kg
Densidad media	3.34 g/cm^2
Gravedad superficial	1.62 m/s^2 = 0.17g

Orbita de la Luna en torno a la Tierra

Movimiento sideral medio	$2.661699489x10^{-6}$ rad/s
Distancia media de la Tierra a la Luna	3.844x105 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	$4.671x10^3$ km
Excentricidad media	0.05490
Inclinación media (respecto de la Eclíptica)	5.145396º
Inclinación media (respecto del ecuador de la Luna)	6º 41'
Límites de la declinación geocéntrica	+29º - 29º
Período de revolución del nodo	6798d
Período de revolución del perigeo	3232d
Período Saros	223 lunaciones = 19 pasos del Sol por el Nodo 6585 1/3 días
Rapidez orbital media	1023 m/s = 0.000591 UA/día
Aceleración centrípeta media	0.00272 m/s^2 = 0.0003 g

Nomenclatura de las estrellas brillantes, 2021

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Acamar	θ	Eri	897
Achernar	α	Eri	472
Achird	η	Cas	219
Acrux	α	Cru	4730
Acubens	α	Cnc	3572
Adhafera	ζ	Leo	4031
Adhara	ε	CMa	2618
Adhil	ξ	And	390
Adib	α	Dra	5291
Agena	ß	Cen	5267
Ain	ε	Tau	1409
Ain al Rami	ν	Sgr	7116
Ak	α	UMa	4301
Akrab	ß	Sco	5984
Aladfar	η	Lyr	7298
Alamak	γ	And	603
Al Anchatal Nahr	τ	Eri	850
Al Anf	ε	Peg	8308
Al Anz	ε	Aur	1605
Alaraph	α	Vir	5056
Alaraph	ß	Vir	4540
Alascha	λ	Sco	6527
Al Athfar	μ	Lyr	6903
Al Atik	o	Per	1131
Al Baldah	π	Sgr	7264
Al Bali	ε	Aqr	7950
Albireo	ß	Cyg	7417
Al Chiba	α	Crv	4623
Alcor	80	UMa	5062
Alcyone	ν	Tau	1165
Aldebarán	α	Tau	1457
Alderamín	α	Cep	8162
Aldhafara	ζ	Leo	4031
Al Dhiba	ι	Dra	5744
Aldhibah	ζ	Dra	6396
Al Dihi	ι	Dra	5744
Aldib	δ	Dra	7310
Al Dibah	ζ	Dra	6396
Alfard	α	Hya	3748
Alfecca	α	CrA	7254
Alfirk	ß	Cep	8238
Alga	θ	Ser	7141
Algebar	ß	Ori	1713
Algedi Prima	α	Cap	7747
Algedi Secunda	α	Cap	7754
Algeiba	γ	Leo	4057
Algenib	γ	Peg	39
Algenib	α	Per	1017
Algenubi	ε	Leo	3873
Algieba	γ	Leo	4058
Algol	ß	Per	936

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Algomeyla	ß	CMi	2845
Algomeysa	α	CMi	2943
Algorab	δ	Crv	4757
Alhajoth	α	Aur	1708
Al Hammam	ζ	Peg	8634
Alhena	γ	Gem	2421
Alioth	ε	UMa	4905
Al Kaffal Jidmah	γ	Cet	804
Alkaid	η	UMa	5191
Al Kalbal Asad	α	Leo	3982
Alkalurops	μ	Boo	5733
Al Kaphrab	χ	UMa	4518
Alkes	α	Crt	4287
Alkhiba	α	Crv	4623
Al Kirdah	ξ	Cep	8417
Almaak	γ	And	603
Almaaz	ε	Aur	1605
Al Minliar al Asad	κ	Leo	3731
Al Minliar al Shuja	σ	Hya	3418
Almuredin	ε	Vir	4932
Alnair	α	Gru	8425
Al Nasl	γ	Sgr	6746
Alnath	α	Ari	617
Alnilam	ε	Ori	1903
Alnitak	ζ	Ori	1948
Al Niyat	σ	Sco	6084
Al Niyat	τ	Sco	6165
Alphard	α	Hya	3748
Alphecca	α	CrB	5793
Alpheratz	α	And	15
Alphirk	ß	Cep	8238
Alrai	γ	Cep	8974
Alrami	α	Sgr	7348
Al Rescha	α	Psc	595
Alruccabah	α	UMi	424
Al Rukbahal Daj	ω	Cyg	7851
Alsafi	σ	Dra	7462
Alsah	α	Sge	7479
Al Sanamal Nakah	ß	Cas	21
Alsciaukat	31	Lyn	3275
Alshain	ß	Aql	7602
Alshat	ν	Cap	7773
Alshemali	μ	leo	3905
Al Sheratain	ß	Ari	553
Alsuhail	λ	Vel	3634
Al Suhailal Muhlif	γ	Vel	3206
Altair	α	Aql	7557
Altais	δ	Dra	7310
AlTarf	ß	Cnc	3249
Alterf	λ	Leo	3773
Aludra	η	CMa	2827

Nomenclatura de las estrellas brillantes, 2021

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Alula Australia	ξ	UMa	4374
Alula Borealis	ν	UMa	4377
Alwaid	ß	Dra	6536
Al Wazor	δ	CMa	2693
Alya	θ	Ser	7141
Alzirr	ξ	Gem	2484
Ancha	θ	Aqr	8499
Angetenar	τ	Eri	850
Ankaa	α	Phe	99
Anser	α	Vul	7405
Antares	α	Sco	6134
Arcturus	α	Boo	5340
Arich	γ	Vir	4825
Arietis	α	Ari	617
Arkab Posterior	ß	Sgr	7343
Arkab Prior	ß	Sgr	7337
Arneb	α	Lep	1865
Arnai	γ	Cep	8974
Ascella	ζ	Sgr	7194
Asellus Australis	δ	Cnc	3461
Asellus Borealis	γ	Cnc	3449
Asellus Primus	θ	Boo	5404
Asellus Secundus	ι	Boo	5350
Asellus Tertius	κ	Boo	5329
Asmidiske	ι	Car	3699
Asmidiske	ξ	Pup	3045
Asuia	ψ	Dra	6636
Atik	ο	Per	1131
Atlas	27	Tau	1178
Atria	α	Tri	544
Auva	δ	Vir	4910
Avior	ε	Car	3307
Azelfafage	π	Cyg	8301
Azha	η	Eri	874
Baham	θ	Peg	8450
Baten Kaitos	ζ	Cet	539
Becrux	ß	Cru	4853
Beid	ο	Eri	1298
Bellatrix	γ	Ori	1790
Benetnash	η	UMa	5191
Betelgeuse	α	Ori	2061
Botein	δ	Ari	951
Brachiu	γ	Sco	1809
Bunda	ξ	Agr	8264
Caja	ω	Her	6117
Calx	μ	Gem	2298
Canopus	α	Car	2326
Capella	α	Aur	1708
Castor	α	Gem	2890
Castula	υ	Cas	253
Castula	υ	Cas	265

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Cebalrai	ß	Oph	6603
Ceginus	γ	Boo	5435
Celaeno	16	Tau	1140
Chara	ß	CVn	4785
Chertan	θ	Leo	4359
Cor Caroli	α	CVn	4915
Cor Tauri	α	Tau	1457
Cursa	ß	Eri	1666
Dabih Major	ß	Cap	7776
Demon Star	ß	per	936
Deneb	α	Cyg	7924
Deneb	ε	Aql	7176
Deneb	ε	Del	7852
Deneb	η	Cet	334
Deneb	ζ	Aql	7235
Deneb Algedi	δ	Cap	8322
Denebkaitos	ι	Cet	74
Denebola	ß	Leo	4534
Dhur	δ	Leo	4357
Diadem	α	Com	4968
Diphda	ß	Cet	188
Dschubba	δ	Sco	5953
Dubhe	α	UMa	4301
Ed Asich	ι	Dra	5744
El Acola	ξ	UMa	4374
Elacrab	ß	Sco	5984
El Kaprah	κ	UMa	3594
El Karidab	δ	Sgr	6859
El Khereb	τ	Peg	8880
Elkhiffa Australis	α	Lib	5530
Elkhiffa Borealis	ß	Lib	5685
El Koprah	χ	UMa	4518
El Nath	ß	Tau	1791
El Phekrab	μ	UMa	4069
Enif	ε	Peg	8308
Erakis	μ	Cep	8316
Etamin	γ	Dra	6705
Fomalhaut	α	Psa	8728
Fornacis	α	For	963
Fumal Samakah	ß	Psc	8773
Furud	ζ	CMa	2282
Gacrux	γ	Cru	4763
Gemma	α	CrB	5793
Genam	ξ	Dra	6688
Gianfar	λ	Dra	4434
Giedi Prima	α	Cap	7747
Giedi Secunda	α	Cap	7754
Gienah	γ	Crv	4662
Gienah	ε	Cyg	7949
Gildun	δ	UMi	6789
Gomeisa	ß	CMi	2845

Nomenclatura de las estrellas brillantes, 2021

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Gorgonea Quarta	ω	Per	947
Gorgonea Tertia	ρ	Per	921
Hadar	ß	Cen	5267
Haedus	ζ	Aur	1612
Hamal	α	Ari	617
Hassaleh	ι	Aur	1577
Hatysa	ι	Ori	1895
Head of Hydrus	α	Hyi	691
Heka	λ	Ori	1879
Hércules	ß	Gem	2990
Heze	ζ	Vir	5107
Hoedus II	ν	Aur	1641
Homam	ζ	Peg	8634
Hyadum I	γ	Tau	1346
Hyadum II	δ	Tau	1373
Isis	γ	CMa	2657
Izar	ε	Boo	5506
Jabbah	ν	Sco	6027
Jed	δ	Oph	6056
Jugum	γ	Lyr	7178
Kaffaljidhma	γ	Cet	804
Kaus Australis	ε	Sgr	6879
Kaus Borealis	λ	Sgr	6913
Keid	o	Eri	1325
Kitalphar	α	Equ	8131
Kocab	ß	UMi	5563
Kornephoros	ß	Her	6148
Kraz	ß	Crv	4786
Ksora	δ	Cas	403
Kuma	ν	Dra	6555
Lesath	υ	Sco	6508
Maasym	λ	Her	6526
Maia	20	Tau	1149
Maiaplacidus	ß	Car	3685
Marfak	θ	Cas	343
Marfak	κ	Her	6008
Marfak	μ	Cas	321
Marfic	λ	Oph	6149
Markab	α	Peg	8781
Matar	η	Peg	8650
Mebsuta	ε	Gem	2473
Megrez	δ	UMa	4660
Mekbuda	ζ	Gem	2650
Menchib	ξ	Per	1228
Menkalinan	ß	Aur	2088
Menkar	α	Cet	911
Menkar	λ	Cet	896
Menkent	θ	Cen	5288
Merak	ß	UMa	4295
Meres	ß	Boo	5602
Meridiana	β	CrA	7259

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Merope	23	Tau	1156
Mesartim	γ	Ari	545
Minelauva	ß	Vir	4540
Minkar	ε	Crv	4630
Mintaka	δ	Ori	1852
Mira	o	Cet	681
Mirach	ß	And	337
Miram	η	Per	834
Mirphak	α	Per	2294
Mirza	ß	CMa	2286
Misam	κ	Per	941
Mizar	ζ	UMa	5055
Mufrid	η	Boo	5235
Muscida	o	UMa	3323
Muscida	π	UMa	3403
Naos	ζ	Pup	3165
Nashira	γ	Cap	8278
Nicolaus	α	Del	7906
Nihal	ß	Lep	1829
Nodus I	ζ	Dra	6396
Nunki	σ	Sgr	7121
Nusakan	ß	CrB	5747
Oculus Boreus	ε	Tau	1409
Peacok	α	Pav	7790
Phact	α	Col	1956
Phad	γ	UMa	4554
Pherkad	γ	UMi	5735
Pherkad Minor	λ	UMi	5714
Pleione	28	Tau	1180
Polaris	α	UMi	424
Pullux	ß	Gem	2990
Praecipua	46	LMi	4247
Praepes	η	Gem	2216
Praesaepe	ε	Cnc	3429
Prima Giedi	α	Cap	7747
Procyon	α	CMi	2943
Propus	ι	Gem	2821
Rana	δ	Eri	1136
Rasalgethi	α	Her	6406
Rasalhague	α	Oph	6556
Ras Elased Austral	ε	Leo	3873
Regulus	α	Leo	3982
Rigel	ß	Ori	1713
Rigil Kent	α	Cen	5459
Rijilal Awwa	μ	Vir	5487
Rotanev	ß	Del	7882
Ruchbah	ε	Cas	542
Saad el Sund	ß	Aqr	8232
Sabik	η	Oph	6378
Sadalachbia	γ	Aqr	8518
Sadalbari	μ	Peg	8684

Nomenclatura de las estrellas brillantes, 2021

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Sadalmelik	α	Aqr	8414
Sadir	γ	Cyg	7796
Saidak	80	UMa	5062
Saiph	κ	Ori	2004
Saiph	η	Ori	1788
Sargas	θ	Sco	6553
Sarin	δ	Her	6410
Sartan	α	Cnc	3572
Sceptrum	53	Eri	1481
Scheat	β	Peg	8775
Scheat	δ	Aqr	8709
Segin	ε	Cas	542
Shaula	λ	Sco	6527
Schedir	α	Cas	168
Sheliak	β	Lyr	7106
Sirius	α	CMa	2491
Situla	κ	Aqr	8610
Spica	α	Vir	5056
Subra	ο	Leo	3852
Superba	λ	CVn	4846
Syrma	ι	Vir	5338
Tabit	π	Ori	1543
Tabit	υ	Ori	1855

Nombres de estrellas			
Propios	Clasificación Bayer		NBSC
Talitha	ι	UMa	3569
Tarazed	γ	Aql	7525
Tayeta	19	Tau	1845
Tegmen	ζ	Cnc	3208
Terebellum	β	Sgr	7604
Theemim	υ	Eri	1464
Thuban	α	Dra	5291
Torcularis Septentr.	ο	Psc	510
Tyl	ε	Dra	7582
Unukalhai	α	Ser	5854
Vega	α	Lyr	7001
Vindemiatrix	ε	Vir	4932
Wasat	δ	Gem	2777
Wazn	ß	Col	2040
Yed Posterior	ε	Oph	5985
Zaniah	η	Vir	4689
Zaurak	γ	Eri	1231
Zibal	ζ	Eri	984
Zuben Elakrab	γ	Lib	5787
Zuben Elakribi	δ	Lib	5586
Zuben Hakrabi	ζ	Lib	5848
Zuben Hakrabi	υ	Lib	5794

Nombre de estrellas (Catálogo Hiparco), 2021

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	ν 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} Cet	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	χ 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	ν 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	ν 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), 2021

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	ν 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	ν 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	ν 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	ν 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	ν 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	υ 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	σ Hyi	11220	694	64 And	12640	793	34 Ari	13244	872	ν Hyi

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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	δ Eri
13701	874	3 Eri	14677	944	55 Ari	16083	1038	2 Tau	17378	1136	δ 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	ν 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	l 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	ν Per	18532	1220	45 Per

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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	ν 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	ν 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	ν 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	ν 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	1 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

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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	ν 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

Nombre de estrellas (Catálogo Hiparco), 2021

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	ν^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	ν^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	ν 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	o[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	o[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 πc	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 πc	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
30769	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	o[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	o[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	9 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 πc	32537	2518	x Pup	33927	2630	42 Gem	34937	2741	GG CMa
31137	2412	μ πc	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	l 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	l 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	υ 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	γ^2 Vel
36366	2852	62 Gem	37629	2973	σ Gem	38848	3095	1 Cnc	39953	3207	γ^2 Vel
36366	2852	ρ Gem	37415	2974	R Pup	38792	3099	PX Pup	39953	3207	γ Vel

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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	σ^1 UMa	45556	3699	ι 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	ν Cha
44511	3614	c Vel	45860	3705	α Lyn	46950	3819	L Vel	48356	3903	υ^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	σ^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	ι 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	ν 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	υ^2 Hya
45170	3650	π^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	ι 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	ν 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	ν UMa
50933	4072	ET UMa	52154	4180	x Vel	53740	4287	α 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	α 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

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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 μs	61071	4766	UU Com
56473	4456	90 Leo	58117	4561	65 UMa	59929	4671	ε μs	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 μs
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	υ 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 μs	61415	4791	24 Com
56802	4488	24 Crt	58867	4603	θ^2 Cru	60329	4704	ζ^1 μs	61418	4792	24 Com
56899	4491	VX Crt	58867	4603	θ^2 Cru	60351	4707	12 Com	61384	4795	6 Dra
56862	4492	GT μs	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	α μs
56975	4495	92 Leo	58948	4608	o Vir	60449	4712	x^1 Cen	61585	4798	α μs
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	α Crv	60610	4724	x^2 Cen	61703	4806	KY μs
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	ν 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	ν Vir	59316	4630	2 Crv	60718	4731	α^2 Cru	61796	4814	FH μs
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 μs	59394	4635	3 Crv	60742	4737	γ Com	61789	4817	l 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 μs
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 μs	59551	4645	S μs	60795	4745	73 UMa	61966	4823	CH Cru
57581	4530	μ μs	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

Nombre de estrellas (Catálogo Hiparco), 2021

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	τ 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	ν Cen
62683	4874	p Cen	64122	4957	g Vir	65755	5066	EZ μs	67464	5190	ν 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	l 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 Boo	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	ν 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	υ 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	ι^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	ι^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	ε 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	ε Lup	76333	5787	38 Lib	77070	5854	α 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	υ Lup	76267	5793	α CrB	77227	5863	PT Ser	78476	5939	S TrA
75342	5721	8 Ser	76267	5793	α CrB	77233	5867	β Ser	78132	5940	φ Ser
75379	5723	ε Lib	76267	5793	5 CrB	77233	5867	28 Ser	78207	5941	48 Lib
75379	5723	31 Lib	76470	5794	υ 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), 2021

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	ν^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	ν^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	ο 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	ι^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	1 Her
78933	5993	ω^1 Sco	79882	6075	ε Oph	80945	6142	V105 Sco	82216	6234	V776 Her
79153	5994	ι^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	ο 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

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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^2 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	ν^1 Dra	87706	6672	63 Oph
83313	6332	d Her	84880	6446	ν Ser	85829	6555	ν^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	ν 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	ν Her
83895	6396	22 Dra	85112	6485	75 Her	86796	6585	μ Ara	87998	6707	ν 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	ν^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	ν^2 Lyr
88404	6733	τ Oph	89931	6859	δ Sgr	90970	6971	V532 Lyr	92405	7102	ν 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	α Lyr	92747	7114	33 Sgr
88714	6743	θ Ara	89826	6872	1 Lyr	91389	7002	X Oph	92761	7116	ν^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	ν^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	ν Pav	91919	7051	ε^1 Lyr	92946	7141	θ^1 Ser
88817	6782	100 Her	90797	6916	ν 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	χ^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	χ^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	95447	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	ν 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	α 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	o Sgr	94713	7314	θ Lyr	95673	7403	V558 Lyr	96693	7483	14 Cyg
93340	7218	49 Dra	94834	7315	ω^1 Aql	95771	7405	α 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	γ CrA	94779	7328	κ Cyg	95937	7414	36 Aql	96957	7497	χ 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	ν 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	υ Aql
94114	7254	α CrA	95176	7342	46 Sgr	96327	7430	37 Aql	97142	7520	V209 Cyg
93808	7258	V550 Lyr	95176	7342	υ Sgr	96406	7431	h^1 Sgr	97151	7523	V973 Cyg
94160	7259	β CrA	95176	7342	υ 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	α 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	ο 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	χ Cyg	98438	7645	VZ Sge	99639	7730	30 Cyg	100859	7828	V212 Cyg
97629	7564	χ Cyg	98425	7647	V174 Cyg	99738	7731	21 Vul	101120	7829	ο 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	o^1 Cyg	101123	7830	ο 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	ε 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	o^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	υ 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	l 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	λ 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	υ 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	ν 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	α 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	ν Cyg	104887	8130	τ 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	υ 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	υ Cyg	107089	8254	ν 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

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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	o 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	o 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	o 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), 2021

Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
111310	8582	ν 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), 2021

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
116928	8984	λ Psc									

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
118243	0	0	6.6	+55	52	28.5	0.027443	+55.874574	4.88	-0.071	-0.05	B1V...
118268	0	0	25.0	+6	58	56.4	0.104173	+6.982343	4.03	0.419	0.49	F4IV
118322	0	1	1.1	-65	27	27.3	0.254659	-65.457587	4.49	-0.075	-0.04	B9IV
122	0	2	40.3	-76	56	49.5	0.667900	-76.947086	4.78	1.254	1.26	K2III
154	0	3	3.8	-5	53	40.7	0.765651	-5.894645	4.37	1.631	2.35	M3III
301	0	4	50.4	-17	12	59.0	1.209871	-17.216375	4.55	-0.047	-0.03	B9IVn
355	0	5	36.1	-10	23	23.8	1.400404	-10.389946	4.99	1.619	1.64	K3Ibvar
443	0	6	26.2	-5	35	14.9	1.609004	-5.587467	4.61	1.029	1.04	K1III
677	0	9	30.2	+29	12	32.6	2.375858	+29.209066	2.07	-0.038	-0.10	B9p
746	0	10	20.3	+59	16	5.9	2.584471	+59.268294	2.28	0.380	0.40	F2III-IV
765	0	10	29.7	-45	37	44.1	2.623807	-45.628914	3.88	1.013	1.00	K0III
910	0	12	21.4	-15	21	0.1	3.089298	-15.350032	4.89	0.487	0.59	F5V
1067	0	14	20.7	+15	18	10.8	3.586396	+15.303007	2.83	-0.190	-0.22	B2IV
1168	0	15	43.1	+20	19	34.1	3.929606	+20.326127	4.79	1.572	1.93	M2III
1170	0	15	43.8	-18	48	50.0	3.932626	-18.813883	4.44	1.640	1.96	M1III
1366	0	18	13.3	+38	48	3.1	4.555363	+38.800852	4.61	0.059	0.07	A2V
1473	0	19	27.4	+36	54	15.3	4.864240	+36.904246	4.51	0.054	0.06	A2V
1562	0	20	31.4	-8	42	17.7	5.130722	-8.704921	3.56	1.214	1.13	K2III
1599	0	21	10.5	-64	44	55.7	5.293719	-64.748800	4.23	0.576	0.65	F9V
2021	0	26	50.7	-77	8	0.5	6.711372	-77.133460	2.82	0.618	0.68	G2IV
2072	0	27	15.3	-43	33	38.8	6.813859	-43.560775	3.93	0.175	0.20	A7V
2081	0	27	20.6	-42	11	21.1	6.835626	-42.189187	2.40	1.083	1.11	K0III...
2210	0	28	59.5	-32	53	19.3	7.247762	-32.888707	4.86	1.634	2.32	M2/M3III
2472	0	32	26.8	-48	41	5.6	8.111817	-48.684885	4.76	0.018	0.01	A0V
2484	0	32	31.2	-62	50	24.1	8.130020	-62.840026	4.36	-0.064	-0.02	B9V
2487	0	32	32.0	-62	50	50.4	8.133406	-62.847321	4.53	0.147	0.14	A2V
2505	0	32	58.2	+54	38	26.5	8.242701	+54.640686	4.74	-0.098	-0.08	B8Vn
2599	0	34	14.3	+63	3	0.6	8.559773	+63.050161	4.17	0.130	0.17	B1Ia
2912	0	38	2.1	+33	50	14.7	9.508776	+33.837404	4.34	-0.123	-0.08	B5V
2920	0	38	10.9	+54	0	53.7	9.545309	+54.014927	3.69	-0.196	-0.23	B2IV
3031	0	39	41.8	+29	25	41.5	9.924284	+29.428205	4.34	0.871	0.92	G5III...
3092	0	40	28.9	+30	58	42.3	10.120621	+30.978405	3.27	1.268	1.23	K3III...
3179	0	41	44.4	+56	39	17.6	10.435195	+56.654897	2.24	1.170	1.13	K0II-IIIvar
3245	0	42	20.2	-45	58	2.3	10.584142	-45.967313	4.59	0.953	0.95	G8III
3300	0	43	16.5	+50	37	48.3	10.818724	+50.630095	4.80	-0.105	-0.10	B2.5V
3405	0	44	18.8	-57	20	43.7	11.078292	-57.345476	4.36	0.024	0.02	A0IV
3414	0	44	40.0	+47	8	30.5	11.166781	+47.141800	4.95	0.170	0.19	A5V
3419	0	44	40.0	-17	52	8.2	11.166833	-17.868950	2.04	1.019	1.00	K0III
3455	0	45	16.5	-10	29	34.1	11.318576	-10.492812	4.77	0.998	0.98	K0IIIvar
3504	0	45	56.0	+48	24	6.0	11.483351	+48.401662	4.48	-0.069	0.00	B5III
3693	0	48	29.0	+24	23	1.6	12.120705	+24.383770	4.08	1.100	1.06	K1II
3786	0	49	48.0	+7	42	6.2	12.449951	+7.701708	4.44	1.500	1.58	K5III
3801	0	50	3.8	+51	5	6.0	12.515811	+51.085011	4.90	-0.091	-0.07	B9III
3821	0	50	25.1	+57	55	43.6	12.604626	+57.928785	3.46	0.587	0.66	G0V SB
3881	0	51	0.5	+41	11	44.2	12.751952	+41.195598	4.53	-0.136	-0.14	B5V SB
4147	0	54	6.5	-1	1	40.6	13.527008	-1.027933	4.78	1.550	1.66	M0III
4151	0	54	22.2	+61	14	28.9	13.592621	+61.241363	4.80	0.540	0.61	F8V
4292	0	56	17.7	+59	5	19.1	14.073671	+59.088625	4.83	1.216	1.19	K2III
4422	0	57	57.7	+59	17	48.3	14.490414	+59.296744	4.62	0.957	1.01	G8III-IV
4427	0	58	1.4	+60	49	57.6	14.505947	+60.832664	2.15	-0.046	-0.02	B0IV:evar
4436	0	57	57.3	+38	36	55.8	14.488582	+38.615507	3.86	0.130	0.14	A5V
4463	0	58	21.5	+23	31	59.8	14.589791	+23.533271	4.40	0.940	0.94	G8III-IV
4577	0	59	38.4	-29	14	30.1	14.909955	-29.241697	4.30	-0.154	-0.12	B7IIIp
4906	1	4	3.7	+8	0	19.4	16.015400	+8.005397	4.27	0.952	0.98	K0III
5165	1	7	2.3	-46	36	12.8	16.759549	-46.603566	3.32	0.885	0.90	G8IIIvar
5348	1	9	17.0	-55	7	52.6	17.320903	-55.131269	3.94	-0.120	-0.08	B6V +B0V
5364	1	9	40.3	-10	4	7.7	17.417829	-10.068799	3.46	1.161	1.11	K2III
5372	1	12	7.6	+86	22	15.9	18.031748	+86.371091	4.24	1.213	1.16	K2II-III
5434	1	10	45.6	+47	21	21.0	17.690061	+47.355832	4.26	0.012	-0.02	B7III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
5447	1	10	56.6	+35	44	2.3	17.735671	+35.733986	2.07	1.576	1.74	M0IIIvar
5542	1	12	25.6	+55	15	49.1	18.106484	+55.263643	4.34	0.170	0.19	A7Vvar
5571	1	12	36.8	+21	8	54.2	18.153385	+21.148401	4.66	1.024	0.99	K0III
5586	1	12	51.0	+30	12	11.5	18.212642	+30.203195	4.51	1.092	1.05	K0III-IV...
5742	1	14	55.3	+24	41	49.3	18.730330	+24.697024	4.67	1.047	1.02	K0III...
5862	1	16	9.1	-45	25	2.7	19.037853	-45.417415	4.97	0.571	0.62	F8V
5896	1	16	29.7	-68	45	43.4	19.123689	-68.762053	4.25	0.480	0.55	F6IV
6193	1	20	39.2	+27	22	35.2	20.163415	+27.376438	4.74	0.032	0.10	A3V
6242	1	21	27.1	+58	20	38.1	20.362758	+58.343918	4.95	0.683	0.93	F0Ia
6411	1	23	37.0	+45	38	26.7	20.904052	+45.640745	4.87	1.077	1.04	K0III-IV
6537	1	25	5.9	-8	4	22.2	21.274663	-8.072842	3.60	1.065	1.05	K0III
6670	1	26	40.7	-14	29	15.3	21.669440	-14.487578	4.90	1.231	1.29	K2III
6686	1	27	14.5	+60	20	46.5	21.810222	+60.346240	2.66	0.160	0.19	A5Vv SB
6692	1	27	28.9	+68	14	29.0	21.870483	+68.241381	4.72	1.047	1.01	K0III
6813	1	28	57.2	+45	31	1.0	22.238206	+45.516949	4.83	0.421	0.49	F5IV
6867	1	29	17.8	-43	12	31.1	22.324079	-43.208648	3.41	1.542	1.73	K5II-III
7007	1	31	18.8	+6	15	14.3	22.828483	+6.253964	4.84	1.372	1.42	K4III
7083	1	32	8.6	-48	57	41.7	23.035943	-48.961580	3.93	0.972	1.00	K0III-IV
7097	1	32	38.2	+15	27	21.4	23.159353	+15.455953	3.62	0.974	0.94	G8III
7294	1	35	21.3	+59	20	29.5	23.838613	+59.341520	4.68	0.991	1.01	K0III
7513	1	38	4.1	+41	30	44.1	24.517043	+41.512259	4.10	0.536	0.58	F8V
7588	1	38	30.7	-57	7	41.2	24.627868	-57.128116	0.45	-0.158	-0.17	B3Vp
7607	1	39	19.4	+48	44	10.7	24.830937	+48.736314	3.59	1.275	1.23	K3III
7818	1	41	51.5	+40	41	6.4	25.464528	+40.685104	4.96	-0.068	-0.06	B8III
7884	1	42	33.2	+5	35	44.4	25.638194	+5.595653	4.45	1.347	1.37	K3III
7918	1	43	6.2	+42	43	12.8	25.775824	+42.720232	4.96	0.618	0.67	G2V
7999	1	43	48.8	-3	34	57.6	25.953347	-3.582671	4.98	1.378	1.26	K3II-III
8068	1	45	1.2	+50	47	46.1	26.255205	+50.796138	4.01	-0.098	-0.08	B2Vpe
8102	1	45	4.1	-15	49	30.2	26.267006	-15.825060	3.49	0.727	0.82	G8V
8198	1	46	31.9	+9	15	54.3	26.632972	+9.265073	4.26	0.942	0.93	K0III
8497	1	50	38.5	-10	34	51.0	27.660428	-10.580835	4.66	0.333	0.38	F3III
8645	1	52	31.3	-10	13	46.5	28.130613	-10.229591	3.74	1.136	1.07	K2III
8796	1	54	18.8	+29	40	57.8	28.578367	+29.682714	3.42	0.488	0.55	F6IV
8832	1	54	42.9	+19	23	54.3	28.678556	+19.398415	3.88	-0.047	-0.03	A1p Si
8833	1	54	40.3	+3	17	34.2	28.667770	+3.292820	4.61	0.928	0.93	K0III SB
8837	1	54	30.3	-46	11	53.0	28.626389	-46.198048	4.39	1.597	2.49	M4III SB
8886	1	55	58.0	+63	46	29.5	28.991468	+63.774869	3.35	-0.150	-0.12	B2pvar
8903	1	55	49.9	+20	54	44.1	28.958052	+20.912263	2.64	0.165	0.18	A5V...
8928	1	55	29.0	-67	32	31.2	28.870625	-67.542007	4.68	0.931	0.95	G5III
9007	1	56	47.5	-51	30	9.6	29.197993	-51.502666	3.69	0.844	0.90	G5IV
9009	1	57	42.2	+68	47	22.7	29.425870	+68.789639	4.97	-0.084	-0.06	B8III
9061	1	57	40.6	-22	25	21.3	29.419095	-22.422589	4.92	1.434	1.45	K3III
9095	1	58	1.1	-47	16	51.5	29.504575	-47.280962	4.82	0.864	0.89	G8III
9153	1	59	7.9	+23	42	0.0	29.782919	+23.700000	4.79	0.290	0.33	F0V
9236	1	59	26.8	-61	27	57.0	29.861573	-61.465830	2.86	0.290	0.34	F0V
9347	2	1	1.1	-20	58	28.1	30.254460	-20.974467	3.99	1.554	1.79	K5/M0III
9480	2	3	45.8	+71	0	35.4	30.940960	+71.009845	4.49	0.164	0.20	A3IV
9487	2	3	9.7	+2	52	0.2	30.790381	+2.866712	3.82	0.024	0.05	A2
9505	2	3	44.9	+54	35	25.3	30.937152	+54.590364	4.99	-0.071	-0.02	B8III
9598	2	5	19.0	+72	31	26.1	31.329057	+72.523907	3.95	-0.002	0.03	A2V
9640	2	5	13.7	+42	25	54.7	31.307056	+42.431857	2.10	1.370	1.37	B8V
9677	2	5	27.2	-29	11	40.0	31.363423	-29.194450	4.68	-0.156	-0.12	B9.5p (Si)
9884	2	8	23.4	+23	33	47.2	32.097562	+23.563123	2.01	1.151	1.13	K2III
9977	2	9	47.6	+37	57	36.0	32.448272	+37.959995	4.78	0.120	0.16	A5IV-V
10053	2	10	39.1	+26	2	26.2	32.662864	+26.040621	4.98	0.339	0.40	F2III
10064	2	10	49.8	+35	5	16.6	32.707587	+35.087948	3.00	0.140	0.17	A5III
10280	2	13	37.5	+30	24	10.1	33.406259	+30.402794	4.94	0.770	0.81	F5V comp SB
10324	2	14	8.5	+8	56	47.6	33.535573	+8.946552	4.36	0.878	0.90	G8II:
10340	2	14	34.8	+44	19	53.0	33.645162	+44.331387	4.84	1.476	1.49	K4III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
10602	2	17	16.6	-51	24	48.0	34.319218	-51.413340	3.56	-0.120	-0.11	B8IV-V
10644	2	18	22.4	+34	19	17.4	34.593132	+34.321501	4.84	0.607	0.76	G0V
10670	2	18	36.0	+33	56	43.9	34.649897	+33.945527	4.03	0.019	-0.02	A1Vnn
11001	2	22	8.3	-68	33	43.0	35.534524	-68.561957	4.08	0.034	0.04	A3V
11313	2	27	4.2	+50	22	28.7	36.767583	+50.374641	4.73	1.532	1.58	K4III
11345	2	26	59.4	-12	11	40.2	36.747399	-12.194491	4.88	-0.027	-0.01	A0V
11407	2	27	46.4	-47	36	29.2	36.943205	-47.608101	4.24	-0.136	-0.11	B5IV
11484	2	29	18.3	+8	33	19.1	37.326262	+8.555315	4.30	-0.053	-0.06	B9III
11569	2	30	52.1	+67	29	51.5	37.716875	+67.497645	4.46	0.153	0.17	A5p Sr
11767	2	59	15.6	+89	21	14.3	44.815078	+89.353965	1.97	0.636	0.70	F7:Ib-IIv SB
11783	2	33	6.4	-15	9	5.1	38.276648	-15.151420	4.74	0.454	0.55	F5V
11918	2	34	47.2	-28	8	19.7	38.696626	-28.138796	4.96	-0.050	-0.04	B9V
12093	2	37	0.3	+5	41	9.5	39.251355	+5.685974	4.87	0.880	0.89	G8III
12387	2	40	35.2	+0	25	12.6	40.146676	+0.420160	4.08	-0.212	-0.22	B2IV
12390	2	40	36.3	-11	46	54.8	40.151320	-11.781887	4.83	0.447	0.53	F5V
12394	2	39	55.6	-68	10	30.7	39.981853	-68.175187	4.12	-0.061	-0.07	B9III
12413	2	40	37.1	-42	48	0.5	40.154710	-42.800153	4.74	0.061	0.09	A2V
12486	2	41	30.9	-39	45	51.2	40.378793	-39.764227	4.11	1.006	1.05	K0III
12623	2	43	36.8	+40	17	0.8	40.903541	+40.283565	4.91	0.582	0.62	F9V
12706	2	44	25.0	+3	19	31.2	41.104239	+3.325340	3.47	0.093	0.10	A3V
12719	2	44	43.1	+27	47	50.6	41.179760	+27.797379	4.65	-0.122	-0.12	B3V
12770	2	45	8.8	-13	46	7.1	41.286648	-13.768644	4.24	-0.122	-0.11	B7IV
12777	2	45	40.8	+49	19	4.5	41.419990	+49.317918	4.10	0.514	0.59	F7V
12828	2	46	6.5	+10	12	13.5	41.526895	+10.203762	4.27	0.311	0.37	F1III-IV
12843	2	46	6.4	-18	28	57.3	41.526719	-18.482585	4.47	0.481	0.54	F5/F6V
12876	2	45	52.9	-67	31	35.9	41.470575	-67.526631	4.83	0.058	0.08	A2IV/V
13061	2	49	11.7	+29	20	6.5	42.298723	+29.335126	4.52	1.112	1.04	K1III
13147	2	49	59.4	-32	18	59.7	42.497497	-32.316576	4.45	0.981	1.00	G8III
13209	2	51	15.3	+27	20	52.2	42.813695	+27.347841	3.61	-0.100	-0.08	B8Vn
13244	2	50	21.7	-74	58	44.5	42.590417	-74.979019	4.76	1.337	1.27	K3III
13254	2	51	57.0	+38	24	20.9	42.987354	+38.405792	4.22	0.343	0.41	F2III
13268	2	52	16.9	+55	58	59.2	43.070259	+55.983122	3.77	1.690	1.64	K3Ib comp SB
13288	2	52	0.9	-20	54	59.1	43.003669	-20.916423	4.76	0.906	0.91	K0III
13328	2	52	50.7	+35	8	48.6	43.211410	+35.146834	4.56	1.554	1.67	K5III
13531	2	55	47.7	+52	50	56.0	43.948902	+52.848891	3.93	0.758	0.80	G4III...
13701	2	57	28.7	-8	48	49.3	44.369759	-8.813688	3.89	1.088	1.08	K1III-IV
13847	2	59	4.6	-40	13	9.9	44.769085	-40.219409	2.88	0.128	0.17	A4III+...
13879	3	0	8.6	+39	44	50.3	45.036025	+39.747316	4.68	0.065	0.11	A2Vn
13884	2	59	12.5	-63	59	10.5	44.801925	-63.986263	4.98	0.126	0.14	A5III
13905	3	0	24.0	+35	16	4.4	45.100105	+35.267884	4.94	1.235	1.19	K2III
13914	3	0	26.8	+21	25	30.3	45.111488	+21.425076	4.63	0.048	0.05	A2Vs
13954	3	0	52.2	+8	59	30.5	45.217591	+8.991792	4.71	-0.109	-0.09	B6III
14135	3	3	24.3	+4	10	22.2	45.851438	+4.172841	2.54	1.630	1.97	M2III
14146	3	3	20.4	-23	32	28.5	45.835023	-23.541238	4.08	0.163	0.18	A4V
14328	3	6	22.1	+53	35	20.2	46.591888	+53.588952	2.91	0.716	0.77	G8III+...
14354	3	6	33.7	+38	55	19.5	46.640501	+38.922079	3.32	1.528	2.76	M3IIIvar
14382	3	7	10.3	+56	47	18.1	46.792929	+56.788373	4.77	1.018	0.99	K0II-III
14576	3	9	34.6	+41	2	12.9	47.394014	+41.036923	2.09	-0.003	0.02	B8V
14632	3	10	37.8	+49	41	37.1	47.657366	+49.693643	4.05	0.595	0.65	G0V
14668	3	10	57.3	+44	56	14.9	47.738907	+44.937478	3.79	0.980	0.94	K0III
14817	3	12	41.1	+39	41	30.1	48.171368	+39.691693	4.61	1.115	1.09	K1III
14838	3	12	51.8	+19	48	23.8	48.215742	+19.806610	4.35	1.033	0.96	K2IIIvar
14862	3	14	19.4	+74	28	22.1	48.580870	+74.472794	4.85	0.035	0.05	A2Vnn
14879	3	12	59.4	-28	54	15.0	48.247489	-28.904178	3.80	0.543	0.63	F8V
15110	3	16	8.5	+21	7	21.7	49.035408	+21.122693	4.87	-0.007	0.02	A1V
15197	3	16	52.8	-8	44	27.9	49.219879	-8.741092	4.80	0.232	0.28	A5m
15382	3	19	19.2	-22	26	1.2	49.829852	-22.433655	4.86	0.904	0.91	K0III
15416	3	20	4.9	+34	17	59.2	50.020360	+34.299764	4.85	1.491	1.41	K2II
15457	3	20	29.5	+3	26	51.7	50.122867	+3.447697	4.84	0.681	0.73	G5Vvar

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
15474	3	20	28.4	-21	40	50.7	50.118415	-21.680749	3.70	1.614	2.42	M3/M4III
15510	3	20	47.0	-42	59	19.6	50.195872	-42.988778	4.26	0.711	0.79	G8V
15520	3	21	54.3	+65	43	43.5	50.476221	+65.728755	4.74	-0.108	-0.12	B2.5Vne
15549	3	21	38.7	+29	7	29.6	50.411402	+29.124890	4.47	1.555	1.61	K2II-III
15648	3	22	53.5	+43	24	20.5	50.722893	+43.405704	4.96	0.051	0.06	A3V
15863	3	25	52.1	+49	56	9.2	51.467233	+49.935895	1.79	0.481	0.63	F5Ib
15900	3	25	58.4	+9	6	11.3	51.493218	+9.103148	3.61	0.887	0.90	G8III
16083	3	28	20.2	+9	48	22.5	52.084280	+9.806237	3.73	-0.082	-0.07	B9Vn
16147	3	29	35.4	+49	8	9.8	52.397594	+49.136050	4.99	-0.091	-0.07	B5V
16228	3	30	49.7	+60	0	47.5	52.706918	+60.013194	4.21	0.419	0.58	B9Ia
16244	3	30	54.9	+49	34	53.7	52.728909	+49.581572	4.67	-0.096	-0.07	B3V
16245	3	29	45.5	-62	51	44.4	52.439567	-62.862323	4.71	0.410	0.49	F5IV-V
16281	3	31	38.7	+58	57	4.6	52.911410	+58.951273	4.55	0.489	0.79	A0Ia SB:
16335	3	32	6.0	+48	4	3.4	53.025167	+48.067619	4.36	1.367	1.42	K3III
16341	3	31	41.2	-5	0	9.8	52.921517	-5.002728	4.74	-0.092	-0.07	B9Vs
16369	3	32	3.8	+13	0	32.1	53.015772	+13.008912	4.14	1.112	1.01	K0II-III...
16537	3	33	56.7	-9	23	12.2	53.486410	-9.386732	3.72	0.881	0.94	K2V
16611	3	34	44.3	-21	33	43.1	53.684584	-21.561969	4.26	-0.106	-0.09	B9V
16826	3	38	1.6	+48	15	44.2	54.506858	+48.262282	4.32	-0.058	0.07	B5Ve
16852	3	37	58.3	+0	28	6.9	54.493078	+0.468591	4.29	0.575	0.66	F9V
16870	3	37	52.0	-40	12	17.7	54.466806	-40.204913	4.57	1.023	1.07	K0III
17304	3	43	6.2	-31	52	14.8	55.776040	-31.870786	4.99	-0.159	-0.15	B5III
17313	3	43	44.8	+34	1	56.4	55.936561	+34.032322	4.97	-0.048	-0.03	B0.5V
17351	3	43	37.9	-37	14	48.1	55.907976	-37.246682	4.59	1.191	1.12	K2IIICN...
17358	3	44	27.9	+47	51	15.7	56.116307	+47.854359	3.01	-0.125	-0.07	B5III SB
17378	3	44	16.8	-9	41	31.4	56.069991	-9.692042	3.52	0.915	0.94	K0IV
17440	3	44	28.5	-64	44	22.8	56.118765	-64.739672	3.84	1.133	1.11	K0IV SB
17448	3	45	40.4	+32	21	16.8	56.418166	+32.354677	3.84	0.022	0.12	B1III
17499	3	46	9.4	+24	10	45.6	56.539154	+24.179340	3.72	-0.105	-0.09	B6III
17529	3	46	39.7	+42	38	40.7	56.665572	+42.644643	3.77	0.425	0.52	F5IIvar
17531	3	46	29.5	+24	31	59.3	56.623081	+24.533152	4.30	-0.110	-0.08	B6V
17573	3	47	6.6	+24	26	0.0	56.777597	+24.433334	3.87	-0.063	-0.02	B8III
17587	3	47	56.4	+63	24	38.2	56.984802	+63.410619	4.78	0.747	0.79	A3V...
17593	3	47	9.6	-12	2	7.7	56.789955	-12.035471	4.43	1.604	1.89	M1III
17608	3	47	36.4	+24	0	49.5	56.901645	+24.013740	4.14	-0.051	0.02	B6IV
17651	3	47	46.4	-23	11	14.4	56.943477	-23.187325	4.22	0.434	0.51	F3/F5V
17678	3	46	55.8	-74	10	21.8	56.732380	-74.172711	3.26	1.590	1.94	M2III
17702	3	48	46.0	+24	10	12.0	57.191704	+24.170009	2.85	-0.086	-0.01	B7III
17797	3	49	23.5	-37	33	19.7	57.348011	-37.555475	4.30	-0.038	-0.02	A+...
17847	3	50	26.7	+24	7	3.1	57.611238	+24.117542	3.62	-0.070	-0.03	B8III
17874	3	50	15.6	-36	8	10.4	57.564842	-36.136217	4.17	0.927	0.92	G8III
17884	3	51	30.8	+65	35	23.9	57.878136	+65.589964	4.39	1.870	2.58	M1III
17959	3	52	39.8	+71	23	44.4	58.165937	+71.395654	4.59	0.064	0.13	A2IVn
18216	3	54	37.6	-24	32	59.3	58.656864	-24.549818	4.64	-0.136	-0.13	B5V
18246	3	55	29.3	+31	56	44.7	58.872161	+31.945750	2.84	0.271	0.18	B1Ib
18255	3	55	22.4	-2	53	33.2	58.843292	-2.892563	4.46	0.672	0.73	G8III
18488	3	58	59.3	+61	10	10.2	59.747059	+61.169511	4.99	1.435	1.53	K3I-II
18505	3	59	20.4	+63	7	58.3	59.835032	+63.132866	4.95	-0.074	-0.01	B9.5V
18532	3	59	18.2	+40	4	14.0	59.825771	+40.070553	2.90	-0.199	-0.19	B0.5V
18543	3	59	2.0	-13	26	55.2	59.758409	-13.448666	2.97	1.588	1.78	M1IIIb Ca-1
18597	3	59	5.4	-61	20	23.8	59.772671	-61.339944	4.56	1.590	1.85	M2III
18614	4	0	21.9	+35	51	3.7	60.091449	+35.851034	3.98	0.016	0.16	O7.5Iab:
18673	4	0	50.5	-23	57	23.2	60.210530	-23.956453	4.62	-0.121	-0.07	Ap Si
18724	4	1	52.4	+12	32	58.3	60.468541	+12.549535	3.41	-0.099	-0.08	B3V +A
18744	4	1	12.8	-62	5	59.0	60.303146	-62.099721	4.48	1.500	2.42	M4III
18772	4	1	39.3	-61	1	8.8	60.413824	-61.019105	4.97	1.386	1.41	K4III
18907	4	4	18.1	+6	2	50.8	61.075580	+6.047438	3.91	0.032	0.03	A1V
19018	4	6	15.5	+59	12	46.5	61.564639	+59.212904	5.00	0.495	0.69	F0II
19038	4	5	58.2	+22	8	20.4	61.492489	+22.138993	4.36	1.064	1.02	K0III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
19167	4	8	11.7	+50	24	27.1	62.048786	+50.407514	4.25	-0.011	0.08	A0IVn
19343	4	10	13.8	+47	46	4.2	62.557668	+47.767834	3.96	-0.025	0.08	B3Ve
19515	4	11	34.1	-41	56	18.5	62.892059	-41.938472	4.93	0.334	0.41	A9V
19587	4	12	55.0	-6	46	58.7	63.229178	-6.782959	4.04	0.327	0.38	F2II-III
19740	4	15	6.7	+9	19	0.5	63.777859	+9.316798	4.84	0.799	0.86	G5III
19747	4	14	42.9	-42	14	32.4	63.678817	-42.242326	3.85	1.085	1.09	K1III
19777	4	15	25.1	-10	12	15.3	63.854725	-10.204255	4.87	1.156	1.12	K3III
19780	4	14	42.4	-62	25	13.6	63.676612	-62.420435	3.33	0.915	0.91	G7III
19811	4	16	21.5	+40	32	10.3	64.089494	+40.536183	4.67	1.007	1.07	G5II comp
19812	4	16	29.1	+48	27	42.6	64.121130	+48.461836	4.12	0.935	0.93	G0Ib...
19849	4	16	15.8	-7	37	12.9	64.065822	-7.620237	4.43	0.820	0.89	K1V
19860	4	16	42.2	+8	56	40.7	64.176012	+8.944635	4.27	-0.054	-0.02	B3IV
19893	4	16	35.5	-51	25	59.7	64.147865	-51.433258	4.26	0.312	0.37	F4III
19921	4	16	51.5	-59	15	3.6	64.214588	-59.250989	4.44	1.078	1.05	K2IV
19990	4	18	31.4	+20	37	47.3	64.631035	+20.629804	4.93	0.259	0.30	A3m
20042	4	18	42.5	-33	44	49.2	64.677183	-33.747009	3.55	-0.108	-0.09	B9V
20070	4	19	52.1	+50	20	46.3	64.967259	+50.346195	4.60	0.043	0.16	A2V
20205	4	21	1.2	+15	40	40.4	65.254899	+15.677886	3.65	0.981	0.95	G8III
20250	4	21	40.8	+27	24	1.4	65.419922	+27.400399	4.97	1.150	1.35	K1III
20252	4	21	48.7	+34	37	0.2	65.452888	+34.616734	4.93	0.950	0.94	G8III
20354	4	23	6.9	+46	32	53.3	65.778740	+46.548142	4.80	-0.022	0.03	B4IV
20455	4	24	10.7	+17	35	28.4	66.044399	+17.591232	3.77	0.983	0.93	G8III
20535	4	24	50.7	-33	58	5.0	66.211408	-33.968046	3.97	1.468	1.53	K4III
20542	4	25	20.3	+17	29	32.2	66.334565	+17.492267	4.80	0.154	0.18	A7V
20635	4	26	39.2	+22	20	28.8	66.663508	+22.341329	4.21	0.136	0.16	A7IV-V
20648	4	26	44.2	+17	58	31.4	66.684097	+17.975385	4.30	0.049	0.08	A2IV
20711	4	27	35.8	+22	51	38.1	66.899356	+22.860577	4.28	0.263	0.32	A8Vn
20713	4	27	34.4	+15	39	55.2	66.893337	+15.665330	4.48	0.262	0.33	F0V...
20732	4	27	49.4	+14	45	38.7	66.955876	+14.760737	4.69	0.979	0.96	G8III
20877	4	29	40.3	+16	24	21.7	67.417810	+16.406028	4.96	1.137	1.12	K2IIIvar
20885	4	29	48.3	+16	0	29.8	67.451431	+16.008279	3.84	0.952	1.02	G7III
20889	4	29	52.5	+19	13	35.0	67.468721	+19.226377	3.53	1.014	1.04	K0III
20894	4	29	53.5	+15	55	0.7	67.473123	+15.916873	3.40	0.179	0.21	A7III
21029	4	31	47.6	+16	14	20.7	67.948436	+16.239095	4.78	0.170	0.19	A6IV
21139	4	32	58.8	+0	0	2.0	68.244819	+0.000564	4.91	1.320	1.25	K3II-III
21248	4	34	21.2	-29	43	27.1	68.588346	-29.724182	4.49	0.972	1.00	K0III
21273	4	35	4.3	+14	53	16.5	68.767799	+14.887909	4.65	0.255	0.28	A8V
21281	4	34	27.8	-55	0	4.1	68.615878	-55.001153	3.30	-0.079	-0.08	A0V:
21393	4	36	23.2	-30	31	10.2	69.096848	-30.519514	3.81	0.957	0.93	G8III
21402	4	36	50.2	+10	12	11.7	69.209361	+10.203250	4.25	0.184	0.21	A5m
21421	4	37	9.4	+16	33	3.0	69.289166	+16.550820	0.87	1.538	1.67	K5III
21444	4	37	23.7	-3	18	36.1	69.348690	-3.310017	3.93	-0.210	-0.20	B2III SB
21476	4	38	11.1	+41	18	24.8	69.546357	+41.306881	4.25	1.171	1.13	G8II comp
21589	4	39	21.7	+12	33	8.2	69.840418	+12.552289	4.27	0.122	0.15	A6V
21594	4	39	10.0	-14	15	48.5	69.791496	-14.263478	3.86	1.082	1.09	K1III
21644	4	39	53.8	-12	4	55.2	69.974102	-12.081997	4.99	0.074	0.13	A0V
21683	4	40	30.4	+15	57	31.8	70.126804	+15.958846	4.67	0.147	0.19	A5Vn
21763	4	41	23.0	-19	37	53.7	70.345857	-19.631577	4.32	1.599	2.27	M3/M4III
21770	4	41	15.3	-41	49	25.3	70.313949	-41.823705	4.44	0.342	0.40	F2V
21881	4	43	32.3	+22	59	46.7	70.884572	+22.996315	4.27	-0.112	-0.10	B3V
22109	4	46	34.7	-3	13	0.4	71.644750	-3.216784	4.01	-0.148	-0.13	B5IV
22449	4	51	0.5	+6	59	49.6	72.752184	+6.997115	3.19	0.484	0.53	F6V
22453	4	51	21.7	+37	31	27.0	72.840490	+37.524168	4.89	1.447	1.51	K4II
22509	4	51	47.1	+8	56	7.4	72.946377	+8.935380	4.35	0.010	0.04	A1Vn
22549	4	52	21.2	+5	38	24.8	73.088195	+5.640209	3.68	-0.157	-0.16	B2III SB
22667	4	53	45.1	+14	17	5.0	73.437743	+14.284732	4.71	1.773	2.63	M3Sv
22678	4	54	4.6	+36	44	14.9	73.519020	+36.737476	4.79	1.414	1.46	K3III
22701	4	53	57.1	-5	25	5.8	73.488044	-5.418272	4.36	0.257	0.33	A9IV
22783	4	56	12.1	+66	22	34.1	74.050510	+66.376145	4.26	-0.008	0.09	O9.5Ia SB:

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
22797	4	55	22.4	+2	28	27.3	73.843276	+2.474255	3.71	-0.179	-0.18	B2III SB
22845	4	56	4.8	+10	10	60.0	74.020156	+10.183327	4.64	0.085	0.11	A0V
22957	4	57	34.9	+13	32	48.1	74.395496	+13.546693	4.06	1.158	1.16	K2III
23015	4	58	23.8	+33	11	53.2	74.599259	+33.198116	2.69	1.490	1.46	K3IIvar
23040	4	59	1.0	+53	47	2.6	74.754264	+53.784049	4.43	-0.017	0.06	A1V
23123	4	59	39.8	+1	44	43.4	74.916005	+1.745393	4.47	1.369	1.32	K2IIvar
23179	5	0	43.2	+37	55	14.3	75.179991	+37.920653	4.93	0.037	0.06	A1V
23231	5	0	55.7	-12	30	25.8	75.232227	-12.507166	4.78	0.267	0.33	F0V
23362	5	2	21.6	-20	1	19.2	75.589999	-20.021992	4.91	-0.047	-0.04	B9V
23364	5	2	29.0	-7	8	38.2	75.620652	-7.143953	4.80	-0.164	-0.18	B3V
23416	5	3	31.0	+43	51	10.4	75.879013	+43.852882	3.03	0.537	0.61	F0Ia
23453	5	3	59.1	+41	6	18.2	75.996213	+41.105052	3.69	1.154	1.12	K4II comp
23497	5	4	23.0	+21	37	7.7	76.095788	+21.618806	4.62	0.155	0.19	A7V
23522	5	5	20.4	+60	28	15.3	76.334871	+60.470918	4.03	0.921	0.89	G0Ib
23595	5	5	10.9	-35	27	16.9	76.295210	-35.454690	4.55	1.177	1.19	K2III
23607	5	5	48.0	+15	25	56.2	76.449902	+15.432275	4.65	-0.064	0.02	A0p Si
23685	5	6	22.3	-22	20	36.5	76.592966	-22.343476	3.19	1.460	1.50	K4III
23693	5	5	52.9	-57	26	38.1	76.470512	-57.443928	4.71	0.526	0.60	F7V
23767	5	8	1.6	+41	15	40.9	77.006573	+41.261366	3.18	-0.148	-0.17	B3V
23783	5	8	22.0	+51	37	25.9	77.091562	+51.623869	4.98	0.343	0.40	F0V
23835	5	8	43.4	+18	40	19.3	77.180641	+18.672032	4.91	0.657	0.74	G4V
23875	5	8	54.5	-5	3	36.6	77.227029	-5.060159	2.78	0.161	0.16	A3IIIvar
23972	5	10	10.6	-8	43	40.9	77.544073	-8.728019	4.25	-0.187	-0.16	B2IVn
24010	5	10	55.9	+15	37	22.4	77.732860	+15.622879	4.81	0.313	0.40	F2IV
24244	5	13	18.1	-11	50	41.7	78.325582	-11.844929	4.45	-0.099	-0.08	B8V
24305	5	13	53.9	-16	10	53.1	78.474594	-16.181405	3.29	-0.110	-0.09	B9IV: HgMn
24327	5	14	13.5	-12	55	2.3	78.556270	-12.917302	4.36	-0.094	-0.07	B7V
24331	5	14	25.0	+2	53	6.8	78.604178	+2.885227	4.46	1.166	1.12	K3III...
24340	5	14	54.2	+38	30	28.3	78.725737	+38.507849	4.82	0.189	0.23	A4m
24372	5	13	44.8	-67	9	39.8	78.436547	-67.161043	4.81	1.274	1.22	K2III
24436	5	15	34.3	-8	10	42.0	78.893021	-8.178326	0.18	-0.030	0.03	B8Ia
24608	5	18	16.9	+46	1	3.3	79.570229	+46.017571	0.08	0.795	0.83	M1: comp
24659	5	18	15.7	-34	52	31.1	79.565272	-34.875298	4.81	0.987	1.00	K0/K1III/IV
24674	5	18	39.1	-6	49	21.8	79.662868	-6.822724	3.59	-0.115	-0.10	B5III
24727	5	19	35.3	+33	23	31.3	79.897272	+33.392028	4.54	1.252	1.32	K3III...
24813	5	20	39.4	+40	6	57.6	80.163965	+40.116002	4.69	0.630	0.70	G0V
24822	5	20	34.2	+22	7	0.6	80.142605	+22.116840	4.96	0.937	0.92	G8III
24845	5	20	34.0	-13	9	21.9	80.141701	-13.156073	4.29	-0.235	-0.26	B0.5IV
24927	5	21	22.0	-21	13	10.2	80.341848	-21.219508	4.70	-0.048	-0.03	A0V
25044	5	22	51.7	-0	21	46.3	80.715287	-0.362865	4.72	-0.168	-0.17	B2IV-V
25142	5	23	57.9	+3	33	48.6	80.991096	+3.563493	4.99	-0.096	-0.14	B1V
25247	5	24	59.0	-7	47	23.4	81.245943	-7.789846	4.13	0.943	0.97	G8III
25278	5	25	40.8	+17	24	6.0	81.420116	+17.401666	5.00	0.544	0.62	F8V SB
25281	5	25	33.5	-2	22	44.3	81.389736	-2.378970	3.35	-0.240	-0.16	B1V +B2
25302	5	25	51.9	+1	51	52.2	81.466046	+1.864487	4.89	-0.200	-0.19	B1V:pe
25336	5	26	17.1	+6	22	2.9	81.571334	+6.367463	1.64	-0.224	-0.22	B2III
25428	5	27	39.2	+28	37	25.0	81.913176	+28.623619	1.65	-0.130	-0.09	B7III
25473	5	27	57.9	+3	6	45.5	81.991147	+3.112632	4.59	-0.199	-0.21	B2IV
25539	5	28	55.7	+21	57	12.4	82.231893	+21.953433	4.88	-0.140	-0.13	B2.5IV
25606	5	29	10.0	-20	44	37.2	82.291828	-20.743653	2.81	0.807	0.86	G5II
25737	5	30	49.5	-1	4	36.9	82.706447	-1.076916	4.71	1.592	1.70	K5III
25813	5	31	56.1	+5	57	46.3	82.983910	+5.962865	4.20	-0.143	-0.14	B5V
25859	5	31	58.6	-35	27	21.3	82.994193	-35.455925	3.86	1.130	1.09	K1II/III
25923	5	32	58.3	-7	17	14.0	83.242974	-7.287214	4.62	-0.261	-0.28	B0V
25930	5	33	6.4	-0	17	5.3	83.276510	-0.284794	2.25	-0.175	-0.21	O9.5II
25945	5	33	28.5	+18	36	30.1	83.368559	+18.608354	4.32	2.060	2.54	M2Ib
25984	5	34	7.7	+32	12	21.0	83.532249	+32.205841	4.71	0.281	0.51	B5Iab
25985	5	33	40.8	-17	48	30.0	83.419826	-17.808321	2.58	0.211	0.32	F0Ib
26069	5	33	48.9	-62	28	33.8	83.453553	-62.476060	3.76	0.640	0.69	F6Ia

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
26176	5	36	0.1	+9	30	8.6	84.000486	+9.502378	4.39	-0.157	-0.13	B0IV...
26199	5	36	5.8	-5	59	21.5	84.024114	-5.989292	4.78	-0.248	-0.27	B0.5V
26207	5	36	19.4	+9	56	48.5	84.080774	+9.946796	3.39	-0.160	-0.13	O...
26220	5	36	19.2	-5	22	28.9	84.080147	-5.374698	4.98	0.000	0.00	O7
26235	5	36	26.3	-5	24	12.6	84.109595	-5.403496	4.98	-0.097	0.03	O9.5Vpe
26237	5	36	26.9	-4	49	33.1	84.111917	-4.825848	4.58	-0.183	-0.19	B2III...
26241	5	36	29.1	-5	53	50.6	84.121402	-5.897376	2.75	-0.210	-0.22	O9III
26311	5	37	18.3	-1	11	23.3	84.326348	-1.189812	1.69	-0.184	-0.16	B0Ia
26366	5	38	5.3	+9	18	2.3	84.522117	+9.300628	4.09	0.951	1.02	G8III-IV
26451	5	38	55.9	+21	9	13.5	84.732728	+21.153763	2.97	-0.148	-0.15	B4IIIp
26549	5	39	49.6	-2	35	21.4	84.956595	-2.589271	3.77	-0.190	-0.25	O9.5V...
26563	5	39	55.5	-7	12	8.6	84.981453	-7.202380	4.77	0.139	0.16	A4V
26594	5	40	19.3	+4	7	55.3	85.080484	+4.132024	4.50	-0.098	-0.02	B3IIIe
26634	5	40	25.7	-34	3	49.8	85.107059	-34.063839	2.65	-0.120	-0.07	B7IV
26727	5	41	50.7	-1	55	58.1	85.461120	-1.932806	1.74	-0.199	-0.18	O9.5Ib SB
26736	5	41	56.3	-1	7	8.7	85.484396	-1.119086	4.95	-0.197	-0.21	B2IV-V
26777	5	42	32.3	+16	32	36.6	85.634724	+16.543494	4.84	-0.125	-0.10	B3IV...
26885	5	43	35.4	+1	29	0.2	85.897495	+1.483393	4.90	1.144	1.17	K1III
27072	5	45	21.6	-22	26	33.6	86.340050	-22.442658	3.59	0.481	0.57	F7V
27100	5	44	48.8	-65	43	39.2	86.203420	-65.727556	4.34	0.217	0.27	A7V
27288	5	47	55.8	-14	48	55.5	86.982652	-14.815405	3.55	0.104	0.11	A2Vann
27321	5	47	47.7	-51	3	34.3	86.948777	-51.059534	3.85	0.171	0.18	A3V
27366	5	48	46.6	-9	39	48.6	87.194207	-9.663489	2.07	-0.168	-0.14	B0.5Iavar
27468	5	50	20.2	+24	34	22.3	87.584204	+24.572875	4.88	1.021	1.04	G8IIIvar
27483	5	50	39.9	+39	11	10.3	87.666168	+39.186183	4.51	0.949	0.95	G8III
27511	5	50	45.4	+12	39	22.9	87.689361	+12.656361	4.89	-0.068	-0.05	B9IV
27530	5	50	13.2	-56	9	42.8	87.554856	-56.161876	4.50	1.075	1.06	K1III
27628	5	51	43.1	-35	45	41.1	87.929671	-35.761429	3.12	1.146	1.10	K1.5III
27639	5	52	30.5	+37	18	34.6	88.126997	+37.309604	4.72	1.621	1.90	M1III
27654	5	52	14.8	-20	52	42.9	88.061640	-20.878582	3.76	0.984	1.05	G8III/IV
27673	5	52	58.9	+39	9	9.1	88.245373	+39.152535	3.97	1.132	1.07	K0III
27750	5	53	33.5	+1	51	31.4	88.389433	+1.858730	4.76	1.382	1.31	K2IIvar
27810	5	53	53.8	-33	47	52.0	88.473993	-33.797782	4.88	-0.154	-0.14	B5V
27830	5	54	40.8	+27	36	55.2	88.669900	+27.615336	4.56	-0.008	0.00	A0V
27890	5	54	16.0	-63	4	59.7	88.566549	-63.083248	4.65	1.022	1.03	K1III/IV
27913	5	55	39.5	+20	16	41.5	88.914385	+20.278197	4.39	0.594	0.66	G0V
27949	5	56	39.0	+55	42	33.4	89.162452	+55.709266	4.96	0.052	0.09	A2V
27989	5	56	20.2	+7	24	33.6	89.084093	+7.409341	0.45	1.500	2.32	M2Ib
28010	5	56	14.4	-37	7	7.2	89.059798	-37.118653	4.97	1.102	1.03	K1IIICN...
28103	5	57	23.1	-14	9	55.0	89.346198	-14.165269	3.71	0.337	0.39	F1V
28199	5	58	18.0	-35	16	55.7	89.574948	-35.282129	4.36	-0.165	-0.16	B2.5IV
28237	5	59	19.7	+25	57	16.6	89.832234	+25.954599	4.81	-0.088	-0.04	B1Ib
28328	5	59	48.3	-42	48	53.7	89.951392	-42.814930	3.96	1.146	1.06	K0III
28358	6	1	17.9	+54	17	1.2	90.324564	+54.283656	3.72	1.010	0.99	K0III
28360	6	1	6.4	+44	56	50.1	90.276606	+44.947261	1.90	0.077	0.05	A2V
28380	6	1	11.3	+37	12	42.9	90.296910	+37.211917	2.65	-0.083	-0.06	A0p Si
28404	6	1	31.9	+45	56	10.7	90.382816	+45.936309	4.30	1.701	2.51	M3IIvar
28413	6	1	7.9	-3	4	30.0	90.283003	-3.074989	4.53	1.202	1.26	K2IIIvar
28574	6	2	51.1	-10	35	56.9	90.713093	-10.599136	4.92	-0.128	-0.08	B5III
28614	6	3	34.0	+9	38	43.8	90.891687	+9.645503	4.12	0.170	0.19	Am...
28716	6	5	11.8	+20	8	9.8	91.299261	+20.136054	4.64	0.236	0.41	B2Iavar
28734	6	5	25.7	+23	15	36.5	91.356915	+23.260149	4.16	0.835	0.88	G7III
28816	6	5	56.7	-16	29	14.3	91.486366	-16.487309	4.92	0.196	0.21	Ap shell
28910	6	7	7.7	-14	56	19.1	91.782271	-14.938647	4.67	0.046	0.04	A0V
29034	6	8	15.9	-37	15	25.4	92.066280	-37.257043	5.00	-0.095	-0.08	B8:IV
29038	6	8	48.0	+14	45	50.7	92.200010	+14.764073	4.42	-0.164	-0.17	B3IV
29276	6	10	43.1	-54	58	26.7	92.679461	-54.974093	4.72	-0.229	-0.24	B0.5IV
29426	6	13	9.8	+14	12	7.5	93.290658	+14.202095	4.45	-0.180	-0.16	B3IV
29434	6	13	17.7	+16	7	25.3	93.323685	+16.123692	4.95	-0.149	-0.12	B5Vn

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
29651	6	15	54.3	-6	16	58.5	93.976148	-6.282920	3.99	1.319	1.27	K3III
29655	6	16	10.5	+22	29	55.1	94.043910	+22.498636	3.31	1.600	2.70	M3III
29696	6	16	44.9	+29	29	17.4	94.187020	+29.488167	4.32	1.021	1.04	G8IIIvar
29735	6	16	44.0	-13	43	37.0	94.183384	-13.726954	5.00	-0.078	-0.05	B9V
29807	6	17	19.1	-35	8	55.8	94.329485	-35.148845	4.37	0.978	0.94	G8II
29997	6	21	12.7	+69	18	31.5	95.302717	+69.308747	4.76	0.025	0.05	A0Vn
30060	6	21	31.1	+59	0	1.4	95.379592	+59.000378	4.44	0.032	0.05	A2Vs
30093	6	21	4.2	-2	57	18.7	95.267585	-2.955207	4.91	1.613	1.90	M1III
30122	6	21	8.3	-30	4	27.0	95.284789	-30.074155	3.02	-0.160	-0.20	B2.5V
30277	6	22	54.0	-33	26	54.4	95.725059	-33.448441	3.85	0.858	0.88	G7II
30324	6	23	38.8	-17	58	4.8	95.911754	-17.968002	1.98	-0.240	-0.24	B1II/III
30343	6	24	15.7	+22	30	2.3	96.065232	+22.500642	2.87	1.621	2.30	M3IIIvar
30419	6	24	54.5	+4	34	48.9	96.226883	+4.580241	4.39	0.215	0.25	A5IV
30438	6	24	25.8	-52	42	29.3	96.107353	-52.708133	-0.62	0.164	0.23	F0Ib
30520	6	26	33.2	+49	16	28.1	96.638206	+49.274472	4.92	1.905	1.94	K5Iabvar
30788	6	28	58.1	-32	35	41.3	97.241968	-32.594810	4.47	-0.169	-0.16	B4V
30867	6	29	51.6	-7	2	54.1	97.465193	-7.048372	3.76	-0.113	-0.11	B3Ve
30883	6	30	14.4	+20	11	47.9	97.559852	+20.196635	4.13	-0.115	-0.10	B6III
31125	6	32	45.1	-23	26	6.7	98.188105	-23.435198	4.34	-0.245	-0.24	B1III
31216	6	34	4.0	+7	18	55.8	98.516578	+7.315507	4.47	0.023	0.09	A0Ib
31407	6	35	27.0	-52	59	37.9	98.862588	-52.993858	4.35	-0.021	0.06	B9III
31416	6	35	57.5	-22	58	59.4	98.989509	-22.983166	4.54	-0.035	-0.01	A0III
31592	6	37	37.3	-19	16	32.2	99.405529	-19.275605	3.95	1.037	1.02	K1III+...
31681	6	38	57.1	+16	22	44.2	99.738051	+16.378937	1.93	0.001	0.04	A0IV
31685	6	38	25.2	-43	12	56.7	99.604873	-43.215757	3.17	-0.103	-0.07	B8III SB
31700	6	38	50.2	-18	15	26.9	99.709078	-18.257468	4.42	1.137	1.12	K0II/III
31827	6	40	15.7	-14	9	59.3	100.065395	-14.166469	4.82	1.459	1.45	K2III
31832	6	40	51.8	+42	28	3.8	100.215943	+42.467719	4.80	1.236	1.17	K3III
31978	6	42	9.7	+9	52	26.9	100.540363	+9.874150	4.66	-0.233	-0.22	O7
32246	6	45	15.2	+25	6	28.5	101.313473	+25.107909	3.06	1.377	1.22	A3mA6-A9
32249	6	45	12.0	+13	12	16.5	101.300050	+13.204574	4.49	1.167	1.11	K1III
32349	6	46	5.8	-16	44	48.9	101.523991	-16.746915	-1.44	0.009	-0.02	A0m...
32362	6	46	29.7	+12	52	14.4	101.623923	+12.870672	3.35	0.443	0.48	F5IV
32438	6	48	7.8	+59	25	1.8	102.032430	+59.417154	4.86	0.084	0.10	A3V
32533	6	48	29.9	+8	0	44.4	102.124430	+8.012345	4.77	1.396	1.36	K4III
32578	6	48	58.9	+2	23	13.2	102.245469	+2.386988	4.48	1.099	1.06	K0III
32607	6	48	24.6	-61	57	54.1	102.102648	-61.965016	3.24	0.225	0.28	A7IV
32759	6	50	38.7	-32	32	4.1	102.661140	-32.534482	3.50	-0.116	-0.10	B1.5IVne
32761	6	50	19.3	-53	38	53.9	102.580554	-53.648296	4.41	0.899	0.92	G6II
32768	6	50	28.2	-50	38	27.4	102.617430	-50.640952	2.94	1.207	1.14	K0III...
32844	6	52	17.0	+41	45	13.5	103.070873	+41.753744	4.99	1.256	1.23	K3III
32855	6	51	39.3	-34	23	37.9	102.913759	-34.393862	4.99	1.379	1.28	K2/K3III
33018	6	54	12.2	+33	55	59.9	103.551036	+33.933292	3.60	0.102	0.14	A3III
33092	6	54	28.7	-20	15	7.8	103.619615	-20.252176	4.82	-0.212	-0.21	B1Ib
33152	6	55	1.5	-24	12	44.7	103.756287	-24.212415	3.89	1.740	1.58	K3Iab
33160	6	55	11.3	-12	4	1.2	103.797268	-12.067001	4.08	1.418	1.49	K4III
33202	6	55	51.4	+13	8	55.7	103.964018	+13.148799	4.73	0.321	0.36	F0Vp
33302	6	56	33.4	-20	9	55.0	104.139110	-20.165265	4.66	0.374	0.46	F2IV/V
33345	6	57	5.8	-14	4	21.5	104.274058	-14.072649	5.00	1.182	1.30	B9.5V
33347	6	57	5.8	-17	5	0.6	104.274061	-17.083497	4.36	-0.063	0.01	B3Ib/II
33357	6	56	50.4	-48	45	1.2	104.209813	-48.750329	4.94	1.668	2.05	M1III
33449	6	59	7.9	+58	23	31.1	104.783042	+58.391969	4.35	0.850	0.85	G5III-IV
33485	6	59	11.0	+45	3	50.1	104.796000	+45.063907	4.90	0.027	0.05	A2Vn
33579	6	59	28.3	-29	0	9.2	104.867791	-29.002566	1.50	-0.211	-0.20	B2II
33694	7	3	10.2	+76	56	43.9	105.792370	+76.945533	4.55	1.365	1.35	K4III
33856	7	2	34.6	-27	58	0.7	105.643998	-27.966861	3.49	1.729	1.82	K4III
33971	7	3	58.8	-4	16	18.9	105.995078	-4.271926	4.99	-0.195	-0.19	B1V
33977	7	3	55.4	-23	51	57.6	105.980671	-23.865990	3.02	-0.077	-0.03	B3Ia
34045	7	4	43.9	-15	39	59.3	106.182766	-15.666463	4.11	-0.112	-0.09	B8II

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
34059	7	4	27.2	-49	36	58.3	106.113178	-49.616184	4.92	0.140	0.15	A4IV
34088	7	5	23.0	+20	32	12.9	106.345710	+20.536929	4.01	0.899	0.90	G3Ibv SB
34444	7	9	16.0	-26	25	42.9	107.316493	-26.428585	1.83	0.671	0.67	F8Ia
34481	7	8	33.5	-70	32	1.0	107.139602	-70.533619	3.78	1.006	0.94	G8IIIvar
34495	7	9	34.4	-39	41	28.4	107.393366	-39.691212	4.83	-0.179	-0.17	B3IV/V
34622	7	11	17.8	-4	16	19.9	107.823963	-4.272203	4.91	1.020	1.03	K0III
34693	7	12	30.3	+30	12	28.7	108.126435	+30.207986	4.41	1.261	1.25	K2III
34752	7	13	7.9	+39	17	0.2	108.282739	+39.283382	4.91	1.451	1.48	K4II-III
34769	7	12	57.7	-0	31	47.7	108.240504	-0.529914	4.15	-0.005	0.02	A2V
34834	7	13	10.4	-46	47	45.9	108.293428	-46.796095	4.49	0.324	0.40	F0IV
34899	7	13	52.0	-45	13	15.6	108.466487	-45.221003	4.87	-0.003	0.02	Ap
34922	7	14	11.7	-44	40	32.7	108.548814	-44.675751	4.42	1.331	3.46	M5e
34981	7	15	7.8	-26	23	26.9	108.782567	-26.390802	4.42	-0.170	-0.12	B3III
35020	7	15	13.7	-48	18	37.3	108.807154	-48.310360	4.75	-0.091	-0.07	B8/B9V
35037	7	15	41.0	-26	48	40.4	108.920883	-26.811215	4.01	-0.150	-0.08	B2IV/Ve
35205	7	17	26.7	-27	55	13.5	109.361336	-27.920417	4.66	1.589	2.11	M2III
35210	7	17	31.2	-23	21	18.2	109.380142	-23.355067	4.83	1.601	1.77	K4III
35228	7	16	48.9	-67	59	47.3	109.203578	-67.996472	3.97	0.760	0.78	F6II
35264	7	17	54.1	-37	8	13.7	109.475576	-37.137144	2.71	1.616	1.65	K3Ib
35350	7	19	19.6	+16	29	59.5	109.831822	+16.499863	3.58	0.106	0.12	A3V...
35363	7	19	4.3	-36	46	27.3	109.767827	-36.774240	4.65	-0.099	0.11	B2V+...
35384	7	20	9.7	+49	25	27.0	110.040214	+49.424166	5.00	0.087	0.16	A4IIIn
35412	7	19	34.1	-24	35	57.1	109.892155	-24.599187	4.88	-0.160	-0.06	O7f
35415	7	19	36.0	-24	59	41.5	109.900003	-24.994871	4.37	-0.132	-0.10	O9Ib
35550	7	21	24.3	+21	56	27.5	110.351351	+21.940968	3.50	0.374	0.44	F0IV...
35727	7	23	10.4	-19	3	32.0	110.793160	-19.058892	4.94	-0.039	0.01	B5II/III
35904	7	24	56.8	-29	20	46.3	111.236465	-29.346208	2.45	-0.083	0.01	B5Ia
36041	7	26	49.3	+9	13	55.5	111.705624	+9.232070	4.99	0.991	0.96	G8III
36046	7	27	3.6	+27	45	12.7	111.764893	+27.753535	3.78	1.024	1.01	G9III+...
36145	7	28	19.8	+49	9	59.9	112.082494	+49.166642	4.61	-0.001	0.02	A1V
36188	7	28	18.9	+8	14	39.8	112.078946	+8.244388	2.89	-0.097	-0.07	B8Vvar
36284	7	29	20.0	+8	52	49.4	112.333255	+8.880398	4.33	1.425	1.48	K3III SB
36366	7	30	29.5	+31	44	23.9	112.623004	+31.739976	4.16	0.320	0.40	F0V...
36377	7	29	54.8	-43	20	45.3	112.478226	-43.345924	3.25	1.509	1.54	K5III SB
36425	7	30	59.5	+11	57	37.7	112.747990	+11.960462	4.55	1.276	1.21	K2III
36431	7	30	46.2	-23	4	12.8	112.692624	-23.070209	4.85	0.243	0.35	A6Ib/II
36514	7	31	32.8	-31	0	31.0	112.886605	-31.008619	4.65	0.904	0.89	G2Ib...
36547	7	35	27.9	+82	21	49.8	113.866183	+82.363846	4.92	1.633	2.66	M4IIIa
36773	7	34	47.2	-14	34	18.2	113.696771	-14.571734	4.82	1.362	1.37	A4Ia
36795	7	34	58.4	-22	20	37.5	113.743421	-22.343761	4.44	0.521	0.60	F6V
36850	7	35	58.0	+31	50	20.7	113.991495	+31.839078	1.58	0.034	0.05	A2Vm
36917	7	36	14.7	-28	25	4.9	114.061259	-28.418021	4.65	-0.111	-0.12	B8V
36942	7	36	11.6	-52	34	57.2	114.048372	-52.582547	4.93	1.373	1.39	K3III
36962	7	37	14.7	+26	50	46.2	114.311119	+26.846154	4.06	1.540	1.66	K5III
37096	7	38	9.9	-35	1	4.6	114.541196	-35.017953	4.53	-0.081	-0.08	B8IV/V
37173	7	39	11.8	-25	24	53.4	114.799004	-25.414829	4.69	-0.100	-0.07	B8IV
37229	7	39	42.8	-26	51	14.2	114.928179	-26.853935	3.80	-0.159	-0.15	B5IV
37265	7	40	33.9	+34	31	59.3	115.141287	+34.533143	4.89	0.413	0.47	F3III
37279	7	40	25.6	+5	10	6.4	115.106593	+5.168448	0.40	0.432	0.49	F5IV-V
37297	7	40	12.8	-38	21	30.3	115.053396	-38.358428	4.84	-0.189	-0.17	B3V
37379	7	41	22.2	-15	18	54.3	115.342536	-15.315078	4.98	1.543	1.49	K3III
37447	7	42	16.5	-9	36	9.6	115.568561	-9.602655	3.94	1.022	1.01	K0III
37504	7	41	32.6	-72	39	26.6	115.385762	-72.657383	3.93	1.033	1.02	K0III
37609	7	44	48.9	+58	39	27.5	116.203586	+58.657635	4.93	0.104	0.17	A3IVn
37629	7	44	39.2	+28	49	46.9	116.163147	+28.829705	4.23	1.118	1.12	K1III SB
37648	7	44	24.5	-28	27	47.4	116.102037	-28.463162	4.63	1.632	1.76	K5III
37677	7	44	40.3	-29	0	26.6	116.167813	-29.007379	3.94	0.160	0.34	A2Iab
37740	7	45	44.6	+24	20	40.9	116.435798	+24.344687	3.57	0.932	0.90	G8III
37819	7	46	1.3	-38	1	18.4	116.505361	-38.021780	3.62	1.706	1.82	K4III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
37826	7	46	37.7	+27	58	21.2	116.657210	+27.972547	1.16	0.991	0.97	K0IIIvar
37908	7	47	22.0	+18	27	21.6	116.841743	+18.455995	4.89	1.425	1.54	K5III
38070	7	48	58.8	-25	59	30.2	117.245040	-25.991721	4.40	-0.070	0.13	B1IV:nne
38089	7	48	58.6	-47	7	58.1	117.243968	-47.132817	4.69	1.039	1.03	K0III
38164	7	49	53.6	-46	25	41.6	117.473375	-46.428213	4.10	-0.160	-0.17	B0III
38170	7	50	11.9	-24	54	53.8	117.549689	-24.914934	3.34	1.218	1.08	G6Ia
38414	7	52	57.4	-40	37	56.0	118.239184	-40.632211	3.71	1.012	1.04	G5III...
38455	7	53	24.3	-38	55	10.0	118.351359	-38.919446	4.49	-0.188	-0.18	B2V
38500	7	53	40.0	-49	40	11.2	118.416560	-49.669772	4.63	-0.228	-0.24	B1.5Vp
38518	7	53	56.1	-48	9	35.4	118.483602	-48.159830	4.22	-0.130	-0.11	B0.5Ib
38538	7	54	48.6	+26	42	30.3	118.702402	+26.708425	4.97	0.098	0.14	A3V
38827	7	57	19.5	-53	2	26.7	119.331198	-53.040763	3.46	-0.177	-0.17	B3IVp
38835	7	57	47.0	-22	56	19.2	119.445904	-22.938671	4.20	0.718	0.75	F7/F8II
38901	7	58	31.6	-30	23	36.6	119.631483	-30.393505	4.76	0.151	0.24	A7III
38957	7	58	51.5	-49	18	14.6	119.714701	-49.304054	4.47	-0.180	-0.14	B1Vp +B2
39079	8	0	48.6	-3	44	22.4	120.202367	-3.739556	4.93	1.205	1.22	K2III
39095	8	0	49.9	-18	27	33.9	120.207763	-18.459429	4.61	0.087	0.11	A1V
39138	8	0	36.0	-63	37	38.6	120.150091	-63.627393	4.81	-0.173	-0.16	B3V
39211	8	2	18.9	-1	27	13.3	120.578819	-1.453688	4.69	1.475	1.54	K4III
39311	8	3	23.0	+2	16	26.7	120.845817	+2.274074	4.39	1.252	1.27	K2III
39424	8	4	50.1	+27	43	56.7	121.208725	+27.732409	4.94	1.130	1.09	K2III
39429	8	4	20.4	-40	3	52.8	121.085041	-40.064672	2.21	-0.269	-0.22	O5IAf
39757	8	8	27.6	-24	22	2.9	122.115039	-24.367474	2.83	0.458	0.42	F2mF5IIp
39794	8	7	59.5	-68	40	49.0	121.997780	-68.680286	4.35	-0.113	-0.10	B6IV
39847	8	10	3.9	+51	26	33.7	122.516271	+51.442681	4.78	0.048	0.10	A2V
39863	8	9	40.4	-3	2	51.8	122.418540	-3.047730	4.36	0.970	0.92	G2Ib
39903	8	9	21.9	-61	22	5.2	122.341293	-61.368109	4.74	0.437	0.53	F5V
39906	8	9	59.2	-19	18	32.9	122.496847	-19.309132	4.40	-0.160	-0.14	B5V
39953	8	10	11.7	-47	24	2.8	122.548826	-47.400773	1.75	-0.145	-0.14	WC8 +O9I
40084	8	12	16.8	-12	59	31.3	123.070109	-12.992035	4.72	0.939	0.93	K0III
40091	8	12	7.6	-39	41	0.9	123.031682	-39.683596	4.44	1.590	1.62	K4III
40096	8	12	9.5	-43	3	8.4	123.039565	-43.052342	4.73	0.164	0.30	A7Ib
40167	8	13	26.5	+17	34	52.8	123.360425	+17.581347	4.67	0.531	0.60	G0V
40259	8	14	19.3	-15	51	15.2	123.580273	-15.854217	4.99	1.066	1.02	G5Ib/II
40274	8	14	18.2	-35	57	55.7	123.576024	-35.965469	4.78	-0.110	-0.01	B2ne
40326	8	14	48.8	-40	24	52.3	123.703181	-40.414517	4.42	1.170	1.15	K1II/III
40526	8	17	40.8	+9	7	4.3	124.419926	+9.117864	3.53	1.481	1.47	K4III
40702	8	17	56.3	-76	59	13.2	124.484418	-76.986988	4.05	0.413	0.49	F5III
40706	8	19	21.6	-36	43	36.8	124.840144	-36.726899	4.44	0.222	0.25	A4m...
40888	8	19	57.6	-77	33	10.8	124.990069	-77.553010	4.34	1.161	1.10	K0III-IV
40945	8	22	13.9	-33	7	25.6	125.557776	-33.123768	4.83	1.419	1.35	K2/K3III
41037	8	22	57.2	-59	34	45.0	125.738311	-59.579159	1.86	1.196	1.16	K3III+B2V
41039	8	23	11.4	-48	33	36.7	125.797509	-48.560203	4.79	-0.146	-0.12	B1V
41075	8	24	18.0	+43	7	2.6	126.074913	+43.117389	4.25	1.550	1.61	K5III
41307	8	26	44.1	-3	58	40.2	126.683559	-3.977834	3.91	-0.012	-0.02	A0V
41312	8	25	57.9	-66	12	32.0	126.491114	-66.208902	3.77	1.132	1.10	K2IIIvar
41704	8	32	2.0	+60	38	39.2	128.008365	+60.644212	3.35	0.856	0.87	G4II-III
42134	8	35	50.1	-58	5	3.2	128.958815	-58.084215	4.84	0.981	0.98	K0III
42312	8	38	24.0	-43	3	54.6	129.600137	-43.065159	4.11	0.109	0.20	A6II
42313	8	38	47.6	+5	37	39.1	129.698203	+5.627526	4.14	0.003	0.02	A1Vnn
42402	8	39	52.8	+3	15	52.9	129.969952	+3.264686	4.45	1.216	1.12	K2III
42483	8	40	36.0	-29	38	19.0	130.150189	-29.638605	4.86	0.900	0.99	G5III
42509	8	41	2.6	-12	33	9.0	130.260783	-12.552507	4.98	1.415	1.40	K3III
42515	8	40	56.7	-35	23	8.2	130.236204	-35.385613	3.97	0.936	0.91	G5II/III
42527	8	42	4.2	+64	15	2.5	130.517648	+64.250708	4.59	1.179	1.18	K2III
42536	8	40	54.5	-52	59	55.9	130.227255	-52.998850	3.60	-0.168	-0.16	B3IV
42568	8	41	5.4	-59	50	17.7	130.272617	-59.838242	4.31	-0.117	-0.08	B1.5III
42570	8	41	20.4	-46	43	33.7	130.335033	-46.726039	3.77	0.670	0.92	F3Ia
42624	8	41	55.5	-47	23	40.7	130.481090	-47.394639	4.74	0.137	0.25	A5II

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
42662	8	42	43.2	-16	1	18.3	130.679981	-16.021761	4.87	1.063	1.04	K0IIICN...
42726	8	43	2.4	-53	11	30.7	130.759866	-53.191863	4.83	-0.173	-0.18	B3IV
42799	8	44	20.8	+3	19	12.8	131.086777	+3.320224	4.30	-0.192	-0.20	B3V...
42806	8	44	31.6	+21	23	23.3	131.131669	+21.389794	4.66	0.010	0.03	A1IV
42828	8	44	27.4	-33	15	53.5	131.114254	-33.264849	3.68	-0.180	-0.17	B1.5III
42835	8	44	43.7	-7	18	44.4	131.182072	-7.312331	4.63	0.840	0.85	G2Ib
42884	8	45	10.1	-42	43	40.8	131.291963	-42.727986	4.05	0.874	0.89	G5III
42911	8	45	54.2	+18	4	26.2	131.475978	+18.073952	3.94	1.083	1.01	K0III
42913	8	45	17.8	-54	47	18.0	131.324362	-54.788338	1.93	0.043	0.05	A1V
43023	8	46	45.4	-46	7	15.4	131.689247	-46.120953	3.87	0.015	0.09	A1III
43067	8	47	23.5	-13	37	38.6	131.847860	-13.627402	4.32	0.900	0.91	G8III
43103	8	47	59.6	+28	40	47.3	131.998406	+28.679816	4.03	1.007	0.96	G8Iab:
43105	8	47	15.9	-56	50	57.9	131.816127	-56.849412	4.50	-0.169	-0.16	B3Vne
43109	8	47	54.7	+6	20	19.5	131.977842	+6.338751	3.38	0.685	0.78	G0III-IV
43234	8	49	34.2	+5	45	25.8	132.392538	+5.757171	4.35	-0.044	-0.03	A0Vn
43347	8	50	32.3	-45	23	19.3	132.634572	-45.388707	4.94	0.043	0.06	A2III
43409	8	51	26.7	-27	47	26.0	132.861332	-27.790562	4.02	1.272	1.24	K3III
43783	8	55	31.9	-60	43	38.0	133.883110	-60.727230	3.84	-0.104	-0.08	B8III
43813	8	56	31.7	+5	51	45.1	134.132198	+5.862529	3.11	0.978	0.96	G8III-IV
43825	8	56	26.9	-27	45	56.1	134.112281	-27.765591	4.87	0.142	0.16	A3IV
43878	8	56	58.2	-52	48	24.4	134.242572	-52.806767	4.68	-0.115	-0.11	B5V
43937	8	57	29.9	-59	18	46.4	134.374682	-59.312885	4.93	-0.182	-0.21	B2IV-V
44066	8	59	39.7	+11	46	23.7	134.915213	+11.773248	4.26	0.141	0.14	A5m
44127	9	0	40.2	+47	57	21.5	135.167484	+47.955972	3.12	0.223	0.25	A7IV
44191	9	0	53.6	-41	20	17.1	135.223484	-41.338093	4.45	0.646	0.75	Fp
44248	9	2	1.6	+41	41	47.5	135.506561	+41.696519	3.96	0.463	0.53	F5V
44382	9	2	46.9	-66	28	56.0	135.695224	-66.482220	4.00	0.145	0.15	Am
44390	9	4	27.2	+67	32	37.7	136.113334	+67.543818	4.74	1.542	2.15	M3III
44471	9	5	5.0	+47	4	11.9	136.270836	+47.069985	3.57	0.007	0.03	A1Vn
44511	9	4	53.8	-47	11	2.7	136.224326	-47.184072	3.75	1.174	1.11	K2III
44599	9	5	11.4	-72	41	21.3	136.297377	-72.689244	4.47	0.607	0.67	F6II-III
44626	9	5	48.3	-70	37	30.5	136.451265	-70.625150	4.66	-0.149	-0.13	B2IVe
44659	9	7	6.2	+5	0	18.9	136.775779	+5.005248	4.99	1.189	1.17	K2II-III
44700	9	7	53.4	+38	21	53.6	136.972535	+38.364887	4.56	1.037	0.97	G8Ib-II
44816	9	8	47.3	-43	31	12.6	137.196997	-43.520172	2.23	1.665	1.69	K4Ib-II
44824	9	8	59.6	-25	56	46.5	137.248131	-25.946245	4.62	1.594	1.66	K4/K5III
44901	9	10	22.5	+51	30	58.9	137.593923	+51.516357	4.46	0.288	0.30	Am
45038	9	12	15.3	+67	2	41.2	138.063825	+67.044787	4.80	0.489	0.57	F7IV-V
45075	9	12	40.0	+63	25	27.9	138.166705	+63.424411	4.67	0.381	0.45	Am
45080	9	11	32.0	-59	3	19.8	137.883444	-59.055489	3.43	-0.190	-0.17	B2IV
45085	9	11	51.3	-44	57	23.9	137.963688	-44.956627	4.99	0.222	0.36	B5Ia
45101	9	11	45.9	-62	24	20.4	137.941348	-62.405654	3.96	-0.180	-0.18	B3IV
45238	9	13	25.6	-69	48	21.5	138.356870	-69.805966	1.67	0.070	0.02	A2IV
45336	9	15	28.9	+2	13	21.2	138.870298	+2.222543	3.89	-0.060	-0.07	B9.5V
45439	9	16	27.6	-38	39	37.2	139.115158	-38.660335	4.92	1.084	1.06	K1III
45448	9	16	36.8	-37	30	12.9	139.153270	-37.503570	4.63	0.473	0.52	F3/F5V
45493	9	17	43.3	+53	55	53.6	139.430575	+53.931558	4.80	0.199	0.26	A5V
45496	9	16	48.5	-57	37	55.4	139.202094	-57.632054	4.34	1.602	1.83	M1III
45556	9	17	39.9	-59	21	57.4	139.416324	-59.365945	2.21	0.189	0.28	A8Ib
45688	9	20	10.5	+36	42	37.3	140.043815	+36.710362	3.82	0.066	0.12	A1V
45751	9	20	48.5	-12	3	59.6	140.202173	-12.066557	4.77	0.927	0.91	G8III
45811	9	21	32.0	-9	38	52.3	140.383320	-9.647866	4.80	0.913	0.92	F5V+...
45856	9	21	27.7	-62	29	48.2	140.365438	-62.496712	4.79	0.926	0.96	G6III
45860	9	22	21.5	+34	18	1.4	140.589715	+34.300401	3.14	1.550	1.65	M0IIIvar
45902	9	22	26.8	-26	3	28.2	140.611499	-26.057828	4.71	1.633	1.91	M0III
45941	9	22	46.8	-55	6	11.1	140.695051	-55.103096	2.47	-0.141	-0.17	B2IV
46026	9	24	8.2	-28	55	35.9	141.034008	-28.926650	4.71	0.892	0.91	G8III
46146	9	25	54.1	+26	5	19.0	141.475511	+26.088619	4.47	1.222	1.20	K2III
46371	9	28	17.5	-22	26	20.0	142.072819	-22.438901	4.72	1.154	1.11	K1III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
46390	9	28	38.6	-8	45	9.9	142.160923	-8.752752	1.99	1.440	1.39	K3III
46509	9	30	14.3	-2	51	49.8	142.559509	-2.863831	4.59	0.411	0.52	F6V
46515	9	30	8.1	-36	2	46.2	142.533568	-36.046153	4.51	1.408	1.37	K3III
46651	9	31	33.0	-40	33	42.4	142.887453	-40.561787	3.60	0.371	0.43	F2IV
46701	9	31	52.6	-57	7	47.2	142.969039	-57.129778	3.16	1.538	1.59	K5III
46733	9	33	12.0	+62	57	58.8	143.300074	+62.966324	3.65	0.360	0.41	F0IV
46750	9	32	56.6	+22	52	19.4	143.235824	+22.872060	4.32	1.541	1.63	K5IIIvar
46771	9	33	6.1	+11	12	12.9	143.275597	+11.203594	4.99	1.046	0.89	K0IIIvar
46776	9	33	4.6	-1	16	49.6	143.269358	-1.280431	4.54	0.109	0.16	A3V
46853	9	34	17.0	+51	34	41.2	143.570971	+51.578111	3.17	0.475	0.56	F6IV
46952	9	35	32.0	+36	18	3.4	143.883356	+36.300949	4.54	0.914	0.91	G8III
46974	9	35	4.1	-59	19	34.2	143.767101	-59.326156	4.08	-0.013	0.01	B5II
46977	9	36	20.7	+69	44	3.0	144.086284	+69.734156	4.54	0.781	0.83	G4III-IV
47006	9	36	17.1	+51	57	16.5	144.071075	+51.954576	4.47	0.027	0.08	A2V
47029	9	36	23.9	+39	31	29.6	144.099401	+39.524876	4.81	0.992	1.00	K0III
47175	9	37	35.8	-49	27	7.1	144.399201	-49.451970	4.34	0.173	0.18	A5V
47193	9	39	59.6	+81	13	43.3	144.998283	+81.228694	4.28	1.488	1.46	K3III
47205	9	38	20.7	+6	44	18.6	144.586085	+6.738503	5.00	1.051	1.03	K1IIIvar
47310	9	39	34.5	+4	33	4.6	144.893725	+4.551265	4.68	1.310	1.35	K3III
47391	9	39	56.7	-61	25	33.2	144.986451	-61.425879	4.51	-0.070	-0.06	B9V
47431	9	40	57.2	-1	14	28.8	145.238298	-1.241332	3.90	1.313	1.29	K3IIIvar
47508	9	42	17.8	+9	47	36.8	145.574003	+9.793543	3.52	0.516	0.59	A5V+...
47522	9	42	15.9	-23	41	24.2	145.566400	-23.690058	4.76	-0.117	-0.10	B5V
47592	9	43	12.7	-24	0	46.4	145.802969	-24.012875	4.93	0.534	0.58	G0V
47758	9	45	9.7	-27	52	7.2	146.290327	-27.868666	4.78	0.516	0.61	A7V+...
47854	9	45	50.3	-62	36	27.1	146.459405	-62.607520	3.69	1.010	1.03	G5Iab/Ib
47908	9	47	4.1	+23	40	27.4	146.766887	+23.674270	2.97	0.808	0.81	G0II
48002	9	47	38.3	-65	10	19.8	146.909631	-65.172168	2.92	0.273	0.42	A9
48319	9	52	30.0	+58	56	11.2	148.125105	+58.936431	3.78	0.291	0.39	F0IV
48356	9	52	30.8	-14	56	53.6	148.128234	-14.948221	4.11	0.918	0.92	G6/G8III
48374	9	52	30.6	-46	38	56.7	148.127663	-46.649081	4.58	1.172	1.10	G5Ib
48402	9	53	33.3	+53	57	45.8	148.388700	+53.962723	4.55	0.038	0.09	A3IV
48455	9	53	58.9	+25	54	17.1	148.495511	+25.904762	3.88	1.222	1.13	K0III
48559	9	55	10.9	-26	2	3.3	148.795248	-26.034244	4.87	1.199	1.19	K2III
48615	9	55	53.1	-19	6	43.2	148.971295	-19.111991	4.94	1.559	1.75	K5III
48774	9	57	37.2	-54	40	14.5	149.404885	-54.670689	3.52	-0.067	-0.04	B5Ib
49029	10	1	20.9	+7	56	24.9	150.336971	+7.940248	4.68	1.589	1.96	M2III
49402	10	6	10.3	-13	10	10.5	151.542992	-13.169596	4.60	-0.087	-0.07	B8V
49583	10	8	30.1	+16	39	25.2	152.125436	+16.657013	3.48	-0.031	0.06	A0Ib
49593	10	8	41.5	+35	8	20.5	152.172741	+35.139014	4.49	0.190	0.19	A7V
49637	10	9	2.6	+9	53	28.9	152.260896	+9.891349	4.39	1.448	1.51	K4III
49641	10	9	2.2	-0	28	38.8	152.259370	-0.477445	4.48	-0.032	-0.01	A0III
49669	10	9	30.9	+11	51	40.8	152.378672	+11.861338	1.36	-0.087	-0.10	B7V
49712	10	9	45.3	-51	55	2.1	152.438862	-51.917254	4.85	-0.120	-0.10	B3IV
49841	10	11	38.2	-12	27	39.9	152.909185	-12.461089	3.61	1.007	0.96	K0III
50099	10	14	14.8	-70	8	41.9	153.561613	-70.144960	3.29	-0.074	-0.03	B8III
50191	10	15	38.5	-42	13	44.5	153.910358	-42.229029	3.85	0.051	0.03	A2V
50335	10	17	52.9	+23	18	33.9	154.470533	+23.309411	3.43	0.307	0.39	F0III
50371	10	17	48.2	-61	26	24.6	154.450951	-61.440160	3.39	1.541	1.45	K3II
50372	10	18	23.1	+42	48	22.2	154.596136	+42.806157	3.45	0.029	0.05	A2IV
50555	10	20	25.4	-55	8	15.9	155.105969	-55.137749	4.59	1.600	1.50	K3II
50564	10	20	54.2	+19	21	40.1	155.225819	+19.361128	4.78	0.452	0.53	F6IV
50583	10	21	9.3	+19	43	55.2	155.288605	+19.732008	2.01	1.128	1.17	K0III
50676	10	21	43.0	-56	9	7.1	155.429232	-56.151964	4.50	-0.102	-0.08	B3III
50799	10	23	15.1	-41	45	31.2	155.812938	-41.758677	4.82	1.095	1.06	K1IIIvar
50801	10	23	36.1	+41	23	26.2	155.900478	+41.390606	3.06	1.603	1.77	M0III SB
50847	10	23	36.5	-67	0	38.2	155.902143	-67.010612	4.97	-0.128	-0.12	B8V
50933	10	25	39.3	+65	27	24.4	156.413931	+65.456783	4.94	-0.052	-0.02	A0sp...
50954	10	24	49.0	-74	8	28.4	156.204161	-74.141231	3.99	0.369	0.43	F2IV

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
51056	10	27	8.4	+33	41	9.3	156.785006	+33.685916	4.72	0.260	0.31	F0V
51069	10	27	7.9	-16	56	47.9	156.782862	-16.946634	3.83	1.456	1.47	K4III
51172	10	28	8.3	-31	10	40.1	157.034473	-31.177813	4.28	1.429	1.47	K4III
51192	10	28	12.8	-57	44	56.1	157.053232	-57.748907	4.65	0.474	0.69	A6Ia
51232	10	28	40.3	-58	50	58.6	157.168022	-58.849609	3.81	0.317	0.41	F2II
51233	10	29	7.2	+36	35	46.7	157.279953	+36.596308	4.20	0.908	0.89	G8III-IV
51438	10	30	52.7	-72	6	13.2	157.719381	-72.103656	4.72	0.042	0.06	A2III
51459	10	31	59.3	+55	52	10.3	157.996946	+55.869516	4.82	0.541	0.58	F8V
51495	10	31	32.0	-73	19	56.2	157.883506	-73.332267	4.94	1.677	1.71	K4/K5III
51523	10	32	12.2	-53	49	30.6	158.050901	-53.825180	4.89	0.500	0.58	F6V
51576	10	32	47.6	-61	47	46.7	158.198297	-61.796308	3.30	-0.089	0.02	B4Vne
51624	10	33	56.5	+9	11	43.2	158.485395	+9.195335	3.84	-0.148	-0.13	B1Ib SB
51658	10	34	28.7	+40	18	51.4	158.619564	+40.314286	4.72	0.222	0.23	A7IV
51808	10	36	51.6	+75	36	4.1	159.214970	+75.601138	4.86	0.957	0.94	K0III
51839	10	35	42.4	-78	43	9.7	158.926496	-78.719368	4.11	1.580	1.71	M0III
51849	10	36	25.1	-57	40	9.7	159.104731	-57.669365	4.45	1.604	1.62	K3/K4II
51979	10	38	14.4	-27	31	28.4	159.560023	-27.524557	4.87	1.626	1.89	M1III
51986	10	38	12.7	-48	20	15.7	159.552732	-48.337682	3.84	0.300	0.35	A3m+...
52009	10	38	37.0	-13	29	48.8	159.654316	-13.496877	4.89	2.800	2.27	C
52085	10	39	37.9	-16	59	19.4	159.907878	-16.988714	4.91	0.922	0.85	G8III
52098	10	39	55.5	+31	51	50.2	159.981193	+31.863942	4.68	0.823	0.82	G0II
52102	10	39	34.4	-59	17	43.1	159.893299	-59.295301	4.69	1.562	1.63	K4/K5III:
52154	10	40	10.0	-55	42	56.4	160.041779	-55.715655	4.29	1.025	0.96	G2II
52370	10	43	0.2	-64	34	45.4	160.750832	-64.579280	4.76	-0.139	-0.13	B3V
52419	10	43	43.7	-64	30	26.7	160.932170	-64.507424	2.74	-0.220	-0.24	B0Vp
52468	10	44	21.7	-60	40	47.1	161.090541	-60.679749	4.58	1.700	1.79	K3Ib
52502	10	44	53.9	-64	4	27.3	161.224588	-64.074244	4.80	-0.134	-0.12	B5Vn
52633	10	45	57.7	-80	39	13.0	161.490273	-80.653622	4.45	-0.188	-0.19	B2.5IV
52727	10	47	41.9	-49	32	3.3	161.924698	-49.534263	2.69	0.901	0.91	G5III SB
52736	10	47	38.5	-64	29	49.6	161.910493	-64.497117	4.87	-0.149	-0.18	B3IV
52943	10	50	41.2	-16	18	23.9	162.671735	-16.306649	3.11	1.232	1.22	K0/K1III
53229	10	54	30.5	+34	5	54.5	163.627116	+34.098468	3.79	1.040	1.07	K0III-IV
53253	10	54	22.4	-58	58	3.7	163.593483	-58.967684	3.78	0.945	0.96	K0III-IV...
53295	10	55	12.5	+43	4	29.9	163.802114	+43.074978	4.66	-0.039	0.01	A1Vs
53417	10	56	46.4	+24	38	4.4	164.193377	+24.634564	4.30	0.016	0.07	A1
53502	10	57	43.4	-37	15	13.3	164.430796	-37.253706	4.60	1.006	0.99	K0III
53740	11	0	49.4	-18	24	49.2	165.205970	-18.413668	4.08	1.079	1.06	K1III
53773	11	1	8.7	-42	20	29.5	165.286348	-42.341518	4.37	0.116	0.13	A3IV
53807	11	1	40.2	+3	30	5.9	165.417621	+3.501652	4.84	1.144	1.13	K1III
53824	11	1	51.6	+5	59	8.0	165.465023	+5.985547	4.98	0.166	0.18	A5III
53907	11	2	55.5	-2	36	2.6	165.731147	-2.600709	4.73	1.593	1.77	K5III
53910	11	3	7.5	+56	16	0.1	165.781218	+56.266696	2.34	0.033	0.02	A1V
53954	11	3	28.5	+20	3	50.7	165.868584	+20.064091	4.42	0.053	0.03	A1m
54061	11	5	2.2	+61	38	4.8	166.259101	+61.634659	1.81	1.061	1.03	F7V comp
54182	11	6	7.5	+7	13	9.9	166.531286	+7.219414	4.62	0.332	0.39	F2III-IVvar
54204	11	6	22.2	-27	24	36.0	166.592641	-27.410003	4.92	0.369	0.43	F3IV/V
54301	11	7	25.8	-62	32	26.0	166.857423	-62.540546	4.62	0.988	0.97	G8III
54463	11	9	30.9	-59	5	30.3	167.378869	-59.091756	3.93	1.225	1.19	G0Ia0
54539	11	10	51.9	+44	22	53.2	167.716062	+44.381458	3.00	1.144	1.09	K1III
54682	11	12	43.1	-22	56	36.6	168.179543	-22.943506	4.46	0.025	0.04	A1V
54751	11	13	31.8	-60	26	5.2	168.382618	-60.434787	4.59	0.541	0.70	A6Ia
54872	11	15	14.9	+20	24	20.2	168.812191	+20.405612	2.56	0.128	0.12	A4V
54879	11	15	22.0	+15	18	42.3	168.841546	+15.311751	3.33	-0.003	0.01	A2V
54951	11	16	20.6	+22	58	40.8	169.086008	+22.977992	4.56	1.657	2.27	M3III
55084	11	17	45.3	-3	46	9.9	169.438783	-3.769406	4.45	0.210	0.25	A7IVn
55203	0	1	6.1	+0	7	10.8	0.275436	+0.119675	3.79	0.606	0.68	G0V
55219	11	19	38.1	+32	58	36.1	169.908815	+32.976695	3.49	1.400	1.37	K3III SB
55266	11	20	17.8	+38	4	2.4	170.074357	+38.067328	4.76	0.113	0.11	A2V
55282	11	20	25.0	-14	53	42.7	170.104362	-14.895183	3.56	1.112	1.12	K0III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
55425	11	21	59.7	-54	36	32.5	170.498674	-54.609024	3.90	-0.157	-0.16	B5Vn
55434	11	22	14.7	+5	54	40.5	170.561123	+5.911239	4.05	-0.058	-0.06	B9.5Vs
55560	11	23	59.9	+43	21	52.1	170.999744	+43.364468	4.99	0.998	0.94	G8II
55588	11	24	15.4	-36	16	58.6	171.064277	-36.282954	5.00	1.464	1.47	K4III
55642	11	25	2.6	+10	24	38.9	171.260735	+10.410813	4.00	0.423	0.47	F2IV SB
55687	11	25	41.8	-10	58	38.9	171.424259	-10.977476	4.81	1.556	1.67	K5III
55705	11	25	57.5	-17	48	8.3	171.489602	-17.802307	4.06	0.216	0.24	A9V
55945	11	29	2.6	+2	44	15.6	172.260672	+2.737658	4.95	1.000	0.95	G8II-III
56127	11	31	24.8	-3	7	20.3	172.853462	-3.122311	4.77	1.529	1.62	K4III
56211	11	32	39.4	+69	12	43.8	173.164171	+69.212181	3.82	1.613	1.79	M0IIIvar
56280	11	33	20.6	-29	22	44.5	173.335694	-29.379015	4.93	0.540	0.61	F8V
56343	11	34	3.8	-31	58	36.3	173.515891	-31.976746	3.54	0.947	0.92	G8III
56480	11	35	47.3	-54	22	58.7	173.947169	-54.382974	4.62	-0.077	-0.06	B9V
56561	11	36	47.0	-63	8	20.1	174.196009	-63.138917	3.11	-0.044	-0.01	B9II:
56633	11	37	46.4	-9	55	16.7	174.443493	-9.921316	4.70	-0.073	-0.06	B9.5Vn
56647	11	38	3.0	-0	56	33.3	174.512473	-0.942595	4.30	0.983	0.98	G9III
56922	11	41	17.1	-34	51	50.1	175.321433	-34.863925	4.70	-0.070	-0.05	B9V
56986	11	41	55.3	-62	12	33.8	175.480371	-62.209377	4.93	1.111	1.11	G3Ib
57175	11	44	33.4	-62	36	31.6	176.139301	-62.608775	5.00	0.784	0.87	F9Ia
57283	11	45	51.3	-18	28	12.9	176.463783	-18.470248	4.71	0.958	0.94	G8III
57328	11	46	23.5	+8	8	18.7	176.597852	+8.138539	4.84	0.174	0.19	A4V
57363	11	46	38.1	-66	50	52.9	176.658810	-66.848025	3.63	0.160	0.17	A7III
57380	11	46	57.8	+6	24	31.9	176.740954	+6.408861	4.04	1.501	1.79	M0III
57399	11	47	10.7	+47	39	36.4	176.794475	+47.660100	3.69	1.181	1.15	K0III
57439	11	47	33.9	-61	17	52.7	176.891277	-61.297978	4.11	0.895	0.88	G0II
57443	11	47	33.0	-40	37	2.9	176.887352	-40.617483	4.89	0.664	0.73	G3/G5V
57565	11	49	5.6	+20	5	57.8	177.273127	+20.099382	4.50	0.547	0.69	A comp SB
57581	11	49	17.5	-66	56	4.3	177.322729	-66.934537	4.75	1.522	1.62	K4III
57632	11	50	9.3	+14	27	6.6	177.538739	+14.451844	2.14	0.090	0.10	A3Vvar
57669	11	50	44.6	-63	54	28.9	177.685899	-63.908019	4.30	-0.149	-0.09	B3V
57696	11	50	59.4	-70	20	43.3	177.747311	-70.345374	4.98	1.360	1.31	G5Ib
57757	11	51	48.9	+1	38	36.8	177.953723	+1.643547	3.59	0.518	0.61	F8V
57803	11	52	13.6	-45	17	35.2	178.056677	-45.293118	4.47	1.283	1.24	K4III
57851	11	52	55.1	-65	19	32.0	178.229769	-65.325558	4.89	-0.123	-0.11	B4V
57936	11	53	60.0	-34	1	39.9	178.499895	-34.027737	4.29	-0.100	-0.07	Ap Si
58001	11	54	57.2	+53	34	30.7	178.738168	+53.575185	2.41	0.044	0.06	A0V SB
58484	12	0	43.5	-78	20	29.6	180.181257	-78.341564	4.88	-0.054	-0.02	B9Vn
58590	12	1	58.5	+6	29	40.1	180.493641	+6.494476	4.65	0.122	0.14	A5V
58758	12	4	8.0	-63	25	57.2	181.033436	-63.432556	4.32	0.280	0.36	Am
58867	12	5	26.5	-63	17	7.3	181.360332	-63.285360	4.72	-0.081	-0.06	B2IV
58948	12	6	18.2	+8	36	49.3	181.575925	+8.613683	4.12	0.967	0.96	G8III
59072	12	8	1.1	-64	44	0.8	182.004539	-64.733561	4.14	0.353	0.41	F2III
59173	12	9	12.6	-50	46	51.3	182.302415	-50.780926	4.46	-0.163	-0.16	B2IIIne
59196	12	9	28.9	-50	50	31.4	182.370288	-50.842048	2.58	-0.128	-0.12	B2IVne
59199	12	9	31.6	-24	50	55.3	182.381647	-24.848689	4.02	0.334	0.40	F0IV/V
59316	12	11	14.0	-22	44	21.3	182.808483	-22.739251	3.02	1.326	1.23	K2III
59449	12	12	47.1	-52	29	17.1	183.196287	-52.488073	3.97	-0.156	-0.17	B3V
59747	12	16	18.0	-58	52	6.2	184.074891	-58.868385	2.79	-0.193	-0.25	B2IV
59774	12	16	28.9	+56	54	47.8	184.120238	+56.913277	3.32	0.077	0.03	A3Vvar
59803	12	16	54.9	-17	39	40.2	184.228710	-17.661170	2.58	-0.107	-0.10	B8III
59847	12	17	25.7	+23	49	33.7	184.356938	+23.826023	4.93	0.957	0.94	K0III
59856	12	17	34.8	+32	56	29.5	184.394849	+32.941529	4.99	1.140	1.12	K1III
59929	12	18	45.2	-68	4	48.7	184.688128	-68.080190	4.06	1.603	2.82	M5III
60000	12	19	39.3	-79	25	53.2	184.913821	-79.431435	4.24	-0.123	-0.11	B5Vn
60009	12	19	37.1	-64	7	20.6	184.904771	-64.122395	4.06	-0.168	-0.18	B2.5V
60129	12	21	0.4	-0	47	10.1	185.251713	-0.786138	3.89	0.026	0.03	A2IV
60172	12	21	26.5	+3	11	34.9	185.360520	+3.193029	4.97	1.172	1.19	K1III
60202	12	21	48.1	+17	40	27.2	185.450493	+17.674223	4.72	1.010	1.02	G8III
60260	12	22	32.1	-60	31	11.1	185.633646	-60.519739	3.59	1.389	1.39	K3/K4III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
60351	12	23	35.0	+25	43	37.3	185.895862	+25.727037	4.78	0.515	0.61	F8:p...
60485	12	25	3.8	+51	26	36.0	186.265701	+51.443333	4.76	0.877	0.89	G7III
60697	12	27	28.4	+27	8	57.6	186.868390	+27.149327	4.92	0.277	0.28	F0p
60710	12	27	42.1	-51	34	10.3	186.925242	-51.569532	4.82	-0.141	-0.16	B3Vn
60718	12	27	48.6	-63	13	4.8	186.952554	-63.218011	0.77	-0.243	-0.26	B0.5IV
60742	12	28	0.4	+28	8	56.9	187.001675	+28.149134	4.35	1.128	1.04	K2IIICN+...
60746	12	28	3.6	+26	42	24.6	187.015196	+26.706832	4.98	0.088	0.05	A4V
60823	12	29	12.7	-50	20	58.0	187.303018	-50.349451	3.91	-0.192	-0.20	B3V
60965	12	30	58.8	-16	38	5.5	187.744937	-16.634868	2.94	-0.012	-0.04	B9.5V
61084	12	32	22.3	-57	13	59.8	188.092869	-57.233281	1.59	1.600	2.37	M4III
61174	12	33	10.9	-16	18	53.3	188.295421	-16.314814	4.30	0.388	0.44	F2V
61199	12	33	46.8	-72	15	5.2	188.444863	-72.251447	3.84	-0.157	-0.14	B5V
61281	12	34	23.3	+69	40	11.8	188.597249	+69.669938	3.85	-0.116	-0.02	B6IIIp
61317	12	34	45.6	+41	14	27.0	188.689908	+41.240846	4.24	0.588	0.67	G0V
61359	12	35	31.2	-23	30	55.3	188.880142	-23.515372	2.65	0.893	0.88	G5II
61384	12	35	38.0	+69	54	12.6	188.908126	+69.903494	4.95	1.312	1.27	K2III
61394	12	35	55.3	+22	30	40.2	188.980262	+22.511173	4.80	0.012	0.03	A0IV
61585	12	38	29.4	-69	15	13.3	189.622457	-69.253685	2.69	-0.176	-0.23	B2IV-V
61622	12	38	53.3	-48	39	33.7	189.722050	-48.659350	3.85	0.049	0.06	A2V
61740	12	40	21.5	-8	6	48.9	190.089436	-8.113584	4.66	1.240	1.15	K2III
61789	12	41	2.8	-40	6	18.9	190.261655	-40.105263	4.63	-0.082	-0.06	B8II/III
61932	12	42	42.8	-49	4	39.2	190.678272	-49.077556	2.20	-0.023	-0.01	A1IV
61941	12	42	45.0	-1	34	0.0	190.687590	-1.566674	2.74	0.368	0.43	F0V+...
61960	12	42	58.3	+10	7	2.9	190.743040	+10.117473	4.88	0.076	0.08	A0V
61966	12	43	11.7	-59	48	12.4	190.798743	-59.803457	4.91	-0.044	-0.02	B6IV
62012	12	43	47.5	-48	55	51.0	190.947736	-48.930843	4.66	1.075	1.03	K0III
62268	12	46	54.9	-61	5	56.2	191.728711	-61.098941	4.69	1.049	1.03	K1III
62322	12	47	37.3	-68	13	31.3	191.905600	-68.225352	3.04	-0.178	-0.19	B2V
62327	12	47	37.6	-56	36	21.8	191.906620	-56.606068	4.62	-0.150	-0.16	B3V
62434	12	48	59.5	-59	48	21.1	192.248117	-59.805860	1.25	-0.238	-0.27	B0.5III
62683	12	51	51.5	-34	6	57.9	192.964707	-34.116079	4.90	-0.031	-0.01	B9V
62763	12	52	44.6	+27	25	26.7	193.185983	+27.424079	4.93	0.681	0.70	G0III
62867	12	54	20.5	-49	3	35.5	193.585491	-49.059865	4.33	1.344	1.33	K3/K4III
62886	12	54	21.2	+21	7	42.1	193.588309	+21.128366	4.89	0.904	0.91	G8III
62896	12	54	38.1	-40	17	43.3	193.658788	-40.295363	4.25	0.224	0.27	A4IV
62956	12	54	58.1	+55	50	36.5	193.742245	+55.843461	1.76	-0.022	-0.04	A0p
62985	12	55	28.4	-9	39	19.3	193.868311	-9.655366	4.77	1.590	2.18	M3IIIvar
63003	12	55	52.3	-57	17	39.2	193.967930	-57.294220	4.03	-0.180	-0.26	B2IV-V
63007	12	55	56.7	-59	15	46.8	193.986298	-59.262996	4.62	-0.153	-0.15	B4Vn
63090	12	56	41.2	+3	16	51.8	194.171853	+3.281059	3.39	1.571	2.24	M3III
63125	12	57	1.8	+38	12	9.5	194.257604	+38.202647	2.89	-0.115	-0.13	A0spe...
63355	12	59	59.2	+17	17	38.3	194.996616	+17.293979	4.76	1.568	1.79	M0III
63462	13	1	18.1	+30	40	10.2	195.325269	+30.669494	4.88	1.165	1.13	K1IIIp
63503	13	1	38.7	+56	15	3.3	195.411299	+56.250918	4.93	0.368	0.45	F2V
63608	13	3	14.8	+10	50	38.6	195.811727	+10.844043	2.85	0.934	0.83	G8IIIvar
63613	13	3	47.0	-71	39	51.0	195.945808	-71.664168	3.61	1.190	1.17	K2III
63724	13	4	48.6	-49	38	32.4	196.202640	-49.642342	4.83	0.029	0.05	A0V
63945	13	7	32.1	-48	34	40.8	196.883736	-48.577987	4.71	-0.148	-0.14	B5V
64004	13	8	10.6	-50	1	15.0	197.044237	-50.020834	4.27	-0.182	-0.18	B1.5V
64022	13	8	12.5	+27	30	35.5	197.052174	+27.509850	4.80	1.482	1.55	K5III
64166	13	10	13.0	-23	13	57.0	197.554264	-23.232496	4.94	1.048	1.02	K0III
64238	13	11	3.9	-5	39	11.7	197.766246	-5.653257	4.38	-0.008	0.01	A1V
64241	13	11	2.0	+17	24	58.1	197.758286	+17.416131	4.32	0.455	0.53	F5V
64394	13	12	52.5	+27	46	10.5	198.218833	+27.769573	4.23	0.572	0.67	G0V
64408	13	13	15.6	-37	54	59.3	198.314881	-37.916460	4.85	0.693	0.73	G3V
64425	13	13	39.2	-60	2	3.6	198.413255	-60.034341	4.58	-0.073	-0.07	B8V
64540	13	14	41.3	+40	2	22.3	198.671903	+40.039518	4.94	1.061	1.03	K0III
64583	13	15	36.0	-59	13	2.9	198.900070	-59.217474	4.90	0.489	0.56	F7IV
64661	13	16	44.0	-68	0	28.1	199.183307	-68.007808	4.79	-0.078	-0.09	B8V

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
64820	13	18	41.5	-66	53	46.7	199.672765	-66.896294	4.86	1.480	1.50	K2Ib/II
64844	13	18	30.2	+40	27	35.7	199.625907	+40.459908	4.72	0.306	0.31	F3III
64852	13	18	41.5	+5	21	25.7	199.672779	+5.357143	4.78	1.638	1.97	M2III
64924	13	19	32.1	-18	25	48.2	199.883598	-18.430045	4.74	0.709	0.75	G5V
64962	13	20	5.7	-23	17	3.5	200.023737	-23.284297	2.99	0.920	0.90	G8III
65109	13	21	48.8	-36	49	30.2	200.453223	-36.825050	2.75	0.068	0.02	A2V
65271	13	24	2.4	-61	6	1.2	201.010010	-61.100332	4.52	-0.141	-0.13	B3V
65378	13	24	47.3	+54	48	48.9	201.196890	+54.813574	2.23	0.057	0.07	A2V
65387	13	25	28.5	-64	38	50.6	201.368895	-64.647377	4.52	0.822	0.87	G5III-IV
65474	13	26	19.7	-11	16	22.4	201.582106	-11.272901	0.98	-0.235	-0.25	B1V
65477	13	26	5.0	+54	52	35.2	201.520820	+54.876445	3.99	0.169	0.19	A5V SB
65639	13	28	36.2	-16	5	3.9	202.150762	-16.084408	4.76	1.096	1.02	K1IIICN...
65721	13	29	28.9	+13	39	52.7	202.370506	+13.664653	4.97	0.714	0.77	G5V
65936	13	32	17.9	-39	31	3.4	203.074754	-39.517601	3.90	1.186	1.10	G8II/III
66006	13	33	5.1	-6	21	58.0	203.271214	-6.366124	4.68	1.606	2.06	M3III
66200	13	35	13.4	+3	32	57.2	203.805712	+3.549219	4.92	0.029	0.03	A1p SrCrEu
66234	13	35	19.8	+48	54	23.6	203.832563	+48.906569	4.68	0.132	0.10	A5V
66249	13	35	47.4	-0	42	18.1	203.947657	-0.705027	3.38	0.114	0.12	A3V
66257	13	35	45.3	+37	4	22.4	203.938667	+37.072876	4.91	0.404	0.55	F2IV SB
66458	13	38	24.8	+36	11	10.0	204.603512	+36.186122	4.82	0.239	0.31	A7III
66657	13	41	15.8	-53	34	29.3	205.315975	-53.574804	2.29	-0.171	-0.23	B1III
66738	13	41	33.1	+54	34	24.1	205.387709	+54.573359	4.63	1.630	1.97	M2IIIvar
66821	13	43	8.2	-54	40	3.0	205.784371	-54.667486	4.99	-0.055	-0.03	B8Vn+...
67153	13	46	55.0	-33	9	5.8	206.728976	-33.151606	4.23	0.390	0.44	F3V
67234	13	48	1.8	-51	32	23.0	207.007496	-51.539715	4.64	0.955	0.93	G8/K0III
67275	13	48	17.1	+17	21	1.9	207.071097	+17.350536	4.50	0.508	0.51	F7V
67301	13	48	23.1	+49	12	23.5	207.096450	+49.206534	1.85	-0.099	-0.08	B3V SB
67457	13	50	41.9	-34	33	26.1	207.674481	-34.557261	4.19	1.520	3.00	M5III
67459	13	50	30.9	+15	41	31.2	207.628626	+15.691988	4.05	1.520	1.60	K5IIIvar
67464	13	50	48.2	-41	47	38.2	207.700758	-41.793944	3.41	-0.225	-0.24	B2IV
67472	13	50	55.2	-42	34	47.8	207.730167	-42.579932	3.47	-0.170	-0.21	B2IV-Ve
67480	13	50	43.8	+21	9	29.2	207.682552	+21.158105	4.92	1.432	1.38	K4III
67494	13	51	2.6	-18	14	25.6	207.760899	-18.240431	4.96	1.059	1.09	K0III
67627	13	52	3.6	+64	37	3.1	208.015081	+64.617516	4.58	1.572	2.35	M3III
67665	13	52	44.3	+34	20	18.4	208.184561	+34.338453	4.76	1.611	1.63	K5III
67669	13	53	4.5	-33	5	59.4	208.268543	-33.099822	4.32	-0.146	-0.12	B5
67786	13	54	27.2	-32	1	58.4	208.613196	-32.032890	4.75	-0.111	-0.10	B4IV
67927	13	55	42.5	+18	17	26.7	208.927107	+18.290755	2.68	0.580	0.65	G0IV
68002	13	56	53.5	-47	23	35.7	209.222959	-47.393252	2.55	-0.176	-0.18	B2.5IV
68191	13	59	13.6	-63	47	27.4	209.806765	-63.790935	4.71	1.075	1.05	K4III
68245	13	59	35.2	-42	12	17.2	209.896755	-42.204789	3.83	-0.224	-0.23	B2IV
68282	14	0	1.0	-44	54	27.1	210.004235	-44.907522	3.87	-0.208	-0.22	B2IV-V
68520	14	2	44.5	+1	26	28.8	210.685591	+1.441344	4.23	0.121	0.14	A3V
68523	14	3	4.6	-45	42	23.6	210.769029	-45.706552	4.34	0.598	0.65	F6II
68702	14	5	21.6	-60	28	32.2	211.339964	-60.475608	0.61	-0.231	-0.25	B1III
68756	14	4	58.3	+64	16	24.8	211.243114	+64.273552	3.67	-0.049	-0.08	A0III SB
68862	14	7	22.0	-41	16	53.8	211.841853	-41.281606	4.36	-0.198	-0.21	B2V
68895	14	7	36.1	-26	47	5.8	211.900339	-26.784952	3.25	1.091	1.10	K2III
68933	14	7	57.3	-36	28	28.8	211.988865	-36.474655	2.06	1.011	1.01	K0IIIb
69112	14	8	47.8	+77	26	47.2	212.199172	+77.446447	4.80	1.368	1.34	K3III
69191	14	11	21.5	-53	32	24.8	212.839667	-53.540229	4.74	0.938	0.92	G8III
69226	14	11	22.7	+24	59	26.3	212.844787	+24.990644	4.82	0.541	0.57	F9IVw
69269	14	12	1.2	-16	24	9.4	213.004868	-16.402623	4.93	1.684	1.94	M1III
69389	14	13	21.2	+2	18	32.9	213.338326	+2.309143	4.99	-0.118	-0.11	B9p Si
69427	14	14	2.7	-10	22	22.2	213.511414	-10.372828	4.18	1.323	1.35	K3III
69483	14	14	15.2	+51	41	24.3	213.563193	+51.690070	4.53	0.233	0.23	A8IV
69673	14	16	38.6	+19	4	17.7	214.160760	+19.071572	-0.05	1.239	1.22	K2IIIp
69701	14	17	8.6	-6	6	7.3	214.286031	-6.102041	4.07	0.511	0.59	F7V
69713	14	16	55.6	+51	16	7.3	214.231525	+51.268697	4.75	0.236	0.19	A9V

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
69732	14	17	12.0	+45	59	24.9	214.300020	+45.990249	4.18	0.087	0.04	A0sh
69879	14	18	54.3	+35	24	39.9	214.726300	+35.411095	4.80	1.057	1.00	K1III
69896	14	21	4.3	-81	6	22.6	215.267864	-81.106279	4.89	0.243	0.24	A2m...
69974	14	20	16.6	-13	28	8.6	215.069145	-13.469047	4.52	0.128	0.11	A1V
69996	14	20	47.4	-46	9	22.0	215.197646	-46.156118	3.55	-0.184	-0.18	B2.5IV
70027	14	20	46.3	+16	12	33.6	215.193008	+16.209346	4.84	1.228	1.16	K3III
70069	14	21	50.6	-56	29	3.3	215.460922	-56.484248	4.30	0.082	0.21	B6Ib
70090	14	21	52.4	-37	58	58.9	215.468166	-37.983028	4.05	-0.030	-0.02	A0IV
70104	14	22	5.5	-45	17	6.4	215.522983	-45.285100	4.78	0.310	0.36	F0IV
70264	14	24	10.5	-58	33	21.7	216.043777	-58.556022	4.76	0.795	0.83	G8/K1 +F/G
70300	14	24	22.2	-39	36	31.9	216.092590	-39.608856	4.41	-0.185	-0.20	B2V
70306	14	24	20.4	-27	51	5.8	216.085199	-27.851604	4.78	1.300	1.31	K3III
70327	14	24	26.2	+8	20	59.0	216.109178	+8.349714	4.86	0.010	0.07	A0V
70497	14	25	55.7	+51	45	7.5	216.482131	+51.752077	4.04	0.497	0.59	F7V
70574	14	27	31.6	-45	19	2.8	216.881802	-45.317448	4.56	-0.147	-0.14	B2IV
70576	14	27	34.4	-45	28	30.9	216.893232	-45.475242	4.33	0.434	0.58	A7:+...
70638	14	30	37.8	-83	45	47.9	217.657429	-83.763297	4.31	1.300	1.30	K2III
70692	14	27	30.3	+75	36	1.4	216.876361	+75.600393	4.25	1.431	1.42	K4III
70753	14	29	26.3	-29	35	13.6	217.359718	-29.587099	4.97	-0.074	-0.05	B7/B8V
70755	14	29	18.7	-2	19	23.9	217.328063	-2.323313	4.81	0.693	0.73	G2III
71053	14	32	45.4	+30	16	40.5	218.189046	+30.277927	3.57	1.298	1.22	K3III
71075	14	32	56.6	+38	12	54.0	218.235767	+38.214997	3.04	0.191	0.17	A7IIIvar
71121	14	34	4.7	-50	33	4.0	218.519633	-50.551114	4.44	-0.177	-0.18	B2III
71284	14	35	37.0	+29	39	9.4	218.904011	+29.652621	4.47	0.364	0.41	F3Vwvar
71352	14	36	52.9	-42	15	3.4	219.220298	-42.250955	2.33	-0.157	-0.17	B1Vn +A
71536	14	39	20.7	-49	31	5.3	219.836295	-49.518137	4.05	-0.152	-0.16	B5V
71681	14	41	4.0	-60	55	23.5	220.266772	-60.923185	1.35	0.900	0.88	K1V
71683	14	41	5.2	-60	55	21.9	220.271747	-60.922740	-0.01	0.710	0.69	G2V
71762	14	41	44.2	+16	19	37.6	220.434277	+16.327118	4.49	-0.002	0.02	B9p MnHg
71795	14	42	10.6	+13	38	13.6	220.544160	+13.637111	3.78	0.044	0.06	A3IVn
71832	14	42	42.2	+8	4	15.0	220.675742	+8.070841	4.86	0.992	0.96	G8IIIvar
71860	14	43	22.2	-47	28	44.8	220.842474	-47.479122	2.30	-0.154	-0.21	B1.5III
71865	14	43	18.2	-37	53	4.1	220.825748	-37.884464	4.01	-0.157	-0.18	B2.5V
71908	14	44	16.2	-65	4	1.3	221.067549	-65.067034	3.18	0.256	0.26	F1Vp
71957	14	44	11.8	-5	45	1.9	221.048974	-5.750519	3.87	0.385	0.47	F2III
71995	14	44	22.1	+26	26	14.6	221.091933	+26.437397	4.80	1.672	2.13	M3III
72010	14	44	58.8	-35	15	53.6	221.244850	-35.264897	4.06	1.356	1.35	K3III
72104	14	46	18.7	-35	16	53.7	221.578103	-35.281589	4.92	0.013	0.02	A0V
72105	14	45	55.6	+26	59	4.3	221.481496	+26.984520	2.35	0.966	0.95	A0
72125	14	46	14.7	+16	52	27.4	221.561223	+16.874264	4.60	0.972	0.94	K0III
72220	14	47	20.2	+1	48	12.2	221.834373	+1.803402	3.73	-0.005	0.01	A0V
72370	14	50	38.1	-79	8	0.0	222.658645	-79.133341	3.83	1.433	1.42	K5III
72571	14	51	33.4	-28	2	55.1	222.889179	-28.048643	4.42	1.366	1.43	K3III
72607	14	50	39.9	+74	4	3.3	222.666128	+74.067582	2.07	1.465	1.46	K4IIIvar
72622	14	52	4.3	-16	7	47.6	223.017911	-16.129892	2.75	0.147	0.16	A3IV
72631	14	52	8.1	-2	23	15.2	223.033745	-2.387546	4.93	0.988	0.97	G8...
72659	14	52	22.9	+19	0	44.9	223.095611	+19.012480	4.54	0.720	0.82	G8V +K4V
72683	14	53	3.1	-43	39	46.5	223.262736	-43.662917	4.32	-0.154	-0.14	B5IV
73165	14	58	18.5	-4	25	58.1	224.577127	-4.432815	4.47	0.318	0.38	F0V
73199	14	57	55.9	+65	50	49.9	224.482949	+65.847202	4.63	1.590	2.85	M5III
73273	14	59	57.0	-43	13	8.7	224.987331	-43.219086	2.68	-0.184	-0.23	B2III
73334	15	0	34.1	-42	11	20.4	225.142195	-42.188991	3.13	-0.208	-0.21	B2IV
73473	15	2	7.4	-8	36	10.8	225.530990	-8.603012	4.91	0.000	0.07	B9.5V
73555	15	2	45.4	+40	18	23.9	225.689014	+40.306645	3.49	0.956	0.89	G8III
73568	15	3	3.0	+24	55	27.1	225.762675	+24.924190	4.80	1.506	1.54	K4III
73620	15	3	59.3	+2	0	28.9	225.997191	+2.008037	4.39	1.026	1.04	K0III
73695	15	4	29.9	+47	34	15.9	226.124383	+47.571089	4.83	0.647	0.71	G2V +G2V
73714	15	5	20.0	-25	21	54.3	226.333395	-25.365094	3.25	1.674	2.23	M3/M4III
73745	15	5	22.0	+26	51	53.4	226.341853	+26.864830	4.52	1.240	1.23	K2III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
73807	15	6	35.5	-47	8	1.7	226.648098	-47.133802	3.91	-0.144	-0.15	B5
73996	15	8	14.7	+24	47	11.5	227.061442	+24.786538	4.93	0.429	0.51	F5V
74117	15	10	18.1	-45	21	39.7	227.575264	-45.361025	4.07	-0.162	-0.18	B3V
74376	15	13	26.4	-48	49	4.5	228.360017	-48.817910	3.88	-0.029	-0.02	B9V
74392	15	13	27.1	-19	52	18.0	228.362771	-19.871653	4.54	-0.071	-0.06	Asp...
74395	15	13	50.5	-52	10	45.6	228.460466	-52.179326	3.41	0.918	0.91	G8III
74449	15	14	16.8	-44	34	48.1	228.569938	-44.580016	4.83	-0.177	-0.19	B3IV
74604	15	15	56.7	-31	35	52.5	228.986191	-31.597906	4.91	0.374	0.48	F3III
74666	15	16	22.2	+33	14	8.3	229.092448	+33.235651	3.46	0.961	0.96	G8III
74785	15	18	10.0	-9	27	39.3	229.541672	-9.460925	2.61	-0.071	-0.08	B8V
74824	15	19	12.9	-58	52	46.5	229.803576	-58.879577	4.07	0.088	0.08	A3V
74837	15	19	29.2	-63	41	16.5	229.871616	-63.687912	4.85	1.260	1.20	K2.5III
74857	15	19	8.7	-30	13	34.4	229.786074	-30.226228	4.35	1.100	1.03	K1II/III
74911	15	20	2.4	-47	57	9.6	230.009827	-47.952674	4.27	-0.086	-0.07	B8V
74946	15	20	56.9	-68	45	24.1	230.237095	-68.756686	2.87	0.014	0.04	A1V
75097	15	20	42.7	+71	45	26.9	230.177742	+71.757482	3.00	0.058	0.12	A3II-III
75141	15	22	47.5	-40	43	25.5	230.697709	-40.723748	3.22	-0.227	-0.23	B1.5IV
75177	15	23	10.6	-36	20	16.1	230.794267	-36.337803	3.57	1.534	1.59	K5III
75206	15	23	38.7	-48	0	15.6	230.911433	-48.004328	4.99	0.515	0.59	F8V
75264	15	24	9.0	-44	45	55.0	231.037501	-44.765290	3.37	-0.191	-0.20	B2IV-V
75304	15	24	32.2	-36	56	2.4	231.134047	-36.933990	4.54	-0.155	-0.16	B4V
75312	15	24	5.6	+30	12	40.8	231.023411	+30.211328	4.99	0.577	0.65	G2V
75323	15	25	6.4	-59	23	46.4	231.276817	-59.396216	4.48	0.169	0.18	B5III +F8
75379	15	25	22.0	-10	23	53.3	231.341620	-10.398152	4.92	0.453	0.52	F5IV
75411	15	25	18.2	+37	18	9.8	231.325789	+37.302711	4.31	0.309	0.35	F0V
75458	15	25	24.7	+58	53	28.8	231.352747	+58.891329	3.29	1.166	1.07	K2III
75501	15	26	44.3	-38	48	29.5	231.684569	-38.808182	4.60	0.000	0.02	A0V
75695	15	28	43.0	+29	1	57.5	232.178964	+29.032642	3.66	0.319	0.37	F0p
76008	15	30	49.1	+77	16	37.2	232.704727	+77.276992	5.00	1.545	1.61	K5III
76041	15	32	33.2	+40	49	38.3	233.138356	+40.827294	4.98	0.086	0.15	A5V
76127	15	33	47.8	+31	17	15.5	233.449303	+31.287630	4.14	-0.127	-0.12	B6Vnn
76219	15	35	21.4	-10	8	12.3	233.839014	-10.136755	4.61	1.000	1.02	K1IV
76267	15	35	35.9	+26	38	36.5	233.899654	+26.643468	2.22	0.032	0.05	A0V
76276	15	35	49.8	+10	28	5.7	233.957706	+10.468254	3.80	0.268	0.30	F0IV
76297	15	36	34.9	-41	14	14.3	234.145240	-41.237307	2.80	-0.216	-0.22	B2IV
76333	15	36	43.9	-14	51	35.2	234.183047	-14.859784	3.91	1.007	1.02	K0III
76371	15	37	22.6	-45	1	42.9	234.344127	-45.028590	4.55	-0.175	-0.20	B3IVp
76440	15	38	42.8	-66	23	13.1	234.678194	-66.386972	4.11	1.161	1.12	K0III
76470	15	38	20.0	-28	12	17.0	234.583513	-28.204731	3.60	1.361	1.36	K3III
76552	15	39	30.6	-42	38	10.3	234.877437	-42.636182	4.34	1.412	1.42	K4.5III
76600	15	39	58.9	-29	50	48.6	234.995382	-29.846842	3.66	-0.177	-0.18	B2.5V
76669	15	40	11.3	+36	34	1.3	235.047033	+36.567039	4.64	-0.103	-0.09	B7V+...
76705	15	41	8.3	-34	28	49.6	235.284388	-34.480454	4.66	0.964	0.97	G8/K0III
76742	15	41	33.4	-23	53	10.9	235.389200	-23.886374	4.97	1.302	1.25	K3III
76829	15	42	40.6	-44	43	50.0	235.669028	-44.730569	4.64	0.413	0.47	F5IV-V
76852	15	42	30.6	+19	36	8.6	235.627601	+19.602377	4.51	0.062	0.07	A1V
76880	15	43	11.3	-19	44	49.1	235.797289	-19.746976	4.75	1.574	1.74	K5III
76945	15	44	3.6	-34	46	40.0	236.014869	-34.777777	4.75	-0.151	-0.15	B5V
76952	15	43	38.8	+26	13	43.2	235.911553	+26.228664	3.81	0.020	0.04	A1Vs
77055	15	43	20.1	+77	43	38.7	235.833674	+77.727426	4.29	0.038	0.05	A3Vn
77070	15	45	19.7	+6	21	33.5	236.332063	+6.359310	2.63	1.167	1.09	K2III
77233	15	47	10.9	+15	21	21.0	236.795230	+15.355831	3.65	0.073	0.09	A3V
77257	15	47	29.3	+7	17	13.3	236.872143	+7.287041	4.42	0.604	0.66	G0Vvar
77450	15	49	42.5	+18	4	35.1	237.427085	+18.076404	4.09	1.616	1.73	M1III
77512	15	50	29.8	+26	0	13.5	237.624130	+26.003741	4.59	0.794	0.82	G5III-IV
77516	15	50	44.6	-3	29	40.5	237.686008	-3.494588	3.54	-0.036	-0.03	A0V
77622	15	51	53.4	+4	24	51.8	237.972332	+4.414388	3.71	0.147	0.13	A2m
77634	15	52	19.8	-33	41	27.2	238.082651	-33.690885	3.97	-0.045	-0.05	B9.5III-IV
77635	15	52	16.6	-25	48	54.1	238.069094	-25.815023	4.63	-0.072	-0.04	B1.5Vn

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
77655	15	52	2.6	+35	35	30.4	238.010774	+35.591778	4.79	0.996	0.97	K0III-IV
77661	15	52	12.6	+20	54	52.2	238.052559	+20.914490	4.74	1.534	1.60	K5III
77760	15	53	25.2	+42	23	32.1	238.354812	+42.392240	4.60	0.563	0.63	F9V
77840	15	54	54.4	-25	23	22.9	238.726735	-25.389704	4.59	-0.073	-0.06	B2.5Vn
77853	15	55	3.2	-16	47	27.0	238.763220	-16.790837	4.13	1.003	1.02	K0III
77952	15	57	3.4	-63	29	40.8	239.264130	-63.494665	2.83	0.315	0.36	F2III
78072	15	57	26.8	+15	35	34.5	239.361824	+15.592929	3.85	0.478	0.54	F6V
78104	15	58	13.0	-29	16	30.6	239.554155	-29.275161	3.87	-0.199	-0.18	B2IV/V
78159	15	58	28.7	+26	49	0.5	239.619619	+26.816804	4.14	1.231	1.17	K3III
78180	15	58	18.2	+54	41	22.8	239.575827	+54.689664	4.96	0.269	0.29	F0IV
78207	15	59	23.8	-14	20	23.4	239.849088	-14.339838	4.95	-0.080	-0.06	B8Ia/Iab
78265	16	0	9.4	-26	10	27.5	240.039138	-26.174316	2.89	-0.180	-0.18	B1V +B2V
78323	16	0	58.5	-41	48	15.3	240.243890	-41.804261	4.99	0.988	0.97	G8III
78384	16	1	33.2	-38	27	22.8	240.388244	-38.456322	3.42	-0.206	-0.23	B2.5IV
78401	16	1	36.5	-22	40	52.8	240.402098	-22.681322	2.29	-0.117	-0.09	B0.2IV
78493	16	2	18.3	+29	47	31.3	240.576179	+29.792034	4.98	-0.050	-0.03	A0p...
78527	16	2	17.7	+58	30	29.9	240.573866	+58.508314	4.01	0.528	0.55	F8IV-V
78554	16	3	13.3	+22	44	45.6	240.805367	+22.746009	4.82	0.066	0.09	A3V
78592	16	3	28.2	+45	58	40.6	240.867292	+45.977934	4.72	-0.094	-0.06	B9III
78639	16	4	48.3	-49	17	15.5	241.201059	-49.287649	4.65	0.902	0.91	G8III
78650	16	4	38.8	-25	55	24.5	241.161737	-25.923481	4.96	1.234	1.25	K3III
78655	16	4	50.3	-38	39	38.4	241.209770	-38.660671	4.90	-0.146	-0.15	B6III/IV
78662	16	5	17.8	-57	50	0.1	241.324267	-57.833351	4.63	0.252	0.30	A7IV
78727	0	1	6.1	+0	7	10.8	0.275436	+0.119675	4.16	0.460	0.53	F6IV
78820	16	6	41.4	-19	51	45.6	241.672630	-19.862672	2.56	-0.065	-0.04	B0.5V
78821	16	6	41.7	-19	51	32.3	241.673796	-19.858975	4.90	-0.024	0.00	B2V
78914	16	8	1.1	-45	13	46.2	242.004467	-45.229496	4.73	0.230	0.20	Am
78918	16	8	0.6	-36	51	32.3	242.002433	-36.858975	4.22	-0.184	-0.19	B2.5Vn
78933	16	8	4.1	-20	43	32.8	242.017016	-20.725773	3.93	-0.046	0.01	B1V
78990	16	8	40.2	-20	55	30.7	242.167421	-20.925194	4.31	0.831	0.85	G6/G8III
79043	16	9	2.8	+16	59	27.7	242.261697	+16.991024	5.00	0.931	0.93	G8III
79101	16	9	26.9	+44	52	46.0	242.362033	+44.879444	4.23	-0.045	-0.02	B9MNp...
79119	16	9	45.5	+36	26	14.6	242.439716	+36.437395	4.73	1.015	1.00	K0III-IV
79374	16	13	14.9	-19	30	53.6	243.312057	-19.514896	4.00	0.076	0.14	B2IV
79375	16	13	10.6	-10	7	6.5	243.294261	-10.118473	4.93	0.087	0.09	A3IV
79404	16	13	37.9	-27	58	49.4	243.407929	-27.980387	4.58	-0.172	-0.15	B2V
79509	16	15	11.1	-54	41	1.8	243.796222	-54.683841	4.95	1.017	0.99	G4III
79593	16	15	28.5	-3	44	53.3	243.868563	-3.748129	2.73	1.584	1.82	M1III
79664	16	17	24.7	-63	44	16.9	244.352894	-63.738022	3.86	1.105	1.03	G5II
79790	16	18	38.0	-50	7	11.1	244.658418	-50.119748	4.97	0.788	0.88	F9Ia
79822	16	16	54.1	+75	42	17.8	244.225483	+75.704936	4.95	0.393	0.46	F5V
79881	16	19	38.1	-28	39	56.4	244.908898	-28.665672	4.80	0.008	-0.01	A0V:
79882	16	19	27.7	-4	44	36.2	244.865220	-4.743376	3.23	0.966	0.96	G8III
79992	16	20	23.3	+46	15	47.0	245.097009	+46.263050	3.91	-0.151	-0.19	B5IV
80000	16	21	27.4	-50	12	21.9	245.364343	-50.206086	4.01	1.080	1.03	G8III
80047	16	23	37.9	-78	44	44.1	245.907847	-78.745592	4.68	1.680	2.67	M5III
80079	16	21	56.0	-24	13	9.7	245.483354	-24.219373	4.55	0.758	0.80	A4II/III
80112	16	22	29.9	-25	38	33.4	245.624723	-25.642603	2.90	0.299	0.31	B1III
80170	16	22	52.2	+19	6	14.2	245.717402	+19.103951	3.74	0.299	0.34	A9III
80179	16	23	9.8	+0	58	47.9	245.790734	+0.979985	4.82	0.338	0.39	F0V
80181	16	22	56.1	+30	50	35.7	245.733881	+30.843242	4.86	0.970	0.93	K0III
80331	16	24	17.2	+61	27	57.4	246.071753	+61.465935	2.73	0.910	0.84	G8III
80343	16	25	21.9	-20	5	9.3	246.341052	-20.085929	4.48	0.996	0.99	K0III
80463	16	26	24.5	+13	59	6.6	246.602267	+13.985159	4.57	0.002	0.02	B9p Cr
80473	16	26	52.7	-23	29	41.8	246.719399	-23.494933	4.57	0.227	0.25	B2V
80569	16	28	16.4	-18	30	11.9	247.068173	-18.503309	4.22	0.217	0.24	B2Vne
80582	16	28	46.0	-47	36	6.0	247.191847	-47.601678	4.46	-0.070	-0.04	B4V
80628	16	28	58.1	-8	25	6.2	247.242089	-8.418379	4.62	0.185	0.20	A3m
80650	16	27	57.1	+68	43	17.6	246.987739	+68.721558	4.94	-0.051	0.02	A0III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
80686	16	30	48.4	-70	7	47.0	247.701476	-70.129723	4.90	0.555	0.64	F9V
80704	16	29	21.0	+41	50	7.3	247.337399	+41.835365	4.83	1.289	3.61	M6III:var
80763	16	30	43.8	-26	28	40.4	247.682315	-26.477901	1.06	1.865	2.90	M1Ib +B2.5V
80815	16	31	31.0	-25	9	38.7	247.879359	-25.160759	4.79	-0.116	-0.12	B3V
80816	16	31	8.7	+21	26	38.6	247.786286	+21.444061	2.78	0.947	0.94	G8III
80883	16	31	60.0	+1	56	18.3	247.999886	+1.938404	3.82	0.022	0.03	A2V
80894	16	32	22.4	-16	39	28.5	248.093170	-16.657903	4.29	0.924	0.89	G8/K0III
80911	16	32	47.5	-34	44	57.3	248.197832	-34.749262	4.24	-0.168	-0.17	B2III-IV
80975	16	33	24.8	-21	30	38.3	248.353469	-21.510633	4.45	0.130	0.12	Ap
81008	16	33	36.7	+11	26	35.8	248.403041	+11.443286	4.84	1.495	1.58	K4III
81065	16	36	49.0	-78	56	27.3	249.204135	-78.940913	3.86	0.923	0.92	K0IV SB
81122	16	35	37.0	-44	5	19.6	248.904297	-44.088776	4.86	0.045	0.18	B0Ia
81126	16	34	47.8	+42	23	37.5	248.699314	+42.393749	4.20	-0.013	0.02	B9Vvar
81266	16	37	13.5	-28	15	31.6	249.306077	-28.258764	2.82	-0.206	-0.24	B0V
81304	16	37	47.6	-35	17	51.4	249.448353	-35.297613	4.18	1.535	1.72	K5III
81377	16	38	20.7	-10	36	32.3	249.586200	-10.608973	2.54	0.038	0.10	O9.5V
81497	16	39	19.9	+48	53	13.6	249.833112	+48.887098	4.86	1.562	2.03	M2.5III
81660	16	41	4.4	+64	32	54.6	250.268222	+64.548511	4.84	1.212	1.19	K1p
81693	16	42	5.9	+31	33	52.7	250.524442	+31.564636	2.81	0.650	0.70	F9IV
81724	16	42	49.1	-17	46	55.3	250.704714	-17.782023	4.91	1.095	1.13	G8II/III
81833	16	43	38.0	+38	52	56.8	250.908513	+38.882435	3.48	0.916	0.89	G8III-IV
81852	16	46	11.9	-77	33	29.4	251.549738	-77.558159	4.23	1.060	1.04	K0III
82020	16	45	42.5	+56	44	38.6	251.426892	+56.744047	4.84	0.375	0.44	F2V
82080	16	43	50.6	+81	59	55.6	250.960848	+81.998776	4.21	0.897	0.91	G5IIIvar
82273	16	50	57.6	-69	3	50.4	252.739931	-69.063986	1.91	1.447	1.45	K2IIb-IIIa
82321	16	49	52.1	+45	56	48.5	252.466895	+45.946815	4.82	0.087	0.10	A2p...
82363	16	51	39.1	-59	4	37.7	252.912960	-59.077153	3.77	1.562	1.67	K5III
82369	16	51	1.5	-10	49	9.3	252.756234	-10.819249	4.64	0.478	0.55	F7IV
82396	16	51	33.6	-34	19	49.0	252.889990	-34.330285	2.29	1.144	1.10	K2IIIb
82514	16	53	19.8	-38	4	55.9	253.332701	-38.082194	3.00	-0.200	-0.20	B1.5IV +B
82545	16	53	47.7	-38	3	7.7	253.448928	-38.052130	3.56	-0.210	-0.21	B2IV
82671	16	55	31.0	-42	23	44.3	253.879097	-42.395647	4.70	0.444	0.71	B1Iae
82673	16	55	1.6	+10	7	53.1	253.756529	+10.131427	4.39	-0.088	-0.13	B8V
82729	16	56	6.0	-42	23	45.4	254.025175	-42.395958	3.62	1.393	1.37	K4III
82860	16	56	9.0	+65	6	7.8	254.037705	+65.102155	4.88	0.481	0.56	F6Vvar
83000	16	58	41.2	+9	20	35.1	254.671765	+9.343083	3.19	1.160	1.10	K2IIIvar
83081	17	0	24.4	-56	1	17.6	255.101616	-56.021565	3.12	1.552	1.60	K5III
83153	17	1	18.2	-53	11	27.8	255.325946	-53.191061	4.06	1.452	1.42	K4III
83207	17	1	6.8	+30	53	45.4	255.278231	+30.895942	3.92	-0.018	-0.04	A0V
83262	17	2	11.7	-4	15	11.7	255.548791	-4.253250	4.82	1.483	1.49	K4III
83430	17	4	7.0	+14	3	44.8	256.029284	+14.062437	4.97	1.600	2.08	M3III
83574	17	6	14.4	-34	9	4.0	256.559944	-34.151123	4.83	0.257	0.38	B2Iab
83608	17	5	47.0	+54	26	32.3	256.445784	+54.442313	4.91	0.471	0.54	F5
83613	17	6	22.6	+12	42	46.0	256.594003	+12.712765	4.89	0.125	0.11	A4IV
83895	17	8	51.2	+65	41	17.9	257.213299	+65.688292	3.17	-0.120	-0.14	B6III
84012	17	11	36.8	-15	44	59.0	257.903171	-15.749734	2.43	0.059	0.06	A2.5Va
84143	17	13	41.8	-43	15	55.0	258.424144	-43.265273	3.32	0.441	0.47	F3p
84345	17	15	37.7	+14	22	2.1	258.907211	+14.367249	2.78	1.164	1.13	M5IIvar
84379	17	15	54.9	+24	48	54.7	258.978936	+24.815181	3.12	0.080	0.06	A3IVv SB
84380	17	15	47.8	+36	47	9.8	258.949213	+36.786047	3.16	1.437	1.31	K3IIvar
84405	17	16	40.5	-26	37	56.4	259.168637	-26.632333	4.33	0.855	0.92	K2:III:
84514	17	17	43.0	-0	28	4.5	259.429040	-0.467907	4.72	1.119	1.09	K2III
84573	17	18	7.3	+33	4	41.2	259.530283	+33.078117	4.80	-0.166	-0.17	B1.5Vp
84606	17	18	24.8	+37	16	12.3	259.603266	+37.270084	4.64	0.043	0.07	A2V
84880	17	22	2.3	-12	52	0.8	260.509542	-12.866902	4.32	0.037	0.07	A0/A1V
84893	17	22	17.8	-21	8	2.6	260.574224	-21.134055	4.39	0.394	0.47	F2/F3V
84969	17	24	14.8	-67	47	23.6	261.061871	-67.789889	4.76	1.194	1.18	K1III
84970	17	23	19.9	-25	1	8.7	260.832880	-25.019089	3.27	-0.186	-0.21	B2IV
85112	17	24	25.5	+37	7	38.3	261.106238	+37.127307	4.15	-0.011	0.01	B9.5III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
85258	17	27	5.5	-55	32	51.4	261.772793	-55.547615	2.84	1.479	1.50	K3Ib-II
85267	17	27	12.5	-56	23	43.3	261.802100	-56.395351	3.31	-0.150	-0.12	B1Ib
85340	17	27	41.1	-24	11	35.4	261.921181	-24.193153	4.16	0.283	0.30	A3IV:m
85355	17	27	34.9	+4	7	23.7	261.895555	+4.123255	4.34	1.480	1.44	K3IIvar
85365	17	27	46.4	-5	6	14.1	261.943301	-5.103912	4.53	0.385	0.46	F3V
85423	17	28	43.7	-29	53	4.1	262.182256	-29.884467	4.28	0.402	0.45	F3III
85670	17	30	55.2	+52	17	10.3	262.729919	+52.286185	2.79	0.954	0.93	G2II
85693	17	31	36.5	+26	5	44.6	262.902006	+26.095732	4.41	1.434	1.39	K3IIIvar
85696	17	32	13.6	-37	18	39.0	263.056863	-37.310826	2.70	-0.179	-0.23	B2IV
85727	17	33	2.6	-60	41	56.3	263.261041	-60.698975	3.60	-0.104	-0.10	B8V
85755	17	32	43.7	-23	58	38.4	263.182256	-23.977340	4.78	0.016	0.08	A0V
85792	17	33	30.4	-49	53	26.8	263.376571	-49.890771	2.84	-0.136	-0.15	B2Vne
85819	17	32	36.0	+55	10	12.6	263.150194	+55.170179	4.89	0.251	0.28	Am...
85822	17	25	23.3	+86	34	13.9	261.347272	+86.570535	4.35	0.021	0.04	A1Vn
85829	17	32	41.5	+55	9	32.4	263.172941	+55.158990	4.86	0.279	0.30	Am
85927	17	35	4.2	-37	7	2.5	263.767516	-37.117366	1.62	-0.231	-0.24	B1.5IV+...
86032	17	35	56.0	+12	32	45.4	263.983228	+12.545935	2.08	0.155	0.17	A5III
86092	17	37	15.8	-46	31	5.4	264.315682	-46.518176	4.56	-0.020	0.01	A0V
86170	17	38	1.8	-38	38	53.6	264.507313	-38.648211	4.26	1.075	1.09	G8/K0III/IV
86201	17	36	49.7	+68	44	52.1	264.207097	+68.747797	4.77	0.430	0.49	F5V
86228	17	38	51.9	-43	0	33.3	264.716299	-43.009250	1.86	0.406	0.48	F1II
86263	17	38	49.1	-15	24	37.0	264.704696	-15.410278	3.54	0.262	0.29	F0IIIp
86284	17	39	0.9	-8	7	48.5	264.753679	-8.130135	4.58	0.132	0.22	B8II-IIIMNp
86414	17	40	4.3	+45	59	44.9	265.018119	+45.995806	3.82	-0.179	-0.21	B3V SB
86486	17	42	3.6	-49	25	35.1	265.514911	-49.426412	4.76	0.415	0.49	F3IV
86565	17	42	37.4	-12	53	6.0	265.655925	-12.885008	4.24	0.086	0.10	A2Va
86614	17	41	33.7	+72	8	15.9	265.390476	+72.137752	4.57	0.434	0.50	F5IV-V
86670	17	43	58.6	-39	2	20.0	265.994137	-39.038879	2.39	-0.171	-0.22	B1.5III
86736	17	44	43.1	-21	41	30.3	266.179774	-21.691762	4.86	0.469	0.54	F6/F7V
86742	17	44	32.1	+4	33	35.6	266.133806	+4.559884	2.76	1.168	1.10	K2III
86929	17	47	50.8	-64	43	51.9	266.961637	-64.731093	3.61	1.161	1.09	K1III
86974	17	47	18.1	+27	42	34.0	266.825448	+27.709454	3.42	0.750	0.71	G5IV
87072	17	48	54.9	-27	50	13.2	267.228620	-27.836989	4.53	0.600	0.76	F7II
87073	17	49	5.4	-40	7	59.2	267.272365	-40.133121	2.99	0.509	0.64	F3Ia
87108	17	48	58.3	+2	42	2.9	267.242825	+2.700801	3.75	0.043	0.05	A0V
87220	17	50	34.3	-31	42	30.7	267.642974	-31.708534	4.79	-0.028	0.01	B8Ib/II
87261	17	51	19.3	-37	2	53.0	267.830507	-37.048052	3.19	1.192	1.15	K0/K1III
87294	17	51	41.4	-40	5	42.6	267.922439	-40.095180	4.78	0.259	0.41	A6Ib
87585	17	53	54.1	+56	52	11.4	268.475328	+56.869821	3.73	1.177	1.11	K2III
87808	17	56	59.5	+37	14	55.7	269.247715	+37.248819	3.86	1.350	1.17	K1IIvar
87833	17	57	6.4	+51	29	13.6	269.276523	+51.487120	2.24	1.521	1.54	K5III
87846	17	58	21.6	-44	20	37.0	269.589961	-44.343625	4.85	1.176	1.15	K2III
87933	17	58	36.0	+29	14	48.6	269.650164	+29.246824	3.70	0.935	0.89	K0III
87936	17	59	19.5	-41	43	1.7	269.831299	-41.717133	4.88	1.617	1.88	M0III
87998	17	59	19.5	+30	11	19.4	269.831433	+30.188730	4.41	0.380	0.51	F2II
88048	18	0	12.6	-9	46	28.2	270.052622	-9.774507	3.32	0.987	0.95	K0III
88060	18	0	28.1	-30	15	11.5	270.117260	-30.253187	5.00	1.654	2.00	K5/M0III
88116	18	1	6.3	-23	48	58.3	270.276364	-23.816191	4.74	-0.030	-0.01	B9V
88128	18	1	0.9	+16	45	4.1	270.253603	+16.751138	4.67	1.254	1.12	K0II-III
88149	18	1	19.7	+4	22	8.2	270.332131	+4.368957	4.79	-0.100	-0.08	B2Ve
88175	18	1	37.2	-3	41	23.9	270.404933	-3.689977	4.62	0.390	0.45	F3V
88192	18	1	43.3	+2	55	55.7	270.430625	+2.932139	3.93	0.029	0.10	B5Ib
88267	18	2	25.2	+21	35	49.3	270.604809	+21.597035	4.26	0.406	0.47	G5
88290	18	2	50.7	+1	18	22.3	270.711126	+1.306199	4.42	0.046	0.06	A2Vn
88404	18	4	15.2	-8	10	43.1	271.063223	-8.178652	4.77	0.410	0.45	F5V+...
88567	18	6	23.6	-29	34	37.7	271.598473	-29.577133	4.66	0.774	0.81	G0Ib/II
88601	18	6	32.3	+2	29	51.4	271.634638	+2.497617	4.03	0.860	0.96	K0V SB
88635	18	7	11.4	-30	25	18.3	271.797338	-30.421756	2.98	0.981	0.99	K0III
88657	18	6	56.3	+22	13	20.0	271.734400	+22.222236	4.96	1.656	2.18	M3IIIa+...

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
88714	18	8	18.3	-50	5	15.5	272.076157	-50.087631	3.65	-0.101	-0.06	B2Ib
88726	18	8	23.2	-43	25	18.7	272.096600	-43.421853	4.92	0.255	0.29	A5V
88765	18	8	20.1	+8	44	17.3	272.083615	+8.738128	4.64	0.951	0.92	G8III-IV
88771	18	8	22.2	+9	34	6.3	272.092348	+9.568417	3.71	0.159	0.18	A4IVs
88788	18	8	7.6	+43	27	56.3	272.031843	+43.465629	5.00	0.913	0.91	G8III...
88794	18	8	22.9	+28	46	0.1	272.095406	+28.766691	3.84	-0.018	-0.02	B9.5V
88839	18	9	26.7	-28	27	9.7	272.361157	-28.452700	4.55	0.938	1.00	K0IIICNpvar
88866	18	10	39.0	-63	39	53.1	272.662308	-63.664743	4.33	0.228	0.23	Am
88886	18	9	40.7	+20	49	9.6	272.419500	+20.819335	4.37	-0.164	-0.19	B2IV
89112	18	12	49.5	-45	56	54.1	273.206191	-45.948356	4.52	1.009	0.95	G5III
89153	18	13	2.0	-23	41	41.8	273.258492	-23.694935	4.96	1.055	1.02	K0III
89172	18	12	42.7	+31	24	42.9	273.178021	+31.411922	4.96	1.643	2.16	M3III
89341	18	15	3.0	-21	3	4.8	273.762301	-21.051322	3.84	0.195	0.21	B2III:
89348	18	14	1.2	+64	24	17.2	273.505155	+64.404788	4.99	0.440	0.51	F5V
89642	18	19	4.9	-36	45	11.1	274.770412	-36.753083	3.10	1.582	2.24	M2III
89678	18	19	23.9	-27	1	58.4	274.849634	-27.032888	4.66	1.629	1.62	K3III
89826	18	20	36.9	+36	4	31.2	275.153942	+36.075344	4.33	1.162	1.10	K2IIIvar
89861	18	21	12.5	+21	58	18.4	275.302117	+21.971775	4.92	1.594	1.82	M1III
89908	18	20	26.8	+71	20	55.6	275.111601	+71.348768	4.22	-0.093	-0.11	A0p (Si)
89918	18	21	56.5	+3	23	18.2	275.485332	+3.388377	4.85	0.911	0.90	G8III
89931	18	22	22.2	-29	49	1.0	275.592439	-29.816950	2.72	1.380	1.35	K3III
89937	18	20	40.0	+72	44	30.1	275.166470	+72.741682	3.55	0.489	0.62	F7Vvar
89962	18	22	25.4	-2	53	29.4	275.605770	-2.891513	3.23	0.941	0.96	K0III-IV
90098	18	25	12.3	-61	28	52.6	276.301270	-61.481268	4.35	1.462	1.50	M1III SB
90135	18	24	50.2	-8	55	17.2	276.209372	-8.921438	4.66	0.932	0.94	K0III
90139	18	24	36.9	+21	46	51.3	276.153664	+21.780929	3.85	1.168	1.13	K2III
90156	18	24	13.4	+58	48	49.1	276.055962	+58.813644	4.98	0.082	0.05	A3V
90185	18	25	35.9	-34	22	20.5	276.399545	-34.372369	1.79	-0.031	0.01	B9.5III
90289	18	26	37.8	-20	31	41.9	276.657697	-20.528302	4.81	1.310	1.27	A1/A2V
90344	18	26	2.8	+65	34	36.8	276.511584	+65.576882	4.82	1.179	1.16	K2III
90422	18	28	34.0	-45	57	15.5	277.141551	-45.954303	3.49	-0.179	-0.18	B3IV
90496	18	29	17.8	-25	24	28.3	277.324237	-25.407872	2.82	1.025	1.04	K1IIIb
90568	18	30	29.1	-49	3	23.3	277.621238	-49.056478	4.10	0.995	1.02	G8/K0III
90595	18	30	25.4	-14	33	1.1	277.605662	-14.550310	4.67	0.076	0.10	A1IV/V
90797	18	33	22.6	-62	15	42.2	278.344255	-62.261717	4.63	-0.116	-0.11	B8III
90830	18	33	20.9	-45	53	52.9	278.336988	-45.898039	4.92	-0.101	-0.08	B6IV
90905	18	32	56.8	+57	3	45.4	278.236501	+57.062608	4.77	0.611	0.67	F7Ib
90982	18	35	2.2	-42	17	41.3	278.759161	-42.294802	4.62	0.994	0.95	G5III
91117	18	36	22.6	-8	13	38.3	279.094214	-8.227293	3.85	1.317	1.28	K2III
91262	18	37	40.0	+38	48	17.2	279.416742	+38.804765	0.03	-0.001	-0.01	A0Vvar
91726	18	43	27.0	-9	1	49.0	280.862638	-9.030284	4.70	0.358	0.40	F2IIIp d Del
91792	18	45	32.1	-71	24	21.8	281.383704	-71.406054	4.01	1.134	1.14	K2III
91845	18	44	41.5	-8	15	8.1	281.172842	-8.252256	4.88	1.112	1.07	G8II
91918	18	45	45.7	-35	37	7.6	281.440237	-35.618774	4.86	-0.168	-0.19	B2V
91919	18	45	3.1	+39	41	37.2	281.262877	+39.693668	4.67	0.170	0.19	F1V
91926	18	45	5.6	+39	38	10.5	281.273189	+39.636238	4.59	0.180	0.20	A8Vn
91971	18	45	30.8	+37	37	43.3	281.378371	+37.628692	4.34	0.192	0.18	Am
92024	18	47	33.1	-64	50	52.8	281.887758	-64.848010	4.78	0.199	0.21	A7V
92041	18	46	59.9	-26	58	0.3	281.749562	-26.966747	3.17	-0.107	-0.10	B8.5III
92043	18	46	35.3	+20	34	5.8	281.646928	+20.568275	4.19	0.483	0.55	F6V
92088	18	46	56.5	+26	41	11.0	281.735336	+26.686393	4.83	1.199	1.16	K3III
92161	18	47	58.3	+18	12	24.6	281.992764	+18.206840	4.34	0.148	0.16	A5III
92175	18	48	18.9	-4	43	23.5	282.078727	-4.723207	4.22	1.087	1.09	G5II...
92420	18	50	52.4	+33	23	19.6	282.718487	+33.388788	3.52	0.003	0.02	A8:V comp SB
92512	18	51	31.1	+59	24	54.3	282.879408	+59.415097	4.63	1.185	1.20	K0II-III SB
92609	18	54	12.1	-62	9	36.5	283.550382	-62.160135	4.22	-0.150	-0.14	B2II-III
92689	18	53	45.5	+50	44	8.7	283.439556	+50.735741	4.92	0.903	0.88	G8III
92761	18	55	28.0	-22	42	59.4	283.866568	-22.716513	4.86	1.412	1.35	K1II
92782	18	54	7.6	+71	19	31.8	283.531785	+71.325511	4.82	1.151	1.10	K0III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
92791	18	55	15.4	+36	55	37.3	283.814237	+36.927018	4.22	1.575	2.60	M4IIvar
92818	18	55	39.4	+22	40	25.1	283.913979	+22.673631	4.57	0.782	0.86	G4III+...
92845	18	56	25.1	-22	38	33.6	284.104375	-22.642671	5.00	1.348	1.25	K1Ib/II
92855	18	56	35.8	-26	16	5.2	284.149234	-26.268110	2.05	-0.134	-0.13	B2.5V
92862	18	55	59.4	+43	58	31.2	283.997328	+43.975341	4.08	1.397	3.14	M5IIIvar
92946	18	57	17.3	+4	13	59.1	284.322025	+4.233088	4.62	0.161	0.20	A5V
92951	18	57	18.8	+4	13	54.0	284.328202	+4.231663	4.98	0.204	0.22	A5Vn
93015	18	59	9.3	-67	12	12.3	284.788798	-67.203405	4.40	0.530	0.59	F5Ib-II:
93026	18	58	12.7	-5	49	0.4	284.552921	-5.816770	4.83	1.057	1.03	K1III
93085	18	59	0.7	-21	4	35.7	284.752830	-21.076573	3.52	1.151	1.09	G8/K0II/III
93148	19	0	10.6	-52	54	29.0	285.044339	-52.908047	4.85	-0.051	-0.03	A0V
93174	19	0	10.2	-37	4	38.3	285.042666	-37.077306	4.83	0.396	0.44	F3IV/V
93194	18	59	44.9	+32	43	12.8	284.937062	+32.720214	3.25	-0.049	-0.03	B9III
93244	19	0	35.9	+15	5	56.0	285.149623	+15.098899	4.02	1.082	1.00	K2III
93279	19	0	49.5	+32	10	36.3	285.206268	+32.176758	4.94	1.465	1.32	K3III
93408	19	2	2.9	+46	57	58.2	285.511940	+46.966165	5.00	0.186	0.23	A7V
93429	19	2	49.7	-5	42	26.0	285.706962	-5.707235	4.02	1.079	1.08	K1IIIvar
93506	19	3	58.7	-29	50	50.8	285.994427	-29.847450	2.60	0.062	0.06	A3IV
93542	19	4	38.0	-42	3	44.8	286.158411	-42.062443	4.74	-0.027	-0.02	A0Vn
93683	19	5	58.2	-21	42	29.4	286.492433	-21.708180	3.76	1.012	0.98	K0III
93747	19	6	23.9	+13	53	48.7	286.599570	+13.896865	2.99	0.014	-0.01	A0Vn
93805	19	7	23.4	-4	50	55.2	286.847322	-4.848680	3.43	-0.096	-0.09	B9Vn
93825	19	7	52.1	-37	1	49.8	286.967260	-37.030504	4.23	0.523	0.59	F7IV-V
93864	19	8	16.8	-27	38	13.5	287.070139	-27.637088	3.32	1.169	1.15	K1/K2III
94005	19	9	50.6	-40	27	40.8	287.460709	-40.461321	4.57	1.070	1.06	K1III
94114	19	10	55.9	-37	52	8.2	287.732946	-37.868948	4.11	0.042	0.03	A0/A1V
94141	19	11	2.4	-20	59	15.5	287.760201	-20.987641	2.88	0.377	0.44	F2II/III
94160	19	11	30.3	-39	18	16.7	287.876197	-39.304640	4.10	1.163	1.11	K0II/IIICN.
94376	19	12	33.3	+67	41	57.6	288.138605	+67.699340	3.07	0.990	0.94	G9III
94481	19	14	29.4	+39	11	2.4	288.622526	+39.184001	4.43	-0.150	-0.19	B2.5IV
94490	19	14	18.1	+57	44	33.9	288.575363	+57.742763	5.00	1.156	1.12	K2III
94643	19	16	51.4	-25	13	4.1	289.214179	-25.217802	4.86	0.569	0.67	K0/K1III+..
94648	19	15	7.5	+73	23	41.0	288.781440	+73.394711	4.45	1.257	1.15	K3III
94703	19	17	8.5	+21	25	46.9	289.285451	+21.429692	4.76	-0.058	-0.05	B4IV
94713	19	17	6.9	+38	10	23.0	289.278699	+38.173068	4.35	1.258	1.13	K0II
94779	19	17	35.9	+53	24	31.7	289.399737	+53.408808	3.80	0.950	0.85	K0III
94820	19	18	53.5	-18	54	46.4	289.722718	-18.912891	4.88	1.013	0.99	K0III
95066	19	21	41.7	-5	22	26.5	290.423804	-5.374021	4.98	0.937	0.93	G8III-IV...
95081	19	20	46.4	+65	45	21.8	290.193494	+65.756061	4.60	0.033	0.01	A2IIIs
95168	19	22	55.1	-17	48	18.0	290.729461	-17.805011	3.92	0.228	0.25	F0III/IV
95176	19	22	57.4	-15	54	46.7	290.739195	-15.912974	4.52	0.079	0.34	F2p
95241	19	24	10.7	-44	24	59.4	291.044711	-44.416494	3.96	-0.085	-0.07	B9V
95294	19	24	46.0	-44	45	25.9	291.191803	-44.757205	4.27	0.350	0.42	F2III
95347	19	25	22.3	-40	34	24.4	291.342899	-40.573449	3.96	-0.105	-0.10	B8V
95372	19	24	58.5	+29	39	52.4	291.243564	+29.664558	4.99	-0.120	-0.11	B3IV
95501	19	26	34.9	+3	9	32.9	291.645397	+3.159130	3.36	0.319	0.38	F0IV
95585	19	27	37.0	+0	22	58.6	291.904269	+0.382938	4.64	0.576	0.75	F2Ib
95771	19	29	36.0	+24	42	34.8	292.400097	+24.709670	4.44	1.502	1.68	M0comp
95853	19	30	14.8	+51	46	34.7	292.561854	+51.776315	3.76	0.148	0.18	A5Vn
95947	19	31	35.3	+28	0	21.6	292.897102	+28.006004	3.05	1.088	1.05	K3II+...
96052	19	32	34.3	+34	29	59.3	293.142830	+34.499793	4.74	-0.150	-0.12	B3IV
96100	19	32	18.8	+69	41	52.7	293.078232	+69.697966	4.67	0.786	0.85	K0V
96229	19	35	8.3	+7	25	33.8	293.784750	+7.426052	4.45	1.176	1.14	K3III
96275	19	35	31.6	+19	49	17.9	293.881493	+19.821642	5.00	-0.093	-0.08	B8IIIn
96341	19	36	48.3	-48	3	2.7	294.201229	-48.050737	4.88	1.096	1.06	G9III
96441	19	37	1.1	+50	16	18.0	294.254671	+50.271663	4.49	0.395	0.44	F4V
96465	19	38	0.8	-24	50	4.0	294.503202	-24.834432	4.59	-0.075	-0.06	B8/B9V
96468	19	37	50.0	-1	14	14.8	294.458173	-1.237436	4.36	-0.079	-0.06	B5III
96483	19	38	2.8	-6	58	41.2	294.511540	-6.978115	4.93	-0.046	0.03	B0.5III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
96683	19	40	13.6	+30	12	14.5	295.056541	+30.204016	4.68	0.971	0.89	G8III-IV...
96757	19	41	3.5	+18	3	52.7	295.264379	+18.064627	4.39	0.777	0.77	G0II
96837	19	42	0.9	+17	31	37.7	295.503644	+17.527146	4.39	1.041	0.96	G8II
97118	19	45	3.1	+37	24	26.4	296.263090	+37.407336	4.89	0.948	0.94	G8III
97165	19	45	38.8	+45	11	3.0	296.411598	+45.184171	2.86	-0.002	-0.02	B9.5III
97278	19	47	16.9	+10	40	1.2	296.820356	+10.667004	2.72	1.507	1.44	K3II
97290	19	47	36.9	-19	42	28.0	296.903556	-19.707776	4.87	1.061	1.03	K0III
97295	19	47	14.6	+33	46	43.6	296.810827	+33.778771	5.00	0.476	0.55	F5
97365	19	48	20.8	+18	35	19.0	297.086518	+18.588622	3.68	1.313	1.27	M2II +B6
97433	19	48	5.4	+70	19	21.2	297.022309	+70.322553	3.84	0.888	0.88	G8III
97649	19	51	49.9	+8	55	35.2	297.957864	+8.926440	0.76	0.221	0.27	A7IV-V
97679	19	51	59.7	+22	39	57.3	297.998587	+22.665919	4.90	-0.153	-0.12	B2.5V
97804	19	53	34.0	+1	3	44.2	298.391773	+1.062273	3.87	0.630	0.73	F6Ibv SB
97886	19	54	22.5	+24	8	12.8	298.593905	+24.136894	4.57	-0.047	-0.02	B9.5III
97938	19	55	17.4	+8	31	6.4	298.822370	+8.518437	4.71	1.023	1.03	K0III
98032	19	56	44.3	-41	48	35.9	299.184739	-41.809965	4.12	1.063	1.09	K0III
98036	19	56	22.1	+6	27	42.9	299.092207	+6.461905	3.71	0.855	0.89	G8IVvar
98055	19	56	11.1	+52	29	48.3	299.046251	+52.496746	4.91	0.124	0.12	A4Vn
98066	19	57	9.2	-26	14	27.0	299.288187	-26.240823	4.70	0.748	0.79	G3/G5III
98068	19	56	37.9	+38	32	41.4	299.157867	+38.544843	4.95	-0.086	-0.07	B5IV
98073	19	56	19.9	+58	54	14.1	299.082788	+58.903927	4.98	1.584	1.56	K5II-III
98110	19	57	6.8	+35	8	29.8	299.278272	+35.141608	3.89	1.019	0.98	K0IIIvar
98162	19	58	15.8	-27	6	40.4	299.565742	-27.111233	4.54	1.462	1.39	K3III
98337	19	59	42.8	+19	33	6.4	299.928298	+19.551773	3.51	1.571	1.65	K5III
98353	20	0	15.6	-26	8	9.5	300.064960	-26.135961	4.84	0.882	0.91	G8II/III
98412	20	1	7.9	-35	12	59.1	300.282713	-35.216417	4.37	-0.150	-0.15	B2.5IV
98495	20	3	2.4	-72	51	2.2	300.760114	-72.850609	3.97	-0.032	-0.04	A0V
98543	20	1	59.2	+27	48	50.9	300.496626	+27.814131	4.66	0.184	0.19	A4III
98608	20	3	32.6	-59	18	54.1	300.885791	-59.315019	4.95	1.356	3.25	M6III
98688	20	3	58.6	-27	38	54.3	300.994056	-27.648428	4.43	1.640	2.50	M4III
98702	20	2	54.4	+67	56	5.9	300.726726	+67.934973	4.51	1.313	1.23	K3III
98761	20	4	58.8	-37	52	46.0	301.245158	-37.879437	4.77	1.417	1.40	K4III
98842	20	5	41.1	-31	59	39.4	301.421361	-31.994270	4.99	1.208	1.17	K1III/IV
99120	20	9	1.4	-52	49	2.1	302.255669	-52.817243	4.93	1.591	1.83	M1II
99240	20	10	48.8	-66	7	28.0	302.703126	-66.124443	3.55	0.751	0.76	G5IV-Vvar
99255	20	8	7.6	+77	46	30.7	302.031491	+77.775203	4.38	-0.046	-0.06	B9III
99303	20	10	13.6	+36	54	14.1	302.556463	+36.903924	4.93	-0.139	-0.13	B2.5V
99473	20	12	24.8	-0	45	22.7	303.103215	-0.756306	3.24	-0.066	-0.06	B9.5III
99639	20	13	58.6	+46	52	53.7	303.494210	+46.881584	4.80	0.100	0.19	A5IIIn
99655	20	13	53.8	+56	38	2.8	303.474012	+56.634104	4.28	0.114	0.14	A3IV-Vn
99675	20	14	18.5	+46	48	26.6	303.577229	+46.807382	3.80	1.270	1.15	K2II+...
99742	20	15	16.3	+15	15	51.6	303.817908	+15.264339	4.94	0.072	0.09	A2V
99770	20	15	20.4	+36	52	23.4	303.834849	+36.873165	4.93	0.151	0.21	A2V
99824	20	16	10.6	+25	39	31.4	304.044082	+25.658730	4.79	-0.181	-0.22	B3V
99848	20	16	8.2	+47	46	51.8	304.034195	+47.781054	3.96	1.451	1.45	K3Ib-II comp
99874	20	16	39.6	+27	52	52.7	304.165054	+27.881292	4.50	1.258	1.30	K3III
100027	20	18	50.2	-12	26	25.1	304.709327	-12.440317	4.30	0.928	1.05	G3Ib
100044	20	18	34.8	+38	6	2.7	304.644885	+38.100755	4.77	0.377	0.44	B2pe
100064	20	19	14.7	-12	28	36.4	304.811211	-12.476769	3.58	0.883	0.92	G6/G8III
100310	20	21	51.2	-12	41	23.9	305.463481	-12.689983	4.77	-0.047	-0.06	B9IV
100345	20	22	13.0	-14	42	43.0	305.554219	-14.711952	3.05	0.790	0.90	A5:n
100453	20	23	0.0	+40	19	35.2	305.750103	+40.326432	2.23	0.673	0.65	F8Ib
100587	20	24	43.2	+32	15	38.2	306.179794	+32.260606	4.43	1.331	1.31	K3III
100751	20	27	20.1	-56	39	51.1	306.833645	-56.664199	1.94	-0.118	-0.10	B2IV
101027	20	30	5.0	-17	44	27.9	307.520893	-17.741095	4.77	0.386	0.44	F3V
101076	20	30	16.5	+30	26	28.8	307.568635	+30.441338	4.01	0.404	0.46	F5II
101093	20	29	56.3	+63	4	0.4	307.484636	+63.066784	4.21	0.199	0.20	A7III
101101	20	30	46.3	-2	48	45.8	307.693080	-2.812718	4.91	1.160	1.12	K2III
101138	20	30	43.5	+49	1	28.7	307.681246	+49.024631	4.94	-0.087	-0.06	B2.5IV

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
101421	20	34	14.4	+11	22	38.9	308.559912	+11.377486	4.03	-0.123	-0.10	B6III
101474	20	34	44.4	+35	19	31.6	308.684986	+35.325453	4.61	1.593	1.78	K2Ib comp
101589	20	36	18.8	+14	44	58.3	309.078502	+14.749521	4.64	0.120	0.14	A3V
101612	20	37	20.6	-60	30	26.4	309.335901	-60.507328	4.75	0.291	0.34	F1III
101692	20	37	50.7	-2	28	27.2	309.461352	-2.474214	4.91	1.606	1.66	K5II
101769	20	38	33.4	+14	40	15.4	309.639297	+14.670955	3.64	0.425	0.50	F5IV
101772	20	39	4.2	-47	12	53.5	309.767451	-47.214863	3.11	0.998	0.98	K0III
101773	20	39	22.3	-61	27	14.5	309.843019	-61.454018	4.86	0.447	0.52	Fm delta Del
101847	20	39	26.8	-1	1	43.5	309.861752	-1.028737	4.31	0.949	0.91	G8III SB
101867	20	39	29.0	+21	16	39.7	309.870719	+21.277687	4.81	-0.030	-0.01	A0V
101958	20	40	38.2	+15	59	20.8	310.159106	+15.989101	3.77	-0.057	-0.01	B9V
102098	20	42	9.9	+45	21	28.8	310.541337	+45.357991	1.25	0.092	0.16	A2Ia
102281	20	44	27.8	+15	9	10.2	311.115645	+15.152837	4.43	0.302	0.34	A7IIIp d Del
102333	20	45	36.3	-51	50	32.8	311.401383	-51.842443	4.51	0.278	0.30	A6:var
102388	20	45	48.4	+25	20	55.0	311.451535	+25.348623	4.92	1.183	1.11	K2III
102395	20	46	52.2	-66	7	26.0	311.717322	-66.123884	3.42	0.163	0.20	A5IV
102422	20	45	43.4	+61	55	21.6	311.430833	+61.922661	3.41	0.912	0.94	K0IV
102431	20	45	53.1	+57	39	27.0	311.471243	+57.657502	4.52	0.535	0.58	F8IV-V
102453	20	46	33.0	+30	47	57.1	311.637699	+30.799198	4.22	1.051	1.01	K0III
102485	20	47	21.9	-25	11	32.0	311.841111	-25.192226	4.13	0.426	0.49	F5V
102488	20	47	4.9	+34	3	6.3	311.770454	+34.051738	2.48	1.021	1.00	K0III
102532	20	47	39.4	+16	12	10.5	311.914010	+16.202904	4.27	1.042	1.03	K1IV
102571	20	48	2.3	+34	27	14.8	312.009493	+34.454100	4.93	1.294	1.25	K3IIIvar
102589	20	48	14.8	+36	34	14.5	312.061858	+36.570682	4.53	-0.083	-0.12	B6IV
102618	20	48	50.3	-9	24	56.9	312.209386	-9.415802	3.78	0.000	-0.01	A1V
102624	20	48	52.2	-4	56	51.9	312.217486	-4.947738	4.43	1.639	2.21	M3IIIvar
102724	20	49	40.3	+46	11	40.9	312.417839	+46.194704	4.81	0.571	0.59	B3Ia
102790	20	50	57.2	-46	8	44.6	312.738310	-46.145730	4.90	1.494	1.57	K5III
102831	20	51	18.3	-33	41	55.5	312.826252	-33.698742	4.89	1.004	0.97	G8III
102978	20	53	6.0	-26	50	14.5	313.275041	-26.837352	4.12	1.633	1.76	K4III
103004	20	53	2.9	+27	10	42.5	313.262201	+27.178468	4.56	0.835	0.87	G8III
103045	20	53	48.7	-8	54	5.1	313.452890	-8.901420	4.73	0.325	0.36	A3m
103089	20	54	0.4	+44	28	10.1	313.501780	+44.469485	4.80	-0.134	-0.16	B5V
103227	20	56	28.4	-58	22	16.7	314.118396	-58.371299	3.67	1.250	1.11	K0III
103413	20	57	58.6	+41	15	2.6	314.494026	+41.250720	3.94	0.027	0.01	A1Vn
103632	21	0	33.5	+47	36	20.4	315.139507	+47.605661	4.74	-0.084	-0.06	B1ne
103738	21	2	36.2	-32	10	20.7	315.651038	-32.172428	4.67	0.890	0.90	G8III
104019	21	5	37.5	-19	46	7.2	316.406257	-19.768677	4.82	0.169	0.18	A5V
104060	21	5	42.9	+44	0	51.9	316.428548	+44.014421	3.72	1.609	1.63	K5Ibv SB
104139	21	7	9.2	-17	8	46.4	316.788125	-17.146212	4.08	-0.010	0.00	A1V
104194	21	7	20.6	+47	44	8.0	316.835781	+47.735557	4.56	1.569	1.54	K4II
104234	21	8	22.9	-24	55	7.2	317.095248	-24.918668	4.49	1.604	1.81	K5/M0III
104459	21	10	45.8	-11	17	0.6	317.690699	-11.283486	4.50	0.926	0.92	G8III
104521	21	11	23.2	+10	13	9.2	317.846693	+10.219234	4.70	0.262	0.26	F0p
104732	21	13	51.2	+30	18	57.4	318.463168	+30.315942	3.21	0.990	0.97	G8II SB
104858	21	15	31.6	+10	5	42.7	318.881765	+10.095191	4.47	0.529	0.57	F5V+...
104887	21	15	39.1	+38	8	16.0	318.912982	+38.137764	3.74	0.393	0.46	F1IV
104987	21	16	53.9	+5	20	15.9	319.224490	+5.337740	3.92	0.549	0.62	G0III+...
105102	21	18	15.7	+39	29	8.2	319.565424	+39.485609	4.22	0.098	0.25	B9Iab
105138	21	18	48.2	+34	59	17.0	319.700801	+34.988063	4.41	-0.103	-0.09	B2Vne
105140	21	19	14.2	-32	4	53.3	319.808997	-32.081466	4.71	0.070	0.09	A0V
105199	21	19	5.5	+62	40	37.7	319.772718	+62.677141	2.45	0.257	0.26	A7IV-V
105319	21	21	23.1	-53	21	28.5	320.346364	-53.357930	4.39	0.191	0.21	A5V
105382	21	22	7.7	-40	43	1.9	320.532013	-40.717201	4.80	0.029	0.07	A2p
105502	21	23	4.9	+19	53	50.7	320.770360	+19.897413	4.08	1.108	1.05	K1III
105515	21	23	26.4	-16	44	30.8	320.860137	-16.741886	4.28	0.888	0.89	G8III
105858	21	28	11.6	-65	16	2.8	322.048330	-65.267440	4.21	0.494	0.61	F6V
105881	21	27	53.4	-22	19	1.7	321.972631	-22.317148	3.77	1.002	0.88	G4Ibp...
106032	21	28	55.7	+70	39	19.2	322.232259	+70.655329	3.23	-0.201	-0.25	B2IIIv SB

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
106039	21	29	56.7	-21	42	44.9	322.486301	-21.712477	4.50	0.889	0.89	K0III
106140	21	30	55.4	+23	44	2.2	322.730774	+23.733943	4.52	1.618	1.82	M1III
106278	21	32	41.3	-5	28	32.1	323.172254	-5.475594	2.90	0.828	0.82	G0Ib
106481	21	34	47.5	+45	41	15.4	323.697824	+45.687613	3.98	0.885	0.94	G8III
106551	21	35	39.3	+38	37	52.2	323.913943	+38.631178	4.87	1.085	1.06	K1III
106723	21	38	16.8	-19	22	7.2	324.570193	-19.368673	4.51	-0.180	-0.17	B3V:p
106786	21	38	53.7	-7	45	24.5	324.723572	-7.756815	4.68	0.175	0.19	A7V
106801	21	38	29.8	+62	10	45.9	324.624259	+62.179417	4.76	0.246	0.38	B2Ib
106985	21	41	16.7	-16	33	51.1	325.319704	-16.564199	3.69	0.320	0.32	A7III:mp...
107089	21	43	47.3	-77	17	33.5	325.947121	-77.292632	3.73	1.008	0.98	K0III
107119	21	42	13.7	+71	24	38.2	325.557136	+71.410620	4.55	1.108	1.07	K0III
107136	21	42	51.6	+51	17	18.2	325.714919	+51.288379	4.69	-0.119	-0.12	B3IV
107188	21	43	51.3	-18	46	2.6	325.963861	-18.767376	4.72	0.868	0.91	G8III
107259	21	44	10.0	+58	52	45.1	326.041670	+58.879198	4.23	2.242	3.57	M2Ia
107310	21	45	6.3	+28	50	26.2	326.276281	+28.840616	4.49	0.512	0.58	F6V
107315	21	45	14.5	+9	58	28.0	326.310451	+9.974444	2.38	1.520	1.42	K2Ibvar
107348	21	45	31.8	+17	26	58.1	326.382549	+17.449468	4.34	1.161	1.05	G5Ib
107354	21	45	37.2	+25	44	40.8	326.405168	+25.744661	4.14	0.425	0.48	F5IV
107380	21	46	13.3	-32	55	36.0	326.555339	-32.926653	4.35	-0.053	-0.05	B9.5V
107418	21	46	4.2	+61	13	13.9	326.517395	+61.220522	4.25	0.474	0.73	A2Iavar
107533	21	47	35.4	+49	24	34.9	326.897490	+49.409698	4.23	-0.120	-0.13	B3III
107556	21	48	13.5	-16	1	43.5	327.056055	-16.028748	2.85	0.180	0.35	A5mF2 (IV)
108085	21	55	13.4	-37	15	45.8	328.805787	-37.262724	3.00	-0.084	-0.10	B8III
108431	21	59	22.0	-54	53	21.5	329.841492	-54.889310	4.40	0.297	0.35	F0IV
108870	22	4	59.1	-56	41	45.7	331.246175	-56.696036	4.69	1.056	1.15	K5V
108874	22	4	25.5	-2	3	2.8	331.106231	-2.050789	4.74	-0.100	-0.03	B7IVe
108917	22	4	24.9	+64	43	59.5	331.103551	+64.733191	4.26	0.379	0.44	Am
109068	22	6	45.8	+5	9	51.7	331.690730	+5.164350	4.86	1.443	1.45	K4III
109074	22	6	53.2	-0	12	52.7	331.721788	-0.214651	2.95	0.969	0.92	G2Ib
109111	22	7	24.2	-39	26	19.4	331.850713	-39.438721	4.47	1.349	1.31	M0III
109139	22	7	35.7	-13	45	52.5	331.898898	-13.764586	4.29	-0.075	-0.06	B8V
109176	22	8	0.8	+25	27	2.9	332.003345	+25.450818	3.77	0.435	0.51	F5V
109268	22	9	34.7	-46	51	21.4	332.394409	-46.855948	1.73	-0.070	-0.05	B7IV
109285	22	9	37.9	-32	52	57.8	332.407957	-32.882722	4.50	0.054	0.06	A2V
109289	22	9	41.1	-33	56	17.5	332.421083	-33.938203	4.99	1.499	1.50	K4III
109400	22	10	12.9	+72	26	50.6	332.553755	+72.447382	4.79	0.919	0.91	G8III
109410	22	10	56.7	+33	17	3.8	332.736138	+33.284386	4.28	0.471	0.52	F5III
109422	22	11	24.0	-32	26	31.1	332.849953	-32.441984	4.94	0.489	0.54	F6V
109427	22	11	17.0	+6	18	15.8	332.821013	+6.304381	3.52	0.086	0.09	A2V
109492	22	11	36.2	+58	18	27.9	332.900845	+58.307736	3.39	1.558	1.58	K1Ibv SB
109754	22	14	48.3	+39	49	19.9	333.701123	+39.822200	4.50	1.385	1.36	K3III
109857	22	15	50.0	+57	9	4.7	333.958182	+57.151315	4.18	0.278	0.33	F0IV
109908	22	16	54.1	-41	14	20.2	334.225599	-41.238957	4.79	0.790	0.83	G8III+...
109937	22	16	54.6	+37	51	23.1	334.227366	+37.856406	4.14	1.447	1.33	K3III
110003	22	17	58.0	-7	40	31.9	334.491652	-7.675535	4.17	0.979	0.95	G8III-IV
110130	22	19	57.3	-60	9	5.5	334.988957	-60.151517	2.87	1.390	1.37	K3III
110351	22	21	55.0	+46	38	43.3	335.479337	+46.645367	4.55	-0.100	-0.10	B6V
110371	22	22	19.0	+28	26	21.9	335.579268	+28.439424	4.78	-0.010	0.06	B9III
110386	22	22	34.6	+12	18	50.9	335.644173	+12.314130	4.82	-0.132	-0.16	B2IV-V
110395	22	22	45.9	-1	16	42.0	335.691406	-1.278333	3.86	-0.057	-0.06	A0V
110538	22	24	24.6	+52	20	14.2	336.102456	+52.337286	4.42	1.015	1.03	G9III
110609	22	25	23.5	+49	35	9.3	336.347999	+49.585905	4.55	0.092	0.18	B9Iab
110672	22	26	22.5	+1	29	13.7	336.593611	+1.487134	4.80	-0.171	-0.18	B1Ve
110838	22	28	50.2	-64	51	22.0	337.209364	-64.856114	4.51	-0.029	-0.01	B8V
110882	22	28	56.8	+4	48	14.8	337.236696	+4.804116	4.78	1.039	1.07	K0III
110960	22	29	56.3	+0	5	26.5	337.484491	+0.090690	3.65	0.406	0.50	F3III-IV
110991	22	29	58.4	+58	31	32.5	337.493413	+58.525700	4.07	0.778	0.81	G2Ibvar
110997	22	30	32.7	-43	23	6.1	337.636447	-43.385041	3.97	1.022	0.98	G6/G8III
111022	22	30	25.8	+47	49	2.7	337.607573	+47.817430	4.34	1.679	1.90	M0II

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
111043	22	31	2.0	-43	38	18.8	337.758194	-43.638568	4.12	1.570	2.49	M4.5IIIa
111104	22	31	25.2	+43	14	2.8	337.854794	+43.234098	4.52	-0.086	-0.09	B2IV
111123	22	31	47.0	-10	34	2.3	337.945659	-10.567295	4.82	-0.053	-0.04	A0IVs
111169	22	32	10.9	+50	23	36.6	338.045386	+50.393502	3.76	0.031	0.05	A1V
111188	22	32	43.3	-32	14	6.7	338.180521	-32.235198	4.29	0.011	0.03	A1V
111310	22	34	26.1	-61	52	15.4	338.608697	-61.870944	4.91	1.612	2.50	M4III
111497	22	36	27.6	-0	0	22.0	339.115085	-0.006114	4.04	-0.083	-0.07	B9IV-Vn
111674	22	38	15.7	+51	39	23.7	339.565370	+51.656584	4.64	0.254	0.28	A8IV
111841	22	40	13.8	+39	9	45.5	340.057389	+39.162649	4.89	-0.207	-0.23	O9V
111944	22	41	27.7	+44	23	20.4	340.365270	+44.388998	4.50	1.318	1.25	K3III
111954	22	41	50.4	-26	55	51.4	340.460028	-26.930942	4.18	-0.105	-0.07	B8V
112029	22	42	32.1	+10	56	38.8	340.633715	+10.944112	3.41	-0.086	-0.06	B8.5V
112051	22	42	46.1	+29	25	13.4	340.692221	+29.420382	4.80	-0.013	0.02	A1IV
112122	22	43	56.5	-46	46	17.6	340.985366	-46.771565	2.07	1.610	2.60	M5III
112158	22	44	0.8	+30	20	3.0	341.003208	+30.334165	2.93	0.852	0.87	G2II-III..
112203	22	44	44.3	-41	18	6.2	341.184665	-41.301718	4.84	1.027	1.01	K0III
112211	22	44	44.5	-18	43	2.5	341.185263	-18.717355	4.68	1.358	1.35	K3III
112374	22	46	56.3	-53	23	11.3	341.734598	-53.386481	4.84	1.180	1.21	K2IIICNIV
112405	22	48	8.0	-81	16	4.6	342.033222	-81.267938	4.13	0.208	0.24	A9IV/V
112440	22	47	34.1	+23	40	45.3	341.892247	+23.679258	3.97	1.070	0.99	G8II-III
112447	22	47	46.1	+12	17	1.4	341.941983	+12.283712	4.20	0.502	0.60	F7V
112519	22	47	20.3	+83	16	4.2	341.834612	+83.267830	4.77	1.257	1.25	K3III
112623	22	49	50.5	-51	12	11.7	342.460541	-51.203237	3.49	0.083	0.10	A3V
112716	22	50	43.7	-13	28	43.3	342.681930	-13.478696	4.05	1.570	1.72	K5III
112724	22	50	27.1	+66	18	49.8	342.612812	+66.313827	3.50	1.053	1.06	K0III
112748	22	51	2.6	+24	42	56.0	342.760764	+24.715545	3.51	0.933	0.89	M2III
112917	22	53	0.5	+43	25	37.5	343.251986	+43.427069	4.95	1.559	1.71	M0III
112948	22	53	42.9	-32	45	39.7	343.428803	-32.761017	4.46	-0.037	-0.01	A0III
112961	22	53	44.1	-7	27	53.2	343.433743	-7.464784	3.73	1.626	2.07	M2IIIvar
113116	22	54	9.6	+84	27	40.0	343.539955	+84.461109	4.70	1.418	1.38	K4III
113136	22	55	47.3	-15	42	21.7	343.947143	-15.706038	3.27	0.066	0.08	A3V
113186	22	56	18.7	+8	55	52.8	344.077721	+8.931342	4.91	-0.003	0.00	A1V
113246	22	57	8.0	-32	25	27.6	344.283419	-32.424334	4.20	0.952	0.96	G8III
113288	22	57	22.9	+49	50	55.3	344.345282	+49.848697	4.99	1.778	1.87	K5Ibvar
113368	22	58	50.0	-29	30	28.2	344.708410	-29.507836	1.17	0.145	0.16	A3V
113638	23	2	8.3	-52	38	18.3	345.534510	-52.638413	4.11	0.960	1.01	G8III
113726	23	2	54.9	+42	26	30.8	345.728729	+42.441899	3.62	-0.099	-0.05	B6pv SB
113881	23	4	49.2	+28	11	59.1	346.204846	+28.199751	2.44	1.655	2.31	M2II-IIIvar
113889	23	4	58.3	+3	56	10.2	346.242788	+3.936161	4.48	-0.115	-0.09	B6Ve
113919	23	5	9.2	+50	10	9.4	346.288482	+50.169272	4.64	1.058	1.02	K0III
113963	23	5	50.0	+15	19	16.7	346.458309	+15.321300	2.49	-0.002	0.00	B9.5III
114104	23	7	31.8	+59	32	10.5	346.882459	+59.536247	4.84	-0.060	-0.02	B0.5IV
114119	23	7	49.9	-23	37	35.7	346.957981	-23.626591	4.48	0.892	0.92	G8III
114131	23	8	4.9	-43	24	14.0	347.020516	-43.403892	4.28	0.423	0.44	F5me...
114144	23	8	5.3	+9	31	33.5	347.022030	+9.525973	4.54	1.559	1.79	M2III
114155	23	8	9.7	+25	35	4.7	347.040575	+25.584630	4.76	1.285	1.30	K0IIp
114222	23	8	35.2	+75	30	14.1	347.146740	+75.503929	4.41	0.802	0.84	G2III
114341	23	10	35.4	-21	3	19.4	347.647439	-21.055386	3.68	1.202	1.16	K1III
114375	23	11	3.6	-22	20	26.7	347.764983	-22.340763	4.71	0.674	0.75	A3IV:
114421	23	11	34.0	-45	7	47.7	347.891849	-45.129917	3.88	0.998	0.95	K0III SB
114570	23	13	32.5	+49	31	26.2	348.385285	+49.523938	4.53	0.302	0.35	F0V
114724	23	15	26.1	-5	55	58.0	348.858829	-5.932781	4.22	1.545	1.89	M2III
114855	23	17	1.0	-8	58	13.1	349.254099	-8.970313	4.24	1.107	1.06	K0III
114939	23	17	57.7	-7	36	32.3	349.490551	-7.608979	4.93	1.613	2.56	M3III
114971	23	18	16.8	+3	24	0.1	349.570005	+3.400040	3.70	0.916	0.97	G7III
114996	23	18	40.2	-58	7	3.3	349.667537	-58.117593	3.99	0.410	0.50	F1III
115022	23	18	44.8	+49	7	58.9	349.686765	+49.133035	4.82	1.668	2.14	M2III
115033	23	19	1.2	-9	3	53.5	349.754913	-9.064854	4.41	-0.144	-0.14	B5Vn
115088	23	19	31.1	+68	13	45.4	349.879449	+68.229281	4.75	0.836	0.86	K0III

Posiciones medias de estrellas brillantes, 2021

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
115102	23	19	58.8	-32	24	52.9	349.994994	-32.414682	4.41	1.109	1.08	K1III
115115	23	20	4.7	-9	29	34.7	350.019551	-9.492981	4.99	-0.022	0.00	A0V
115250	23	21	42.3	+23	51	29.7	350.426075	+23.858246	4.58	0.180	0.23	A5V
115438	23	24	5.8	-19	58	58.7	351.024217	-19.982980	3.96	1.082	1.10	K0III
115590	23	25	48.1	+62	24	3.7	351.450596	+62.401038	4.96	1.676	1.94	M1III
115623	23	26	27.3	+23	31	21.6	351.613902	+23.522669	4.42	0.617	0.67	F8IV
115669	23	27	10.4	-20	31	26.3	351.793256	-20.523973	4.38	1.460	1.52	K4III
115738	23	28	2.1	+1	22	24.7	352.008694	+1.373531	4.95	0.036	0.01	A0p
115830	23	29	3.6	+6	29	50.2	352.264923	+6.497288	4.27	1.062	1.03	K1III
115919	23	30	14.6	+12	52	45.6	352.560936	+12.879332	4.54	0.939	0.93	G8III
115990	23	31	2.1	+58	40	3.5	352.758585	+58.667633	4.89	-0.122	-0.11	B3IV
116231	23	34	7.1	-37	41	57.0	353.529569	-37.699169	4.38	-0.095	-0.09	B9.5IVMNpe.
116247	23	34	24.0	-20	47	44.0	353.599877	-20.795557	4.70	0.020	0.03	A0V
116310	23	35	1.4	+31	26	38.8	353.755952	+31.444105	4.97	1.383	1.36	K4III
116389	23	36	13.5	-42	29	45.6	354.056437	-42.496011	4.69	0.078	0.10	A2V
116584	23	38	37.4	+46	34	29.4	354.655755	+46.574823	3.81	0.984	0.96	G8III-IV
116602	23	38	60.0	-45	22	23.8	354.749926	-45.373277	4.74	0.082	0.08	A2V
116631	23	39	11.8	+43	23	14.0	354.799339	+43.387224	4.29	-0.083	-0.06	B8V
116727	23	40	15.0	+77	45	8.0	355.062689	+77.752229	3.21	1.031	0.99	K1IV
116758	23	40	53.9	-14	6	11.8	355.224451	-14.103266	4.97	0.257	0.29	A7IV
116771	23	41	3.4	+5	44	34.7	355.264300	+5.742986	4.13	0.507	0.59	F7V
116805	23	41	28.4	+44	27	11.1	355.368486	+44.453084	4.15	-0.071	-0.06	B9IVn
116901	23	42	52.6	-17	41	50.0	355.719332	-17.697212	4.82	0.822	0.81	G2Ib/II
116928	23	43	8.7	+1	53	54.5	355.786081	+1.898468	4.49	0.200	0.22	A7V
116971	23	43	50.1	-14	25	33.4	355.958882	-14.425937	4.49	-0.032	-0.04	B9V
117073	23	45	4.6	+29	28	50.2	356.269222	+29.480619	4.93	0.935	0.93	K0III
117221	23	47	6.4	+46	32	23.0	356.776661	+46.539710	4.97	1.086	1.05	G5Ib
117245	23	47	29.5	+3	36	22.1	356.872794	+3.606147	4.95	2.508	2.57	C5II
117301	23	48	7.2	+58	46	18.6	357.029855	+58.771821	4.88	1.122	1.08	K1III
117452	23	50	2.5	-28	0	40.8	357.510466	-28.011325	4.59	0.001	-0.01	A0V
117863	23	55	28.1	+57	37	8.4	358.867189	+57.619009	4.51	1.190	1.15	F8Iavar
118121	23	58	41.9	-64	10	44.1	359.674659	-64.178916	5.00	0.060	0.07	A1V
118131	23	58	51.5	+25	15	39.2	359.714481	+25.260885	4.63	1.584	2.21	M3III
118209	23	59	46.4	-3	26	12.2	359.943370	-3.436730	4.88	0.930	0.92	G9III

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

950

		V	Sp		
		5.24	F3/5V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	0.21297	0.19531	-35.02113	17.47
ene	8	0.21294	0.19526	-35.02117	17.01
ene	15	0.21292	0.19521	-35.02105	16.55
ene	22	0.21289	0.19516	-35.02100	16.09
ene	29	0.21287	0.19512	-35.02079	15.63
feb	5	0.21284	0.19508	-35.02063	15.17
feb	12	0.21283	0.19505	-35.02031	14.71
feb	19	0.21281	0.19502	-35.02006	14.25
feb	26	0.21281	0.19500	-35.01967	13.79
mar	5	0.21280	0.19498	-35.01933	13.33
mar	12	0.21280	0.19497	-35.01886	12.87
mar	19	0.21280	0.19496	-35.01846	12.41
mar	26	0.21282	0.19496	-35.01793	11.95
abr	2	0.21283	0.19497	-35.01746	11.49
abr	9	0.21286	0.19498	-35.01690	11.03
abr	16	0.21288	0.19499	-35.01640	10.57
abr	23	0.21292	0.19502	-35.01581	10.11
abr	30	0.21296	0.19504	-35.01528	9.65
may	7	0.21301	0.19508	-35.01470	9.19
may	14	0.21306	0.19511	-35.01419	8.73
may	21	0.21312	0.19515	-35.01364	8.27
may	28	0.21318	0.19519	-35.01313	7.81
jun	4	0.21325	0.19524	-35.01264	7.35
jun	11	0.21332	0.19528	-35.01220	6.89
jun	18	0.21339	0.19533	-35.01178	6.43
jun	25	0.21346	0.19538	-35.01139	5.97
jul	2	0.21354	0.19543	-35.01107	5.51
jul	9	0.21360	0.19548	-35.01080	5.05
jul	16	0.21368	0.19553	-35.01058	4.59
jul	23	0.21374	0.19558	-35.01039	4.13
jul	30	0.21381	0.19562	-35.01031	3.67
ago	6	0.21386	0.19566	-35.01025	3.21
ago	13	0.21392	0.19571	-35.01028	2.75
ago	20	0.21397	0.19574	-35.01031	2.29
ago	27	0.21401	0.19577	-35.01047	1.83
sep	3	0.21405	0.19579	-35.01062	1.37
sep	10	0.21408	0.19581	-35.01088	0.91
sep	17	0.21411	0.19582	-35.01109	0.45
sep	24	0.21412	0.19583	-35.01145	23.99
oct	1	0.21413	0.19582	-35.01174	23.53
oct	8	0.21413	0.19582	-35.01214	23.08
oct	15	0.21414	0.19580	-35.01244	22.62
oct	22	0.21412	0.19578	-35.01287	22.16
oct	29	0.21412	0.19575	-35.01320	21.70
nov	5	0.21410	0.19572	-35.01361	21.24
nov	12	0.21409	0.19569	-35.01388	20.78
nov	19	0.21406	0.19564	-35.01425	20.32
nov	26	0.21404	0.19560	-35.01449	19.86
dic	3	0.21400	0.19555	-35.01479	19.40
dic	10	0.21399	0.19550	-35.01492	18.93
dic	17	0.21395	0.19545	-35.01513	18.47
dic	24	0.21392	0.19540	-35.01520	18.01

1599

		V	Sp		
		4.23	F9V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	0.35224	0.33458	-64.75869	17.61
ene	8	0.35217	0.33449	-64.75859	17.15
ene	15	0.35210	0.33439	-64.75830	16.69
ene	22	0.35203	0.33431	-64.75806	16.23
ene	29	0.35197	0.33423	-64.75764	15.77
feb	5	0.35191	0.33415	-64.75726	15.31
feb	12	0.35187	0.33409	-64.75671	14.85
feb	19	0.35182	0.33404	-64.75621	14.39
feb	26	0.35180	0.33399	-64.75557	13.93
mar	5	0.35177	0.33396	-64.75498	13.47
mar	12	0.35177	0.33393	-64.75427	13.01
mar	19	0.35175	0.33392	-64.75363	12.55
mar	26	0.35177	0.33392	-64.75287	12.09
abr	2	0.35178	0.33392	-64.75218	11.63
abr	9	0.35182	0.33394	-64.75142	11.17
abr	16	0.35185	0.33397	-64.75074	10.71
abr	23	0.35192	0.33401	-64.75000	10.25
abr	30	0.35197	0.33405	-64.74933	9.79
may	7	0.35205	0.33411	-64.74864	9.33
may	14	0.35213	0.33417	-64.74804	8.87
may	21	0.35223	0.33425	-64.74742	8.41
may	28	0.35232	0.33432	-64.74689	7.95
jun	4	0.35243	0.33442	-64.74638	7.49
jun	11	0.35253	0.33450	-64.74597	7.03
jun	18	0.35266	0.33460	-64.74559	6.57
jun	25	0.35277	0.33469	-64.74528	6.11
jul	2	0.35290	0.33480	-64.74505	5.65
jul	9	0.35301	0.33489	-64.74489	5.19
jul	16	0.35313	0.33499	-64.74482	4.73
jul	23	0.35324	0.33508	-64.74479	4.27
jul	30	0.35336	0.33518	-64.74488	3.81
ago	6	0.35345	0.33525	-64.74501	3.35
ago	13	0.35355	0.33534	-64.74525	2.89
ago	20	0.35364	0.33540	-64.74550	2.43
ago	27	0.35371	0.33547	-64.74588	1.97
sep	3	0.35378	0.33552	-64.74625	1.51
sep	10	0.35383	0.33556	-64.74674	1.05
sep	17	0.35387	0.33558	-64.74718	0.59
sep	24	0.35390	0.33560	-64.74775	0.13
oct	1	0.35391	0.33560	-64.74826	23.67
oct	8	0.35391	0.33560	-64.74885	23.21
oct	15	0.35391	0.33557	-64.74934	22.75
oct	22	0.35388	0.33554	-64.74994	22.29
oct	29	0.35385	0.33549	-64.75041	21.83
nov	5	0.35380	0.33543	-64.75094	21.37
nov	12	0.35376	0.33536	-64.75131	20.91
nov	19	0.35369	0.33528	-64.75175	20.45
nov	26	0.35363	0.33519	-64.75203	19.99
dic	3	0.35355	0.33510	-64.75234	19.53
dic	10	0.35349	0.33501	-64.75245	19.07
dic	17	0.35341	0.33490	-64.75260	18.61
dic	24	0.35334	0.33481	-64.75259	18.15

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

2021

		V	Sp		
		2.82	G2IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	0.44687	0.42920	-77.14365	17.71
ene	8	0.44671	0.42903	-77.14351	17.25
ene	15	0.44656	0.42885	-77.14317	16.79
ene	22	0.44640	0.42868	-77.14287	16.33
ene	29	0.44627	0.42852	-77.14240	15.87
feb	5	0.44614	0.42839	-77.14196	15.41
feb	12	0.44604	0.42826	-77.14135	14.95
feb	19	0.44594	0.42815	-77.14080	14.48
feb	26	0.44587	0.42806	-77.14010	14.03
mar	5	0.44580	0.42799	-77.13946	13.57
mar	12	0.44578	0.42794	-77.13869	13.11
mar	19	0.44574	0.42791	-77.13801	12.65
mar	26	0.44576	0.42790	-77.13721	12.19
abr	2	0.44577	0.42790	-77.13649	11.73
abr	9	0.44582	0.42794	-77.13570	11.27
abr	16	0.44587	0.42798	-77.13500	10.81
abr	23	0.44597	0.42806	-77.13423	10.35
abr	30	0.44605	0.42813	-77.13356	9.89
may	7	0.44619	0.42825	-77.13286	9.43
may	14	0.44631	0.42836	-77.13227	8.97
may	21	0.44648	0.42851	-77.13167	8.51
may	28	0.44664	0.42864	-77.13115	8.05
jun	4	0.44684	0.42882	-77.13067	7.59
jun	11	0.44701	0.42897	-77.13028	7.13
jun	18	0.44723	0.42917	-77.12994	6.67
jun	25	0.44742	0.42934	-77.12967	6.21
jul	2	0.44764	0.42954	-77.12949	5.75
jul	9	0.44784	0.42972	-77.12938	5.29
jul	16	0.44806	0.42992	-77.12936	4.83
jul	23	0.44825	0.43009	-77.12939	4.37
jul	30	0.44846	0.43028	-77.12953	3.91
ago	6	0.44863	0.43043	-77.12973	3.45
ago	13	0.44881	0.43060	-77.13003	2.99
ago	20	0.44896	0.43072	-77.13033	2.53
ago	27	0.44910	0.43086	-77.13077	2.07
sep	3	0.44921	0.43095	-77.13121	1.61
sep	10	0.44931	0.43105	-77.13176	1.15
sep	17	0.44938	0.43109	-77.13225	0.69
sep	24	0.44943	0.43114	-77.13287	0.23
oct	1	0.44945	0.43114	-77.13343	23.77
oct	8	0.44945	0.43113	-77.13407	23.31
oct	15	0.44942	0.43109	-77.13459	22.85
oct	22	0.44937	0.43102	-77.13521	22.39
oct	29	0.44930	0.43093	-77.13571	21.93
nov	5	0.44920	0.43083	-77.13626	21.47
nov	12	0.44910	0.43070	-77.13664	21.01
nov	19	0.44896	0.43055	-77.13708	20.55
nov	26	0.44882	0.43039	-77.13736	20.09
dic	3	0.44866	0.43021	-77.13765	19.63
dic	10	0.44852	0.43003	-77.13774	19.17
dic	17	0.44834	0.42984	-77.13787	18.71
dic	24	0.44818	0.42965	-77.13782	18.25

3419

		V	Sp		
		2.04	K0III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	0.74379	0.72613	-17.87554	18.00
ene	8	0.74376	0.72608	-17.87568	17.54
ene	15	0.74375	0.72604	-17.87568	17.08
ene	22	0.74371	0.72599	-17.87576	16.62
ene	29	0.74370	0.72595	-17.87571	16.16
feb	5	0.74367	0.72591	-17.87571	15.70
feb	12	0.74366	0.72588	-17.87557	15.24
feb	19	0.74364	0.72585	-17.87551	14.78
feb	26	0.74363	0.72582	-17.87531	14.32
mar	5	0.74361	0.72580	-17.87516	13.86
mar	12	0.74362	0.72578	-17.87489	13.40
mar	19	0.74361	0.72577	-17.87468	12.94
mar	26	0.74362	0.72576	-17.87434	12.48
abr	2	0.74362	0.72576	-17.87405	12.02
abr	9	0.74364	0.72576	-17.87364	11.56
abr	16	0.74366	0.72577	-17.87331	11.10
abr	23	0.74369	0.72578	-17.87285	10.64
abr	30	0.74372	0.72580	-17.87244	10.18
may	7	0.74376	0.72582	-17.87196	9.72
may	14	0.74380	0.72585	-17.87154	9.26
may	21	0.74385	0.72588	-17.87104	8.80
may	28	0.74390	0.72591	-17.87058	8.34
jun	4	0.74396	0.72595	-17.87009	7.88
jun	11	0.74402	0.72598	-17.86965	7.42
jun	18	0.74408	0.72603	-17.86919	6.96
jun	25	0.74415	0.72607	-17.86876	6.50
jul	2	0.74421	0.72611	-17.86836	6.04
jul	9	0.74427	0.72615	-17.86799	5.58
jul	16	0.74434	0.72620	-17.86766	5.12
jul	23	0.74440	0.72624	-17.86734	4.66
jul	30	0.74446	0.72628	-17.86710	4.20
ago	6	0.74452	0.72631	-17.86688	3.74
ago	13	0.74456	0.72635	-17.86674	3.28
ago	20	0.74462	0.72638	-17.86659	2.82
ago	27	0.74466	0.72641	-17.86656	2.36
sep	3	0.74470	0.72644	-17.86652	1.90
sep	10	0.74473	0.72646	-17.86658	1.44
sep	17	0.74476	0.72647	-17.86661	0.98
sep	24	0.74478	0.72649	-17.86677	0.52
oct	1	0.74480	0.72649	-17.86689	0.06
oct	8	0.74481	0.72649	-17.86711	23.61
oct	15	0.74482	0.72649	-17.86726	23.15
oct	22	0.74482	0.72647	-17.86755	22.69
oct	29	0.74482	0.72646	-17.86776	22.23
nov	5	0.74481	0.72644	-17.86806	21.77
nov	12	0.74481	0.72641	-17.86824	21.31
nov	19	0.74479	0.72638	-17.86855	20.85
nov	26	0.74478	0.72634	-17.86875	20.39
dic	3	0.74476	0.72630	-17.86903	19.93
dic	10	0.74475	0.72626	-17.86917	19.47
dic	17	0.74472	0.72622	-17.86941	19.01
dic	24	0.74471	0.72618	-17.86953	18.55

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

3909

		V	Sp		
		5.17	F7IV-V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	0.85272	0.83506	-10.53475	18.11
ene	8	0.85270	0.83502	-10.53490	17.65
ene	15	0.85268	0.83497	-10.53494	17.19
ene	22	0.85265	0.83493	-10.53506	16.73
ene	29	0.85264	0.83489	-10.53506	16.27
feb	5	0.85261	0.83485	-10.53511	15.81
feb	12	0.85260	0.83482	-10.53504	15.35
feb	19	0.85257	0.83478	-10.53505	14.89
feb	26	0.85257	0.83476	-10.53492	14.43
mar	5	0.85255	0.83473	-10.53486	13.97
mar	12	0.85255	0.83472	-10.53466	13.51
mar	19	0.85254	0.83470	-10.53454	13.05
mar	26	0.85255	0.83469	-10.53429	12.59
abr	2	0.85255	0.83469	-10.53408	12.13
abr	9	0.85257	0.83469	-10.53376	11.67
abr	16	0.85258	0.83470	-10.53350	11.21
abr	23	0.85261	0.83471	-10.53312	10.75
abr	30	0.85264	0.83472	-10.53279	10.29
may	7	0.85268	0.83474	-10.53237	9.83
may	14	0.85272	0.83477	-10.53201	9.37
may	21	0.85277	0.83480	-10.53155	8.91
may	28	0.85282	0.83483	-10.53114	8.45
jun	4	0.85288	0.83486	-10.53068	7.99
jun	11	0.85293	0.83490	-10.53027	7.53
jun	18	0.85300	0.83494	-10.52982	7.07
jun	25	0.85306	0.83498	-10.52939	6.61
jul	2	0.85312	0.83502	-10.52898	6.15
jul	9	0.85318	0.83506	-10.52861	5.69
jul	16	0.85324	0.83510	-10.52824	5.23
jul	23	0.85331	0.83514	-10.52790	4.77
jul	30	0.85336	0.83518	-10.52761	4.31
ago	6	0.85342	0.83522	-10.52735	3.85
ago	13	0.85347	0.83525	-10.52714	3.39
ago	20	0.85352	0.83528	-10.52693	2.93
ago	27	0.85356	0.83531	-10.52683	2.47
sep	3	0.85360	0.83534	-10.52672	2.01
sep	10	0.85363	0.83536	-10.52670	1.55
sep	17	0.85366	0.83537	-10.52665	1.09
sep	24	0.85368	0.83539	-10.52673	0.63
oct	1	0.85370	0.83539	-10.52677	0.17
oct	8	0.85371	0.83540	-10.52691	23.71
oct	15	0.85373	0.83539	-10.52698	23.25
oct	22	0.85372	0.83538	-10.52719	22.79
oct	29	0.85373	0.83537	-10.52733	22.33
nov	5	0.85372	0.83535	-10.52756	21.87
nov	12	0.85372	0.83532	-10.52769	21.41
nov	19	0.85370	0.83529	-10.52795	20.95
nov	26	0.85370	0.83526	-10.52811	20.49
dic	3	0.85368	0.83522	-10.52835	20.03
dic	10	0.85367	0.83519	-10.52847	19.57
dic	17	0.85364	0.83514	-10.52870	19.11
dic	24	0.85363	0.83510	-10.52881	18.65

5364

		V	Sp		
		3.46	K2III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.16056	1.14289	-10.07447	18.42
ene	8	1.16053	1.14285	-10.07464	17.96
ene	15	1.16052	1.14281	-10.07468	17.50
ene	22	1.16048	1.14276	-10.07481	17.04
ene	29	1.16047	1.14272	-10.07482	16.58
feb	5	1.16044	1.14268	-10.07489	16.12
feb	12	1.16043	1.14264	-10.07482	15.66
feb	19	1.16040	1.14261	-10.07484	15.20
feb	26	1.16039	1.14258	-10.07472	14.74
mar	5	1.16037	1.14255	-10.07467	14.28
mar	12	1.16037	1.14253	-10.07448	13.82
mar	19	1.16035	1.14251	-10.07437	13.36
mar	26	1.16036	1.14250	-10.07412	12.90
abr	2	1.16036	1.14249	-10.07393	12.44
abr	9	1.16037	1.14249	-10.07361	11.98
abr	16	1.16038	1.14249	-10.07336	11.52
abr	23	1.16041	1.14250	-10.07299	11.06
abr	30	1.16043	1.14251	-10.07266	10.60
may	7	1.16047	1.14253	-10.07224	10.14
may	14	1.16051	1.14255	-10.07188	9.68
may	21	1.16055	1.14258	-10.07143	9.22
may	28	1.16060	1.14261	-10.07101	8.76
jun	4	1.16066	1.14264	-10.07055	8.30
jun	11	1.16071	1.14267	-10.07014	7.84
jun	18	1.16077	1.14271	-10.06968	7.38
jun	25	1.16083	1.14275	-10.06925	6.92
jul	2	1.16089	1.14279	-10.06883	6.46
jul	9	1.16096	1.14283	-10.06845	6.00
jul	16	1.16102	1.14288	-10.06807	5.54
jul	23	1.16108	1.14292	-10.06772	5.08
jul	30	1.16114	1.14296	-10.06742	4.62
ago	6	1.16120	1.14300	-10.06714	4.16
ago	13	1.16125	1.14303	-10.06692	3.70
ago	20	1.16130	1.14307	-10.06670	3.24
ago	27	1.16134	1.14310	-10.06658	2.78
sep	3	1.16139	1.14313	-10.06646	2.32
sep	10	1.16142	1.14315	-10.06643	1.86
sep	17	1.16146	1.14317	-10.06637	1.40
sep	24	1.16148	1.14319	-10.06644	0.94
oct	1	1.16151	1.14320	-10.06647	0.48
oct	8	1.16152	1.14320	-10.06661	0.02
oct	15	1.16154	1.14320	-10.06668	23.56
oct	22	1.16154	1.14320	-10.06688	23.10
oct	29	1.16155	1.14318	-10.06702	22.64
nov	5	1.16154	1.14317	-10.06726	22.18
nov	12	1.16155	1.14315	-10.06739	21.72
nov	19	1.16153	1.14312	-10.06766	21.26
nov	26	1.16153	1.14309	-10.06782	20.80
dic	3	1.16151	1.14306	-10.06807	20.34
dic	10	1.16151	1.14302	-10.06820	19.88
dic	17	1.16148	1.14298	-10.06844	19.42
dic	24	1.16147	1.14294	-10.06856	18.96

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

6537

		V	Sp		
		3.60	K0III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.41771	1.40004	-8.07819	18.68
ene	8	1.41768	1.40000	-8.07836	18.22
ene	15	1.41766	1.39995	-8.07842	17.76
ene	22	1.41763	1.39991	-8.07856	17.30
ene	29	1.41761	1.39987	-8.07858	16.84
feb	5	1.41758	1.39982	-8.07866	16.38
feb	12	1.41757	1.39979	-8.07862	15.92
feb	19	1.41754	1.39975	-8.07866	15.46
feb	26	1.41753	1.39972	-8.07856	15.00
mar	5	1.41750	1.39969	-8.07853	14.54
mar	12	1.41750	1.39966	-8.07837	14.08
mar	19	1.41748	1.39964	-8.07828	13.62
mar	26	1.41748	1.39963	-8.07806	13.16
abr	2	1.41748	1.39962	-8.07789	12.70
abr	9	1.41749	1.39961	-8.07760	12.24
abr	16	1.41750	1.39961	-8.07738	11.78
abr	23	1.41752	1.39962	-8.07703	11.32
abr	30	1.41755	1.39962	-8.07673	10.86
may	7	1.41758	1.39964	-8.07633	10.40
may	14	1.41761	1.39966	-8.07599	9.94
may	21	1.41766	1.39968	-8.07555	9.48
may	28	1.41770	1.39971	-8.07515	9.02
jun	4	1.41775	1.39974	-8.07470	8.56
jun	11	1.41781	1.39977	-8.07430	8.10
jun	18	1.41787	1.39981	-8.07384	7.64
jun	25	1.41793	1.39984	-8.07342	7.18
jul	2	1.41799	1.39989	-8.07299	6.72
jul	9	1.41805	1.39993	-8.07261	6.26
jul	16	1.41811	1.39997	-8.07222	5.80
jul	23	1.41817	1.40001	-8.07186	5.34
jul	30	1.41823	1.40005	-8.07154	4.88
ago	6	1.41829	1.40009	-8.07125	4.42
ago	13	1.41834	1.40013	-8.07101	3.96
ago	20	1.41840	1.40016	-8.07077	3.50
ago	27	1.41844	1.40020	-8.07063	3.04
sep	3	1.41849	1.40023	-8.07049	2.58
sep	10	1.41852	1.40025	-8.07043	2.12
sep	17	1.41856	1.40027	-8.07035	1.66
sep	24	1.41858	1.40029	-8.07039	1.20
oct	1	1.41861	1.40031	-8.07040	0.74
oct	8	1.41863	1.40031	-8.07051	0.28
oct	15	1.41865	1.40032	-8.07056	23.82
oct	22	1.41866	1.40031	-8.07075	23.36
oct	29	1.41867	1.40031	-8.07088	22.90
nov	5	1.41867	1.40029	-8.07109	22.44
nov	12	1.41868	1.40028	-8.07122	21.98
nov	19	1.41866	1.40025	-8.07147	21.52
nov	26	1.41866	1.40022	-8.07163	21.06
dic	3	1.41864	1.40019	-8.07188	20.60
dic	10	1.41864	1.40016	-8.07200	20.14
dic	17	1.41862	1.40012	-8.07224	19.68
dic	24	1.41861	1.40008	-8.07237	19.22

7588

		V	Sp		
		0.45	B3Vp		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.64157	1.62390	-57.13704	18.90
ene	8	1.64150	1.62382	-57.13716	18.44
ene	15	1.64145	1.62374	-57.13712	17.98
ene	22	1.64138	1.62366	-57.13710	17.52
ene	29	1.64132	1.62357	-57.13692	17.06
feb	5	1.64126	1.62350	-57.13674	16.60
feb	12	1.64121	1.62343	-57.13640	16.14
feb	19	1.64115	1.62336	-57.13610	15.68
feb	26	1.64110	1.62329	-57.13563	15.22
mar	5	1.64105	1.62324	-57.13520	14.76
mar	12	1.64102	1.62319	-57.13462	14.30
mar	19	1.64098	1.62315	-57.13410	13.84
mar	26	1.64097	1.62311	-57.13344	13.38
abr	2	1.64095	1.62308	-57.13283	12.92
abr	9	1.64095	1.62307	-57.13211	12.46
abr	16	1.64094	1.62306	-57.13147	12.00
abr	23	1.64097	1.62306	-57.13071	11.54
abr	30	1.64098	1.62306	-57.13004	11.08
may	7	1.64102	1.62308	-57.12928	10.62
may	14	1.64106	1.62310	-57.12863	10.16
may	21	1.64111	1.62314	-57.12790	9.70
may	28	1.64117	1.62317	-57.12727	9.24
jun	4	1.64124	1.62323	-57.12662	8.78
jun	11	1.64131	1.62327	-57.12606	8.32
jun	18	1.64140	1.62334	-57.12550	7.86
jun	25	1.64148	1.62339	-57.12502	7.40
jul	2	1.64157	1.62347	-57.12458	6.94
jul	9	1.64166	1.62354	-57.12424	6.48
jul	16	1.64176	1.62362	-57.12394	6.02
jul	23	1.64185	1.62368	-57.12371	5.56
jul	30	1.64194	1.62376	-57.12357	5.10
ago	6	1.64203	1.62383	-57.12351	4.64
ago	13	1.64212	1.62391	-57.12353	4.18
ago	20	1.64221	1.62397	-57.12360	3.72
ago	27	1.64228	1.62404	-57.12379	3.26
sep	3	1.64235	1.62409	-57.12402	2.80
sep	10	1.64242	1.62415	-57.12435	2.34
sep	17	1.64248	1.62419	-57.12469	1.88
sep	24	1.64252	1.62423	-57.12515	1.42
oct	1	1.64256	1.62425	-57.12561	0.96
oct	8	1.64259	1.62427	-57.12615	0.50
oct	15	1.64261	1.62428	-57.12664	0.04
oct	22	1.64262	1.62427	-57.12725	23.58
oct	29	1.64262	1.62426	-57.12778	23.12
nov	5	1.64261	1.62424	-57.12839	22.66
nov	12	1.64260	1.62420	-57.12887	22.20
nov	19	1.64257	1.62416	-57.12944	21.74
nov	26	1.64254	1.62410	-57.12988	21.28
dic	3	1.64249	1.62404	-57.13036	20.82
dic	10	1.64246	1.62397	-57.13067	20.36
dic	17	1.64240	1.62390	-57.13104	19.90
dic	24	1.64235	1.62383	-57.13124	19.44

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

7884					
		V	Sp		
		4.45	K3III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.70860	1.69094	5.59181	18.97
ene	8	1.70857	1.69090	5.59166	18.51
ene	15	1.70856	1.69085	5.59160	18.05
ene	22	1.70853	1.69081	5.59143	17.59
ene	29	1.70851	1.69076	5.59136	17.13
feb	5	1.70848	1.69072	5.59122	16.67
feb	12	1.70846	1.69068	5.59119	16.21
feb	19	1.70843	1.69064	5.59105	15.75
feb	26	1.70842	1.69061	5.59103	15.29
mar	5	1.70839	1.69058	5.59094	14.83
mar	12	1.70838	1.69055	5.59097	14.37
mar	19	1.70836	1.69053	5.59091	13.91
mar	26	1.70836	1.69051	5.59098	13.45
abr	2	1.70836	1.69049	5.59099	12.99
abr	9	1.70837	1.69049	5.59112	12.53
abr	16	1.70837	1.69048	5.59115	12.07
abr	23	1.70839	1.69048	5.59136	11.61
abr	30	1.70841	1.69049	5.59151	11.15
may	7	1.70844	1.69050	5.59176	10.69
may	14	1.70847	1.69052	5.59196	10.23
may	21	1.70852	1.69054	5.59227	9.77
may	28	1.70856	1.69057	5.59254	9.31
jun	4	1.70861	1.69059	5.59290	8.85
jun	11	1.70866	1.69063	5.59320	8.39
jun	18	1.70872	1.69066	5.59359	7.93
jun	25	1.70878	1.69070	5.59395	7.47
jul	2	1.70884	1.69074	5.59435	7.01
jul	9	1.70890	1.69078	5.59471	6.55
jul	16	1.70896	1.69082	5.59510	6.09
jul	23	1.70903	1.69086	5.59548	5.63
jul	30	1.70908	1.69090	5.59584	5.17
ago	6	1.70914	1.69094	5.59617	4.71
ago	13	1.70920	1.69098	5.59650	4.25
ago	20	1.70926	1.69102	5.59681	3.79
ago	27	1.70930	1.69106	5.59706	3.33
sep	3	1.70935	1.69109	5.59732	2.87
sep	10	1.70938	1.69112	5.59751	2.41
sep	17	1.70943	1.69114	5.59773	1.95
sep	24	1.70945	1.69116	5.59783	1.49
oct	1	1.70949	1.69118	5.59797	1.03
oct	8	1.70951	1.69119	5.59802	0.57
oct	15	1.70954	1.69120	5.59812	0.11
oct	22	1.70954	1.69120	5.59809	23.65
oct	29	1.70956	1.69120	5.59813	23.19
nov	5	1.70956	1.69119	5.59806	22.73
nov	12	1.70958	1.69118	5.59808	22.27
nov	19	1.70957	1.69116	5.59796	21.81
nov	26	1.70957	1.69113	5.59792	21.35
dic	3	1.70956	1.69110	5.59778	20.89
dic	10	1.70956	1.69107	5.59776	20.43
dic	17	1.70954	1.69103	5.59759	19.97
dic	24	1.70953	1.69100	5.59752	19.51

8102					
		V	Sp		
		3.49	G8V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.75059	1.73292	-15.83095	19.01
ene	8	1.75056	1.73288	-15.83113	18.55
ene	15	1.75054	1.73283	-15.83119	18.09
ene	22	1.75050	1.73278	-15.83131	17.63
ene	29	1.75048	1.73274	-15.83131	17.17
feb	5	1.75045	1.73269	-15.83135	16.71
feb	12	1.75043	1.73265	-15.83126	16.25
feb	19	1.75040	1.73261	-15.83124	15.79
feb	26	1.75038	1.73257	-15.83108	15.33
mar	5	1.75035	1.73254	-15.83097	14.87
mar	12	1.75034	1.73251	-15.83073	14.41
mar	19	1.75032	1.73249	-15.83056	13.95
mar	26	1.75032	1.73247	-15.83025	13.49
abr	2	1.75031	1.73245	-15.82999	13.03
abr	9	1.75032	1.73244	-15.82961	12.57
abr	16	1.75032	1.73243	-15.82930	12.11
abr	23	1.75034	1.73244	-15.82886	11.65
abr	30	1.75036	1.73244	-15.82847	11.19
may	7	1.75039	1.73245	-15.82799	10.73
may	14	1.75042	1.73246	-15.82758	10.27
may	21	1.75046	1.73249	-15.82706	9.81
may	28	1.75050	1.73251	-15.82661	9.35
jun	4	1.75055	1.73254	-15.82609	8.89
jun	11	1.75060	1.73257	-15.82564	8.43
jun	18	1.75066	1.73260	-15.82514	7.97
jun	25	1.75072	1.73264	-15.82469	7.51
jul	2	1.75078	1.73268	-15.82423	7.05
jul	9	1.75084	1.73272	-15.82383	6.59
jul	16	1.75090	1.73276	-15.82343	6.13
jul	23	1.75097	1.73280	-15.82308	5.67
jul	30	1.75102	1.73284	-15.82277	5.21
ago	6	1.75108	1.73288	-15.82250	4.75
ago	13	1.75114	1.73293	-15.82228	4.29
ago	20	1.75120	1.73296	-15.82209	3.83
ago	27	1.75124	1.73300	-15.82199	3.37
sep	3	1.75129	1.73303	-15.82191	2.91
sep	10	1.75133	1.73306	-15.82191	2.45
sep	17	1.75137	1.73308	-15.82190	1.99
sep	24	1.75140	1.73311	-15.82202	1.53
oct	1	1.75143	1.73312	-15.82212	1.07
oct	8	1.75145	1.73313	-15.82231	0.61
oct	15	1.75147	1.73314	-15.82245	0.15
oct	22	1.75148	1.73314	-15.82272	23.69
oct	29	1.75149	1.73313	-15.82294	23.23
nov	5	1.75149	1.73312	-15.82324	22.77
nov	12	1.75150	1.73310	-15.82345	22.31
nov	19	1.75149	1.73308	-15.82378	21.85
nov	26	1.75149	1.73305	-15.82401	21.39
dic	3	1.75147	1.73302	-15.82432	20.93
dic	10	1.75147	1.73299	-15.82450	20.47
dic	17	1.75145	1.73295	-15.82479	20.01
dic	24	1.75143	1.73291	-15.82495	19.55

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

10320

		V	Sp		
		5.27	A0V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	2.23049	2.21282	-30.63049	19.49
ene	8	2.23045	2.21278	-30.63072	19.03
ene	15	2.23043	2.21272	-30.63081	18.57
ene	22	2.23039	2.21267	-30.63095	18.11
ene	29	2.23036	2.21262	-30.63095	17.65
feb	5	2.23032	2.21256	-30.63097	17.19
feb	12	2.23030	2.21251	-30.63084	16.73
feb	19	2.23026	2.21247	-30.63076	16.27
feb	26	2.23023	2.21242	-30.63053	15.81
mar	5	2.23020	2.21238	-30.63034	15.35
mar	12	2.23018	2.21234	-30.63000	14.89
mar	19	2.23015	2.21231	-30.62972	14.43
mar	26	2.23014	2.21228	-30.62929	13.97
abr	2	2.23012	2.21225	-30.62891	13.51
abr	9	2.23012	2.21224	-30.62840	13.05
abr	16	2.23011	2.21222	-30.62797	12.59
abr	23	2.23012	2.21222	-30.62740	12.13
abr	30	2.23013	2.21221	-30.62689	11.67
may	7	2.23016	2.21222	-30.62628	11.21
may	14	2.23018	2.21223	-30.62576	10.75
may	21	2.23022	2.21224	-30.62513	10.29
may	28	2.23025	2.21226	-30.62457	9.83
jun	4	2.23030	2.21229	-30.62396	9.37
jun	11	2.23035	2.21231	-30.62343	8.91
jun	18	2.23041	2.21235	-30.62285	8.45
jun	25	2.23047	2.21238	-30.62235	7.99
jul	2	2.23053	2.21243	-30.62183	7.53
jul	9	2.23059	2.21247	-30.62141	7.07
jul	16	2.23066	2.21251	-30.62098	6.61
jul	23	2.23072	2.21256	-30.62063	6.15
jul	30	2.23079	2.21261	-30.62033	5.69
ago	6	2.23085	2.21265	-30.62010	5.23
ago	13	2.23092	2.21270	-30.61991	4.77
ago	20	2.23098	2.21275	-30.61978	4.31
ago	27	2.23104	2.21279	-30.61975	3.85
sep	3	2.23109	2.21283	-30.61976	3.39
sep	10	2.23114	2.21287	-30.61985	2.93
sep	17	2.23119	2.21290	-30.61996	2.47
sep	24	2.23123	2.21294	-30.62019	2.01
oct	1	2.23127	2.21296	-30.62043	1.55
oct	8	2.23129	2.21298	-30.62076	1.09
oct	15	2.23133	2.21299	-30.62105	0.63
oct	22	2.23134	2.21300	-30.62147	0.17
oct	29	2.23136	2.21300	-30.62185	23.71
nov	5	2.23136	2.21299	-30.62230	23.25
nov	12	2.23138	2.21298	-30.62267	22.79
nov	19	2.23137	2.21296	-30.62314	22.33
nov	26	2.23137	2.21293	-30.62352	21.87
dic	3	2.23135	2.21290	-30.62396	21.41
dic	10	2.23135	2.21286	-30.62426	20.95
dic	17	2.23132	2.21282	-30.62466	20.49
dic	24	2.23131	2.21278	-30.62491	20.03

10670

		V	Sp		
		4.03	A1Vnn		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	2.30936	2.29169	33.94455	19.57
ene	8	2.30932	2.29164	33.94456	19.11
ene	15	2.30931	2.29160	33.94460	18.65
ene	22	2.30926	2.29154	33.94450	18.19
ene	29	2.30924	2.29149	33.94445	17.73
feb	5	2.30919	2.29144	33.94430	17.27
feb	12	2.30917	2.29139	33.94420	16.81
feb	19	2.30912	2.29134	33.94397	16.35
feb	26	2.30910	2.29129	33.94381	15.89
mar	5	2.30906	2.29125	33.94355	15.43
mar	12	2.30904	2.29121	33.94336	14.97
mar	19	2.30901	2.29118	33.94306	14.51
mar	26	2.30900	2.29115	33.94286	14.05
abr	2	2.30899	2.29113	33.94258	13.59
abr	9	2.30899	2.29111	33.94240	13.13
abr	16	2.30899	2.29110	33.94213	12.67
abr	23	2.30900	2.29110	33.94199	12.21
abr	30	2.30902	2.29110	33.94179	11.75
may	7	2.30905	2.29111	33.94170	11.29
may	14	2.30908	2.29112	33.94155	10.83
may	21	2.30912	2.29114	33.94154	10.37
may	28	2.30917	2.29117	33.94150	9.91
jun	4	2.30922	2.29120	33.94156	9.45
jun	11	2.30928	2.29124	33.94159	8.99
jun	18	2.30934	2.29128	33.94174	8.53
jun	25	2.30941	2.29132	33.94187	8.07
jul	2	2.30947	2.29137	33.94209	7.61
jul	9	2.30954	2.29142	33.94229	7.15
jul	16	2.30961	2.29147	33.94258	6.69
jul	23	2.30969	2.29152	33.94287	6.23
jul	30	2.30975	2.29157	33.94319	5.77
ago	6	2.30983	2.29162	33.94352	5.31
ago	13	2.30989	2.29167	33.94389	4.85
ago	20	2.30996	2.29172	33.94427	4.39
ago	27	2.31001	2.29177	33.94464	3.93
sep	3	2.31008	2.29182	33.94503	3.47
sep	10	2.31012	2.29186	33.94542	3.01
sep	17	2.31018	2.29190	33.94584	2.55
sep	24	2.31022	2.29193	33.94619	2.09
oct	1	2.31027	2.29196	33.94658	1.63
oct	8	2.31030	2.29198	33.94693	1.17
oct	15	2.31034	2.29200	33.94733	0.71
oct	22	2.31036	2.29201	33.94762	0.25
oct	29	2.31039	2.29202	33.94797	23.79
nov	5	2.31039	2.29202	33.94824	23.33
nov	12	2.31042	2.29202	33.94859	22.87
nov	19	2.31042	2.29201	33.94879	22.41
nov	26	2.31043	2.29199	33.94905	21.95
dic	3	2.31042	2.29196	33.94922	21.49
dic	10	2.31042	2.29194	33.94946	21.03
dic	17	2.31040	2.29190	33.94954	20.57
dic	24	2.31039	2.29186	33.94969	20.11

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

15510

		V	Sp		
		4.26	G8V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	3.34626	3.32860	-42.99479	20.61
ene	8	3.34623	3.32855	-42.99513	20.15
ene	15	3.34620	3.32848	-42.99536	19.69
ene	22	3.34615	3.32843	-42.99559	19.23
ene	29	3.34611	3.32836	-42.99570	18.77
feb	5	3.34606	3.32830	-42.99579	18.31
feb	12	3.34602	3.32824	-42.99574	17.85
feb	19	3.34596	3.32818	-42.99571	17.38
feb	26	3.34592	3.32811	-42.99553	16.93
mar	5	3.34587	3.32806	-42.99536	16.47
mar	12	3.34583	3.32800	-42.99504	16.01
mar	19	3.34579	3.32795	-42.99476	15.55
mar	26	3.34575	3.32790	-42.99433	15.09
abr	2	3.34572	3.32785	-42.99394	14.63
abr	9	3.34570	3.32782	-42.99339	14.17
abr	16	3.34567	3.32778	-42.99292	13.71
abr	23	3.34567	3.32776	-42.99229	13.25
abr	30	3.34566	3.32774	-42.99174	12.79
may	7	3.34566	3.32773	-42.99106	12.33
may	14	3.34567	3.32772	-42.99046	11.87
may	21	3.34569	3.32772	-42.98975	11.41
may	28	3.34572	3.32772	-42.98913	10.95
jun	4	3.34575	3.32774	-42.98841	10.49
jun	11	3.34579	3.32776	-42.98781	10.03
jun	18	3.34584	3.32779	-42.98712	9.57
jun	25	3.34590	3.32781	-42.98655	9.11
jul	2	3.34595	3.32785	-42.98593	8.65
jul	9	3.34602	3.32789	-42.98543	8.19
jul	16	3.34608	3.32794	-42.98490	7.73
jul	23	3.34616	3.32799	-42.98449	7.27
jul	30	3.34623	3.32805	-42.98408	6.81
ago	6	3.34630	3.32810	-42.98380	6.35
ago	13	3.34637	3.32816	-42.98353	5.89
ago	20	3.34645	3.32821	-42.98338	5.43
ago	27	3.34652	3.32827	-42.98328	4.97
sep	3	3.34659	3.32833	-42.98328	4.51
sep	10	3.34665	3.32838	-42.98334	4.05
sep	17	3.34672	3.32843	-42.98347	3.59
sep	24	3.34677	3.32848	-42.98370	3.13
oct	1	3.34683	3.32852	-42.98398	2.67
oct	8	3.34688	3.32856	-42.98434	2.21
oct	15	3.34692	3.32859	-42.98472	1.75
oct	22	3.34696	3.32861	-42.98520	1.29
oct	29	3.34699	3.32863	-42.98568	0.83
nov	5	3.34701	3.32864	-42.98623	0.37
nov	12	3.34704	3.32864	-42.98672	23.91
nov	19	3.34704	3.32863	-42.98732	23.45
nov	26	3.34705	3.32862	-42.98784	22.99
dic	3	3.34705	3.32859	-42.98841	22.53
dic	10	3.34705	3.32856	-42.98886	22.07
dic	17	3.34703	3.32853	-42.98940	21.61
dic	24	3.34701	3.32849	-42.98979	21.15

17378

		V	Sp		
		3.52	K0IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	3.73763	3.71996	-9.69542	21.00
ene	8	3.73761	3.71993	-9.69565	20.54
ene	15	3.73760	3.71989	-9.69582	20.08
ene	22	3.73757	3.71984	-9.69602	19.62
ene	29	3.73755	3.71980	-9.69614	19.16
feb	5	3.73751	3.71976	-9.69627	18.70
feb	12	3.73749	3.71971	-9.69631	18.24
feb	19	3.73745	3.71966	-9.69639	17.78
feb	26	3.73742	3.71962	-9.69636	17.32
mar	5	3.73739	3.71957	-9.69637	16.86
mar	12	3.73736	3.71953	-9.69625	16.40
mar	19	3.73732	3.71949	-9.69620	15.94
mar	26	3.73730	3.71945	-9.69602	15.48
abr	2	3.73728	3.71941	-9.69589	15.02
abr	9	3.73726	3.71938	-9.69563	14.56
abr	16	3.73724	3.71936	-9.69545	14.10
abr	23	3.73724	3.71933	-9.69512	13.64
abr	30	3.73724	3.71932	-9.69487	13.18
may	7	3.73724	3.71930	-9.69448	12.72
may	14	3.73725	3.71930	-9.69418	12.26
may	21	3.73727	3.71929	-9.69374	11.80
may	28	3.73729	3.71930	-9.69338	11.34
jun	4	3.73732	3.71931	-9.69291	10.88
jun	11	3.73735	3.71932	-9.69253	10.42
jun	18	3.73739	3.71934	-9.69204	9.96
jun	25	3.73744	3.71936	-9.69164	9.50
jul	2	3.73749	3.71939	-9.69116	9.04
jul	9	3.73754	3.71941	-9.69078	8.58
jul	16	3.73759	3.71945	-9.69032	8.12
jul	23	3.73765	3.71948	-9.68996	7.66
jul	30	3.73771	3.71953	-9.68957	7.20
ago	6	3.73777	3.71957	-9.68927	6.74
ago	13	3.73782	3.71961	-9.68895	6.28
ago	20	3.73789	3.71965	-9.68871	5.82
ago	27	3.73794	3.71970	-9.68850	5.36
sep	3	3.73800	3.71974	-9.68836	4.90
sep	10	3.73805	3.71978	-9.68823	4.44
sep	17	3.73811	3.71982	-9.68817	3.98
sep	24	3.73815	3.71986	-9.68817	3.52
oct	1	3.73820	3.71989	-9.68821	3.06
oct	8	3.73824	3.71993	-9.68831	2.60
oct	15	3.73829	3.71995	-9.68841	2.14
oct	22	3.73832	3.71998	-9.68862	1.68
oct	29	3.73836	3.72000	-9.68881	1.22
nov	5	3.73838	3.72001	-9.68907	0.76
nov	12	3.73842	3.72002	-9.68928	0.30
nov	19	3.73843	3.72002	-9.68961	23.84
nov	26	3.73845	3.72002	-9.68987	23.38
dic	3	3.73846	3.72000	-9.69020	22.92
dic	10	3.73848	3.71999	-9.69043	22.46
dic	17	3.73847	3.71997	-9.69077	22.00
dic	24	3.73847	3.71995	-9.69100	21.54

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

23693

		V	Sp		
		4.71	F7V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	5.09846	5.08080	-57.44686	22.36
ene	8	5.09843	5.08075	-57.44741	21.90
ene	15	5.09839	5.08068	-57.44791	21.44
ene	22	5.09834	5.08061	-57.44837	20.98
ene	29	5.09828	5.08053	-57.44875	20.52
feb	5	5.09821	5.08045	-57.44908	20.06
feb	12	5.09815	5.08036	-57.44931	19.60
feb	19	5.09807	5.08028	-57.44951	19.14
feb	26	5.09799	5.08018	-57.44959	18.68
mar	5	5.09791	5.08009	-57.44964	18.22
mar	12	5.09783	5.08000	-57.44955	17.76
mar	19	5.09775	5.07991	-57.44947	17.30
mar	26	5.09767	5.07982	-57.44923	16.84
abr	2	5.09760	5.07973	-57.44901	16.38
abr	9	5.09753	5.07965	-57.44863	15.92
abr	16	5.09746	5.07957	-57.44829	15.46
abr	23	5.09741	5.07950	-57.44779	15.00
abr	30	5.09735	5.07943	-57.44734	14.54
may	7	5.09732	5.07938	-57.44673	14.08
may	14	5.09728	5.07933	-57.44619	13.62
may	21	5.09726	5.07929	-57.44551	13.16
may	28	5.09725	5.07925	-57.44491	12.70
jun	4	5.09724	5.07923	-57.44418	12.24
jun	11	5.09725	5.07921	-57.44355	11.78
jun	18	5.09727	5.07921	-57.44279	11.32
jun	25	5.09729	5.07921	-57.44216	10.86
jul	2	5.09733	5.07923	-57.44143	10.40
jul	9	5.09737	5.07925	-57.44083	9.94
jul	16	5.09743	5.07929	-57.44016	9.48
jul	23	5.09749	5.07932	-57.43962	9.02
jul	30	5.09756	5.07937	-57.43905	8.56
ago	6	5.09763	5.07943	-57.43861	8.10
ago	13	5.09771	5.07949	-57.43815	7.64
ago	20	5.09779	5.07955	-57.43785	7.18
ago	27	5.09787	5.07963	-57.43756	6.72
sep	3	5.09796	5.07970	-57.43741	6.26
sep	10	5.09805	5.07978	-57.43728	5.80
sep	17	5.09814	5.07985	-57.43729	5.34
sep	24	5.09822	5.07993	-57.43735	4.88
oct	1	5.09831	5.08000	-57.43754	4.42
oct	8	5.09839	5.08007	-57.43777	3.96
oct	15	5.09847	5.08013	-57.43810	3.50
oct	22	5.09854	5.08019	-57.43851	3.04
oct	29	5.09860	5.08024	-57.43899	2.58
nov	5	5.09866	5.08028	-57.43952	2.12
nov	12	5.09871	5.08031	-57.44008	1.66
nov	19	5.09875	5.08034	-57.44073	1.20
nov	26	5.09878	5.08034	-57.44136	0.74
dic	3	5.09880	5.08035	-57.44204	0.28
dic	10	5.09882	5.08033	-57.44267	23.82
dic	17	5.09881	5.08031	-57.44337	23.36
dic	24	5.09881	5.08028	-57.44397	22.90

24436

		V	Sp		
		0.18	B8Ia		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	5.25924	5.24158	-8.17959	22.52
ene	8	5.25924	5.24156	-8.17987	22.06
ene	15	5.25924	5.24153	-8.18013	21.60
ene	22	5.25922	5.24150	-8.18038	21.14
ene	29	5.25921	5.24146	-8.18059	20.68
feb	5	5.25918	5.24142	-8.18077	20.22
feb	12	5.25917	5.24138	-8.18090	19.76
feb	19	5.25913	5.24134	-8.18104	19.30
feb	26	5.25910	5.24129	-8.18110	18.84
mar	5	5.25906	5.24125	-8.18117	18.38
mar	12	5.25903	5.24120	-8.18114	17.92
mar	19	5.25899	5.24115	-8.18115	17.46
mar	26	5.25896	5.24111	-8.18106	17.00
abr	2	5.25892	5.24106	-8.18100	16.54
abr	9	5.25890	5.24102	-8.18082	16.08
abr	16	5.25887	5.24098	-8.18071	15.62
abr	23	5.25885	5.24095	-8.18048	15.16
abr	30	5.25883	5.24091	-8.18030	14.70
may	7	5.25882	5.24089	-8.17999	14.24
may	14	5.25881	5.24086	-8.17976	13.78
may	21	5.25882	5.24084	-8.17940	13.32
may	28	5.25882	5.24083	-8.17912	12.86
jun	4	5.25884	5.24082	-8.17871	12.40
jun	11	5.25885	5.24082	-8.17840	11.94
jun	18	5.25888	5.24082	-8.17796	11.48
jun	25	5.25891	5.24083	-8.17763	11.02
jul	2	5.25894	5.24084	-8.17718	10.56
jul	9	5.25898	5.24085	-8.17684	10.10
jul	16	5.25902	5.24088	-8.17641	9.64
jul	23	5.25907	5.24090	-8.17609	9.18
jul	30	5.25911	5.24093	-8.17570	8.72
ago	6	5.25917	5.24097	-8.17542	8.26
ago	13	5.25922	5.24100	-8.17508	7.80
ago	20	5.25928	5.24104	-8.17486	7.34
ago	27	5.25933	5.24109	-8.17461	6.88
sep	3	5.25939	5.24113	-8.17447	6.42
sep	10	5.25944	5.24117	-8.17431	5.96
sep	17	5.25951	5.24122	-8.17425	5.50
sep	24	5.25955	5.24126	-8.17422	5.04
oct	1	5.25961	5.24131	-8.17426	4.58
oct	8	5.25966	5.24135	-8.17432	4.12
oct	15	5.25972	5.24139	-8.17444	3.66
oct	22	5.25977	5.24142	-8.17462	3.20
oct	29	5.25982	5.24146	-8.17484	2.74
nov	5	5.25986	5.24149	-8.17508	2.28
nov	12	5.25991	5.24151	-8.17534	1.82
nov	19	5.25994	5.24153	-8.17567	1.36
nov	26	5.25998	5.24154	-8.17598	0.90
dic	3	5.26000	5.24155	-8.17633	0.44
dic	10	5.26004	5.24155	-8.17663	23.98
dic	17	5.26005	5.24155	-8.17701	23.52
dic	24	5.26007	5.24154	-8.17731	23.06

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

27288

V 3.55 Sp A2Vann

m	d	α h	α_c h	δ °	Hp h
ene	1	5.79861	5.78095	-14.81606	23.06
ene	8	5.79861	5.78093	-14.81642	22.60
ene	15	5.79862	5.78091	-14.81678	22.14
ene	22	5.79860	5.78088	-14.81710	21.68
ene	29	5.79860	5.78085	-14.81739	21.22
feb	5	5.79857	5.78081	-14.81764	20.76
feb	12	5.79855	5.78077	-14.81784	20.30
feb	19	5.79852	5.78073	-14.81803	19.84
feb	26	5.79849	5.78068	-14.81814	19.38
mar	5	5.79845	5.78063	-14.81825	18.92
mar	12	5.79842	5.78058	-14.81826	18.46
mar	19	5.79837	5.78054	-14.81829	18.00
mar	26	5.79834	5.78049	-14.81822	17.54
abr	2	5.79830	5.78044	-14.81817	17.08
abr	9	5.79827	5.78039	-14.81799	16.62
abr	16	5.79824	5.78035	-14.81787	16.16
abr	23	5.79822	5.78031	-14.81763	15.70
abr	30	5.79819	5.78027	-14.81743	15.24
may	7	5.79818	5.78024	-14.81710	14.78
may	14	5.79816	5.78021	-14.81684	14.32
may	21	5.79816	5.78018	-14.81645	13.86
may	28	5.79816	5.78016	-14.81614	13.40
jun	4	5.79816	5.78015	-14.81568	12.94
jun	11	5.79817	5.78013	-14.81533	12.48
jun	18	5.79819	5.78013	-14.81485	12.02
jun	25	5.79821	5.78013	-14.81447	11.56
jul	2	5.79824	5.78014	-14.81398	11.10
jul	9	5.79827	5.78015	-14.81360	10.64
jul	16	5.79830	5.78016	-14.81311	10.18
jul	23	5.79835	5.78018	-14.81276	9.72
jul	30	5.79839	5.78021	-14.81232	9.26
ago	6	5.79844	5.78024	-14.81200	8.80
ago	13	5.79849	5.78027	-14.81162	8.34
ago	20	5.79854	5.78031	-14.81138	7.88
ago	27	5.79859	5.78035	-14.81109	7.42
sep	3	5.79865	5.78039	-14.81094	6.96
sep	10	5.79870	5.78044	-14.81076	6.50
sep	17	5.79877	5.78048	-14.81070	6.04
sep	24	5.79882	5.78053	-14.81066	5.58
oct	1	5.79888	5.78057	-14.81071	5.12
oct	8	5.79893	5.78062	-14.81078	4.66
oct	15	5.79900	5.78066	-14.81094	4.20
oct	22	5.79904	5.78070	-14.81114	3.74
oct	29	5.79910	5.78073	-14.81141	3.28
nov	5	5.79914	5.78077	-14.81170	2.82
nov	12	5.79920	5.78080	-14.81203	2.36
nov	19	5.79923	5.78082	-14.81242	1.90
nov	26	5.79928	5.78084	-14.81280	1.44
dic	3	5.79931	5.78085	-14.81323	0.98
dic	10	5.79935	5.78086	-14.81362	0.52
dic	17	5.79936	5.78086	-14.81408	0.06
dic	24	5.79939	5.78086	-14.81447	23.60

27654

V 3.76 Sp G8III/IV

m	d	α h	α_c h	δ °	Hp h
ene	1	5.87060	5.85293	-20.87923	23.13
ene	8	5.87060	5.85292	-20.87965	22.67
ene	15	5.87060	5.85289	-20.88007	22.21
ene	22	5.87058	5.85286	-20.88045	21.75
ene	29	5.87057	5.85283	-20.88079	21.29
feb	5	5.87055	5.85279	-20.88109	20.83
feb	12	5.87053	5.85275	-20.88133	20.37
feb	19	5.87049	5.85270	-20.88155	19.91
feb	26	5.87046	5.85265	-20.88170	19.45
mar	5	5.87042	5.85261	-20.88182	18.99
mar	12	5.87039	5.85255	-20.88185	18.53
mar	19	5.87034	5.85250	-20.88189	18.07
mar	26	5.87031	5.85245	-20.88183	17.61
abr	2	5.87027	5.85240	-20.88177	17.15
abr	9	5.87023	5.85235	-20.88159	16.69
abr	16	5.87020	5.85231	-20.88146	16.23
abr	23	5.87017	5.85226	-20.88119	15.77
abr	30	5.87014	5.85222	-20.88097	15.31
may	7	5.87013	5.85219	-20.88060	14.85
may	14	5.87011	5.85216	-20.88031	14.39
may	21	5.87010	5.85213	-20.87988	13.93
may	28	5.87010	5.85210	-20.87953	13.47
jun	4	5.87010	5.85209	-20.87903	13.01
jun	11	5.87011	5.85207	-20.87863	12.55
jun	18	5.87013	5.85207	-20.87810	12.09
jun	25	5.87015	5.85206	-20.87768	11.63
jul	2	5.87017	5.85207	-20.87714	11.17
jul	9	5.87020	5.85208	-20.87671	10.71
jul	16	5.87024	5.85209	-20.87619	10.25
jul	23	5.87028	5.85211	-20.87579	9.79
jul	30	5.87032	5.85214	-20.87531	9.33
ago	6	5.87037	5.85217	-20.87496	8.87
ago	13	5.87041	5.85220	-20.87455	8.41
ago	20	5.87047	5.85224	-20.87428	7.95
ago	27	5.87052	5.85228	-20.87397	7.49
sep	3	5.87058	5.85232	-20.87380	7.03
sep	10	5.87063	5.85237	-20.87361	6.57
sep	17	5.87070	5.85241	-20.87355	6.11
sep	24	5.87075	5.85246	-20.87350	5.65
oct	1	5.87081	5.85251	-20.87357	5.19
oct	8	5.87087	5.85255	-20.87365	4.73
oct	15	5.87093	5.85259	-20.87383	4.27
oct	22	5.87098	5.85264	-20.87406	3.81
oct	29	5.87104	5.85267	-20.87436	3.35
nov	5	5.87108	5.85271	-20.87469	2.89
nov	12	5.87114	5.85274	-20.87507	2.43
nov	19	5.87118	5.85277	-20.87551	1.97
nov	26	5.87122	5.85278	-20.87595	1.51
dic	3	5.87125	5.85280	-20.87643	1.05
dic	10	5.87129	5.85281	-20.87688	0.59
dic	17	5.87131	5.85281	-20.87740	0.13
dic	24	5.87133	5.85280	-20.87785	23.67

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

28103

V 3.71 Sp F1V

m	d	α h	α_c h	δ °	Hp h
ene	1	5.95618	5.93852	-14.16567	23.22
ene	8	5.95618	5.93850	-14.16603	22.76
ene	15	5.95619	5.93848	-14.16639	22.30
ene	22	5.95618	5.93845	-14.16672	21.84
ene	29	5.95617	5.93842	-14.16701	21.38
feb	5	5.95615	5.93839	-14.16726	20.92
feb	12	5.95613	5.93835	-14.16747	20.46
feb	19	5.95609	5.93831	-14.16766	20.00
feb	26	5.95607	5.93826	-14.16778	19.54
mar	5	5.95603	5.93822	-14.16789	19.08
mar	12	5.95600	5.93817	-14.16791	18.62
mar	19	5.95595	5.93812	-14.16795	18.16
mar	26	5.95592	5.93807	-14.16789	17.70
abr	2	5.95588	5.93802	-14.16785	17.24
abr	9	5.95585	5.93797	-14.16769	16.78
abr	16	5.95582	5.93793	-14.16758	16.32
abr	23	5.95579	5.93789	-14.16734	15.86
abr	30	5.95577	5.93785	-14.16716	15.40
may	7	5.95575	5.93781	-14.16684	14.94
may	14	5.95574	5.93778	-14.16659	14.48
may	21	5.95573	5.93776	-14.16622	14.02
may	28	5.95573	5.93773	-14.16592	13.56
jun	4	5.95573	5.93772	-14.16548	13.10
jun	11	5.95574	5.93771	-14.16514	12.64
jun	18	5.95576	5.93770	-14.16467	12.18
jun	25	5.95578	5.93770	-14.16430	11.72
jul	2	5.95580	5.93770	-14.16382	11.26
jul	9	5.95583	5.93771	-14.16344	10.80
jul	16	5.95587	5.93773	-14.16297	10.34
jul	23	5.95591	5.93774	-14.16262	9.88
jul	30	5.95595	5.93777	-14.16218	9.42
ago	6	5.95600	5.93780	-14.16187	8.96
ago	13	5.95604	5.93783	-14.16149	8.50
ago	20	5.95610	5.93786	-14.16125	8.04
ago	27	5.95615	5.93790	-14.16097	7.58
sep	3	5.95621	5.93795	-14.16081	7.12
sep	10	5.95626	5.93799	-14.16062	6.66
sep	17	5.95632	5.93803	-14.16057	6.20
sep	24	5.95637	5.93808	-14.16052	5.74
oct	1	5.95643	5.93812	-14.16057	5.28
oct	8	5.95648	5.93817	-14.16063	4.82
oct	15	5.95655	5.93821	-14.16079	4.36
oct	22	5.95660	5.93825	-14.16098	3.90
oct	29	5.95666	5.93829	-14.16124	3.44
nov	5	5.95670	5.93833	-14.16153	2.98
nov	12	5.95676	5.93836	-14.16185	2.52
nov	19	5.95679	5.93838	-14.16224	2.06
nov	26	5.95684	5.93840	-14.16262	1.60
dic	3	5.95687	5.93842	-14.16304	1.14
dic	10	5.95691	5.93843	-14.16343	0.68
dic	17	5.95693	5.93843	-14.16389	0.22
dic	24	5.95696	5.93843	-14.16428	23.76

29271

V 5.08 Sp G5V

m	d	α h	α_c h	δ °	Hp h
ene	1	6.16184	6.14417	-74.75982	23.42
ene	8	6.16179	6.14411	-74.76045	22.96
ene	15	6.16171	6.14400	-74.76109	22.50
ene	22	6.16162	6.14390	-74.76166	22.04
ene	29	6.16151	6.14376	-74.76221	21.58
feb	5	6.16138	6.14363	-74.76268	21.12
feb	12	6.16124	6.14345	-74.76309	20.66
feb	19	6.16108	6.14330	-74.76345	20.20
feb	26	6.16091	6.14311	-74.76372	19.74
mar	5	6.16075	6.14293	-74.76395	19.28
mar	12	6.16056	6.14273	-74.76406	18.82
mar	19	6.16039	6.14255	-74.76415	18.36
mar	26	6.16020	6.14234	-74.76411	17.90
abr	2	6.16002	6.14216	-74.76406	17.44
abr	9	6.15984	6.14196	-74.76387	16.98
abr	16	6.15968	6.14179	-74.76368	16.52
abr	23	6.15952	6.14161	-74.76335	16.06
abr	30	6.15937	6.14145	-74.76304	15.60
may	7	6.15923	6.14129	-74.76258	15.14
may	14	6.15911	6.14115	-74.76216	14.68
may	21	6.15900	6.14102	-74.76159	14.22
may	28	6.15891	6.14091	-74.76108	13.76
jun	4	6.15883	6.14082	-74.76042	13.30
jun	11	6.15878	6.14074	-74.75985	12.84
jun	18	6.15874	6.14068	-74.75914	12.38
jun	25	6.15872	6.14064	-74.75854	11.92
jul	2	6.15873	6.14063	-74.75781	11.46
jul	9	6.15875	6.14063	-74.75719	11.00
jul	16	6.15879	6.14065	-74.75648	10.54
jul	23	6.15885	6.14068	-74.75591	10.08
jul	30	6.15893	6.14075	-74.75526	9.62
ago	6	6.15902	6.14082	-74.75474	9.16
ago	13	6.15914	6.14092	-74.75418	8.70
ago	20	6.15926	6.14102	-74.75378	8.24
ago	27	6.15940	6.14115	-74.75335	7.78
sep	3	6.15954	6.14128	-74.75308	7.32
sep	10	6.15970	6.14143	-74.75281	6.86
sep	17	6.15986	6.14157	-74.75269	6.40
sep	24	6.16003	6.14173	-74.75261	5.94
oct	1	6.16019	6.14188	-74.75266	5.48
oct	8	6.16036	6.14204	-74.75275	5.02
oct	15	6.16051	6.14217	-74.75298	4.56
oct	22	6.16067	6.14232	-74.75326	4.10
oct	29	6.16081	6.14244	-74.75365	3.64
nov	5	6.16094	6.14257	-74.75408	3.18
nov	12	6.16105	6.14265	-74.75460	2.72
nov	19	6.16115	6.14274	-74.75518	2.26
nov	26	6.16123	6.14279	-74.75579	1.80
dic	3	6.16130	6.14284	-74.75645	1.34
dic	10	6.16133	6.14285	-74.75711	0.88
dic	17	6.16135	6.14285	-74.75783	0.42
dic	24	6.16134	6.14282	-74.75850	23.96

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

30438

		V	Sp		
		-0.62	F0Ib		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	6.40749	6.38982	-52.70789	23.67
ene	8	6.40748	6.38980	-52.70852	23.21
ene	15	6.40747	6.38976	-52.70917	22.75
ene	22	6.40744	6.38972	-52.70975	22.29
ene	29	6.40742	6.38967	-52.71031	21.83
feb	5	6.40737	6.38961	-52.71080	21.37
feb	12	6.40733	6.38955	-52.71123	20.91
feb	19	6.40727	6.38948	-52.71162	20.45
feb	26	6.40721	6.38940	-52.71192	19.99
mar	5	6.40715	6.38933	-52.71217	19.53
mar	12	6.40708	6.38925	-52.71232	19.07
mar	19	6.40701	6.38917	-52.71244	18.61
mar	26	6.40694	6.38908	-52.71245	18.15
abr	2	6.40687	6.38900	-52.71243	17.69
abr	9	6.40680	6.38892	-52.71228	17.23
abr	16	6.40673	6.38884	-52.71213	16.77
abr	23	6.40667	6.38877	-52.71185	16.31
abr	30	6.40661	6.38869	-52.71158	15.85
may	7	6.40656	6.38862	-52.71115	15.39
may	14	6.40652	6.38856	-52.71077	14.93
may	21	6.40648	6.38851	-52.71024	14.47
may	28	6.40645	6.38846	-52.70977	14.01
jun	4	6.40643	6.38841	-52.70914	13.55
jun	11	6.40642	6.38838	-52.70860	13.09
jun	18	6.40641	6.38835	-52.70791	12.63
jun	25	6.40641	6.38833	-52.70733	12.17
jul	2	6.40642	6.38832	-52.70662	11.71
jul	9	6.40644	6.38832	-52.70602	11.25
jul	16	6.40647	6.38833	-52.70532	10.79
jul	23	6.40651	6.38834	-52.70475	10.33
jul	30	6.40655	6.38837	-52.70410	9.87
ago	6	6.40660	6.38840	-52.70359	9.41
ago	13	6.40665	6.38844	-52.70301	8.95
ago	20	6.40672	6.38848	-52.70260	8.49
ago	27	6.40678	6.38854	-52.70216	8.03
sep	3	6.40685	6.38859	-52.70187	7.57
sep	10	6.40692	6.38866	-52.70157	7.11
sep	17	6.40701	6.38872	-52.70143	6.65
sep	24	6.40708	6.38879	-52.70132	6.19
oct	1	6.40716	6.38885	-52.70134	5.73
oct	8	6.40724	6.38893	-52.70140	5.27
oct	15	6.40732	6.38899	-52.70159	4.81
oct	22	6.40740	6.38905	-52.70184	4.35
oct	29	6.40747	6.38911	-52.70220	3.89
nov	5	6.40754	6.38917	-52.70260	3.43
nov	12	6.40761	6.38921	-52.70309	2.97
nov	19	6.40767	6.38926	-52.70364	2.51
nov	26	6.40772	6.38929	-52.70424	2.05
dic	3	6.40777	6.38931	-52.70488	1.59
dic	10	6.40781	6.38932	-52.70552	1.13
dic	17	6.40783	6.38933	-52.70623	0.67
dic	24	6.40785	6.38933	-52.70689	0.21

32349

		V	Sp		
		-1.44	A0m		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	6.76806	6.75039	-16.74611	0.03
ene	8	6.76807	6.75039	-16.74653	23.57
ene	15	6.76808	6.75037	-16.74697	23.11
ene	22	6.76808	6.75035	-16.74736	22.65
ene	29	6.76808	6.75033	-16.74774	22.19
feb	5	6.76806	6.75030	-16.74805	21.73
feb	12	6.76805	6.75026	-16.74834	21.27
feb	19	6.76801	6.75023	-16.74859	20.81
feb	26	6.76799	6.75018	-16.74879	20.35
mar	5	6.76796	6.75014	-16.74895	19.89
mar	12	6.76793	6.75009	-16.74905	19.43
mar	19	6.76788	6.75005	-16.74914	18.97
mar	26	6.76785	6.75000	-16.74914	18.51
abr	2	6.76781	6.74995	-16.74915	18.05
abr	9	6.76778	6.74990	-16.74905	17.59
abr	16	6.76774	6.74985	-16.74898	17.13
abr	23	6.76771	6.74980	-16.74879	16.67
abr	30	6.76768	6.74976	-16.74865	16.21
may	7	6.76766	6.74972	-16.74838	15.75
may	14	6.76763	6.74968	-16.74816	15.29
may	21	6.76762	6.74965	-16.74782	14.83
may	28	6.76761	6.74962	-16.74755	14.37
jun	4	6.76761	6.74959	-16.74714	13.91
jun	11	6.76761	6.74957	-16.74682	13.45
jun	18	6.76761	6.74956	-16.74637	12.99
jun	25	6.76763	6.74954	-16.74603	12.53
jul	2	6.76764	6.74954	-16.74555	12.07
jul	9	6.76766	6.74954	-16.74519	11.61
jul	16	6.76769	6.74955	-16.74471	11.15
jul	23	6.76772	6.74956	-16.74437	10.69
jul	30	6.76775	6.74957	-16.74393	10.23
ago	6	6.76780	6.74959	-16.74362	9.77
ago	13	6.76783	6.74962	-16.74323	9.31
ago	20	6.76789	6.74965	-16.74298	8.85
ago	27	6.76793	6.74969	-16.74268	8.39
sep	3	6.76798	6.74972	-16.74252	7.93
sep	10	6.76803	6.74976	-16.74231	7.47
sep	17	6.76809	6.74981	-16.74225	7.01
sep	24	6.76814	6.74985	-16.74218	6.55
oct	1	6.76820	6.74990	-16.74223	6.09
oct	8	6.76826	6.74994	-16.74228	5.63
oct	15	6.76832	6.74999	-16.74245	5.17
oct	22	6.76837	6.75003	-16.74263	4.71
oct	29	6.76844	6.75007	-16.74291	4.25
nov	5	6.76849	6.75011	-16.74320	3.79
nov	12	6.76855	6.75015	-16.74356	3.33
nov	19	6.76859	6.75018	-16.74396	2.87
nov	26	6.76865	6.75021	-16.74439	2.41
dic	3	6.76868	6.75023	-16.74484	1.95
dic	10	6.76873	6.75025	-16.74530	1.49
dic	17	6.76876	6.75026	-16.74580	1.03
dic	24	6.76879	6.75027	-16.74626	0.57

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

34834

V 4.49 Sp F0IV

m	d	α h	α_c h	δ °	Hp h
ene	1	7.21972	7.20205	-46.79405	0.48
ene	8	7.21973	7.20205	-46.79469	0.02
ene	15	7.21974	7.20203	-46.79538	23.56
ene	22	7.21973	7.20201	-46.79599	23.10
ene	29	7.21972	7.20197	-46.79661	22.64
feb	5	7.21970	7.20194	-46.79715	22.18
feb	12	7.21967	7.20189	-46.79767	21.72
feb	19	7.21963	7.20184	-46.79812	21.26
feb	26	7.21959	7.20178	-46.79853	20.80
mar	5	7.21954	7.20172	-46.79887	20.34
mar	12	7.21949	7.20165	-46.79914	19.88
mar	19	7.21943	7.20159	-46.79936	19.42
mar	26	7.21937	7.20152	-46.79949	18.96
abr	2	7.21931	7.20145	-46.79959	18.50
abr	9	7.21925	7.20137	-46.79956	18.04
abr	16	7.21919	7.20130	-46.79953	17.58
abr	23	7.21914	7.20123	-46.79937	17.12
abr	30	7.21909	7.20117	-46.79922	16.66
may	7	7.21904	7.20110	-46.79892	16.20
may	14	7.21899	7.20104	-46.79864	15.74
may	21	7.21896	7.20098	-46.79823	15.28
may	28	7.21892	7.20093	-46.79786	14.82
jun	4	7.21890	7.20088	-46.79733	14.36
jun	11	7.21888	7.20084	-46.79687	13.90
jun	18	7.21886	7.20081	-46.79627	13.44
jun	25	7.21886	7.20078	-46.79575	12.98
jul	2	7.21886	7.20076	-46.79510	12.52
jul	9	7.21887	7.20074	-46.79455	12.06
jul	16	7.21888	7.20074	-46.79387	11.60
jul	23	7.21891	7.20074	-46.79333	11.14
jul	30	7.21893	7.20075	-46.79268	10.68
ago	6	7.21897	7.20077	-46.79216	10.22
ago	13	7.21901	7.20079	-46.79157	9.76
ago	20	7.21906	7.20082	-46.79113	9.30
ago	27	7.21910	7.20086	-46.79064	8.84
sep	3	7.21916	7.20090	-46.79030	8.38
sep	10	7.21922	7.20095	-46.78992	7.92
sep	17	7.21929	7.20100	-46.78973	7.46
sep	24	7.21936	7.20106	-46.78952	7.00
oct	1	7.21943	7.20112	-46.78947	6.54
oct	8	7.21950	7.20118	-46.78943	6.08
oct	15	7.21958	7.20124	-46.78955	5.62
oct	22	7.21965	7.20130	-46.78970	5.16
oct	29	7.21972	7.20136	-46.78998	4.70
nov	5	7.21979	7.20142	-46.79029	4.24
nov	12	7.21987	7.20147	-46.79072	3.78
nov	19	7.21993	7.20152	-46.79119	3.32
nov	26	7.21999	7.20155	-46.79173	2.86
dic	3	7.22004	7.20159	-46.79231	2.40
dic	10	7.22010	7.20161	-46.79293	1.94
dic	17	7.22013	7.20163	-46.79360	1.48
dic	24	7.22017	7.20164	-46.79427	1.02

36795

V 4.44 Sp F6V

m	d	α h	α_c h	δ °	Hp h
ene	1	7.58271	7.56505	-22.34151	0.84
ene	8	7.58273	7.56505	-22.34199	0.38
ene	15	7.58276	7.56505	-22.34253	23.92
ene	22	7.58276	7.56504	-22.34299	23.46
ene	29	7.58277	7.56502	-22.34347	23.00
feb	5	7.58276	7.56500	-22.34387	22.54
feb	12	7.58275	7.56497	-22.34427	22.08
feb	19	7.58273	7.56494	-22.34460	21.62
feb	26	7.58271	7.56490	-22.34491	21.16
mar	5	7.58268	7.56486	-22.34516	20.70
mar	12	7.58265	7.56482	-22.34535	20.24
mar	19	7.58261	7.56477	-22.34551	19.78
mar	26	7.58258	7.56472	-22.34561	19.32
abr	2	7.58254	7.56468	-22.34568	18.86
abr	9	7.58251	7.56462	-22.34566	18.40
abr	16	7.58246	7.56457	-22.34564	17.94
abr	23	7.58243	7.56452	-22.34553	17.48
abr	30	7.58240	7.56448	-22.34543	17.02
may	7	7.58237	7.56443	-22.34521	16.56
may	14	7.58234	7.56438	-22.34502	16.10
may	21	7.58232	7.56434	-22.34471	15.64
may	28	7.58230	7.56430	-22.34446	15.18
jun	4	7.58228	7.56427	-22.34407	14.72
jun	11	7.58227	7.56424	-22.34375	14.26
jun	18	7.58227	7.56421	-22.34331	13.80
jun	25	7.58227	7.56419	-22.34295	13.34
jul	2	7.58228	7.56418	-22.34247	12.88
jul	9	7.58229	7.56417	-22.34208	12.42
jul	16	7.58230	7.56416	-22.34157	11.96
jul	23	7.58233	7.56416	-22.34120	11.50
jul	30	7.58235	7.56417	-22.34071	11.04
ago	6	7.58238	7.56418	-22.34035	10.58
ago	13	7.58241	7.56420	-22.33990	10.12
ago	20	7.58245	7.56422	-22.33960	9.66
ago	27	7.58249	7.56425	-22.33923	9.20
sep	3	7.58254	7.56428	-22.33901	8.74
sep	10	7.58258	7.56431	-22.33873	8.28
sep	17	7.58264	7.56435	-22.33862	7.82
sep	24	7.58269	7.56440	-22.33847	7.36
oct	1	7.58275	7.56444	-22.33847	6.90
oct	8	7.58280	7.56449	-22.33845	6.44
oct	15	7.58287	7.56453	-22.33858	5.98
oct	22	7.58292	7.56458	-22.33872	5.52
oct	29	7.58299	7.56462	-22.33897	5.06
nov	5	7.58304	7.56467	-22.33923	4.60
nov	12	7.58311	7.56471	-22.33959	4.14
nov	19	7.58316	7.56475	-22.33998	3.68
nov	26	7.58322	7.56479	-22.34043	3.22
dic	3	7.58327	7.56482	-22.34089	2.76
dic	10	7.58333	7.56484	-22.34140	2.30
dic	17	7.58337	7.56487	-22.34193	1.84
dic	24	7.58341	7.56488	-22.34245	1.38

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

44382

		V	Sp		
		4.00	Am		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	9.04688	9.02922	-66.47583	2.31
ene	8	9.04694	9.02926	-66.47648	1.85
ene	15	9.04698	9.02927	-66.47726	1.39
ene	22	9.04701	9.02929	-66.47797	0.93
ene	29	9.04703	9.02928	-66.47876	0.47
feb	5	9.04702	9.02926	-66.47946	0.01
feb	12	9.04701	9.02923	-66.48022	23.55
feb	19	9.04698	9.02919	-66.48090	23.09
feb	26	9.04694	9.02913	-66.48160	22.63
mar	5	9.04689	9.02907	-66.48221	22.17
mar	12	9.04682	9.02899	-66.48281	21.71
mar	19	9.04675	9.02891	-66.48333	21.25
mar	26	9.04667	9.02881	-66.48382	20.79
abr	2	9.04658	9.02872	-66.48423	20.33
abr	9	9.04648	9.02860	-66.48458	19.87
abr	16	9.04639	9.02850	-66.48486	19.41
abr	23	9.04629	9.02838	-66.48507	18.95
abr	30	9.04619	9.02827	-66.48523	18.49
may	7	9.04609	9.02815	-66.48527	18.03
may	14	9.04599	9.02804	-66.48528	17.57
may	21	9.04589	9.02791	-66.48518	17.11
may	28	9.04580	9.02781	-66.48507	16.65
jun	4	9.04571	9.02769	-66.48481	16.19
jun	11	9.04563	9.02760	-66.48455	15.73
jun	18	9.04555	9.02749	-66.48416	15.27
jun	25	9.04549	9.02741	-66.48380	14.81
jul	2	9.04543	9.02733	-66.48329	14.35
jul	9	9.04538	9.02726	-66.48283	13.89
jul	16	9.04534	9.02720	-66.48223	13.43
jul	23	9.04532	9.02715	-66.48171	12.97
jul	30	9.04529	9.02711	-66.48106	12.51
ago	6	9.04529	9.02709	-66.48049	12.05
ago	13	9.04530	9.02708	-66.47981	11.59
ago	20	9.04532	9.02709	-66.47927	11.13
ago	27	9.04535	9.02711	-66.47862	10.67
sep	3	9.04540	9.02714	-66.47810	10.21
sep	10	9.04545	9.02718	-66.47752	9.75
sep	17	9.04552	9.02723	-66.47710	9.29
sep	24	9.04559	9.02730	-66.47663	8.83
oct	1	9.04569	9.02738	-66.47633	8.37
oct	8	9.04578	9.02747	-66.47599	7.91
oct	15	9.04589	9.02755	-66.47586	7.45
oct	22	9.04600	9.02765	-66.47570	6.99
oct	29	9.04612	9.02775	-66.47572	6.53
nov	5	9.04623	9.02786	-66.47575	6.07
nov	12	9.04635	9.02795	-66.47596	5.61
nov	19	9.04647	9.02806	-66.47618	5.15
nov	26	9.04659	9.02815	-66.47655	4.69
dic	3	9.04670	9.02824	-66.47694	4.23
dic	10	9.04680	9.02832	-66.47747	3.77
dic	17	9.04690	9.02840	-66.47802	3.31
dic	24	9.04698	9.02845	-66.47864	2.85

45238

		V	Sp		
		1.67	A2IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	9.22447	9.20681	-69.79914	2.48
ene	8	9.22453	9.20685	-69.79978	2.02
ene	15	9.22459	9.20688	-69.80056	1.56
ene	22	9.22462	9.20690	-69.80126	1.10
ene	29	9.22464	9.20689	-69.80205	0.64
feb	5	9.22464	9.20688	-69.80276	0.18
feb	12	9.22463	9.20685	-69.80354	23.72
feb	19	9.22460	9.20681	-69.80423	23.26
feb	26	9.22456	9.20675	-69.80495	22.80
mar	5	9.22450	9.20668	-69.80558	22.34
mar	12	9.22443	9.20659	-69.80622	21.88
mar	19	9.22435	9.20651	-69.80676	21.42
mar	26	9.22425	9.20640	-69.80729	20.96
abr	2	9.22416	9.20629	-69.80774	20.50
abr	9	9.22405	9.20616	-69.80812	20.04
abr	16	9.22394	9.20605	-69.80844	19.58
abr	23	9.22382	9.20591	-69.80869	19.12
abr	30	9.22371	9.20579	-69.80889	18.66
may	7	9.22358	9.20564	-69.80898	18.20
may	14	9.22347	9.20552	-69.80903	17.74
may	21	9.22335	9.20538	-69.80896	17.28
may	28	9.22325	9.20525	-69.80889	16.82
jun	4	9.22313	9.20512	-69.80867	16.36
jun	11	9.22304	9.20500	-69.80844	15.90
jun	18	9.22294	9.20488	-69.80808	15.44
jun	25	9.22286	9.20478	-69.80775	14.98
jul	2	9.22278	9.20468	-69.80727	14.52
jul	9	9.22272	9.20460	-69.80682	14.06
jul	16	9.22266	9.20452	-69.80624	13.60
jul	23	9.22263	9.20446	-69.80574	13.14
jul	30	9.22259	9.20441	-69.80509	12.68
ago	6	9.22259	9.20439	-69.80452	12.22
ago	13	9.22258	9.20437	-69.80385	11.76
ago	20	9.22260	9.20437	-69.80330	11.30
ago	27	9.22262	9.20438	-69.80264	10.84
sep	3	9.22267	9.20441	-69.80210	10.38
sep	10	9.22272	9.20446	-69.80150	9.92
sep	17	9.22280	9.20451	-69.80106	9.46
sep	24	9.22288	9.20459	-69.80056	9.00
oct	1	9.22298	9.20467	-69.80023	8.54
oct	8	9.22308	9.20477	-69.79986	8.08
oct	15	9.22320	9.20486	-69.79969	7.62
oct	22	9.22332	9.20498	-69.79950	7.16
oct	29	9.22346	9.20509	-69.79947	6.70
nov	5	9.22359	9.20522	-69.79946	6.24
nov	12	9.22373	9.20533	-69.79964	5.78
nov	19	9.22386	9.20545	-69.79982	5.32
nov	26	9.22399	9.20555	-69.80015	4.86
dic	3	9.22412	9.20566	-69.80051	4.41
dic	10	9.22424	9.20575	-69.80101	3.95
dic	17	9.22435	9.20585	-69.80153	3.49
dic	24	9.22444	9.20592	-69.80214	3.03

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

50954

		V	Sp		
		3.99	F2IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	10.41406	10.39639	-74.13245	3.67
ene	8	10.41417	10.39649	-74.13299	3.21
ene	15	10.41429	10.39658	-74.13370	2.75
ene	22	10.41437	10.39665	-74.13434	2.29
ene	29	10.41445	10.39670	-74.13510	1.83
feb	5	10.41450	10.39674	-74.13580	1.37
feb	12	10.41453	10.39675	-74.13661	0.91
feb	19	10.41454	10.39676	-74.13733	0.45
feb	26	10.41454	10.39673	-74.13813	23.99
mar	5	10.41452	10.39670	-74.13884	23.53
mar	12	10.41447	10.39664	-74.13959	23.07
mar	19	10.41442	10.39658	-74.14025	22.61
mar	26	10.41434	10.39649	-74.14094	22.15
abr	2	10.41426	10.39640	-74.14154	21.69
abr	9	10.41416	10.39628	-74.14212	21.23
abr	16	10.41406	10.39617	-74.14261	20.77
abr	23	10.41393	10.39602	-74.14307	20.31
abr	30	10.41381	10.39589	-74.14346	19.85
may	7	10.41367	10.39573	-74.14378	19.39
may	14	10.41354	10.39559	-74.14403	18.93
may	21	10.41339	10.39542	-74.14420	18.47
may	28	10.41327	10.39527	-74.14432	18.01
jun	4	10.41311	10.39510	-74.14434	17.55
jun	11	10.41298	10.39495	-74.14430	17.09
jun	18	10.41284	10.39478	-74.14416	16.63
jun	25	10.41272	10.39464	-74.14400	16.17
jul	2	10.41258	10.39448	-74.14371	15.71
jul	9	10.41248	10.39436	-74.14341	15.25
jul	16	10.41236	10.39422	-74.14298	14.79
jul	23	10.41229	10.39412	-74.14259	14.33
jul	30	10.41219	10.39401	-74.14205	13.87
ago	6	10.41214	10.39394	-74.14156	13.41
ago	13	10.41208	10.39387	-74.14094	12.95
ago	20	10.41206	10.39382	-74.14042	12.49
ago	27	10.41204	10.39379	-74.13976	12.03
sep	3	10.41205	10.39379	-74.13920	11.57
sep	10	10.41206	10.39380	-74.13855	11.11
sep	17	10.41212	10.39383	-74.13805	10.65
sep	24	10.41217	10.39388	-74.13745	10.19
oct	1	10.41226	10.39395	-74.13699	9.73
oct	8	10.41236	10.39404	-74.13648	9.27
oct	15	10.41248	10.39414	-74.13616	8.81
oct	22	10.41260	10.39426	-74.13579	8.35
oct	29	10.41275	10.39439	-74.13559	7.89
nov	5	10.41290	10.39453	-74.13538	7.43
nov	12	10.41307	10.39467	-74.13537	6.97
nov	19	10.41324	10.39483	-74.13535	6.51
nov	26	10.41341	10.39497	-74.13550	6.05
dic	3	10.41358	10.39513	-74.13565	5.59
dic	10	10.41375	10.39526	-74.13600	5.13
dic	17	10.41391	10.39541	-74.13634	4.67
dic	24	10.41406	10.39553	-74.13682	4.22

51814

		V	Sp		
		5.16	F1V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	10.60839	10.59072	56.97115	3.87
ene	8	10.60847	10.59079	56.97125	3.41
ene	15	10.60857	10.59086	56.97133	2.95
ene	22	10.60864	10.59092	56.97158	2.49
ene	29	10.60872	10.59097	56.97180	2.03
feb	5	10.60877	10.59101	56.97217	1.57
feb	12	10.60883	10.59105	56.97249	1.11
feb	19	10.60886	10.59107	56.97295	0.65
feb	26	10.60889	10.59108	56.97336	0.19
mar	5	10.60890	10.59108	56.97386	23.73
mar	12	10.60891	10.59108	56.97430	23.27
mar	19	10.60889	10.59105	56.97483	22.81
mar	26	10.60888	10.59103	56.97526	22.35
abr	2	10.60885	10.59098	56.97573	21.89
abr	9	10.60882	10.59094	56.97614	21.43
abr	16	10.60877	10.59088	56.97656	20.97
abr	23	10.60874	10.59083	56.97689	20.51
abr	30	10.60868	10.59076	56.97719	20.05
may	7	10.60864	10.59070	56.97744	19.59
may	14	10.60857	10.59062	56.97764	19.13
may	21	10.60853	10.59055	56.97777	18.67
may	28	10.60847	10.59048	56.97782	18.21
jun	4	10.60843	10.59041	56.97784	17.75
jun	11	10.60837	10.59034	56.97779	17.29
jun	18	10.60833	10.59028	56.97769	16.83
jun	25	10.60829	10.59021	56.97748	16.37
jul	2	10.60826	10.59016	56.97729	15.91
jul	9	10.60822	10.59010	56.97699	15.45
jul	16	10.60820	10.59006	56.97669	14.99
jul	23	10.60818	10.59001	56.97626	14.53
jul	30	10.60817	10.58999	56.97589	14.07
ago	6	10.60816	10.58996	56.97540	13.61
ago	13	10.60816	10.58994	56.97495	13.15
ago	20	10.60817	10.58993	56.97437	12.69
ago	27	10.60818	10.58993	56.97388	12.23
sep	3	10.60820	10.58994	56.97327	11.77
sep	10	10.60822	10.58996	56.97273	11.31
sep	17	10.60827	10.58998	56.97207	10.85
sep	24	10.60830	10.59001	56.97153	10.39
oct	1	10.60836	10.59005	56.97089	9.93
oct	8	10.60841	10.59010	56.97035	9.47
oct	15	10.60849	10.59015	56.96970	9.01
oct	22	10.60855	10.59021	56.96920	8.55
oct	29	10.60864	10.59028	56.96862	8.09
nov	5	10.60872	10.59035	56.96817	7.63
nov	12	10.60883	10.59043	56.96765	7.17
nov	19	10.60891	10.59050	56.96728	6.71
nov	26	10.60902	10.59059	56.96688	6.25
dic	3	10.60912	10.59067	56.96661	5.79
dic	10	10.60924	10.59076	56.96632	5.33
dic	17	10.60934	10.59083	56.96618	4.87
dic	24	10.60945	10.59092	56.96605	4.41

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

53910

		V	Sp		
		2.34	A1V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	11.05159	11.03393	56.26658	4.31
ene	8	11.05168	11.03400	56.26662	3.85
ene	15	11.05179	11.03408	56.26662	3.39
ene	22	11.05186	11.03414	56.26683	2.93
ene	29	11.05194	11.03419	56.26699	2.47
feb	5	11.05200	11.03424	56.26731	2.01
feb	12	11.05207	11.03429	56.26759	1.55
feb	19	11.05210	11.03431	56.26803	1.09
feb	26	11.05214	11.03434	56.26841	0.63
mar	5	11.05216	11.03434	56.26890	0.17
mar	12	11.05218	11.03435	56.26934	23.71
mar	19	11.05217	11.03433	56.26987	23.25
mar	26	11.05217	11.03432	56.27032	22.79
abr	2	11.05215	11.03428	56.27082	22.33
abr	9	11.05213	11.03425	56.27125	21.87
abr	16	11.05209	11.03420	56.27171	21.41
abr	23	11.05206	11.03415	56.27208	20.95
abr	30	11.05201	11.03408	56.27243	20.49
may	7	11.05197	11.03403	56.27272	20.03
may	14	11.05191	11.03395	56.27299	19.57
may	21	11.05187	11.03389	56.27317	19.11
may	28	11.05181	11.03381	56.27328	18.65
jun	4	11.05177	11.03375	56.27336	18.19
jun	11	11.05171	11.03367	56.27337	17.73
jun	18	11.05167	11.03361	56.27332	17.27
jun	25	11.05162	11.03354	56.27317	16.81
jul	2	11.05159	11.03348	56.27302	16.35
jul	9	11.05154	11.03342	56.27277	15.89
jul	16	11.05152	11.03337	56.27251	15.43
jul	23	11.05149	11.03332	56.27212	14.97
jul	30	11.05147	11.03329	56.27178	14.51
ago	6	11.05145	11.03325	56.27132	14.05
ago	13	11.05144	11.03323	56.27088	13.59
ago	20	11.05144	11.03321	56.27032	13.13
ago	27	11.05144	11.03320	56.26983	12.67
sep	3	11.05145	11.03319	56.26923	12.21
sep	10	11.05147	11.03320	56.26869	11.75
sep	17	11.05150	11.03321	56.26801	11.29
sep	24	11.05153	11.03324	56.26746	10.83
oct	1	11.05157	11.03326	56.26679	10.37
oct	8	11.05161	11.03330	56.26622	9.91
oct	15	11.05168	11.03335	56.26553	9.45
oct	22	11.05174	11.03340	56.26499	8.99
oct	29	11.05182	11.03345	56.26437	8.53
nov	5	11.05189	11.03352	56.26386	8.07
nov	12	11.05199	11.03359	56.26327	7.61
nov	19	11.05207	11.03366	56.26285	7.15
nov	26	11.05217	11.03374	56.26238	6.69
dic	3	11.05227	11.03381	56.26205	6.23
dic	10	11.05238	11.03390	56.26168	5.77
dic	17	11.05248	11.03398	56.26148	5.31
dic	24	11.05259	11.03406	56.26127	4.85

54872

		V	Sp		
		2.56	A4V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	11.25359	11.23592	20.40785	4.51
ene	8	11.25364	11.23596	20.40761	4.05
ene	15	11.25372	11.23600	20.40731	3.59
ene	22	11.25376	11.23604	20.40718	3.13
ene	29	11.25382	11.23607	20.40698	2.67
feb	5	11.25386	11.23610	20.40694	2.21
feb	12	11.25391	11.23613	20.40683	1.75
feb	19	11.25393	11.23614	20.40689	1.29
feb	26	11.25396	11.23616	20.40689	0.83
mar	5	11.25398	11.23616	20.40701	0.37
mar	12	11.25400	11.23616	20.40709	23.91
mar	19	11.25399	11.23616	20.40728	23.45
mar	26	11.25400	11.23615	20.40742	22.99
abr	2	11.25399	11.23613	20.40763	22.53
abr	9	11.25399	11.23611	20.40781	22.07
abr	16	11.25397	11.23608	20.40805	21.61
abr	23	11.25396	11.23605	20.40824	21.15
abr	30	11.25394	11.23602	20.40845	20.69
may	7	11.25392	11.23599	20.40864	20.23
may	14	11.25390	11.23594	20.40885	19.77
may	21	11.25388	11.23591	20.40902	19.31
may	28	11.25386	11.23586	20.40916	18.85
jun	4	11.25384	11.23582	20.40931	18.39
jun	11	11.25381	11.23578	20.40942	17.93
jun	18	11.25379	11.23574	20.40952	17.47
jun	25	11.25377	11.23569	20.40956	17.01
jul	2	11.25376	11.23565	20.40962	16.55
jul	9	11.25374	11.23562	20.40963	16.09
jul	16	11.25372	11.23558	20.40964	15.63
jul	23	11.25372	11.23555	20.40955	15.17
jul	30	11.25370	11.23552	20.40953	14.71
ago	6	11.25370	11.23550	20.40941	14.25
ago	13	11.25369	11.23548	20.40932	13.79
ago	20	11.25370	11.23546	20.40911	13.33
ago	27	11.25369	11.23545	20.40898	12.87
sep	3	11.25370	11.23544	20.40874	12.41
sep	10	11.25371	11.23544	20.40854	11.95
sep	17	11.25373	11.23545	20.40821	11.49
sep	24	11.25375	11.23546	20.40797	11.03
oct	1	11.25378	11.23547	20.40760	10.57
oct	8	11.25380	11.23549	20.40729	10.11
oct	15	11.25385	11.23551	20.40685	9.65
oct	22	11.25388	11.23554	20.40651	9.19
oct	29	11.25393	11.23557	20.40605	8.73
nov	5	11.25398	11.23561	20.40567	8.27
nov	12	11.25405	11.23565	20.40516	7.82
nov	19	11.25410	11.23569	20.40477	7.36
nov	26	11.25417	11.23573	20.40429	6.90
dic	3	11.25423	11.23578	20.40390	6.44
dic	10	11.25431	11.23582	20.40342	5.98
dic	17	11.25437	11.23587	20.40307	5.52
dic	24	11.25445	11.23592	20.40267	5.06

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

58001

V 2.41 Sp A0V

m	d	α h	α_c h	δ °	Hp h
ene	1	11.91533	11.89767	53.57493	5.17
ene	8	11.91542	11.89774	53.57482	4.71
ene	15	11.91553	11.89782	53.57469	4.25
ene	22	11.91560	11.89788	53.57476	3.79
ene	29	11.91569	11.89794	53.57480	3.33
feb	5	11.91576	11.89800	53.57501	2.87
feb	12	11.91584	11.89805	53.57519	2.41
feb	19	11.91588	11.89810	53.57555	1.95
feb	26	11.91594	11.89813	53.57585	1.50
mar	5	11.91597	11.89815	53.57629	1.04
mar	12	11.91601	11.89817	53.57669	0.58
mar	19	11.91601	11.89817	53.57721	0.12
mar	26	11.91603	11.89817	53.57765	23.66
abr	2	11.91602	11.89816	53.57817	23.20
abr	9	11.91602	11.89814	53.57863	22.74
abr	16	11.91599	11.89811	53.57915	22.28
abr	23	11.91598	11.89807	53.57957	21.82
abr	30	11.91594	11.89802	53.58001	21.36
may	7	11.91592	11.89798	53.58038	20.90
may	14	11.91587	11.89792	53.58075	20.44
may	21	11.91584	11.89786	53.58102	19.98
may	28	11.91579	11.89779	53.58126	19.52
jun	4	11.91575	11.89773	53.58144	19.06
jun	11	11.91570	11.89766	53.58157	18.60
jun	18	11.91566	11.89760	53.58163	18.14
jun	25	11.91561	11.89753	53.58161	17.68
jul	2	11.91557	11.89747	53.58156	17.22
jul	9	11.91552	11.89740	53.58143	16.76
jul	16	11.91549	11.89735	53.58126	16.30
jul	23	11.91545	11.89728	53.58098	15.84
jul	30	11.91542	11.89724	53.58071	15.38
ago	6	11.91539	11.89719	53.58035	14.92
ago	13	11.91536	11.89715	53.57997	14.46
ago	20	11.91535	11.89711	53.57947	14.00
ago	27	11.91533	11.89709	53.57903	13.54
sep	3	11.91533	11.89706	53.57847	13.08
sep	10	11.91532	11.89706	53.57794	12.62
sep	17	11.91533	11.89705	53.57729	12.16
sep	24	11.91534	11.89705	53.57673	11.70
oct	1	11.91536	11.89706	53.57606	11.24
oct	8	11.91539	11.89707	53.57545	10.78
oct	15	11.91543	11.89710	53.57472	10.32
oct	22	11.91547	11.89713	53.57413	9.86
oct	29	11.91553	11.89717	53.57344	9.40
nov	5	11.91558	11.89721	53.57285	8.94
nov	12	11.91567	11.89727	53.57217	8.48
nov	19	11.91573	11.89732	53.57165	8.02
nov	26	11.91582	11.89738	53.57106	7.56
dic	3	11.91590	11.89745	53.57061	7.10
dic	10	11.91601	11.89752	53.57010	6.64
dic	17	11.91609	11.89759	53.56977	6.18
dic	24	11.91620	11.89767	53.56942	5.72

58803

V 5.15 Sp F6V

m	d	α h	α_c h	δ °	Hp h
ene	1	12.07902	12.06135	-42.54629	5.34
ene	8	12.07909	12.06141	-42.54670	4.88
ene	15	12.07917	12.06146	-42.54727	4.42
ene	22	12.07923	12.06151	-42.54775	3.96
ene	29	12.07930	12.06155	-42.54836	3.50
feb	5	12.07935	12.06159	-42.54889	3.04
feb	12	12.07941	12.06163	-42.54955	2.58
feb	19	12.07945	12.06166	-42.55010	2.12
feb	26	12.07949	12.06168	-42.55075	1.66
mar	5	12.07952	12.06170	-42.55130	1.20
mar	12	12.07955	12.06171	-42.55192	0.74
mar	19	12.07956	12.06172	-42.55243	0.28
mar	26	12.07957	12.06172	-42.55301	23.82
abr	2	12.07957	12.06171	-42.55348	23.36
abr	9	12.07957	12.06169	-42.55399	22.90
abr	16	12.07956	12.06167	-42.55438	22.44
abr	23	12.07955	12.06165	-42.55481	21.98
abr	30	12.07954	12.06162	-42.55514	21.52
may	7	12.07952	12.06158	-42.55548	21.06
may	14	12.07949	12.06154	-42.55571	20.60
may	21	12.07947	12.06149	-42.55594	20.14
may	28	12.07944	12.06145	-42.55609	19.68
jun	4	12.07941	12.06140	-42.55621	19.22
jun	11	12.07938	12.06134	-42.55625	18.76
jun	18	12.07934	12.06129	-42.55626	18.30
jun	25	12.07932	12.06123	-42.55623	17.84
jul	2	12.07928	12.06118	-42.55612	17.38
jul	9	12.07925	12.06112	-42.55597	16.92
jul	16	12.07921	12.06107	-42.55576	16.46
jul	23	12.07918	12.06102	-42.55555	16.00
jul	30	12.07915	12.06097	-42.55524	15.54
ago	6	12.07912	12.06092	-42.55494	15.08
ago	13	12.07909	12.06088	-42.55456	14.62
ago	20	12.07908	12.06084	-42.55423	14.16
ago	27	12.07905	12.06081	-42.55380	13.70
sep	3	12.07905	12.06079	-42.55342	13.24
sep	10	12.07904	12.06077	-42.55298	12.78
sep	17	12.07905	12.06076	-42.55263	12.32
sep	24	12.07905	12.06076	-42.55220	11.86
oct	1	12.07907	12.06076	-42.55187	11.40
oct	8	12.07908	12.06077	-42.55149	10.94
oct	15	12.07913	12.06079	-42.55126	10.48
oct	22	12.07915	12.06081	-42.55096	10.02
oct	29	12.07921	12.06084	-42.55081	9.56
nov	5	12.07925	12.06088	-42.55062	9.10
nov	12	12.07932	12.06092	-42.55063	8.64
nov	19	12.07938	12.06097	-42.55057	8.18
nov	26	12.07946	12.06102	-42.55068	7.72
dic	3	12.07953	12.06108	-42.55077	7.26
dic	10	12.07962	12.06113	-42.55106	6.80
dic	17	12.07969	12.06119	-42.55129	6.34
dic	24	12.07978	12.06125	-42.55166	5.88

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

58948					
		V	Sp		
		4.12	G8III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.10443	12.08676	8.61693	5.36
ene	8	12.10449	12.08681	8.61658	4.90
ene	15	12.10456	12.08685	8.61616	4.44
ene	22	12.10461	12.08689	8.61589	3.98
ene	29	12.10467	12.08692	8.61556	3.52
feb	5	12.10471	12.08696	8.61536	3.06
feb	12	12.10477	12.08699	8.61510	2.60
feb	19	12.10480	12.08701	8.61500	2.14
feb	26	12.10484	12.08703	8.61484	1.68
mar	5	12.10486	12.08705	8.61480	1.22
mar	12	12.10489	12.08706	8.61472	0.76
mar	19	12.10490	12.08706	8.61478	0.30
mar	26	12.10492	12.08706	8.61478	23.84
abr	2	12.10492	12.08705	8.61488	23.38
abr	9	12.10493	12.08705	8.61493	22.92
abr	16	12.10492	12.08703	8.61509	22.46
abr	23	12.10492	12.08701	8.61519	22.00
abr	30	12.10490	12.08698	8.61535	21.54
may	7	12.10490	12.08696	8.61548	21.08
may	14	12.10488	12.08692	8.61567	20.62
may	21	12.10487	12.08689	8.61580	20.16
may	28	12.10485	12.08685	8.61595	19.70
jun	4	12.10483	12.08682	8.61610	19.24
jun	11	12.10481	12.08677	8.61625	18.78
jun	18	12.10479	12.08674	8.61638	18.32
jun	25	12.10477	12.08669	8.61648	17.86
jul	2	12.10475	12.08665	8.61660	17.40
jul	9	12.10474	12.08661	8.61669	16.94
jul	16	12.10472	12.08658	8.61678	16.48
jul	23	12.10470	12.08654	8.61681	16.02
jul	30	12.10468	12.08650	8.61688	15.56
ago	6	12.10467	12.08647	8.61688	15.10
ago	13	12.10466	12.08644	8.61691	14.64
ago	20	12.10465	12.08642	8.61683	14.18
ago	27	12.10464	12.08640	8.61682	13.72
sep	3	12.10464	12.08638	8.61672	13.26
sep	10	12.10464	12.08637	8.61665	12.80
sep	17	12.10465	12.08636	8.61646	12.34
sep	24	12.10465	12.08636	8.61635	11.88
oct	1	12.10467	12.08636	8.61611	11.42
oct	8	12.10468	12.08637	8.61591	10.97
oct	15	12.10472	12.08638	8.61557	10.51
oct	22	12.10474	12.08640	8.61533	10.05
oct	29	12.10478	12.08642	8.61496	9.59
nov	5	12.10482	12.08645	8.61464	9.13
nov	12	12.10488	12.08648	8.61419	8.67
nov	19	12.10492	12.08651	8.61384	8.21
nov	26	12.10498	12.08655	8.61337	7.75
dic	3	12.10504	12.08658	8.61298	7.29
dic	10	12.10511	12.08663	8.61247	6.83
dic	17	12.10517	12.08667	8.61208	6.37
dic	24	12.10524	12.08671	8.61161	5.91

59774					
		V	Sp		
		3.32	A3Vvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.27413	12.25647	56.91274	5.53
ene	8	12.27423	12.25655	56.91260	5.07
ene	15	12.27434	12.25663	56.91244	4.61
ene	22	12.27443	12.25670	56.91248	4.15
ene	29	12.27452	12.25677	56.91250	3.69
feb	5	12.27460	12.25684	56.91269	3.23
feb	12	12.27469	12.25690	56.91286	2.77
feb	19	12.27474	12.25696	56.91321	2.31
feb	26	12.27481	12.25700	56.91352	1.85
mar	5	12.27485	12.25703	56.91396	1.39
mar	12	12.27489	12.25706	56.91437	0.93
mar	19	12.27491	12.25707	56.91491	0.47
mar	26	12.27493	12.25708	56.91537	0.01
abr	2	12.27493	12.25706	56.91592	23.55
abr	9	12.27493	12.25705	56.91640	23.09
abr	16	12.27491	12.25702	56.91696	22.63
abr	23	12.27490	12.25699	56.91742	22.17
abr	30	12.27486	12.25694	56.91790	21.71
may	7	12.27484	12.25690	56.91831	21.25
may	14	12.27479	12.25684	56.91873	20.79
may	21	12.27475	12.25678	56.91904	20.33
may	28	12.27470	12.25671	56.91932	19.87
jun	4	12.27466	12.25664	56.91954	19.41
jun	11	12.27460	12.25656	56.91972	18.95
jun	18	12.27455	12.25650	56.91980	18.49
jun	25	12.27450	12.25642	56.91982	18.03
jul	2	12.27445	12.25635	56.91980	17.57
jul	9	12.27440	12.25627	56.91970	17.11
jul	16	12.27435	12.25621	56.91954	16.65
jul	23	12.27431	12.25614	56.91929	16.19
jul	30	12.27427	12.25609	56.91903	15.73
ago	6	12.27423	12.25602	56.91867	15.27
ago	13	12.27419	12.25598	56.91830	14.81
ago	20	12.27417	12.25593	56.91780	14.35
ago	27	12.27414	12.25590	56.91735	13.89
sep	3	12.27412	12.25586	56.91679	13.43
sep	10	12.27411	12.25584	56.91624	12.97
sep	17	12.27411	12.25583	56.91557	12.51
sep	24	12.27411	12.25582	56.91499	12.05
oct	1	12.27413	12.25582	56.91429	11.59
oct	8	12.27415	12.25583	56.91366	11.14
oct	15	12.27419	12.25585	56.91290	10.68
oct	22	12.27422	12.25587	56.91227	10.22
oct	29	12.27427	12.25591	56.91155	9.76
nov	5	12.27432	12.25595	56.91092	9.30
nov	12	12.27440	12.25600	56.91020	8.84
nov	19	12.27447	12.25605	56.90964	8.38
nov	26	12.27455	12.25612	56.90901	7.92
dic	3	12.27464	12.25618	56.90852	7.46
dic	10	12.27474	12.25626	56.90797	7.00
dic	17	12.27483	12.25633	56.90760	6.54
dic	24	12.27494	12.25642	56.90721	6.08

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

60718

		V	Sp		
		0.77	B0.5IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.46274	12.44507	-63.20859	5.72
ene	8	12.46284	12.44516	-63.20891	5.26
ene	15	12.46296	12.44525	-63.20940	4.80
ene	22	12.46306	12.44534	-63.20983	4.34
ene	29	12.46316	12.44542	-63.21042	3.88
feb	5	12.46325	12.44549	-63.21095	3.42
feb	12	12.46334	12.44555	-63.21164	2.96
feb	19	12.46340	12.44561	-63.21224	2.50
feb	26	12.46347	12.44566	-63.21296	2.04
mar	5	12.46351	12.44570	-63.21361	1.58
mar	12	12.46356	12.44572	-63.21435	1.12
mar	19	12.46358	12.44574	-63.21500	0.66
mar	26	12.46360	12.44575	-63.21572	0.20
abr	2	12.46361	12.44575	-63.21636	23.74
abr	9	12.46361	12.44573	-63.21705	23.28
abr	16	12.46360	12.44572	-63.21762	22.82
abr	23	12.46359	12.44568	-63.21824	22.36
abr	30	12.46357	12.44565	-63.21876	21.90
may	7	12.46353	12.44559	-63.21929	21.44
may	14	12.46349	12.44554	-63.21971	20.98
may	21	12.46344	12.44547	-63.22013	20.52
may	28	12.46340	12.44540	-63.22046	20.06
jun	4	12.46333	12.44532	-63.22075	19.60
jun	11	12.46328	12.44524	-63.22095	19.14
jun	18	12.46321	12.44515	-63.22111	18.68
jun	25	12.46315	12.44507	-63.22120	18.22
jul	2	12.46307	12.44497	-63.22121	17.76
jul	9	12.46301	12.44488	-63.22116	17.30
jul	16	12.46293	12.44479	-63.22103	16.84
jul	23	12.46287	12.44470	-63.22087	16.38
jul	30	12.46279	12.44461	-63.22061	15.92
ago	6	12.46274	12.44454	-63.22031	15.46
ago	13	12.46267	12.44446	-63.21993	15.00
ago	20	12.46263	12.44440	-63.21956	14.54
ago	27	12.46257	12.44433	-63.21908	14.08
sep	3	12.46255	12.44429	-63.21863	13.62
sep	10	12.46251	12.44424	-63.21809	13.16
sep	17	12.46251	12.44422	-63.21762	12.70
sep	24	12.46249	12.44420	-63.21705	12.24
oct	1	12.46251	12.44420	-63.21656	11.78
oct	8	12.46252	12.44420	-63.21601	11.32
oct	15	12.46256	12.44423	-63.21560	10.86
oct	22	12.46260	12.44426	-63.21511	10.40
oct	29	12.46267	12.44430	-63.21475	9.94
nov	5	12.46273	12.44436	-63.21436	9.48
nov	12	12.46282	12.44442	-63.21416	9.02
nov	19	12.46291	12.44450	-63.21390	8.56
nov	26	12.46301	12.44458	-63.21382	8.10
dic	3	12.46311	12.44466	-63.21372	7.64
dic	10	12.46324	12.44475	-63.21382	7.18
dic	17	12.46335	12.44485	-63.21389	6.72
dic	24	12.46347	12.44494	-63.21412	6.26

61084

		V	Sp		
		1.59	M4III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.53875	12.52109	-57.22422	5.80
ene	8	12.53884	12.52116	-57.22454	5.34
ene	15	12.53895	12.52124	-57.22504	4.88
ene	22	12.53903	12.52131	-57.22547	4.42
ene	29	12.53913	12.52138	-57.22605	3.96
feb	5	12.53920	12.52144	-57.22658	3.50
feb	12	12.53928	12.52150	-57.22725	3.04
feb	19	12.53933	12.52155	-57.22783	2.58
feb	26	12.53940	12.52159	-57.22853	2.12
mar	5	12.53944	12.52162	-57.22915	1.66
mar	12	12.53948	12.52164	-57.22987	1.20
mar	19	12.53950	12.52166	-57.23047	0.74
mar	26	12.53953	12.52167	-57.23117	0.28
abr	2	12.53954	12.52167	-57.23176	23.82
abr	9	12.53954	12.52166	-57.23241	23.36
abr	16	12.53954	12.52165	-57.23294	22.90
abr	23	12.53953	12.52162	-57.23352	22.44
abr	30	12.53951	12.52159	-57.23400	21.98
may	7	12.53949	12.52155	-57.23450	21.52
may	14	12.53946	12.52150	-57.23488	21.06
may	21	12.53942	12.52145	-57.23526	20.60
may	28	12.53939	12.52139	-57.23556	20.14
jun	4	12.53934	12.52133	-57.23583	19.68
jun	11	12.53930	12.52126	-57.23600	19.22
jun	18	12.53924	12.52119	-57.23614	18.76
jun	25	12.53920	12.52112	-57.23621	18.30
jul	2	12.53914	12.52104	-57.23622	17.84
jul	9	12.53909	12.52097	-57.23615	17.38
jul	16	12.53903	12.52088	-57.23602	16.92
jul	23	12.53898	12.52082	-57.23586	16.46
jul	30	12.53892	12.52074	-57.23561	16.00
ago	6	12.53888	12.52068	-57.23532	15.54
ago	13	12.53882	12.52061	-57.23496	15.08
ago	20	12.53879	12.52056	-57.23461	14.62
ago	27	12.53875	12.52050	-57.23415	14.16
sep	3	12.53873	12.52047	-57.23372	13.70
sep	10	12.53869	12.52043	-57.23322	13.24
sep	17	12.53869	12.52041	-57.23278	12.78
sep	24	12.53868	12.52039	-57.23225	12.32
oct	1	12.53870	12.52039	-57.23180	11.86
oct	8	12.53870	12.52039	-57.23130	11.40
oct	15	12.53874	12.52041	-57.23093	10.94
oct	22	12.53877	12.52043	-57.23047	10.48
oct	29	12.53883	12.52047	-57.23016	10.02
nov	5	12.53888	12.52051	-57.22982	9.56
nov	12	12.53896	12.52056	-57.22966	9.10
nov	19	12.53904	12.52062	-57.22943	8.64
nov	26	12.53913	12.52069	-57.22938	8.18
dic	3	12.53921	12.52076	-57.22932	7.72
dic	10	12.53932	12.52084	-57.22945	7.26
dic	17	12.53942	12.52092	-57.22954	6.80
dic	24	12.53952	12.52100	-57.22980	6.34

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

62896

		V	Sp		
		4.25	A4IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.90978	12.89211	-40.28764	6.17
ene	8	12.90985	12.89217	-40.28797	5.71
ene	15	12.90994	12.89223	-40.28845	5.25
ene	22	12.91000	12.89228	-40.28885	4.79
ene	29	12.91008	12.89233	-40.28938	4.33
feb	5	12.91014	12.89238	-40.28984	3.87
feb	12	12.91021	12.89243	-40.29043	3.41
feb	19	12.91025	12.89247	-40.29091	2.95
feb	26	12.91031	12.89250	-40.29150	2.49
mar	5	12.91035	12.89253	-40.29199	2.03
mar	12	12.91039	12.89255	-40.29258	1.57
mar	19	12.91041	12.89257	-40.29305	1.11
mar	26	12.91044	12.89259	-40.29360	0.65
abr	2	12.91046	12.89259	-40.29404	0.19
abr	9	12.91047	12.89259	-40.29455	23.73
abr	16	12.91047	12.89259	-40.29493	23.27
abr	23	12.91048	12.89257	-40.29537	22.81
abr	30	12.91048	12.89256	-40.29571	22.35
may	7	12.91047	12.89253	-40.29607	21.89
may	14	12.91046	12.89251	-40.29632	21.43
may	21	12.91044	12.89247	-40.29661	20.97
may	28	12.91043	12.89243	-40.29680	20.51
jun	4	12.91040	12.89239	-40.29699	20.05
jun	11	12.91038	12.89235	-40.29708	19.59
jun	18	12.91035	12.89229	-40.29718	19.13
jun	25	12.91033	12.89225	-40.29720	18.67
jul	2	12.91029	12.89219	-40.29719	18.21
jul	9	12.91026	12.89214	-40.29712	17.75
jul	16	12.91023	12.89208	-40.29701	17.29
jul	23	12.91020	12.89203	-40.29687	16.83
jul	30	12.91016	12.89198	-40.29667	16.37
ago	6	12.91013	12.89193	-40.29644	15.91
ago	13	12.91010	12.89188	-40.29616	15.45
ago	20	12.91008	12.89184	-40.29590	14.99
ago	27	12.91005	12.89180	-40.29555	14.53
sep	3	12.91003	12.89177	-40.29523	14.07
sep	10	12.91001	12.89174	-40.29485	13.61
sep	17	12.91001	12.89172	-40.29454	13.15
sep	24	12.90999	12.89170	-40.29415	12.69
oct	1	12.91001	12.89170	-40.29384	12.23
oct	8	12.91001	12.89169	-40.29348	11.77
oct	15	12.91004	12.89170	-40.29325	11.31
oct	22	12.91005	12.89171	-40.29293	10.85
oct	29	12.91009	12.89173	-40.29275	10.39
nov	5	12.91013	12.89176	-40.29254	9.93
nov	12	12.91019	12.89179	-40.29250	9.47
nov	19	12.91024	12.89183	-40.29238	9.01
nov	26	12.91031	12.89187	-40.29243	8.55
dic	3	12.91037	12.89192	-40.29245	8.09
dic	10	12.91045	12.89197	-40.29266	7.63
dic	17	12.91052	12.89202	-40.29280	7.17
dic	24	12.91061	12.89208	-40.29310	6.71

63608

		V	Sp		
		2.85	G8IIIvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	13.05340	13.03574	10.84681	6.31
ene	8	13.05346	13.03578	10.84643	5.85
ene	15	13.05353	13.03582	10.84598	5.39
ene	22	13.05359	13.03587	10.84569	4.93
ene	29	13.05366	13.03591	10.84535	4.47
feb	5	13.05371	13.03595	10.84513	4.01
feb	12	13.05377	13.03599	10.84485	3.55
feb	19	13.05381	13.03602	10.84475	3.09
feb	26	13.05386	13.03605	10.84459	2.63
mar	5	13.05389	13.03608	10.84456	2.17
mar	12	13.05393	13.03610	10.84449	1.71
mar	19	13.05395	13.03611	10.84457	1.25
mar	26	13.05398	13.03612	10.84458	0.79
abr	2	13.05399	13.03613	10.84472	0.33
abr	9	13.05401	13.03613	10.84480	23.87
abr	16	13.05401	13.03612	10.84500	23.41
abr	23	13.05402	13.03612	10.84513	22.95
abr	30	13.05402	13.03610	10.84534	22.49
may	7	13.05402	13.03608	10.84550	22.03
may	14	13.05401	13.03606	10.84574	21.57
may	21	13.05400	13.03603	10.84591	21.11
may	28	13.05399	13.03600	10.84612	20.65
jun	4	13.05398	13.03596	10.84629	20.19
jun	11	13.05396	13.03593	10.84649	19.73
jun	18	13.05395	13.03589	10.84664	19.27
jun	25	13.05393	13.03585	10.84679	18.81
jul	2	13.05391	13.03581	10.84691	18.35
jul	9	13.05389	13.03576	10.84704	17.89
jul	16	13.05387	13.03572	10.84712	17.43
jul	23	13.05385	13.03568	10.84717	16.97
jul	30	13.05382	13.03564	10.84723	16.51
ago	6	13.05380	13.03560	10.84725	16.05
ago	13	13.05378	13.03557	10.84725	15.59
ago	20	13.05377	13.03553	10.84718	15.13
ago	27	13.05375	13.03551	10.84715	14.67
sep	3	13.05374	13.03548	10.84704	14.21
sep	10	13.05372	13.03546	10.84694	13.75
sep	17	13.05373	13.03544	10.84673	13.29
sep	24	13.05372	13.03542	10.84659	12.83
oct	1	13.05372	13.03541	10.84634	12.37
oct	8	13.05372	13.03541	10.84611	11.91
oct	15	13.05375	13.03541	10.84576	11.45
oct	22	13.05376	13.03542	10.84548	10.99
oct	29	13.05379	13.03543	10.84509	10.53
nov	5	13.05381	13.03544	10.84475	10.07
nov	12	13.05386	13.03546	10.84426	9.61
nov	19	13.05390	13.03549	10.84389	9.15
nov	26	13.05396	13.03552	10.84340	8.69
dic	3	13.05400	13.03555	10.84298	8.24
dic	10	13.05407	13.03559	10.84244	7.78
dic	17	13.05413	13.03563	10.84203	7.32
dic	24	13.05420	13.03567	10.84153	6.86

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

64394

V 4.23 Sp G0V

m	d	α h	α_c h	δ °	Hp h
ene	1	13.21389	13.19623	27.77072	6.47
ene	8	13.21396	13.19628	27.77036	6.01
ene	15	13.21404	13.19633	27.76996	5.55
ene	22	13.21410	13.19638	27.76973	5.09
ene	29	13.21417	13.19642	27.76947	4.63
feb	5	13.21423	13.19647	27.76936	4.17
feb	12	13.21429	13.19651	27.76921	3.71
feb	19	13.21434	13.19655	27.76925	3.25
feb	26	13.21439	13.19659	27.76925	2.79
mar	5	13.21443	13.19662	27.76939	2.33
mar	12	13.21448	13.19664	27.76949	1.87
mar	19	13.21450	13.19666	27.76976	1.41
mar	26	13.21453	13.19667	27.76996	0.95
abr	2	13.21454	13.19668	27.77028	0.49
abr	9	13.21456	13.19668	27.77055	0.03
abr	16	13.21457	13.19668	27.77094	23.57
abr	23	13.21457	13.19667	27.77124	23.11
abr	30	13.21457	13.19665	27.77162	22.65
may	7	13.21457	13.19663	27.77194	22.19
may	14	13.21456	13.19660	27.77233	21.73
may	21	13.21455	13.19657	27.77262	21.27
may	28	13.21453	13.19654	27.77294	20.81
jun	4	13.21452	13.19650	27.77320	20.35
jun	11	13.21449	13.19646	27.77349	19.89
jun	18	13.21447	13.19642	27.77368	19.43
jun	25	13.21445	13.19637	27.77387	18.97
jul	2	13.21443	13.19633	27.77400	18.51
jul	9	13.21440	13.19628	27.77412	18.05
jul	16	13.21437	13.19623	27.77418	17.59
jul	23	13.21435	13.19618	27.77418	17.13
jul	30	13.21432	13.19614	27.77417	16.67
ago	6	13.21430	13.19609	27.77410	16.21
ago	13	13.21427	13.19606	27.77400	15.75
ago	20	13.21425	13.19602	27.77381	15.29
ago	27	13.21423	13.19598	27.77364	14.83
sep	3	13.21421	13.19595	27.77338	14.37
sep	10	13.21419	13.19593	27.77312	13.91
sep	17	13.21419	13.19590	27.77275	13.45
sep	24	13.21418	13.19589	27.77243	12.99
oct	1	13.21418	13.19587	27.77200	12.53
oct	8	13.21418	13.19586	27.77160	12.08
oct	15	13.21420	13.19586	27.77107	11.62
oct	22	13.21421	13.19586	27.77063	11.16
oct	29	13.21424	13.19587	27.77007	10.70
nov	5	13.21426	13.19589	27.76957	10.24
nov	12	13.21431	13.19591	27.76894	9.78
nov	19	13.21434	13.19593	27.76844	9.32
nov	26	13.21440	13.19596	27.76784	8.86
dic	3	13.21445	13.19599	27.76733	8.40
dic	10	13.21452	13.19603	27.76671	7.94
dic	17	13.21458	13.19607	27.76625	7.48
dic	24	13.21465	13.19612	27.76572	7.02

66249

V 3.38 Sp A3V

m	d	α h	α_c h	δ °	Hp h
ene	1	13.59572	13.57806	-0.70139	6.85
ene	8	13.59578	13.57810	-0.70177	6.39
ene	15	13.59585	13.57814	-0.70223	5.93
ene	22	13.59591	13.57819	-0.70257	5.47
ene	29	13.59598	13.57823	-0.70297	5.01
feb	5	13.59603	13.57827	-0.70326	4.56
feb	12	13.59609	13.57831	-0.70362	4.10
feb	19	13.59614	13.57835	-0.70382	3.64
feb	26	13.59619	13.57838	-0.70409	3.18
mar	5	13.59623	13.57841	-0.70423	2.72
mar	12	13.59627	13.57844	-0.70444	2.26
mar	19	13.59630	13.57846	-0.70448	1.80
mar	26	13.59633	13.57848	-0.70460	1.34
abr	2	13.59635	13.57849	-0.70460	0.88
abr	9	13.59638	13.57850	-0.70465	0.42
abr	16	13.59639	13.57850	-0.70457	23.96
abr	23	13.59640	13.57850	-0.70456	23.50
abr	30	13.59641	13.57849	-0.70446	23.04
may	7	13.59641	13.57847	-0.70442	22.58
may	14	13.59641	13.57846	-0.70426	22.12
may	21	13.59641	13.57844	-0.70419	21.66
may	28	13.59640	13.57841	-0.70405	21.20
jun	4	13.59640	13.57838	-0.70395	20.74
jun	11	13.59638	13.57835	-0.70379	20.28
jun	18	13.59637	13.57831	-0.70369	19.82
jun	25	13.59636	13.57827	-0.70355	19.36
jul	2	13.59634	13.57824	-0.70345	18.90
jul	9	13.59632	13.57820	-0.70331	18.44
jul	16	13.59630	13.57815	-0.70321	17.98
jul	23	13.59628	13.57811	-0.70312	17.52
jul	30	13.59625	13.57807	-0.70303	17.06
ago	6	13.59623	13.57803	-0.70294	16.60
ago	13	13.59621	13.57799	-0.70287	16.14
ago	20	13.59619	13.57796	-0.70285	15.68
ago	27	13.59617	13.57792	-0.70280	15.22
sep	3	13.59615	13.57789	-0.70279	14.76
sep	10	13.59613	13.57786	-0.70278	14.30
sep	17	13.59613	13.57784	-0.70286	13.84
sep	24	13.59611	13.57782	-0.70288	13.38
oct	1	13.59612	13.57781	-0.70299	12.92
oct	8	13.59611	13.57780	-0.70308	12.46
oct	15	13.59613	13.57779	-0.70328	12.00
oct	22	13.59613	13.57779	-0.70342	11.54
oct	29	13.59616	13.57779	-0.70367	11.08
nov	5	13.59618	13.57780	-0.70389	10.62
nov	12	13.59622	13.57782	-0.70425	10.16
nov	19	13.59625	13.57784	-0.70451	9.70
nov	26	13.59630	13.57787	-0.70490	9.24
dic	3	13.59635	13.57789	-0.70523	8.78
dic	10	13.59641	13.57793	-0.70570	8.32
dic	17	13.59646	13.57796	-0.70605	7.86
dic	24	13.59653	13.57800	-0.70651	7.40

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

67494

		V	Sp		
		4.96	K0III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	13.84985	13.83219	-18.23527	7.11
ene	8	13.84991	13.83223	-18.23560	6.65
ene	15	13.84999	13.83228	-18.23603	6.19
ene	22	13.85005	13.83233	-18.23636	5.73
ene	29	13.85012	13.83237	-18.23679	5.27
feb	5	13.85018	13.83242	-18.23713	4.81
feb	12	13.85025	13.83246	-18.23756	4.35
feb	19	13.85029	13.83250	-18.23787	3.89
feb	26	13.85035	13.83254	-18.23827	3.43
mar	5	13.85039	13.83258	-18.23855	2.97
mar	12	13.85044	13.83261	-18.23891	2.51
mar	19	13.85047	13.83263	-18.23914	2.05
mar	26	13.85051	13.83265	-18.23944	1.59
abr	2	13.85053	13.83267	-18.23963	1.13
abr	9	13.85056	13.83268	-18.23989	0.67
abr	16	13.85058	13.83269	-18.24001	0.21
abr	23	13.85060	13.83269	-18.24021	23.75
abr	30	13.85061	13.83268	-18.24030	23.29
may	7	13.85062	13.83268	-18.24046	22.83
may	14	13.85062	13.83266	-18.24049	22.37
may	21	13.85062	13.83264	-18.24059	21.91
may	28	13.85062	13.83262	-18.24061	21.45
jun	4	13.85061	13.83259	-18.24067	20.99
jun	11	13.85060	13.83256	-18.24064	20.53
jun	18	13.85059	13.83253	-18.24065	20.07
jun	25	13.85057	13.83249	-18.24061	19.61
jul	2	13.85055	13.83245	-18.24058	19.15
jul	9	13.85054	13.83241	-18.24049	18.69
jul	16	13.85051	13.83237	-18.24043	18.23
jul	23	13.85049	13.83233	-18.24033	17.77
jul	30	13.85046	13.83228	-18.24023	17.31
ago	6	13.85044	13.83224	-18.24010	16.85
ago	13	13.85041	13.83220	-18.23997	16.39
ago	20	13.85039	13.83216	-18.23986	15.93
ago	27	13.85036	13.83212	-18.23970	15.47
sep	3	13.85035	13.83209	-18.23957	15.01
sep	10	13.85032	13.83205	-18.23942	14.55
sep	17	13.85032	13.83203	-18.23933	14.09
sep	24	13.85030	13.83200	-18.23918	13.63
oct	1	13.85030	13.83199	-18.23909	13.17
oct	8	13.85029	13.83197	-18.23899	12.71
oct	15	13.85030	13.83197	-18.23899	12.25
oct	22	13.85030	13.83196	-18.23892	11.79
oct	29	13.85033	13.83197	-18.23895	11.33
nov	5	13.85035	13.83197	-18.23895	10.87
nov	12	13.85039	13.83199	-18.23909	10.41
nov	19	13.85042	13.83201	-18.23916	9.95
nov	26	13.85047	13.83204	-18.23936	9.49
dic	3	13.85052	13.83206	-18.23951	9.03
dic	10	13.85058	13.83210	-18.23983	8.57
dic	17	13.85064	13.83214	-18.24004	8.11
dic	24	13.85071	13.83218	-18.24039	7.65

68895

		V	Sp		
		3.25	K2III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	14.12574	14.10808	-26.77926	7.38
ene	8	14.12580	14.10812	-26.77953	6.92
ene	15	14.12589	14.10818	-26.77991	6.46
ene	22	14.12595	14.10822	-26.78022	6.00
ene	29	14.12602	14.10828	-26.78062	5.55
feb	5	14.12608	14.10832	-26.78096	5.09
feb	12	14.12616	14.10837	-26.78141	4.63
feb	19	14.12621	14.10842	-26.78174	4.17
feb	26	14.12627	14.10846	-26.78217	3.71
mar	5	14.12632	14.10850	-26.78250	3.25
mar	12	14.12637	14.10854	-26.78292	2.79
mar	19	14.12641	14.10857	-26.78320	2.33
mar	26	14.12645	14.10859	-26.78358	1.87
abr	2	14.12648	14.10862	-26.78385	1.41
abr	9	14.12651	14.10863	-26.78420	0.95
abr	16	14.12653	14.10864	-26.78441	0.49
abr	23	14.12656	14.10865	-26.78471	0.03
abr	30	14.12657	14.10865	-26.78489	23.57
may	7	14.12658	14.10864	-26.78515	23.11
may	14	14.12659	14.10863	-26.78527	22.65
may	21	14.12659	14.10862	-26.78548	22.19
may	28	14.12659	14.10860	-26.78558	21.73
jun	4	14.12659	14.10857	-26.78573	21.27
jun	11	14.12658	14.10854	-26.78577	20.81
jun	18	14.12657	14.10851	-26.78586	20.35
jun	25	14.12656	14.10847	-26.78588	19.89
jul	2	14.12653	14.10843	-26.78592	19.43
jul	9	14.12651	14.10839	-26.78587	18.97
jul	16	14.12649	14.10835	-26.78585	18.51
jul	23	14.12647	14.10830	-26.78579	18.05
jul	30	14.12644	14.10825	-26.78570	17.59
ago	6	14.12641	14.10821	-26.78558	17.13
ago	13	14.12638	14.10816	-26.78545	16.67
ago	20	14.12636	14.10812	-26.78532	16.21
ago	27	14.12632	14.10808	-26.78514	15.75
sep	3	14.12630	14.10804	-26.78497	15.29
sep	10	14.12627	14.10800	-26.78477	14.83
sep	17	14.12626	14.10797	-26.78461	14.37
sep	24	14.12624	14.10795	-26.78440	13.91
oct	1	14.12623	14.10792	-26.78423	13.45
oct	8	14.12622	14.10791	-26.78404	12.99
oct	15	14.12623	14.10790	-26.78394	12.53
oct	22	14.12623	14.10789	-26.78377	12.07
oct	29	14.12626	14.10789	-26.78370	11.61
nov	5	14.12627	14.10790	-26.78359	11.15
nov	12	14.12631	14.10791	-26.78363	10.69
nov	19	14.12634	14.10793	-26.78358	10.23
nov	26	14.12639	14.10796	-26.78367	9.77
dic	3	14.12644	14.10798	-26.78372	9.31
dic	10	14.12651	14.10802	-26.78394	8.85
dic	17	14.12656	14.10806	-26.78407	8.39
dic	24	14.12663	14.10810	-26.78434	7.93

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

68933

		V	Sp		
		2.06	K0IIIb		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	14.13158	14.11392	-36.46816	7.39
ene	8	14.13165	14.11397	-36.46838	6.93
ene	15	14.13174	14.11403	-36.46873	6.47
ene	22	14.13180	14.11408	-36.46901	6.01
ene	29	14.13189	14.11414	-36.46941	5.55
feb	5	14.13195	14.11419	-36.46976	5.09
feb	12	14.13203	14.11425	-36.47022	4.63
feb	19	14.13209	14.11430	-36.47059	4.17
feb	26	14.13215	14.11435	-36.47106	3.71
mar	5	14.13220	14.11439	-36.47145	3.25
mar	12	14.13226	14.11443	-36.47194	2.79
mar	19	14.13230	14.11446	-36.47231	2.33
mar	26	14.13235	14.11449	-36.47278	1.87
abr	2	14.13238	14.11452	-36.47314	1.41
abr	9	14.13242	14.11454	-36.47359	0.95
abr	16	14.13244	14.11455	-36.47391	0.49
abr	23	14.13246	14.11455	-36.47431	0.03
abr	30	14.13248	14.11456	-36.47461	23.57
may	7	14.13249	14.11455	-36.47497	23.11
may	14	14.13249	14.11454	-36.47521	22.65
may	21	14.13250	14.11452	-36.47552	22.19
may	28	14.13250	14.11450	-36.47572	21.73
jun	4	14.13249	14.11447	-36.47596	21.27
jun	11	14.13248	14.11444	-36.47610	20.81
jun	18	14.13246	14.11440	-36.47627	20.35
jun	25	14.13245	14.11437	-36.47636	19.89
jul	2	14.13242	14.11432	-36.47645	19.43
jul	9	14.13240	14.11428	-36.47646	18.97
jul	16	14.13237	14.11422	-36.47648	18.51
jul	23	14.13234	14.11418	-36.47644	18.05
jul	30	14.13230	14.11412	-36.47637	17.59
ago	6	14.13228	14.11407	-36.47625	17.13
ago	13	14.13223	14.11402	-36.47611	16.67
ago	20	14.13221	14.11398	-36.47595	16.21
ago	27	14.13217	14.11393	-36.47574	15.75
sep	3	14.13215	14.11389	-36.47552	15.29
sep	10	14.13211	14.11384	-36.47527	14.83
sep	17	14.13210	14.11381	-36.47504	14.37
sep	24	14.13207	14.11378	-36.47474	13.91
oct	1	14.13207	14.11376	-36.47449	13.45
oct	8	14.13205	14.11374	-36.47420	12.99
oct	15	14.13206	14.11373	-36.47400	12.53
oct	22	14.13206	14.11372	-36.47373	12.07
oct	29	14.13209	14.11372	-36.47355	11.61
nov	5	14.13210	14.11373	-36.47333	11.15
nov	12	14.13215	14.11375	-36.47326	10.69
nov	19	14.13218	14.11377	-36.47311	10.23
nov	26	14.13223	14.11380	-36.47309	9.77
dic	3	14.13228	14.11383	-36.47305	9.31
dic	10	14.13235	14.11387	-36.47317	8.85
dic	17	14.13241	14.11391	-36.47321	8.39
dic	24	14.13249	14.11396	-36.47341	7.93

69763

		V	Sp		
		5.72	B1.5III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	14.30466	14.28700	-66.67850	7.56
ene	8	14.30478	14.28710	-66.67853	7.10
ene	15	14.30493	14.28722	-66.67870	6.64
ene	22	14.30506	14.28733	-66.67885	6.18
ene	29	14.30520	14.28746	-66.67914	5.72
feb	5	14.30532	14.28757	-66.67943	5.26
feb	12	14.30546	14.28768	-66.67986	4.80
feb	19	14.30557	14.28779	-66.68024	4.34
feb	26	14.30570	14.28789	-66.68077	3.89
mar	5	14.30580	14.28798	-66.68124	3.43
mar	12	14.30590	14.28807	-66.68185	2.97
mar	19	14.30598	14.28814	-66.68237	2.51
mar	26	14.30607	14.28821	-66.68301	2.05
abr	2	14.30613	14.28827	-66.68358	1.59
abr	9	14.30620	14.28831	-66.68426	1.13
abr	16	14.30624	14.28835	-66.68482	0.67
abr	23	14.30628	14.28837	-66.68549	0.21
abr	30	14.30631	14.28839	-66.68606	23.75
may	7	14.30632	14.28838	-66.68671	23.29
may	14	14.30633	14.28838	-66.68723	22.83
may	21	14.30632	14.28835	-66.68782	22.37
may	28	14.30631	14.28832	-66.68830	21.91
jun	4	14.30628	14.28827	-66.68881	21.45
jun	11	14.30625	14.28822	-66.68921	20.99
jun	18	14.30620	14.28814	-66.68963	20.53
jun	25	14.30616	14.28808	-66.68994	20.07
jul	2	14.30609	14.28799	-66.69024	19.61
jul	9	14.30603	14.28791	-66.69043	19.15
jul	16	14.30594	14.28780	-66.69061	18.69
jul	23	14.30588	14.28771	-66.69069	18.23
jul	30	14.30578	14.28760	-66.69072	17.77
ago	6	14.30571	14.28751	-66.69067	17.31
ago	13	14.30561	14.28740	-66.69056	16.85
ago	20	14.30554	14.28731	-66.69040	16.39
ago	27	14.30545	14.28721	-66.69015	15.93
sep	3	14.30538	14.28712	-66.68986	15.47
sep	10	14.30530	14.28703	-66.68951	15.01
sep	17	14.30526	14.28697	-66.68914	14.55
sep	24	14.30519	14.28690	-66.68868	14.09
oct	1	14.30516	14.28685	-66.68823	13.63
oct	8	14.30512	14.28681	-66.68772	13.17
oct	15	14.30512	14.28679	-66.68727	12.71
oct	22	14.30511	14.28677	-66.68673	12.25
oct	29	14.30514	14.28678	-66.68626	11.79
nov	5	14.30516	14.28679	-66.68575	11.33
nov	12	14.30523	14.28683	-66.68537	10.87
nov	19	14.30528	14.28687	-66.68491	10.41
nov	26	14.30537	14.28693	-66.68459	9.95
dic	3	14.30545	14.28700	-66.68424	9.49
dic	10	14.30557	14.28708	-66.68407	9.03
dic	17	14.30567	14.28717	-66.68383	8.57
dic	24	14.30580	14.28728	-66.68377	8.11

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

71683

		V	Sp		
		-0.01	G2V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	14.68333	14.66566	-60.91531	7.94
ene	8	14.68342	14.66574	-60.91533	7.48
ene	15	14.68355	14.66584	-60.91548	7.02
ene	22	14.68365	14.66593	-60.91562	6.56
ene	29	14.68378	14.66603	-60.91588	6.10
feb	5	14.68388	14.66612	-60.91614	5.64
feb	12	14.68400	14.66621	-60.91653	5.18
feb	19	14.68409	14.66630	-60.91687	4.72
feb	26	14.68419	14.66638	-60.91735	4.26
mar	5	14.68428	14.66646	-60.91777	3.80
mar	12	14.68437	14.66654	-60.91832	3.34
mar	19	14.68444	14.66660	-60.91878	2.88
mar	26	14.68451	14.66666	-60.91937	2.42
abr	2	14.68457	14.66671	-60.91988	1.96
abr	9	14.68463	14.66675	-60.92049	1.50
abr	16	14.68467	14.66678	-60.92100	1.04
abr	23	14.68471	14.66680	-60.92160	0.58
abr	30	14.68474	14.66682	-60.92211	0.12
may	7	14.68476	14.66682	-60.92270	23.66
may	14	14.68477	14.66681	-60.92316	23.20
may	21	14.68477	14.66680	-60.92371	22.74
may	28	14.68477	14.66677	-60.92414	22.28
jun	4	14.68475	14.66674	-60.92462	21.82
jun	11	14.68473	14.66669	-60.92497	21.36
jun	18	14.68470	14.66664	-60.92536	20.90
jun	25	14.68467	14.66658	-60.92565	20.44
jul	2	14.68461	14.66651	-60.92594	19.98
jul	9	14.68457	14.66645	-60.92611	19.52
jul	16	14.68450	14.66636	-60.92629	19.06
jul	23	14.68445	14.66629	-60.92637	18.60
jul	30	14.68438	14.66620	-60.92642	18.14
ago	6	14.68432	14.66612	-60.92638	17.68
ago	13	14.68424	14.66603	-60.92631	17.22
ago	20	14.68418	14.66595	-60.92617	16.76
ago	27	14.68410	14.66586	-60.92596	16.30
sep	3	14.68405	14.66579	-60.92570	15.84
sep	10	14.68397	14.66571	-60.92540	15.38
sep	17	14.68394	14.66565	-60.92507	14.92
sep	24	14.68388	14.66559	-60.92466	14.46
oct	1	14.68385	14.66554	-60.92426	14.00
oct	8	14.68381	14.66549	-60.92380	13.54
oct	15	14.68381	14.66547	-60.92339	13.08
oct	22	14.68379	14.66545	-60.92289	12.62
oct	29	14.68381	14.66545	-60.92247	12.16
nov	5	14.68382	14.66545	-60.92200	11.70
nov	12	14.68387	14.66547	-60.92165	11.24
nov	19	14.68391	14.66550	-60.92123	10.78
nov	26	14.68398	14.66554	-60.92093	10.32
dic	3	14.68404	14.66559	-60.92060	9.87
dic	10	14.68414	14.66565	-60.92045	9.41
dic	17	14.68422	14.66572	-60.92022	8.95
dic	24	14.68433	14.66580	-60.92017	8.49

71957

		V	Sp		
		3.87	F2III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	14.73568	14.71802	-5.74727	7.99
ene	8	14.73574	14.71806	-5.74762	7.53
ene	15	14.73581	14.71810	-5.74804	7.07
ene	22	14.73587	14.71814	-5.74837	6.61
ene	29	14.73594	14.71819	-5.74875	6.15
feb	5	14.73599	14.71823	-5.74905	5.69
feb	12	14.73606	14.71828	-5.74941	5.24
feb	19	14.73611	14.71832	-5.74963	4.78
feb	26	14.73617	14.71836	-5.74992	4.32
mar	5	14.73622	14.71840	-5.75009	3.86
mar	12	14.73628	14.71844	-5.75033	3.40
mar	19	14.73631	14.71847	-5.75041	2.94
mar	26	14.73636	14.71850	-5.75057	2.48
abr	2	14.73639	14.71853	-5.75060	2.02
abr	9	14.73643	14.71855	-5.75070	1.56
abr	16	14.73645	14.71856	-5.75065	1.10
abr	23	14.73648	14.71858	-5.75069	0.64
abr	30	14.73650	14.71858	-5.75062	0.18
may	7	14.73652	14.71858	-5.75062	23.72
may	14	14.73653	14.71858	-5.75050	23.26
may	21	14.73654	14.71857	-5.75047	22.80
may	28	14.73655	14.71855	-5.75034	22.34
jun	4	14.73655	14.71853	-5.75029	21.88
jun	11	14.73655	14.71851	-5.75014	21.42
jun	18	14.73654	14.71848	-5.75008	20.96
jun	25	14.73654	14.71845	-5.74995	20.50
jul	2	14.73652	14.71842	-5.74988	20.04
jul	9	14.73651	14.71838	-5.74974	19.58
jul	16	14.73649	14.71834	-5.74967	19.12
jul	23	14.73647	14.71830	-5.74957	18.66
jul	30	14.73644	14.71826	-5.74949	18.20
ago	6	14.73642	14.71822	-5.74939	17.74
ago	13	14.73639	14.71818	-5.74933	17.28
ago	20	14.73637	14.71814	-5.74928	16.82
ago	27	14.73634	14.71810	-5.74922	16.36
sep	3	14.73632	14.71806	-5.74917	15.90
sep	10	14.73629	14.71802	-5.74915	15.44
sep	17	14.73628	14.71799	-5.74917	14.98
sep	24	14.73625	14.71796	-5.74915	14.52
oct	1	14.73624	14.71793	-5.74920	14.06
oct	8	14.73622	14.71791	-5.74924	13.60
oct	15	14.73623	14.71789	-5.74936	13.14
oct	22	14.73622	14.71788	-5.74943	12.68
oct	29	14.73623	14.71787	-5.74959	12.22
nov	5	14.73624	14.71787	-5.74973	11.76
nov	12	14.73627	14.71787	-5.75001	11.30
nov	19	14.73629	14.71788	-5.75019	10.84
nov	26	14.73633	14.71789	-5.75050	10.38
dic	3	14.73636	14.71791	-5.75075	9.92
dic	10	14.73642	14.71793	-5.75115	9.46
dic	17	14.73646	14.71796	-5.75143	9.00
dic	24	14.73652	14.71800	-5.75183	8.54

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

73714

		V	Sp		
		3.25	M3/M4III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	15.08783	15.07017	-25.36061	8.35
ene	8	15.08789	15.07021	-25.36082	7.89
ene	15	15.08797	15.07026	-25.36112	7.43
ene	22	15.08803	15.07031	-25.36135	6.97
ene	29	15.08811	15.07036	-25.36167	6.51
feb	5	15.08817	15.07041	-25.36194	6.05
feb	12	15.08824	15.07046	-25.36229	5.59
feb	19	15.08830	15.07051	-25.36255	5.13
feb	26	15.08837	15.07056	-25.36289	4.67
mar	5	15.08842	15.07061	-25.36315	4.21
mar	12	15.08848	15.07065	-25.36349	3.75
mar	19	15.08853	15.07069	-25.36371	3.29
mar	26	15.08858	15.07073	-25.36402	2.83
abr	2	15.08862	15.07076	-25.36422	2.37
abr	9	15.08867	15.07079	-25.36451	1.91
abr	16	15.08870	15.07081	-25.36467	1.45
abr	23	15.08874	15.07083	-25.36492	0.99
abr	30	15.08876	15.07084	-25.36506	0.53
may	7	15.08879	15.07085	-25.36528	0.07
may	14	15.08880	15.07085	-25.36538	23.61
may	21	15.08882	15.07085	-25.36556	23.15
may	28	15.08883	15.07084	-25.36564	22.69
jun	4	15.08884	15.07082	-25.36580	22.23
jun	11	15.08884	15.07081	-25.36584	21.77
jun	18	15.08884	15.07078	-25.36596	21.31
jun	25	15.08884	15.07075	-25.36598	20.85
jul	2	15.08882	15.07072	-25.36606	20.39
jul	9	15.08881	15.07068	-25.36604	19.93
jul	16	15.08879	15.07064	-25.36608	19.47
jul	23	15.08877	15.07060	-25.36605	19.01
jul	30	15.08874	15.07056	-25.36604	18.55
ago	6	15.08872	15.07051	-25.36596	18.09
ago	13	15.08868	15.07047	-25.36591	17.63
ago	20	15.08866	15.07042	-25.36583	17.17
ago	27	15.08862	15.07038	-25.36573	16.71
sep	3	15.08859	15.07033	-25.36560	16.25
sep	10	15.08856	15.07029	-25.36548	15.79
sep	17	15.08854	15.07025	-25.36537	15.33
sep	24	15.08851	15.07022	-25.36521	14.87
oct	1	15.08849	15.07018	-25.36508	14.41
oct	8	15.08847	15.07015	-25.36493	13.95
oct	15	15.08847	15.07013	-25.36485	13.49
oct	22	15.08846	15.07012	-25.36470	13.03
oct	29	15.08847	15.07011	-25.36463	12.57
nov	5	15.08847	15.07010	-25.36454	12.11
nov	12	15.08850	15.07010	-25.36456	11.65
nov	19	15.08852	15.07011	-25.36449	11.19
nov	26	15.08856	15.07012	-25.36454	10.73
dic	3	15.08859	15.07014	-25.36455	10.27
dic	10	15.08865	15.07017	-25.36471	9.81
dic	17	15.08870	15.07020	-25.36478	9.35
dic	24	15.08876	15.07023	-25.36499	8.89

74824

		V	Sp		
		4.07	A3V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	15.31866	15.30099	-58.87333	8.58
ene	8	15.31875	15.30107	-58.87326	8.12
ene	15	15.31887	15.30116	-58.87331	7.66
ene	22	15.31896	15.30124	-58.87334	7.20
ene	29	15.31908	15.30134	-58.87349	6.74
feb	5	15.31918	15.30142	-58.87364	6.28
feb	12	15.31930	15.30152	-58.87392	5.82
feb	19	15.31940	15.30161	-58.87415	5.36
feb	26	15.31951	15.30170	-58.87451	4.90
mar	5	15.31960	15.30179	-58.87483	4.44
mar	12	15.31970	15.30187	-58.87528	3.98
mar	19	15.31978	15.30195	-58.87565	3.52
mar	26	15.31987	15.30202	-58.87615	3.06
abr	2	15.31994	15.30208	-58.87658	2.60
abr	9	15.32002	15.30214	-58.87712	2.14
abr	16	15.32008	15.30219	-58.87756	1.68
abr	23	15.32014	15.30223	-58.87812	1.22
abr	30	15.32018	15.30226	-58.87858	0.76
may	7	15.32022	15.30228	-58.87914	0.30
may	14	15.32025	15.30230	-58.87958	23.84
may	21	15.32028	15.30230	-58.88012	23.38
may	28	15.32029	15.30230	-58.88055	22.92
jun	4	15.32030	15.30228	-58.88105	22.46
jun	11	15.32030	15.30226	-58.88143	22.00
jun	18	15.32028	15.30223	-58.88187	21.54
jun	25	15.32027	15.30219	-58.88220	21.08
jul	2	15.32024	15.30214	-58.88256	20.62
jul	9	15.32021	15.30209	-58.88280	20.16
jul	16	15.32016	15.30202	-58.88307	19.70
jul	23	15.32012	15.30196	-58.88322	19.24
jul	30	15.32006	15.30188	-58.88337	18.78
ago	6	15.32001	15.30181	-58.88342	18.32
ago	13	15.31994	15.30173	-58.88346	17.86
ago	20	15.31989	15.30165	-58.88341	17.40
ago	27	15.31981	15.30157	-58.88331	16.94
sep	3	15.31976	15.30150	-58.88314	16.48
sep	10	15.31969	15.30142	-58.88294	16.02
sep	17	15.31965	15.30136	-58.88270	15.56
sep	24	15.31958	15.30129	-58.88238	15.10
oct	1	15.31955	15.30124	-58.88204	14.64
oct	8	15.31950	15.30118	-58.88166	14.18
oct	15	15.31949	15.30115	-58.88129	13.72
oct	22	15.31946	15.30111	-58.88085	13.26
oct	29	15.31946	15.30110	-58.88044	12.80
nov	5	15.31946	15.30108	-58.88000	12.34
nov	12	15.31949	15.30109	-58.87964	11.88
nov	19	15.31952	15.30110	-58.87920	11.42
nov	26	15.31957	15.30113	-58.87888	10.96
dic	3	15.31962	15.30116	-58.87851	10.50
dic	10	15.31970	15.30121	-58.87830	10.04
dic	17	15.31977	15.30127	-58.87801	9.58
dic	24	15.31986	15.30134	-58.87787	9.12

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

75458

		V	Sp		
		3.29	K2III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	15.42275	15.40508	58.88994	8.68
ene	8	15.42283	15.40515	58.88937	8.22
ene	15	15.42292	15.40521	58.88881	7.76
ene	22	15.42301	15.40528	58.88840	7.30
ene	29	15.42310	15.40536	58.88802	6.84
feb	5	15.42320	15.40544	58.88777	6.38
feb	12	15.42330	15.40552	58.88753	5.92
feb	19	15.42340	15.40561	58.88749	5.46
feb	26	15.42349	15.40569	58.88746	5.00
mar	5	15.42358	15.40577	58.88758	4.54
mar	12	15.42367	15.40584	58.88770	4.08
mar	19	15.42375	15.40591	58.88802	3.62
mar	26	15.42383	15.40597	58.88832	3.16
abr	2	15.42389	15.40602	58.88876	2.70
abr	9	15.42395	15.40607	58.88916	2.24
abr	16	15.42399	15.40610	58.88974	1.78
abr	23	15.42404	15.40613	58.89024	1.32
abr	30	15.42406	15.40614	58.89085	0.86
may	7	15.42409	15.40615	58.89139	0.40
may	14	15.42409	15.40614	58.89205	23.94
may	21	15.42410	15.40613	58.89259	23.48
may	28	15.42409	15.40609	58.89321	23.02
jun	4	15.42408	15.40606	58.89371	22.56
jun	11	15.42405	15.40601	58.89429	22.10
jun	18	15.42402	15.40596	58.89473	21.64
jun	25	15.42398	15.40590	58.89520	21.18
jul	2	15.42394	15.40584	58.89555	20.72
jul	9	15.42388	15.40576	58.89592	20.26
jul	16	15.42383	15.40568	58.89615	19.80
jul	23	15.42376	15.40560	58.89638	19.34
jul	30	15.42370	15.40552	58.89649	18.88
ago	6	15.42363	15.40542	58.89660	18.42
ago	13	15.42355	15.40534	58.89657	17.96
ago	20	15.42348	15.40525	58.89651	17.50
ago	27	15.42341	15.40516	58.89636	17.04
sep	3	15.42333	15.40507	58.89617	16.58
sep	10	15.42326	15.40500	58.89588	16.12
sep	17	15.42320	15.40491	58.89553	15.66
sep	24	15.42313	15.40484	58.89514	15.20
oct	1	15.42307	15.40476	58.89467	14.74
oct	8	15.42302	15.40471	58.89416	14.28
oct	15	15.42298	15.40464	58.89355	13.82
oct	22	15.42294	15.40460	58.89296	13.36
oct	29	15.42292	15.40455	58.89228	12.90
nov	5	15.42290	15.40452	58.89161	12.44
nov	12	15.42290	15.40450	58.89083	11.98
nov	19	15.42290	15.40449	58.89014	11.52
nov	26	15.42292	15.40448	58.88936	11.06
dic	3	15.42295	15.40449	58.88864	10.60
dic	10	15.42300	15.40451	58.88783	10.14
dic	17	15.42304	15.40454	58.88717	9.68
dic	24	15.42311	15.40458	58.88644	9.22

76440

		V	Sp		
		4.11	K0III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	15.64325	15.62558	-66.38103	8.90
ene	8	15.64335	15.62567	-66.38087	8.44
ene	15	15.64350	15.62579	-66.38081	7.98
ene	22	15.64362	15.62589	-66.38075	7.52
ene	29	15.64377	15.62602	-66.38080	7.06
feb	5	15.64389	15.62613	-66.38087	6.60
feb	12	15.64404	15.62626	-66.38107	6.14
feb	19	15.64416	15.62638	-66.38124	5.68
feb	26	15.64431	15.62650	-66.38154	5.22
mar	5	15.64443	15.62661	-66.38181	4.76
mar	12	15.64456	15.62673	-66.38222	4.30
mar	19	15.64467	15.62683	-66.38256	3.84
mar	26	15.64479	15.62693	-66.38304	3.38
abr	2	15.64489	15.62702	-66.38346	2.92
abr	9	15.64499	15.62711	-66.38401	2.46
abr	16	15.64507	15.62718	-66.38446	2.01
abr	23	15.64515	15.62724	-66.38505	1.55
abr	30	15.64522	15.62729	-66.38554	1.09
may	7	15.64527	15.62733	-66.38614	0.63
may	14	15.64532	15.62736	-66.38663	0.17
may	21	15.64535	15.62738	-66.38723	23.71
may	28	15.64538	15.62739	-66.38772	23.25
jun	4	15.64539	15.62738	-66.38829	22.79
jun	11	15.64539	15.62736	-66.38874	22.33
jun	18	15.64538	15.62732	-66.38926	21.87
jun	25	15.64537	15.62728	-66.38966	21.41
jul	2	15.64533	15.62723	-66.39011	20.95
jul	9	15.64529	15.62717	-66.39042	20.49
jul	16	15.64523	15.62709	-66.39078	20.03
jul	23	15.64518	15.62701	-66.39101	19.57
jul	30	15.64510	15.62692	-66.39124	19.11
ago	6	15.64503	15.62683	-66.39135	18.65
ago	13	15.64494	15.62673	-66.39146	18.18
ago	20	15.64487	15.62663	-66.39146	17.72
ago	27	15.64477	15.62653	-66.39143	17.26
sep	3	15.64469	15.62643	-66.39130	16.80
sep	10	15.64459	15.62633	-66.39114	16.34
sep	17	15.64453	15.62624	-66.39091	15.88
sep	24	15.64444	15.62615	-66.39061	15.42
oct	1	15.64439	15.62608	-66.39027	14.96
oct	8	15.64432	15.62600	-66.38989	14.51
oct	15	15.64429	15.62595	-66.38949	14.05
oct	22	15.64424	15.62590	-66.38902	13.59
oct	29	15.64424	15.62587	-66.38857	13.13
nov	5	15.64422	15.62585	-66.38807	12.67
nov	12	15.64425	15.62585	-66.38764	12.21
nov	19	15.64427	15.62586	-66.38714	11.75
nov	26	15.64433	15.62589	-66.38672	11.29
dic	3	15.64437	15.62592	-66.38627	10.83
dic	10	15.64447	15.62598	-66.38595	10.37
dic	17	15.64454	15.62604	-66.38557	9.91
dic	24	15.64465	15.62613	-66.38533	9.45

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

77622

		V	Sp		
		3.71	A2m		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	15.86386	15.84620	4.41576	9.12
ene	8	15.86391	15.84623	4.41535	8.66
ene	15	15.86397	15.84626	4.41492	8.20
ene	22	15.86402	15.84630	4.41457	7.74
ene	29	15.86409	15.84634	4.41420	7.28
feb	5	15.86415	15.84639	4.41390	6.82
feb	12	15.86422	15.84643	4.41358	6.36
feb	19	15.86427	15.84648	4.41338	5.90
feb	26	15.86433	15.84652	4.41315	5.44
mar	5	15.86438	15.84657	4.41303	4.98
mar	12	15.86445	15.84661	4.41288	4.52
mar	19	15.86449	15.84665	4.41288	4.06
mar	26	15.86455	15.84669	4.41283	3.60
abr	2	15.86459	15.84672	4.41291	3.14
abr	9	15.86464	15.84676	4.41292	2.68
abr	16	15.86467	15.84678	4.41310	2.22
abr	23	15.86471	15.84680	4.41319	1.76
abr	30	15.86474	15.84682	4.41341	1.30
may	7	15.86477	15.84683	4.41355	0.84
may	14	15.86479	15.84684	4.41382	0.38
may	21	15.86482	15.84684	4.41399	23.92
may	28	15.86483	15.84684	4.41427	23.46
jun	4	15.86485	15.84683	4.41444	23.00
jun	11	15.86485	15.84682	4.41473	22.54
jun	18	15.86486	15.84680	4.41490	22.08
jun	25	15.86486	15.84677	4.41516	21.62
jul	2	15.86485	15.84675	4.41531	21.16
jul	9	15.86484	15.84672	4.41555	20.70
jul	16	15.86483	15.84669	4.41567	20.24
jul	23	15.86481	15.84665	4.41585	19.78
jul	30	15.86479	15.84661	4.41595	19.32
ago	6	15.86477	15.84657	4.41610	18.86
ago	13	15.86474	15.84653	4.41615	18.40
ago	20	15.86472	15.84648	4.41623	17.94
ago	27	15.86468	15.84644	4.41625	17.48
sep	3	15.86465	15.84639	4.41629	17.02
sep	10	15.86462	15.84635	4.41626	16.56
sep	17	15.86460	15.84631	4.41621	16.10
sep	24	15.86456	15.84627	4.41614	15.64
oct	1	15.86454	15.84623	4.41605	15.18
oct	8	15.86451	15.84620	4.41591	14.73
oct	15	15.86451	15.84617	4.41572	14.27
oct	22	15.86449	15.84614	4.41555	13.81
oct	29	15.86449	15.84612	4.41532	13.35
nov	5	15.86448	15.84610	4.41507	12.89
nov	12	15.86449	15.84609	4.41474	12.43
nov	19	15.86450	15.84609	4.41446	11.97
nov	26	15.86453	15.84609	4.41409	11.51
dic	3	15.86455	15.84609	4.41375	11.05
dic	10	15.86459	15.84610	4.41330	10.59
dic	17	15.86462	15.84612	4.41295	10.13
dic	24	15.86467	15.84614	4.41250	9.67

81724

		V	Sp		
		4.91	G8II/III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	16.71250	16.69484	-17.78041	9.97
ene	8	16.71255	16.69487	-17.78059	9.51
ene	15	16.71261	16.69490	-17.78079	9.05
ene	22	16.71266	16.69494	-17.78097	8.59
ene	29	16.71273	16.69498	-17.78118	8.13
feb	5	16.71278	16.69502	-17.78136	7.67
feb	12	16.71286	16.69507	-17.78158	7.21
feb	19	16.71291	16.69512	-17.78174	6.75
feb	26	16.71298	16.69517	-17.78193	6.29
mar	5	16.71304	16.69522	-17.78206	5.83
mar	12	16.71311	16.69527	-17.78224	5.37
mar	19	16.71316	16.69532	-17.78232	4.91
mar	26	16.71322	16.69537	-17.78246	4.45
abr	2	16.71327	16.69541	-17.78250	3.99
abr	9	16.71333	16.69545	-17.78262	3.53
abr	16	16.71338	16.69549	-17.78261	3.07
abr	23	16.71343	16.69552	-17.78270	2.61
abr	30	16.71347	16.69555	-17.78267	2.15
may	7	16.71352	16.69558	-17.78274	1.69
may	14	16.71355	16.69560	-17.78268	1.23
may	21	16.71359	16.69561	-17.78273	0.77
may	28	16.71361	16.69562	-17.78267	0.31
jun	4	16.71364	16.69562	-17.78272	23.85
jun	11	16.71366	16.69562	-17.78265	23.39
jun	18	16.71367	16.69562	-17.78269	22.93
jun	25	16.71369	16.69560	-17.78262	22.47
jul	2	16.71369	16.69559	-17.78266	22.01
jul	9	16.71369	16.69557	-17.78259	21.55
jul	16	16.71368	16.69554	-17.78263	21.09
jul	23	16.71368	16.69551	-17.78257	20.63
jul	30	16.71366	16.69548	-17.78260	20.17
ago	6	16.71364	16.69544	-17.78254	19.71
ago	13	16.71361	16.69540	-17.78257	19.25
ago	20	16.71359	16.69536	-17.78252	18.79
ago	27	16.71355	16.69531	-17.78252	18.33
sep	3	16.71353	16.69527	-17.78247	17.87
sep	10	16.71349	16.69522	-17.78246	17.41
sep	17	16.71346	16.69518	-17.78243	16.95
sep	24	16.71342	16.69513	-17.78240	16.49
oct	1	16.71340	16.69509	-17.78236	16.03
oct	8	16.71336	16.69505	-17.78234	15.57
oct	15	16.71335	16.69501	-17.78233	15.11
oct	22	16.71332	16.69498	-17.78230	14.65
oct	29	16.71332	16.69495	-17.78230	14.19
nov	5	16.71330	16.69493	-17.78230	13.73
nov	12	16.71331	16.69491	-17.78236	13.27
nov	19	16.71331	16.69490	-17.78237	12.81
nov	26	16.71333	16.69489	-17.78244	12.35
dic	3	16.71334	16.69489	-17.78248	11.89
dic	10	16.71338	16.69489	-17.78265	11.43
dic	17	16.71340	16.69490	-17.78273	10.97
dic	24	16.71345	16.69492	-17.78290	10.51

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

81833

		V	Sp		
		3.48	G8III-IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	16.72634	16.70868	38.88147	9.99
ene	8	16.72639	16.70871	38.88083	9.53
ene	15	16.72645	16.70874	38.88022	9.07
ene	22	16.72650	16.70878	38.87969	8.61
ene	29	16.72656	16.70882	38.87919	8.15
feb	5	16.72662	16.70887	38.87877	7.69
feb	12	16.72670	16.70892	38.87838	7.23
feb	19	16.72676	16.70897	38.87813	6.77
feb	26	16.72683	16.70902	38.87791	6.31
mar	5	16.72690	16.70908	38.87782	5.85
mar	12	16.72697	16.70914	38.87774	5.39
mar	19	16.72703	16.70919	38.87783	4.93
mar	26	16.72710	16.70924	38.87793	4.47
abr	2	16.72715	16.70929	38.87818	4.01
abr	9	16.72721	16.70933	38.87839	3.55
abr	16	16.72726	16.70937	38.87879	3.09
abr	23	16.72731	16.70941	38.87914	2.63
abr	30	16.72735	16.70943	38.87963	2.17
may	7	16.72740	16.70946	38.88005	1.71
may	14	16.72743	16.70947	38.88063	1.25
may	21	16.72746	16.70948	38.88111	0.79
may	28	16.72748	16.70948	38.88170	0.33
jun	4	16.72749	16.70948	38.88218	23.87
jun	11	16.72750	16.70946	38.88278	23.41
jun	18	16.72750	16.70945	38.88325	22.95
jun	25	16.72750	16.70942	38.88380	22.49
jul	2	16.72749	16.70939	38.88422	22.03
jul	9	16.72748	16.70936	38.88472	21.57
jul	16	16.72746	16.70932	38.88507	21.11
jul	23	16.72743	16.70927	38.88547	20.65
jul	30	16.72740	16.70922	38.88573	20.19
ago	6	16.72737	16.70917	38.88603	19.73
ago	13	16.72733	16.70911	38.88619	19.27
ago	20	16.72729	16.70905	38.88636	18.81
ago	27	16.72724	16.70899	38.88642	18.35
sep	3	16.72719	16.70893	38.88648	17.89
sep	10	16.72714	16.70887	38.88641	17.43
sep	17	16.72710	16.70881	38.88632	16.97
sep	24	16.72705	16.70875	38.88615	16.51
oct	1	16.72700	16.70869	38.88595	16.05
oct	8	16.72696	16.70864	38.88565	15.59
oct	15	16.72693	16.70859	38.88530	15.13
oct	22	16.72689	16.70854	38.88492	14.67
oct	29	16.72686	16.70850	38.88447	14.21
nov	5	16.72683	16.70846	38.88397	13.75
nov	12	16.72683	16.70843	38.88339	13.29
nov	19	16.72682	16.70840	38.88284	12.83
nov	26	16.72682	16.70838	38.88220	12.37
dic	3	16.72682	16.70837	38.88158	11.91
dic	10	16.72685	16.70836	38.88087	11.45
dic	17	16.72687	16.70837	38.88024	10.99
dic	24	16.72691	16.70838	38.87955	10.53

82396

		V	Sp		
		2.29	K2IIIb		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	16.85802	16.84035	-34.32816	10.12
ene	8	16.85807	16.84039	-34.32816	9.66
ene	15	16.85814	16.84043	-34.32819	9.20
ene	22	16.85819	16.84047	-34.32821	8.74
ene	29	16.85827	16.84052	-34.32828	8.28
feb	5	16.85833	16.84057	-34.32835	7.82
feb	12	16.85841	16.84063	-34.32848	7.36
feb	19	16.85847	16.84069	-34.32857	6.90
feb	26	16.85855	16.84074	-34.32871	6.44
mar	5	16.85862	16.84080	-34.32882	5.98
mar	12	16.85870	16.84086	-34.32901	5.52
mar	19	16.85876	16.84092	-34.32911	5.06
mar	26	16.85883	16.84097	-34.32930	4.60
abr	2	16.85889	16.84103	-34.32942	4.14
abr	9	16.85896	16.84108	-34.32964	3.68
abr	16	16.85901	16.84112	-34.32975	3.22
abr	23	16.85907	16.84117	-34.32996	2.76
abr	30	16.85912	16.84120	-34.33008	2.30
may	7	16.85917	16.84123	-34.33031	1.84
may	14	16.85921	16.84126	-34.33042	1.38
may	21	16.85926	16.84128	-34.33065	0.92
may	28	16.85929	16.84130	-34.33077	0.46
jun	4	16.85932	16.84131	-34.33100	24.00
jun	11	16.85934	16.84131	-34.33112	23.54
jun	18	16.85936	16.84131	-34.33135	23.08
jun	25	16.85938	16.84130	-34.33146	22.62
jul	2	16.85938	16.84128	-34.33168	22.16
jul	9	16.85938	16.84126	-34.33178	21.70
jul	16	16.85937	16.84123	-34.33197	21.24
jul	23	16.85937	16.84120	-34.33205	20.78
jul	30	16.85935	16.84117	-34.33221	20.32
ago	6	16.85933	16.84113	-34.33226	19.86
ago	13	16.85929	16.84108	-34.33238	19.40
ago	20	16.85927	16.84104	-34.33240	18.94
ago	27	16.85923	16.84098	-34.33245	18.48
sep	3	16.85920	16.84094	-34.33243	18.02
sep	10	16.85915	16.84088	-34.33244	17.56
sep	17	16.85912	16.84083	-34.33238	17.10
sep	24	16.85907	16.84078	-34.33232	16.64
oct	1	16.85904	16.84074	-34.33221	16.18
oct	8	16.85900	16.84069	-34.33211	15.72
oct	15	16.85899	16.84065	-34.33200	15.26
oct	22	16.85895	16.84061	-34.33184	14.80
oct	29	16.85894	16.84058	-34.33169	14.34
nov	5	16.85892	16.84055	-34.33154	13.88
nov	12	16.85893	16.84053	-34.33142	13.42
nov	19	16.85893	16.84051	-34.33124	12.96
nov	26	16.85895	16.84051	-34.33112	12.50
dic	3	16.85896	16.84050	-34.33098	12.04
dic	10	16.85900	16.84051	-34.33092	11.58
dic	17	16.85903	16.84053	-34.33079	11.12
dic	24	16.85908	16.84055	-34.33076	10.66

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

86796

		V	Sp		
		5.12	G5V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	17.76255	17.74488	-51.84226	11.02
ene	8	17.76259	17.74491	-51.84200	10.56
ene	15	17.76267	17.74496	-51.84175	10.10
ene	22	17.76273	17.74501	-51.84153	9.64
ene	29	17.76282	17.74507	-51.84134	9.18
feb	5	17.76289	17.74513	-51.84119	8.72
feb	12	17.76299	17.74521	-51.84107	8.26
feb	19	17.76306	17.74528	-51.84097	7.80
feb	26	17.76317	17.74536	-51.84092	7.34
mar	5	17.76325	17.74543	-51.84087	6.88
mar	12	17.76335	17.74552	-51.84091	6.42
mar	19	17.76343	17.74559	-51.84091	5.96
mar	26	17.76353	17.74568	-51.84100	5.50
abr	2	17.76362	17.74575	-51.84106	5.04
abr	9	17.76371	17.74583	-51.84123	4.58
abr	16	17.76379	17.74590	-51.84134	4.12
abr	23	17.76388	17.74598	-51.84156	3.66
abr	30	17.76396	17.74604	-51.84172	3.20
may	7	17.76404	17.74610	-51.84201	2.74
may	14	17.76410	17.74615	-51.84220	2.28
may	21	17.76417	17.74620	-51.84253	1.82
may	28	17.76423	17.74623	-51.84277	1.36
jun	4	17.76428	17.74627	-51.84314	0.90
jun	11	17.76432	17.74629	-51.84341	0.44
jun	18	17.76436	17.74631	-51.84380	23.98
jun	25	17.76439	17.74631	-51.84408	23.52
jul	2	17.76441	17.74631	-51.84448	23.06
jul	9	17.76442	17.74630	-51.84476	22.60
jul	16	17.76442	17.74628	-51.84515	22.14
jul	23	17.76442	17.74626	-51.84541	21.68
jul	30	17.76440	17.74622	-51.84577	21.22
ago	6	17.76438	17.74618	-51.84599	20.76
ago	13	17.76435	17.74614	-51.84629	20.30
ago	20	17.76432	17.74609	-51.84646	19.84
ago	27	17.76427	17.74602	-51.84668	19.38
sep	3	17.76423	17.74597	-51.84678	18.92
sep	10	17.76416	17.74590	-51.84691	18.46
sep	17	17.76412	17.74584	-51.84693	18.00
sep	24	17.76406	17.74577	-51.84695	17.54
oct	1	17.76401	17.74570	-51.84688	17.08
oct	8	17.76395	17.74563	-51.84681	16.62
oct	15	17.76392	17.74558	-51.84666	16.16
oct	22	17.76386	17.74552	-51.84648	15.70
oct	29	17.76383	17.74547	-51.84625	15.24
nov	5	17.76379	17.74542	-51.84601	14.78
nov	12	17.76379	17.74539	-51.84574	14.32
nov	19	17.76376	17.74535	-51.84542	13.86
nov	26	17.76377	17.74533	-51.84511	13.40
dic	3	17.76377	17.74531	-51.84477	12.94
dic	10	17.76380	17.74532	-51.84448	12.48
dic	17	17.76382	17.74532	-51.84412	12.02
dic	24	17.76387	17.74534	-51.84383	11.56

91262

		V	Sp		
		0.03	A0Vvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	18.62683	18.60916	38.80325	11.89
ene	8	18.62685	18.60917	38.80259	11.43
ene	15	18.62688	18.60917	38.80198	10.97
ene	22	18.62691	18.60918	38.80137	10.51
ene	29	18.62695	18.60920	38.80081	10.05
feb	5	18.62699	18.60923	38.80027	9.59
feb	12	18.62705	18.60927	38.79978	9.13
feb	19	18.62710	18.60931	38.79936	8.67
feb	26	18.62716	18.60935	38.79900	8.21
mar	5	18.62722	18.60940	38.79873	7.75
mar	12	18.62729	18.60945	38.79850	7.29
mar	19	18.62735	18.60951	38.79840	6.83
mar	26	18.62742	18.60956	38.79834	6.37
abr	2	18.62748	18.60962	38.79841	5.91
abr	9	18.62755	18.60967	38.79849	5.45
abr	16	18.62761	18.60972	38.79873	4.99
abr	23	18.62768	18.60977	38.79898	4.53
abr	30	18.62774	18.60982	38.79936	4.07
may	7	18.62780	18.60986	38.79970	3.61
may	14	18.62785	18.60990	38.80021	3.15
may	21	18.62790	18.60993	38.80066	2.69
may	28	18.62795	18.60995	38.80125	2.23
jun	4	18.62799	18.60997	38.80175	1.77
jun	11	18.62802	18.60998	38.80238	1.31
jun	18	18.62805	18.60999	38.80292	0.85
jun	25	18.62807	18.60999	38.80357	0.39
jul	2	18.62809	18.60998	38.80409	23.93
jul	9	18.62809	18.60997	38.80472	23.47
jul	16	18.62809	18.60995	38.80522	23.01
jul	23	18.62809	18.60992	38.80580	22.55
jul	30	18.62808	18.60990	38.80624	22.09
ago	6	18.62806	18.60986	38.80675	21.63
ago	13	18.62803	18.60982	38.80710	21.17
ago	20	18.62800	18.60977	38.80752	20.71
ago	27	18.62796	18.60972	38.80779	20.25
sep	3	18.62793	18.60966	38.80810	19.79
sep	10	18.62788	18.60961	38.80825	19.33
sep	17	18.62783	18.60955	38.80844	18.87
sep	24	18.62778	18.60949	38.80849	18.41
oct	1	18.62773	18.60942	38.80855	17.95
oct	8	18.62768	18.60936	38.80847	17.49
oct	15	18.62764	18.60930	38.80838	17.03
oct	22	18.62758	18.60924	38.80820	16.57
oct	29	18.62754	18.60918	38.80799	16.11
nov	5	18.62750	18.60913	38.80768	15.65
nov	12	18.62747	18.60907	38.80732	15.19
nov	19	18.62744	18.60903	38.80692	14.73
nov	26	18.62742	18.60898	38.80646	14.27
dic	3	18.62740	18.60894	38.80595	13.81
dic	10	18.62739	18.60891	38.80538	13.35
dic	17	18.62739	18.60889	38.80483	12.89
dic	24	18.62740	18.60887	38.80421	12.43

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

92262

		V	Sp		
		6.86	F6V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	18.82249	18.80483	-14.68510	12.08
ene	8	18.82251	18.80483	-14.68524	11.62
ene	15	18.82255	18.80484	-14.68533	11.16
ene	22	18.82258	18.80486	-14.68545	10.70
ene	29	18.82263	18.80488	-14.68553	10.24
feb	5	18.82267	18.80491	-14.68562	9.78
feb	12	18.82273	18.80494	-14.68570	9.32
feb	19	18.82277	18.80498	-14.68575	8.86
feb	26	18.82283	18.80502	-14.68579	8.40
mar	5	18.82288	18.80506	-14.68580	7.94
mar	12	18.82294	18.80511	-14.68582	7.48
mar	19	18.82299	18.80515	-14.68578	7.02
mar	26	18.82306	18.80520	-14.68575	6.56
abr	2	18.82311	18.80525	-14.68565	6.10
abr	9	18.82318	18.80530	-14.68560	5.64
abr	16	18.82323	18.80535	-14.68547	5.18
abr	23	18.82330	18.80539	-14.68537	4.72
abr	30	18.82336	18.80544	-14.68520	4.26
may	7	18.82342	18.80548	-14.68510	3.80
may	14	18.82347	18.80551	-14.68491	3.34
may	21	18.82352	18.80555	-14.68480	2.88
may	28	18.82357	18.80558	-14.68459	2.42
jun	4	18.82362	18.80561	-14.68451	1.96
jun	11	18.82366	18.80562	-14.68431	1.50
jun	18	18.82370	18.80564	-14.68424	1.04
jun	25	18.82373	18.80565	-14.68406	0.58
jul	2	18.82376	18.80566	-14.68401	0.12
jul	9	18.82378	18.80566	-14.68387	23.66
jul	16	18.82380	18.80565	-14.68385	23.20
jul	23	18.82381	18.80564	-14.68373	22.74
jul	30	18.82381	18.80563	-14.68374	22.28
ago	6	18.82381	18.80561	-14.68366	21.82
ago	13	18.82380	18.80558	-14.68370	21.36
ago	20	18.82379	18.80555	-14.68364	20.90
ago	27	18.82376	18.80552	-14.68369	20.44
sep	3	18.82374	18.80548	-14.68366	19.98
sep	10	18.82371	18.80544	-14.68373	19.52
sep	17	18.82369	18.80540	-14.68372	19.06
sep	24	18.82365	18.80536	-14.68379	18.60
oct	1	18.82362	18.80531	-14.68379	18.14
oct	8	18.82358	18.80527	-14.68387	17.68
oct	15	18.82356	18.80522	-14.68389	17.22
oct	22	18.82352	18.80518	-14.68395	16.76
oct	29	18.82350	18.80513	-14.68398	16.30
nov	5	18.82347	18.80509	-14.68405	15.84
nov	12	18.82346	18.80506	-14.68410	15.38
nov	19	18.82343	18.80502	-14.68416	14.92
nov	26	18.82343	18.80499	-14.68422	14.46
dic	3	18.82342	18.80497	-14.68430	14.00
dic	10	18.82344	18.80495	-14.68440	13.54
dic	17	18.82344	18.80494	-14.68446	13.08
dic	24	18.82346	18.80493	-14.68456	12.62

97649

		V	Sp		
		0.76	A7IV-V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	19.86283	19.84516	8.92381	13.12
ene	8	19.86283	19.84515	8.92343	12.66
ene	15	19.86286	19.84515	8.92314	12.20
ene	22	19.86287	19.84515	8.92278	11.74
ene	29	19.86291	19.84516	8.92250	11.28
feb	5	19.86293	19.84517	8.92218	10.82
feb	12	19.86297	19.84519	8.92192	10.36
feb	19	19.86300	19.84521	8.92167	9.90
feb	26	19.86305	19.84524	8.92149	9.44
mar	5	19.86309	19.84528	8.92133	8.98
mar	12	19.86314	19.84531	8.92122	8.52
mar	19	19.86319	19.84535	8.92116	8.06
mar	26	19.86325	19.84539	8.92116	7.60
abr	2	19.86330	19.84543	8.92122	7.14
abr	9	19.86336	19.84548	8.92129	6.68
abr	16	19.86341	19.84552	8.92146	6.22
abr	23	19.86347	19.84557	8.92164	5.76
abr	30	19.86353	19.84561	8.92192	5.30
may	7	19.86359	19.84565	8.92215	4.84
may	14	19.86365	19.84569	8.92250	4.38
may	21	19.86370	19.84573	8.92281	3.92
may	28	19.86376	19.84576	8.92323	3.46
jun	4	19.86381	19.84579	8.92356	3.00
jun	11	19.86386	19.84582	8.92399	2.54
jun	18	19.86390	19.84584	8.92435	2.08
jun	25	19.86394	19.84586	8.92481	1.62
jul	2	19.86397	19.84587	8.92514	1.16
jul	9	19.86400	19.84588	8.92558	0.70
jul	16	19.86402	19.84588	8.92589	0.24
jul	23	19.86404	19.84588	8.92630	23.78
jul	30	19.86405	19.84587	8.92657	23.32
ago	6	19.86406	19.84586	8.92692	22.86
ago	13	19.86405	19.84584	8.92714	22.40
ago	20	19.86405	19.84582	8.92745	21.94
ago	27	19.86403	19.84579	8.92760	21.48
sep	3	19.86402	19.84576	8.92784	21.02
sep	10	19.86399	19.84573	8.92793	20.56
sep	17	19.86398	19.84569	8.92810	20.10
sep	24	19.86394	19.84565	8.92813	19.64
oct	1	19.86391	19.84561	8.92823	19.18
oct	8	19.86388	19.84556	8.92820	18.72
oct	15	19.86385	19.84551	8.92821	18.26
oct	22	19.86381	19.84547	8.92813	17.80
oct	29	19.86379	19.84542	8.92807	17.34
nov	5	19.86375	19.84538	8.92792	16.88
nov	12	19.86373	19.84533	8.92779	16.42
nov	19	19.86370	19.84529	8.92759	15.96
nov	26	19.86369	19.84525	8.92740	15.50
dic	3	19.86367	19.84521	8.92714	15.04
dic	10	19.86367	19.84518	8.92688	14.58
dic	17	19.86366	19.84516	8.92659	14.12
dic	24	19.86366	19.84514	8.92629	13.66

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

99240

		V	Sp		
		3.55	G5IV-Vvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	20.17808	20.16042	-66.12937	13.44
ene	8	20.17808	20.16041	-66.12891	12.98
ene	15	20.17813	20.16042	-66.12835	12.52
ene	22	20.17815	20.16043	-66.12785	12.06
ene	29	20.17822	20.16047	-66.12729	11.60
feb	5	20.17827	20.16051	-66.12679	11.14
feb	12	20.17836	20.16057	-66.12625	10.68
feb	19	20.17842	20.16064	-66.12577	10.22
feb	26	20.17853	20.16072	-66.12527	9.76
mar	5	20.17862	20.16080	-66.12483	9.30
mar	12	20.17874	20.16091	-66.12441	8.84
mar	19	20.17884	20.16100	-66.12403	8.38
mar	26	20.17898	20.16112	-66.12368	7.92
abr	2	20.17909	20.16123	-66.12336	7.46
abr	9	20.17924	20.16136	-66.12312	7.00
abr	16	20.17935	20.16147	-66.12290	6.54
abr	23	20.17950	20.16159	-66.12275	6.08
abr	30	20.17963	20.16171	-66.12261	5.62
may	7	20.17977	20.16183	-66.12259	5.16
may	14	20.17989	20.16194	-66.12256	4.70
may	21	20.18003	20.16206	-66.12265	4.24
may	28	20.18015	20.16216	-66.12271	3.78
jun	4	20.18028	20.16226	-66.12292	3.32
jun	11	20.18038	20.16235	-66.12309	2.86
jun	18	20.18050	20.16244	-66.12340	2.40
jun	25	20.18059	20.16251	-66.12366	1.94
jul	2	20.18067	20.16257	-66.12406	1.48
jul	9	20.18074	20.16262	-66.12441	1.02
jul	16	20.18080	20.16266	-66.12488	0.56
jul	23	20.18085	20.16269	-66.12527	0.10
jul	30	20.18088	20.16270	-66.12579	23.64
ago	6	20.18090	20.16270	-66.12621	23.18
ago	13	20.18090	20.16269	-66.12675	22.72
ago	20	20.18090	20.16266	-66.12716	22.26
ago	27	20.18086	20.16262	-66.12768	21.80
sep	3	20.18083	20.16257	-66.12807	21.34
sep	10	20.18078	20.16251	-66.12853	20.88
sep	17	20.18073	20.16244	-66.12885	20.42
sep	24	20.18065	20.16236	-66.12922	19.96
oct	1	20.18058	20.16227	-66.12945	19.50
oct	8	20.18049	20.16217	-66.12971	19.04
oct	15	20.18042	20.16208	-66.12981	18.58
oct	22	20.18032	20.16198	-66.12993	18.12
oct	29	20.18025	20.16188	-66.12992	17.66
nov	5	20.18015	20.16178	-66.12990	17.20
nov	12	20.18010	20.16170	-66.12975	16.74
nov	19	20.18001	20.16160	-66.12958	16.28
nov	26	20.17996	20.16152	-66.12932	15.82
dic	3	20.17990	20.16144	-66.12903	15.36
dic	10	20.17988	20.16139	-66.12866	14.90
dic	17	20.17983	20.16133	-66.12825	14.44
dic	24	20.17983	20.16130	-66.12780	13.98

102485

		V	Sp		
		4.13	F5V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	20.78825	20.77058	-25.19721	14.05
ene	8	20.78825	20.77057	-25.19719	13.59
ene	15	20.78827	20.77056	-25.19706	13.13
ene	22	20.78827	20.77055	-25.19700	12.67
ene	29	20.78830	20.77055	-25.19685	12.21
feb	5	20.78832	20.77056	-25.19674	11.75
feb	12	20.78835	20.77057	-25.19656	11.29
feb	19	20.78838	20.77059	-25.19642	10.83
feb	26	20.78842	20.77062	-25.19621	10.37
mar	5	20.78846	20.77064	-25.19603	9.91
mar	12	20.78851	20.77068	-25.19580	9.45
mar	19	20.78855	20.77072	-25.19559	8.99
mar	26	20.78861	20.77076	-25.19534	8.53
abr	2	20.78866	20.77080	-25.19509	8.07
abr	9	20.78873	20.77085	-25.19484	7.61
abr	16	20.78878	20.77089	-25.19458	7.15
abr	23	20.78885	20.77095	-25.19432	6.69
abr	30	20.78891	20.77099	-25.19403	6.23
may	7	20.78899	20.77105	-25.19380	5.77
may	14	20.78905	20.77109	-25.19353	5.31
may	21	20.78912	20.77114	-25.19332	4.85
may	28	20.78918	20.77119	-25.19306	4.39
jun	4	20.78925	20.77123	-25.19290	3.93
jun	11	20.78931	20.77127	-25.19269	3.47
jun	18	20.78937	20.77131	-25.19257	3.01
jun	25	20.78942	20.77134	-25.19240	2.55
jul	2	20.78947	20.77137	-25.19235	2.09
jul	9	20.78952	20.77139	-25.19224	1.63
jul	16	20.78956	20.77141	-25.19226	1.17
jul	23	20.78959	20.77143	-25.19219	0.71
jul	30	20.78962	20.77144	-25.19227	0.25
ago	6	20.78964	20.77144	-25.19227	23.79
ago	13	20.78965	20.77144	-25.19241	23.33
ago	20	20.78966	20.77143	-25.19244	22.87
ago	27	20.78965	20.77141	-25.19262	22.41
sep	3	20.78965	20.77139	-25.19270	21.95
sep	10	20.78963	20.77137	-25.19290	21.49
sep	17	20.78963	20.77134	-25.19299	21.03
sep	24	20.78959	20.77130	-25.19320	20.57
oct	1	20.78957	20.77126	-25.19330	20.11
oct	8	20.78954	20.77122	-25.19350	19.65
oct	15	20.78952	20.77118	-25.19359	19.19
oct	22	20.78948	20.77113	-25.19375	18.73
oct	29	20.78945	20.77109	-25.19383	18.27
nov	5	20.78941	20.77104	-25.19396	17.81
nov	12	20.78939	20.77099	-25.19400	17.35
nov	19	20.78936	20.77095	-25.19409	16.89
nov	26	20.78934	20.77090	-25.19410	16.43
dic	3	20.78931	20.77086	-25.19414	15.97
dic	10	20.78931	20.77082	-25.19412	15.51
dic	17	20.78929	20.77079	-25.19411	15.05
dic	24	20.78929	20.77076	-25.19406	14.59

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

105199

		V	Sp		
		2.45	A7IV-V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	21.31718	21.29952	62.67649	14.58
ene	8	21.31713	21.29945	62.67592	14.12
ene	15	21.31710	21.29939	62.67540	13.66
ene	22	21.31707	21.29934	62.67475	13.20
ene	29	21.31706	21.29931	62.67416	12.74
feb	5	21.31705	21.29929	62.67349	12.28
feb	12	21.31706	21.29928	62.67288	11.82
feb	19	21.31707	21.29929	62.67221	11.36
feb	26	21.31711	21.29930	62.67164	10.90
mar	5	21.31715	21.29933	62.67106	10.44
mar	12	21.31720	21.29937	62.67055	9.98
mar	19	21.31726	21.29942	62.67006	9.52
mar	26	21.31733	21.29948	62.66969	9.06
abr	2	21.31742	21.29955	62.66937	8.60
abr	9	21.31750	21.29962	62.66912	8.14
abr	16	21.31760	21.29971	62.66895	7.68
abr	23	21.31769	21.29979	62.66888	7.22
abr	30	21.31780	21.29988	62.66891	6.76
may	7	21.31790	21.29996	62.66898	6.30
may	14	21.31800	21.30005	62.66917	5.84
may	21	21.31810	21.30013	62.66942	5.38
may	28	21.31820	21.30021	62.66979	4.92
jun	4	21.31829	21.30028	62.67015	4.46
jun	11	21.31839	21.30035	62.67065	4.00
jun	18	21.31847	21.30041	62.67114	3.54
jun	25	21.31855	21.30047	62.67177	3.08
jul	2	21.31861	21.30051	62.67233	2.62
jul	9	21.31867	21.30055	62.67302	2.16
jul	16	21.31871	21.30057	62.67365	1.70
jul	23	21.31875	21.30059	62.67441	1.24
jul	30	21.31877	21.30059	62.67505	0.78
ago	6	21.31879	21.30059	62.67581	0.32
ago	13	21.31879	21.30057	62.67646	23.86
ago	20	21.31879	21.30055	62.67721	23.40
ago	27	21.31876	21.30052	62.67782	22.94
sep	3	21.31873	21.30047	62.67851	22.48
sep	10	21.31869	21.30042	62.67906	22.02
sep	17	21.31865	21.30036	62.67970	21.56
sep	24	21.31858	21.30029	62.68016	21.10
oct	1	21.31852	21.30021	62.68068	20.64
oct	8	21.31844	21.30013	62.68105	20.18
oct	15	21.31837	21.30004	62.68146	19.72
oct	22	21.31829	21.29995	62.68170	19.26
oct	29	21.31821	21.29984	62.68196	18.80
nov	5	21.31812	21.29975	62.68206	18.34
nov	12	21.31804	21.29964	62.68217	17.88
nov	19	21.31795	21.29954	62.68213	17.42
nov	26	21.31787	21.29943	62.68207	16.96
dic	3	21.31779	21.29933	62.68187	16.50
dic	10	21.31771	21.29923	62.68166	16.04
dic	17	21.31764	21.29914	62.68132	15.58
dic	24	21.31758	21.29905	62.68094	15.12

105858

		V	Sp		
		4.21	F6V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	21.46814	21.45047	-65.27491	14.73
ene	8	21.46811	21.45043	-65.27450	14.27
ene	15	21.46811	21.45040	-65.27395	13.81
ene	22	21.46810	21.45037	-65.27345	13.35
ene	29	21.46812	21.45037	-65.27285	12.89
feb	5	21.46813	21.45037	-65.27231	12.43
feb	12	21.46818	21.45040	-65.27167	11.97
feb	19	21.46821	21.45042	-65.27110	11.51
feb	26	21.46827	21.45046	-65.27047	11.05
mar	5	21.46833	21.45051	-65.26990	10.59
mar	12	21.46841	21.45058	-65.26930	10.13
mar	19	21.46848	21.45064	-65.26875	9.67
mar	26	21.46858	21.45073	-65.26820	9.21
abr	2	21.46867	21.45081	-65.26769	8.75
abr	9	21.46879	21.45091	-65.26722	8.29
abr	16	21.46889	21.45100	-65.26679	7.83
abr	23	21.46902	21.45111	-65.26640	7.37
abr	30	21.46913	21.45121	-65.26604	6.91
may	7	21.46927	21.45133	-65.26577	6.45
may	14	21.46938	21.45143	-65.26552	5.99
may	21	21.46952	21.45155	-65.26536	5.53
may	28	21.46964	21.45165	-65.26522	5.07
jun	4	21.46978	21.45176	-65.26519	4.61
jun	11	21.46989	21.45185	-65.26517	4.15
jun	18	21.47001	21.45196	-65.26528	3.69
jun	25	21.47012	21.45204	-65.26536	3.23
jul	2	21.47023	21.45213	-65.26559	2.77
jul	9	21.47032	21.45220	-65.26580	2.31
jul	16	21.47041	21.45227	-65.26615	1.85
jul	23	21.47048	21.45232	-65.26643	1.39
jul	30	21.47054	21.45236	-65.26687	0.93
ago	6	21.47059	21.45239	-65.26725	0.47
ago	13	21.47063	21.45242	-65.26776	0.01
ago	20	21.47065	21.45242	-65.26817	23.55
ago	27	21.47066	21.45241	-65.26871	23.09
sep	3	21.47065	21.45239	-65.26914	22.63
sep	10	21.47063	21.45236	-65.26968	22.17
sep	17	21.47061	21.45232	-65.27008	21.71
sep	24	21.47055	21.45226	-65.27057	21.25
oct	1	21.47051	21.45220	-65.27093	20.79
oct	8	21.47043	21.45212	-65.27135	20.33
oct	15	21.47038	21.45204	-65.27160	19.87
oct	22	21.47029	21.45195	-65.27190	19.41
oct	29	21.47022	21.45186	-65.27206	18.95
nov	5	21.47013	21.45176	-65.27223	18.49
nov	12	21.47007	21.45167	-65.27224	18.03
nov	19	21.46997	21.45156	-65.27225	17.57
nov	26	21.46991	21.45147	-65.27214	17.11
dic	3	21.46983	21.45137	-65.27201	16.65
dic	10	21.46978	21.45130	-65.27175	16.19
dic	17	21.46972	21.45121	-65.27147	15.73
dic	24	21.46968	21.45115	-65.27111	15.27

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

108870

V 4.69 Sp K5V

m	d	α h	α_c h	δ °	Hp h
ene	1	22.08174	22.06408	-56.70417	15.34
ene	8	22.08172	22.06404	-56.70389	14.88
ene	15	22.08171	22.06400	-56.70345	14.42
ene	22	22.08170	22.06397	-56.70307	13.96
ene	29	22.08171	22.06396	-56.70256	13.50
feb	5	22.08171	22.06395	-56.70211	13.04
feb	12	22.08174	22.06395	-56.70155	12.58
feb	19	22.08175	22.06396	-56.70105	12.12
feb	26	22.08179	22.06398	-56.70047	11.66
mar	5	22.08182	22.06401	-56.69994	11.20
mar	12	22.08188	22.06405	-56.69935	10.74
mar	19	22.08192	22.06409	-56.69882	10.28
mar	26	22.08200	22.06414	-56.69825	9.82
abr	2	22.08206	22.06419	-56.69773	9.36
abr	9	22.08215	22.06427	-56.69721	8.90
abr	16	22.08222	22.06433	-56.69674	8.44
abr	23	22.08231	22.06441	-56.69628	7.98
abr	30	22.08240	22.06448	-56.69586	7.52
may	7	22.08250	22.06456	-56.69549	7.06
may	14	22.08259	22.06464	-56.69516	6.60
may	21	22.08270	22.06473	-56.69489	6.14
may	28	22.08280	22.06481	-56.69464	5.68
jun	4	22.08291	22.06490	-56.69449	5.22
jun	11	22.08301	22.06497	-56.69437	4.76
jun	18	22.08311	22.06506	-56.69434	4.30
jun	25	22.08321	22.06512	-56.69431	3.84
jul	2	22.08330	22.06520	-56.69441	3.38
jul	9	22.08338	22.06526	-56.69451	2.92
jul	16	22.08347	22.06532	-56.69473	2.46
jul	23	22.08354	22.06537	-56.69492	2.00
jul	30	22.08360	22.06542	-56.69526	1.54
ago	6	22.08365	22.06545	-56.69555	1.08
ago	13	22.08369	22.06548	-56.69598	0.62
ago	20	22.08373	22.06550	-56.69632	0.16
ago	27	22.08375	22.06551	-56.69681	23.70
sep	3	22.08376	22.06550	-56.69722	23.24
sep	10	22.08376	22.06549	-56.69774	22.78
sep	17	22.08376	22.06547	-56.69813	22.32
sep	24	22.08373	22.06544	-56.69864	21.86
oct	1	22.08371	22.06540	-56.69903	21.40
oct	8	22.08367	22.06535	-56.69950	20.94
oct	15	22.08364	22.06530	-56.69981	20.48
oct	22	22.08358	22.06524	-56.70020	20.02
oct	29	22.08354	22.06517	-56.70044	19.56
nov	5	22.08348	22.06510	-56.70072	19.10
nov	12	22.08344	22.06504	-56.70083	18.64
nov	19	22.08337	22.06496	-56.70098	18.18
nov	26	22.08333	22.06489	-56.70099	17.72
dic	3	22.08327	22.06481	-56.70101	17.26
dic	10	22.08324	22.06475	-56.70087	16.80
dic	17	22.08318	22.06468	-56.70074	16.34
dic	24	22.08316	22.06463	-56.70051	15.88

111449

V 5.21 Sp F7V

m	d	α h	α_c h	δ °	Hp h
ene	1	22.59683	22.57916	-20.60400	15.86
ene	8	22.59681	22.57913	-20.60405	15.40
ene	15	22.59681	22.57910	-20.60396	14.94
ene	22	22.59679	22.57907	-20.60396	14.48
ene	29	22.59680	22.57905	-20.60383	14.02
feb	5	22.59679	22.57903	-20.60377	13.56
feb	12	22.59681	22.57902	-20.60358	13.10
feb	19	22.59681	22.57902	-20.60347	12.64
feb	26	22.59683	22.57902	-20.60323	12.18
mar	5	22.59684	22.57902	-20.60304	11.72
mar	12	22.59687	22.57903	-20.60275	11.26
mar	19	22.59689	22.57905	-20.60251	10.80
mar	26	22.59693	22.57907	-20.60218	10.34
abr	2	22.59696	22.57909	-20.60188	9.88
abr	9	22.59700	22.57912	-20.60152	9.42
abr	16	22.59704	22.57916	-20.60118	8.96
abr	23	22.59710	22.57919	-20.60079	8.50
abr	30	22.59715	22.57923	-20.60041	8.04
may	7	22.59721	22.57927	-20.60002	7.58
may	14	22.59727	22.57931	-20.59964	7.12
may	21	22.59734	22.57936	-20.59926	6.66
may	28	22.59740	22.57940	-20.59886	6.20
jun	4	22.59747	22.57945	-20.59852	5.74
jun	11	22.59753	22.57949	-20.59817	5.28
jun	18	22.59760	22.57954	-20.59786	4.82
jun	25	22.59766	22.57958	-20.59754	4.36
jul	2	22.59772	22.57962	-20.59731	3.90
jul	9	22.59778	22.57966	-20.59705	3.44
jul	16	22.59783	22.57969	-20.59689	2.98
jul	23	22.59789	22.57972	-20.59669	2.52
jul	30	22.59793	22.57975	-20.59662	2.06
ago	6	22.59797	22.57977	-20.59651	1.60
ago	13	22.59800	22.57979	-20.59652	1.14
ago	20	22.59803	22.57980	-20.59647	0.68
ago	27	22.59805	22.57981	-20.59656	0.22
sep	3	22.59807	22.57981	-20.59659	23.76
sep	10	22.59807	22.57980	-20.59675	23.30
sep	17	22.59808	22.57979	-20.59681	22.84
sep	24	22.59807	22.57978	-20.59702	22.38
oct	1	22.59807	22.57976	-20.59715	21.92
oct	8	22.59805	22.57974	-20.59738	21.46
oct	15	22.59804	22.57971	-20.59751	21.00
oct	22	22.59801	22.57967	-20.59775	20.54
oct	29	22.59800	22.57963	-20.59790	20.08
nov	5	22.59797	22.57959	-20.59813	19.62
nov	12	22.59795	22.57955	-20.59824	19.16
nov	19	22.59792	22.57951	-20.59845	18.70
nov	26	22.59790	22.57946	-20.59855	18.24
dic	3	22.59787	22.57941	-20.59872	17.78
dic	10	22.59786	22.57937	-20.59876	17.32
dic	17	22.59783	22.57933	-20.59887	16.86
dic	24	22.59781	22.57929	-20.59890	16.40

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

112440

		V	Sp		
		3.97	G8II-III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	22.79195	22.77429	23.67646	16.05
ene	8	22.79192	22.77424	23.67614	15.59
ene	15	22.79192	22.77421	23.67590	15.13
ene	22	22.79189	22.77417	23.67552	14.67
ene	29	22.79189	22.77414	23.67524	14.21
feb	5	22.79188	22.77412	23.67485	13.75
feb	12	22.79188	22.77410	23.67456	13.29
feb	19	22.79188	22.77409	23.67418	12.83
feb	26	22.79189	22.77408	23.67391	12.37
mar	5	22.79189	22.77408	23.67358	11.91
mar	12	22.79192	22.77408	23.67336	11.45
mar	19	22.79193	22.77410	23.67309	10.99
mar	26	22.79197	22.77411	23.67294	10.53
abr	2	22.79200	22.77413	23.67279	10.07
abr	9	22.79204	22.77416	23.67273	9.61
abr	16	22.79208	22.77419	23.67267	9.15
abr	23	22.79213	22.77422	23.67272	8.69
abr	30	22.79218	22.77426	23.67281	8.23
may	7	22.79224	22.77430	23.67296	7.77
may	14	22.79230	22.77434	23.67314	7.31
may	21	22.79236	22.77439	23.67340	6.85
may	28	22.79243	22.77443	23.67372	6.39
jun	4	22.79249	22.77447	23.67405	5.93
jun	11	22.79255	22.77452	23.67444	5.47
jun	18	22.79262	22.77456	23.67485	5.01
jun	25	22.79268	22.77460	23.67533	4.55
jul	2	22.79274	22.77464	23.67578	4.09
jul	9	22.79280	22.77467	23.67629	3.63
jul	16	22.79285	22.77471	23.67676	3.17
jul	23	22.79290	22.77473	23.67731	2.71
jul	30	22.79294	22.77476	23.67777	2.25
ago	6	22.79298	22.77478	23.67831	1.79
ago	13	22.79301	22.77479	23.67876	1.33
ago	20	22.79304	22.77480	23.67929	0.87
ago	27	22.79305	22.77481	23.67968	0.41
sep	3	22.79307	22.77481	23.68015	23.95
sep	10	22.79307	22.77480	23.68051	23.49
sep	17	22.79308	22.77479	23.68094	23.03
sep	24	22.79307	22.77478	23.68122	22.57
oct	1	22.79307	22.77476	23.68157	22.11
oct	8	22.79305	22.77473	23.68179	21.65
oct	15	22.79304	22.77470	23.68208	21.19
oct	22	22.79301	22.77467	23.68220	20.73
oct	29	22.79300	22.77463	23.68239	20.27
nov	5	22.79297	22.77459	23.68245	19.81
nov	12	22.79295	22.77455	23.68256	19.35
nov	19	22.79292	22.77451	23.68253	18.89
nov	26	22.79290	22.77446	23.68254	18.43
dic	3	22.79286	22.77441	23.68242	17.97
dic	10	22.79284	22.77436	23.68236	17.51
dic	17	22.79281	22.77431	23.68216	17.05
dic	24	22.79279	22.77427	23.68199	16.59

112623

		V	Sp		
		3.49	A3V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	22.82963	22.81197	-51.21194	16.09
ene	8	22.82960	22.81192	-51.21176	15.63
ene	15	22.82958	22.81187	-51.21141	15.17
ene	22	22.82955	22.81183	-51.21112	14.71
ene	29	22.82955	22.81180	-51.21068	14.25
feb	5	22.82953	22.81177	-51.21030	13.79
feb	12	22.82954	22.81176	-51.20978	13.33
feb	19	22.82953	22.81175	-51.20932	12.87
feb	26	22.82956	22.81175	-51.20875	12.41
mar	5	22.82957	22.81175	-51.20824	11.95
mar	12	22.82960	22.81177	-51.20764	11.49
mar	19	22.82962	22.81178	-51.20710	11.03
mar	26	22.82967	22.81182	-51.20648	10.57
abr	2	22.82971	22.81185	-51.20592	10.11
abr	9	22.82977	22.81189	-51.20533	9.65
abr	16	22.82982	22.81193	-51.20480	9.19
abr	23	22.82989	22.81199	-51.20423	8.73
abr	30	22.82996	22.81204	-51.20372	8.27
may	7	22.83004	22.81210	-51.20323	7.81
may	14	22.83012	22.81216	-51.20279	7.35
may	21	22.83021	22.81223	-51.20237	6.89
may	28	22.83029	22.81230	-51.20199	6.43
jun	4	22.83039	22.81237	-51.20169	5.97
jun	11	22.83047	22.81243	-51.20142	5.51
jun	18	22.83056	22.81251	-51.20123	5.05
jun	25	22.83065	22.81257	-51.20105	4.59
jul	2	22.83074	22.81264	-51.20099	4.13
jul	9	22.83082	22.81269	-51.20095	3.67
jul	16	22.83090	22.81275	-51.20101	3.21
jul	23	22.83097	22.81280	-51.20107	2.75
jul	30	22.83103	22.81285	-51.20126	2.29
ago	6	22.83109	22.81289	-51.20144	1.83
ago	13	22.83114	22.81293	-51.20175	1.37
ago	20	22.83118	22.81295	-51.20200	0.91
ago	27	22.83121	22.81297	-51.20240	0.45
sep	3	22.83123	22.81297	-51.20275	23.99
sep	10	22.83124	22.81298	-51.20321	23.53
sep	17	22.83126	22.81297	-51.20357	23.07
sep	24	22.83124	22.81295	-51.20406	22.61
oct	1	22.83124	22.81293	-51.20445	22.15
oct	8	22.83121	22.81290	-51.20493	21.69
oct	15	22.83119	22.81286	-51.20528	21.23
oct	22	22.83115	22.81281	-51.20571	20.77
oct	29	22.83112	22.81276	-51.20602	20.31
nov	5	22.83107	22.81270	-51.20637	19.85
nov	12	22.83104	22.81264	-51.20657	19.39
nov	19	22.83098	22.81257	-51.20682	18.93
nov	26	22.83094	22.81251	-51.20693	18.47
dic	3	22.83089	22.81244	-51.20706	18.01
dic	10	22.83086	22.81238	-51.20702	17.55
dic	17	22.83081	22.81231	-51.20701	17.09
dic	24	22.83078	22.81225	-51.20688	16.63

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

112724

V 3.50 Sp K0III

m	d	α h	α_c h	δ °	Hp h
ene	1	22.83987	22.82220	66.31388	16.10
ene	8	22.83978	22.82210	66.31352	15.64
ene	15	22.83971	22.82200	66.31320	15.18
ene	22	22.83964	22.82192	66.31269	14.72
ene	29	22.83959	22.82184	66.31224	14.26
feb	5	22.83954	22.82178	66.31166	13.80
feb	12	22.83951	22.82172	66.31113	13.34
feb	19	22.83948	22.82169	66.31048	12.88
feb	26	22.83947	22.82166	66.30992	12.42
mar	5	22.83947	22.82166	66.30929	11.96
mar	12	22.83949	22.82166	66.30873	11.50
mar	19	22.83952	22.82169	66.30813	11.04
mar	26	22.83957	22.82171	66.30764	10.58
abr	2	22.83963	22.82176	66.30715	10.12
abr	9	22.83969	22.82181	66.30675	9.66
abr	16	22.83978	22.82189	66.30637	9.20
abr	23	22.83987	22.82196	66.30611	8.74
abr	30	22.83997	22.82205	66.30591	8.28
may	7	22.84007	22.82213	66.30578	7.82
may	14	22.84019	22.82223	66.30572	7.36
may	21	22.84030	22.82232	66.30576	6.90
may	28	22.84042	22.82243	66.30589	6.44
jun	4	22.84053	22.82252	66.30607	5.98
jun	11	22.84066	22.82262	66.30635	5.52
jun	18	22.84076	22.82271	66.30668	5.06
jun	25	22.84088	22.82280	66.30712	4.60
jul	2	22.84097	22.82287	66.30756	4.14
jul	9	22.84108	22.82296	66.30810	3.68
jul	16	22.84116	22.82302	66.30865	3.22
jul	23	22.84125	22.82308	66.30932	2.76
jul	30	22.84130	22.82312	66.30992	2.30
ago	6	22.84137	22.82317	66.31063	1.84
ago	13	22.84140	22.82319	66.31129	1.38
ago	20	22.84145	22.82321	66.31207	0.92
ago	27	22.84146	22.82322	66.31273	0.46
sep	3	22.84148	22.82322	66.31349	0.00
sep	10	22.84147	22.82320	66.31415	23.54
sep	17	22.84146	22.82317	66.31491	23.08
sep	24	22.84143	22.82314	66.31552	22.62
oct	1	22.84140	22.82309	66.31620	22.16
oct	8	22.84135	22.82303	66.31676	21.70
oct	15	22.84130	22.82297	66.31739	21.24
oct	22	22.84123	22.82289	66.31784	20.78
oct	29	22.84117	22.82281	66.31834	20.32
nov	5	22.84109	22.82272	66.31868	19.86
nov	12	22.84101	22.82261	66.31907	19.40
nov	19	22.84092	22.82251	66.31927	18.94
nov	26	22.84084	22.82240	66.31949	18.48
dic	3	22.84074	22.82229	66.31955	18.02
dic	10	22.84065	22.82217	66.31963	17.56
dic	17	22.84056	22.82206	66.31952	17.10
dic	24	22.84047	22.82195	66.31941	16.64

112748

V 3.51 Sp M2III

m	d	α h	α_c h	δ °	Hp h
ene	1	22.84986	22.83219	24.71283	16.11
ene	8	22.84983	22.83215	24.71251	15.65
ene	15	22.84982	22.83211	24.71227	15.19
ene	22	22.84980	22.83207	24.71189	14.73
ene	29	22.84979	22.83204	24.71160	14.27
feb	5	22.84978	22.83202	24.71121	13.81
feb	12	22.84978	22.83200	24.71092	13.35
feb	19	22.84977	22.83199	24.71053	12.89
feb	26	22.84979	22.83198	24.71025	12.43
mar	5	22.84979	22.83198	24.70991	11.97
mar	12	22.84981	22.83198	24.70967	11.51
mar	19	22.84983	22.83199	24.70939	11.05
mar	26	22.84986	22.83201	24.70924	10.59
abr	2	22.84989	22.83203	24.70907	10.13
abr	9	22.84993	22.83205	24.70900	9.67
abr	16	22.84997	22.83208	24.70893	9.21
abr	23	22.85002	22.83212	24.70897	8.75
abr	30	22.85008	22.83216	24.70905	8.29
may	7	22.85013	22.83220	24.70918	7.83
may	14	22.85019	22.83224	24.70936	7.37
may	21	22.85026	22.83228	24.70961	6.91
may	28	22.85032	22.83233	24.70992	6.45
jun	4	22.85039	22.83237	24.71025	5.99
jun	11	22.85045	22.83241	24.71063	5.53
jun	18	22.85051	22.83246	24.71104	5.07
jun	25	22.85058	22.83250	24.71152	4.61
jul	2	22.85064	22.83254	24.71197	4.15
jul	9	22.85070	22.83257	24.71248	3.69
jul	16	22.85075	22.83260	24.71295	3.23
jul	23	22.85080	22.83263	24.71351	2.77
jul	30	22.85084	22.83266	24.71398	2.31
ago	6	22.85088	22.83268	24.71452	1.85
ago	13	22.85091	22.83269	24.71497	1.39
ago	20	22.85094	22.83271	24.71551	0.93
ago	27	22.85095	22.83271	24.71592	0.47
sep	3	22.85097	22.83271	24.71640	0.01
sep	10	22.85097	22.83271	24.71677	23.55
sep	17	22.85099	22.83270	24.71721	23.09
sep	24	22.85098	22.83268	24.71750	22.63
oct	1	22.85097	22.83267	24.71786	22.17
oct	8	22.85096	22.83264	24.71809	21.71
oct	15	22.85095	22.83261	24.71840	21.25
oct	22	22.85092	22.83258	24.71853	20.79
oct	29	22.85091	22.83254	24.71873	20.33
nov	5	22.85087	22.83250	24.71880	19.87
nov	12	22.85086	22.83246	24.71893	19.41
nov	19	22.85082	22.83241	24.71890	18.95
nov	26	22.85080	22.83236	24.71891	18.49
dic	3	22.85077	22.83231	24.71880	18.03
dic	10	22.85075	22.83227	24.71875	17.57
dic	17	22.85072	22.83222	24.71856	17.11
dic	24	22.85070	22.83217	24.71839	16.65

Posiciones aparentes de estrellas brillantes, 2021

(a las 0^h del meridiano 90° W.G.)

115102

		V	Sp		
		4.41	K1III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	23.33213	23.31446	-32.42250	16.59
ene	8	23.33210	23.31442	-32.42250	16.13
ene	15	23.33209	23.31438	-32.42233	15.67
ene	22	23.33206	23.31434	-32.42224	15.21
ene	29	23.33206	23.31431	-32.42201	14.75
feb	5	23.33204	23.31428	-32.42183	14.29
feb	12	23.33204	23.31426	-32.42151	13.83
feb	19	23.33203	23.31424	-32.42126	13.37
feb	26	23.33204	23.31423	-32.42088	12.91
mar	5	23.33204	23.31423	-32.42056	12.45
mar	12	23.33207	23.31423	-32.42012	11.99
mar	19	23.33207	23.31424	-32.41974	11.53
mar	26	23.33211	23.31425	-32.41926	11.07
abr	2	23.33213	23.31427	-32.41882	10.61
abr	9	23.33217	23.31429	-32.41832	10.15
abr	16	23.33221	23.31432	-32.41787	9.69
abr	23	23.33226	23.31435	-32.41735	9.23
abr	30	23.33231	23.31439	-32.41687	8.77
may	7	23.33237	23.31443	-32.41638	8.31
may	14	23.33242	23.31447	-32.41593	7.85
may	21	23.33249	23.31452	-32.41546	7.39
may	28	23.33256	23.31456	-32.41502	6.93
jun	4	23.33263	23.31461	-32.41461	6.47
jun	11	23.33269	23.31466	-32.41424	6.01
jun	18	23.33277	23.31471	-32.41390	5.55
jun	25	23.33284	23.31476	-32.41358	5.09
jul	2	23.33291	23.31481	-32.41335	4.63
jul	9	23.33297	23.31485	-32.41313	4.17
jul	16	23.33304	23.31490	-32.41300	3.71
jul	23	23.33310	23.31494	-32.41285	3.25
jul	30	23.33316	23.31498	-32.41283	2.79
ago	6	23.33321	23.31501	-32.41281	2.33
ago	13	23.33325	23.31504	-32.41289	1.87
ago	20	23.33329	23.31506	-32.41294	1.41
ago	27	23.33332	23.31508	-32.41313	0.95
sep	3	23.33335	23.31509	-32.41328	0.49
sep	10	23.33336	23.31510	-32.41355	0.03
sep	17	23.33338	23.31509	-32.41375	23.57
sep	24	23.33338	23.31509	-32.41408	23.11
oct	1	23.33339	23.31508	-32.41434	22.65
oct	8	23.33337	23.31506	-32.41470	22.19
oct	15	23.33337	23.31503	-32.41495	21.73
oct	22	23.33335	23.31500	-32.41532	21.27
oct	29	23.33333	23.31497	-32.41557	20.81
nov	5	23.33330	23.31493	-32.41591	20.35
nov	12	23.33329	23.31489	-32.41611	19.89
nov	19	23.33325	23.31484	-32.41640	19.43
nov	26	23.33323	23.31479	-32.41656	18.97
dic	3	23.33319	23.31474	-32.41677	18.51
dic	10	23.33318	23.31469	-32.41683	18.05
dic	17	23.33314	23.31464	-32.41696	17.59
dic	24	23.33312	23.31459	-32.41696	17.13

115623

		V	Sp		
		4.42	F8IV		
		α	α_χ	δ	Hπ
m	d	h	h	°	h
ene	1	23.44010	23.42244	23.51989	16.70
ene	8	23.44007	23.42239	23.51962	16.24
ene	15	23.44006	23.42235	23.51944	15.78
ene	22	23.44003	23.42231	23.51910	15.32
ene	29	23.44003	23.42228	23.51886	14.86
feb	5	23.44000	23.42225	23.51852	14.40
feb	12	23.44000	23.42222	23.51826	13.94
feb	19	23.43999	23.42220	23.51790	13.48
feb	26	23.43999	23.42219	23.51766	13.02
mar	5	23.43999	23.42218	23.51734	12.56
mar	12	23.44001	23.42217	23.51713	12.10
mar	19	23.44001	23.42218	23.51686	11.64
mar	26	23.44004	23.42218	23.51671	11.18
abr	2	23.44006	23.42220	23.51654	10.72
abr	9	23.44010	23.42222	23.51647	10.26
abr	16	23.44013	23.42224	23.51638	9.80
abr	23	23.44018	23.42227	23.51641	9.34
abr	30	23.44023	23.42230	23.51646	8.88
may	7	23.44028	23.42234	23.51658	8.42
may	14	23.44033	23.42238	23.51673	7.96
may	21	23.44039	23.42242	23.51696	7.50
may	28	23.44046	23.42246	23.51723	7.04
jun	4	23.44052	23.42251	23.51753	6.58
jun	11	23.44059	23.42255	23.51788	6.12
jun	18	23.44065	23.42259	23.51826	5.66
jun	25	23.44072	23.42264	23.51871	5.20
jul	2	23.44078	23.42268	23.51913	4.74
jul	9	23.44084	23.42272	23.51960	4.28
jul	16	23.44090	23.42275	23.52006	3.82
jul	23	23.44095	23.42279	23.52059	3.36
jul	30	23.44100	23.42282	23.52104	2.90
ago	6	23.44105	23.42285	23.52155	2.44
ago	13	23.44108	23.42287	23.52200	1.98
ago	20	23.44112	23.42289	23.52252	1.52
ago	27	23.44114	23.42290	23.52293	1.06
sep	3	23.44117	23.42291	23.52339	0.60
sep	10	23.44118	23.42291	23.52376	0.14
sep	17	23.44120	23.42291	23.52420	23.68
sep	24	23.44120	23.42291	23.52450	23.22
oct	1	23.44120	23.42289	23.52486	22.76
oct	8	23.44119	23.42288	23.52510	22.30
oct	15	23.44119	23.42286	23.52541	21.84
oct	22	23.44117	23.42283	23.52556	21.38
oct	29	23.44116	23.42280	23.52578	20.92
nov	5	23.44114	23.42276	23.52587	20.46
nov	12	23.44113	23.42273	23.52603	20.00
nov	19	23.44110	23.42269	23.52603	19.54
nov	26	23.44108	23.42264	23.52608	19.08
dic	3	23.44105	23.42259	23.52601	18.62
dic	10	23.44103	23.42255	23.52600	18.16
dic	17	23.44100	23.42250	23.52585	17.70
dic	24	23.44098	23.42245	23.52574	17.24

Posiciones aparentes de la estrella Polar, 2021

(a las 0^h del meridiano 90° W.G.)

11767

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

		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	2.98592	2.96825	89.35573	20.24
ene	2	2.98548	2.96781	89.35581	20.18
ene	3	2.98501	2.96734	89.35588	20.11
ene	4	2.98452	2.96685	89.35595	20.05
ene	5	2.98403	2.96636	89.35601	19.98
ene	6	2.98356	2.96588	89.35606	19.91
ene	7	2.98312	2.96544	89.35611	19.85
ene	8	2.98271	2.96503	89.35616	19.78
ene	9	2.98233	2.96465	89.35621	19.72
ene	10	2.98197	2.96429	89.35626	19.65
ene	11	2.98161	2.96392	89.35632	19.58
ene	12	2.98121	2.96352	89.35638	19.52
ene	13	2.98078	2.96307	89.35644	19.45
ene	14	2.98029	2.96258	89.35650	19.39
ene	15	2.97977	2.96206	89.35656	19.32
ene	16	2.97921	2.96150	89.35661	19.25
ene	17	2.97864	2.96093	89.35666	19.19
ene	18	2.97808	2.96037	89.35670	19.12
ene	19	2.97753	2.95981	89.35673	19.05
ene	20	2.97700	2.95928	89.35675	18.99
ene	21	2.97650	2.95878	89.35678	18.92
ene	22	2.97602	2.95829	89.35680	18.86
ene	23	2.97555	2.95783	89.35683	18.79
ene	24	2.97510	2.95737	89.35685	18.72
ene	25	2.97465	2.95692	89.35688	18.66
ene	26	2.97418	2.95645	89.35691	18.59
ene	27	2.97370	2.95596	89.35695	18.52
ene	28	2.97318	2.95543	89.35699	18.46
ene	29	2.97262	2.95487	89.35702	18.39
ene	30	2.97203	2.95428	89.35705	18.33
ene	31	2.97142	2.95367	89.35707	18.26
feb	1	2.97081	2.95306	89.35709	18.19
feb	2	2.97021	2.95246	89.35710	18.13
feb	3	2.96966	2.95190	89.35710	18.06
feb	4	2.96914	2.95138	89.35710	17.99
feb	5	2.96866	2.95090	89.35710	17.93
feb	6	2.96820	2.95044	89.35710	17.86
feb	7	2.96775	2.94998	89.35711	17.80
feb	8	2.96728	2.94951	89.35712	17.73
feb	9	2.96678	2.94901	89.35713	17.66
feb	10	2.96624	2.94846	89.35715	17.60
feb	11	2.96566	2.94788	89.35716	17.53
feb	12	2.96506	2.94727	89.35716	17.46
feb	13	2.96444	2.94666	89.35716	17.40
feb	14	2.96383	2.94604	89.35715	17.33
feb	15	2.96323	2.94545	89.35713	17.27
feb	16	2.96266	2.94488	89.35711	17.20
feb	17	2.96212	2.94433	89.35709	17.13
feb	18	2.96161	2.94382	89.35706	17.07
feb	19	2.96112	2.94333	89.35703	17.00
feb	20	2.96065	2.94286	89.35701	16.93
feb	21	2.96020	2.94240	89.35699	16.87
feb	22	2.95974	2.94194	89.35697	16.80
feb	23	2.95926	2.94147	89.35695	16.74
feb	24	2.95877	2.94097	89.35694	16.67
feb	25	2.95824	2.94044	89.35693	16.60
feb	26	2.95769	2.93988	89.35691	16.54
feb	27	2.95711	2.93930	89.35689	16.47
feb	28	2.95654	2.93872	89.35686	16.40
mar	1	2.95598	2.93817	89.35682	16.34
mar	2	2.95546	2.93765	89.35677	16.27
mar	3	2.95498	2.93718	89.35672	16.21
mar	4	2.95456	2.93675	89.35667	16.14
mar	5	2.95417	2.93636	89.35663	16.07
mar	6	2.95379	2.93597	89.35659	16.01
mar	7	2.95340	2.93558	89.35655	15.94
mar	8	2.95299	2.93517	89.35652	15.87
mar	9	2.95255	2.93472	89.35648	15.81
mar	10	2.95208	2.93424	89.35645	15.74
mar	11	2.95158	2.93374	89.35641	15.68
mar	12	2.95107	2.93323	89.35636	15.61
mar	13	2.95056	2.93273	89.35631	15.54
mar	14	2.95008	2.93224	89.35625	15.48
mar	15	2.94962	2.93178	89.35618	15.41
mar	16	2.94919	2.93136	89.35612	15.35
mar	17	2.94881	2.93097	89.35605	15.28
mar	18	2.94845	2.93061	89.35598	15.21
mar	19	2.94812	2.93028	89.35591	15.15
mar	20	2.94781	2.92997	89.35585	15.08
mar	21	2.94750	2.92966	89.35579	15.02
mar	22	2.94719	26.92935	89.35573	14.95
mar	23	2.94687	2.92902	89.35567	14.88
mar	24	2.94652	2.92867	89.35562	14.82
mar	25	2.94615	2.92829	89.35557	14.75
mar	26	2.94576	2.92790	89.35551	14.69
mar	27	2.94536	2.92750	89.35544	14.62
mar	28	2.94497	2.92712	89.35537	14.55
mar	29	2.94462	2.92677	89.35529	14.49
mar	30	2.94433	2.92647	89.35521	14.42
mar	31	2.94409	2.92623	89.35512	14.36
abr	1	2.94390	2.92604	89.35504	14.29
abr	2	2.94373	2.92587	89.35497	14.22
abr	3	2.94356	2.92569	89.35490	14.16
abr	4	2.94337	2.92550	89.35483	14.09
abr	5	2.94315	2.92528	89.35477	14.03
abr	6	2.94290	2.92502	89.35471	13.96
abr	7	2.94263	2.92475	89.35464	13.89
abr	8	2.94235	2.92447	89.35457	13.83
abr	9	2.94207	2.92419	89.35449	13.76
abr	10	2.94181	2.92393	89.35440	13.70
abr	11	2.94158	2.92370	89.35431	13.63
abr	12	2.94138	2.92350	89.35422	13.56
abr	13	2.94122	2.92334	89.35413	13.50
abr	14	2.94110	2.92322	89.35403	13.43
abr	15	2.94101	2.92313	89.35394	13.37
abr	16	2.94094	2.92305	89.35386	13.30

Posiciones aparentes de la estrella Polar, 2021

(a las 0^h del meridiano 90° W.G.)

11767

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

		α	α_c	δ	Hp
m	d	h	h	°	h
abr	17	2.94088	2.92299	89.35377	13.23
abr	18	2.94083	2.92293	89.35369	13.17
abr	19	2.94076	2.92286	89.35362	13.10
abr	20	2.94067	2.92277	89.35355	13.04
abr	21	2.94057	2.92267	89.35348	12.97
abr	22	2.94044	2.92254	89.35340	12.91
abr	23	2.94031	2.92240	89.35332	12.84
abr	24	2.94018	2.92227	89.35324	12.77
abr	25	2.94008	2.92217	89.35315	12.71
abr	26	2.94002	2.92212	89.35305	12.64
abr	27	2.94003	2.92212	89.35296	12.58
abr	28	2.94009	2.92218	89.35286	12.51
abr	29	2.94020	2.92228	89.35277	12.45
abr	30	2.94031	2.92239	89.35269	12.38
may	1	2.94040	2.92248	89.35262	12.31
may	2	2.94046	2.92253	89.35255	12.25
may	3	2.94049	2.92256	89.35248	12.18
may	4	2.94050	2.92256	89.35241	12.12
may	5	2.94049	2.92255	89.35233	12.05
may	6	2.94048	2.92254	89.35225	11.99
may	7	2.94048	2.92254	89.35217	11.92
may	8	2.94052	2.92258	89.35207	11.85
may	9	2.94058	2.92264	89.35198	11.79
may	10	2.94069	2.92274	89.35189	11.72
may	11	2.94083	2.92288	89.35179	11.66
may	12	2.94100	2.92305	89.35170	11.59
may	13	2.94120	2.92325	89.35162	11.53
may	14	2.94141	2.92345	89.35154	11.46
may	15	2.94162	2.92366	89.35146	11.40
may	16	2.94182	2.92386	89.35139	11.33
may	17	2.94201	2.92405	89.35132	11.27
may	18	2.94218	2.92421	89.35125	11.20
may	19	2.94232	2.92435	89.35119	11.13
may	20	2.94246	2.92449	89.35112	11.07
may	21	2.94259	2.92462	89.35104	11.00
may	22	2.94274	2.92477	89.35096	10.94
may	23	2.94293	2.92495	89.35088	10.87
may	24	2.94317	2.92519	89.35079	10.81
may	25	2.94347	2.92549	89.35071	10.74
may	26	2.94381	2.92583	89.35063	10.67
may	27	2.94418	2.92619	89.35056	10.61
may	28	2.94455	2.92655	89.35050	10.54
may	29	2.94488	2.92688	89.35044	10.48
may	30	2.94518	2.92717	89.35039	10.41
may	31	2.94544	2.92743	89.35034	10.35
jun	1	2.94567	2.92766	89.35028	10.28
jun	2	2.94591	2.92789	89.35022	10.22
jun	3	2.94615	2.92813	89.35015	10.15
jun	4	2.94641	2.92840	89.35008	10.09
jun	5	2.94671	2.92869	89.35000	10.02
jun	6	2.94704	2.92902	89.34993	9.96
jun	7	2.94740	2.92938	89.34986	9.89
jun	8	2.94780	2.92978	89.34979	9.82
jun	9	2.94822	2.93019	89.34972	9.76
jun	10	2.94865	2.93062	89.34966	9.69
jun	11	2.94909	2.93105	89.34961	9.63
jun	12	2.94952	2.93148	89.34956	9.56
jun	13	2.94993	2.93188	89.34951	9.50
jun	14	2.95032	2.93227	89.34947	9.43
jun	15	2.95068	2.93263	89.34943	9.37
jun	16	2.95103	2.93297	89.34938	9.30
jun	17	2.95137	2.93331	89.34934	9.24
jun	18	2.95172	2.93366	89.34929	9.17
jun	19	2.95209	2.93404	89.34923	9.11
jun	20	2.95251	2.93445	89.34917	9.04
jun	21	2.95298	2.93492	89.34911	8.98
jun	22	2.95350	2.93544	89.34906	8.91
jun	23	2.95406	2.93598	89.34902	8.85
jun	24	2.95461	2.93654	89.34898	8.78
jun	25	2.95515	2.93707	89.34895	8.72
jun	26	2.95565	2.93756	89.34893	8.65
jun	27	2.95610	2.93801	89.34891	8.59
jun	28	2.95652	2.93843	89.34889	8.52
jun	29	2.95693	2.93883	89.34886	8.45
jun	30	2.95733	2.93923	89.34882	8.39
jul	1	2.95775	2.93965	89.34879	8.32
jul	2	2.95820	2.94010	89.34875	8.26
jul	3	2.95868	2.94058	89.34870	8.19
jul	4	2.95919	2.94109	89.34866	8.13
jul	5	2.95974	2.94163	89.34863	8.06
jul	6	2.96030	2.94219	89.34859	8.00
jul	7	2.96088	2.94277	89.34857	7.93
jul	8	2.96146	2.94334	89.34855	7.87
jul	9	2.96203	2.94391	89.34853	7.80
jul	10	2.96258	2.94446	89.34852	7.74
jul	11	2.96311	2.94498	89.34851	7.67
jul	12	2.96361	2.94548	89.34851	7.61
jul	13	2.96409	2.94595	89.34850	7.54
jul	14	2.96455	2.94641	89.34849	7.48
jul	15	2.96502	2.94688	89.34847	7.41
jul	16	2.96551	2.94736	89.34846	7.35
jul	17	2.96603	2.94788	89.34844	7.28
jul	18	2.96659	2.94845	89.34841	7.22
jul	19	2.96720	2.94905	89.34840	7.15
jul	20	2.96784	2.94969	89.34839	7.08
jul	21	2.96849	2.95034	89.34838	7.02
jul	22	2.96913	2.95097	89.34839	6.96
jul	23	2.96974	2.95157	89.34840	6.89
jul	24	2.97030	2.95213	89.34842	6.82
jul	25	2.97082	2.95265	89.34844	6.76
jul	26	2.97132	2.95314	89.34845	6.69
jul	27	2.97180	2.95362	89.34846	6.63
jul	28	2.97229	2.95411	89.34846	6.56
jul	29	2.97280	2.95462	89.34846	6.50
jul	30	2.97334	2.95516	89.34845	6.43
jul	31	2.97391	2.95573	89.34845	6.37

Posiciones aparentes de la estrella Polar, 2021

(a las 0^h del meridiano 90° W.G.)

11767

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

		α	α_c	δ	Hp
m	d	h	h	°	h
ago	1	2.97451	2.95632	89.34845	6.30
ago	2	2.97513	2.95694	89.34846	6.24
ago	3	2.97576	2.95757	89.34847	6.17
ago	4	2.97639	2.95820	89.34848	6.11
ago	5	2.97702	2.95882	89.34850	6.04
ago	6	2.97762	2.95942	89.34853	5.98
ago	7	2.97820	2.96000	89.34856	5.91
ago	8	2.97875	2.96054	89.34859	5.85
ago	9	2.97927	2.96106	89.34863	5.78
ago	10	2.97977	2.96156	89.34866	5.72
ago	11	2.98026	2.96205	89.34868	5.65
ago	12	2.98077	2.96255	89.34870	5.59
ago	13	2.98130	2.96309	89.34872	5.52
ago	14	2.98188	2.96366	89.34874	5.46
ago	15	2.98249	2.96427	89.34876	5.39
ago	16	2.98313	2.96492	89.34878	5.33
ago	17	2.98379	2.96557	89.34882	5.26
ago	18	2.98444	2.96621	89.34886	5.20
ago	19	2.98506	2.96683	89.34891	5.13
ago	20	2.98564	2.96740	89.34896	5.07
ago	21	2.98617	2.96793	89.34902	5.00
ago	22	2.98666	2.96842	89.34907	4.94
ago	23	2.98714	2.96890	89.34911	4.87
ago	24	2.98761	2.96937	89.34916	4.80
ago	25	2.98810	2.96986	89.34919	4.74
ago	26	2.98861	2.97037	89.34923	4.67
ago	27	2.98915	2.97090	89.34926	4.61
ago	28	2.98971	2.97147	89.34930	4.54
ago	29	2.99030	2.97205	89.34934	4.48
ago	30	2.99089	2.97265	89.34938	4.41
ago	31	2.99150	2.97324	89.34943	4.35
sep	1	2.99209	2.97383	89.34949	4.28
sep	2	2.99266	2.97440	89.34955	4.22
sep	3	2.99321	2.97495	89.34962	4.15
sep	4	2.99372	2.97545	89.34968	4.09
sep	5	2.99420	2.97593	89.34975	4.02
sep	6	2.99465	2.97638	89.34982	3.96
sep	7	2.99508	2.97681	89.34988	3.89
sep	8	2.99552	2.97725	89.34994	3.83
sep	9	2.99598	2.97772	89.34999	3.76
sep	10	2.99648	2.97821	89.35004	3.70
sep	11	2.99702	2.97875	89.35010	3.63
sep	12	2.99759	2.97932	89.35016	3.57
sep	13	2.99818	2.97990	89.35022	3.50
sep	14	2.99875	2.98047	89.35029	3.44
sep	15	2.99930	2.98102	89.35038	3.37
sep	16	2.99980	2.98152	89.35046	3.31
sep	17	3.00026	2.98197	89.35055	3.24
sep	18	3.00067	2.98238	89.35063	3.18
sep	19	3.00106	2.98277	89.35071	3.11
sep	20	3.00144	2.98315	89.35079	3.04
sep	21	3.00182	2.98353	89.35086	2.98
sep	22	3.00222	2.98393	89.35092	2.91
sep	23	3.00264	2.98435	89.35099	2.85
sep	24	3.00309	2.98480	89.35105	2.78
sep	25	3.00356	2.98527	89.35112	2.72
sep	26	3.00405	2.98575	89.35120	2.65
sep	27	3.00453	2.98624	89.35127	2.59
sep	28	3.00501	2.98671	89.35136	2.52
sep	29	3.00547	2.98717	89.35145	2.46
sep	30	3.00590	2.98759	89.35154	2.39
oct	1	3.00630	2.98799	89.35164	2.33
oct	2	3.00666	2.98835	89.35173	2.26
oct	3	3.00699	2.98867	89.35183	2.20
oct	4	3.00729	2.98898	89.35192	2.13
oct	5	3.00759	2.98927	89.35201	2.07
oct	6	3.00790	2.98958	89.35209	2.00
oct	7	3.00824	2.98992	89.35217	1.93
oct	8	3.00862	2.99031	89.35224	1.87
oct	9	3.00904	2.99072	89.35233	1.80
oct	10	3.00948	2.99116	89.35241	1.74
oct	11	3.00991	2.99158	89.35251	1.67
oct	12	3.01031	2.99198	89.35261	1.61
oct	13	3.01067	2.99234	89.35272	1.54
oct	14	3.01097	2.99264	89.35283	1.48
oct	15	3.01123	2.99289	89.35294	1.41
oct	16	3.01146	2.99312	89.35304	1.35
oct	17	3.01167	2.99333	89.35314	1.28
oct	18	3.01187	2.99353	89.35324	1.21
oct	19	3.01209	2.99375	89.35332	1.15
oct	20	3.01233	2.99399	89.35341	1.08
oct	21	3.01259	2.99425	89.35350	1.02
oct	22	3.01287	2.99453	89.35358	0.95
oct	23	3.01317	2.99482	89.35367	0.89
oct	24	3.01347	2.99512	89.35377	0.82
oct	25	3.01376	2.99541	89.35387	0.76
oct	26	3.01403	2.99567	89.35397	0.69
oct	27	3.01427	2.99592	89.35408	0.63
oct	28	3.01448	2.99612	89.35419	0.56
oct	29	3.01466	2.99629	89.35431	0.50
oct	30	3.01479	2.99643	89.35442	0.43
oct	31	3.01490	2.99653	89.35453	0.36
nov	1	3.01499	2.99662	89.35463	0.30
nov	2	3.01508	2.99671	89.35473	0.23
nov	3	3.01519	2.99682	89.35482	0.17
nov	4	3.01534	2.99697	89.35491	0.10
nov	5	3.01553	2.99716	89.35501	0.04
nov	6	3.01576	2.99738	89.35510	23.97
nov	7	3.01598	2.99760	89.35521	23.90
nov	8	3.01618	2.99779	89.35532	23.84
nov	9	3.01633	2.99794	89.35544	23.77
nov	10	3.01643	2.99803	89.35556	23.71
nov	11	3.01647	2.99807	89.35568	23.64
nov	12	3.01647	2.99807	89.35579	23.58
nov	13	3.01645	2.99804	89.35590	23.51
nov	14	3.01642	2.99802	89.35600	23.45

Posiciones aparentes de la estrella Polar, 2021

(a las 0^h del meridiano 90° W.G.)

11767

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

		α	α_c	δ	Hp			α	α_c	δ	Hp
m	d	h	h	°	h	m	d	h	h	°	h
nov	15	3.01640	2.99799	89.35610	23.38	dic	9	3.01481	2.99633	89.35851	21.80
nov	16	3.01639	2.99799	89.35619	23.31	dic	10	3.01453	2.99604	89.35861	21.74
nov	17	3.01641	2.99800	89.35628	23.25	dic	11	3.01424	2.99575	89.35870	21.67
nov	18	3.01645	2.99804	89.35637	23.18	dic	12	3.01395	2.99547	89.35879	21.60
nov	19	3.01650	2.99809	89.35647	23.12	dic	13	3.01368	2.99519	89.35887	21.54
nov	20	3.01655	2.99814	89.35656	23.05	dic	14	3.01344	2.99495	89.35895	21.47
nov	21	3.01660	2.99818	89.35666	22.99	dic	15	3.01321	2.99472	89.35902	21.41
nov	22	3.01663	2.99821	89.35677	22.92	dic	16	3.01300	2.99450	89.35910	21.34
nov	23	3.01664	2.99821	89.35688	22.85	dic	17	3.01279	2.99429	89.35918	21.27
nov	24	3.01661	2.99817	89.35699	22.79	dic	18	3.01259	2.99408	89.35926	21.21
nov	25	3.01654	2.99810	89.35710	22.72	dic	19	3.01237	2.99386	89.35935	21.14
nov	26	3.01643	2.99800	89.35721	22.66	dic	20	3.01212	2.99361	89.35944	21.08
nov	27	3.01630	2.99786	89.35732	22.59	dic	21	3.01185	2.99333	89.35953	21.01
nov	28	3.01614	2.99770	89.35742	22.53	dic	22	3.01153	2.99301	89.35962	20.94
nov	29	3.01597	2.99753	89.35752	22.46	dic	23	3.01118	2.99266	89.35971	20.88
nov	30	3.01582	2.99737	89.35761	22.39	dic	24	3.01080	2.99227	89.35980	20.81
dic	1	3.01569	2.99724	89.35770	22.33	dic	25	3.01040	2.99186	89.35988	20.75
dic	2	3.01560	2.99715	89.35779	22.26	dic	26	3.00998	2.99145	89.35996	20.68
dic	3	3.01555	2.99710	89.35788	22.20	dic	27	3.00957	2.99104	89.36003	20.61
dic	4	3.01552	2.99706	89.35797	22.13	dic	28	3.00919	2.99065	89.36009	20.55
dic	5	3.01548	2.99702	89.35807	22.06	dic	29	3.00884	2.99030	89.36015	20.48
dic	6	3.01540	2.99693	89.35818	22.00	dic	30	3.00852	2.98998	89.36021	20.42
dic	7	3.01526	2.99678	89.35830	21.93	dic	31	3.00824	2.98970	89.36028	20.35
dic	8	3.01506	2.99658	89.35841	21.87	ene	1	3.00796	2.98941	89.36035	20.28

Constelaciones, 2021

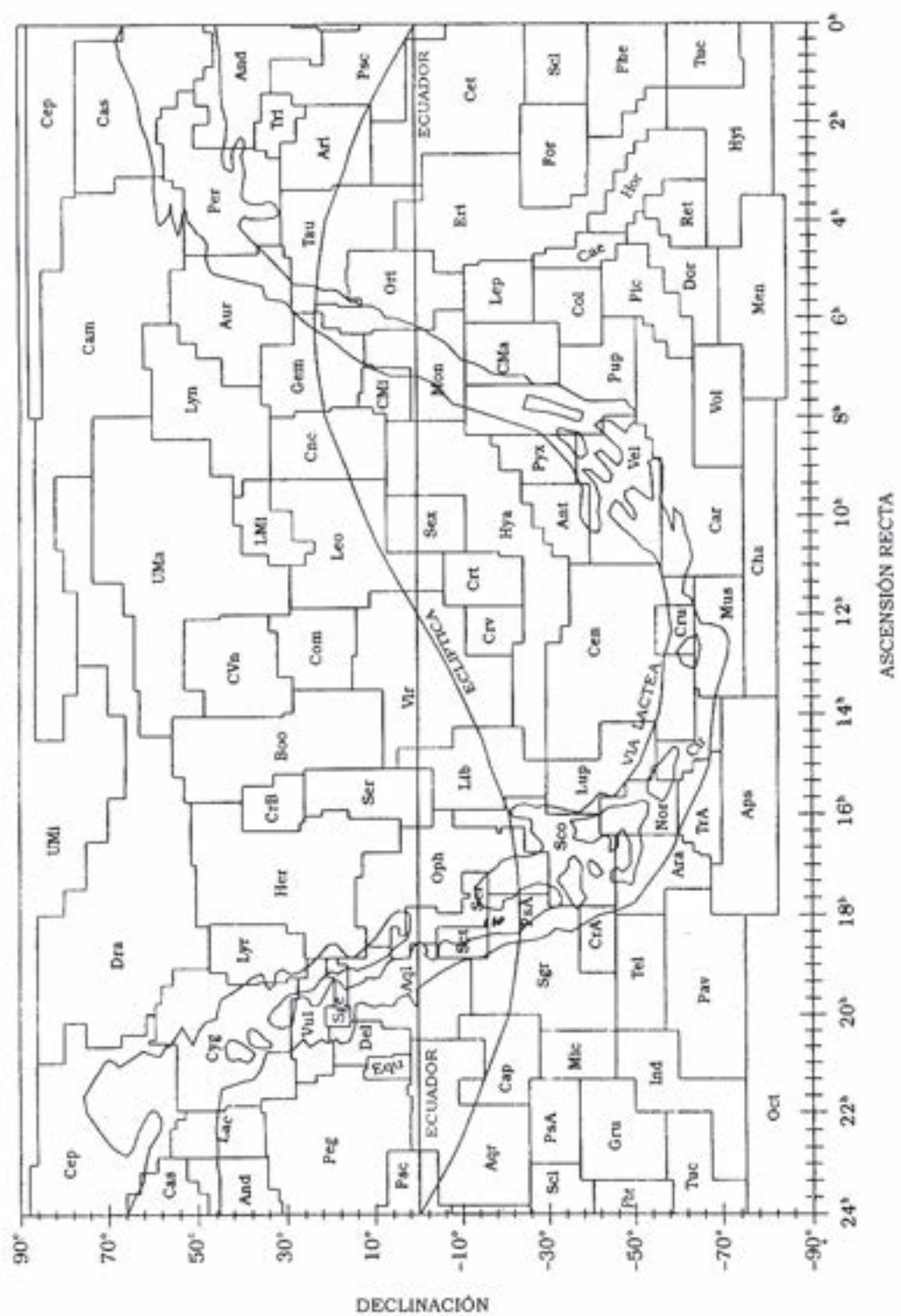
Nombres y significados

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	Lebreles 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, 2021

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	Retícula
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, 2021



Objetos Messier, 2021

M	NGC	α h	α m	α s	δ º	δ ‘	δ “	const	v	tipo	descripción
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, 2021

M	NGC	α h	α m	α s	δ °	δ ‘	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 obscura 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 Tierra
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 Vía 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, 2020

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	
Virgínidas	ene	25	mar	25	abr	15	13	00	-04	30	5	
Líridas	abr	16	abr	22	abr	25	18	06	+34	49	15	C/Thatcher (1861 G1)
Púpidas	abr	15	abr	24	abr	28	07	18	-45	18	26	P/Grigg-Skjellerup
Acuáridas	abr	19	may	06	may	28	22	30	-01	66	60	P/Halley
Sagitáridas	abr	15	may	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	
Píscidas	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)
Pupi 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, 2021

Hora del meridiano 90º W.G.

Mes		Eventos	
d	h	objeto	suceso
Enero			
2	8	Tierra	Perihelio
6	4	Luna	Cuarto Menguante
9	10	Luna	Perigeo
11	5	Mercurio	1.5º al sur de Júpiter
11	14	Venus	1.5º al norte de la Luna
12	23	Luna	Luna Nueva
13	19	Júpiter	3º al norte de la Luna
14	2	Mercurio	2º al norte de la Luna
14	8	Plutón	Conjunción con el Sol
14	8	Urano	Estacionario
17	0	Neptuno	4º al norte de la Luna
20	15	Luna	Cuarto Creciente
21	0	Marte	5º al norte de la Luna
21	0	Urano	3º al norte de la Luna
21	7	Luna	Apogeo
21	18	Marte	1.7º al norte de Urano
23	20	Mercurio	Máxima elongación al E(19º)
23	21	Saturno	Conjunción con el Sol
28	13	Luna	Luna Llena
28	20	Júpiter	Conjunción con el Sol
29	20	Mercurio	Estacionario
Febrero			
3	13	Luna	Perigeo
4	12	Luna	Cuarto Menguante
8	8	Mercurio	Conjunción inferior
10	5	Saturno	3º al norte de la Luna
10	14	Venus	3º al norte de la Luna
11	6	Venus	0.4º al sur de Júpiter
11	13	Luna	Luna Nueva
13	11	Neptuno	4º al norte de la Luna
13	13	Mercurio	4º al norte de Júpiter
17	10	Urano	3º al norte de la Luna
18	4	Luna	Apogeo
18	17	Marte	4º al norte de la Luna
19	13	Luna	Cuarto Creciente
20	7	Mercurio	Estacionario
27	2	Luna	Luna Llena
Marzo			
1	23	Luna	Perigeo
5	1	Mercurio	0.3º al norte de Júpiter
5	20	Luna	Cuarto Menguante
6	5	Mercurio	Máxima elongación al O(27º)
9	17	Saturno	4º al norte de la Luna
10	10	Júpiter	4º al norte de la Luna
10	18	Neptuno	Conjunción con el Sol
10	19	Mercurio	4º al norte de la Luna
13	4	Luna	Luna Nueva
16	20	Urano	3º al norte de la Luna
17	23	Luna	Apogeo
19	12	Marte	1.9º al norte de la Luna
20	4	Sol	Equinoccio
21	9	Luna	Cuarto Creciente
22	18	Marte	7al norte de Aldebarán
26	1	Venus	Conjunción superior
28	13	Luna	Luna Llena
30	0	Luna	Perigeo
Abril			
4	4	Luna	Cuarto Menguante
6	2	Saturno	4º al norte de la Luna
7	1	Júpiter	4º al norte de la Luna
9	5	Neptuno	4º al norte de la Luna
11	21	Luna	Luna Nueva
13	6	Urano	2º al norte de la Luna
14	12	Luna	Apogeo
17	6	Marte	0.1º al norte de la Luna*
18	20	Mercurio	Conjunción superior
20	1	Luna	Cuarto Creciente
26	22	Luna	Luna Llena
27	9	Luna	Perigeo
28	13	Plutón	Estacionario
30	14	Urano	Conjunción con el Sol
Mayo			
3	11	Saturno	4º al norte de la Luna
3	14	Luna	Cuarto Menguante
4	15	Júpiter	5º al norte de la Luna
6	12	Luna	4º al norte de la Luna
10	21	Mercurio	8º al norte de Aldebarán
11	13	Luna	Luna Nueva
11	16	Luna	Apogeo
12	16	Venus	0.7º al norte de la Luna*
13	12	Mercurio	2º al norte de la Luna
15	23	Marte	1.5º al sur de la Luna
17	0	Mercurio	Máxima elongación al E(22º)
17	17	Venus	6º al norte de Aldebarán
19	13	Luna	Cuarto Creciente
23	14	Saturno	Estacionario
25	20	Luna	Perigeo
26	5	Luna	Luna Llena*
29	0	Mercurio	0.4º al sur de la Venus
29	20	Mercurio	Estacionario
30	19	Saturno	4º al norte de la Luna
Junio			
1	3	Júpiter	5º al norte de la Luna
2	1	Luna	Cuarto Menguante
2	8	Marte	5º al sur de Polux
2	19	Neptuno	4º al norte de la Luna
7	0	Urano	2º al norte de la Luna
7	20	Luna	Apogeo
10	5	Luna	Luna Nueva*
10	19	Mercurio	Conjunción inferior
12	1	Venus	1.5º al sur de la Luna
13	14	Marte	3º al sur de la Luna
17	22	Luna	Cuarto Creciente
20	22	Sol	Solsticio
20	23	Júpiter	Estacionario
22	9	Venus	5º al sur de Polux
22	17	Mercurio	Estacionario
23	4	Luna	Perigeo
24	13	Luna	Luna Llena
26	4	Neptuno	Estacionario
27	3	Saturno	4º al norte de la Luna
28	13	Júpiter	4º al norte de la Luna
30	3	Neptuno	4º al norte de la Luna
Julio			
1	15	Luna	Cuarto Menguante
4	9	Urano	2º al norte de la Luna
4	14	Mercurio	Máxima elongación al O(22º)
5	9	Luna	Apogeo
5	16	Tierra	Afelio

Eventos Planetarios, 2021

Hora del meridiano 90º W.G.

Mes		Eventos	
d	h	objeto	suceso
7	23	Mercurio	4º al sur de la Luna
9	19	Luna	Luna Nueva
12	3	Venus	3º al sur de la Luna
12	4	Marte	4º al sur de la Luna
13	1	Venus	0.5º al norte de Marte
17	4	Luna	Cuarto Creciente
17	17	Plutón	Oposición
21	4	Luna	Perigeo
21	13	Venus	1.2º al norte de Régulo
23	21	Luna	Luna Llena
24	11	Saturno	4º al norte de la Luna
25	19	Júpiter	4º al norte de la Luna
27	12	Neptuno	4º al norte de la Luna
29	10	Marte	0.7º al norte de Régulo
31	7	Luna	Cuarto Menguante
31	18	Urano	1.8º al norte de la Luna
Agosto			
1	8	Mercurio	Conjunción superior
2	0	Saturno	Oposición
2	2	Luna	Apogeo
8	8	Luna	Luna Nueva
9	19	Marte	4º al sur de la Luna
11	1	Venus	4º al sur de la Luna
11	12	Mercurio	1.2º al norte de Régulo
15	9	Luna	Cuarto Creciente
17	3	Luna	Perigeo
18	22	Mercurio	0.08º al sur de Marte
19	18	Júpiter	Oposición
19	22	Urano	Estacionario
20	16	Saturno	4º al norte de la Luna
21	23	Júpiter	4º al norte de la Luna
22	6	Luna	Luna Llena
23	20	Neptuno	4º al norte de la Luna
28	3	Urano	1.5º al norte de la Luna
29	20	Luna	Apogeo
30	1	Luna	Cuarto Menguante
Septiembre			
5	0	Venus	1.7º al sur de Espiga
6	19	Luna	Luna Nueva
8	14	Mercurio	7º al sur de la Luna
9	20	Venus	4º al sur de la Luna
11	4	Luna	Perigeo
13	15	Luna	Cuarto Creciente
13	22	Mercurio	Máxima elongación al E(27º)
14	3	Neptuno	Oposición
16	21	Saturno	4º al norte de la Luna
18	1	Júpiter	4º al norte de la Luna
20	3	Neptuno	4º al norte de la Luna
20	18	Luna	Luna Llena
22	13	Sol	Equinoccio
23	6	Mercurio	1.7º al sur de Espiga
24	10	Urano	1.3º al norte de la Luna
26	16	Luna	Apogeo
26	22	Mercurio	Estacionario
28	20	Luna	Cuarto Menguante
30	9	Mercurio	1.7º al sur de Espiga
Octubre			
6	5	Luna	Luna Nueva
6	7	Plutón	Estacionario
7	22	Marte	Conjunción con el Sol
8	11	Luna	Perigeo
9	10	Mercurio	Conjunción inferior
9	13	Venus	3º al sur de la Luna
10	20	Saturno	Estacionario
12	21	Luna	Cuarto Creciente
14	1	Saturno	4º al norte de la Luna
15	4	Júpiter	4º al norte de la Luna
16	8	Venus	1.5º al norte de Antares
17	8	Neptuno	4º al norte de la Luna
17	19	Mercurio	Estacionario
18	5	Júpiter	Estacionario
20	9	Luna	Luna Llena
21	16	Urano	1.3º al norte de la Luna
24	9	Luna	Apogeo
25	0	Mercurio	Máxima elongación al O(18º)
28	14	Luna	Cuarto Menguante
29	15	Venus	Máxima elongación al E(47º)
31	20	Mercurio	4º al sur de Espiga
Noviembre			
3	13	Mercurio	1.2º al sur de la Luna*
4	15	Luna	Luna Nueva
4	18	Urano	Oposición
5	16	Luna	Perigeo
7	23	Venus	1.1º al sur de la Luna*
10	8	Saturno	4º al norte de la Luna
11	7	Luna	Cuarto Creciente
11	11	Júpiter	4º al norte de la Luna
13	13	Neptuno	4º al norte de la Luna
17	20	Urano	1.5º al norte de la Luna
19	3	Luna	Luna Llena*
20	20	Luna	Apogeo
27	6	Luna	Cuarto Menguante
28	23	Mercurio	Conjunción superior
Diciembre			
1	16	Neptuno	Estacionario
2	18	Marte	0.7º al sur de la Luna*
4	1	Venus	Máximo brillo
4	2	Luna	Luna Nueva*
4	4	Luna	Perigeo
6	19	Venus	1.9º al norte de la Luna
7	20	Saturno	4º al norte de la Luna
9	0	Júpiter	4º al norte de la Luna
10	19	Neptuno	4º al norte de la Luna
10	20	Luna	Cuarto Creciente
15	0	Urano	1.5º al norte de la Luna
17	20	Luna	Apogeo
18	5	Venus	Estacionario
18	23	Luna	Luna Llena
21	10	Sol	Solsticio
26	12	Marte	5º al norte de Antares
26	20	Luna	Cuarto Menguante
28	19	Mercurio	4º al sur de la Venus
31	14	Marte	0.9º al norte de la Luna*

* Ocultaciones o eclipses.

Pasos cenitales del sol, 2021

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes	día	φ = δ h	φ = δ m	Paso cenital h	Paso cenital m
Aguascalientes						
Aguascalientes	may	30	12	6.2	12	34.9
Calvillo	may	30	6	37.5	12	36.7
Puertecitos	may	31	2	33.5	12	34.9
Puertecitos	jul	11	17	55.7	12	42.7
Aguascalientes	jul	12	8	31.0	12	43.0
Calvillo	jul	12	13	59.2	12	44.8
Baja California Sur						
San José del Cabo	jun	10	13	22.3	13	6.3
San José del Cabo	jul	1	6	9.8	13	10.7
Campeche						
Lerma	may	12	6	0.2	11	46.9
Carmen Isla	may	13	19	39.6	11	51.9
Escarcega	may	13	15	50.6	11	47.4
Champoton	may	16	20	20.5	11	47.4
Dzibalchen	may	17	8	13.0	11	43.5
Iturbide	may	17	21	23.4	11	43.0
Bolonchenticul	may	19	20	58.2	11	43.7
Campeche	may	19	2	44.4	11	46.8
Becal	may	22	0	58.8	11	45.0
Becal	jul	20	20	45.6	11	54.7
Bolonchenticul	jul	23	1	13.1	11	53.7
Campeche	jul	23	19	33.9	11	56.8
Dzibalchen	jul	25	14	28.8	11	53.6
Iturbide	jul	25	1	12.2	11	53.1
Champoton	jul	26	2	28.7	11	57.6
Carmen Isla	jul	29	3	51.5	12	2.0
Escarcega	jul	29	7	42.7	11	57.6
Lerma	jul	30	17	53.5	11	57.0
Chiapas						
Puerto Madero	abr	29	13	32.0	11	59.2
Suchiate	abr	29	10	9.1	11	54.1
Cacahuaton	abr	30	11	11.3	11	54.0
Las Margaritas	may	2	7	18.4	11	57.5
Jaltenango	may	3	10	2.8	11	56.0
Comitan	may	4	17	57.7	11	53.5
Chiapa de Corzo	may	6	8	42.4	11	56.9
Ocosingo	may	7	2	17.9	11	53.1
Pichucalco	may	9	9	32.9	11	57.1
Catazaja	may	10	4	8.0	11	52.7
Catazaja	ago	1	20	16.7	12	2.6
Pichucalco	ago	2	15	3.3	12	6.9
Ocosingo	ago	4	22	53.6	12	2.7
Chiapa de Corzo	ago	5	16	40.1	12	6.2
Comitan	ago	7	7	49.1	12	2.5
Jaltenango	ago	8	16	5.3	12	4.7
Las Margaritas	ago	9	19	7.5	12	6.1
Cacahuaton	ago	11	15	43.5	12	2.0
Puerto Madero	ago	12	13	37.0	12	6.9
Suchiate	ago	12	17	2.6	12	1.8
Ciudad de México						
Ciudad Universitaria	may	16	18	29.3	12	21.3
Ixtapalapa	may	16	20	52.2	12	20.9
Tlalpam	may	16	13	38.1	12	21.2
Atzcapotzalco	may	17	10	14.2	12	21.3
Chapultepec	may	17	3	41.7	12	21.3
Mexico	may	17	5	8.5	12	21.1
Tacubaya	may	17	1	51.4	12	21.4
Atzcapotzalco	jul	25	12	26.6	12	31.5
Chapultepec	jul	25	19	2.2	12	31.4
México	jul	25	17	34.7	12	31.2
Tacubaya	jul	25	20	53.3	12	31.5
Ciudad Universitaria	jul	26	4	20.8	12	31.4
Ixtapalapa	jul	26	1	56.7	12	31.1
Tlalpam	jul	26	9	14.4	12	31.4
Colima						
Manzanillo	may	15	13	9.6	12	41.8
Colima	may	16	8	43.4	12	39.5
Colima	jul	26	14	11.6	12	49.6
Manzanillo	jul	27	9	56.9	12	52.0
Durango						
Santa María Ocotlán	jun	8	13	0.7	12	45.6
Santa María Ocotlán	jul	3	6	41.6	12	50.8
Guanajuato						
Abasolo	may	22	1	50.7	12	27.0
Celaya	may	22	11	1.3	12	28.1
Salamanca	may	22	17	11.2	12	29.6
Irapuato	may	23	6	2.7	12	30.3
San Miguel de Allende	may	24	13	20.6	12	28.0
Dolores Hidalgo	may	25	22	34.7	12	28.8
Guanajuato	may	25	3	3.9	12	30.1
Leon	may	25	17	36.9	12	31.8
Xichu	may	26	18	37.6	12	25.5
Dolores Hidalgo	jul	16	22	35.8	12	38.0
Xichu	jul	16	2	28.5	12	34.5
Guanajuato	jul	17	18	11.6	12	39.4
Leon	jul	17	3	37.1	12	41.1
San Miguel de Allende	jul	18	8	2.3	12	37.4
Irapuato	jul	19	15	30.5	12	39.9
Abasolo	jul	20	19	53.4	12	36.7
Celaya	jul	20	10	40.6	12	37.8
Salamanca	jul	20	4	29.3	12	39.3
Guerrero						
Acapulco	may	6	20	4.8	12	24.5
San Marcos	may	6	15	59.5	12	22.2
Chilpancingo	may	9	11	40.7	12	22.6
Petatlán	may	9	10	6.4	12	29.8
Zihuatanejo	may	9	19	23.1	12	30.9
Coyuca de Catalán	may	12	13	4.6	12	27.1
Teloloapan	may	12	16	24.7	12	24.0

φ = δ: Indica el momento en que los valores angulares de la latitud de la población y la declinación del Sol son iguales.

Paso cenital: Instante del paso del Sol por el meridiano de la población.

Pasos cenitales del sol, 2021

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes	día	φ = δ h	φ = δ m	Paso cenital h	Paso cenital m
Taxco	may	13	10	39.1	12	22.9
Taxco	jul	29	12	57.2	12	33.1
Coyuca de Catalán	jul	30	10	44.8	12	37.2
Teloloapan	jul	30	7	22.8	12	34.1
Chilpancingo	ago	2	12	54.2	12	32.4
Petatlán	ago	2	14	29.5	12	39.6
Zihuatanejo	ago	2	5	6.7	12	40.7
Acapulco	ago	5	5	9.8	12	33.8
San Marcos	ago	5	9	17.9	12	31.6
Hidalgo						
Apan	may	18	5	53.3	12	18.2
Tezontepec	may	19	6	27.4	12	19.9
Pachuca	may	20	11	20.9	12	19.6
Real del Monte	may	20	12	37.3	12	19.4
Tulancingo	may	20	5	55.7	12	18.2
Huichapan	may	21	16	59.2	12	23.4
Nopala	may	21	2	16.1	12	19.4
Pisa Flores	may	26	3	45.0	12	21.2
Pisa Flores	jul	16	17	22.1	12	30.3
Huichapan	jul	21	4	51.3	12	33.2
Nopala	jul	21	19	38.7	12	29.2
Pachuca	jul	22	10	42.3	12	29.6
Real del Monte	jul	22	9	25.5	12	29.3
Tulancingo	jul	22	16	9.4	12	28.1
Tezontepec	jul	23	15	49.5	12	30.0
Apan	jul	24	16	36.4	12	28.3
Jalisco						
Cihuatlán	may	16	8	6.4	12	42.8
Tecatitlán	may	17	9	16.3	12	37.8
Cocula	may	21	19	36.5	12	40.1
Puerto Vallarta	may	22	22	31.1	12	45.8
Guadalajara	may	23	10	28.6	12	38.5
Lagos de Moreno	may	27	2	38.2	12	33.0
Colotlan	jun	1	4	57.8	12	39.1
Colotlan	jul	10	15	24.7	12	46.6
Lagos de Moreno	jul	15	18	21.0	12	41.9
Guadalajara	jul	19	11	3.8	12	48.0
Puerto Vallarta	jul	19	23	6.4	12	55.5
Cocula	jul	21	2	13.3	12	49.9
Tecatitlán	jul	25	13	25.0	12	47.9
Cihuatlán	jul	26	14	49.0	12	53.0
México						
S. Antonio del Rosario	may	12	19	35.0	12	25.8
Ixtapan de la Sal	may	14	14	54.5	12	23.2
Amecameca	may	15	20	39.4	12	19.6
Ozumba	may	15	11	5.5	12	19.7
Popocatepetl	may	15	9	46.3	12	19.0
Tenancingo	may	15	3	51.2	12	22.9
Chalco	may	16	11	11.6	12	20.2
Tlalmanalco	may	16	5	24.0	12	19.8
Huexotla	may	17	10	17.8	12	20.1
Naucalpan	may	17	9	52.5	12	21.5
Texcoco	may	17	13	58.4	12	20.1
Tlalnepantla	may	17	16	37.6	12	21.4
Atlacomulco	may	18	21	43.2	12	20.1
Otumba	may	18	10	20.4	12	19.7
Tecamac	may	18	11	1.3	12	20.5
Atlacomulco	jul	24	0	39.7	12	30.2
Otumba	jul	24	12	7.4	12	29.7
Tecamac	jul	24	11	26.2	12	30.6
Huexotla	jul	25	12	23.0	12	30.2
Naucalpan	jul	25	12	48.5	12	31.6
Texcoco	jul	25	8	40.6	12	30.2
Tlalnepantla	jul	25	6	0.2	12	31.5
Chalco	jul	26	11	42.1	12	30.3
Tlalmanalco	jul	26	17	32.7	12	29.9
Amecameca	jul	27	2	23.1	12	29.8
Ozumba	jul	27	12	2.1	12	29.9
Popocatepetl	jul	27	13	22.1	12	29.2
Tenancingo	jul	27	19	20.2	12	33.1
Ixtapan de la Sal	jul	28	8	25.1	12	33.4
S. Antonio del Rosario	jul	30	4	10.5	12	35.9
Michoacán						
Tacambaro	may	16	7	38.1	12	30.4
Janitzio	may	17	20	27.3	12	31.2
Patzcuaro	may	17	16	44.8	12	31.0
Uruapan	may	17	3	14.6	12	32.8
Cotija	may	18	22	46.3	12	35.4
Morelia	may	18	10	52.0	12	29.4
Zacapu	may	18	23	42.0	12	31.8
Maravatio	may	19	8	0.7	12	26.4
Cotija	jul	23	23	35.5	12	45.5
Maravatio	jul	23	14	15.5	12	36.5
Zacapu	jul	23	22	38.0	12	41.8
Morelia	jul	24	11	35.6	12	39.5
Janitzio	jul	25	2	8.7	12	41.3
Patzcuaro	jul	25	5	52.9	12	41.2
Uruapan	jul	25	19	29.5	12	43.0
Tacambaro	jul	26	15	17.4	12	40.5
Morelos						
Cuautla	may	14	11	44.1	12	20.3
Cuernavaca	may	14	22	47.9	12	21.5
Oaxtepec	may	14	21	20.3	12	20.4
Huitzilac	may	15	10	24.2	12	21.6
Huitzilac	jul	27	12	43.8	12	31.8
Cuautla	jul	28	11	37.2	12	30.5
Cuernavaca	jul	28	0	27.3	12	31.6
Oaxtepec	jul	28	1	55.7	12	30.6
Nayarit						
Ixtlan del Río	may	25	5	39.7	12	42.6
San Blas	may	28	6	15.8	12	46.6
Tepic	may	28	1	59.6	12	45.0
Mezcaltitan	may	30	16	30.7	12	47.6
Acaponeta	jun	4	6	12.6	12	47.9
Acaponeta	jul	7	13	50.3	12	54.6
Mezcaltitan	jul	12	4	6.8	12	55.7

Pasos cenitales del sol, 2021

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes	día	φ = δ h	φ = δ m	Paso cenital h	Paso cenital m
San Blas	jul	14	14	35.6	12	55.2
Tepic	jul	14	18	51.8	12	53.6
Ixtlan del Río	jul	17	15	35.5	12	51.8
Oaxaca						
Puerto Angel	may	2	16	32.8	12	11.1
Huatulco	may	3	6	39.2	12	10.3
Salinas Cruz	may	4	10	9.7	12	5.8
Juchitan de Zaragoza	may	5	9	5.9	12	5.0
Miahuatlan	may	5	0	42.1	12	11.2
Tehuantepec	may	5	0	36.4	12	5.8
Guichicovi	may	7	8	5.7	12	5.6
Oaxaca de Juárez	may	7	15	37.7	12	11.6
Putla	may	7	12	19.6	12	16.5
Etla	may	8	4	16.5	12	11.9
Guelatao	may	8	14	41.9	12	10.6
Tlaxiaco	may	8	9	48.1	12	15.4
Valle Nacional	may	9	23	9.8	12	9.8
Ocotepec	may	10	10	15.4	12	10.2
Huautla	may	11	17	36.2	12	11.9
Huautla	jul	31	6	25.1	12	22.0
Ocotepec	ago	1	14	5.4	12	20.1
Valle Nacional	ago	2	1	17.6	12	19.6
Etla	ago	3	20	38.4	12	21.6
Guelatao	ago	3	10	6.0	12	20.3
Tlaxiaco	ago	3	15	3.1	12	25.1
Guichicovi	ago	4	17	1.8	12	15.2
Oaxaca de Juárez	ago	4	9	24.7	12	21.2
Putla	ago	4	12	45.1	12	26.0
Juchitan de Zaragoza	ago	6	16	31.7	12	14.2
Miahuatlán	ago	7	1	0.5	12	20.3
Salinas Cruz	ago	7	15	42.7	12	14.8
Tehuantepec	ago	7	1	6.2	12	14.9
Huatulco	ago	8	19	31.4	12	19.1
Puerto Ángel	ago	9	9	46.2	12	19.7
Puebla						
Chila Asunción	may	11	2	39.8	12	16.0
Izucar de Matamoros	may	13	15	19.2	12	18.4
Tepeji de Rodríguez	may	13	13	9.1	12	16.2
Atlixco	may	14	22	10.8	12	18.3
Tecali	may	14	21	13.5	12	16.4
Cualtlancingo	may	15	16	38.2	12	17.6
Cholula	may	15	14	1.3	12	17.7
Huejotzingo	may	15	23	54.2	12	18.2
Popocatepetl	may	15	9	46.3	12	19.0
Puebla de Zaragoza	may	15	11	52.1	12	17.3
Tonantzintla	may	15	10	56.9	12	17.8
S. Martín Texmelucan	may	16	13	8.1	12	18.3
Tlaltenango	may	16	1	6.4	12	17.9
Huauchinango	may	20	17	27.2	12	16.9
Huauchinango	jul	22	4	33.9	12	26.8
Huejotzingo	jul	26	23	5.4	12	28.3
S. Martín Texmelucan	jul	26	9	44.7	12	28.4
Tlaltenango	jul	26	21	52.5	12	28.1
Cualtlancingo	jul	27	6	26.5	12	27.8
Cholula	jul	27	9	4.7	12	27.9
Popocatepetl	jul	27	13	22.1	12	29.2
Puebla de Zaragoza	jul	27	11	15.1	12	27.5
Tonantzintla	jul	27	12	10.8	12	28.0
Atlixco	jul	28	1	4.7	12	28.4
Tecali	jul	28	2	2.5	12	26.5
Izucar de Matamoros	jul	29	8	14.4	12	28.5
Tepeji de Rodríguez	jul	29	10	25.8	12	26.4
Chila Asunción	jul	31	21	30.8	12	26.0
Querétaro						
San Juan del Río	may	21	18	46.1	12	24.8
Queretaro	may	22	19	44.9	12	26.4
Cadereyta	may	23	8	39.2	12	24.2
Jalpan	may	26	7	4.4	12	23.1
Arroyo Seco	may	28	7	24.9	12	24.2
Arroyo Seco	jul	14	13	26.5	12	32.8
Jalpan	jul	16	14	2.5	12	32.2
Cadereyta	jul	19	12	53.5	12	33.8
Querétaro	jul	20	1	54.9	12	36.1
San Juan del Río	jul	21	3	4.0	12	34.6
Quintana Roo						
Xkalak	may	12	2	35.3	11	35.9
Chetumal	may	13	4	41.5	11	37.7
Santa Cruz Chico	may	15	0	45.1	11	37.2
Carrillo Puerto	may	17	21	8.9	11	36.8
Cozumel	may	22	10	53.0	11	32.7
Kantunil Kin	may	25	15	1.1	11	35.1
Cabo Catoche	may	28	16	25.4	11	33.9
Cabo Catoche	jul	14	4	26.1	11	42.5
Kantunil Kin	jul	17	6	13.2	11	44.3
Cozumel	jul	20	10	48.9	11	42.4
Carrillo Puerto	jul	25	1	26.8	11	46.9
Santa Cruz Chico	jul	27	22	28.0	11	47.4
Chetumal	jul	29	18	58.3	11	47.8
Xkalak	jul	30	21	20.4	11	46.0
San Luis Potosí						
Tamanzuchale	may	26	13	52.8	12	20.4
Rio Verde	may	30	20	52.5	12	25.7
San Luis Potosí	jun	1	12	2.6	12	29.9
Arista	jun	5	17	1.9	12	30.1
Arista	jul	6	2	58.7	12	36.3
San Luis Potosi	jul	10	8	21.0	12	37.5
Río Verde	jul	11	23	44.7	12	33.7
Tamanzuchale	jul	16	7	13.7	12	29.4
Sinaloa						
Rosario	jun	9	12	23.7	12	50.8
Mazatlán	jun	12	13	57.6	12	53.7
Mazatlán	jun	29	5	25.1	12	57.3
Rosario	jul	2	7	12.8	12	55.6
Tabasco						
Tapijulapa	may	9	3	37.0	11	55.7

Pasos cenitales del sol, 2021

Para algunas poblaciones de la República Mexicana

Hora del meridiano 90° W.G.

Población	mes	día	φ = δ h	φ = δ m	Paso cenital h	Paso cenital m
Astapa	may	10	8	25.3	11	56.5
Tierra Colorada	may	11	0	58.6	11	55.1
Villahermosa	may	11	3	57.3	11	56.2
Comalcalco	may	12	6	24.4	11	57.4
Ignacio Allende	may	12	18	7.9	11	55.9
Comalcalco	jul	30	17	29.0	12	7.5
Ignacio Allende	jul	30	5	38.5	12	6.0
Tierra Colorada	jul	31	23	13.0	12	5.1
Villahermosa	jul	31	20	12.5	12	6.2
Astapa	ago	1	15	56.6	12	6.5
Tapijulapa	ago	2	21	3.1	12	5.6
Tamaulipas						
Ocampo	may	24	3	44.7	12	22.4
Jaumave	jun	17	23	44.8	12	26.6
Jaumave	jun	23	18	23.0	12	27.9
Ocampo	jul	18	17	39.5	12	31.8
Tlaxcala						
Cuauhutotohuatlan	may	15	19	49.4	12	17.2
Huamantla	may	16	16	29.3	12	16.3
Tlaxcala	may	16	16	48.7	12	17.5
Huamantla	jul	26	6	21.8	12	26.4
Tlaxcala	jul	26	6	2.3	12	27.7
Cuauhutotohuatlan	jul	27	3	13.5	12	27.4
Veracruz						
Pl. Vicente	may	10	13	40.0	12	7.8
Coatzacoalcos	may	11	19	15.8	12	2.2
Minatitlan	may	11	3	13.0	12	2.7
Tehuipango	may	13	7	18.0	12	12.8
Tierra Blanca	may	13	0	24.4	12	10.0
Tlacotalpan	may	13	16	15.3	12	7.2
Alvarado	may	14	8	11.9	12	7.6
Cordoba	may	14	20	33.1	12	12.2
Orizaba	may	14	16	10.3	12	12.9
Tamarindo	may	14	6	46.0	12	10.0
Huatusco	may	15	23	5.9	12	12.3
Pico de Orizaba	may	15	11	0.4	12	13.6
Rizo	may	15	13	13.1	12	8.2
Veracruz	may	16	4	24.0	12	9.1
Actopan	may	17	12	44.3	12	11.0
Jalapa	may	17	15	16.2	12	12.2
Martines de la Torre	may	20	3	58.2	12	12.9
Coatzintla	may	22	6	14.6	12	14.6
Papantla	may	22	1	38.3	12	14.1
Tihuatlan	may	23	12	24.3	12	15.1
Chicontepec	may	24	21	25.6	12	17.7
Tuxpan	may	24	18	43.9	12	14.6
Ixcatepec	may	26	10	2.5	12	17.2
Tantoyuca	may	27	2	6.2	12	18.2
Tantoyuca	jul	15	18	53.0	12	27.1
Ixcatepec	jul	16	11	4.2	12	26.3
Chicontepec	jul	17	23	55.9	12	27.0
Tuxpan	jul	18	2	38.1	12	24.0
Tihuatlan	jul	19	9	7.6	12	24.7
Coatzintla	jul	20	15	28.5	12	24.3
Papantla	jul	20	20	5.9	12	23.8
Martines de la Torre	jul	22	18	7.6	12	22.8
Actopan	jul	25	9	55.4	12	21.2
Jalapa	jul	25	7	22.3	12	22.4
Huatusco	jul	26	23	55.2	12	22.5
Veracruz	jul	26	18	33.2	12	19.3
Pico de Orizaba	jul	27	12	7.3	12	23.7
Rizo	jul	27	9	53.4	12	18.4
Alvarado	jul	28	15	11.4	12	17.7
Córdoba	jul	28	2	43.3	12	22.4
Orizaba	jul	28	7	8.6	12	23.1
Tamarindo	jul	28	16	38.1	12	20.2
Tehuipango	jul	29	16	20.2	12	22.9
Tierra Blanca	jul	29	23	17.9	12	20.1
Tlacotalpan	jul	29	7	17.8	12	17.3
Coatzacoalcos	jul	31	4	44.5	12	12.2
Minatitlan	jul	31	20	57.2	12	12.7
Pl. Vicente	ago	1	10	38.6	12	17.7
Yucatán						
Becanchen	may	19	6	4.5	11	41.5
Maxcanu	may	22	18	53.0	11	44.8
Celestum	may	24	6	6.5	11	46.6
Mérida	may	24	22	29.8	11	43.6
Tzimin	may	25	19	6.2	11	37.7
Progreso	may	26	18	37.6	11	43.8
Chavihau	may	27	2	57.9	11	41.8
Telchac	may	27	0	47.3	11	42.4
Chavihau	jul	15	18	1.3	11	50.6
Telchac	jul	15	20	11.9	11	51.2
Progreso	jul	16	2	28.5	11	52.9
Mérida	jul	17	22	49.4	11	52.9
Tzimin	jul	17	2	7.6	11	47.0
Celestum	jul	18	15	17.4	11	56.0
Maxcanu	jul	20	2	47.0	11	54.6
Becanchen	jul	23	16	12.5	11	51.5
Zacatecas						
Juchipila	may	27	11	5.7	12	37.8
Nochistlan	may	27	3	44.7	12	36.7
Villanueva	jun	3	2	26.9	12	37.9
Jerez	jun	5	17	21.0	12	38.7
Obs. Astronómico	jun	6	13	36.7	12	37.0
Calera	jun	8	23	51.5	12	38.0
Panuco	jun	8	3	39.5	12	37.4
Fresnillo	jun	12	4	43.4	12	39.5
Fresnillo	jun	29	14	28.9	12	43.2
Calera	jul	2	19	36.9	12	43.0
Panuco	jul	3	15	57.1	12	42.6
Obs. Astronómico	jul	5	6	17.0	12	42.9
Jerez	jul	6	2	39.8	12	44.9
Villanueva	jul	8	17	41.4	12	44.8
Juchipila	jul	15	9	53.2	12	46.7
Nochistlán	jul	15	17	14.4	12	45.6

Fases de la Luna, 2021

Hora del meridiano 90° W.G.

Luna Nueva

mes	*d*	*h*	*m*
	...	...	...
ene	12	23	00
feb	11	13	06
mar	13	4	21
abr	11	20	31
may	11	13	0
jun	10	4	53
jul	9	19	17
ago	8	7	50
sep	6	18	52
oct	6	5	5
nov	4	15	15
dic	4	1	43

Luna Llena

mes	*d*	*h*	*m*
	...	...	...
ene	28	13	16
feb	27	2	17
mar	28	12	48
abr	26	21	32
may	26	5	14
jun	24	12	40
jul	23	20	37
ago	22	6	2
sep	20	17	55
oct	20	8	57
nov	19	2	57
dic	18	22	35

Cuarto Creciente

mes	*d*	*h*	*m*
	...	...	...
ene	20	15	02
feb	19	12	47
mar	21	8	40
abr	20	0	59
may	19	13	13
jun	17	21	54
jul	17	4	11
ago	15	9	20
sep	13	14	39
oct	12	21	25
nov	11	6	46
dic	10	19	36

Cuarto Menguante

mes	*d*	*h*	*m*
ene	6	3	37
feb	4	11	37
mar	5	19	30
abr	4	4	2
may	3	13	50
jun	2	1	24
jul	1	15	11
jul	31	7	16
ago	30	1	13
sep	28	19	57
oct	28	14	5
nov	27	6	28
dic	26	20	24

Crepúsculos, salidas y puestas de Sol, 2021

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
Jun 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, 2021

Hora local

LATITUD 25°

	AM h m	CM h m	SS h m	PS h m	CV h m	AV h m		AM h m	CM h m	SS h m	PS h m	CV h m	AV 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 h m	CM h m	SS h m	PS h m	CV h m	AV h m		AM h m	CM h m	SS h m	PS h m	CV h m	AV 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	18 54	7	4 09	5 04	5 27	18 26	18 49	19 45
13	5 20	6 14	6 38	17 40	18 04	18 58	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, 2021

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 2021

Hora del meridiano 90º W.G.

I.- Eclipse total de luna el 26 de mayo de 2021. Se observará en la República Mexicana.
El eclipse se observará en el oeste del continente americano, el Océano Pacífico, Oceanía y el Este de Asia.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicia eclipse penumbral	may	26	2	46	12
Inicia el eclipse parcial umbral	may	26	3	44	36
Inicia eclipse total umbral	may	26	5	9	30
Máximo del eclipse total umbral	may	26	5	18	42
Finaliza eclipse total umbral	may	26	5	27	54
Finaliza eclipse parcial umbral	may	26	6	52	48
Finaliza eclipse penumbral	may	26	7	51	12

II.- Eclipse Anular de Sol el 10 de junio de 2021. No se observará en la República Mexicana.
Se observará en la región norte y noreste de América del Norte, Groenlandia, Europa, Rusia y norte y occidente de China.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicia el eclipse	jun	10	2	12	18
Inicia el eclipse anular	jun	10	3	50	12
Inicia el eclipse central	jun	10	3	55	0
Máximo del eclipse	jun	10	5	1	6
Termina el eclipse central	jun	10	5	23	18
Termina el eclipse anular	jun	10	5	28	42
Termina el eclipse	jun	10	7	11	18

III.- Eclipse parcial de Luna el 19 de noviembre de 2021. Se observará en la República Mexicana.
Se observará en el noroeste de Europa, el continente Americano, Oceanía, Australia y gran parte de Asia.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicia eclipse parcial penumbral	nov	19	0	0	24
Inicia eclipse parcial umbral	nov	19	1	18	24
Máximo del eclipse parcial	nov	19	3	2	54
Termina eclipse parcial umbral	nov	19	4	47	24
Termina eclipse penumbral	nov	19	6	5	30

Eclipses 2021

Hora del meridiano 90º W.G.

IV.- Eclipse total de Sol del 3 al 4 de diciembre de 2021. No se observará en la República Mexicana.

Se observará en la Islas Malvinas, sur de África, la Antártida y sureste de Australia.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicia el eclipse	dic	3	23	29	18
Inicia eclipse parcial	dic	4	1	0	6
Máximo del eclipse	dic	4	1	56	12
Termina eclipse central	dic	4	2	3	48
Termina eclipse parcial	dic	4	2	6	30
Termina el eclipse	dic	4	3	37	30

Poblaciones de la República Méxicana, 2021

Coordenadas geográficas (Anuario del Observatorio 1984)

ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Aguascalientes										
Aguascalientes	21	52	43	102	18	4	1888	5	33	-7
Asientos	22	14	18	102	5	29	2164	5	28	-7
Calvillo	21	50	45	102	44	14	1702	5	43	-7
Jesús María	21	57	45	102	20	48	1907	5	34	-7
Puertecito	21	57	52	102	15	15	2052	5	32	-7
Rincón de Romos	22	13	49	102	19	22	1957	5	34	-7
Baja California										
Bailador Isla	31	56	56	116	5	12	0	10	54	-6
Cedros Isla	28	3	53	115	11	35	0	10	0	-6
Ensenada	31	51	10	116	38	9	2	11	0	-6
Granito Isla	29	33	0	113	32	0	0	9	51	-6
Guadalupe Isla	29	10	45	118	19	30	0	10	51	-5
Mejia Isla	29	33	8	113	35	18	0	9	52	-6
Mexicali	32	40	0	115	27	0	0	10	52	-6
Miramar Isla	30	2	30	114	31	30	0	10	11	-6
Salsipuedes Isla	28	44	0	112	50	30	0	9	32	-6
San Benito Isla	28	18	8	115	36	12	0	10	8	-6
San Felipe	31	1	36	114	49	46	0	10	25	-6
San Jerónimo Isla	29	47	20	115	48	14	0	10	26	-6
San Pedro Mártir	31	2	39	115	27	49	2800	10	35	-6
San Quintin	30	22	16	115	59	10	0	10	35	-6
Baja California Sur										
Asunción Isla	27	6	21	114	18	15	0	9	38	-6
Catalina Isla	25	35	35	110	47	48	0	8	33	-7
Cerralvo Isla	24	22	0	109	55	29	0	8	10	-7
Coronados Isla	26	6	12	111	15	38	0	8	44	-7
Danaznte Isla	25	48	0	111	12	0	0	8	41	-7
El Triunfo	23	48	13	110	8	41	432	8	10	-7
Espíritu Santo Isla	24	34	43	110	21	30	0	8	18	-7
José del Cabo	23	4	8	109	40	36	7	7	58	-7
La Paz	24	9	41	110	20	44	10	8	15	-7
Miraflores	23	22	25	109	48	33	183	8	2	-7
Muleje	26	53	33	111	46	41	35	8	59	-6
Roca Alijos Isla	24	58	6	113	44	47	0	9	11	-6
San Bartolo	23	44	16	109	52	15	353	8	5	-7
San Marcos Isla	27	14	35	112	5	23	0	9	7	-6
Santa Inés Isla	27	2	34	111	53	28	0	9	2	-6
Santiago	23	28	24	109	43	21	98	8	1	-7
Tortugas Isla	27	26	59	111	52	59	0	9	5	-6
Campeche										
Becal	20	26	34	90	1	36	12	0	-15	-7
Bolonchenticul	20	0	21	89	44	53	14	0	-22	-7
Calkini	20	22	21	90	3	3	52	0	-14	-7
Campeche	19	50	47	90	32	14	5	0	6	-7
Carmen	18	38	22	91	50	16	3	0	56	-7
Carmen Isla	18	38	44	91	50	16	0	0	56	-7
Champoton	19	21	4	90	43	0	27	0	15	-7
Dzibalchen	19	27	41	89	43	55	100	0	-18	-7

Poblaciones de la República Méxicana, 2021

Coordenadas geográficas (Anuario del Observatorio 1984)

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

Poblaciones de la República Méxicana, 2021

Coordenadas geográficas (Anuario del Observatorio 1984)

ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Ocosingo	16	54	38	92	5	45	908	1	16	-7
Ocozocoautla	16	45	55	93	22	37	864	1	55	-7
Pichucalco	17	31	46	93	7	24	100	1	43	-7
Pueblo Nuevo	15	12	37	92	35	7	28	1	42	-7
Puerto Madero	14	42	59	93	25	37	2	2	10	-8
San Bartolome	16	19	29	92	33	36	804	1	34	-7
Suchiate	14	40	23	92	9	12	22	1	33	-8
Tonalá	16	5	14	93	45	21	55	2	11	-7
Tuxtla Gutiérrez	16	45	20	93	6	46	528	1	48	-7
Villa Flores	16	14	8	93	16	3	610	1	55	-7
Yajalon	17	10	57	92	20	24	849	1	21	-7
Chihuahua										
Ahumada	30	37	18	106	31	12	1181	7	43	-7
Camargo	27	41	49	105	10	9	1653	6	55	-7
Cienaga de Ortiz	28	8	15	106	12	11	1300	7	21	-7
Ciudad Guerrero	28	32	57	107	29	27	2000	7	52	-7
Ciudad Jiménez	27	7	52	104	55	29	1381	6	47	-7
Ciudad Juárez	31	44	19	106	29	15	1144	7	49	-7
Coyame	29	27	42	105	5	44	1062	7	2	-7
Cuchillo Parado	29	26	34	104	52	58	900	6	57	-7
Cusihuiriachi	28	14	25	106	50	13	1985	7	36	-7
Chihuahua	28	38	12	106	4	42	1430	7	21	-7
Chinipas	27	23	34	108	32	22	1640	8	5	-7
Galeana	30	6	52	107	37	51	1431	8	5	-7
Guadalupe	31	23	27	106	6	13	1113	7	38	-7
Guadalupe y Calvo	26	6	6	106	58	2	1100	7	26	-7
Guerrero	28	32	57	107	29	18	2000	7	52	-7
Meoqui	28	16	36	105	29	16	1155	7	6	-7
Namiquipa	29	15	5	107	24	34	1828	7	54	-7
Ocampo	28	10	59	108	22	27	1732	8	7	-7
Ojinaga	29	33	53	104	25	23	841	6	46	-7
Parral Hidalgo del	26	56	4	105	39	58	1661	7	3	-7
Placer de Guadalupe	29	9	41	105	22	57	900	7	8	-7
San Buenaventura	29	50	47	107	29	10	1574	8	0	-7
San Ignacio	27	10	21	106	19	28	970	7	19	-7
Santa Bárbara	26	48	13	105	49	1	1969	7	6	-7
Santa Isabel	28	20	34	106	22	1	1630	7	26	-7
Satevo	27	57	17	106	6	32	1368	7	18	-7
Temosachic	28	57	12	107	49	50	1900	8	1	-7
Valle de Zaragoza	27	27	40	105	48	35	900	7	9	-7
Valle del Rosario	27	19	5	106	17	41	1480	7	19	-7
Ciudad de México										
Alamo	19	23	55	99	8	30	2246	4	20	-7
Atzcapotzalco	19	28	48	99	11	7	2277	4	21	-7
Ciudad Universitaria	19	20	1	99	10	54	2280	4	21	-7
Ciudad Universitaria	19	19	50	99	11	3	2280	4	21	-7
Coyoacán	19	20	54	99	9	45	2278	4	20	-7
Cuajilmalpa	19	21	33	99	18	1	2783	4	24	-7
Chapultepec	19	25	11	99	10	52	2310	4	21	-7
Churubusco	19	21	17	99	8	56	2260	4	20	-7
Guadalupe Hidalgo	19	29	9	99	6	56	2200	4	19	-7

Poblaciones de la República Méxicana, 2021

Coordenadas geográficas (Anuario del Observatorio 1984)

ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Ixtacalco	19	23	22	99	7	16	2261	4	19	-7
Ixtapalapa	19	21	22	99	5	30	2280	4	19	-7
La Piedad	19	24	3	99	9	20	2253	4	20	-7
México	19	25	59	99	7	58	2233	4	20	-7
Mixcoac	19	22	37	99	10	55	2200	4	21	-7
Mixquic	19	13	28	98	57	52	2260	4	16	-7
Nativitas	19	23	12	99	8	48	2246	4	20	-7
San Jerónimo	19	19	33	99	13	20	2394	4	22	-7
San Simón	19	22	36	99	8	39	2100	4	20	-7
Tacubaya	19	24	10	99	11	40	2298	4	21	-7
Tlahuac	19	16	6	99	0	16	2264	4	17	-7
Tlalpam	19	17	16	99	9	57	2294	4	21	-7
Villa Obregón	19	20	41	99	11	21	2340	4	21	-7
Xochimilco	19	15	44	99	6	7	2274	4	19	-7
Durango										
Ciudad Lerdo	25	32	14	103	31	28	1135	6	9	-7
Cuencame	24	52	18	103	38	6	1889	6	9	-7
Durango	24	1	31	104	40	11	1889	6	29	-7
Gómez Palacio	25	34	18	103	30	17	1195	6	8	-7
Guanacevi	25	55	59	105	57	31	2230	7	5	-7
Inde	25	54	45	105	10	16	2049	6	47	-7
Llano Grande	23	52	2	105	12	7	2406	6	40	-7
Mezquital	23	28	57	104	22	18	1468	6	21	-7
Nazas	25	13	40	104	6	53	1264	6	21	-7
Nombre de Dios	23	51	4	104	15	25	1855	6	20	-7
Pueblo Nuevo	23	22	35	105	22	18	1982	6	42	-7
San Juan de Guadalupe	24	37	0	102	45	8	1520	5	48	-7
San Juan del Río	24	46	45	104	23	22	1737	6	26	-7
Santa María del Oro	25	56	53	105	19	56	1871	6	51	-7
Santa María Ocotlán	22	54	44	104	36	10	365	6	25	-7
Santiago Papasquiaro	25	2	47	105	25	30	1716	6	49	-7
Tamazula	24	58	11	106	58	13	240	7	21	-7
Tayoltita	24	6	27	105	55	30	500	6	56	-7
Tepehuanes	25	21	19	105	47	9	1967	6	58	-7
Tizonazo	25	58	4	105	15	33	1981	6	50	-7
Topia	25	12	19	106	34	34	1851	7	14	-7
Tlahualilo	26	6	31	103	26	21	1132	6	8	-7
Guerrero										
Acapulco	16	50	21	99	55	1	82	4	44	-7
Acayahualco	18	13	30	99	28	52	790	4	31	-7
Coahuayutla	18	18	52	101	48	37	358	5	22	-7
Coatepec	18	20	22	99	42	56	1260	4	36	-7
Coyuca de Catalán	18	20	2	100	39	0	210	4	57	-7
Chaucingo	18	18	7	99	6	53	810	4	22	-7
Chilpancingo	17	33	10	99	30	3	1360	4	33	-7
Huamuxtitlán	17	48	37	99	34	2	1125	4	34	-7
Iguana	18	21	1	99	32	24	731	4	32	-7
La Unión	17	58	52	101	48	49	174	5	22	-7
Mayanalan	18	10	29	99	26	1	0	4	30	-7
Mezcala	17	56	13	99	36	6	420	4	34	-7
Pericotepec	17	57	40	100	13	0	770	4	48	-7

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ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Petatlan	17	32	8	101	17	0	0	5	12	-7
Placeres de Oro	18	14	31	100	53	57	0	5	3	-7
San Jerónimo	17	5	55	100	28	26	0	4	55	-7
San Luis de la Loma	17	15	42	100	53	48	0	5	4	-7
San Marcos	16	47	31	99	20	41	210	4	31	-7
Santa Fetepetlapa	18	33	5	99	25	19	1090	4	28	-7
Taxco	18	33	16	99	36	20	1755	4	33	-7
Teloloapan	18	22	6	99	52	31	1620	4	39	-7
Tonalapa del Río	18	20	38	99	41	6	750	4	35	-7
Tepantitlancoa	18	0	26	100	17	6	820	4	49	-7
Tepecoacuilco	18	17	10	99	27	55	1012	4	30	-7
Tetela del Río	17	59	7	100	4	50	350	4	45	-7
Tlacozotitlán	17	53	29	99	7	51	560	4	23	-7
Tlapehuala	18	14	21	100	31	18	235	4	54	-7
Zihuatanejo	17	38	14	101	33	48	0	5	18	-7
Zirandaro	18	29	4	100	58	0	193	5	4	-7
Guanajuato										
Abasolo	20	26	59	100	31	48	1760	4	52	-7
Acambaro	20	2	1	100	43	24	1947	4	57	-7
Apaseo	20	32	37	100	41	7	1767	4	55	-7
Apaseo El Alto	20	27	25	100	37	13	1853	4	54	-7
Atargea	21	16	5	99	43	5	1258	4	31	-7
C. González	21	28	44	101	12	52	2140	5	8	-7
Celaya	20	31	24	100	48	55	1808	4	58	-7
Cerano	20	6	41	101	23	26	1500	5	12	-7
Comonfort	20	43	15	100	45	51	1795	4	57	-7
Coronea	20	11	42	100	21	59	1998	4	48	-7
Cortazar	20	28	59	100	52	58	1800	5	0	-7
Cubilete E.	21	0	25	101	22	30	2480	5	11	-7
Cueramaro	20	37	36	101	40	23	1785	5	18	-7
Dolores Hidalgo	21	9	32	100	56	0	1987	5	1	-7
Guanajuato	21	1	1	101	15	20	2050	5	9	-7
Huanimaro	20	22	1	101	29	45	2459	5	14	-7
Ibarra	21	28	53	101	32	23	2110	5	15	-7
Irapuato	20	40	28	101	20	51	1795	5	11	-7
Iturbide	21	0	3	100	23	4	1100	4	48	-7
Jaral del Progreso	20	22	11	101	13	45	1743	5	8	-7
Jerecuaro	20	9	3	100	30	43	1100	4	52	-7
León	21	7	22	101	41	0	1885	5	18	-7
Manuel Doblado	20	43	49	101	57	14	1795	5	24	-7
Mora	21	8	47	100	19	0	2128	4	46	-7
Moroleón	20	7	54	101	11	36	1772	5	7	-7
Pénjamo	20	25	44	101	43	22	1700	5	19	-7
Pueblo Nuevo	20	31	35	101	22	18	1714	5	11	-7
Purisisma de Bustos	21	1	48	101	52	36	1780	5	23	-7
Romita	20	52	14	101	31	7	1792	5	15	-7
Salamanca	20	34	22	101	11	39	1721	5	7	-7
Salvatierra	20	12	56	100	53	46	1749	5	1	-7
San Diego de la Unión	21	27	56	100	52	25	2080	5	0	-7
San Francisco del Rincón	21	1	2	101	51	36	1721	5	22	-7
San Juan de Los Llanos	21	16	47	101	19	4	1000	5	10	-7

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ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
San José	20	56	13	100	58	32	2002	5	2	-7
San Luis de La Paz	21	17	57	100	30	52	2020	4	51	-7
San Miguel de Allende	20	54	52	100	44	47	1870	4	57	-7
Santa Catarina	21	8	27	100	14	10	1845	4	44	-7
Santa Cruz Galeana	20	38	35	100	59	50	1000	5	3	-7
Santiago Maravatio	20	10	28	100	59	38	1790	5	3	-7
Silao	20	56	24	101	25	59	1780	5	13	-7
Tarandacuao	20	1	14	100	32	3	1920	4	52	-7
Tarimoro	20	17	39	100	45	20	1790	4	57	-7
Tierra Blanca	21	6	9	100	4	44	1760	4	40	-7
Uriangato	20	8	46	100	8	10	1800	4	43	-7
Valle de Santiago	20	23	31	101	11	21	1760	5	7	-7
Victoria	21	12	23	100	13	9	1760	4	44	-7
Villa Ocampo	21	38	52	101	28	50	2420	5	14	-7
Villagran	20	29	40	100	59	52	1790	5	3	-7
Xichu	21	18	0	100	3	37	1334	4	40	-7
Yuriria	20	12	51	100	8	19	1882	4	43	-7
Hidalgo										
Acayuca	20	1	48	98	50	30	2570	4	11	-7
Actopan	20	16	12	96	56	42	2069	3	21	-7
Ahuehueco	21	1	43	98	54	24	2500	4	11	-7
Altajayucan	20	24	40	99	20	59	1898	4	23	-7
Apan	19	39	35	98	24	10	2493	4	1	-7
Atotonilco Grande	20	17	6	98	40	13	2138	4	6	-7
Bonanza	20	43	12	99	14	36	1900	4	20	-7
Chapantongo	20	17	16	99	24	50	2145	4	25	-7
Chapulhuacan	21	9	29	98	54	22	1500	4	11	-7
Chicautla	20	19	54	99	13	49	1884	4	20	-7
Epazoyuca	20	1	33	98	37	26	2461	4	6	-7
Huasca	20	12	12	98	34	42	1900	4	4	-7
Huautla	21	2	3	98	16	54	1900	3	55	-7
Huejutla	21	8	43	98	24	58	2490	3	58	-7
Huichapan	20	22	37	99	38	58	2102	4	31	-7
Ixmiquilpan	20	29	4	99	13	5	1745	4	20	-7
Metxtitlán	20	35	45	98	45	30	1353	4	8	-7
Mexquititlán	20	32	0	98	38	27	1421	4	5	-7
Nopala	20	15	19	98	38	52	2437	4	6	-7
Orizatlán	21	10	35	98	36	40	1900	4	3	-7
Pachuca	20	7	44	98	43	54	2426	4	8	-7
Pisa Flores	21	11	44	99	0	15	1900	4	13	-7
Real del Monte	20	8	23	98	40	21	2679	4	7	-7
San Agustín Tlaxiaca	20	7	5	98	53	6	2372	4	12	-7
San Gabriel	19	52	44	98	36	58	1900	4	6	-7
San Juanico	19	54	14	98	40	17	1900	4	7	-7
San Pablo	20	38	38	98	55	21	1900	4	12	-7
Santa Monica	19	58	55	98	37	16	1900	4	6	-7
Singuilucan	20	1	52	98	19	59	2714	3	58	-7
Tasquillo	20	33	7	99	18	21	1720	4	22	-7
Tepetitlán	20	11	14	99	22	59	2000	4	24	-7
Tezontepec	19	52	44	98	49	10	2326	4	11	-7
Tianguistengo	20	44	0	98	37	34	1687	4	4	-7

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Tulancingo	20	4	58	98	22	8	2222	3	59	-7
Tlaxcoapan	20	5	40	99	13	29	2100	4	21	-7
Yolotepec	20	23	36	99	4	31	1900	4	16	-7
Zempoala	19	54	54	98	40	2	2532	4	7	-7
Zimapan	20	44	20	99	22	58	1813	4	24	-7
Jalisco										
Ameca	20	32	47	104	2	46	1235	6	8	-7
Atoyac	20	0	40	103	31	12	1350	5	57	-7
Autlán de Navarro	19	46	13	104	22	4	688	6	13	-7
Bolaños	21	46	31	103	46	58	910	6	5	-7
Cabo Corriente	20	24	42	105	40	50	81	6	39	-7
Carranza	19	44	46	103	46	18	0	6	2	-7
Cihuatlán	19	14	8	104	33	36	0	6	16	-7
Ciudad Guzmán	19	42	13	103	27	53	1507	5	56	-7
Cocula	20	23	55	103	49	27	1432	6	4	-7
Colotlán	22	6	51	103	16	8	0	5	55	-7
Encarnación de Díaz	21	31	37	102	14	6	1814	5	31	-7
Guachinango	20	34	38	104	22	59	1285	6	15	-7
Guadalajara	20	42	32	103	23	9	1567	5	55	-7
Guerrero	21	59	4	103	35	52	1785	6	1	-7
Hostotipaquillo	21	3	46	104	4	21	1079	6	10	-7
Huejuquilla	22	37	42	103	53	58	1480	6	9	-7
La Barca	20	16	37	102	32	53	1517	5	37	-7
La Rosa	19	45	7	103	10	2	0	5	50	-7
Lagos de Moreno	21	21	20	101	55	24	1942	5	24	-7
Ojuelos	21	52	5	101	35	20	2254	5	16	-7
Puerto Vallarta	20	36	56	105	14	42	5	6	31	-7
San Miguel del Alto	21	1	52	102	24	12	2385	5	34	-7
San Pedro Analco	21	14	54	103	57	57	0	6	8	-7
Talpa de Allende	20	23	41	104	49	52	1039	6	23	-7
Tapatitlán	20	48	48	102	45	41	1764	5	42	-7
Tecatitlán	19	28	16	103	18	30	1036	5	52	-7
Tecomates	19	33	8	104	29	18	0	6	15	-7
Tecaltiche	21	26	11	102	34	32	2240	5	39	-7
Tequila	20	53	33	103	50	8	1215	6	4	-7
Unión de Tula	19	57	37	104	16	7	1385	6	12	-7
México										
Acambay	19	57	18	99	50	47	2552	4	36	-7
Amecameca	19	7	36	98	46	0	2468	4	11	-7
Analco de Becerra	19	15	34	100	1	26	2511	4	41	-7
Atlacomulco	19	48	7	98	52	48	2526	4	13	-7
Ayotla	19	18	55	98	56	8	2251	4	15	-7
Chalco	19	15	53	98	54	12	2280	4	14	-7
Chapa de Mota	19	47	24	99	31	23	3070	4	28	-7
Chicoloapan	19	25	3	98	54	11	2235	4	14	-7
Chimalhuacán	19	25	45	98	56	57	2255	4	15	-7
Coatlichan	19	27	4	98	52	34	2200	4	13	-7
Ecatzingo de Hidalgo	18	57	2	98	45	29	2340	4	11	-7
Huexotla	19	28	50	98	52	25	2200	4	13	-7
Huizquilucan	19	21	47	99	21	39	2750	4	25	-7
Ixtapan de La Sal	18	50	13	99	40	28	1900	4	34	-7

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Ixtlahuaca	19	52	54	98	51	39	2640	4	12	-7
Jilotepec	19	57	13	99	31	45	2525	4	28	-7
Lerma	19	17	16	99	30	34	2599	4	29	-7
Los Reyes	19	21	27	98	52	42	2200	4	13	-7
Naucalpan	19	28	36	99	13	45	2298	4	22	-7
Otumba	19	41	59	98	45	33	2349	4	10	-7
Ozumba	19	2	3	98	47	50	2500	4	12	-7
Progreso Industrial	19	37	37	99	20	32	2449	4	24	-7
Popocatepetl	19	1	17	98	37	34	5452	4	8	-7
Popocatepetl	19	5	3	98	39	12	5450	4	8	-7
Remedios	19	28	25	99	15	2	2383	4	22	-7
San Antonio del Rosario	18	24	4	100	18	43	3350	4	49	-7
San Cristobal	19	24	24	99	19	40	2239	4	24	-7
San Pedro Atzapotzaltongo	19	37	38	99	18	54	2420	4	24	-7
San Pedro Atzompa	19	40	56	99	0	36	2243	4	16	-7
Sultepec	18	50	0	99	51	44	2336	4	38	-7
Tecamac	19	42	21	98	58	10	2300	4	15	-7
Temascalapa	19	49	37	98	54	11	2347	4	13	-7
Temascaltepec	19	2	24	100	2	47	1640	4	42	-7
Tenancingo	18	57	51	99	35	45	2022	4	32	-7
Teoloyucan	19	44	48	99	10	53	2280	4	20	-7
Texcoco	19	30	52	98	52	57	2278	4	13	-7
Tlalmanalco	19	12	36	98	48	27	2412	4	12	-7
Tlalnepantla	19	32	20	99	11	39	2278	4	21	-7
Toluca	19	17	33	99	39	38	2680	4	33	-7
Michoacán										
Aguililla	18	44	17	102	44	9	970	5	41	-7
Agostitlán	19	32	6	100	37	13	2500	4	55	-7
Apatzingan	19	4	54	102	15	31	682	5	31	-7
Apo	19	26	38	102	25	2	0	5	34	-7
Ario de Rosales	19	12	21	101	44	19	2050	5	20	-7
Buenavista	19	12	3	102	35	35	586	5	38	-7
Coahuayana	18	45	9	103	40	30	20	5	59	-7
Cotija	19	48	41	102	42	26	1751	5	40	-7
Hidalgo	19	41	19	100	33	23	2360	4	53	-7
Huajumbaro	19	40	52	100	44	29	2390	4	57	-7
Irimbo	19	41	54	100	28	58	2015	4	51	-7
Janitzio	19	34	27	101	39	11	2120	5	18	-7
Jiquilpan	19	59	31	102	43	16	1654	5	41	-7
La Huacana	18	57	36	101	48	39	550	5	22	-7
Los Reyes	19	35	23	102	28	57	1280	5	36	-7
Maravatio	19	53	33	100	26	43	2080	4	50	-7
Morelia	19	42	16	101	11	30	1941	5	8	-7
Ostula	18	29	50	103	28	19	229	5	55	-7
Panindicuaro	19	59	7	102	45	40	1638	5	41	-7
Paracuaro	19	8	46	103	13	32	586	5	51	-7
Paracho	19	38	44	102	3	1	1567	5	26	-7
Patzcuaro	19	32	24	101	37	0	2174	5	17	-7
Penjamillo	20	6	31	101	55	40	1645	5	24	-7
Piedad de Cavadas	20	20	44	102	1	32	1696	5	26	-7
Pueblo Viejo	19	46	16	101	34	3	2210	5	16	-7

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Puruandiro	20	5	21	101	30	59	1994	5	15	-7
San Pedro Jacuaro	19	43	1	100	38	49	2004	4	55	-7
Senguio	19	44	11	100	21	31	2030	4	48	-7
Tacambaro	19	13	52	101	27	34	1577	5	14	-7
Tequicheo	18	54	0	100	44	21	440	4	58	-7
Tepalcatepec	19	11	31	102	50	35	320	5	43	-7
Tumbiscatio	18	31	33	102	22	28	820	5	33	-7
Turicato	19	3	0	101	25	14	795	5	13	-7
Tuzantla	19	12	19	100	34	39	640	4	54	-7
Uruapán	19	24	56	102	3	46	1634	5	27	-7
Villa Madero	19	23	30	101	16	34	800	5	10	-7
Zacapu	19	49	11	101	47	34	1980	5	21	-7
Zamora	19	59	17	102	18	52	1567	5	32	-7
Zinapecuaro	19	53	5	100	40	32	1920	4	56	-7
Zitácuaro	19	25	51	100	21	50	1781	4	49	-7
Morelos										
Acapatzingo	18	54	11	99	13	17	1465	4	23	-7
Acatlipa	18	49	30	99	13	42	1215	4	23	-7
Ahuacatitlán	18	58	42	99	15	19	1955	4	24	-7
Atlatlahuacan	18	56	5	98	53	53	1656	4	15	-7
Coatetelco	18	43	55	99	19	48	1029	4	26	-7
Cuajomulco	19	2	2	99	12	17	2651	4	22	-7
Cuautla	18	48	20	98	57	13	1309	4	17	-7
Cuernavaca	18	54	54	99	14	14	1542	4	23	-7
Chapultepec	18	55	11	99	12	49	1492	4	23	-7
Huautla	18	26	24	99	1	44	1075	4	19	-7
Huitzilac	19	1	39	99	16	2	2540	4	24	-7
Itzamatitlán	18	53	58	99	1	30	1235	4	18	-7
Jojutla	18	36	39	99	10	52	890	4	23	-7
Oaxtepec	18	54	2	98	58	11	1385	4	17	-7
Smiguel	18	41	42	98	48	40	1403	4	13	-7
Tejalpa	18	53	43	99	9	57	1337	4	22	-7
Tepalcingo	18	35	34	98	50	43	1220	4	14	-7
Tetelcingo	18	51	55	98	55	47	1425	4	16	-7
Xiutepec	18	52	31	99	10	27	1355	4	22	-7
Xochitepec	18	47	4	99	13	50	1154	4	23	-7
Yautepec	18	52	38	99	3	46	1282	4	19	-7
Yecapixtla	18	52	56	98	51	55	1603	4	14	-7
Nayarit										
Acaponeta	22	29	21	105	21	41	30	6	39	-7
Amatlán de Jara	21	23	9	104	8	47	1150	6	12	-7
Huajimic	21	41	29	104	18	18	1170	6	15	-7
Ixtapan	21	18	16	105	9	44	0	6	31	-7
Ixtlan del Río	21	2	9	104	22	16	1042	6	15	-7
Jesús María	22	15	9	104	31	10	610	6	21	-7
Mezcaltitan	21	54	18	105	28	39	0	6	39	-7
Ruiz	21	57	29	105	8	35	24	6	33	-7
San Blas	21	32	27	105	17	16	2	6	35	-7
San Martín de Bolaños	21	29	42	104	1	35	0	6	9	-7
Tepic	21	30	47	104	53	42	915	6	27	-7
Tuxpan	21	54	10	104	8	6	39	6	13	-7

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ESTADO Población	latitud ° ‘ “	longitud ° ‘ “	alt m	δm ° ‘	Δδm ‘/año
Nuevo León					
Agualeguas	26 18 38	99 33 3	207	4 26	-7
Arramberri	24 6 10	99 49 3	1076	4 33	-7
Cadereyta Jímenez	25 35 34	99 59 54	360	4 38	-7
Cerralvo	26 5 32	99 36 29	345	4 28	-7
China	25 42 30	99 13 55	163	4 17	-7
Doctor Arroyo	23 40 23	100 10 52	1766	4 42	-7
Galeana	24 49 41	100 3 53	1654	4 40	-7
Garcia	25 48 49	100 35 21	697	4 55	-7
Lampazos de Naranjo	27 1 32	100 30 33	340	4 54	-7
Linares	24 51 39	99 34 5	684	4 26	-7
Los Aldamas	26 3 58	99 11 30	288	4 16	-7
Mier y Noriega	23 25 19	100 7 11	1681	4 41	-7
Montemorelos	25 11 34	99 49 31	432	4 33	-7
Monterrey	25 40 11	100 18 26	538	4 47	-7
Parras	26 30 5	99 31 5	165	4 26	-7
Sabinas Hidalgo	26 29 59	100 10 9	313	4 44	-7
Salinas Victoria	25 57 34	100 18 0	464	4 47	-7
Santiago Huajuco	25 25 35	100 8 17	445	4 42	-7
Vallecillo	26 39 41	99 58 2	274	4 39	-7
Villa Aldama	26 29 49	100 25 50	469	4 51	-7
Zaragoza	23 50 52	99 36 19	1377	4 27	-7
Oaxaca					
Ayutla	18 1 48	96 39 46	733	3 21	-7
Ayoquezco	16 41 13	96 50 2	0	3 31	-7
Ayotzintepec	17 40 38	96 8 17	64	3 8	-7
Coatzopan	18 2 56	96 45 31	1922	3 23	-7
Colotepec	15 53 33	96 56 28	0	3 37	-7
Cuicatlan	17 48 11	96 57 36	595	3 30	-7
Chacalapa	15 55 20	95 55 48	555	3 11	-7
Chalcatongo	17 1 57	97 34 24	2365	3 48	-7
Ecatepec	16 17 8	95 52 39	1690	3 8	-7
Ejutla de Crespo	16 33 48	96 43 44	1440	3 29	-7
Etla	17 12 17	96 47 49	1640	3 28	-7
Guichicovi	16 58 35	95 13 52	297	2 47	-7
Guelatao	17 19 15	96 29 34	1698	3 19	-7
Guelatao	17 19 10	96 29 31	1600	3 19	-7
Huajuapan de León	17 48 30	97 46 31	1680	3 50	-7
Huamelulas Pedro	16 1 39	95 40 1	1030	3 4	-7
Huatulco	15 49 44	96 19 11	325	3 22	-7
Huautla	18 7 53	96 50 45	1714	3 25	-7
Jamiltepec	16 16 33	97 49 23	240	3 57	-7
Juchitlán de Zaragoza	16 25 56	95 1 31	38	2 44	-7
Juguila	16 14 6	97 17 45	1500	3 44	-7
Juxtlahuaca	17 20 11	98 0 56	1650	3 58	-7
Lachiguiri	16 23 9	97 20 8	1780	3 45	-7
Loxicha	16 0 31	96 37 20	1885	3 29	-7
Mazatlán	17 2 11	95 26 48	642	2 53	-7
Miahuatlán	16 20 1	96 35 44	1607	3 26	-7
Nejapa	16 36 50	95 58 48	1000	3 9	-7
Niltepec	16 33 47	94 36 48	110	2 32	-7
Nochixtlán	17 27 33	97 13 29	2200	3 38	-7

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Oaxaca de Juárez	17	3	43	96	43	18	1550	3	26	-7
Ocotepec	17	47	53	96	23	47	1636	3	15	-7
Ojitlán	18	3	42	96	23	31	0	3	14	-7
Ojitlán	18	3	35	96	23	34	233	3	14	-7
Pluma Hidalgo	15	54	50	96	25	30	1475	3	24	-7
Pochutla	15	44	21	96	27	57	163	3	26	-7
Puerto Ángel	15	39	24	96	29	35	20	3	27	-7
Putla	17	1	28	97	56	2	1248	3	57	-7
Quiechapa	16	25	34	96	14	54	1900	3	17	-7
Quiotepec	17	54	8	96	59	0	845	3	30	-7
Salinas Cruz	16	9	37	95	12	11	70	2	51	-7
San Jerónimo Ixtepec	16	33	58	95	6	1	121	2	46	-7
San Miguel Peras	16	56	22	97	0	16	50	3	34	-7
San Vicente Coatlán	16	23	15	96	50	42	0	3	33	-7
Santa María del Mar	16	13	24	94	51	33	0	2	41	-7
Silacayoapan	17	30	14	98	8	38	1720	4	1	-7
Soladevega	16	31	1	96	58	22	1580	3	35	-7
Soyaltepec	18	12	12	96	28	57	0	3	15	-7
Suchixtepec	17	58	28	97	39	26	2842	3	47	-7
Tamazulapan	17	40	30	97	34	19	0	3	46	-7
Tecomavaca	17	57	34	97	1	5	660	3	30	-7
Tehuantepec	16	19	57	95	13	46	100	2	50	-7
Teotitlán del Camino	18	7	53	97	4	26	1067	3	31	-7
Teposcolula	17	30	45	97	29	16	2155	3	44	-7
Tequisistlán	16	24	21	95	36	2	1000	3	0	-7
Teutla	17	59	0	96	42	54	1338	3	22	-7
Tezoatlán	17	40	24	97	48	42	1500	3	52	-7
Tlaxiaco	17	15	59	97	40	58	1210	3	50	-7
Tlocula de Matamoros	16	57	19	96	28	43	1650	3	21	-7
Tololapan	16	40	4	96	18	12	0	3	17	-7
Tuxtepec	18	5	24	96	6	50	91	3	6	-7
Valle Nacional	17	40	43	96	17	59	65	3	13	-7
Villa Alta	17	20	41	96	9	8	1138	3	10	-7
Yacuane	17	14	25	97	27	3	0	3	44	-7
Yautepec	16	25	52	95	58	11	1100	3	10	-7
Yautepec	16	30	15	96	6	18	1000	3	13	-7
Yalalag	17	11	20	96	10	48	1186	3	12	-7
Zaniza	16	39	7	97	20	19	0	3	44	-7
Zimatlan	16	52	0	96	46	34	1609	3	29	-7
Puebla										
Acatepec	19	1	16	98	18	24	2174	4	0	-7
Acatlán de Osorio	18	12	6	98	3	6	1213	3	56	-7
Ahuatempan	18	24	47	98	0	58	1810	3	54	-7
Atezcal	18	23	51	97	43	28	1847	3	47	-7
Atlixco	18	54	32	98	26	27	1881	4	4	-7
Cacalotepec	19	0	3	98	17	28	2337	4	0	-7
Canoa	19	8	55	98	6	4	2000	3	54	-7
Canal de Morelos	18	44	8	97	25	20	2337	3	38	-7
Coronanc	19	7	11	98	17	58	2230	4	0	-7
Coxcatlán	18	15	55	97	8	55	1217	3	33	-7
Oyotzingo	19	11	49	98	26	18	2322	4	3	-7

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ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Cualtlancingo	19	5	16	98	16	14	2118	3	59	-7
Chachapa	19	2	47	98	5	35	2298	3	54	-7
Chiautla de Tapia	18	17	28	98	35	55	1025	4	9	-7
Chila Asunción	17	58	26	97	51	11	1676	3	52	-7
Cholula	19	3	45	98	18	15	2150	4	0	-7
Huauchinango	20	10	51	98	2	58	1472	3	50	-7
Huejotzingo	19	9	29	98	24	22	2291	4	2	-7
Hueyotlipan	19	5	6	98	12	32	2195	3	57	-7
Ixtaccihuatl	19	11	11	98	38	38	5146	4	8	-7
Izucar de Matamoros	18	36	6	98	27	42	1326	4	5	-7
La Malinche	19	13	48	98	1	47	4461	3	52	-7
Loreto	19	3	24	98	11	5	2221	3	57	-7
Molcaxac	18	44	9	97	54	8	1874	3	51	-7
Momoxpan	19	4	13	98	15	54	2159	3	59	-7
Moyotzingo	19	14	35	98	24	11	2271	4	2	-7
Nextetelco	19	7	13	98	20	21	1500	4	1	-7
Nopalucan	19	12	59	97	49	10	2490	3	47	-7
Ocotlan	19	8	37	98	17	3	2243	3	59	-7
Ocoyucan	18	58	30	98	17	58	2152	4	0	-7
Pantepec	20	31	29	97	56	14	738	3	47	-7
Petlaltzingo	18	4	59	97	55	12	1325	3	53	-7
Popocatepetl	19	1	17	98	37	34	5452	4	8	-7
Puebla de Zaragoza	19	2	30	98	11	48	2162	3	57	-7
Resurrección	19	6	4	98	7	36	2366	3	55	-7
San Andrés Chalchico	18	59	10	97	26	52	2540	3	38	-7
San Antonio	19	6	3	98	9	31	2296	3	56	-7
San Aparicio	18	29	42	97	16	51	1771	3	35	-7
San Baltazar	19	1	24	98	12	18	2142	3	57	-7
Sanctorum	19	5	51	98	15	8	2000	3	58	-7
San Juan de Los Llanos	19	27	54	97	41	3	2380	3	43	-7
San Martín Texmelucan	19	16	59	98	25	59	2278	4	2	-7
San Salvador El Seco	19	8	7	97	38	32	2450	3	43	-7
Santa María Chiamecati	18	38	47	98	4	46	2000	3	55	-7
Santa Rita Tlahuapan	19	19	56	98	35	9	2291	4	6	-7
Santiago Xalitzintla	19	4	36	98	30	53	2000	4	5	-7
Tecali	18	53	58	97	57	59	2240	3	52	-7
Tecamachalco	18	52	57	97	43	49	2055	3	46	-7
Tehuacan de las Gran	18	27	51	97	23	20	1676	3	38	-7
Temextatiloyan	19	5	22	98	12	46	2183	3	57	-7
Tepeaca	18	57	43	97	54	8	2257	3	50	-7
Tepeji Rodríguez	18	34	47	97	55	45	1746	3	52	-7
Tetela de Ocampo	19	49	15	97	48	10	1790	3	45	-7
Teziutlán	19	49	30	97	21	17	1990	3	33	-7
Tlacotepec	18	40	54	97	39	9	1977	3	44	-7
Tlaltenango	19	10	10	98	20	36	2246	4	1	-7
Tlancualpican	18	25	41	98	41	41	1100	4	11	-7
Tlaxcalanzingo	19	1	44	98	16	24	2173	3	59	-7
Tonantzintla	19	1	58	98	18	50	2147	4	0	-7
Xalmimilulco	18	12	32	98	22	46	2248	4	4	-7
Xochimehuacan	19	5	23	98	11	51	2200	3	57	-7
Xonacatepec	19	5	12	98	6	8	2209	3	55	-7
Zacapoaxtla	19	52	49	97	35	2	2045	3	39	-7

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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	49	-7
Zapotitlán	18	19	56	97	28	23	2407	3	41	-7
Zautla	19	43	6	97	40	21	2020	3	42	-7
Zinacatepec	18	19	57	97	14	41	1139	3	35	-7
Querétaro										
Amealco	20	11	17	100	8	38	2075	4	43	-7
Arroyo Seco	21	32	54	99	41	13	1008	4	30	-7
Boye	20	40	58	99	44	47	1000	4	33	-7
Cadereyta	20	41	41	99	48	58	2077	4	34	-7
Ezequiel Montes	20	40	2	99	53	54	1000	4	36	-7
Huimilpan	20	22	39	100	16	32	2307	4	46	-7
Jalpan	21	13	8	99	28	16	860	4	25	-7
Querétaro	20	35	36	100	23	11	1000	4	48	-7
San Juan del Río	20	23	30	99	59	49	1978	4	39	-7
Tequisquiapan	20	31	26	99	53	42	1717	4	37	-7
Toliman	20	54	35	99	55	45	1535	4	37	-7
Quintana Roo										
Ascensión	19	46	31	87	28	0	0	-1	39	-7
Cabo Catoche	21	36	25	87	6	21	157	-2	6	-7
Carrillo Puerto	19	34	50	88	2	38	30	-1	17	-7
Contoy	21	31	45	86	48	12	0	-2	17	-7
Cozumel	20	31	20	86	57	12	0	-2	3	-7
Chetumal	18	29	39	88	17	56	0	-1	0	-7
Filomeno Mata	19	52	8	88	23	47	0	-1	7	-7
Icaiche	18	4	17	89	10	7	183	0	-27	-7
Kantunil Kin	21	6	14	87	29	12	20	-1	49	-7
Leona Vicario	20	59	23	87	12	22	0	-1	58	-7
Polyuc	19	36	50	88	33	58	0	0	-59	-7
Put	19	39	8	89	24	46	0	0	-31	-7
Saban	20	2	12	88	32	16	0	-1	4	-7
Santa Cruz Chico	18	56	3	88	9	44	0	-1	8	-7
Tulum	20	12	34	87	25	34	150	-1	44	-7
Vigia Chico	19	46	27	87	35	2	0	-1	35	-7
Xkalak	18	13	32	87	50	50	0	-1	14	-7
Xkanha	19	6	13	89	20	5	0	0	-29	-7
San Luis Potosí										
Ahualco	22	23	56	101	9	58	1902	5	7	-7
Alaquines	22	7	41	99	35	27	1300	4	27	-7
Arista	22	38	46	100	51	2	1560	4	59	-7
Arriaga	21	54	44	101	22	58	2660	5	12	-7
Cárdenas	21	59	49	99	38	28	1201	4	29	-7
Catorce	23	41	34	100	53	23	2756	5	1	-7
Cerritos	22	25	55	100	16	51	1153	4	45	-7
Ciudad del Maíz	22	24	8	99	36	9	1239	4	28	-7
Charcas	23	7	47	101	6	37	2057	5	6	-7
Guadalcazar	22	37	1	100	23	56	1673	4	48	-7
Matehuala	23	38	41	100	38	26	1615	4	54	-7
Moctezuma	22	45	7	101	5	0	1777	5	5	-7
Pastora	22	8	2	100	3	25	920	4	39	-7
Ramos	22	49	59	101	55	3	2210	5	25	-7

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

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

Poblaciones de la República Méxicana, 2021

Coordenadas geográficas (Anuario del Observatorio 1984)

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

Poblaciones de la República Méxicana, 2021

Coordenadas geográficas (Anuario del Observatorio 1984)

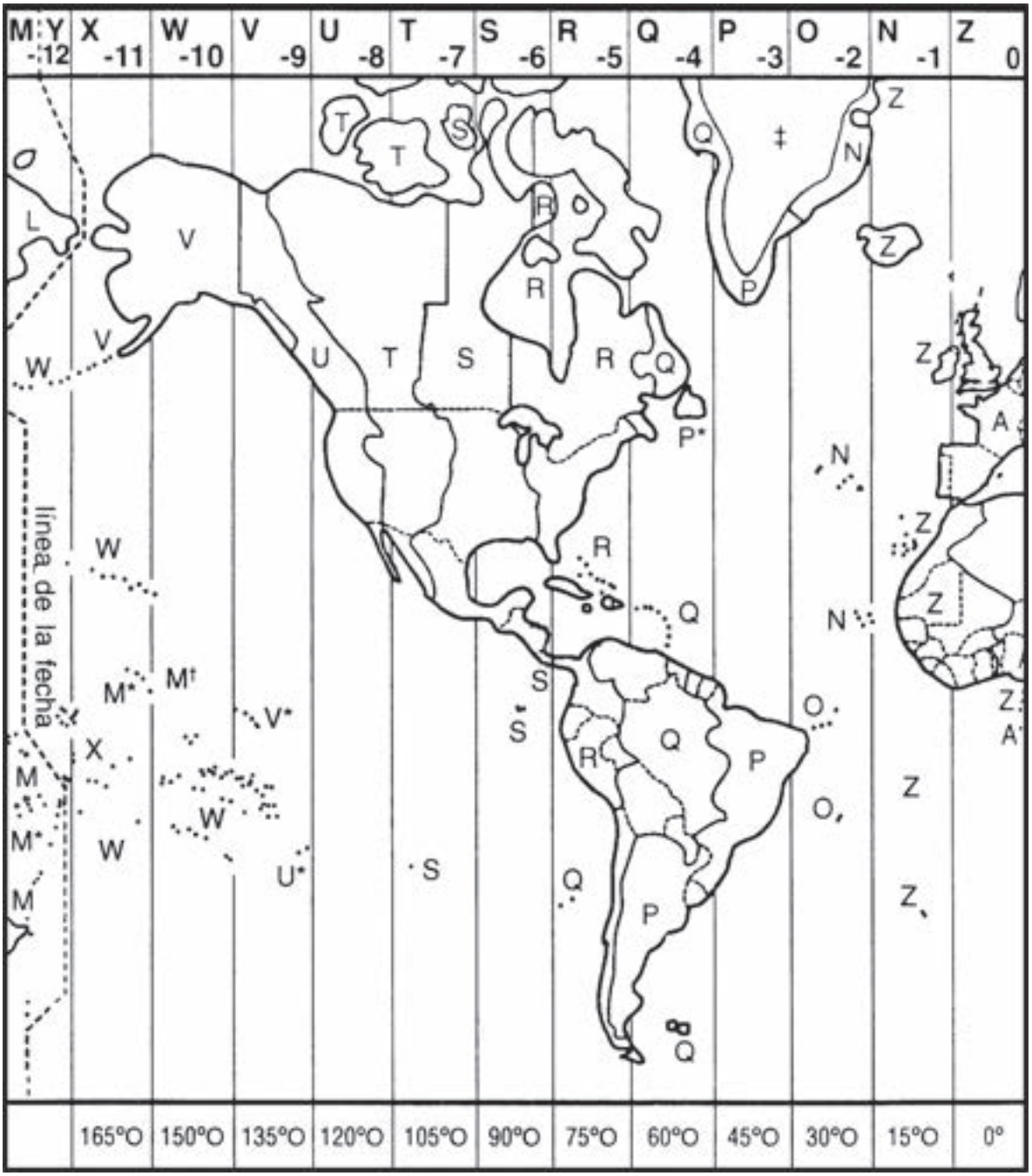
ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
General Alemán	18	11	32	96	5	44	18	3	5	-7
Hidalgotitlán	17	46	20	94	38	47	77	2	26	-7
Huatusco	19	9	1	96	57	9	1344	3	24	-7
Huayacocotla	20	32	27	98	28	38	2100	4	1	-7
Inalámbrica	19	10	50	96	7	36	0	3	2	-7
Ixcatepec	21	14	23	98	0	14	295	3	47	-7
Ixhuatlán	20	41	30	98	0	35	306	3	48	-7
Jalapa	19	31	35	96	54	51	1427	3	22	-7
Lobos	21	28	0	97	13	3	0	3	25	-7
Martinez de La Torre	20	3	58	97	2	36	151	3	24	-7
Minatitlán	17	58	47	94	32	27	64	2	22	-7
Misantla	19	56	2	96	50	24	410	3	19	-7
Mocayapan	18	12	49	94	50	17	340	2	30	-7
Naolingo	19	39	15	96	51	51	1605	3	20	-7
Nautla	20	12	43	95	45	38	4	2	47	-7
Orizaba	18	50	58	97	5	47	1284	3	29	-7
Ozuluama	21	39	46	97	51	0	229	3	42	-7
Pantepec	20	31	29	97	56	14	738	3	47	-7
Papantla	20	26	53	97	19	7	298	3	30	-7
Perote	19	33	52	97	14	24	2465	3	31	-7
Pico Orizaba	19	2	0	97	15	42	5700	3	33	-7
Pl Vicente	17	50	5	95	48	35	95	2	59	-7
Rizo	19	3	17	95	55	8	0	2	56	-7
Rodríguez Clara	17	59	28	95	24	9	148	2	47	-7
Sacrificios	19	10	26	96	5	27	0	3	1	-7
San Andrés Tuxtla	18	26	42	95	11	53	361	2	39	-7
San Andrés Tuxtla	18	26	40	95	13	1	323	2	39	-7
San Carlos	19	24	17	96	21	25	136	3	7	-7
San Juan de Ulua	19	12	26	96	7	46	0	3	2	-7
San Juan Evangelista	17	52	59	95	8	12	88	2	40	-7
San Martín	18	33	48	95	10	48	1738	2	38	-7
Santiaguillo	19	8	29	95	48	23	0	2	53	-7
Tamarindo	18	45	23	96	22	49	80	3	10	-7
Tamiahua	21	16	26	97	26	29	4	3	32	-7
Tantoyucan	21	21	7	98	13	31	217	3	53	-7
Tehuipango	18	31	14	97	3	31	2382	3	29	-7
Teocelo de Díaz	19	23	8	96	57	47	1218	3	24	-7
Tepetzintla	21	10	43	96	49	48	351	3	15	-7
Tesechoacan	18	8	12	95	39	47	0	2	53	-7
Tierra Blanca	18	27	3	96	21	28	60	3	11	-7
Tihuatlán	20	43	26	97	32	23	222	3	36	-7
Tlacojalpan	18	13	57	95	57	13	91	3	1	-7
Tlacotalpan	18	36	40	95	39	54	320	2	51	-7
Tlaliscoyan	18	48	7	96	3	26	84	3	1	-7
Tlapacoyan	19	58	13	97	12	35	504	3	29	-7
Tonayan	19	40	54	96	54	45	0	3	22	-7
Tuxpan	20	57	18	97	23	59	14	3	31	-7
Veracruz	19	12	2	96	8	13	14	3	2	-7
Verde	19	11	50	96	3	59	0	3	0	-7
Xico	19	25	17	97	0	11	0	3	25	-7
Zongolica	18	40	10	96	59	26	1294	3	27	-7

Poblaciones de la República Méxicana, 2021

Coordenadas geográficas (Anuario del Observatorio 1984)

ESTADO Población	latitud ° ‘ “	longitud ° ‘ “	alt m	δm ° ‘	Δδm ‘/año
Yucatán					
Becanchen	19 52 32	89 13 3	0	0 -39	-7
Celestum	20 51 36	90 24 5	3	0 -5	-7
Cuyo	21 31 9	87 40 48	8	-1 45	-7
Chancenote	20 59 36	87 46 56	0	-1 37	-7
Chavihau	21 21 28	89 7 7	0	0 -53	-7
Espita	21 0 36	88 18 27	22	-1 19	-7
Halacho	20 28 44	90 4 51	6	0 -13	-7
Huhi	20 43 42	89 10 0	15	0 -47	-7
Izamal	20 56 16	88 57 14	14	0 -55	-7
Maxcanu	20 35 11	89 59 55	8	0 -17	-7
Mérida	20 59 0	89 38 43	9	0 -32	-7
Molas	20 49 0	89 37 48	10	0 -31	-7
Progreso	21 18 0	89 39 30	8	0 -33	-7
San Felipe	21 34 8	88 13 58	0	-1 25	-7
Sisal	21 9 59	90 1 55	0	0 -20	-7
Tekax	20 12 18	98 17 20	35	3 57	-7
Telchac	21 20 35	89 15 50	10	0 -47	-7
Tzimin	21 8 1	88 9 6	17	-1 25	-7
Valladolid	20 41 24	88 12 23	20	-1 20	-7
Yalkubul	21 31 26	88 36 55	0	-1 11	-7
Zacatecas					
Calera	22 57 2	102 42 10	2236	5 43	-7
Concepción del Oro	24 36 54	101 25 43	2070	5 15	-7
Chalchihuites	23 28 42	103 53 15	2321	6 11	-7
Fresnillo	23 10 35	102 52 39	2250	5 48	-7
Guadalupe	22 45 30	102 31 9	2265	5 39	-7
Jerez	22 38 51	102 59 48	2027	5 49	-7
Juchipila	21 24 46	103 7 29	1350	5 50	-7
Nieves	23 59 41	103 1 12	2017	5 53	-7
Nochistlan	21 21 47	102 50 55	1930	5 44	-7
Observatorio Astronómico	22 43 56	102 32 26	2717	5 39	-7
Observatorio Astronómico	22 46 1	102 32 56	2425	5 40	-7
Ojo Caliente	22 34 44	102 15 20	2114	5 33	-7
Ojuelos	21 52 5	101 35 20	2000	5 16	-7
Panuco	22 52 45	102 32 30	2321	5 40	-7
Pinos	22 17 54	101 34 23	2419	5 16	-7
Río Grande	23 49 40	103 2 17	2000	5 53	-7
San Juan del Mezquital	24 17 28	103 23 47	2000	6 2	-7
Sombrerete	23 37 53	103 38 30	2351	6 6	-7
Tlatenango	21 47 0	103 18 44	1724	5 55	-7
Valparaíso	22 46 13	103 34 5	2140	6 2	-7
Villa de Cos	23 17 40	102 20 55	2050	5 36	-7
Villanueva	22 21 16	102 53 13	1955	5 47	-7
Zacateca	22 46 30	102 34 45	2496	5 40	-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
00	Z	0	
+15	A	+ 1	
+30	B	+ 2	
+45	C	+ 3	
+52 30	C*	+ 3	30
+60	D	+ 4	
+67 30	D*	+ 4	30
+75	E	+ 5	
+82 30	E*	+ 5	30

° ’	zona	h	m
+90	F	+ 6	
+97 30	F*	+ 6	30
+105	G	+ 7	
+120	H	+ 8	
+135	I	+ 9	
+14230	I*	+ 9	30
+150	K	+ 10	
+15730	K*	+ 10	30
+165	L	+ 11	

° ’	zona	h	m
+180	M	+ 12	
+18730	M*	+ 12	30
-15	N	- 1	
-30	O	- 2	
-45	P	- 3	
-52 30	P*	- 3	30
-60	Q	- 4	
-75	R	- 5	
-90	S	- 6	

° ’	zona	h	m
-105	T	- 7	
-120	U	- 8	
-127 30	U*	- 8	30
-135	V	- 9	
-142 30	V*	- 9	30
-150	W	- 10	
-165	X	- 11	
-180	Y	- 12	

Hora Legal en los Estados Unidos Mexicanos

Sistema de cuatro husos horarios en los Estados Unidos Mexicanos
(Diario Oficial de la Federación: 31-01-2015)

Artículo 1. La presente Ley es de aplicación general y regirá en todo el territorio de los Estados Unidos Mexicanos, sus disposiciones son de orden público e interés general, su aplicación y vigilancia estará 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 al 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 reformado Diario Oficial de la Federación 31-01-2015).*

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

I. Zona Centro: Referida al meridiano 90 grados al oeste de Greenwich y que comprende la mayor parte del territorio nacional, con la salvedad de lo establecido en los numerales II, III, IV y V de este mismo artículo *(Fracción reformada Diario Oficial de la Federación 31-01-2015).*

II. Zona Pacífico: Referida al meridiano 105 oeste y que comprende los territorios de los estados de Baja California Sur; Chihuahua; 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 (Fracción reformada *Diario Oficial de la Federación* 06-01-2010).

III. Zona Noroeste: Referida al meridiano 120 oeste y que comprende el territorio del Estado de Baja California (Fracción reformada *Diario Oficial de la Federación* 31-01-2015).

IV. Zona Sureste: Referida al meridiano 75 oeste y que comprende el territorio del Estado de Quintana Roo (Fracción adicionada *Diario Oficial de la Federación* 31-01-2015).

V. Las islas, arrecifes y cayos quedarán comprendidos dentro del meridiano al cual corresponda su situación geográfica y de acuerdo a los instrumentos de derecho internacional aceptados (Fracción recorrida *Diario Oficial de la Federación* 31-01-2015).

Artículo 4. El sistema normal de medición del tiempo en la República, que se establece con la aplicación de los husos horarios y su correspondiente hora en los artículos que anteceden, podrá ser modificado mediante decreto del Honorable Congreso de la Unión que establezca horarios estacionales.

Artículo 5. Cualquier propuesta de establecimiento o modificación de horarios estacionales deberá ser presentada al Honorable Congreso de la Unión, a más tardar el 15 de noviembre del año inmediato anterior al que se pretende modificar el horario. El decreto respectivo deberá ser emitido a más tardar el 15 de diciembre del mismo año.

Artículo 6. En el caso del establecimiento de horarios estacionales, el Ejecutivo Federal en coordinación con los Ejecutivos Estatales y del Distrito Federal, difundirán, con la anticipación debida, el Decreto por medio del cual se establece dicho horario, para el conocimiento de la población.

Artículo 7. Las dependencias de los ejecutivos federal, y estatales y del Distrito Federal, en el ámbito de sus respectivas competencias, tomarán las medidas necesarias a efecto de implementar de forma eficiente los horarios estacionales decretados.

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
HAWC								
Volcán Sierra Negra	18	59	41	97	18	30.6	4100	Observatorio Cherenkov de agua a gran altura
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
Observatorio de centelleo interplanetario								Coeneo
* 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+b1*z+b2*z2+b3*z3+b4*z4+b5*z5+b6*z6+b7*z7+b8*z8+b9*z9 ,

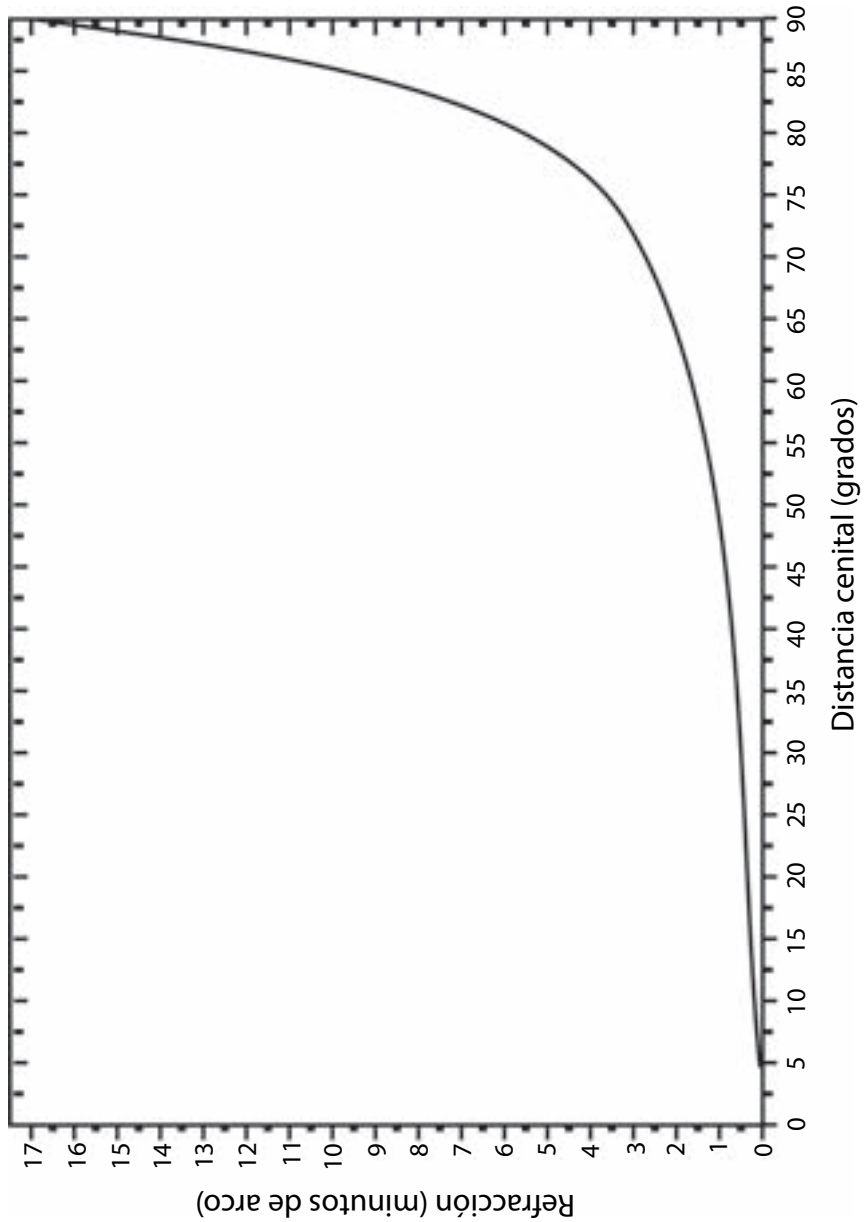
donde r está dada en minutos de arco, y sus coeficientes son:

a	$-7.64878\ 10^{-4}$	b5	$1.22379\ 10^{-6}$
b_1	0.02752	b6	$-2.70552\ 10^{-8}$
b_2	-0.00384	b7	$3.52568\ 10^{-10}$
b_3	$5.03936\ 10^{-4}$	b8	$-2.50309\ 10^{-12}$
b_4	$-3.28953\ 10^{-5}$	b9	$7.48708\ 10^{-15}$

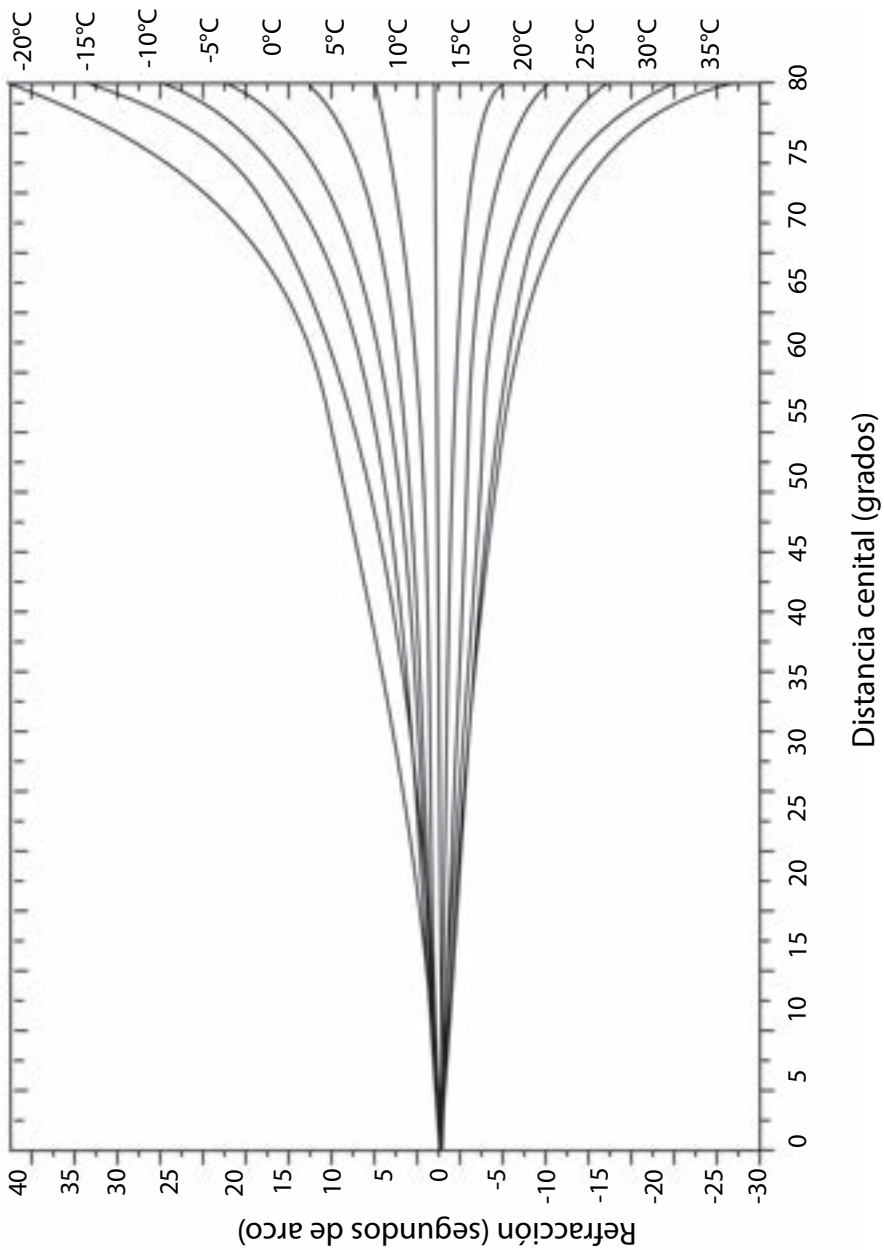
Con la gráfica de corrección por temperatura, se determina el valor en segundos de arco, que se deberá sumar algebraicamente a la refracción media. Cada curva corresponde a las temperaturas, en grados centígrados, señaladas al extremo derecho de cada una de ellas.

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.

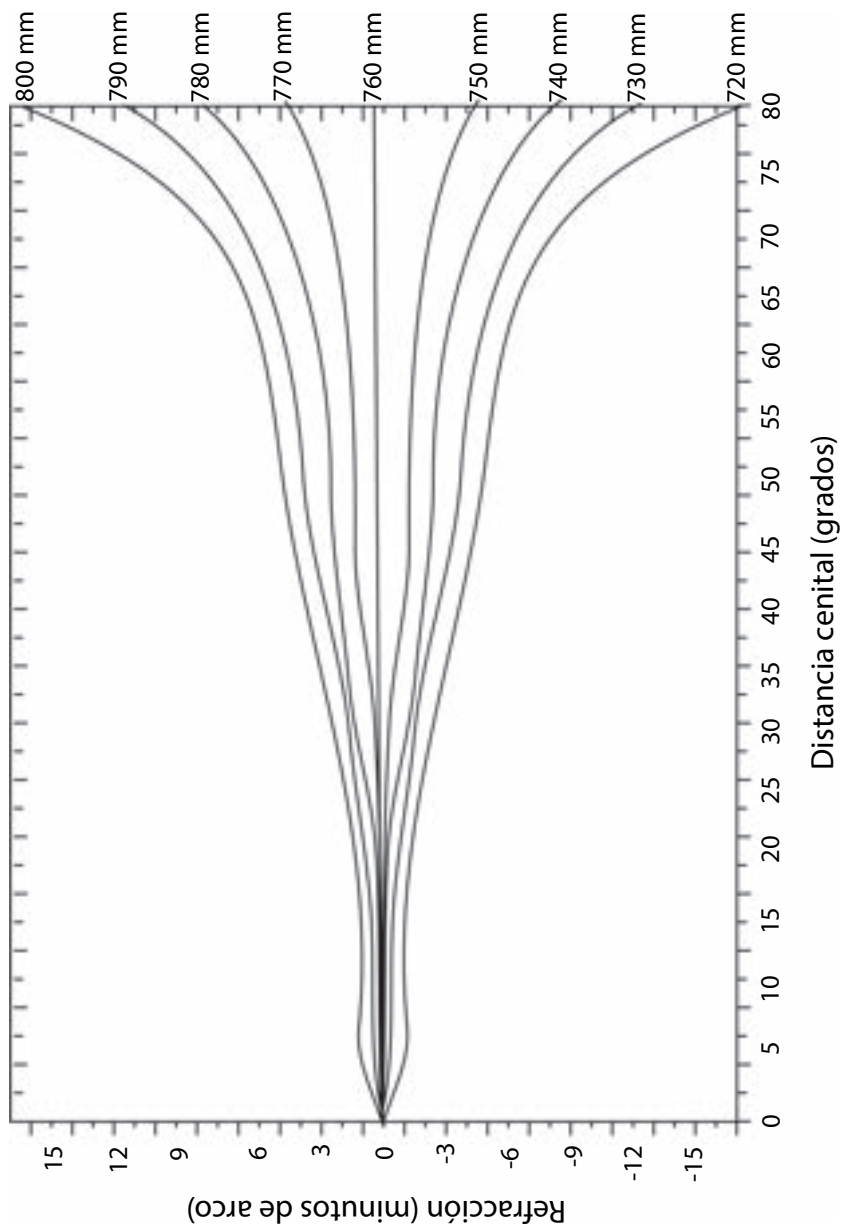
Corrección por distancia cenital



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
1g: 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
δm: declinación magnética para el 1 de del 2006
Δδm: Variación de la declinación magnética por año

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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-

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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 terreste, 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 90o 50' y 96o; náutico entre 96o y 102o, y astronómico, entre 102o y 108o.

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 Greewich.

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 subtiende 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 0o y 180o, 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, II, 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 0o, 90o, 180o y 270o , 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 Héjira. Éra 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. Período 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 obscurecido 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. Dícese de aquel punto, del otro lado de la Tierra, ubicado por debajo de nosotros.
Nebulosa. Nube de materia interestelar.

Nebulosa planetaria. Envolvente 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. Domínica 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.

Glosario: Términos astronómicos básicos

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

Sideral. 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 diurno de Sol medio o ficticio, suponiendo un movimiento de rotación terrestre uniforme.

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

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

Umbra. En un eclipse, la región desde donde se observa al cuerpo celeste totalmente oculto. Umbra, 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 bisisestos; en cambio el año1600 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, institutido 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 siguiría 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 Zodiaco. 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 numero 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	2 500	Con bandas espectrales de compuestos de carbón.
	Roja		Semejantes as las N, conbandas 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 estan 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 comunmente 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 latidud 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°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 (Dl) será:

$\Delta\lambda = (97.5° - 90°)/15$

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

T = 4h 59m +30m es decir 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.

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