ANUARIO DEL OBSERVATORIO ASTRONÓMICO NACIONAL

Edición CXXXIX

2020

INSTITUTO DE ASTRONOMÍA

UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

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Efemérides astronómicas 2020

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Prefacio, 2020

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 $\Delta T = 69.0s$. 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 la efemérides JPL Planetary and Lunar Ephemeris DE431/LE431. Para las estrellas se tomaron de los parámetros astronómicos del catálogo The Hipparcos and Tycho Catalog, ESA Hipparcos Space Astrometry Mission, apartir 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 nombre comunes de estrellas a demás de los número 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.

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Día Juliano, 2020

A las 0^h del meridiano 90º W.G.

d	ds	dj
Enero		
1	mie	2458849.75
2	jue	2458850.75
3	vie	2458851.75
4	sab	2458852.75
5	dom	2458853.75
6	lun	2458854.75
7	mar	2458855.75
8	mie	2458856.75
9	jue	2458857.75
10	vie	2458858.75
11	sab	2458859.75
12	dom	2458860.75
13	lun	2458861.75
14	mar	2458862.75
15	mie	2458863.75
16	jue	2458864.75
17	vie	2458865.75
18	sab	2458866.75
19	dom	2458867.75
20	lun	2458868.75
21	mar	2458869.75
22	mie	2458870.75
23	jue	2458871.75
24	vie	2458872.75
25	sab	2458873.75
26	dom	2458874.75
27	lun	2458875.75
28	mar	2458876.75
29	mie	2458877.75
30	jue	2458878.75
31	vie	2458879.75
Febrero		
1	sab	2458880.75
2	dom	2458881.75
3	lun	2458882.75
4	mar	2458883.75
5	mie	2458884.75
6	jue	2458885.75
7	vie	2458886.75
8	sab	2458887.75
9	dom	2458888.75
10	lun	2458889.75
11	mar	2458890.75
12	mie	2458891.75
13	jue	2458892.75
14	vie	2458893.75
15	sab	2458894.75
16	dom	2458895.75
17	lun	2458896.75
18	mar	2458897.75
19	mie	2458898.75
20	jue	2458899.75
21	vie	2458900.75
22	sab	2458901.75
23	dom	2458902.75
24	lun	2458903.75
25	mar	2458904.75
26	mie	2458905.75
27	jue	2458906.75
28	vie	2458907.75
29	sab	2458908.75
Marzo		
1	dom	2458909.75
2	lun	2458910.75
3	mar	2458911.75
4	mie	2458912.75
5	jue	2458913.75
6	vie	2458914.75
7	sab	2458915.75
8	dom	2458916.75
9	lun	2458917.75
10	mar	2458918.75
11	mie	2458919.75
12	jue	2458920.75
13	vie	2458921.75
14	sab	2458922.75
15	dom	2458923.75
16	lun	2458924.75
17	mar	2458925.75
18	mie	2458926.75
19	jue	2458927.75
20	vie	2458928.75
21	sab	2458929.75
22	dom	2458930.75
23	lun	2458931.75
24	mar	2458932.75
25	mie	2458933.75
26	jue	2458934.75
27	vie	2458935.75
28	sab	2458936.75
29	dom	2458937.75
30	lun	2458938.75
31	mar	2458939.75
Abril		
1	mie	2458940.75
2	jue	2458941.75
3	vie	2458942.75
4	sab	2458943.75
5	dom	2458944.75
6	lun	2458945.75
7	mar	2458946.75
8	mie	2458947.75
9	jue	2458948.75
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12	dom	2458951.75
13	lun	2458952.75
14	mar	2458953.75
15	mie	2458954.75
16	jue	2458955.75
17	vie	2458956.75
18	sab	2458957.75
19	dom	2458958.75
20	lun	2458959.75
21	mar	2458960.75
22	mie	2458961.75
23	jue	2458962.75
24	vie	2458963.75
25	sab	2458964.75
26	dom	2458965.75
27	lun	2458966.75
28	mar	2458967.75
29	mie	2458968.75
30	jue	2458969.75
Mayo		
1	vie	2458970.75
2	sab	2458971.75
3	dom	2458972.75
4	lun	2458973.75
5	mar	2458974.75
6	mie	2458975.75
7	jue	2458976.75
8	vie	2458977.75
9	sab	2458978.75
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15	vie	2458984.75
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20	mie	2458989.75
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22	vie	2458991.75
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25	lun	2458994.75
26	mar	2458995.75
27	mie	2458996.75
28	jue	2458997.75
29	vie	2458998.75
30	sab	2458999.75
31	dom	2459000.75
Junio		
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2	mar	2459002.75
3	mie	2459003.75
4	jue	2459004.75
5	vie	2459005.75
6	sab	2459006.75
7	dom	2459007.75
8	lun	2459008.75
9	mar	2459009.75
10	mie	2459010.75
11	jue	2459011.75
12	vie	2459012.75
13	sab	2459013.75
14	dom	2459014.75
15	lun	2459015.75
16	mar	2459016.75
17	mie	2459017.75
18	jue	2459018.75
19	vie	2459019.75
20	sab	2459020.75
21	dom	2459021.75
22	lun	2459022.75
23	mar	2459023.75
24	mie	2459024.75
25	jue	2459025.75
26	vie	2459026.75
27	sab	2459027.75
28	dom	2459028.75
29	lun	2459029.75
30	mar	2459030.75
Julio		
1	mie	2459031.75
2	jue	2459032.75
3	vie	2459033.75
4	sab	2459034.75
5	dom	2459035.75
6	lun	2459036.75
7	mar	2459037.75
8	mie	2459038.75
9	jue	2459039.75
10	vie	2459040.75
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12	dom	2459042.75
13	lun	2459043.75
14	mar	2459044.75
15	mie	2459045.75
16	jue	2459046.75
17	vie	2459047.75
18	sab	2459048.75
19	dom	2459049.75
20	lun	2459050.75
21	mar	2459051.75

d	ds	dj
22	mie	2459052.75
23	jue	2459053.75
24	vie	2459054.75
25	sab	2459055.75
26	dom	2459056.75
27	lun	2459057.75
28	mar	2459058.75
29	mie	2459059.75
30	jue	2459060.75
31	vie	2459061.75
Agosto		
1	sab	2459062.75
2	dom	2459063.75
3	lun	2459064.75
4	mar	2459065.75
5	mie	2459066.75
6	jue	2459067.75
7	vie	2459068.75
8	sab	2459069.75
9	dom	2459070.75
10	lun	2459071.75
11	mar	2459072.75
12	mie	2459073.75
13	jue	2459074.75
14	vie	2459075.75
15	sab	2459076.75
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17	lun	2459078.75
18	mar	2459079.75
19	mie	2459080.75
20	jue	2459081.75
21	vie	2459082.75
22	sab	2459083.75
23	dom	2459084.75
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25	mar	2459086.75
26	mie	2459087.75
27	jue	2459088.75
28	vie	2459089.75
29	sab	2459090.75
30	dom	2459091.75
31	lun	2459092.75

d	ds	dj
Septiembre		
1	mar	2459093.75
2	mie	2459094.75
3	jue	2459095.75
4	vie	2459096.75
5	sab	2459097.75
6	dom	2459098.75
7	lun	2459099.75
8	mar	2459100.75
9	mie	2459101.75
10	jue	2459102.75
11	vie	2459103.75
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13	dom	2459105.75
14	lun	2459106.75
15	mar	2459107.75
16	mie	2459108.75
17	jue	2459109.75
18	vie	2459110.75
19	sab	2459111.75
20	dom	2459112.75
21	lun	2459113.75
22	mar	2459114.75
23	mie	2459115.75
24	jue	2459116.75
25	vie	2459117.75
26	sab	2459118.75
27	dom	2459119.75
28	lun	2459120.75
29	mar	2459121.75
30	mie	2459122.75
Octubre		
1	jue	2459123.75
2	vie	2459124.75
3	sab	2459125.75
4	dom	2459126.75
5	lun	2459127.75
6	mar	2459128.75
7	mie	2459129.75
8	jue	2459130.75
9	vie	2459131.75
10	sab	2459132.75

d	ds	dj
11	dom	2459133.75
12	lun	2459134.75
13	mar	2459135.75
14	mie	2459136.75
15	jue	2459137.75
16	vie	2459138.75
17	sab	2459139.75
18	dom	2459140.75
19	lun	2459141.75
20	mar	2459142.75
21	mie	2459143.75
22	jue	2459144.75
23	vie	2459145.75
24	sab	2459146.75
25	dom	2459147.75
26	lun	2459148.75
27	mar	2459149.75
28	mie	2459150.75
29	jue	2459151.75
30	vie	2459152.75
31	sab	2459153.75
Noviembre		
1	dom	2459154.75
2	lun	2459155.75
3	mar	2459156.75
4	mie	2459157.75
5	jue	2459158.75
6	vie	2459159.75
7	sab	2459160.75
8	dom	2459161.75
9	lun	2459162.75
10	mar	2459163.75
11	mie	2459164.75
12	jue	2459165.75
13	vie	2459166.75
14	sab	2459167.75
15	dom	2459168.75
16	lun	2459169.75
17	mar	2459170.75
18	mie	2459171.75
19	jue	2459172.75
20	vie	2459173.75

d	ds	dj
21	sab	2459174.75
22	dom	2459175.75
23	lun	2459176.75
24	mar	2459177.75
25	mie	2459178.75
26	jue	2459179.75
27	vie	2459180.75
28	sab	2459181.75
29	dom	2459182.75
30	lun	2459183.75
Diciembre		
1	mar	2459184.75
2	mie	2459185.75
3	jue	2459186.75
4	vie	2459187.75
5	sab	2459188.75
6	dom	2459189.75
7	lun	2459190.75
8	mar	2459191.75
9	mie	2459192.75
10	jue	2459193.75
11	vie	2459194.75
12	sab	2459195.75
13	dom	2459196.75
14	lun	2459197.75
15	mar	2459198.75
16	mie	2459199.75
17	jue	2459200.75
18	vie	2459201.75
19	sab	2459202.75
20	dom	2459203.75
21	lun	2459204.75
22	mar	2459205.75
23	mie	2459206.75
24	jue	2459207.75
25	vie	2459208.75
26	sab	2459209.75
27	dom	2459210.75
28	lun	2459211.75
29	mar	2459212.75
30	mier	2459213.75
31	jue	2459214.75

Eras y ciclos cronológicos: 2020

Calendario Gregoriano

Cómputo

Eras

El año 2020, es el vigésimo del siglo XXI de la Era Cristiana.

El 14 de enero del año 2020, corresponde al 1 de enero del año 6733 del Período Juliano.

El 1 de enero del año 2020 del Calendario Juliano, corresponde al 14 de enero.

El año 2020 corresponde al 2795 de las olimpiadas.

Año	Era	Inicia
2773	Romana	enero 14
2680	Japonesa	enero 1
5781	Judía	septiembre 18
2332	Griega	septiembre 14
1442	Hégira	agosto 19
7529	Bizantina	septiembre 14
	China	enero 25

Fiestas y aniversarios para el año 2020

Año Nuevo	miércoles 1 de enero
Epifanía	lunes 6 de enero
Proclamación de la Constitución de 1917	miércoles 5 de febrero
Septuagésima	domingo 9 de febrero
Quinquagésima	domingo 23 de febrero
Diza de la Bandera	lunes 24 de febrero
Carnaval	martes 25 de febrero
Miércoles de ceniza	miércoles 26 de febrero
Aniversario del Natalicio de Benito Juárez	sábado 21 de marzo
Domingo de Ramos	domingo 5 de abril
Viernes Santo	viernes 10 de abril
Pascua	domingo 12 de abril
Día del Trabajo	viernes 1 de mayo
Aniversario de la Batalla de Puebla	martes 5 de mayo
Ascensión	jueves 21 de mayo
Pentecostés	domingo 31 de mayo
Trinidad	domingo 7 de junio
Corpus Cristi	jueves 11 de junio
Domingo de Corpus	domingo 14 de junio
San Pedro y San Pablo	lunes 29 de junio
Aniversario de la Muerte de Benito Juárez	sábado 18 de julio
Aniversario de la Muerte de Miguel Hidalgo	jueves 30 de julio
Año nuevo Islámico	jueves 20 de agosto
Aniversario de la Independencia de México	miércoles 16 de septiembre
Año nuevo Judío	sábado 19 de septiembre
Yom Kipur	lunes 28 de septiembre
Día de la Raza	lunes 12 de octubre
Conmemoración de los Difuntos	lunes 2 de noviembre
Aniversario de la Revolución Mexicana	viernes 20 de noviembre
Adviento	domingo 29 de noviembre
Navidad	viernes 25 de diciembre

Estaciones del año, 2020

Hora del meridiano 90º W.G.

mes	día	h	m	longitud λ(º)	Constelación
Invierno					
Enero	18	1	41	300	Capricornio
Febrero	18	7	41	330	Acuario
Primavera					
Marzo	19	21	50	0	Piscis
Abril	21	14	22	30	Aries
Mayo	22	11	55	60	Tauro
Verano					
Junio	20	15	44	90	Géminis
Julio	19	22	7	120	Cáncer
Agosto	20	3	26	150	Leo
Otoño					
Septiembre	22	7	31	180	Virgo
Octubre	24	21	32	210	Libra
Noviembre	23	16	16	240	Escorpión
Invierno					
Diciembre	21	4	2	270	Sagitario

Hora sideral, 2020

A las 0^h del meridiano 90° W.G.

d	dj	h	m	s
Ene				
1	2458849.75	6	41	27.36
2	2458850.75	6	45	23.91
3	2458851.75	6	49	20.47
4	2458852.75	6	53	17.02
5	2458853.75	6	57	13.57
6	2458854.75	7	1	10.13
7	2458855.75	7	5	6.69
8	2458856.75	7	9	3.25
9	2458857.75	7	12	59.81
10	2458858.75	7	16	56.38
11	2458859.75	7	20	52.94
12	2458860.75	7	24	49.50
13	2458861.75	7	28	46.06
14	2458862.75	7	32	42.62
15	2458863.75	7	36	39.17
16	2458864.75	7	40	35.72
17	2458865.75	7	44	32.27
18	2458866.75	7	48	28.83
19	2458867.75	7	52	25.38
20	2458868.75	7	56	21.94
21	2458869.75	8	0	18.50
22	2458870.75	8	4	15.06
23	2458871.75	8	8	11.63
24	2458872.75	8	12	8.19
25	2458873.75	8	16	4.74
26	2458874.75	8	20	1.30
27	2458875.75	8	23	57.86
28	2458876.75	8	27	54.41
29	2458877.75	8	31	50.96
30	2458878.75	8	35	47.51
31	2458879.75	8	39	44.06
Feb				
1	2458880.75	8	43	40.61
2	2458881.75	8	47	37.16
3	2458882.75	8	51	33.72
4	2458883.75	8	55	30.28
5	2458884.75	8	59	26.83
6	2458885.75	9	3	23.40
7	2458886.75	9	7	19.96
8	2458887.75	9	11	16.52
9	2458888.75	9	15	13.08
10	2458889.75	9	19	9.64
11	2458890.75	9	23	6.18
12	2458891.75	9	27	2.73
13	2458892.75	9	30	59.28
14	2458893.75	9	34	55.83
15	2458894.75	9	38	52.39
16	2458895.75	9	42	48.94
17	2458896.75	9	46	45.50
18	2458897.75	9	50	42.06
19	2458898.75	9	54	38.62
20	2458899.75	9	58	35.17
21	2458900.75	10	2	31.73
22	2458901.75	10	6	28.29
23	2458902.75	10	10	24.84
24	2458903.75	10	14	21.39
25	2458904.75	10	18	17.94
26	2458905.75	10	22	14.49
27	2458906.75	10	26	11.03
28	2458907.75	10	30	7.58
29	2458908.75	10	34	4.13
Mar				
1	2458909.75	10	38	0.68
2	2458910.75	10	41	57.24
3	2458911.75	10	45	53.80
4	2458912.75	10	49	50.35
5	2458913.75	10	53	46.91
6	2458914.75	10	57	43.47
7	2458915.75	11	1	40.03
8	2458916.75	11	5	36.58
9	2458917.75	11	9	33.13
10	2458918.75	11	13	29.68
11	2458919.75	11	17	26.23
12	2458920.75	11	21	22.78
13	2458921.75	11	25	19.32
14	2458922.75	11	29	15.88
15	2458923.75	11	33	12.43
16	2458924.75	11	37	8.99
17	2458925.75	11	41	5.55
18	2458926.75	11	45	2.11
19	2458927.75	11	48	58.67
20	2458928.75	11	52	55.21
21	2458929.75	11	56	51.77
22	2458930.75	12	0	48.32
23	2458931.75	12	4	44.87
24	2458932.75	12	8	41.41
25	2458933.75	12	12	37.96
26	2458934.75	12	16	34.51
27	2458935.75	12	20	31.06
28	2458936.75	12	24	27.60
29	2458937.75	12	28	24.16
30	2458938.75	12	32	20.72
31	2458939.75	12	36	17.27
Abr				
1	2458940.75	12	40	13.83
2	2458941.75	12	44	10.39
3	2458942.75	12	48	6.95
4	2458943.75	12	52	3.50
5	2458944.75	12	56	0.05
6	2458945.75	12	59	56.60
7	2458946.75	13	3	53.15
8	2458947.75	13	7	49.70
9	2458948.75	13	11	46.25
10	2458949.75	13	15	42.80
11	2458950.75	13	19	39.36
12	2458951.75	13	23	35.91
13	2458952.75	13	27	32.47
14	2458953.75	13	31	29.03
15	2458954.75	13	35	25.60
16	2458955.75	13	39	22.15
17	2458956.75	13	43	18.70
18	2458957.75	13	47	15.26
19	2458958.75	13	51	11.81
20	2458959.75	13	55	8.35
21	2458960.75	13	59	4.89
22	2458961.75	14	3	1.44
23	2458962.75	14	6	57.99
24	2458963.75	14	10	54.55
25	2458964.75	14	14	51.11
26	2458965.75	14	18	47.66
27	2458966.75	14	22	44.22
28	2458967.75	14	26	40.77
29	2458968.75	14	30	37.34
30	2458969.75	14	34	33.90
May				
1	2458970.75	14	38	30.46
2	2458971.75	14	42	27.01
3	2458972.75	14	46	23.57
4	2458973.75	14	50	20.12
5	2458974.75	14	54	16.66
6	2458975.75	14	58	13.21
7	2458976.75	15	2	9.76
8	2458977.75	15	6	6.32
9	2458978.75	15	10	2.89
10	2458979.75	15	13	59.45
11	2458980.75	15	17	56.01
12	2458981.75	15	21	52.57
13	2458982.75	15	25	49.13
14	2458983.75	15	29	45.69
15	2458984.75	15	33	42.24
16	2458985.75	15	37	38.79
17	2458986.75	15	41	35.34
18	2458987.75	15	45	31.89
19	2458988.75	15	49	28.45
20	2458989.75	15	53	24.99
21	2458990.75	15	57	21.55
22	2458991.75	16	1	18.10

Hora sideral, 2020

A las 0^h del meridiano 90° W.G.

d	dj	h	m	s
23	2458992.75	16	5	14.66
24	2458993.75	16	9	11.22
25	2458994.75	16	13	7.79
26	2458995.75	16	17	4.36
27	2458996.75	16	21	0.92
28	2458997.75	16	24	57.47
29	2458998.75	16	28	54.03
30	2458999.75	16	32	50.59
31	2459000.75	16	36	47.14
Jun				
1	2459001.75	16	40	43.69
2	2459002.75	16	44	40.24
3	2459003.75	16	48	36.79
4	2459004.75	16	52	33.35
5	2459005.75	16	56	29.91
6	2459006.75	17	0	26.47
7	2459007.75	17	4	23.04
8	2459008.75	17	8	19.61
9	2459009.75	17	12	16.17
10	2459010.75	17	16	12.73
11	2459011.75	17	20	9.29
12	2459012.75	17	24	5.84
13	2459013.75	17	28	2.39
14	2459014.75	17	31	58.94
15	2459015.75	17	35	55.49
16	2459016.75	17	39	52.05
17	2459017.75	17	43	48.60
18	2459018.75	17	47	45.16
19	2459019.75	17	51	41.72
20	2459020.75	17	55	38.27
21	2459021.75	17	59	34.84
22	2459022.75	18	3	31.40
23	2459023.75	18	7	27.97
24	2459024.75	18	11	24.53
25	2459025.75	18	15	21.09
26	2459026.75	18	19	17.65
27	2459027.75	18	23	14.20
28	2459028.75	18	27	10.75
29	2459029.75	18	31	7.30
30	2459030.75	18	35	3.85
Jul				
1	2459031.75	18	39	0.41
2	2459032.75	18	42	56.97
3	2459033.75	18	46	53.53
4	2459034.75	18	50	50.10
5	2459035.75	18	54	46.66
6	2459036.75	18	58	43.23
7	2459037.75	19	2	39.79
8	2459038.75	19	6	36.34
9	2459039.75	19	10	32.90
10	2459040.75	19	14	29.45
11	2459041.75	19	18	26.00
12	2459042.75	19	22	22.55
13	2459043.75	19	26	19.11
14	2459044.75	19	30	15.66
15	2459045.75	19	34	12.21
16	2459046.75	19	38	8.77
17	2459047.75	19	42	5.33
18	2459048.75	19	46	1.89
19	2459049.75	19	49	58.45
20	2459050.75	19	53	55.02
21	2459051.75	19	57	51.58
22	2459052.75	20	1	48.14
23	2459053.75	20	5	44.69
24	2459054.75	20	9	41.25
25	2459055.75	20	13	37.80
26	2459056.75	20	17	34.35
27	2459057.75	20	21	30.90
28	2459058.75	20	25	27.45
29	2459059.75	20	29	24.01
30	2459060.75	20	33	20.57
31	2459061.75	20	37	17.13
Ago				
1	2459062.75	20	41	13.69
2	2459063.75	20	45	10.26
3	2459064.75	20	49	6.82
4	2459065.75	20	53	3.37
5	2459066.75	20	56	59.93
6	2459067.75	21	0	56.48
7	2459068.75	21	4	53.03
8	2459069.75	21	8	49.57
9	2459070.75	21	12	46.12
10	2459071.75	21	16	42.67
11	2459072.75	21	20	39.23
12	2459073.75	21	24	35.78
13	2459074.75	21	28	32.34
14	2459075.75	21	32	28.90
15	2459076.75	21	36	25.46
16	2459077.75	21	40	22.02
17	2459078.75	21	44	18.58
18	2459079.75	21	48	15.14
19	2459080.75	21	52	11.69
20	2459081.75	21	56	8.24
21	2459082.75	22	0	4.79
22	2459083.75	22	4	1.34
23	2459084.75	22	7	57.89
24	2459085.75	22	11	54.44
25	2459086.75	22	15	50.99
26	2459087.75	22	19	47.55
27	2459088.75	22	23	44.11
28	2459089.75	22	27	40.67
29	2459090.75	22	31	37.23
30	2459091.75	22	35	33.79
31	2459092.75	22	39	30.34
Sep				
1	2459093.75	22	43	26.89
2	2459094.75	22	47	23.44
3	2459095.75	22	51	19.99
4	2459096.75	22	55	16.54
5	2459097.75	22	59	13.08
6	2459098.75	23	3	9.63
7	2459099.75	23	7	6.18
8	2459100.75	23	11	2.73
9	2459101.75	23	14	59.29
10	2459102.75	23	18	55.84
11	2459103.75	23	22	52.40
12	2459104.75	23	26	48.96
13	2459105.75	23	30	45.52
14	2459106.75	23	34	42.08
15	2459107.75	23	38	38.63
16	2459108.75	23	42	35.18
17	2459109.75	23	46	31.73
18	2459110.75	23	50	28.28
19	2459111.75	23	54	24.82
20	2459112.75	23	58	21.37
21	2459113.75	0	2	17.93
22	2459114.75	0	6	14.48
23	2459115.75	0	10	11.04
24	2459116.75	0	14	7.60
25	2459117.75	0	18	4.16
26	2459118.75	0	22	0.72
27	2459119.75	0	25	57.27
28	2459120.75	0	29	53.82
29	2459121.75	0	33	50.37
30	2459122.75	0	37	46.92
Oct				
1	2459123.75	0	41	43.47
2	2459124.75	0	45	40.01
3	2459125.75	0	49	36.56
4	2459126.75	0	53	33.11
5	2459127.75	0	57	29.66
6	2459128.75	1	1	26.21
7	2459129.75	1	5	22.77
8	2459130.75	1	9	19.33
9	2459131.75	1	13	15.88
10	2459132.75	1	17	12.44
11	2459133.75	1	21	9.00
12	2459134.75	1	25	5.56

Hora sideral, 2020

A las 0^h del meridiano 90° W.G.

d	dj	h	m	s
13	2459135.75	1	29	2.11
14	2459136.75	1	32	58.66
15	2459137.75	1	36	55.21
16	2459138.75	1	40	51.76
17	2459139.75	1	44	48.30
18	2459140.75	1	48	44.85
19	2459141.75	1	52	41.41
20	2459142.75	1	56	37.97
21	2459143.75	2	0	34.53
22	2459144.75	2	4	31.09
23	2459145.75	2	8	27.66
24	2459146.75	2	12	24.21
25	2459147.75	2	16	20.76
26	2459148.75	2	20	17.32
27	2459149.75	2	24	13.87
28	2459150.75	2	28	10.42
29	2459151.75	2	32	6.96
30	2459152.75	2	36	3.51
31	2459153.75	2	40	0.07
Nov				
1	2459154.75	2	43	56.62
2	2459155.75	2	47	53.17
3	2459156.75	2	51	49.73
4	2459157.75	2	55	46.29
5	2459158.75	2	59	42.85
6	2459159.75	3	3	39.41
7	2459160.75	3	7	35.97
8	2459161.75	3	11	32.53
9	2459162.75	3	15	29.09
10	2459163.75	3	19	25.64
11	2459164.75	3	23	22.19
12	2459165.75	3	27	18.74
13	2459166.75	3	31	15.29
14	2459167.75	3	35	11.84
15	2459168.75	3	39	8.40
16	2459169.75	3	43	4.96
17	2459170.75	3	47	1.52
18	2459171.75	3	50	58.09
19	2459172.75	3	54	54.65
20	2459173.75	3	58	51.22
21	2459174.75	4	2	47.77
22	2459175.75	4	6	44.33
23	2459176.75	4	10	40.88
24	2459177.75	4	14	37.43
25	2459178.75	4	18	33.98
26	2459179.75	4	22	30.53
27	2459180.75	4	26	27.09
28	2459181.75	4	30	23.64
29	2459182.75	4	34	20.20
30	2459183.75	4	38	16.76
Dic				
1	2459184.75	4	42	13.32
2	2459185.75	4	46	9.88
3	2459186.75	4	50	6.44
4	2459187.75	4	54	3.01
5	2459188.75	4	57	59.57
6	2459189.75	5	1	56.13
7	2459190.75	5	5	52.69
8	2459191.75	5	9	49.24
9	2459192.75	5	13	45.79
10	2459193.75	5	17	42.34
11	2459194.75	5	21	38.89
12	2459195.75	5	25	35.45
13	2459196.75	5	29	32.01
14	2459197.75	5	33	28.58
15	2459198.75	5	37	25.15
16	2459199.75	5	41	21.71
17	2459200.75	5	45	18.28
18	2459201.75	5	49	14.84
19	2459202.75	5	53	11.40
20	2459203.75	5	57	7.95
21	2459204.75	6	1	4.51
22	2459205.75	6	5	1.06
23	2459206.75	6	8	57.61
24	2459207.75	6	12	54.16
25	2459208.75	6	16	50.72
26	2459209.75	6	20	47.27
27	2459210.75	6	24	43.83
28	2459211.75	6	28	40.40
29	2459212.75	6	32	36.96
30	2459213.75	6	36	33.52
31	2459214.75	6	40	30.09
Ene				
1	2459215.75	6	44	26.65
2	2459216.75	6	48	23.21

Sol, 2020

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

mes	día	dj	h	α m	α s	vh s	δ °	δ `	δ “	vh ”	dis UA	hp h	hp m	hp s
ene	1	2458849.75	18	44	39.61	11.0	-23	2	21.98	12.3	0.98329	12	3	12.2
ene	2	2458850.75	18	49	4.52	11.0	-22	57	25.62	13.5	0.98327	12	3	40.6
ene	3	2458851.75	18	53	29.09	11.0	-22	52	1.78	14.6	0.98326	12	4	8.6
ene	4	2458852.75	18	57	53.28	11.0	-22	46	10.61	15.8	0.98325	12	4	36.3
ene	5	2458853.75	19	2	17.06	11.0	-22	39	52.30	16.9	0.98324	12	5	3.5
ene	6	2458854.75	19	6	40.40	11.0	-22	33	7.04	18.0	0.98325	12	5	30.3
ene	7	2458855.75	19	11	3.28	10.9	-22	25	55.03	19.1	0.98325	12	5	56.6
ene	8	2458856.75	19	15	25.66	10.9	-22	18	16.52	20.2	0.98327	12	6	22.4
ene	9	2458857.75	19	19	47.54	10.9	-22	10	11.71	21.3	0.98329	12	6	47.7
ene	10	2458858.75	19	24	8.89	10.9	-22	1	40.88	22.4	0.98332	12	7	12.5
ene	11	2458859.75	19	28	29.67	10.8	-21	52	44.26	23.4	0.98335	12	7	36.7
ene	12	2458860.75	19	32	49.89	10.8	-21	43	22.11	24.5	0.98339	12	8	0.4
ene	13	2458861.75	19	37	9.50	10.8	-21	33	34.69	25.5	0.98344	12	8	23.4
ene	14	2458862.75	19	41	28.51	10.8	-21	23	22.26	26.5	0.98349	12	8	45.9
ene	15	2458863.75	19	45	46.88	10.7	-21	12	45.09	27.6	0.98355	12	9	7.7
ene	16	2458864.75	19	50	4.62	10.7	-21	1	43.46	28.6	0.98361	12	9	28.9
ene	17	2458865.75	19	54	21.70	10.7	-20	50	17.66	29.6	0.98369	12	9	49.4
ene	18	2458866.75	19	58	38.11	10.7	-20	38	27.99	30.6	0.98376	12	10	9.3
ene	19	2458867.75	20	2	53.83	10.6	-20	26	14.79	31.5	0.98384	12	10	28.4
ene	20	2458868.75	20	7	8.85	10.6	-20	13	38.38	32.5	0.98393	12	10	46.9
ene	21	2458869.75	20	11	23.15	10.6	-20	0	39.12	33.4	0.98401	12	11	4.6
ene	22	2458870.75	20	15	36.71	10.5	-19	47	17.35	34.3	0.98411	12	11	21.6
ene	23	2458871.75	20	19	49.51	10.5	-19	33	33.45	35.2	0.98420	12	11	37.9
ene	24	2458872.75	20	24	1.55	10.5	-19	19	27.78	36.1	0.98430	12	11	53.4
ene	25	2458873.75	20	28	12.81	10.4	-19	5	0.71	37.0	0.98441	12	12	8.1
ene	26	2458874.75	20	32	23.26	10.4	-18	50	12.63	37.9	0.98451	12	12	22.0
ene	27	2458875.75	20	36	32.91	10.4	-18	35	3.91	38.7	0.98462	12	12	35.1
ene	28	2458876.75	20	40	41.75	10.3	-18	19	34.94	39.5	0.98474	12	12	47.3
ene	29	2458877.75	20	44	49.76	10.3	-18	3	46.13	40.3	0.98486	12	12	58.8
ene	30	2458878.75	20	48	56.94	10.3	-17	47	37.85	41.1	0.98498	12	13	9.4
ene	31	2458879.75	20	53	3.29	10.2	-17	31	10.53	41.9	0.98510	12	13	19.2
feb	1	2458880.75	20	57	8.81	10.2	-17	14	24.56	42.7	0.98523	12	13	28.2
feb	2	2458881.75	21	1	13.50	10.2	-16	57	20.36	43.4	0.98537	12	13	36.3
feb	3	2458882.75	21	5	17.35	10.1	-16	39	58.35	44.1	0.98550	12	13	43.6
feb	4	2458883.75	21	9	20.37	10.1	-16	22	18.93	44.8	0.98565	12	13	50.1
feb	5	2458884.75	21	13	22.57	10.1	-16	4	22.54	45.5	0.98579	12	13	55.7
feb	6	2458885.75	21	17	23.94	10.0	-15	46	9.59	46.2	0.98595	12	14	0.5
feb	7	2458886.75	21	21	24.49	10.0	-15	27	40.51	46.9	0.98611	12	14	4.5
feb	8	2458887.75	21	25	24.24	10.0	-15	8	55.71	47.5	0.98627	12	14	7.7
feb	9	2458888.75	21	29	23.18	9.9	-14	49	55.60	48.1	0.98644	12	14	10.1
feb	10	2458889.75	21	33	21.33	9.9	-14	30	40.57	48.7	0.98661	12	14	11.7
feb	11	2458890.75	21	37	18.71	9.9	-14	11	11.01	49.3	0.98680	12	14	12.5
feb	12	2458891.75	21	41	15.32	9.8	-13	51	27.30	49.9	0.98698	12	14	12.6
feb	13	2458892.75	21	45	11.19	9.8	-13	31	29.82	50.5	0.98717	12	14	11.9
feb	14	2458893.75	21	49	6.32	9.8	-13	11	18.97	51.0	0.98737	12	14	10.5
feb	15	2458894.75	21	53	0.74	9.7	-12	50	55.14	51.5	0.98757	12	14	8.4

Sol, 2020

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

mes	día	dj	h	α m	α s	vh s	δ °	δ `	δ “	vh ”	dis UA	hp h	hp m	hp s
feb	16	2458895.75	21	56	54.45	9.7	-12	30	18.74	52.0	0.98777	12	14	5.5
feb	17	2458896.75	22	0	47.47	9.7	-12	9	30.18	52.5	0.98798	12	14	2.0
feb	18	2458897.75	22	4	39.80	9.7	-11	48	29.90	53.0	0.98819	12	13	57.7
feb	19	2458898.75	22	8	31.46	9.6	-11	27	18.31	53.4	0.98841	12	13	52.8
feb	20	2458899.75	22	12	22.45	9.6	-11	5	55.84	53.9	0.98862	12	13	47.3
feb	21	2458900.75	22	16	12.79	9.6	-10	44	22.90	54.3	0.98884	12	13	41.1
feb	22	2458901.75	22	20	2.48	9.5	-10	22	39.93	54.7	0.98906	12	13	34.2
feb	23	2458902.75	22	23	51.54	9.5	-10	0	47.34	55.1	0.98928	12	13	26.7
feb	24	2458903.75	22	27	39.97	9.5	-9	38	45.56	55.4	0.98951	12	13	18.6
feb	25	2458904.75	22	31	27.80	9.5	-9	16	35.00	55.8	0.98974	12	13	9.9
feb	26	2458905.75	22	35	15.04	9.4	-8	54	16.07	56.1	0.98997	12	13	0.6
feb	27	2458906.75	22	39	1.69	9.4	-8	31	49.20	56.4	0.99020	12	12	50.7
feb	28	2458907.75	22	42	47.79	9.4	-8	9	14.81	56.7	0.99043	12	12	40.2
feb	29	2458908.75	22	46	33.34	9.4	-7	46	33.29	57.0	0.99066	12	12	29.2
mar	1	2458909.75	22	50	18.35	9.4	-7	23	45.07	57.3	0.99090	12	12	17.7
mar	2	2458910.75	22	54	2.86	9.3	-7	0	50.55	57.5	0.99114	12	12	5.6
mar	3	2458911.75	22	57	46.87	9.3	-6	37	50.16	57.7	0.99138	12	11	53.1
mar	4	2458912.75	23	1	30.40	9.3	-6	14	44.28	58.0	0.99163	12	11	40.1
mar	5	2458913.75	23	5	13.48	9.3	-5	51	33.33	58.2	0.99187	12	11	26.6
mar	6	2458914.75	23	8	56.11	9.3	-5	28	17.72	58.3	0.99212	12	11	12.6
mar	7	2458915.75	23	12	38.33	9.2	-5	4	57.82	58.5	0.99238	12	10	58.3
mar	8	2458916.75	23	16	20.14	9.2	-4	41	34.02	58.6	0.99263	12	10	43.6
mar	9	2458917.75	23	20	1.58	9.2	-4	18	6.68	58.8	0.99289	12	10	28.4
mar	10	2458918.75	23	23	42.67	9.2	-3	54	36.16	58.9	0.99316	12	10	13.0
mar	11	2458919.75	23	27	23.44	9.2	-3	31	2.79	59.0	0.99343	12	9	57.2
mar	12	2458920.75	23	31	3.91	9.2	-3	7	26.89	59.1	0.99370	12	9	41.1
mar	13	2458921.75	23	34	44.12	9.2	-2	43	48.81	59.2	0.99397	12	9	24.8
mar	14	2458922.75	23	38	24.07	9.2	-2	20	8.90	59.2	0.99425	12	9	8.2
mar	15	2458923.75	23	42	3.81	9.1	-1	56	27.50	59.3	0.99453	12	8	51.4
mar	16	2458924.75	23	45	43.34	9.1	-1	32	44.98	59.3	0.99481	12	8	34.4
mar	17	2458925.75	23	49	22.69	9.1	-1	9	1.72	59.3	0.99509	12	8	17.1
mar	18	2458926.75	23	53	1.88	9.1	-0	45	18.09	59.3	0.99537	12	7	59.8
mar	19	2458927.75	23	56	40.91	9.1	-0	21	34.47	59.3	0.99566	12	7	42.2
mar	20	2458928.75	0	0	19.82	9.1	+0	2	8.77	59.3	0.99594	12	7	24.6
mar	21	2458929.75	0	3	58.61	9.1	+0	25	51.26	59.2	0.99623	12	7	6.8
mar	22	2458930.75	0	7	37.30	9.1	+0	49	32.61	59.2	0.99651	12	6	49.0
mar	23	2458931.75	0	11	15.92	9.1	+1	13	12.46	59.1	0.99680	12	6	31.1
mar	24	2458932.75	0	14	54.49	9.1	+1	36	50.43	59.0	0.99708	12	6	13.1
mar	25	2458933.75	0	18	33.01	9.1	+2	0	26.15	58.9	0.99737	12	5	55.0
mar	26	2458934.75	0	22	11.51	9.1	+2	23	59.25	58.8	0.99765	12	5	37.0
mar	27	2458935.75	0	25	50.00	9.1	+2	47	29.36	58.6	0.99794	12	5	18.9
mar	28	2458936.75	0	29	28.51	9.1	+3	10	56.10	58.5	0.99822	12	5	0.9
mar	29	2458937.75	0	33	7.05	9.1	+3	34	19.12	58.3	0.99850	12	4	42.9
mar	30	2458938.75	0	36	45.63	9.1	+3	57	38.02	58.1	0.99878	12	4	24.9
mar	31	2458939.75	0	40	24.28	9.1	+4	20	52.46	57.9	0.99907	12	4	7.0
abr	1	2458940.75	0	44	3.02	9.1	+4	44	2.06	57.7	0.99935	12	3	49.2

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mes	día	dj	h	α m	α s	vh s	δ °	δ `	δ “	vh ”	dis UA	hp h	hp m	hp s
abr	2	2458941.75	0	47	41.85	9.1	+5	7	6.44	57.5	0.99963	12	3	31.5
abr	3	2458942.75	0	51	20.81	9.1	+5	30	5.26	57.2	0.99991	12	3	13.9
abr	4	2458943.75	0	54	59.89	9.1	+5	52	58.16	56.9	1.00019	12	2	56.4
abr	5	2458944.75	0	58	39.13	9.1	+6	15	44.78	56.7	1.00048	12	2	39.1
abr	6	2458945.75	1	2	18.55	9.2	+6	38	24.79	56.4	1.00076	12	2	21.9
abr	7	2458946.75	1	5	58.17	9.2	+7	0	57.87	56.1	1.00104	12	2	5.0
abr	8	2458947.75	1	9	38.01	9.2	+7	23	23.74	55.8	1.00133	12	1	48.3
abr	9	2458948.75	1	13	18.10	9.2	+7	45	42.08	55.4	1.00162	12	1	31.9
abr	10	2458949.75	1	16	58.46	9.2	+8	7	52.60	55.1	1.00191	12	1	15.7
abr	11	2458950.75	1	20	39.12	9.2	+8	29	55.01	54.7	1.00220	12	0	59.8
abr	12	2458951.75	1	24	20.09	9.2	+8	51	48.99	54.4	1.00248	12	0	44.2
abr	13	2458952.75	1	28	1.39	9.2	+9	13	34.20	54.0	1.00277	12	0	28.9
abr	14	2458953.75	1	31	43.04	9.3	+9	35	10.33	53.6	1.00306	12	0	14.0
abr	15	2458954.75	1	35	25.05	9.3	+9	56	37.02	53.2	1.00335	11	59	59.5
abr	16	2458955.75	1	39	7.43	9.3	+10	17	53.94	52.8	1.00364	11	59	45.3
abr	17	2458956.75	1	42	50.20	9.3	+10	39	0.74	52.3	1.00392	11	59	31.5
abr	18	2458957.75	1	46	33.37	9.3	+10	59	57.09	51.9	1.00421	11	59	18.1
abr	19	2458958.75	1	50	16.96	9.3	+11	20	42.63	51.4	1.00449	11	59	5.2
abr	20	2458959.75	1	54	0.97	9.4	+11	41	17.02	51.0	1.00477	11	58	52.6
abr	21	2458960.75	1	57	45.42	9.4	+12	1	39.93	50.5	1.00505	11	58	40.5
abr	22	2458961.75	2	1	30.31	9.4	+12	21	51.00	50.0	1.00532	11	58	28.9
abr	23	2458962.75	2	5	15.67	9.4	+12	41	49.89	49.4	1.00559	11	58	17.7
abr	24	2458963.75	2	9	1.49	9.4	+13	1	36.27	48.9	1.00586	11	58	6.9
abr	25	2458964.75	2	12	47.79	9.4	+13	21	9.78	48.3	1.00612	11	57	56.7
abr	26	2458965.75	2	16	34.58	9.5	+13	40	30.09	47.8	1.00639	11	57	46.9
abr	27	2458966.75	2	20	21.85	9.5	+13	59	36.85	47.2	1.00665	11	57	37.6
abr	28	2458967.75	2	24	9.62	9.5	+14	18	29.72	46.6	1.00690	11	57	28.9
abr	29	2458968.75	2	27	57.89	9.5	+14	37	8.36	46.0	1.00716	11	57	20.6
abr	30	2458969.75	2	31	46.67	9.6	+14	55	32.43	45.4	1.00741	11	57	12.8
may	1	2458970.75	2	35	35.96	9.6	+15	13	41.59	44.7	1.00766	11	57	5.5
may	2	2458971.75	2	39	25.77	9.6	+15	31	35.51	44.1	1.00790	11	56	58.8
may	3	2458972.75	2	43	16.10	9.6	+15	49	13.87	43.4	1.00815	11	56	52.5
may	4	2458973.75	2	47	6.96	9.6	+16	6	36.36	42.8	1.00839	11	56	46.8
may	5	2458974.75	2	50	58.36	9.7	+16	23	42.68	42.1	1.00863	11	56	41.7
may	6	2458975.75	2	54	50.31	9.7	+16	40	32.56	41.4	1.00887	11	56	37.1
may	7	2458976.75	2	58	42.83	9.7	+16	57	5.74	40.7	1.00911	11	56	33.1
may	8	2458977.75	3	2	35.92	9.7	+17	13	21.94	40.0	1.00935	11	56	29.6
may	9	2458978.75	3	6	29.58	9.8	+17	29	20.92	39.2	1.00958	11	56	26.7
may	10	2458979.75	3	10	23.83	9.8	+17	45	2.39	38.5	1.00982	11	56	24.4
may	11	2458980.75	3	14	18.66	9.8	+18	0	26.08	37.7	1.01005	11	56	22.6
may	12	2458981.75	3	18	14.08	9.8	+18	15	31.71	37.0	1.01028	11	56	21.5
may	13	2458982.75	3	22	10.08	9.9	+18	30	18.99	36.2	1.01051	11	56	21.0
may	14	2458983.75	3	26	6.67	9.9	+18	44	47.63	35.4	1.01074	11	56	21.0
may	15	2458984.75	3	30	3.84	9.9	+18	58	57.35	34.6	1.01096	11	56	21.6
may	16	2458985.75	3	34	1.59	9.9	+19	12	47.87	33.8	1.01118	11	56	22.8
may	17	2458986.75	3	37	59.92	10.0	+19	26	18.91	33.0	1.01140	11	56	24.6

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mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	hp m	s
may	18	2458987.75	3	41	58.81	10.0	+19	39	30.19	32.1	1.01161	11	56	26.9
may	19	2458988.75	3	45	58.28	10.0	+19	52	21.44	31.3	1.01182	11	56	29.8
may	20	2458989.75	3	49	58.29	10.0	+20	4	52.40	30.4	1.01202	11	56	33.3
may	21	2458990.75	3	53	58.86	10.0	+20	17	2.80	29.6	1.01222	11	56	37.3
may	22	2458991.75	3	57	59.96	10.1	+20	28	52.40	28.7	1.01241	11	56	41.9
may	23	2458992.75	4	2	1.58	10.1	+20	40	20.93	27.8	1.01260	11	56	46.9
may	24	2458993.75	4	6	3.72	10.1	+20	51	28.15	26.9	1.01279	11	56	52.5
may	25	2458994.75	4	10	6.35	10.1	+21	2	13.82	26.0	1.01297	11	56	58.6
may	26	2458995.75	4	14	9.46	10.1	+21	12	37.70	25.1	1.01314	11	57	5.1
may	27	2458996.75	4	18	13.04	10.2	+21	22	39.55	24.1	1.01331	11	57	12.1
may	28	2458997.75	4	22	17.05	10.2	+21	32	19.14	23.2	1.01347	11	57	19.6
may	29	2458998.75	4	26	21.50	10.2	+21	41	36.26	22.3	1.01363	11	57	27.5
may	30	2458999.75	4	30	26.36	10.2	+21	50	30.70	21.3	1.01379	11	57	35.8
may	31	2459000.75	4	34	31.61	10.2	+21	59	2.25	20.4	1.01394	11	57	44.5
jun	1	2459001.75	4	38	37.25	10.3	+22	7	10.74	19.4	1.01409	11	57	53.6
jun	2	2459002.75	4	42	43.25	10.3	+22	14	55.99	18.4	1.01423	11	58	3.0
jun	3	2459003.75	4	46	49.61	10.3	+22	22	17.87	17.4	1.01438	11	58	12.8
jun	4	2459004.75	4	50	56.32	10.3	+22	29	16.23	16.4	1.01452	11	58	23.0
jun	5	2459005.75	4	55	3.36	10.3	+22	35	50.96	15.5	1.01465	11	58	33.5
jun	6	2459006.75	4	59	10.71	10.3	+22	42	1.95	14.5	1.01478	11	58	44.2
jun	7	2459007.75	5	3	18.37	10.3	+22	47	49.08	13.5	1.01492	11	58	55.3
jun	8	2459008.75	5	7	26.30	10.3	+22	53	12.24	12.5	1.01504	11	59	6.7
jun	9	2459009.75	5	11	34.50	10.4	+22	58	11.31	11.5	1.01517	11	59	18.3
jun	10	2459010.75	5	15	42.95	10.4	+23	2	46.18	10.4	1.01529	11	59	30.2
jun	11	2459011.75	5	19	51.62	10.4	+23	6	56.76	9.4	1.01541	11	59	42.3
jun	12	2459012.75	5	24	0.50	10.4	+23	10	42.94	8.4	1.01552	11	59	54.7
jun	13	2459013.75	5	28	9.57	10.4	+23	14	4.65	7.4	1.01563	12	0	7.2
jun	14	2459014.75	5	32	18.80	10.4	+23	17	1.80	6.4	1.01573	12	0	19.9
jun	15	2459015.75	5	36	28.18	10.4	+23	19	34.32	5.3	1.01583	12	0	32.7
jun	16	2459016.75	5	40	37.67	10.4	+23	21	42.16	4.3	1.01593	12	0	45.6
jun	17	2459017.75	5	44	47.26	10.4	+23	23	25.28	3.3	1.01602	12	0	58.7
jun	18	2459018.75	5	48	56.92	10.4	+23	24	43.64	2.2	1.01610	12	1	11.8
jun	19	2459019.75	5	53	6.63	10.4	+23	25	37.21	1.2	1.01618	12	1	24.9
jun	20	2459020.75	5	57	16.35	10.4	+23	26	5.98	0.2	1.01625	12	1	38.1
jun	21	2459021.75	6	1	26.07	10.4	+23	26	9.95	-0.9	1.01632	12	1	51.2
jun	22	2459022.75	6	5	35.74	10.4	+23	25	49.13	-1.9	1.01638	12	2	4.3
jun	23	2459023.75	6	9	45.35	10.4	+23	25	3.52	-2.9	1.01644	12	2	17.4
jun	24	2459024.75	6	13	54.86	10.4	+23	23	53.14	-4.0	1.01649	12	2	30.3
jun	25	2459025.75	6	18	4.24	10.4	+23	22	18.04	-5.0	1.01653	12	2	43.1
jun	26	2459026.75	6	22	13.46	10.4	+23	20	18.23	-6.0	1.01657	12	2	55.8
jun	27	2459027.75	6	26	22.51	10.4	+23	17	53.78	-7.0	1.01660	12	3	8.3
jun	28	2459028.75	6	30	31.35	10.4	+23	15	4.75	-8.1	1.01662	12	3	20.6
jun	29	2459029.75	6	34	39.96	10.3	+23	11	51.20	-9.1	1.01665	12	3	32.7
jun	30	2459030.75	6	38	48.33	10.3	+23	8	13.25	-10.1	1.01666	12	3	44.5
jul	1	2459031.75	6	42	56.44	10.3	+23	4	10.99	-11.1	1.01668	12	3	56.0
jul	2	2459032.75	6	47	4.26	10.3	+22	59	44.55	-12.1	1.01669	12	4	7.3

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mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	hp m	s
jul	3	2459033.75	6	51	11.79	10.3	+22	54	54.06	-13.1	1.01669	12	4	18.3
jul	4	2459034.75	6	55	18.99	10.3	+22	49	39.66	-14.1	1.01669	12	4	28.9
jul	5	2459035.75	6	59	25.86	10.3	+22	44	1.49	-15.1	1.01669	12	4	39.2
jul	6	2459036.75	7	3	32.38	10.3	+22	37	59.68	-16.1	1.01669	12	4	49.2
jul	7	2459037.75	7	7	38.54	10.2	+22	31	34.38	-17.0	1.01668	12	4	58.8
jul	8	2459038.75	7	11	44.31	10.2	+22	24	45.74	-18.0	1.01667	12	5	8.0
jul	9	2459039.75	7	15	49.69	10.2	+22	17	33.90	-19.0	1.01666	12	5	16.8
jul	10	2459040.75	7	19	54.66	10.2	+22	9	59.02	-19.9	1.01664	12	5	25.2
jul	11	2459041.75	7	23	59.20	10.2	+22	2	1.27	-20.9	1.01661	12	5	33.2
jul	12	2459042.75	7	28	3.31	10.2	+21	53	40.83	-21.8	1.01659	12	5	40.8
jul	13	2459043.75	7	32	6.97	10.1	+21	44	57.87	-22.7	1.01655	12	5	47.9
jul	14	2459044.75	7	36	10.16	10.1	+21	35	52.60	-23.6	1.01652	12	5	54.5
jul	15	2459045.75	7	40	12.88	10.1	+21	26	25.20	-24.6	1.01648	12	6	0.7
jul	16	2459046.75	7	44	15.10	10.1	+21	16	35.90	-25.5	1.01643	12	6	6.3
jul	17	2459047.75	7	48	16.83	10.1	+21	6	24.90	-26.4	1.01638	12	6	11.5
jul	18	2459048.75	7	52	18.03	10.0	+20	55	52.45	-27.2	1.01632	12	6	16.1
jul	19	2459049.75	7	56	18.71	10.0	+20	44	58.78	-28.1	1.01626	12	6	20.3
jul	20	2459050.75	8	0	18.83	10.0	+20	33	44.12	-29.0	1.01619	12	6	23.8
jul	21	2459051.75	8	4	18.40	10.0	+20	22	8.73	-29.8	1.01611	12	6	26.8
jul	22	2459052.75	8	8	17.39	9.9	+20	10	12.87	-30.7	1.01603	12	6	29.3
jul	23	2459053.75	8	12	15.78	9.9	+19	57	56.78	-31.5	1.01594	12	6	31.1
jul	24	2459054.75	8	16	13.58	9.9	+19	45	20.73	-32.3	1.01585	12	6	32.3
jul	25	2459055.75	8	20	10.77	9.9	+19	32	24.97	-33.1	1.01575	12	6	33.0
jul	26	2459056.75	8	24	7.34	9.8	+19	19	9.79	-33.9	1.01564	12	6	33.0
jul	27	2459057.75	8	28	3.30	9.8	+19	5	35.45	-34.7	1.01553	12	6	32.4
jul	28	2459058.75	8	31	58.63	9.8	+18	51	42.24	-35.5	1.01542	12	6	31.2
jul	29	2459059.75	8	35	53.34	9.8	+18	37	30.46	-36.3	1.01530	12	6	29.3
jul	30	2459060.75	8	39	47.43	9.7	+18	23	0.41	-37.0	1.01518	12	6	26.9
jul	31	2459061.75	8	43	40.90	9.7	+18	8	12.45	-37.7	1.01505	12	6	23.8
ago	1	2459062.75	8	47	33.74	9.7	+17	53	7.54	-38.5	1.01492	12	6	20.0
ago	2	2459063.75	8	51	25.91	9.7	+17	37	43.83	-39.2	1.01479	12	6	15.7
ago	3	2459064.75	8	55	17.53	9.6	+17	22	3.35	-39.9	1.01466	12	6	10.7
ago	4	2459065.75	8	59	8.54	9.6	+17	6	6.19	-40.6	1.01452	12	6	5.2
ago	5	2459066.75	9	2	58.94	9.6	+16	49	52.50	-41.2	1.01438	12	5	59.0
ago	6	2459067.75	9	6	48.75	9.6	+16	33	22.55	-41.9	1.01423	12	5	52.3
ago	7	2459068.75	9	10	37.97	9.5	+16	16	36.59	-42.6	1.01409	12	5	44.9
ago	8	2459069.75	9	14	26.62	9.5	+15	59	34.92	-43.2	1.01394	12	5	37.0
ago	9	2459070.75	9	18	14.69	9.5	+15	42	17.82	-43.8	1.01379	12	5	28.6
ago	10	2459071.75	9	22	2.21	9.5	+15	24	45.59	-44.5	1.01363	12	5	19.5
ago	11	2459072.75	9	25	49.17	9.4	+15	6	58.50	-45.1	1.01347	12	5	9.9
ago	12	2459073.75	9	29	35.59	9.4	+14	48	56.87	-45.7	1.01331	12	4	59.8
ago	13	2459074.75	9	33	21.48	9.4	+14	30	41.00	-46.2	1.01314	12	4	49.1
ago	14	2459075.75	9	37	6.84	9.4	+14	12	11.20	-46.8	1.01297	12	4	37.9
ago	15	2459076.75	9	40	51.68	9.3	+13	53	27.78	-47.4	1.01279	12	4	26.2
ago	16	2459077.75	9	44	36.01	9.3	+13	34	31.06	-47.9	1.01261	12	4	14.0
ago	17	2459078.75	9	48	19.83	9.3	+13	15	21.37	-48.4	1.01242	12	4	1.3

Sol, 2020

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

mes	día	dj	h	α m	α s	vh s	δ °	δ `	vh “	vh ”	dis UA	hp h	hp m	hp s
ago	18	2459079.75	9	52	3.16	9.3	+12	55	59.04	-48.9	1.01223	12	3	48.0
ago	19	2459080.75	9	55	45.98	9.3	+12	36	24.39	-49.4	1.01204	12	3	34.3
ago	20	2459081.75	9	59	28.32	9.2	+12	16	37.76	-49.9	1.01184	12	3	20.1
ago	21	2459082.75	10	3	10.18	9.2	+11	56	39.49	-50.4	1.01163	12	3	5.4
ago	22	2459083.75	10	6	51.57	9.2	+11	36	29.89	-50.9	1.01142	12	2	50.2
ago	23	2459084.75	10	10	32.50	9.2	+11	16	9.31	-51.3	1.01120	12	2	34.6
ago	24	2459085.75	10	14	12.99	9.2	+10	55	38.07	-51.7	1.01099	12	2	18.6
ago	25	2459086.75	10	17	53.04	9.2	+10	34	56.53	-52.1	1.01076	12	2	2.1
ago	26	2459087.75	10	21	32.68	9.1	+10	14	5.01	-52.5	1.01054	12	1	45.1
ago	27	2459088.75	10	25	11.91	9.1	+9	53	3.85	-52.9	1.01031	12	1	27.8
ago	28	2459089.75	10	28	50.75	9.1	+9	31	53.39	-53.3	1.01008	12	1	10.1
ago	29	2459090.75	10	32	29.22	9.1	+9	10	33.95	-53.7	1.00984	12	0	52.0
ago	30	2459091.75	10	36	7.33	9.1	+8	49	5.85	-54.0	1.00961	12	0	33.5
ago	31	2459092.75	10	39	45.11	9.1	+8	27	29.39	-54.4	1.00937	12	0	14.8
sep	1	2459093.75	10	43	22.58	9.0	+8	5	44.89	-54.7	1.00913	11	59	55.7
sep	2	2459094.75	10	46	59.75	9.0	+7	43	52.64	-55.0	1.00889	11	59	36.3
sep	3	2459095.75	10	50	36.64	9.0	+7	21	52.94	-55.3	1.00865	11	59	16.7
sep	4	2459096.75	10	54	13.29	9.0	+6	59	46.09	-55.6	1.00840	11	58	56.7
sep	5	2459097.75	10	57	49.70	9.0	+6	37	32.40	-55.8	1.00816	11	58	36.6
sep	6	2459098.75	11	1	25.91	9.0	+6	15	12.15	-56.1	1.00791	11	58	16.3
sep	7	2459099.75	11	5	1.92	9.0	+5	52	45.65	-56.4	1.00767	11	57	55.7
sep	8	2459100.75	11	8	37.78	9.0	+5	30	13.21	-56.6	1.00742	11	57	35.0
sep	9	2459101.75	11	12	13.48	9.0	+5	7	35.15	-56.8	1.00717	11	57	14.2
sep	10	2459102.75	11	15	49.06	9.0	+4	44	51.77	-57.0	1.00691	11	56	53.2
sep	11	2459103.75	11	19	24.53	9.0	+4	22	3.39	-57.2	1.00666	11	56	32.1
sep	12	2459104.75	11	22	59.91	9.0	+3	59	10.34	-57.4	1.00640	11	56	11.0
sep	13	2459105.75	11	26	35.23	9.0	+3	36	12.95	-57.6	1.00614	11	55	49.7
sep	14	2459106.75	11	30	10.49	9.0	+3	13	11.56	-57.7	1.00588	11	55	28.4
sep	15	2459107.75	11	33	45.71	9.0	+2	50	6.52	-57.8	1.00562	11	55	7.1
sep	16	2459108.75	11	37	20.90	9.0	+2	26	58.16	-58.0	1.00535	11	54	45.7
sep	17	2459109.75	11	40	56.10	9.0	+2	3	46.85	-58.1	1.00508	11	54	24.4
sep	18	2459110.75	11	44	31.30	9.0	+1	40	32.94	-58.2	1.00480	11	54	3.0
sep	19	2459111.75	11	48	6.53	9.0	+1	17	16.78	-58.3	1.00453	11	53	41.7
sep	20	2459112.75	11	51	41.80	9.0	+0	53	58.74	-58.3	1.00425	11	53	20.4
sep	21	2459113.75	11	55	17.14	9.0	+0	30	39.16	-58.4	1.00396	11	52	59.2
sep	22	2459114.75	11	58	52.56	9.0	+0	7	18.43	-58.4	1.00368	11	52	38.1
sep	23	2459115.75	12	2	28.08	9.0	-0	16	3.10	-58.4	1.00339	11	52	17.0
sep	24	2459116.75	12	6	3.71	9.0	-0	39	25.07	-58.4	1.00311	11	51	56.1
sep	25	2459117.75	12	9	39.48	9.0	-1	2	47.11	-58.4	1.00282	11	51	35.3
sep	26	2459118.75	12	13	15.41	9.0	-1	26	8.89	-58.4	1.00253	11	51	14.7
sep	27	2459119.75	12	16	51.51	9.0	-1	49	30.04	-58.3	1.00224	11	50	54.2
sep	28	2459120.75	12	20	27.81	9.0	-2	12	50.25	-58.3	1.00195	11	50	34.0
sep	29	2459121.75	12	24	4.34	9.0	-2	36	9.17	-58.2	1.00166	11	50	14.0
sep	30	2459122.75	12	27	41.12	9.0	-2	59	26.48	-58.1	1.00137	11	49	54.2
oct	1	2459123.75	12	31	18.17	9.1	-3	22	41.84	-58.0	1.00108	11	49	34.7
oct	2	2459124.75	12	34	55.51	9.1	-3	45	54.94	-57.9	1.00080	11	49	15.5

Sol, 2020

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

mes	día	dj	h	α m	s	vh s	°	δ `	“	vh ”	dis UA	h	hp m	s
oct	3	2459125.75	12	38	33.17	9.1	-4	9	5.44	-57.8	1.00051	11	48	56.6
oct	4	2459126.75	12	42	11.18	9.1	-4	32	13.01	-57.7	1.00023	11	48	38.1
oct	5	2459127.75	12	45	49.56	9.1	-4	55	17.32	-57.5	0.99994	11	48	19.9
oct	6	2459128.75	12	49	28.33	9.1	-5	18	18.03	-57.4	0.99966	11	48	2.1
oct	7	2459129.75	12	53	7.50	9.2	-5	41	14.80	-57.2	0.99938	11	47	44.7
oct	8	2459130.75	12	56	47.12	9.2	-6	4	7.28	-57.0	0.99909	11	47	27.8
oct	9	2459131.75	13	0	27.18	9.2	-6	26	55.12	-56.8	0.99881	11	47	11.3
oct	10	2459132.75	13	4	7.72	9.2	-6	49	37.95	-56.6	0.99853	11	46	55.3
oct	11	2459133.75	13	7	48.76	9.2	-7	12	15.41	-56.3	0.99825	11	46	39.8
oct	12	2459134.75	13	11	30.30	9.3	-7	34	47.13	-56.1	0.99797	11	46	24.7
oct	13	2459135.75	13	15	12.37	9.3	-7	57	12.71	-55.8	0.99769	11	46	10.3
oct	14	2459136.75	13	18	54.98	9.3	-8	19	31.77	-55.5	0.99741	11	45	56.3
oct	15	2459137.75	13	22	38.15	9.3	-8	41	43.92	-55.2	0.99713	11	45	42.9
oct	16	2459138.75	13	26	21.89	9.3	-9	3	48.74	-54.9	0.99685	11	45	30.1
oct	17	2459139.75	13	30	6.22	9.4	-9	25	45.85	-54.5	0.99656	11	45	17.9
oct	18	2459140.75	13	33	51.16	9.4	-9	47	34.83	-54.2	0.99628	11	45	6.3
oct	19	2459141.75	13	37	36.71	9.4	-10	9	15.26	-53.8	0.99600	11	44	55.3
oct	20	2459142.75	13	41	22.89	9.5	-10	30	46.74	-53.4	0.99571	11	44	44.9
oct	21	2459143.75	13	45	9.70	9.5	-10	52	8.83	-53.0	0.99543	11	44	35.2
oct	22	2459144.75	13	48	57.17	9.5	-11	13	21.11	-52.6	0.99515	11	44	26.1
oct	23	2459145.75	13	52	45.30	9.5	-11	34	23.19	-52.1	0.99486	11	44	17.6
oct	24	2459146.75	13	56	34.10	9.6	-11	55	14.64	-51.7	0.99458	11	44	9.9
oct	25	2459147.75	14	0	23.59	9.6	-12	15	55.07	-51.2	0.99430	11	44	2.8
oct	26	2459148.75	14	4	13.79	9.6	-12	36	24.08	-50.7	0.99403	11	43	56.5
oct	27	2459149.75	14	8	4.70	9.7	-12	56	41.28	-50.2	0.99375	11	43	50.8
oct	28	2459150.75	14	11	56.36	9.7	-13	16	46.29	-49.7	0.99348	11	43	45.9
oct	29	2459151.75	14	15	48.76	9.7	-13	36	38.73	-49.1	0.99321	11	43	41.8
oct	30	2459152.75	14	19	41.93	9.7	-13	56	18.22	-48.6	0.99295	11	43	38.4
oct	31	2459153.75	14	23	35.88	9.8	-14	15	44.36	-48.0	0.99268	11	43	35.8
nov	1	2459154.75	14	27	30.63	9.8	-14	34	56.79	-47.4	0.99242	11	43	34.0
nov	2	2459155.75	14	31	26.18	9.8	-14	53	55.13	-46.8	0.99217	11	43	33.0
nov	3	2459156.75	14	35	22.55	9.9	-15	12	38.99	-46.2	0.99191	11	43	32.8
nov	4	2459157.75	14	39	19.75	9.9	-15	31	7.99	-45.6	0.99166	11	43	33.5
nov	5	2459158.75	14	43	17.79	10.0	-15	49	21.73	-44.9	0.99142	11	43	34.9
nov	6	2459159.75	14	47	16.68	10.0	-16	7	19.84	-44.3	0.99118	11	43	37.3
nov	7	2459160.75	14	51	16.41	10.0	-16	25	1.91	-43.6	0.99094	11	43	40.4
nov	8	2459161.75	14	55	17.01	10.1	-16	42	27.54	-42.9	0.99070	11	43	44.5
nov	9	2459162.75	14	59	18.46	10.1	-16	59	36.33	-42.1	0.99047	11	43	49.4
nov	10	2459163.75	15	3	20.78	10.1	-17	16	27.88	-41.4	0.99024	11	43	55.1
nov	11	2459164.75	15	7	23.96	10.2	-17	33	1.77	-40.7	0.99001	11	44	1.8
nov	12	2459165.75	15	11	28.01	10.2	-17	49	17.59	-39.9	0.98978	11	44	9.3
nov	13	2459166.75	15	15	32.93	10.2	-18	5	14.94	-39.1	0.98956	11	44	17.6
nov	14	2459167.75	15	19	38.71	10.3	-18	20	53.40	-38.3	0.98934	11	44	26.9
nov	15	2459168.75	15	23	45.35	10.3	-18	36	12.58	-37.5	0.98911	11	44	37.0
nov	16	2459169.75	15	27	52.83	10.3	-18	51	12.07	-36.6	0.98890	11	44	47.9
nov	17	2459170.75	15	32	1.15	10.4	-19	5	51.45	-35.8	0.98868	11	44	59.6

Sol, 2020

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

				α		vh		δ		vh		dis		hp	
mes	día	dj	h	m	s	s	°	`	“	”		UA	h	m	s
nov	18	2459171.75	15	36	10.29	10.4	-19	20	10.34	-34.9		0.98846	11	45	12.2
nov	19	2459172.75	15	40	20.25	10.4	-19	34	8.32	-34.0		0.98825	11	45	25.6
nov	20	2459173.75	15	44	31.00	10.5	-19	47	45.00	-33.1		0.98804	11	45	39.8
nov	21	2459174.75	15	48	42.54	10.5	-20	0	60.00	-32.2		0.98783	11	45	54.8
nov	22	2459175.75	15	52	54.85	10.5	-20	13	52.95	-31.3		0.98763	11	46	10.5
nov	23	2459176.75	15	57	7.94	10.6	-20	26	23.50	-30.3		0.98743	11	46	27.1
nov	24	2459177.75	16	1	21.77	10.6	-20	38	31.31	-29.4		0.98723	11	46	44.3
nov	25	2459178.75	16	5	36.36	10.6	-20	50	16.05	-28.4		0.98704	11	47	2.4
nov	26	2459179.75	16	9	51.67	10.7	-21	1	37.38	-27.4		0.98685	11	47	21.1
nov	27	2459180.75	16	14	7.71	10.7	-21	12	35.02	-26.4		0.98667	11	47	40.6
nov	28	2459181.75	16	18	24.45	10.7	-21	23	8.65	-25.4		0.98649	11	48	0.8
nov	29	2459182.75	16	22	41.89	10.8	-21	33	17.98	-24.4		0.98632	11	48	21.7
nov	30	2459183.75	16	26	60.00	10.8	-21	43	2.74	-23.3		0.98615	11	48	43.2
dic	1	2459184.75	16	31	18.77	10.8	-21	52	22.65	-22.3		0.98599	11	49	5.5
dic	2	2459185.75	16	35	38.18	10.8	-22	1	17.44	-21.2		0.98583	11	49	28.3
dic	3	2459186.75	16	39	58.21	10.9	-22	9	46.86	-20.2		0.98568	11	49	51.8
dic	4	2459187.75	16	44	18.85	10.9	-22	17	50.66	-19.1		0.98554	11	50	15.8
dic	5	2459188.75	16	48	40.06	10.9	-22	25	28.58	-18.0		0.98540	11	50	40.5
dic	6	2459189.75	16	53	1.82	10.9	-22	32	40.39	-16.9		0.98526	11	51	5.7
dic	7	2459190.75	16	57	24.12	11.0	-22	39	25.85	-15.8		0.98513	11	51	31.4
dic	8	2459191.75	17	1	46.93	11.0	-22	45	44.73	-14.7		0.98501	11	51	57.7
dic	9	2459192.75	17	6	10.21	11.0	-22	51	36.83	-13.5		0.98489	11	52	24.4
dic	10	2459193.75	17	10	33.95	11.0	-22	57	1.93	-12.4		0.98477	11	52	51.6
dic	11	2459194.75	17	14	58.11	11.0	-23	1	59.86	-11.3		0.98466	11	53	19.2
dic	12	2459195.75	17	19	22.67	11.0	-23	6	30.44	-10.1		0.98455	11	53	47.2
dic	13	2459196.75	17	23	47.59	11.1	-23	10	33.51	-9.0		0.98445	11	54	15.6
dic	14	2459197.75	17	28	12.82	11.1	-23	14	8.93	-7.8		0.98434	11	54	44.2
dic	15	2459198.75	17	32	38.34	11.1	-23	17	16.57	-6.7		0.98424	11	55	13.2
dic	16	2459199.75	17	37	4.10	11.1	-23	19	56.32	-5.5		0.98415	11	55	42.4
dic	17	2459200.75	17	41	30.07	11.1	-23	22	8.05	-4.3		0.98406	11	56	11.8
dic	18	2459201.75	17	45	56.19	11.1	-23	23	51.68	-3.1		0.98397	11	56	41.4
dic	19	2459202.75	17	50	22.44	11.1	-23	25	7.13	-2.0		0.98388	11	57	11.0
dic	20	2459203.75	17	54	48.77	11.1	-23	25	54.33	-0.8		0.98380	11	57	40.8
dic	21	2459204.75	17	59	15.16	11.1	-23	26	13.26	0.4		0.98373	11	58	10.7
dic	22	2459205.75	18	3	41.58	11.1	-23	26	3.89	1.6		0.98366	11	58	40.5
dic	23	2459206.75	18	8	7.98	11.1	-23	25	26.23	2.7		0.98359	11	59	10.4
dic	24	2459207.75	18	12	34.33	11.1	-23	24	20.28	3.9		0.98353	11	59	40.2
dic	25	2459208.75	18	17	0.61	11.1	-23	22	46.10	5.1		0.98348	12	0	9.9
dic	26	2459209.75	18	21	26.78	11.1	-23	20	43.72	6.3		0.98343	12	0	39.5
dic	27	2459210.75	18	25	52.80	11.1	-23	18	13.23	7.4		0.98338	12	1	9.0
dic	28	2459211.75	18	30	18.66	11.1	-23	15	14.69	8.6		0.98335	12	1	38.3
dic	29	2459212.75	18	34	44.32	11.1	-23	11	48.21	9.8		0.98332	12	2	7.4
dic	30	2459213.75	18	39	9.75	11.0	-23	7	53.90	10.9		0.98329	12	2	36.2
dic	31	2459214.75	18	43	34.91	11.0	-23	3	31.87	10.9		0.98327	12	3	6.6

Luna, 2020

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	2458849.75	23	27	52.62	-8	53	47.77	63.37	14.8	54.3	30.0	17.2
ene	2	2458850.75	0	11	58.12	-4	25	0.74	63.44	14.8	54.2	39.0	17.8
ene	3	2458851.75	0	55	32.60	+0	13	31.47	63.29	14.8	54.3	48.4	18.5
ene	4	2458852.75	1	39	29.30	+4	53	43.15	62.95	14.9	54.5	58.0	19.2
ene	5	2458853.75	2	24	42.70	+9	26	56.75	62.42	15.0	55.0	67.3	19.9
ene	6	2458854.75	3	12	5.81	+13	43	1.37	61.73	15.1	55.5	76.2	20.6
ene	7	2458855.75	4	2	24.88	+17	29	22.19	60.95	15.3	56.2	84.2	21.4
ene	8	2458856.75	4	56	9.62	+20	30	48.45	60.12	15.5	57.0	91.0	22.2
ene	9	2458857.75	5	53	19.67	+22	30	36.07	59.31	15.7	57.8	96.2	23.1
ene	10	2458858.75	6	53	13.16	+23	13	18.30	58.60	15.9	58.5	99.3	0.0
ene	11	2458859.75	7	54	28.71	+22	28	57.93	58.02	16.1	59.1	99.9	1.0
ene	12	2458860.75	8	55	28.12	+20	16	48.09	57.61	16.2	59.6	98.0	1.9
ene	13	2458861.75	9	54	49.91	+16	46	4.95	57.41	16.3	59.9	93.3	2.8
ene	14	2458862.75	10	51	52.94	+12	13	42.96	57.39	16.3	59.9	86.3	3.7
ene	15	2458863.75	11	46	39.07	+7	0	17.97	57.53	16.3	59.8	77.2	4.6
ene	16	2458864.75	12	39	41.44	+1	26	47.62	57.81	16.2	59.5	66.7	5.4
ene	17	2458865.75	13	31	49.30	-4	7	14.60	58.18	16.1	59.2	55.4	6.2
ene	18	2458866.75	14	23	55.22	-9	24	5.50	58.61	16.0	58.8	44.1	7.0
ene	19	2458867.75	15	16	44.76	-14	7	38.08	59.08	15.9	58.3	33.2	7.8
ene	20	2458868.75	16	10	47.33	-18	3	14.55	59.57	15.8	57.8	23.3	8.6
ene	21	2458869.75	17	6	7.67	-20	58	14.17	60.07	15.6	57.4	14.8	9.5
ene	22	2458870.75	18	2	21.19	-22	43	6.93	60.59	15.5	56.9	8.1	10.4
ene	23	2458871.75	18	58	37.68	-23	13	8.86	61.11	15.4	56.4	3.4	11.2
ene	24	2458872.75	19	53	55.23	-22	29	24.88	61.64	15.2	55.9	0.7	12.1
ene	25	2458873.75	20	47	19.40	-20	38	32.04	62.15	15.1	55.4	0.0	12.9
ene	26	2458874.75	21	38	17.91	-17	51	1.85	62.62	15.0	55.0	1.4	13.7
ene	27	2458875.75	22	26	45.23	-14	19	10.43	63.03	14.9	54.6	4.6	14.4
ene	28	2458876.75	23	12	58.86	-10	15	8.15	63.34	14.8	54.3	9.5	15.1
ene	29	2458877.75	23	57	32.18	-5	49	58.39	63.53	14.8	54.1	15.8	15.8
ene	30	2458878.75	0	41	8.22	-1	13	23.24	63.55	14.7	54.1	23.3	16.5
ene	31	2458879.75	1	24	35.43	+3	25	56.28	63.40	14.8	54.2	31.7	17.1
feb	1	2458880.75	2	8	45.30	+7	59	38.13	63.05	14.8	54.5	40.9	17.8
feb	2	2458881.75	2	54	30.32	+12	18	45.81	62.50	14.9	54.9	50.5	18.5
feb	3	2458882.75	3	42	40.82	+16	12	52.25	61.79	15.1	55.5	60.2	19.2
feb	4	2458883.75	4	33	58.61	+19	29	16.72	60.93	15.3	56.2	69.8	20.0
feb	5	2458884.75	5	28	46.28	+21	53	2.86	60.00	15.6	57.1	78.9	20.9
feb	6	2458885.75	6	26	53.79	+23	8	17.07	59.05	15.8	58.0	86.9	21.8
feb	7	2458886.75	7	27	29.94	+23	1	13.69	58.16	16.1	58.9	93.5	22.7
feb	8	2458887.75	8	29	9.54	+21	24	31.03	57.40	16.3	59.7	98.0	23.7
feb	9	2458888.75	9	30	19.57	+18	20	36.81	56.86	16.4	60.3	99.9	0.6
feb	10	2458889.75	10	29	50.67	+14	2	18.01	56.56	16.6	60.7	99.1	1.6
feb	11	2458890.75	11	27	14.57	+8	50	0.11	56.53	16.6	60.8	95.3	2.5
feb	12	2458891.75	12	22	41.84	+3	7	39.33	56.76	16.5	60.6	88.8	3.3
feb	13	2458892.75	13	16	48.32	-2	40	54.07	57.19	16.4	60.2	80.1	4.2
feb	14	2458893.75	14	10	19.95	-8	14	6.63	57.79	16.2	59.6	69.9	5.0
feb	15	2458894.75	15	4	0.23	-13	13	30.76	58.47	16.1	59.0	58.9	5.8

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

mes	día	dj	h	α m	s	°	δ `	“	dis DT	´	´	fase	hp h
feb	16	2458895.75	15	58	20.12	-17	23	50.49	59.20	15.9	58.2	47.7	6.7
feb	17	2458896.75	16	53	30.14	-20	33	2.79	59.93	15.7	57.5	37.0	7.5
feb	18	2458897.75	17	49	15.91	-22	32	40.47	60.61	15.5	56.9	27.1	8.4
feb	19	2458898.75	18	45	0.38	-23	18	34.10	61.25	15.3	56.3	18.4	9.2
feb	20	2458899.75	19	39	53.92	-22	51	24.35	61.82	15.2	55.7	11.3	10.1
feb	21	2458900.75	20	33	9.41	-21	16	31.86	62.32	15.1	55.3	5.8	10.9
feb	22	2458901.75	21	24	15.39	-18	42	55.12	62.76	14.9	54.9	2.0	11.7
feb	23	2458902.75	22	13	1.99	-15	21	37.95	63.12	14.9	54.5	0.2	12.4
feb	24	2458903.75	22	59	39.75	-11	24	21.03	63.41	14.8	54.3	0.3	13.2
feb	25	2458904.75	23	44	34.55	-7	2	21.76	63.61	14.7	54.1	2.1	13.8
feb	26	2458905.75	0	28	22.19	-2	26	5.98	63.70	14.7	54.0	5.7	14.5
feb	27	2458906.75	1	11	44.39	+2	14	52.23	63.66	14.7	54.0	10.9	15.2
feb	28	2458907.75	1	55	26.19	+6	51	30.96	63.48	14.7	54.1	17.5	15.8
feb	29	2458908.75	2	40	14.08	+11	14	47.87	63.14	14.8	54.4	25.3	16.5
mar	1	2458909.75	3	26	53.84	+15	15	1.19	62.62	14.9	54.8	34.0	17.2
mar	2	2458910.75	4	16	6.38	+18	41	11.87	61.94	15.1	55.4	43.5	18.0
mar	3	2458911.75	5	8	20.79	+21	20	44.12	61.11	15.3	56.1	53.5	18.8
mar	4	2458912.75	6	3	44.47	+22	59	50.49	60.18	15.5	56.9	63.6	19.6
mar	5	2458913.75	7	1	53.98	+23	25	6.98	59.18	15.8	57.9	73.5	20.5
mar	6	2458914.75	8	1	53.74	+22	26	25.80	58.20	16.0	58.8	82.6	21.5
mar	7	2458915.75	9	2	28.94	+20	0	17.17	57.32	16.3	59.8	90.4	22.4
mar	8	2458916.75	10	2	29.46	+16	12	10.06	56.61	16.5	60.6	96.2	23.3
mar	9	2458917.75	11	1	11.57	+11	16	38.38	56.15	16.7	61.1	99.5	0.3
mar	10	2458918.75	11	58	25.94	+5	35	17.65	55.99	16.7	61.4	99.7	1.1
mar	11	2458919.75	12	54	31.76	-0	26	29.81	56.14	16.7	61.3	96.9	2.0
mar	12	2458920.75	13	50	3.75	-6	22	53.91	56.56	16.6	60.9	91.3	2.9
mar	13	2458921.75	14	45	38.45	-11	50	13.58	57.23	16.4	60.3	83.3	3.7
mar	14	2458922.75	15	41	42.08	-16	28	40.42	58.04	16.2	59.4	73.6	4.6
mar	15	2458923.75	16	38	21.41	-20	3	16.20	58.95	15.9	58.5	63.1	5.5
mar	16	2458924.75	17	35	19.21	-22	24	26.08	59.86	15.7	57.6	52.3	6.4
mar	17	2458925.75	18	31	57.28	-23	28	13.71	60.73	15.5	56.8	41.8	7.2
mar	18	2458926.75	19	27	27.46	-23	16	9.82	61.51	15.3	56.1	31.9	8.1
mar	19	2458927.75	20	21	6.39	-21	54	19.35	62.18	15.1	55.4	22.9	8.9
mar	20	2458928.75	21	12	27.23	-19	31	56.03	62.73	15.0	54.9	15.2	9.7
mar	21	2458929.75	22	1	24.14	-16	19	48.97	63.15	14.8	54.5	9.0	10.5
mar	22	2458930.75	22	48	10.10	-12	29	9.07	63.46	14.8	54.2	4.3	11.2
mar	23	2458931.75	23	33	11.66	-8	10	47.09	63.66	14.7	54.0	1.3	11.9
mar	24	2458932.75	0	17	3.74	-3	34	58.93	63.76	14.7	53.9	0.0	12.5
mar	25	2458933.75	1	0	25.83	+1	8	29.44	63.75	14.7	53.9	0.6	13.2
mar	26	2458934.75	1	43	59.50	+5	50	7.45	63.63	14.7	54.0	2.9	13.9
mar	27	2458935.75	2	28	26.76	+10	20	18.91	63.40	14.8	54.2	7.0	14.5
mar	28	2458936.75	3	14	27.94	+14	29	0.55	63.05	14.8	54.5	12.6	15.2
mar	29	2458937.75	4	2	38.54	+18	5	22.45	62.57	14.9	54.8	19.7	16.0
mar	30	2458938.75	4	53	23.92	+20	57	41.90	61.96	15.1	55.4	28.1	16.7
mar	31	2458939.75	5	46	52.32	+22	53	43.47	61.22	15.2	56.0	37.4	17.6
abr	1	2458940.75	6	42	48.34	+23	41	42.04	60.38	15.5	56.7	47.5	18.4

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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	2	2458941.75	7	40	31.85	+23	12	12.09	59.47	15.7	57.6	58.1	19.3
abr	3	2458942.75	8	39	6.29	+21	20	20.34	58.53	15.9	58.5	68.6	20.2
abr	4	2458943.75	9	37	35.50	+18	7	35.45	57.64	16.2	59.4	78.6	21.2
abr	5	2458944.75	10	35	21.15	+13	42	36.51	56.87	16.4	60.3	87.3	22.1
abr	6	2458945.75	11	32	12.06	+8	20	51.32	56.30	16.6	60.9	94.2	22.9
abr	7	2458946.75	12	28	22.78	+2	23	22.05	56.00	16.7	61.3	98.6	23.8
abr	8	2458947.75	13	24	24.63	-3	45	5.31	56.00	16.7	61.4	100.0	0.7
abr	9	2458948.75	14	20	53.36	-9	38	21.02	56.30	16.7	61.2	98.3	1.5
abr	10	2458949.75	15	18	15.90	-14	51	30.82	56.88	16.5	60.6	93.7	2.4
abr	11	2458950.75	16	16	38.14	-19	3	34.61	57.67	16.3	59.8	86.7	3.3
abr	12	2458951.75	17	15	37.33	-21	59	42.13	58.61	16.1	58.9	77.9	4.3
abr	13	2458952.75	18	14	24.09	-23	32	39.55	59.59	15.8	57.9	68.1	5.2
abr	14	2458953.75	19	11	56.08	-23	42	56.31	60.56	15.5	57.0	57.8	6.1
abr	15	2458954.75	20	7	17.84	-22	37	21.32	61.45	15.3	56.1	47.5	6.9
abr	16	2458955.75	20	59	56.29	-20	26	39.09	62.21	15.1	55.4	37.6	7.7
abr	17	2458956.75	21	49	45.49	-17	23	2.87	62.82	14.9	54.8	28.4	8.5
abr	18	2458957.75	22	37	2.27	-13	38	32.62	63.27	14.8	54.4	20.2	9.2
abr	19	2458958.75	23	22	18.49	-9	24	9.32	63.56	14.8	54.1	13.1	9.9
abr	20	2458959.75	0	6	14.12	-4	49	53.88	63.71	14.7	54.0	7.4	10.6
abr	21	2458960.75	0	49	32.58	-0	5	8.87	63.71	14.7	54.0	3.2	11.2
abr	22	2458961.75	1	32	58.06	+4	40	50.73	63.60	14.7	54.0	0.7	11.9
abr	23	2458962.75	2	17	13.79	+9	18	27.82	63.39	14.8	54.2	0.0	12.6
abr	24	2458963.75	3	2	59.96	+13	37	19.74	63.09	14.8	54.4	1.1	13.3
abr	25	2458964.75	3	50	50.53	+17	26	6.91	62.70	14.9	54.7	4.1	14.0
abr	26	2458965.75	4	41	8.05	+20	32	39.68	62.23	15.0	55.1	8.8	14.8
abr	27	2458966.75	5	33	57.18	+22	44	35.76	61.68	15.2	55.6	15.2	15.6
abr	28	2458967.75	6	28	59.42	+23	50	32.90	61.05	15.3	56.2	23.1	16.4
abr	29	2458968.75	7	25	33.45	+23	41	50.97	60.35	15.5	56.8	32.3	17.3
abr	30	2458969.75	8	22	44.39	+22	14	14.51	59.60	15.7	57.5	42.5	18.2
may	1	2458970.75	9	19	40.18	+19	28	56.90	58.83	15.9	58.3	53.4	19.1
may	2	2458971.75	10	15	47.31	+15	32	47.25	58.07	16.1	59.0	64.4	20.0
may	3	2458972.75	11	10	58.96	+10	37	36.52	57.39	16.3	59.8	75.0	20.8
may	4	2458973.75	12	5	33.73	+4	59	35.07	56.84	16.4	60.4	84.5	21.7
may	5	2458974.75	13	0	8.04	-1	1	22.54	56.49	16.6	60.8	92.2	22.5
may	6	2458975.75	13	55	25.73	-7	2	18.88	56.39	16.6	61.0	97.5	23.4
may	7	2458976.75	14	52	5.59	-12	38	28.30	56.56	16.6	60.9	99.9	0.2
may	8	2458977.75	15	50	27.45	-17	25	29.81	57.00	16.5	60.5	99.3	1.1
may	9	2458978.75	16	50	18.97	-21	2	33.22	57.67	16.3	59.8	95.9	2.1
may	10	2458979.75	17	50	50.14	-23	15	40.60	58.51	16.1	59.0	90.1	3.0
may	11	2458980.75	18	50	43.51	-24	0	5.61	59.44	15.8	58.1	82.5	3.9
may	12	2458981.75	19	48	38.89	-23	20	10.93	60.40	15.6	57.1	73.7	4.8
may	13	2458982.75	20	43	39.28	-21	26	58.23	61.30	15.3	56.3	64.1	5.7
may	14	2458983.75	21	35	23.30	-18	34	31.53	62.10	15.1	55.5	54.1	6.5
may	15	2458984.75	22	24	2.20	-14	56	57.08	62.74	15.0	54.9	44.3	7.2
may	16	2458985.75	23	10	9.28	-10	46	48.56	63.21	14.8	54.5	34.9	7.9
may	17	2458986.75	23	54	29.38	-6	14	49.41	63.49	14.8	54.2	26.1	8.6

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

mes	día	dj	h	α m	s	°	δ `	“	dis DT	´	´	fase	hp h
may	18	2458987.75	0	37	51.93	-1	30	20.33	63.58	14.7	54.1	18.3	9.3
may	19	2458988.75	1	21	7.16	+3	17	53.72	63.52	14.7	54.1	11.5	9.9
may	20	2458989.75	2	5	4.03	+8	0	54.56	63.31	14.8	54.2	6.2	10.6
may	21	2458990.75	2	50	28.26	+12	28	48.43	62.99	14.8	54.5	2.4	11.3
may	22	2458991.75	3	37	59.05	+16	30	18.90	62.58	14.9	54.8	0.3	12.0
may	23	2458992.75	4	28	3.52	+19	52	46.16	62.12	15.1	55.2	0.2	12.8
may	24	2458993.75	5	20	49.08	+22	22	47.55	61.61	15.2	55.7	2.0	13.6
may	25	2458994.75	6	15	56.50	+23	47	47.51	61.07	15.3	56.2	5.8	14.4
may	26	2458995.75	7	12	39.11	+23	58	7.56	60.52	15.4	56.7	11.5	15.3
may	27	2458996.75	8	9	53.02	+22	49	13.04	59.96	15.6	57.2	19.1	16.2
may	28	2458997.75	9	6	36.31	+20	22	39.21	59.40	15.7	57.8	28.2	17.1
may	29	2458998.75	10	2	8.06	+16	45	47.75	58.84	15.9	58.3	38.5	18.0
may	30	2458999.75	10	56	17.97	+12	10	24.80	58.31	16.0	58.8	49.7	18.8
may	31	2459000.75	11	49	24.79	+6	51	16.55	57.84	16.2	59.3	61.0	19.6
jun	1	2459001.75	12	42	8.35	+1	5	21.62	57.46	16.3	59.8	72.0	20.4
jun	2	2459002.75	13	35	19.42	-4	48	20.22	57.21	16.4	60.0	81.9	21.2
jun	3	2459003.75	14	29	49.01	-10	28	50.33	57.13	16.4	60.2	90.1	22.1
jun	4	2459004.75	15	26	15.91	-15	33	46.23	57.25	16.4	60.1	96.0	23.0
jun	5	2459005.75	16	24	52.02	-19	41	6.76	57.59	16.3	59.8	99.3	23.9
jun	6	2459006.75	17	25	9.36	-22	32	18.42	58.12	16.2	59.3	99.9	0.8
jun	7	2459007.75	18	25	58.52	-23	55	58.25	58.81	16.0	58.6	97.8	1.8
jun	8	2459008.75	19	25	46.63	-23	50	24.69	59.61	15.8	57.9	93.4	2.7
jun	9	2459009.75	20	23	8.97	-22	23	14.29	60.47	15.6	57.0	87.1	3.6
jun	10	2459010.75	21	17	14.91	-19	48	9.90	61.30	15.3	56.3	79.3	4.4
jun	11	2459011.75	22	7	54.99	-16	20	57.51	62.05	15.1	55.6	70.6	5.2
jun	12	2459012.75	22	55	32.38	-12	16	26.41	62.67	15.0	55.0	61.2	5.9
jun	13	2459013.75	23	40	49.64	-7	47	12.25	63.11	14.9	54.5	51.6	6.6
jun	14	2459014.75	0	24	38.32	-3	3	38.46	63.37	14.8	54.3	42.1	7.3
jun	15	2459015.75	1	7	52.84	+1	45	20.18	63.42	14.8	54.2	32.9	7.9
jun	16	2459016.75	1	51	27.52	+6	31	17.94	63.29	14.8	54.3	24.3	8.6
jun	17	2459017.75	2	36	14.58	+11	5	18.60	62.99	14.8	54.5	16.6	9.3
jun	18	2459018.75	3	23	1.52	+15	17	5.01	62.56	14.9	54.9	10.1	10.0
jun	19	2459019.75	4	12	25.87	+18	54	30.14	62.03	15.1	55.3	4.9	10.7
jun	20	2459020.75	5	4	46.93	+21	43	49.97	61.45	15.2	55.8	1.5	11.5
jun	21	2459021.75	5	59	55.93	+23	30	58.68	60.84	15.4	56.4	0.0	12.4
jun	22	2459022.75	6	57	10.42	+24	3	53.46	60.26	15.5	56.9	0.7	13.3
jun	23	2459023.75	7	55	20.50	+23	15	31.52	59.72	15.7	57.4	3.6	14.2
jun	24	2459024.75	8	53	9.11	+21	5	57.32	59.24	15.8	57.9	8.7	15.1
jun	25	2459025.75	9	49	36.94	+17	42	30.79	58.83	15.9	58.3	15.9	16.0
jun	26	2459026.75	10	44	18.38	+13	18	3.69	58.49	16.0	58.7	24.9	16.8
jun	27	2459027.75	11	37	22.87	+8	8	36.70	58.22	16.1	59.0	35.3	17.6
jun	28	2459028.75	12	29	26.40	+2	31	32.90	58.01	16.1	59.2	46.6	18.4
jun	29	2459029.75	13	21	20.29	-3	15	8.87	57.89	16.2	59.4	58.1	19.2
jun	30	2459030.75	14	14	0.41	-8	52	54.50	57.85	16.2	59.4	69.2	20.0
jul	1	2459031.75	15	8	16.53	-14	2	26.12	57.93	16.2	59.4	79.3	20.9
jul	2	2459032.75	16	4	39.76	-18	24	6.94	58.12	16.1	59.2	87.8	21.8

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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	3	2459033.75	17	3	8.71	-21	39	35.91	58.45	16.1	58.9	94.3	22.7
jul	4	2459034.75	18	3	0.37	-23	34	39.76	58.90	15.9	58.5	98.3	23.6
jul	5	2459035.75	19	2	55.47	-24	2	26.81	59.48	15.8	58.0	100.0	0.5
jul	6	2459036.75	20	1	22.43	-23	5	11.79	60.14	15.6	57.3	99.2	1.4
jul	7	2459037.75	20	57	8.16	-20	53	10.13	60.85	15.4	56.7	96.2	2.3
jul	8	2459038.75	21	49	37.31	-17	41	17.44	61.55	15.3	56.0	91.2	3.1
jul	9	2459039.75	22	38	52.85	-13	45	29.83	62.20	15.1	55.4	84.7	3.9
jul	10	2459040.75	23	25	25.33	-9	20	17.59	62.74	15.0	54.9	77.0	4.6
jul	11	2459041.75	0	10	0.73	-4	37	51.67	63.13	14.9	54.5	68.3	5.3
jul	12	2459042.75	0	53	31.86	+0	11	44.03	63.33	14.8	54.3	59.1	5.9
jul	13	2459043.75	1	36	53.75	+4	59	45.19	63.35	14.8	54.2	49.7	6.6
jul	14	2459044.75	2	21	1.19	+9	37	46.43	63.16	14.8	54.4	40.2	7.2
jul	15	2459045.75	3	6	46.67	+13	56	39.82	62.78	14.9	54.7	31.0	7.9
jul	16	2459046.75	3	54	56.59	+17	45	43.81	62.25	15.0	55.1	22.5	8.7
jul	17	2459047.75	4	46	4.21	+20	52	18.45	61.60	15.2	55.7	14.8	9.5
jul	18	2459048.75	5	40	19.39	+23	2	13.81	60.87	15.3	56.3	8.3	10.3
jul	19	2459049.75	6	37	18.24	+24	1	36.96	60.14	15.5	57.0	3.5	11.2
jul	20	2459050.75	7	36	1.15	+23	39	55.29	59.44	15.7	57.7	0.7	12.1
jul	21	2459051.75	8	35	6.37	+21	53	13.76	58.84	15.9	58.3	0.1	13.0
jul	22	2459052.75	9	33	16.42	+18	46	2.47	58.35	16.0	58.8	2.0	13.9
jul	23	2459053.75	10	29	42.60	+14	30	33.70	58.01	16.1	59.2	6.5	14.8
jul	24	2459054.75	11	24	14.71	+9	24	8.05	57.82	16.2	59.4	13.3	15.6
jul	25	2459055.75	12	17	15.88	+3	46	23.11	57.76	16.2	59.5	22.1	16.5
jul	26	2459056.75	13	9	30.61	-2	2	45.75	57.82	16.2	59.5	32.5	17.3
jul	27	2459057.75	14	1	52.51	-7	43	57.72	57.98	16.2	59.4	43.7	18.1
jul	28	2459058.75	14	55	13.30	-12	58	35.42	58.22	16.1	59.1	55.2	18.9
jul	29	2459059.75	15	50	11.65	-17	28	47.06	58.53	16.0	58.8	66.3	19.7
jul	30	2459060.75	16	47	1.37	-20	58	2.67	58.89	15.9	58.5	76.4	20.6
jul	31	2459061.75	17	45	21.35	-23	12	48.51	59.32	15.8	58.1	85.1	21.5
ago	1	2459062.75	18	44	14.73	-24	4	48.07	59.80	15.7	57.6	92.0	22.4
ago	2	2459063.75	19	42	23.10	-23	33	1.49	60.32	15.6	57.1	96.8	23.4
ago	3	2459064.75	20	38	31.82	-21	44	2.19	60.89	15.4	56.6	99.5	0.2
ago	4	2459065.75	21	31	52.43	-18	50	5.44	61.47	15.3	56.1	99.9	1.0
ago	5	2459066.75	22	22	11.05	-15	6	8.92	62.03	15.1	55.5	98.3	1.8
ago	6	2459067.75	23	9	43.58	-10	47	12.80	62.55	15.0	55.1	94.7	2.5
ago	7	2459068.75	23	55	5.47	-6	6	45.59	62.98	14.9	54.7	89.5	3.2
ago	8	2459069.75	0	39	2.62	-1	16	16.66	63.28	14.8	54.4	82.8	3.9
ago	9	2459070.75	1	22	25.54	+3	34	25.81	63.43	14.8	54.2	75.1	4.6
ago	10	2459071.75	2	6	6.25	+8	16	32.18	63.40	14.8	54.2	66.5	5.2
ago	11	2459072.75	2	50	56.19	+12	41	18.74	63.17	14.8	54.4	57.3	5.9
ago	12	2459073.75	3	37	43.72	+16	39	13.74	62.74	14.9	54.7	47.7	6.6
ago	13	2459074.75	4	27	9.23	+19	59	15.95	62.15	15.0	55.2	38.1	7.4
ago	14	2459075.75	5	19	37.02	+22	28	43.61	61.40	15.2	55.8	28.8	8.2
ago	15	2459076.75	6	15	5.01	+23	54	1.14	60.57	15.4	56.6	20.1	9.0
ago	16	2459077.75	7	12	57.21	+24	2	46.08	59.69	15.6	57.4	12.3	9.9
ago	17	2459078.75	8	12	7.21	+22	46	57.11	58.85	15.9	58.2	6.1	10.9

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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
ago	18	2459079.75	9	11	16.58	+20	5	54.46	58.11	16.1	59.0	1.9	11.8
ago	19	2459080.75	10	9	20.85	+16	7	36.64	57.53	16.2	59.6	0.0	12.7
ago	20	2459081.75	11	5	47.97	+11	7	37.60	57.16	16.4	60.1	0.9	13.6
ago	21	2459082.75	12	0	41.65	+5	26	30.83	57.00	16.4	60.3	4.7	14.4
ago	22	2459083.75	12	54	32.77	-0	33	2.53	57.06	16.4	60.3	11.0	15.2
ago	23	2459084.75	13	48	6.70	-6	28	25.41	57.31	16.4	60.1	19.5	16.1
ago	24	2459085.75	14	42	10.82	-11	58	24.33	57.72	16.3	59.7	29.6	16.9
ago	25	2459086.75	15	37	22.84	-16	43	51.80	58.22	16.1	59.2	40.6	17.8
ago	26	2459087.75	16	33	59.59	-20	28	22.80	58.79	16.0	58.6	51.9	18.6
ago	27	2459088.75	17	31	48.08	-22	59	12.65	59.38	15.8	58.0	62.8	19.5
ago	28	2459089.75	18	30	4.03	-24	8	41.99	59.97	15.7	57.5	72.9	20.4
ago	29	2459090.75	19	27	42.24	-23	55	31.52	60.56	15.5	56.9	81.8	21.3
ago	30	2459091.75	20	23	36.87	-22	24	52.76	61.12	15.4	56.4	89.1	22.2
ago	31	2459092.75	21	17	1.23	-19	47	9.97	61.65	15.2	55.9	94.6	23.0
sep	1	2459093.75	22	7	37.39	-16	15	46.68	62.15	15.1	55.4	98.3	23.8
sep	2	2459094.75	22	55	34.41	-12	4	53.79	62.60	15.0	55.0	99.9	0.5
sep	3	2459095.75	23	41	20.61	-7	28	0.89	62.99	14.9	54.6	99.6	1.2
sep	4	2459096.75	0	25	35.42	-2	37	16.18	63.31	14.8	54.4	97.4	1.9
sep	5	2459097.75	1	9	3.67	+2	16	36.43	63.51	14.8	54.2	93.4	2.6
sep	6	2459098.75	1	52	32.18	+7	3	55.88	63.59	14.7	54.1	88.0	3.2
sep	7	2459099.75	2	36	47.70	+11	35	30.76	63.51	14.7	54.1	81.2	3.9
sep	8	2459100.75	3	22	34.84	+15	42	0.38	63.26	14.8	54.3	73.3	4.6
sep	9	2459101.75	4	10	32.73	+19	13	19.42	62.83	14.9	54.6	64.5	5.3
sep	10	2459102.75	5	1	9.36	+21	58	17.38	62.22	15.0	55.1	55.0	6.1
sep	11	2459103.75	5	54	33.81	+23	44	52.81	61.45	15.2	55.8	45.1	6.9
sep	12	2459104.75	6	50	29.06	+24	21	20.28	60.56	15.4	56.5	35.2	7.8
sep	13	2459105.75	7	48	10.66	+23	38	15.69	59.61	15.7	57.4	25.5	8.7
sep	14	2459106.75	8	46	36.47	+21	31	10.69	58.65	15.9	58.4	16.7	9.6
sep	15	2459107.75	9	44	45.84	+18	2	36.92	57.77	16.2	59.3	9.1	10.5
sep	16	2459108.75	10	41	58.65	+13	22	47.78	57.05	16.4	60.1	3.5	11.4
sep	17	2459109.75	11	38	4.95	+7	48	49.66	56.55	16.5	60.7	0.5	12.3
sep	18	2459110.75	12	33	22.62	+1	42	51.04	56.31	16.6	61.0	0.3	13.1
sep	19	2459111.75	13	28	27.57	-4	30	15.36	56.36	16.6	61.0	3.1	14.0
sep	20	2459112.75	14	24	1.30	-10	25	12.30	56.68	16.6	60.8	8.8	14.8
sep	21	2459113.75	15	20	37.79	-15	38	25.04	57.21	16.4	60.2	16.7	15.7
sep	22	2459114.75	16	18	30.85	-19	49	52.01	57.90	16.2	59.6	26.4	16.6
sep	23	2459115.75	17	17	24.65	-22	44	43.99	58.68	16.0	58.8	36.9	17.5
sep	24	2459116.75	18	16	32.61	-24	14	48.19	59.49	15.8	58.0	47.9	18.4
sep	25	2459117.75	19	14	48.89	-24	19	10.53	60.28	15.6	57.2	58.6	19.3
sep	26	2459118.75	20	11	9.22	-23	3	41.73	61.01	15.4	56.5	68.6	20.2
sep	27	2459119.75	21	4	50.01	-20	39	5.42	61.66	15.2	55.9	77.7	21.0
sep	28	2459120.75	21	55	36.62	-17	18	34.04	62.23	15.1	55.4	85.5	21.8
sep	29	2459121.75	22	43	40.51	-13	15	48.08	62.70	15.0	54.9	91.7	22.6
sep	30	2459122.75	23	29	31.07	-8	43	45.43	63.09	14.9	54.6	96.3	23.3
oct	1	2459123.75	0	13	47.57	-3	54	17.27	63.38	14.8	54.3	99.1	23.9
oct	2	2459124.75	0	57	13.54	+1	1	47.19	63.59	14.7	54.1	100.0	0.6

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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	3	2459125.75	1	40	33.49	+5	54	22.18	63.69	14.7	54.0	99.1	1.2
oct	4	2459126.75	2	24	30.90	+10	33	41.80	63.69	14.7	54.0	96.5	1.9
oct	5	2459127.75	3	9	46.40	+14	49	55.76	63.56	14.7	54.0	92.2	2.6
oct	6	2459128.75	3	56	54.91	+18	32	50.54	63.29	14.8	54.2	86.4	3.3
oct	7	2459129.75	4	46	21.25	+21	31	41.86	62.88	14.9	54.6	79.2	4.1
oct	8	2459130.75	5	38	14.33	+23	35	28.45	62.31	15.0	55.0	70.9	4.9
oct	9	2459131.75	6	32	22.00	+24	33	40.29	61.59	15.2	55.6	61.6	5.7
oct	10	2459132.75	7	28	10.21	+24	17	40.59	60.74	15.4	56.4	51.6	6.6
oct	11	2459133.75	8	24	50.17	+22	42	26.11	59.81	15.6	57.2	41.2	7.5
oct	12	2459134.75	9	21	32.58	+19	47	53.85	58.83	15.9	58.2	30.8	8.3
oct	13	2459135.75	10	17	43.15	+15	39	47.61	57.89	16.1	59.2	21.0	9.2
oct	14	2459136.75	11	13	12.10	+10	29	43.83	57.06	16.4	60.0	12.3	10.1
oct	15	2459137.75	12	8	14.81	+4	34	49.97	56.42	16.6	60.8	5.5	10.9
oct	16	2459138.75	13	3	25.43	-1	42	57.18	56.04	16.7	61.3	1.3	11.8
oct	17	2459139.75	13	59	26.38	-7	58	5.94	55.97	16.7	61.4	0.0	12.6
oct	18	2459140.75	14	56	55.21	-13	43	31.09	56.21	16.7	61.3	1.8	13.5
oct	19	2459141.75	15	56	9.41	-18	33	26.59	56.72	16.6	60.8	6.5	14.5
oct	20	2459142.75	16	56	52.45	-22	6	49.43	57.46	16.4	60.0	13.6	15.4
oct	21	2459143.75	17	58	8.99	-24	10	32.55	58.34	16.1	59.2	22.5	16.4
oct	22	2459144.75	18	58	37.07	-24	41	15.92	59.29	15.9	58.2	32.5	17.3
oct	23	2459145.75	19	56	55.12	-23	44	53.12	60.22	15.6	57.3	42.9	18.2
oct	24	2459146.75	20	52	7.98	-21	33	40.85	61.10	15.4	56.5	53.4	19.1
oct	25	2459147.75	21	43	57.73	-18	22	40.66	61.87	15.2	55.7	63.4	19.9
oct	26	2459148.75	22	32	38.77	-14	26	47.68	62.50	15.0	55.1	72.7	20.6
oct	27	2459149.75	23	18	46.20	-9	59	27.00	63.00	14.9	54.7	80.9	21.3
oct	28	2459150.75	0	3	5.21	-5	12	20.57	63.36	14.8	54.3	87.9	22.0
oct	29	2459151.75	0	46	24.22	-0	15	52.12	63.59	14.7	54.1	93.4	22.6
oct	30	2459152.75	1	29	31.27	+4	40	14.66	63.70	14.7	54.0	97.3	23.3
oct	31	2459153.75	2	13	12.07	+9	26	20.70	63.71	14.7	54.0	99.5	24.0
nov	1	2459154.75	2	58	8.11	+13	52	22.92	63.61	14.7	54.0	99.9	0.6
nov	2	2459155.75	3	44	53.89	+17	47	40.17	63.41	14.8	54.2	98.6	1.3
nov	3	2459156.75	4	33	52.56	+21	0	57.21	63.11	14.8	54.4	95.4	2.1
nov	4	2459157.75	5	25	10.26	+23	20	54.80	62.71	14.9	54.7	90.6	2.9
nov	5	2459158.75	6	18	31.67	+24	37	10.31	62.20	15.0	55.1	84.2	3.7
nov	6	2459159.75	7	13	20.32	+24	41	40.78	61.58	15.2	55.7	76.3	4.6
nov	7	2459160.75	8	8	46.73	+23	30	5.60	60.85	15.3	56.3	67.2	5.4
nov	8	2459161.75	9	4	2.98	+21	2	36.80	60.04	15.6	57.1	57.1	6.3
nov	9	2459162.75	9	58	37.49	+17	24	3.18	59.17	15.8	57.9	46.4	7.1
nov	10	2459163.75	10	52	23.47	+12	43	24.27	58.30	16.0	58.8	35.5	7.9
nov	11	2459164.75	11	45	39.48	+7	13	27.85	57.49	16.2	59.6	25.0	8.8
nov	12	2459165.75	12	39	4.01	+1	10	49.63	56.81	16.4	60.4	15.5	9.6
nov	13	2459166.75	13	33	27.04	-5	3	53.87	56.33	16.6	60.9	7.8	10.4
nov	14	2459167.75	14	29	39.06	-11	6	15.01	56.11	16.7	61.2	2.5	11.3
nov	15	2459168.75	15	28	16.12	-16	29	14.64	56.19	16.7	61.2	0.1	12.2
nov	16	2459169.75	16	29	21.31	-20	46	27.33	56.57	16.6	60.9	0.8	13.2
nov	17	2459170.75	17	32	9.32	-23	36	42.28	57.21	16.4	60.3	4.3	14.1

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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
nov	18	2459171.75	18	35	8.31	-24	48	50.06	58.04	16.2	59.5	10.3	15.1
nov	19	2459172.75	19	36	27.69	-24	23	58.30	59.00	15.9	58.5	18.1	16.1
nov	20	2459173.75	20	34	38.07	-22	33	38.87	59.99	15.7	57.5	27.3	17.0
nov	21	2459174.75	21	28	56.69	-19	34	58.18	60.94	15.4	56.6	37.1	17.8
nov	22	2459175.75	22	19	27.35	-15	45	48.82	61.79	15.2	55.8	47.2	18.6
nov	23	2459176.75	23	6	45.35	-11	22	0.64	62.50	15.0	55.1	57.2	19.3
nov	24	2459177.75	23	51	41.50	-6	36	34.86	63.04	14.9	54.6	66.7	20.0
nov	25	2459178.75	0	35	11.53	-1	40	13.41	63.41	14.8	54.3	75.4	20.7
nov	26	2459179.75	1	18	10.73	+3	17	44.15	63.60	14.7	54.1	83.0	21.3
nov	27	2459180.75	2	1	31.54	+8	8	20.87	63.64	14.7	54.0	89.5	22.0
nov	28	2459181.75	2	46	1.83	+12	42	11.95	63.54	14.7	54.1	94.6	22.7
nov	29	2459182.75	3	32	22.25	+16	48	52.47	63.33	14.8	54.2	98.1	23.4
nov	30	2459183.75	4	21	1.47	+20	16	49.69	63.03	14.8	54.5	99.8	0.1
dic	1	2459184.75	5	12	9.62	+22	53	53.54	62.66	14.9	54.8	99.7	0.9
dic	2	2459185.75	6	5	32.07	+24	28	30.60	62.23	15.0	55.1	97.7	1.7
dic	3	2459186.75	7	0	28.17	+24	51	34.64	61.75	15.1	55.6	93.9	2.6
dic	4	2459187.75	7	55	59.69	+23	58	17.52	61.21	15.3	56.0	88.1	3.4
dic	5	2459188.75	8	51	7.91	+21	49	11.67	60.62	15.4	56.6	80.7	4.3
dic	6	2459189.75	9	45	11.75	+18	29	54.90	59.99	15.6	57.1	71.8	5.1
dic	7	2459190.75	10	37	58.39	+14	10	0.22	59.33	15.7	57.8	61.6	5.9
dic	8	2459191.75	11	29	43.91	+9	1	41.05	58.66	15.9	58.4	50.7	6.7
dic	9	2459192.75	12	21	7.44	+3	19	13.76	58.02	16.1	59.1	39.4	7.5
dic	10	2459193.75	13	13	2.94	-2	40	52.05	57.45	16.3	59.7	28.5	8.3
dic	11	2459194.75	14	6	30.32	-8	39	17.28	57.02	16.4	60.2	18.5	9.1
dic	12	2459195.75	15	2	24.15	-14	13	30.62	56.76	16.5	60.5	10.2	10.0
dic	13	2459196.75	16	1	17.13	-18	58	36.67	56.74	16.5	60.6	4.1	10.9
dic	14	2459197.75	17	2	59.68	-22	30	9.83	56.96	16.5	60.4	0.7	11.9
dic	15	2459198.75	18	6	25.51	-24	29	17.01	57.43	16.4	60.0	0.1	12.9
dic	16	2459199.75	19	9	41.30	-24	47	54.99	58.11	16.2	59.4	2.3	13.9
dic	17	2459200.75	20	10	45.55	-23	31	0.18	58.95	15.9	58.5	7.0	14.8
dic	18	2459201.75	21	8	12.71	-20	53	41.99	59.86	15.7	57.7	13.6	15.7
dic	19	2459202.75	22	1	33.09	-17	15	40.11	60.78	15.5	56.8	21.7	16.5
dic	20	2459203.75	22	51	4.49	-12	56	3.21	61.63	15.2	56.0	30.8	17.3
dic	21	2459204.75	23	37	32.89	-8	10	57.21	62.37	15.1	55.3	40.4	18.0
dic	22	2459205.75	0	21	56.12	-3	13	4.56	62.93	14.9	54.7	50.1	18.7
dic	23	2459206.75	1	5	14.50	+1	47	26.87	63.31	14.8	54.4	59.7	19.3
dic	24	2459207.75	1	48	26.68	+6	41	51.84	63.49	14.8	54.2	68.8	20.0
dic	25	2459208.75	2	32	27.56	+11	21	36.79	63.48	14.8	54.1	77.2	20.7
dic	26	2459209.75	3	18	6.30	+15	37	21.54	63.30	14.8	54.3	84.6	21.4
dic	27	2459210.75	4	6	2.14	+19	18	23.34	62.98	14.8	54.5	90.8	22.1
dic	28	2459211.75	4	56	37.60	+22	12	36.51	62.55	14.9	54.9	95.6	22.9
dic	29	2459212.75	5	49	58.26	+24	0	36.40	62.42	15.1	55.3	98.7	13.1
dic	30	2459213.75	6	47	42.90	+23	4	49.38	61.69	15.2	55.8	100.0	0.6

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2458849.75	18	21	1.40	-24	38	37.20	1.4346	11.7
ene	2	2458850.75	18	27	58.75	-24	39	40.45	1.4365	11.7
ene	3	2458851.75	18	34	57.48	-24	39	20.93	1.4378	11.8
ene	4	2458852.75	18	41	57.48	-24	37	37.57	1.4386	11.8
ene	5	2458853.75	18	48	58.66	-24	34	29.37	1.4388	11.9
ene	6	2458854.75	18	56	0.92	-24	29	55.35	1.4385	11.9
ene	7	2458855.75	19	3	4.13	-24	23	54.58	1.4376	12.0
ene	8	2458856.75	19	10	8.20	-24	16	26.16	1.4362	12.0
ene	9	2458857.75	19	17	13.00	-24	7	29.27	1.4341	12.1
ene	10	2458858.75	19	24	18.42	-23	57	3.09	1.4315	12.1
ene	11	2458859.75	19	31	24.32	-23	45	6.89	1.4283	12.2
ene	12	2458860.75	19	38	30.58	-23	31	39.98	1.4244	12.2
ene	13	2458861.75	19	45	37.06	-23	16	41.75	1.4200	12.3
ene	14	2458862.75	19	52	43.61	-23	0	11.65	1.4149	12.3
ene	15	2458863.75	19	59	50.09	-22	42	9.22	1.4091	12.4
ene	16	2458864.75	20	6	56.33	-22	22	34.08	1.4026	12.4
ene	17	2458865.75	20	14	2.16	-22	1	26.01	1.3955	12.5
ene	18	2458866.75	20	21	7.37	-21	38	44.92	1.3876	12.5
ene	19	2458867.75	20	28	11.77	-21	14	30.87	1.3790	12.6
ene	20	2458868.75	20	35	15.10	-20	48	44.16	1.3696	12.6
ene	21	2458869.75	20	42	17.12	-20	21	25.30	1.3594	12.7
ene	22	2458870.75	20	49	17.51	-19	52	35.09	1.3484	12.8
ene	23	2458871.75	20	56	15.96	-19	22	14.63	1.3365	12.8
ene	24	2458872.75	21	3	12.06	-18	50	25.44	1.3237	12.9
ene	25	2458873.75	21	10	5.41	-18	17	9.46	1.3100	12.9
ene	26	2458874.75	21	16	55.49	-17	42	29.20	1.2954	12.9
ene	27	2458875.75	21	23	41.74	-17	6	27.77	1.2798	13.0
ene	28	2458876.75	21	30	23.52	-16	29	9.05	1.2632	13.0
ene	29	2458877.75	21	37	0.08	-15	50	37.76	1.2456	13.1
ene	30	2458878.75	21	43	30.57	-15	10	59.63	1.2270	13.1
ene	31	2458879.75	21	49	54.01	-14	30	21.53	1.2073	13.2
feb	1	2458880.75	21	56	9.28	-13	48	51.63	1.1865	13.2
feb	2	2458881.75	22	2	15.11	-13	6	39.57	1.1647	13.2
feb	3	2458882.75	22	8	10.06	-12	23	56.60	1.1419	13.3
feb	4	2458883.75	22	13	52.53	-11	40	55.70	1.1181	13.3
feb	5	2458884.75	22	19	20.73	-10	57	51.75	1.0933	13.3
feb	6	2458885.75	22	24	32.69	-10	15	1.58	1.0677	13.4
feb	7	2458886.75	22	29	26.28	-9	32	43.96	1.0413	13.4
feb	8	2458887.75	22	33	59.21	-8	51	19.57	1.0142	13.4
feb	9	2458888.75	22	38	9.09	-8	11	10.87	0.9866	13.4
feb	10	2458889.75	22	41	53.47	-7	32	41.82	0.9586	13.4
feb	11	2458890.75	22	45	9.87	-6	56	17.53	0.9305	13.4
feb	12	2458891.75	22	47	55.91	-6	22	23.85	0.9025	13.3
feb	13	2458892.75	22	50	9.37	-5	51	26.73	0.8747	13.3
feb	14	2458893.75	22	51	48.27	-5	23	51.59	0.8474	13.3
feb	15	2458894.75	22	52	51.02	-5	0	2.54	0.8208	13.2

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2458895.75	22	53	16.55	-4	40	21.51	0.7952	13.2
feb	17	2458896.75	22	53	4.37	-4	25	7.28	0.7709	13.1
feb	18	2458897.75	22	52	14.72	-4	14	34.53	0.7480	13.0
feb	19	2458898.75	22	50	48.69	-4	8	52.81	0.7268	12.9
feb	20	2458899.75	22	48	48.24	-4	8	5.66	0.7074	12.8
feb	21	2458900.75	22	46	16.24	-4	12	9.81	0.6900	12.7
feb	22	2458901.75	22	43	16.46	-4	20	54.72	0.6747	12.6
feb	23	2458902.75	22	39	53.50	-4	34	2.49	0.6616	12.5
feb	24	2458903.75	22	36	12.60	-4	51	8.22	0.6508	12.4
feb	25	2458904.75	22	32	19.48	-5	11	40.92	0.6423	12.2
feb	26	2458905.75	22	28	20.08	-5	35	4.85	0.6359	12.1
feb	27	2458906.75	22	24	20.33	-6	0	41.22	0.6318	12.0
feb	28	2458907.75	22	20	25.89	-6	27	50.06	0.6298	11.8
feb	29	2458908.75	22	16	41.94	-6	55	52.06	0.6298	11.7
mar	1	2458909.75	22	13	12.99	-7	24	10.17	0.6317	11.6
mar	2	2458910.75	22	10	2.83	-7	52	10.85	0.6353	11.5
mar	3	2458911.75	22	7	14.42	-8	19	24.85	0.6405	11.4
mar	4	2458912.75	22	4	49.96	-8	45	27.65	0.6471	11.2
mar	5	2458913.75	22	2	50.89	-9	9	59.40	0.6550	11.2
mar	6	2458914.75	22	1	18.01	-9	32	44.73	0.6640	11.1
mar	7	2458915.75	22	0	11.54	-9	53	32.24	0.6741	11.0
mar	8	2458916.75	21	59	31.26	-10	12	13.97	0.6849	10.9
mar	9	2458917.75	21	59	16.58	-10	28	44.82	0.6966	10.8
mar	10	2458918.75	21	59	26.66	-10	43	2.01	0.7088	10.8
mar	11	2458919.75	22	0	0.43	-10	55	4.55	0.7216	10.7
mar	12	2458920.75	22	0	56.75	-11	4	52.87	0.7349	10.7
mar	13	2458921.75	22	2	14.35	-11	12	28.43	0.7485	10.6
mar	14	2458922.75	22	3	51.98	-11	17	53.42	0.7624	10.6
mar	15	2458923.75	22	5	48.35	-11	21	10.54	0.7766	10.5
mar	16	2458924.75	22	8	2.22	-11	22	22.83	0.7910	10.5
mar	17	2458925.75	22	10	32.39	-11	21	33.49	0.8055	10.5
mar	18	2458926.75	22	13	17.71	-11	18	45.79	0.8201	10.5
mar	19	2458927.75	22	16	17.11	-11	14	3.02	0.8348	10.5
mar	20	2458928.75	22	19	29.58	-11	7	28.41	0.8495	10.4
mar	21	2458929.75	22	22	54.18	-10	59	5.09	0.8642	10.4
mar	22	2458930.75	22	26	30.03	-10	48	56.08	0.8789	10.4
mar	23	2458931.75	22	30	16.36	-10	37	4.31	0.8936	10.4
mar	24	2458932.75	22	34	12.41	-10	23	32.53	0.9083	10.4
mar	25	2458933.75	22	38	17.53	-10	8	23.39	0.9229	10.4
mar	26	2458934.75	22	42	31.12	-9	51	39.43	0.9374	10.4
mar	27	2458935.75	22	46	52.63	-9	33	23.02	0.9519	10.4
mar	28	2458936.75	22	51	21.56	-9	13	36.46	0.9662	10.4
mar	29	2458937.75	22	55	57.48	-8	52	21.91	0.9805	10.5
mar	30	2458938.75	23	0	40.00	-8	29	41.44	0.9947	10.5
mar	31	2458939.75	23	5	28.77	-8	5	37.04	1.0087	10.5
abr	1	2458940.75	23	10	23.48	-7	40	10.57	1.0227	10.5

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
abr	2	2458941.75	23	15	23.89	-7	13	23.86	1.0365	10.5
abr	3	2458942.75	23	20	29.75	-6	45	18.64	1.0502	10.5
abr	4	2458943.75	23	25	40.88	-6	15	56.59	1.0638	10.6
abr	5	2458944.75	23	30	57.14	-5	45	19.31	1.0773	10.6
abr	6	2458945.75	23	36	18.40	-5	13	28.36	1.0906	10.6
abr	7	2458946.75	23	41	44.58	-4	40	25.26	1.1038	10.6
abr	8	2458947.75	23	47	15.63	-4	6	11.50	1.1168	10.7
abr	9	2458948.75	23	52	51.51	-3	30	48.55	1.1297	10.7
abr	10	2458949.75	23	58	32.23	-2	54	17.89	1.1424	10.7
abr	11	2458950.75	0	4	17.80	-2	16	41.03	1.1549	10.7
abr	12	2458951.75	0	10	8.28	-1	37	59.51	1.1672	10.8
abr	13	2458952.75	0	16	3.73	-0	58	14.93	1.1793	10.8
abr	14	2458953.75	0	22	4.24	-0	17	28.93	1.1912	10.8
abr	15	2458954.75	0	28	9.93	+0	24	16.74	1.2028	10.9
abr	16	2458955.75	0	34	20.92	+1	7	0.26	1.2142	10.9
abr	17	2458956.75	0	40	37.38	+1	50	39.68	1.2253	11.0
abr	18	2458957.75	0	46	59.48	+2	35	12.87	1.2360	11.0
abr	19	2458958.75	0	53	27.41	+3	20	37.56	1.2464	11.0
abr	20	2458959.75	1	0	1.38	+4	6	51.22	1.2564	11.1
abr	21	2458960.75	1	6	41.59	+4	53	51.07	1.2660	11.1
abr	22	2458961.75	1	13	28.28	+5	41	34.00	1.2751	11.2
abr	23	2458962.75	1	20	21.67	+6	29	56.57	1.2837	11.2
abr	24	2458963.75	1	27	22.00	+7	18	54.87	1.2917	11.3
abr	25	2458964.75	1	34	29.47	+8	8	24.53	1.2991	11.3
abr	26	2458965.75	1	41	44.30	+8	58	20.62	1.3058	11.4
abr	27	2458966.75	1	49	6.67	+9	48	37.60	1.3118	11.4
abr	28	2458967.75	1	56	36.71	+10	39	9.21	1.3169	11.5
abr	29	2458968.75	2	4	14.52	+11	29	48.49	1.3212	11.6
abr	30	2458969.75	2	12	0.15	+12	20	27.64	1.3244	11.6
may	1	2458970.75	2	19	53.54	+13	10	58.07	1.3267	11.7
may	2	2458971.75	2	27	54.58	+14	1	10.33	1.3278	11.8
may	3	2458972.75	2	36	3.03	+14	50	54.17	1.3277	11.8
may	4	2458973.75	2	44	18.54	+15	39	58.57	1.3263	11.9
may	5	2458974.75	2	52	40.68	+16	28	12.12	1.3236	12.0
may	6	2458975.75	3	1	8.76	+17	15	22.43	1.3196	12.0
may	7	2458976.75	3	9	42.10	+18	1	17.33	1.3141	12.1
may	8	2458977.75	3	18	19.78	+18	45	44.45	1.3072	12.2
may	9	2458978.75	3	27	0.81	+19	28	31.75	1.2989	12.3
may	10	2458979.75	3	35	44.06	+20	9	27.72	1.2892	12.4
may	11	2458980.75	3	44	28.32	+20	48	21.76	1.2781	12.4
may	12	2458981.75	3	53	12.33	+21	25	4.40	1.2657	12.5
may	13	2458982.75	4	1	54.77	+21	59	27.54	1.2520	12.6
may	14	2458983.75	4	10	34.35	+22	31	24.60	1.2372	12.7
may	15	2458984.75	4	19	9.78	+23	0	50.63	1.2214	12.8
may	16	2458985.75	4	27	39.82	+23	27	42.32	1.2045	12.8
may	17	2458986.75	4	36	3.31	+23	51	57.94	1.1869	12.9

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	18	2458987.75	4	44	19.13	+24	13	37.27	1.1684	13.0
may	19	2458988.75	4	52	26.29	+24	32	41.41	1.1494	13.0
may	20	2458989.75	5	0	23.87	+24	49	12.70	1.1298	13.1
may	21	2458990.75	5	8	11.02	+25	3	14.44	1.1099	13.2
may	22	2458991.75	5	15	47.00	+25	14	50.82	1.0896	13.2
may	23	2458992.75	5	23	11.14	+25	24	6.67	1.0691	13.3
may	24	2458993.75	5	30	22.82	+25	31	7.37	1.0484	13.4
may	25	2458994.75	5	37	21.50	+25	35	58.71	1.0276	13.4
may	26	2458995.75	5	44	6.67	+25	38	46.72	1.0069	13.5
may	27	2458996.75	5	50	37.90	+25	39	37.64	0.9862	13.5
may	28	2458997.75	5	56	54.74	+25	38	37.85	0.9656	13.5
may	29	2458998.75	6	2	56.83	+25	35	53.73	0.9451	13.6
may	30	2458999.75	6	8	43.77	+25	31	31.71	0.9249	13.6
may	31	2459000.75	6	14	15.21	+25	25	38.17	0.9049	13.6
jun	1	2459001.75	6	19	30.82	+25	18	19.45	0.8852	13.6
jun	2	2459002.75	6	24	30.26	+25	9	41.84	0.8658	13.7
jun	3	2459003.75	6	29	13.18	+24	59	51.54	0.8468	13.7
jun	4	2459004.75	6	33	39.27	+24	48	54.67	0.8281	13.7
jun	5	2459005.75	6	37	48.19	+24	36	57.30	0.8098	13.7
jun	6	2459006.75	6	41	39.61	+24	24	5.38	0.7919	13.7
jun	7	2459007.75	6	45	13.19	+24	10	24.80	0.7745	13.7
jun	8	2459008.75	6	48	28.62	+23	56	1.36	0.7575	13.7
jun	9	2459009.75	6	51	25.56	+23	41	0.79	0.7411	13.7
jun	10	2459010.75	6	54	3.72	+23	25	28.73	0.7251	13.6
jun	11	2459011.75	6	56	22.79	+23	9	30.79	0.7097	13.6
jun	12	2459012.75	6	58	22.53	+22	53	12.51	0.6949	13.6
jun	13	2459013.75	7	0	2.70	+22	36	39.42	0.6807	13.5
jun	14	2459014.75	7	1	23.13	+22	19	56.98	0.6670	13.5
jun	15	2459015.75	7	2	23.70	+22	3	10.64	0.6541	13.4
jun	16	2459016.75	7	3	4.39	+21	46	25.83	0.6418	13.4
jun	17	2459017.75	7	3	25.27	+21	29	47.94	0.6302	13.3
jun	18	2459018.75	7	3	26.51	+21	13	22.37	0.6194	13.3
jun	19	2459019.75	7	3	8.45	+20	57	14.46	0.6094	13.2
jun	20	2459020.75	7	2	31.56	+20	41	29.57	0.6001	13.1
jun	21	2459021.75	7	1	36.51	+20	26	13.00	0.5918	13.0
jun	22	2459022.75	7	0	24.14	+20	11	30.00	0.5843	12.9
jun	23	2459023.75	6	58	55.53	+19	57	25.78	0.5778	12.9
jun	24	2459024.75	6	57	11.97	+19	44	5.45	0.5722	12.8
jun	25	2459025.75	6	55	14.97	+19	31	33.99	0.5676	12.7
jun	26	2459026.75	6	53	6.26	+19	19	56.23	0.5641	12.6
jun	27	2459027.75	6	50	47.81	+19	9	16.82	0.5616	12.5
jun	28	2459028.75	6	48	21.77	+18	59	40.10	0.5602	12.4
jun	29	2459029.75	6	45	50.44	+18	51	10.14	0.5599	12.2
jun	30	2459030.75	6	43	16.26	+18	43	50.56	0.5608	12.1
jul	1	2459031.75	6	40	41.76	+18	37	44.55	0.5629	12.0
jul	2	2459032.75	6	38	9.50	+18	32	54.72	0.5661	11.9

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
jul	3	2459033.75	6	35	42.01	+18	29	23.03	0.5705	11.8
jul	4	2459034.75	6	33	21.79	+18	27	10.75	0.5760	11.7
jul	5	2459035.75	6	31	11.19	+18	26	18.36	0.5828	11.6
jul	6	2459036.75	6	29	12.47	+18	26	45.52	0.5907	11.5
jul	7	2459037.75	6	27	27.65	+18	28	31.07	0.5998	11.4
jul	8	2459038.75	6	25	58.61	+18	31	32.99	0.6100	11.3
jul	9	2459039.75	6	24	46.98	+18	35	48.41	0.6214	11.2
jul	10	2459040.75	6	23	54.18	+18	41	13.68	0.6338	11.2
jul	11	2459041.75	6	23	21.44	+18	47	44.37	0.6473	11.1
jul	12	2459042.75	6	23	9.76	+18	55	15.31	0.6619	11.0
jul	13	2459043.75	6	23	19.97	+19	3	40.66	0.6775	11.0
jul	14	2459044.75	6	23	52.72	+19	12	53.96	0.6940	10.9
jul	15	2459045.75	6	24	48.50	+19	22	48.14	0.7115	10.8
jul	16	2459046.75	6	26	7.68	+19	33	15.60	0.7300	10.8
jul	17	2459047.75	6	27	50.48	+19	44	8.25	0.7493	10.8
jul	18	2459048.75	6	29	57.05	+19	55	17.50	0.7694	10.7
jul	19	2459049.75	6	32	27.45	+20	6	34.32	0.7903	10.7
jul	20	2459050.75	6	35	21.63	+20	17	49.25	0.8119	10.7
jul	21	2459051.75	6	38	39.51	+20	28	52.44	0.8342	10.7
jul	22	2459052.75	6	42	20.92	+20	39	33.63	0.8571	10.7
jul	23	2459053.75	6	46	25.61	+20	49	42.18	0.8806	10.7
jul	24	2459054.75	6	50	53.31	+20	59	7.16	0.9046	10.7
jul	25	2459055.75	6	55	43.63	+21	7	37.34	0.9289	10.7
jul	26	2459056.75	7	0	56.11	+21	15	1.28	0.9536	10.7
jul	27	2459057.75	7	6	30.19	+21	21	7.43	0.9785	10.7
jul	28	2459058.75	7	12	25.20	+21	25	44.24	1.0035	10.8
jul	29	2459059.75	7	18	40.34	+21	28	40.33	1.0285	10.8
jul	30	2459060.75	7	25	14.68	+21	29	44.66	1.0533	10.9
jul	31	2459061.75	7	32	7.10	+21	28	46.75	1.0780	10.9
ago	1	2459062.75	7	39	16.36	+21	25	36.93	1.1022	11.0
ago	2	2459063.75	7	46	41.04	+21	20	6.58	1.1259	11.0
ago	3	2459064.75	7	54	19.58	+21	12	8.45	1.1489	11.1
ago	4	2459065.75	8	2	10.28	+21	1	36.83	1.1711	11.2
ago	5	2459066.75	8	10	11.32	+20	48	27.80	1.1925	11.2
ago	6	2459067.75	8	18	20.84	+20	32	39.36	1.2128	11.3
ago	7	2459068.75	8	26	36.92	+20	14	11.48	1.2319	11.4
ago	8	2459069.75	8	34	57.65	+19	53	6.11	1.2499	11.4
ago	9	2459070.75	8	43	21.20	+19	29	27.07	1.2665	11.5
ago	10	2459071.75	8	51	45.80	+19	3	19.85	1.2819	11.6
ago	11	2459072.75	9	0	9.83	+18	34	51.37	1.2958	11.7
ago	12	2459073.75	9	8	31.83	+18	4	9.75	1.3085	11.7
ago	13	2459074.75	9	16	50.49	+17	31	23.93	1.3197	11.8
ago	14	2459075.75	9	25	4.71	+16	56	43.45	1.3297	11.9
ago	15	2459076.75	9	33	13.55	+16	20	18.16	1.3383	11.9
ago	16	2459077.75	9	41	16.27	+15	42	17.97	1.3457	12.0
ago	17	2459078.75	9	49	12.27	+15	2	52.64	1.3519	12.1

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	18	2459079.75	9	57	1.12	+14	22	11.63	1.3570	12.1
ago	19	2459080.75	10	4	42.52	+13	40	24.05	1.3610	12.2
ago	20	2459081.75	10	12	16.26	+12	57	38.50	1.3639	12.3
ago	21	2459082.75	10	19	42.27	+12	14	3.06	1.3659	12.3
ago	22	2459083.75	10	27	0.55	+11	29	45.22	1.3669	12.4
ago	23	2459084.75	10	34	11.15	+10	44	51.93	1.3672	12.4
ago	24	2459085.75	10	41	14.19	+9	59	29.59	1.3666	12.5
ago	25	2459086.75	10	48	9.83	+9	13	44.10	1.3652	12.5
ago	26	2459087.75	10	54	58.27	+8	27	40.86	1.3632	12.6
ago	27	2459088.75	11	1	39.70	+7	41	24.81	1.3605	12.6
ago	28	2459089.75	11	8	14.37	+6	55	0.46	1.3571	12.7
ago	29	2459090.75	11	14	42.50	+6	8	31.94	1.3532	12.7
ago	30	2459091.75	11	21	4.33	+5	22	3.03	1.3487	12.8
ago	31	2459092.75	11	27	20.13	+4	35	37.18	1.3437	12.8
sep	1	2459093.75	11	33	30.11	+3	49	17.57	1.3382	12.8
sep	2	2459094.75	11	39	34.52	+3	3	7.12	1.3323	12.9
sep	3	2459095.75	11	45	33.59	+2	17	8.51	1.3259	12.9
sep	4	2459096.75	11	51	27.53	+1	31	24.26	1.3190	12.9
sep	5	2459097.75	11	57	16.56	+0	45	56.68	1.3117	13.0
sep	6	2459098.75	12	3	0.87	+0	0	47.97	1.3040	13.0
sep	7	2459099.75	12	8	40.63	-0	43	59.81	1.2959	13.0
sep	8	2459100.75	12	14	16.02	-1	28	24.70	1.2875	13.1
sep	9	2459101.75	12	19	47.19	-2	12	24.82	1.2787	13.1
sep	10	2459102.75	12	25	14.26	-2	55	58.37	1.2695	13.1
sep	11	2459103.75	12	30	37.37	-3	39	3.59	1.2599	13.1
sep	12	2459104.75	12	35	56.60	-4	21	38.75	1.2500	13.2
sep	13	2459105.75	12	41	12.03	-5	3	42.15	1.2397	13.2
sep	14	2459106.75	12	46	23.72	-5	45	12.08	1.2291	13.2
sep	15	2459107.75	12	51	31.71	-6	26	6.84	1.2182	13.2
sep	16	2459108.75	12	56	36.00	-7	6	24.70	1.2069	13.2
sep	17	2459109.75	13	1	36.59	-7	46	3.87	1.1953	13.3
sep	18	2459110.75	13	6	33.44	-8	25	2.55	1.1833	13.3
sep	19	2459111.75	13	11	26.49	-9	3	18.85	1.1710	13.3
sep	20	2459112.75	13	16	15.63	-9	40	50.81	1.1584	13.3
sep	21	2459113.75	13	21	0.74	-10	17	36.37	1.1454	13.3
sep	22	2459114.75	13	25	41.65	-10	53	33.35	1.1321	13.3
sep	23	2459115.75	13	30	18.15	-11	28	39.43	1.1184	13.3
sep	24	2459116.75	13	34	50.00	-12	2	52.13	1.1044	13.3
sep	25	2459117.75	13	39	16.90	-12	36	8.81	1.0901	13.4
sep	26	2459118.75	13	43	38.49	-13	8	26.63	1.0755	13.4
sep	27	2459119.75	13	47	54.39	-13	39	42.50	1.0605	13.4
sep	28	2459120.75	13	52	4.13	-14	9	53.08	1.0452	13.4
sep	29	2459121.75	13	56	7.17	-14	38	54.75	1.0296	13.4
sep	30	2459122.75	14	0	2.91	-15	6	43.50	1.0136	13.4
oct	1	2459123.75	14	3	50.65	-15	33	14.99	0.9974	13.4
oct	2	2459124.75	14	7	29.63	-15	58	24.38	0.9809	13.4

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
oct	3	2459125.75	14	10	58.96	-16	22	6.35	0.9641	13.4
oct	4	2459126.75	14	14	17.65	-16	44	15.00	0.9471	13.3
oct	5	2459127.75	14	17	24.61	-17	4	43.76	0.9299	13.3
oct	6	2459128.75	14	20	18.62	-17	23	25.34	0.9125	13.3
oct	7	2459129.75	14	22	58.32	-17	40	11.61	0.8949	13.3
oct	8	2459130.75	14	25	22.25	-17	54	53.55	0.8772	13.3
oct	9	2459131.75	14	27	28.79	-18	7	21.11	0.8595	13.2
oct	10	2459132.75	14	29	16.22	-18	17	23.18	0.8417	13.2
oct	11	2459133.75	14	30	42.71	-18	24	47.53	0.8241	13.2
oct	12	2459134.75	14	31	46.37	-18	29	20.81	0.8067	13.1
oct	13	2459135.75	14	32	25.25	-18	30	48.63	0.7895	13.1
oct	14	2459136.75	14	32	37.44	-18	28	55.74	0.7728	13.0
oct	15	2459137.75	14	32	21.18	-18	23	26.40	0.7566	12.9
oct	16	2459138.75	14	31	34.89	-18	14	4.97	0.7411	12.8
oct	17	2459139.75	14	30	17.41	-18	0	36.76	0.7265	12.8
oct	18	2459140.75	14	28	28.12	-17	42	49.32	0.7130	12.7
oct	19	2459141.75	14	26	7.14	-17	20	33.97	0.7009	12.6
oct	20	2459142.75	14	23	15.55	-16	53	47.87	0.6903	12.4
oct	21	2459143.75	14	19	55.57	-16	22	36.21	0.6815	12.3
oct	22	2459144.75	14	16	10.70	-15	47	14.46	0.6748	12.2
oct	23	2459145.75	14	12	5.79	-15	8	10.26	0.6703	12.1
oct	24	2459146.75	14	7	46.95	-14	26	4.49	0.6684	11.9
oct	25	2459147.75	14	3	21.40	-13	41	50.95	0.6692	11.8
oct	26	2459148.75	13	58	57.10	-12	56	34.53	0.6728	11.6
oct	27	2459149.75	13	54	42.27	-12	11	27.66	0.6793	11.5
oct	28	2459150.75	13	50	44.96	-11	27	45.61	0.6887	11.4
oct	29	2459151.75	13	47	12.46	-10	46	41.10	0.7009	11.3
oct	30	2459152.75	13	44	10.99	-10	9	19.32	0.7158	11.1
oct	31	2459153.75	13	41	45.35	-9	36	33.96	0.7332	11.0
nov	1	2459154.75	13	39	58.80	-9	9	4.78	0.7528	10.9
nov	2	2459155.75	13	38	53.13	-8	47	16.84	0.7744	10.8
nov	3	2459156.75	13	38	28.72	-8	31	21.11	0.7977	10.8
nov	4	2459157.75	13	38	44.80	-8	21	16.22	0.8222	10.7
nov	5	2459158.75	13	39	39.69	-8	16	50.70	0.8478	10.7
nov	6	2459159.75	13	41	11.07	-8	17	45.49	0.8741	10.6
nov	7	2459160.75	13	43	16.15	-8	23	36.30	0.9008	10.6
nov	8	2459161.75	13	45	51.98	-8	33	55.70	0.9277	10.6
nov	9	2459162.75	13	48	55.52	-8	48	14.82	0.9546	10.6
nov	10	2459163.75	13	52	23.79	-9	6	4.70	0.9813	10.5
nov	11	2459164.75	13	56	13.98	-9	26	57.21	1.0075	10.5
nov	12	2459165.75	14	0	23.49	-9	50	25.75	1.0332	10.6
nov	13	2459166.75	14	4	49.92	-10	16	5.60	1.0583	10.6
nov	14	2459167.75	14	9	31.16	-10	43	34.15	1.0827	10.6
nov	15	2459168.75	14	14	25.32	-11	12	30.94	1.1063	10.6
nov	16	2459169.75	14	19	30.73	-11	42	37.63	1.1291	10.6
nov	17	2459170.75	14	24	45.97	-12	13	37.89	1.1510	10.6

Mercurio, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	18	2459171.75	14	30	9.80	-12	45	17.23	1.1720	10.7
nov	19	2459172.75	14	35	41.14	-13	17	22.89	1.1921	10.7
nov	20	2459173.75	14	41	19.10	-13	49	43.62	1.2114	10.7
nov	21	2459174.75	14	47	2.90	-14	22	9.54	1.2298	10.7
nov	22	2459175.75	14	52	51.91	-14	54	31.98	1.2473	10.8
nov	23	2459176.75	14	58	45.57	-15	26	43.32	1.2639	10.8
nov	24	2459177.75	15	4	43.43	-15	58	36.84	1.2797	10.8
nov	25	2459178.75	15	10	45.11	-16	30	6.64	1.2947	10.9
nov	26	2459179.75	15	16	50.30	-17	1	7.49	1.3089	10.9
nov	27	2459180.75	15	22	58.73	-17	31	34.76	1.3223	10.9
nov	28	2459181.75	15	29	10.19	-18	1	24.31	1.3349	11.0
nov	29	2459182.75	15	35	24.50	-18	30	32.45	1.3467	11.0
nov	30	2459183.75	15	41	41.51	-18	58	55.87	1.3579	11.1
dic	1	2459184.75	15	48	1.09	-19	26	31.56	1.3683	11.1
dic	2	2459185.75	15	54	23.16	-19	53	16.77	1.3780	11.1
dic	3	2459186.75	16	0	47.62	-20	19	9.01	1.3870	11.2
dic	4	2459187.75	16	7	14.41	-20	44	5.95	1.3954	11.2
dic	5	2459188.75	16	13	43.46	-21	8	5.44	1.4031	11.3
dic	6	2459189.75	16	20	14.73	-21	31	5.47	1.4102	11.3
dic	7	2459190.75	16	26	48.17	-21	53	4.14	1.4167	11.3
dic	8	2459191.75	16	33	23.75	-22	13	59.64	1.4225	11.4
dic	9	2459192.75	16	40	1.41	-22	33	50.27	1.4278	11.4
dic	10	2459193.75	16	46	41.14	-22	52	34.39	1.4324	11.5
dic	11	2459194.75	16	53	22.88	-23	10	10.42	1.4365	11.5
dic	12	2459195.75	17	0	6.60	-23	26	36.85	1.4399	11.6
dic	13	2459196.75	17	6	52.26	-23	41	52.21	1.4428	11.6
dic	14	2459197.75	17	13	39.81	-23	55	55.08	1.4451	11.7
dic	15	2459198.75	17	20	29.19	-24	8	44.06	1.4469	11.7
dic	16	2459199.75	17	27	20.34	-24	20	17.79	1.4481	11.8
dic	17	2459200.75	17	34	13.19	-24	30	34.92	1.4487	11.8
dic	18	2459201.75	17	41	7.68	-24	39	34.13	1.4487	11.9
dic	19	2459202.75	17	48	3.73	-24	47	14.14	1.4482	11.9
dic	20	2459203.75	17	55	1.26	-24	53	33.66	1.4471	12.0
dic	21	2459204.75	18	2	0.18	-24	58	31.45	1.4455	12.0
dic	22	2459205.75	18	9	0.40	-25	2	6.34	1.4432	12.1
dic	23	2459206.75	18	16	1.81	-25	4	17.18	1.4404	12.1
dic	24	2459207.75	18	23	4.29	-25	5	2.84	1.4370	12.2
dic	25	2459208.75	18	30	7.73	-25	4	22.24	1.4330	12.2
dic	26	2459209.75	18	37	12.00	-25	2	14.31	1.4284	12.3
dic	27	2459210.75	18	44	16.94	-24	58	38.08	1.4232	12.3
dic	28	2459211.75	18	51	22.41	-24	53	32.60	1.4173	12.4
dic	29	2459212.75	18	58	28.22	-24	46	56.99	1.4109	12.4
dic	30	2459213.75	19	5	34.20	-24	38	50.46	1.4037	12.5
dic	31	2459214.75	19	12	40.14	-24	29	12.28	1.3959	12.5

Venus, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ene	1	2458849.75	21	10	58.63	-18	10	23.92	1.2766	14.5
ene	2	2458850.75	21	15	52.94	-17	48	0.80	1.2710	14.5
ene	3	2458851.75	21	20	45.77	-17	25	8.98	1.2653	14.5
ene	4	2458852.75	21	25	37.13	-17	1	49.22	1.2596	14.5
ene	5	2458853.75	21	30	27.03	-16	38	2.32	1.2538	14.6
ene	6	2458854.75	21	35	15.47	-16	13	49.08	1.2481	14.6
ene	7	2458855.75	21	40	2.45	-15	49	10.30	1.2423	14.6
ene	8	2458856.75	21	44	47.99	-15	24	6.77	1.2364	14.6
ene	9	2458857.75	21	49	32.11	-14	58	39.30	1.2306	14.6
ene	10	2458858.75	21	54	14.81	-14	32	48.69	1.2247	14.6
ene	11	2458859.75	21	58	56.12	-14	6	35.75	1.2188	14.6
ene	12	2458860.75	22	3	36.05	-13	40	1.28	1.2128	14.6
ene	13	2458861.75	22	8	14.61	-13	13	6.05	1.2069	14.7
ene	14	2458862.75	22	12	51.85	-12	45	50.84	1.2009	14.7
ene	15	2458863.75	22	17	27.78	-12	18	16.42	1.1948	14.7
ene	16	2458864.75	22	22	2.42	-11	50	23.54	1.1888	14.7
ene	17	2458865.75	22	26	35.82	-11	22	12.97	1.1827	14.7
ene	18	2458866.75	22	31	8.00	-10	53	45.47	1.1766	14.7
ene	19	2458867.75	22	35	38.98	-10	25	1.81	1.1704	14.7
ene	20	2458868.75	22	40	8.80	-9	56	2.75	1.1643	14.7
ene	21	2458869.75	22	44	37.48	-9	26	49.08	1.1581	14.7
ene	22	2458870.75	22	49	5.06	-8	57	21.56	1.1519	14.7
ene	23	2458871.75	22	53	31.55	-8	27	40.98	1.1456	14.8
ene	24	2458872.75	22	57	56.98	-7	57	48.11	1.1393	14.8
ene	25	2458873.75	23	2	21.39	-7	27	43.73	1.1330	14.8
ene	26	2458874.75	23	6	44.79	-6	57	28.60	1.1267	14.8
ene	27	2458875.75	23	11	7.22	-6	27	3.50	1.1203	14.8
ene	28	2458876.75	23	15	28.71	-5	56	29.18	1.1139	14.8
ene	29	2458877.75	23	19	49.28	-5	25	46.40	1.1075	14.8
ene	30	2458878.75	23	24	8.96	-4	54	55.92	1.1010	14.8
ene	31	2458879.75	23	28	27.79	-4	23	58.49	1.0945	14.8
feb	1	2458880.75	23	32	45.80	-3	52	54.86	1.0880	14.8
feb	2	2458881.75	23	37	3.00	-3	21	45.77	1.0814	14.8
feb	3	2458882.75	23	41	19.45	-2	50	31.98	1.0748	14.8
feb	4	2458883.75	23	45	35.15	-2	19	14.21	1.0682	14.8
feb	5	2458884.75	23	49	50.16	-1	47	53.22	1.0616	14.8
feb	6	2458885.75	23	54	4.48	-1	16	29.74	1.0549	14.8
feb	7	2458886.75	23	58	18.16	-0	45	4.51	1.0482	14.8
feb	8	2458887.75	0	2	31.21	-0	13	38.25	1.0415	14.9
feb	9	2458888.75	0	6	43.68	+0	17	48.30	1.0348	14.9
feb	10	2458889.75	0	10	55.58	+0	49	14.46	1.0280	14.9
feb	11	2458890.75	0	15	6.96	+1	20	39.54	1.0212	14.9
feb	12	2458891.75	0	19	17.85	+1	52	2.85	1.0144	14.9
feb	13	2458892.75	0	23	28.28	+2	23	23.75	1.0075	14.9
feb	14	2458893.75	0	27	38.28	+2	54	41.58	1.0006	14.9
feb	15	2458894.75	0	31	47.89	+3	25	55.68	0.9937	14.9

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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
feb	16	2458895.75	0	35	57.13	+3	57	5.40	0.9868	14.9
feb	17	2458896.75	0	40	6.04	+4	28	10.07	0.9798	14.9
feb	18	2458897.75	0	44	14.63	+4	59	9.02	0.9729	14.9
feb	19	2458898.75	0	48	22.93	+5	30	1.58	0.9658	14.9
feb	20	2458899.75	0	52	30.97	+6	0	47.06	0.9588	14.9
feb	21	2458900.75	0	56	38.75	+6	31	24.80	0.9518	14.9
feb	22	2458901.75	1	0	46.29	+7	1	54.12	0.9447	14.9
feb	23	2458902.75	1	4	53.62	+7	32	14.35	0.9376	14.9
feb	24	2458903.75	1	9	0.75	+8	2	24.81	0.9304	14.9
feb	25	2458904.75	1	13	7.69	+8	32	24.84	0.9232	14.9
feb	26	2458905.75	1	17	14.45	+9	2	13.77	0.9161	14.9
feb	27	2458906.75	1	21	21.04	+9	31	50.93	0.9088	14.9
feb	28	2458907.75	1	25	27.48	+10	1	15.67	0.9016	14.9
feb	29	2458908.75	1	29	33.77	+10	30	27.32	0.8943	14.9
mar	1	2458909.75	1	33	39.91	+10	59	25.22	0.8870	14.9
mar	2	2458910.75	1	37	45.91	+11	28	8.73	0.8797	14.9
mar	3	2458911.75	1	41	51.77	+11	56	37.18	0.8724	14.9
mar	4	2458912.75	1	45	57.47	+12	24	49.94	0.8650	14.9
mar	5	2458913.75	1	50	3.03	+12	52	46.34	0.8576	14.9
mar	6	2458914.75	1	54	8.42	+13	20	25.75	0.8502	14.9
mar	7	2458915.75	1	58	13.65	+13	47	47.52	0.8428	14.9
mar	8	2458916.75	2	2	18.70	+14	14	51.03	0.8354	14.9
mar	9	2458917.75	2	6	23.56	+14	41	35.67	0.8279	14.9
mar	10	2458918.75	2	10	28.22	+15	8	0.85	0.8204	14.9
mar	11	2458919.75	2	14	32.68	+15	34	6.00	0.8129	15.0
mar	12	2458920.75	2	18	36.92	+15	59	50.59	0.8054	15.0
mar	13	2458921.75	2	22	40.92	+16	25	14.10	0.7978	15.0
mar	14	2458922.75	2	26	44.68	+16	50	16.01	0.7903	15.0
mar	15	2458923.75	2	30	48.16	+17	14	55.82	0.7827	15.0
mar	16	2458924.75	2	34	51.35	+17	39	13.01	0.7751	15.0
mar	17	2458925.75	2	38	54.21	+18	3	7.09	0.7675	15.0
mar	18	2458926.75	2	42	56.70	+18	26	37.54	0.7599	15.0
mar	19	2458927.75	2	46	58.79	+18	49	43.88	0.7523	15.0
mar	20	2458928.75	2	51	0.43	+19	12	25.61	0.7446	15.0
mar	21	2458929.75	2	55	1.58	+19	34	42.27	0.7370	15.0
mar	22	2458930.75	2	59	2.18	+19	56	33.38	0.7293	15.0
mar	23	2458931.75	3	3	2.17	+20	17	58.49	0.7216	15.0
mar	24	2458932.75	3	7	1.50	+20	38	57.17	0.7140	15.0
mar	25	2458933.75	3	11	0.09	+20	59	28.98	0.7063	15.0
mar	26	2458934.75	3	14	57.89	+21	19	33.51	0.6985	15.0
mar	27	2458935.75	3	18	54.80	+21	39	10.37	0.6908	15.0
mar	28	2458936.75	3	22	50.75	+21	58	19.17	0.6831	15.0
mar	29	2458937.75	3	26	45.66	+22	16	59.54	0.6754	15.0
mar	30	2458938.75	3	30	39.42	+22	35	11.14	0.6676	15.0
mar	31	2458939.75	3	34	31.94	+22	52	53.62	0.6599	15.0
abr	1	2458940.75	3	38	23.12	+23	10	6.67	0.6521	15.0

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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
abr	2	2458941.75	3	42	12.83	+23	26	49.99	0.6444	15.0
abr	3	2458942.75	3	46	0.97	+23	43	3.27	0.6366	15.0
abr	4	2458943.75	3	49	47.41	+23	58	46.26	0.6289	15.0
abr	5	2458944.75	3	53	32.03	+24	13	58.70	0.6211	15.0
abr	6	2458945.75	3	57	14.70	+24	28	40.37	0.6134	15.0
abr	7	2458946.75	4	0	55.28	+24	42	51.09	0.6057	15.0
abr	8	2458947.75	4	4	33.65	+24	56	30.70	0.5979	14.9
abr	9	2458948.75	4	8	9.66	+25	9	39.10	0.5902	14.9
abr	10	2458949.75	4	11	43.18	+25	22	16.22	0.5825	14.9
abr	11	2458950.75	4	15	14.06	+25	34	22.01	0.5748	14.9
abr	12	2458951.75	4	18	42.14	+25	45	56.45	0.5672	14.9
abr	13	2458952.75	4	22	7.26	+25	56	59.51	0.5595	14.9
abr	14	2458953.75	4	25	29.25	+26	7	31.19	0.5519	14.9
abr	15	2458954.75	4	28	47.93	+26	17	31.51	0.5443	14.9
abr	16	2458955.75	4	32	3.12	+26	27	0.47	0.5367	14.9
abr	17	2458956.75	4	35	14.63	+26	35	58.10	0.5291	14.9
abr	18	2458957.75	4	38	22.25	+26	44	24.45	0.5216	14.9
abr	19	2458958.75	4	41	25.78	+26	52	19.55	0.5141	14.8
abr	20	2458959.75	4	44	25.00	+26	59	43.47	0.5066	14.8
abr	21	2458960.75	4	47	19.69	+27	6	36.25	0.4992	14.8
abr	22	2458961.75	4	50	9.61	+27	12	57.97	0.4918	14.8
abr	23	2458962.75	4	52	54.53	+27	18	48.66	0.4844	14.8
abr	24	2458963.75	4	55	34.20	+27	24	8.39	0.4771	14.7
abr	25	2458964.75	4	58	8.35	+27	28	57.20	0.4699	14.7
abr	26	2458965.75	5	0	36.72	+27	33	15.12	0.4627	14.7
abr	27	2458966.75	5	2	59.04	+27	37	2.15	0.4555	14.7
abr	28	2458967.75	5	5	15.03	+27	40	18.27	0.4484	14.6
abr	29	2458968.75	5	7	24.39	+27	43	3.43	0.4414	14.6
abr	30	2458969.75	5	9	26.83	+27	45	17.55	0.4345	14.6
may	1	2458970.75	5	11	22.05	+27	47	0.49	0.4276	14.5
may	2	2458971.75	5	13	9.76	+27	48	12.08	0.4208	14.5
may	3	2458972.75	5	14	49.65	+27	48	52.10	0.4141	14.5
may	4	2458973.75	5	16	21.43	+27	49	0.27	0.4074	14.4
may	5	2458974.75	5	17	44.80	+27	48	36.26	0.4009	14.4
may	6	2458975.75	5	18	59.48	+27	47	39.71	0.3945	14.3
may	7	2458976.75	5	20	5.20	+27	46	10.20	0.3882	14.3
may	8	2458977.75	5	21	1.70	+27	44	7.26	0.3820	14.2
may	9	2458978.75	5	21	48.74	+27	41	30.37	0.3759	14.2
may	10	2458979.75	5	22	26.08	+27	38	18.91	0.3700	14.1
may	11	2458980.75	5	22	53.50	+27	34	32.22	0.3642	14.1
may	12	2458981.75	5	23	10.81	+27	30	9.55	0.3585	14.0
may	13	2458982.75	5	23	17.85	+27	25	10.11	0.3530	14.0
may	14	2458983.75	5	23	14.48	+27	19	33.02	0.3477	13.9
may	15	2458984.75	5	23	0.59	+27	13	17.38	0.3425	13.8
may	16	2458985.75	5	22	36.13	+27	6	22.28	0.3375	13.7
may	17	2458986.75	5	22	1.06	+26	58	46.78	0.3328	13.7

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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
may	18	2458987.75	5	21	15.42	+26	50	29.98	0.3282	13.6
may	19	2458988.75	5	20	19.30	+26	41	31.05	0.3238	13.5
may	20	2458989.75	5	19	12.85	+26	31	49.23	0.3196	13.4
may	21	2458990.75	5	17	56.28	+26	21	23.90	0.3157	13.3
may	22	2458991.75	5	16	29.87	+26	10	14.61	0.3119	13.3
may	23	2458992.75	5	14	53.98	+25	58	21.14	0.3085	13.2
may	24	2458993.75	5	13	9.04	+25	45	43.53	0.3053	13.1
may	25	2458994.75	5	11	15.55	+25	32	22.13	0.3023	13.0
may	26	2458995.75	5	9	14.12	+25	18	17.69	0.2996	12.9
may	27	2458996.75	5	7	5.39	+25	3	31.33	0.2972	12.8
may	28	2458997.75	5	4	50.12	+24	48	4.63	0.2951	12.7
may	29	2458998.75	5	2	29.11	+24	31	59.69	0.2932	12.6
may	30	2458999.75	5	0	3.25	+24	15	19.10	0.2917	12.5
may	31	2459000.75	4	57	33.47	+23	58	5.96	0.2905	12.3
jun	1	2459001.75	4	55	0.76	+23	40	23.92	0.2895	12.2
jun	2	2459002.75	4	52	26.15	+23	22	17.15	0.2889	12.1
jun	3	2459003.75	4	49	50.68	+23	3	50.25	0.2886	12.0
jun	4	2459004.75	4	47	15.40	+22	45	8.27	0.2886	11.9
jun	5	2459005.75	4	44	41.38	+22	26	16.58	0.2889	11.8
jun	6	2459006.75	4	42	9.62	+22	7	20.78	0.2896	11.7
jun	7	2459007.75	4	39	41.13	+21	48	26.61	0.2905	11.6
jun	8	2459008.75	4	37	16.83	+21	29	39.84	0.2918	11.5
jun	9	2459009.75	4	34	57.61	+21	11	6.17	0.2934	11.4
jun	10	2459010.75	4	32	44.25	+20	52	51.14	0.2952	11.3
jun	11	2459011.75	4	30	37.50	+20	35	0.02	0.2974	11.2
jun	12	2459012.75	4	28	38.00	+20	17	37.79	0.2998	11.1
jun	13	2459013.75	4	26	46.32	+20	0	49.02	0.3026	11.0
jun	14	2459014.75	4	25	2.94	+19	44	37.87	0.3055	10.9
jun	15	2459015.75	4	23	28.26	+19	29	8.00	0.3088	10.8
jun	16	2459016.75	4	22	2.62	+19	14	22.61	0.3123	10.7
jun	17	2459017.75	4	20	46.26	+19	0	24.39	0.3160	10.6
jun	18	2459018.75	4	19	39.37	+18	47	15.52	0.3200	10.5
jun	19	2459019.75	4	18	42.08	+18	34	57.69	0.3242	10.5
jun	20	2459020.75	4	17	54.43	+18	23	32.13	0.3286	10.4
jun	21	2459021.75	4	17	16.44	+18	12	59.63	0.3333	10.3
jun	22	2459022.75	4	16	48.08	+18	3	20.55	0.3381	10.2
jun	23	2459023.75	4	16	29.28	+17	54	34.90	0.3431	10.2
jun	24	2459024.75	4	16	19.91	+17	46	42.33	0.3483	10.1
jun	25	2459025.75	4	16	19.86	+17	39	42.19	0.3536	10.0
jun	26	2459026.75	4	16	28.96	+17	33	33.59	0.3591	10.0
jun	27	2459027.75	4	16	47.05	+17	28	15.42	0.3648	9.9
jun	28	2459028.75	4	17	13.94	+17	23	46.38	0.3706	9.8
jun	29	2459029.75	4	17	49.44	+17	20	4.99	0.3765	9.8
jun	30	2459030.75	4	18	33.37	+17	17	9.68	0.3826	9.7
jul	1	2459031.75	4	19	25.50	+17	14	58.75	0.3888	9.7
jul	2	2459032.75	4	20	25.64	+17	13	30.40	0.3952	9.6

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
jul	3	2459033.75	4	21	33.56	+17	12	42.76	0.4016	9.6
jul	4	2459034.75	4	22	49.07	+17	12	33.90	0.4081	9.5
jul	5	2459035.75	4	24	11.94	+17	13	1.80	0.4148	9.5
jul	6	2459036.75	4	25	41.95	+17	14	4.42	0.4215	9.4
jul	7	2459037.75	4	27	18.89	+17	15	39.70	0.4283	9.4
jul	8	2459038.75	4	29	2.54	+17	17	45.54	0.4352	9.4
jul	9	2459039.75	4	30	52.70	+17	20	19.87	0.4422	9.3
jul	10	2459040.75	4	32	49.16	+17	23	20.60	0.4493	9.3
jul	11	2459041.75	4	34	51.71	+17	26	45.68	0.4564	9.3
jul	12	2459042.75	4	37	0.15	+17	30	33.08	0.4636	9.2
jul	13	2459043.75	4	39	14.30	+17	34	40.80	0.4708	9.2
jul	14	2459044.75	4	41	33.96	+17	39	6.89	0.4781	9.2
jul	15	2459045.75	4	43	58.95	+17	43	49.42	0.4854	9.2
jul	16	2459046.75	4	46	29.10	+17	48	46.51	0.4928	9.1
jul	17	2459047.75	4	49	4.23	+17	53	56.33	0.5003	9.1
jul	18	2459048.75	4	51	44.17	+17	59	17.09	0.5077	9.1
jul	19	2459049.75	4	54	28.77	+18	4	47.03	0.5152	9.1
jul	20	2459050.75	4	57	17.87	+18	10	24.46	0.5228	9.1
jul	21	2459051.75	5	0	11.32	+18	16	7.71	0.5304	9.0
jul	22	2459052.75	5	3	8.96	+18	21	55.19	0.5380	9.0
jul	23	2459053.75	5	6	10.67	+18	27	45.31	0.5456	9.0
jul	24	2459054.75	5	9	16.32	+18	33	36.57	0.5533	9.0
jul	25	2459055.75	5	12	25.78	+18	39	27.52	0.5610	9.0
jul	26	2459056.75	5	15	38.95	+18	45	16.74	0.5687	9.0
jul	27	2459057.75	5	18	55.71	+18	51	2.88	0.5764	9.0
jul	28	2459058.75	5	22	15.95	+18	56	44.64	0.5842	8.9
jul	29	2459059.75	5	25	39.59	+19	2	20.74	0.5919	8.9
jul	30	2459060.75	5	29	6.52	+19	7	49.95	0.5997	8.9
jul	31	2459061.75	5	32	36.66	+19	13	11.08	0.6075	8.9
ago	1	2459062.75	5	36	9.90	+19	18	22.95	0.6153	8.9
ago	2	2459063.75	5	39	46.16	+19	23	24.41	0.6231	8.9
ago	3	2459064.75	5	43	25.35	+19	28	14.34	0.6309	8.9
ago	4	2459065.75	5	47	7.38	+19	32	51.65	0.6388	8.9
ago	5	2459066.75	5	50	52.16	+19	37	15.28	0.6466	8.9
ago	6	2459067.75	5	54	39.62	+19	41	24.19	0.6545	8.9
ago	7	2459068.75	5	58	29.66	+19	45	17.40	0.6623	8.9
ago	8	2459069.75	6	2	22.21	+19	48	53.94	0.6702	8.9
ago	9	2459070.75	6	6	17.18	+19	52	12.89	0.6780	8.9
ago	10	2459071.75	6	10	14.49	+19	55	13.35	0.6859	8.9
ago	11	2459072.75	6	14	14.05	+19	57	54.48	0.6937	8.9
ago	12	2459073.75	6	18	15.79	+20	0	15.45	0.7015	8.9
ago	13	2459074.75	6	22	19.63	+20	2	15.47	0.7094	8.9
ago	14	2459075.75	6	26	25.48	+20	3	53.81	0.7172	8.9
ago	15	2459076.75	6	30	33.26	+20	5	9.74	0.7250	8.9
ago	16	2459077.75	6	34	42.90	+20	6	2.58	0.7329	8.9
ago	17	2459078.75	6	38	54.30	+20	6	31.69	0.7407	8.9

Venus, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	18	2459079.75	6	43	7.40	+20	6	36.46	0.7485	8.9
ago	19	2459080.75	6	47	22.11	+20	6	16.28	0.7563	8.9
ago	20	2459081.75	6	51	38.35	+20	5	30.62	0.7640	8.9
ago	21	2459082.75	6	55	56.06	+20	4	18.95	0.7718	8.9
ago	22	2459083.75	7	0	15.16	+20	2	40.78	0.7795	8.9
ago	23	2459084.75	7	4	35.58	+20	0	35.69	0.7873	8.9
ago	24	2459085.75	7	8	57.28	+19	58	3.25	0.7950	9.0
ago	25	2459086.75	7	13	20.17	+19	55	3.10	0.8027	9.0
ago	26	2459087.75	7	17	44.21	+19	51	34.90	0.8104	9.0
ago	27	2459088.75	7	22	9.32	+19	47	38.32	0.8181	9.0
ago	28	2459089.75	7	26	35.46	+19	43	13.08	0.8258	9.0
ago	29	2459090.75	7	31	2.56	+19	38	18.91	0.8335	9.0
ago	30	2459091.75	7	35	30.56	+19	32	55.55	0.8411	9.0
ago	31	2459092.75	7	39	59.42	+19	27	2.79	0.8487	9.0
sep	1	2459093.75	7	44	29.06	+19	20	40.42	0.8564	9.0
sep	2	2459094.75	7	48	59.45	+19	13	48.28	0.8640	9.0
sep	3	2459095.75	7	53	30.52	+19	6	26.22	0.8715	9.0
sep	4	2459096.75	7	58	2.22	+18	58	34.13	0.8791	9.0
sep	5	2459097.75	8	2	34.50	+18	50	11.93	0.8866	9.1
sep	6	2459098.75	8	7	7.31	+18	41	19.57	0.8942	9.1
sep	7	2459099.75	8	11	40.60	+18	31	57.03	0.9017	9.1
sep	8	2459100.75	8	16	14.32	+18	22	4.32	0.9092	9.1
sep	9	2459101.75	8	20	48.42	+18	11	41.48	0.9166	9.1
sep	10	2459102.75	8	25	22.84	+18	0	48.59	0.9241	9.1
sep	11	2459103.75	8	29	57.55	+17	49	25.73	0.9315	9.1
sep	12	2459104.75	8	34	32.49	+17	37	33.05	0.9389	9.1
sep	13	2459105.75	8	39	7.62	+17	25	10.70	0.9462	9.1
sep	14	2459106.75	8	43	42.90	+17	12	18.85	0.9536	9.2
sep	15	2459107.75	8	48	18.27	+16	58	57.72	0.9609	9.2
sep	16	2459108.75	8	52	53.70	+16	45	7.53	0.9682	9.2
sep	17	2459109.75	8	57	29.15	+16	30	48.53	0.9755	9.2
sep	18	2459110.75	9	2	4.57	+16	16	1.00	0.9827	9.2
sep	19	2459111.75	9	6	39.95	+16	0	45.23	0.9899	9.2
sep	20	2459112.75	9	11	15.25	+15	45	1.53	0.9971	9.2
sep	21	2459113.75	9	15	50.45	+15	28	50.24	1.0043	9.2
sep	22	2459114.75	9	20	25.51	+15	12	11.73	1.0114	9.2
sep	23	2459115.75	9	25	0.43	+14	55	6.36	1.0185	9.2
sep	24	2459116.75	9	29	35.17	+14	37	34.54	1.0256	9.3
sep	25	2459117.75	9	34	9.73	+14	19	36.64	1.0327	9.3
sep	26	2459118.75	9	38	44.09	+14	1	13.09	1.0397	9.3
sep	27	2459119.75	9	43	18.23	+13	42	24.29	1.0467	9.3
sep	28	2459120.75	9	47	52.15	+13	23	10.68	1.0537	9.3
sep	29	2459121.75	9	52	25.84	+13	3	32.68	1.0607	9.3
sep	30	2459122.75	9	56	59.28	+12	43	30.75	1.0676	9.3
oct	1	2459123.75	10	1	32.48	+12	23	5.35	1.0745	9.3
oct	2	2459124.75	10	6	5.44	+12	2	16.96	1.0813	9.3

Venus, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
oct	3	2459125.75	10	10	38.14	+11	41	6.07	1.0882	9.4
oct	4	2459126.75	10	15	10.60	+11	19	33.20	1.0950	9.4
oct	5	2459127.75	10	19	42.81	+10	57	38.85	1.1018	9.4
oct	6	2459128.75	10	24	14.77	+10	35	23.57	1.1085	9.4
oct	7	2459129.75	10	28	46.49	+10	12	47.91	1.1153	9.4
oct	8	2459130.75	10	33	17.97	+9	49	52.42	1.1220	9.4
oct	9	2459131.75	10	37	49.21	+9	26	37.70	1.1286	9.4
oct	10	2459132.75	10	42	20.22	+9	3	4.32	1.1352	9.4
oct	11	2459133.75	10	46	51.01	+8	39	12.89	1.1418	9.4
oct	12	2459134.75	10	51	21.57	+8	15	4.02	1.1484	9.4
oct	13	2459135.75	10	55	51.93	+7	50	38.34	1.1549	9.4
oct	14	2459136.75	11	0	22.08	+7	25	56.48	1.1614	9.5
oct	15	2459137.75	11	4	52.05	+7	0	59.08	1.1679	9.5
oct	16	2459138.75	11	9	21.83	+6	35	46.77	1.1743	9.5
oct	17	2459139.75	11	13	51.45	+6	10	20.23	1.1807	9.5
oct	18	2459140.75	11	18	20.93	+5	44	40.09	1.1871	9.5
oct	19	2459141.75	11	22	50.28	+5	18	47.03	1.1934	9.5
oct	20	2459142.75	11	27	19.52	+4	52	41.73	1.1997	9.5
oct	21	2459143.75	11	31	48.66	+4	26	24.86	1.2060	9.5
oct	22	2459144.75	11	36	17.75	+3	59	57.11	1.2122	9.5
oct	23	2459145.75	11	40	46.78	+3	33	19.13	1.2184	9.5
oct	24	2459146.75	11	45	15.80	+3	6	31.61	1.2245	9.5
oct	25	2459147.75	11	49	44.82	+2	39	35.21	1.2307	9.6
oct	26	2459148.75	11	54	13.87	+2	12	30.61	1.2368	9.6
oct	27	2459149.75	11	58	42.99	+1	45	18.46	1.2428	9.6
oct	28	2459150.75	12	3	12.21	+1	17	59.44	1.2489	9.6
oct	29	2459151.75	12	7	41.55	+0	50	34.24	1.2548	9.6
oct	30	2459152.75	12	12	11.05	+0	23	3.52	1.2608	9.6
oct	31	2459153.75	12	16	40.74	-0	4	32.02	1.2667	9.6
nov	1	2459154.75	12	21	10.65	-0	32	11.69	1.2726	9.6
nov	2	2459155.75	12	25	40.82	-0	59	54.80	1.2785	9.6
nov	3	2459156.75	12	30	11.27	-1	27	40.64	1.2843	9.6
nov	4	2459157.75	12	34	42.03	-1	55	28.49	1.2901	9.6
nov	5	2459158.75	12	39	13.15	-2	23	17.65	1.2958	9.7
nov	6	2459159.75	12	43	44.64	-2	51	7.37	1.3015	9.7
nov	7	2459160.75	12	48	16.55	-3	18	56.92	1.3072	9.7
nov	8	2459161.75	12	52	48.90	-3	46	45.55	1.3128	9.7
nov	9	2459162.75	12	57	21.71	-4	14	32.53	1.3184	9.7
nov	10	2459163.75	13	1	55.03	-4	42	17.07	1.3240	9.7
nov	11	2459164.75	13	6	28.88	-5	9	58.43	1.3295	9.7
nov	12	2459165.75	13	11	3.30	-5	37	35.84	1.3350	9.7
nov	13	2459166.75	13	15	38.31	-6	5	8.52	1.3405	9.7
nov	14	2459167.75	13	20	13.94	-6	32	35.71	1.3459	9.8
nov	15	2459168.75	13	24	50.23	-6	59	56.62	1.3512	9.8
nov	16	2459169.75	13	29	27.20	-7	27	10.47	1.3566	9.8
nov	17	2459170.75	13	34	4.88	-7	54	16.47	1.3619	9.8

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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
nov	18	2459171.75	13	38	43.30	-8	21	13.82	1.3671	9.8
nov	19	2459172.75	13	43	22.48	-8	48	1.73	1.3723	9.8
nov	20	2459173.75	13	48	2.45	-9	14	39.40	1.3775	9.8
nov	21	2459174.75	13	52	43.24	-9	41	6.05	1.3827	9.8
nov	22	2459175.75	13	57	24.89	-10	7	20.91	1.3878	9.8
nov	23	2459176.75	14	2	7.41	-10	33	23.17	1.3928	9.9
nov	24	2459177.75	14	6	50.85	-10	59	12.09	1.3979	9.9
nov	25	2459178.75	14	11	35.22	-11	24	46.86	1.4028	9.9
nov	26	2459179.75	14	16	20.57	-11	50	6.72	1.4078	9.9
nov	27	2459180.75	14	21	6.90	-12	15	10.90	1.4127	9.9
nov	28	2459181.75	14	25	54.26	-12	39	58.60	1.4176	9.9
nov	29	2459182.75	14	30	42.66	-13	4	29.05	1.4224	9.9
nov	30	2459183.75	14	35	32.13	-13	28	41.48	1.4272	10.0
dic	1	2459184.75	14	40	22.69	-13	52	35.08	1.4320	10.0
dic	2	2459185.75	14	45	14.35	-14	16	9.09	1.4367	10.0
dic	3	2459186.75	14	50	7.14	-14	39	22.70	1.4414	10.0
dic	4	2459187.75	14	55	1.07	-15	2	15.12	1.4461	10.0
dic	5	2459188.75	14	59	56.15	-15	24	45.56	1.4507	10.0
dic	6	2459189.75	15	4	52.40	-15	46	53.21	1.4553	10.0
dic	7	2459190.75	15	9	49.82	-16	8	37.29	1.4598	10.1
dic	8	2459191.75	15	14	48.43	-16	29	56.99	1.4643	10.1
dic	9	2459192.75	15	19	48.22	-16	50	51.53	1.4688	10.1
dic	10	2459193.75	15	24	49.21	-17	11	20.11	1.4732	10.1
dic	11	2459194.75	15	29	51.40	-17	31	21.95	1.4776	10.1
dic	12	2459195.75	15	34	54.78	-17	50	56.30	1.4820	10.2
dic	13	2459196.75	15	39	59.36	-18	10	2.38	1.4863	10.2
dic	14	2459197.75	15	45	5.11	-18	28	39.43	1.4905	10.2
dic	15	2459198.75	15	50	12.04	-18	46	46.71	1.4948	10.2
dic	16	2459199.75	15	55	20.12	-19	4	23.48	1.4989	10.2
dic	17	2459200.75	16	0	29.34	-19	21	28.98	1.5031	10.3
dic	18	2459201.75	16	5	39.69	-19	38	2.51	1.5072	10.3
dic	19	2459202.75	16	10	51.14	-19	54	3.36	1.5113	10.3
dic	20	2459203.75	16	16	3.67	-20	9	30.84	1.5153	10.3
dic	21	2459204.75	16	21	17.28	-20	24	24.30	1.5193	10.3
dic	22	2459205.75	16	26	31.92	-20	38	43.10	1.5232	10.4
dic	23	2459206.75	16	31	47.59	-20	52	26.60	1.5272	10.4
dic	24	2459207.75	16	37	4.26	-21	5	34.22	1.5310	10.4
dic	25	2459208.75	16	42	21.88	-21	18	5.37	1.5349	10.4
dic	26	2459209.75	16	47	40.45	-21	29	59.49	1.5387	10.4
dic	27	2459210.75	16	52	59.91	-21	41	16.05	1.5424	10.5
dic	28	2459211.75	16	58	20.23	-21	51	54.53	1.5462	10.5
dic	29	2459212.75	17	3	41.38	-22	1	54.44	1.5499	10.5
dic	30	2459213.75	17	9	3.31	-22	11	15.31	1.5535	10.5
dic	31	2459214.75	17	14	25.98	-22	19	56.69	1.5571	10.6

Marte, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2458849.75	15	45	35.93	-19	29	4.39	2.1826	9.1
ene	2	2458850.75	15	48	22.58	-19	38	27.56	2.1754	9.0
ene	3	2458851.75	15	51	9.62	-19	47	41.48	2.1682	9.0
ene	4	2458852.75	15	53	57.06	-19	56	46.04	2.1609	9.0
ene	5	2458853.75	15	56	44.90	-20	5	41.15	2.1536	9.0
ene	6	2458854.75	15	59	33.14	-20	14	26.70	2.1462	9.0
ene	7	2458855.75	16	2	21.78	-20	23	2.62	2.1389	9.0
ene	8	2458856.75	16	5	10.82	-20	31	28.80	2.1315	8.9
ene	9	2458857.75	16	8	0.25	-20	39	45.15	2.1240	8.9
ene	10	2458858.75	16	10	50.08	-20	47	51.59	2.1166	8.9
ene	11	2458859.75	16	13	40.29	-20	55	48.02	2.1091	8.9
ene	12	2458860.75	16	16	30.90	-21	3	34.35	2.1016	8.9
ene	13	2458861.75	16	19	21.89	-21	11	10.45	2.0941	8.8
ene	14	2458862.75	16	22	13.25	-21	18	36.24	2.0865	8.8
ene	15	2458863.75	16	25	5.00	-21	25	51.60	2.0789	8.8
ene	16	2458864.75	16	27	57.11	-21	32	56.44	2.0713	8.8
ene	17	2458865.75	16	30	49.60	-21	39	50.66	2.0636	8.8
ene	18	2458866.75	16	33	42.46	-21	46	34.18	2.0560	8.8
ene	19	2458867.75	16	36	35.67	-21	53	6.90	2.0483	8.7
ene	20	2458868.75	16	39	29.23	-21	59	28.74	2.0405	8.7
ene	21	2458869.75	16	42	23.14	-22	5	39.62	2.0328	8.7
ene	22	2458870.75	16	45	17.38	-22	11	39.44	2.0250	8.7
ene	23	2458871.75	16	48	11.95	-22	17	28.11	2.0172	8.7
ene	24	2458872.75	16	51	6.82	-22	23	5.54	2.0094	8.6
ene	25	2458873.75	16	54	2.00	-22	28	31.65	2.0016	8.6
ene	26	2458874.75	16	56	57.48	-22	33	46.35	1.9937	8.6
ene	27	2458875.75	16	59	53.24	-22	38	49.54	1.9858	8.6
ene	28	2458876.75	17	2	49.29	-22	43	41.16	1.9779	8.6
ene	29	2458877.75	17	5	45.61	-22	48	21.13	1.9700	8.6
ene	30	2458878.75	17	8	42.19	-22	52	49.39	1.9620	8.5
ene	31	2458879.75	17	11	39.04	-22	57	5.86	1.9541	8.5
feb	1	2458880.75	17	14	36.13	-23	1	10.49	1.9461	8.5
feb	2	2458881.75	17	17	33.48	-23	5	3.22	1.9381	8.5
feb	3	2458882.75	17	20	31.07	-23	8	44.02	1.9301	8.5
feb	4	2458883.75	17	23	28.89	-23	12	12.82	1.9221	8.5
feb	5	2458884.75	17	26	26.94	-23	15	29.60	1.9141	8.5
feb	6	2458885.75	17	29	25.21	-23	18	34.30	1.9060	8.4
feb	7	2458886.75	17	32	23.70	-23	21	26.90	1.8980	8.4
feb	8	2458887.75	17	35	22.39	-23	24	7.35	1.8899	8.4
feb	9	2458888.75	17	38	21.27	-23	26	35.60	1.8818	8.4
feb	10	2458889.75	17	41	20.35	-23	28	51.60	1.8738	8.4
feb	11	2458890.75	17	44	19.61	-23	30	55.31	1.8657	8.4
feb	12	2458891.75	17	47	19.04	-23	32	46.67	1.8576	8.3
feb	13	2458892.75	17	50	18.63	-23	34	25.66	1.8494	8.3
feb	14	2458893.75	17	53	18.39	-23	35	52.24	1.8413	8.3
feb	15	2458894.75	17	56	18.30	-23	37	6.40	1.8332	8.3

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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
feb	16	2458895.75	17	59	18.34	-23	38	8.11	1.8250	8.3
feb	17	2458896.75	18	2	18.51	-23	38	57.36	1.8169	8.3
feb	18	2458897.75	18	5	18.79	-23	39	34.14	1.8087	8.2
feb	19	2458898.75	18	8	19.17	-23	39	58.42	1.8005	8.2
feb	20	2458899.75	18	11	19.63	-23	40	10.21	1.7924	8.2
feb	21	2458900.75	18	14	20.16	-23	40	9.47	1.7842	8.2
feb	22	2458901.75	18	17	20.74	-23	39	56.20	1.7760	8.2
feb	23	2458902.75	18	20	21.37	-23	39	30.39	1.7678	8.2
feb	24	2458903.75	18	23	22.02	-23	38	52.04	1.7596	8.2
feb	25	2458904.75	18	26	22.70	-23	38	1.14	1.7514	8.1
feb	26	2458905.75	18	29	23.39	-23	36	57.70	1.7432	8.1
feb	27	2458906.75	18	32	24.09	-23	35	41.74	1.7350	8.1
feb	28	2458907.75	18	35	24.77	-23	34	13.26	1.7268	8.1
feb	29	2458908.75	18	38	25.44	-23	32	32.28	1.7186	8.1
mar	1	2458909.75	18	41	26.08	-23	30	38.84	1.7104	8.1
mar	2	2458910.75	18	44	26.69	-23	28	32.97	1.7022	8.0
mar	3	2458911.75	18	47	27.25	-23	26	14.70	1.6939	8.0
mar	4	2458912.75	18	50	27.76	-23	23	44.06	1.6857	8.0
mar	5	2458913.75	18	53	28.21	-23	21	1.10	1.6775	8.0
mar	6	2458914.75	18	56	28.59	-23	18	5.87	1.6693	8.0
mar	7	2458915.75	18	59	28.90	-23	14	58.39	1.6612	8.0
mar	8	2458916.75	19	2	29.11	-23	11	38.70	1.6530	7.9
mar	9	2458917.75	19	5	29.24	-23	8	6.83	1.6448	7.9
mar	10	2458918.75	19	8	29.27	-23	4	22.82	1.6366	7.9
mar	11	2458919.75	19	11	29.19	-23	0	26.69	1.6284	7.9
mar	12	2458920.75	19	14	29.00	-22	56	18.49	1.6203	7.9
mar	13	2458921.75	19	17	28.69	-22	51	58.28	1.6121	7.9
mar	14	2458922.75	19	20	28.26	-22	47	26.13	1.6040	7.9
mar	15	2458923.75	19	23	27.68	-22	42	42.12	1.5958	7.8
mar	16	2458924.75	19	26	26.96	-22	37	46.30	1.5877	7.8
mar	17	2458925.75	19	29	26.07	-22	32	38.77	1.5795	7.8
mar	18	2458926.75	19	32	25.00	-22	27	19.59	1.5714	7.8
mar	19	2458927.75	19	35	23.74	-22	21	48.84	1.5633	7.8
mar	20	2458928.75	19	38	22.28	-22	16	6.60	1.5552	7.8
mar	21	2458929.75	19	41	20.61	-22	10	12.94	1.5470	7.7
mar	22	2458930.75	19	44	18.71	-22	4	7.94	1.5389	7.7
mar	23	2458931.75	19	47	16.58	-21	57	51.69	1.5309	7.7
mar	24	2458932.75	19	50	14.21	-21	51	24.27	1.5228	7.7
mar	25	2458933.75	19	53	11.59	-21	44	45.78	1.5147	7.7
mar	26	2458934.75	19	56	8.71	-21	37	56.30	1.5066	7.7
mar	27	2458935.75	19	59	5.57	-21	30	55.94	1.4986	7.6
mar	28	2458936.75	20	2	2.16	-21	23	44.81	1.4906	7.6
mar	29	2458937.75	20	4	58.47	-21	16	23.01	1.4825	7.6
mar	30	2458938.75	20	7	54.51	-21	8	50.64	1.4745	7.6
mar	31	2458939.75	20	10	50.25	-21	1	7.83	1.4665	7.6
abr	1	2458940.75	20	13	45.70	-20	53	14.69	1.4585	7.6

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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
abr	2	2458941.75	20	16	40.86	-20	45	11.32	1.4506	7.5
abr	3	2458942.75	20	19	35.71	-20	36	57.85	1.4426	7.5
abr	4	2458943.75	20	22	30.26	-20	28	34.38	1.4347	7.5
abr	5	2458944.75	20	25	24.50	-20	20	1.01	1.4268	7.5
abr	6	2458945.75	20	28	18.43	-20	11	17.84	1.4189	7.5
abr	7	2458946.75	20	31	12.04	-20	2	24.96	1.4110	7.5
abr	8	2458947.75	20	34	5.35	-19	53	22.48	1.4031	7.4
abr	9	2458948.75	20	36	58.34	-19	44	10.51	1.3953	7.4
abr	10	2458949.75	20	39	51.02	-19	34	49.16	1.3874	7.4
abr	11	2458950.75	20	42	43.38	-19	25	18.57	1.3796	7.4
abr	12	2458951.75	20	45	35.42	-19	15	38.89	1.3718	7.4
abr	13	2458952.75	20	48	27.11	-19	5	50.27	1.3640	7.3
abr	14	2458953.75	20	51	18.47	-18	55	52.84	1.3563	7.3
abr	15	2458954.75	20	54	9.47	-18	45	46.75	1.3485	7.3
abr	16	2458955.75	20	57	0.12	-18	35	32.15	1.3408	7.3
abr	17	2458956.75	20	59	50.39	-18	25	9.18	1.3331	7.3
abr	18	2458957.75	21	2	40.30	-18	14	37.99	1.3254	7.3
abr	19	2458958.75	21	5	29.82	-18	3	58.72	1.3177	7.2
abr	20	2458959.75	21	8	18.96	-17	53	11.51	1.3100	7.2
abr	21	2458960.75	21	11	7.71	-17	42	16.53	1.3024	7.2
abr	22	2458961.75	21	13	56.07	-17	31	13.91	1.2948	7.2
abr	23	2458962.75	21	16	44.04	-17	20	3.82	1.2871	7.2
abr	24	2458963.75	21	19	31.60	-17	8	46.42	1.2796	7.1
abr	25	2458964.75	21	22	18.77	-16	57	21.86	1.2720	7.1
abr	26	2458965.75	21	25	5.53	-16	45	50.30	1.2644	7.1
abr	27	2458966.75	21	27	51.88	-16	34	11.91	1.2569	7.1
abr	28	2458967.75	21	30	37.82	-16	22	26.86	1.2494	7.1
abr	29	2458968.75	21	33	23.36	-16	10	35.29	1.2419	7.0
abr	30	2458969.75	21	36	8.48	-15	58	37.38	1.2345	7.0
may	1	2458970.75	21	38	53.19	-15	46	33.26	1.2270	7.0
may	2	2458971.75	21	41	37.50	-15	34	23.10	1.2196	7.0
may	3	2458972.75	21	44	21.39	-15	22	7.03	1.2122	7.0
may	4	2458973.75	21	47	4.87	-15	9	45.18	1.2049	6.9
may	5	2458974.75	21	49	47.95	-14	57	17.69	1.1975	6.9
may	6	2458975.75	21	52	30.64	-14	44	44.68	1.1902	6.9
may	7	2458976.75	21	55	12.93	-14	32	6.30	1.1829	6.9
may	8	2458977.75	21	57	54.82	-14	19	22.71	1.1756	6.9
may	9	2458978.75	22	0	36.32	-14	6	34.07	1.1684	6.8
may	10	2458979.75	22	3	17.42	-13	53	40.56	1.1611	6.8
may	11	2458980.75	22	5	58.11	-13	40	42.38	1.1539	6.8
may	12	2458981.75	22	8	38.39	-13	27	39.70	1.1467	6.8
may	13	2458982.75	22	11	18.25	-13	14	32.71	1.1396	6.8
may	14	2458983.75	22	13	57.68	-13	1	21.59	1.1324	6.7
may	15	2458984.75	22	16	36.69	-12	48	6.52	1.1253	6.7
may	16	2458985.75	22	19	15.27	-12	34	47.70	1.1182	6.7
may	17	2458986.75	22	21	53.40	-12	21	25.30	1.1111	6.7

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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
may	18	2458987.75	22	24	31.09	-12	7	59.51	1.1041	6.6
may	19	2458988.75	22	27	8.34	-11	54	30.52	1.0970	6.6
may	20	2458989.75	22	29	45.14	-11	40	58.51	1.0900	6.6
may	21	2458990.75	22	32	21.48	-11	27	23.67	1.0830	6.6
may	22	2458991.75	22	34	57.37	-11	13	46.20	1.0761	6.6
may	23	2458992.75	22	37	32.79	-11	0	6.28	1.0691	6.5
may	24	2458993.75	22	40	7.76	-10	46	24.11	1.0622	6.5
may	25	2458994.75	22	42	42.25	-10	32	39.88	1.0553	6.5
may	26	2458995.75	22	45	16.28	-10	18	53.78	1.0484	6.5
may	27	2458996.75	22	47	49.84	-10	5	5.99	1.0416	6.4
may	28	2458997.75	22	50	22.92	-9	51	16.69	1.0347	6.4
may	29	2458998.75	22	52	55.52	-9	37	26.06	1.0279	6.4
may	30	2458999.75	22	55	27.65	-9	23	34.24	1.0212	6.4
may	31	2459000.75	22	57	59.31	-9	9	41.41	1.0144	6.4
jun	1	2459001.75	23	0	30.50	-8	55	47.69	1.0077	6.3
jun	2	2459002.75	23	3	1.22	-8	41	53.25	1.0010	6.3
jun	3	2459003.75	23	5	31.47	-8	27	58.21	0.9943	6.3
jun	4	2459004.75	23	8	1.26	-8	14	2.73	0.9876	6.3
jun	5	2459005.75	23	10	30.58	-8	0	6.98	0.9810	6.2
jun	6	2459006.75	23	12	59.43	-7	46	11.14	0.9744	6.2
jun	7	2459007.75	23	15	27.81	-7	32	15.40	0.9678	6.2
jun	8	2459008.75	23	17	55.70	-7	18	19.96	0.9613	6.2
jun	9	2459009.75	23	20	23.09	-7	4	25.01	0.9547	6.1
jun	10	2459010.75	23	22	49.98	-6	50	30.76	0.9482	6.1
jun	11	2459011.75	23	25	16.36	-6	36	37.42	0.9417	6.1
jun	12	2459012.75	23	27	42.21	-6	22	45.19	0.9352	6.1
jun	13	2459013.75	23	30	7.54	-6	8	54.27	0.9288	6.0
jun	14	2459014.75	23	32	32.31	-5	55	4.86	0.9224	6.0
jun	15	2459015.75	23	34	56.54	-5	41	17.17	0.9160	6.0
jun	16	2459016.75	23	37	20.21	-5	27	31.41	0.9096	6.0
jun	17	2459017.75	23	39	43.30	-5	13	47.77	0.9032	5.9
jun	18	2459018.75	23	42	5.81	-5	0	6.47	0.8969	5.9
jun	19	2459019.75	23	44	27.72	-4	46	27.70	0.8905	5.9
jun	20	2459020.75	23	46	49.03	-4	32	51.69	0.8842	5.9
jun	21	2459021.75	23	49	9.72	-4	19	18.64	0.8780	5.8
jun	22	2459022.75	23	51	29.78	-4	5	48.74	0.8717	5.8
jun	23	2459023.75	23	53	49.20	-3	52	22.20	0.8655	5.8
jun	24	2459024.75	23	56	7.97	-3	38	59.22	0.8593	5.7
jun	25	2459025.75	23	58	26.07	-3	25	39.97	0.8531	5.7
jun	26	2459026.75	0	0	43.50	-3	12	24.62	0.8469	5.7
jun	27	2459027.75	0	3	0.26	-2	59	13.34	0.8408	5.7
jun	28	2459028.75	0	5	16.32	-2	46	6.26	0.8347	5.6
jun	29	2459029.75	0	7	31.70	-2	33	3.53	0.8286	5.6
jun	30	2459030.75	0	9	46.38	-2	20	5.28	0.8225	5.6
jul	1	2459031.75	0	12	0.36	-2	7	11.65	0.8165	5.5
jul	2	2459032.75	0	14	13.61	-1	54	22.80	0.8105	5.5

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
jul	3	2459033.75	0	16	26.15	-1	41	38.87	0.8045	5.5
jul	4	2459034.75	0	18	37.94	-1	29	0.04	0.7985	5.5
jul	5	2459035.75	0	20	48.97	-1	16	26.48	0.7926	5.4
jul	6	2459036.75	0	22	59.22	-1	3	58.41	0.7866	5.4
jul	7	2459037.75	0	25	8.67	-0	51	36.00	0.7807	5.4
jul	8	2459038.75	0	27	17.30	-0	39	19.46	0.7749	5.3
jul	9	2459039.75	0	29	25.08	-0	27	9.00	0.7690	5.3
jul	10	2459040.75	0	31	31.99	-0	15	4.81	0.7632	5.3
jul	11	2459041.75	0	33	38.02	-0	3	7.11	0.7573	5.3
jul	12	2459042.75	0	35	43.12	+0	8	43.91	0.7515	5.2
jul	13	2459043.75	0	37	47.29	+0	20	28.05	0.7458	5.2
jul	14	2459044.75	0	39	50.48	+0	32	5.09	0.7400	5.2
jul	15	2459045.75	0	41	52.68	+0	43	34.83	0.7343	5.1
jul	16	2459046.75	0	43	53.85	+0	54	57.08	0.7286	5.1
jul	17	2459047.75	0	45	53.96	+1	6	11.61	0.7229	5.1
jul	18	2459048.75	0	47	52.99	+1	17	18.24	0.7172	5.0
jul	19	2459049.75	0	49	50.91	+1	28	16.75	0.7116	5.0
jul	20	2459050.75	0	51	47.67	+1	39	6.95	0.7060	5.0
jul	21	2459051.75	0	53	43.26	+1	49	48.64	0.7004	4.9
jul	22	2459052.75	0	55	37.64	+2	0	21.64	0.6948	4.9
jul	23	2459053.75	0	57	30.77	+2	10	45.79	0.6893	4.9
jul	24	2459054.75	0	59	22.64	+2	21	0.94	0.6838	4.8
jul	25	2459055.75	1	1	13.22	+2	31	6.96	0.6783	4.8
jul	26	2459056.75	1	3	2.48	+2	41	3.73	0.6728	4.8
jul	27	2459057.75	1	4	50.40	+2	50	51.16	0.6674	4.7
jul	28	2459058.75	1	6	36.94	+3	0	29.12	0.6620	4.7
jul	29	2459059.75	1	8	22.09	+3	9	57.51	0.6566	4.6
jul	30	2459060.75	1	10	5.81	+3	19	16.20	0.6513	4.6
jul	31	2459061.75	1	11	48.07	+3	28	25.08	0.6459	4.6
ago	1	2459062.75	1	13	28.82	+3	37	23.99	0.6406	4.5
ago	2	2459063.75	1	15	8.03	+3	46	12.78	0.6354	4.5
ago	3	2459064.75	1	16	45.66	+3	54	51.28	0.6301	4.5
ago	4	2459065.75	1	18	21.66	+4	3	19.33	0.6249	4.4
ago	5	2459066.75	1	19	55.98	+4	11	36.74	0.6198	4.4
ago	6	2459067.75	1	21	28.59	+4	19	43.35	0.6146	4.3
ago	7	2459068.75	1	22	59.42	+4	27	38.96	0.6095	4.3
ago	8	2459069.75	1	24	28.44	+4	35	23.40	0.6044	4.3
ago	9	2459070.75	1	25	55.58	+4	42	56.49	0.5994	4.2
ago	10	2459071.75	1	27	20.80	+4	50	18.04	0.5943	4.2
ago	11	2459072.75	1	28	44.04	+4	57	27.88	0.5893	4.1
ago	12	2459073.75	1	30	5.25	+5	4	25.83	0.5844	4.1
ago	13	2459074.75	1	31	24.37	+5	11	11.69	0.5795	4.0
ago	14	2459075.75	1	32	41.34	+5	17	45.31	0.5746	4.0
ago	15	2459076.75	1	33	56.10	+5	24	6.49	0.5697	4.0
ago	16	2459077.75	1	35	8.60	+5	30	15.07	0.5649	3.9
ago	17	2459078.75	1	36	18.78	+5	36	10.88	0.5602	3.9

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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
ago	18	2459079.75	1	37	26.58	+5	41	53.76	0.5554	3.8
ago	19	2459080.75	1	38	31.94	+5	47	23.58	0.5508	3.8
ago	20	2459081.75	1	39	34.82	+5	52	40.23	0.5461	3.7
ago	21	2459082.75	1	40	35.15	+5	57	43.62	0.5415	3.7
ago	22	2459083.75	1	41	32.91	+6	2	33.68	0.5370	3.6
ago	23	2459084.75	1	42	28.04	+6	7	10.39	0.5325	3.6
ago	24	2459085.75	1	43	20.50	+6	11	33.71	0.5281	3.5
ago	25	2459086.75	1	44	10.25	+6	15	43.62	0.5237	3.5
ago	26	2459087.75	1	44	57.24	+6	19	40.09	0.5193	3.4
ago	27	2459088.75	1	45	41.42	+6	23	23.07	0.5151	3.4
ago	28	2459089.75	1	46	22.76	+6	26	52.51	0.5108	3.3
ago	29	2459090.75	1	47	1.19	+6	30	8.37	0.5067	3.3
ago	30	2459091.75	1	47	36.66	+6	33	10.56	0.5026	3.2
ago	31	2459092.75	1	48	9.14	+6	35	59.03	0.4985	3.1
sep	1	2459093.75	1	48	38.56	+6	38	33.71	0.4946	3.1
sep	2	2459094.75	1	49	4.88	+6	40	54.52	0.4907	3.0
sep	3	2459095.75	1	49	28.05	+6	43	1.41	0.4868	3.0
sep	4	2459096.75	1	49	48.03	+6	44	54.32	0.4830	2.9
sep	5	2459097.75	1	50	4.77	+6	46	33.21	0.4793	2.8
sep	6	2459098.75	1	50	18.22	+6	47	58.02	0.4757	2.8
sep	7	2459099.75	1	50	28.36	+6	49	8.74	0.4721	2.7
sep	8	2459100.75	1	50	35.13	+6	50	5.36	0.4687	2.7
sep	9	2459101.75	1	50	38.52	+6	50	47.87	0.4653	2.6
sep	10	2459102.75	1	50	38.49	+6	51	16.29	0.4620	2.5
sep	11	2459103.75	1	50	35.02	+6	51	30.67	0.4587	2.5
sep	12	2459104.75	1	50	28.08	+6	51	31.05	0.4556	2.4
sep	13	2459105.75	1	50	17.68	+6	51	17.53	0.4526	2.3
sep	14	2459106.75	1	50	3.81	+6	50	50.23	0.4496	2.3
sep	15	2459107.75	1	49	46.46	+6	50	9.29	0.4468	2.2
sep	16	2459108.75	1	49	25.66	+6	49	14.93	0.4440	2.1
sep	17	2459109.75	1	49	1.44	+6	48	7.40	0.4414	2.0
sep	18	2459110.75	1	48	33.83	+6	46	47.02	0.4388	2.0
sep	19	2459111.75	1	48	2.88	+6	45	14.17	0.4364	1.9
sep	20	2459112.75	1	47	28.67	+6	43	29.28	0.4341	1.8
sep	21	2459113.75	1	46	51.25	+6	41	32.81	0.4319	1.7
sep	22	2459114.75	1	46	10.71	+6	39	25.23	0.4298	1.7
sep	23	2459115.75	1	45	27.13	+6	37	7.04	0.4279	1.6
sep	24	2459116.75	1	44	40.60	+6	34	38.76	0.4261	1.5
sep	25	2459117.75	1	43	51.20	+6	32	0.89	0.4244	1.4
sep	26	2459118.75	1	42	59.04	+6	29	13.98	0.4228	1.3
sep	27	2459119.75	1	42	4.24	+6	26	18.57	0.4214	1.3
sep	28	2459120.75	1	41	6.89	+6	23	15.25	0.4201	1.2
sep	29	2459121.75	1	40	7.12	+6	20	4.61	0.4190	1.1
sep	30	2459122.75	1	39	5.07	+6	16	47.28	0.4179	1.0
oct	1	2459123.75	1	38	0.87	+6	13	23.89	0.4171	0.9
oct	2	2459124.75	1	36	54.65	+6	9	55.13	0.4163	0.9

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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	3	2459125.75	1	35	46.58	+6	6	21.70	0.4158	0.8
oct	4	2459126.75	1	34	36.80	+6	2	44.30	0.4153	0.7
oct	5	2459127.75	1	33	25.48	+5	59	3.68	0.4150	0.6
oct	6	2459128.75	1	32	12.79	+5	55	20.62	0.4149	0.5
oct	7	2459129.75	1	30	58.90	+5	51	35.88	0.4149	0.4
oct	8	2459130.75	1	29	43.99	+5	47	50.28	0.4151	0.3
oct	9	2459131.75	1	28	28.24	+5	44	4.63	0.4155	0.3
oct	10	2459132.75	1	27	11.85	+5	40	19.77	0.4160	0.2
oct	11	2459133.75	1	25	55.00	+5	36	36.53	0.4166	0.1
oct	12	2459134.75	1	24	37.88	+5	32	55.80	0.4174	24.0
oct	13	2459135.75	1	23	20.70	+5	29	18.43	0.4184	23.9
oct	14	2459136.75	1	22	3.67	+5	25	45.33	0.4196	23.8
oct	15	2459137.75	1	20	46.97	+5	22	17.41	0.4209	23.7
oct	16	2459138.75	1	19	30.83	+5	18	55.60	0.4224	23.6
oct	17	2459139.75	1	18	15.45	+5	15	40.83	0.4240	23.6
oct	18	2459140.75	1	17	1.03	+5	12	34.01	0.4258	23.5
oct	19	2459141.75	1	15	47.76	+5	9	36.02	0.4278	23.4
oct	20	2459142.75	1	14	35.83	+5	6	47.68	0.4299	23.3
oct	21	2459143.75	1	13	25.41	+5	4	9.74	0.4322	23.2
oct	22	2459144.75	1	12	16.66	+5	1	42.89	0.4347	23.1
oct	23	2459145.75	1	11	9.74	+4	59	27.76	0.4373	23.0
oct	24	2459146.75	1	10	4.79	+4	57	24.93	0.4401	23.0
oct	25	2459147.75	1	9	1.93	+4	55	34.90	0.4430	22.9
oct	26	2459148.75	1	8	1.29	+4	53	58.14	0.4461	22.8
oct	27	2459149.75	1	7	2.98	+4	52	35.08	0.4493	22.7
oct	28	2459150.75	1	6	7.10	+4	51	26.08	0.4527	22.6
oct	29	2459151.75	1	5	13.75	+4	50	31.47	0.4562	22.6
oct	30	2459152.75	1	4	23.01	+4	49	51.53	0.4599	22.5
oct	31	2459153.75	1	3	34.95	+4	49	26.51	0.4638	22.4
nov	1	2459154.75	1	2	49.65	+4	49	16.61	0.4677	22.3
nov	2	2459155.75	1	2	7.16	+4	49	21.98	0.4719	22.2
nov	3	2459156.75	1	1	27.54	+4	49	42.77	0.4761	22.2
nov	4	2459157.75	1	0	50.83	+4	50	19.07	0.4805	22.1
nov	5	2459158.75	1	0	17.07	+4	51	10.93	0.4850	22.0
nov	6	2459159.75	0	59	46.29	+4	52	18.40	0.4897	21.9
nov	7	2459160.75	0	59	18.52	+4	53	41.49	0.4945	21.9
nov	8	2459161.75	0	58	53.77	+4	55	20.21	0.4994	21.8
nov	9	2459162.75	0	58	32.08	+4	57	14.52	0.5045	21.7
nov	10	2459163.75	0	58	13.44	+4	59	24.39	0.5097	21.6
nov	11	2459164.75	0	57	57.87	+5	1	49.80	0.5150	21.6
nov	12	2459165.75	0	57	45.38	+5	4	30.69	0.5204	21.5
nov	13	2459166.75	0	57	35.97	+5	7	27.03	0.5259	21.4
nov	14	2459167.75	0	57	29.64	+5	10	38.75	0.5316	21.4
nov	15	2459168.75	0	57	26.40	+5	14	5.79	0.5374	21.3
nov	16	2459169.75	0	57	26.22	+5	17	48.02	0.5433	21.2
nov	17	2459170.75	0	57	29.09	+5	21	45.31	0.5493	21.2

Marte, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	18	2459171.75	0	57	34.98	+5	25	57.46	0.5554	21.1
nov	19	2459172.75	0	57	43.85	+5	30	24.24	0.5616	21.0
nov	20	2459173.75	0	57	55.68	+5	35	5.39	0.5679	21.0
nov	21	2459174.75	0	58	10.41	+5	40	0.64	0.5743	20.9
nov	22	2459175.75	0	58	28.01	+5	45	9.70	0.5808	20.9
nov	23	2459176.75	0	58	48.43	+5	50	32.27	0.5874	20.8
nov	24	2459177.75	0	59	11.62	+5	56	8.04	0.5941	20.7
nov	25	2459178.75	0	59	37.53	+6	1	56.70	0.6009	20.7
nov	26	2459179.75	1	0	6.12	+6	7	57.93	0.6078	20.6
nov	27	2459180.75	1	0	37.34	+6	14	11.40	0.6148	20.6
nov	28	2459181.75	1	1	11.13	+6	20	36.81	0.6218	20.5
nov	29	2459182.75	1	1	47.45	+6	27	13.81	0.6289	20.5
nov	30	2459183.75	1	2	26.24	+6	34	2.09	0.6361	20.4
dic	1	2459184.75	1	3	7.45	+6	41	1.33	0.6434	20.3
dic	2	2459185.75	1	3	51.05	+6	48	11.20	0.6508	20.3
dic	3	2459186.75	1	4	36.96	+6	55	31.38	0.6582	20.2
dic	4	2459187.75	1	5	25.16	+7	3	1.58	0.6658	20.2
dic	5	2459188.75	1	6	15.59	+7	10	41.47	0.6733	20.1
dic	6	2459189.75	1	7	8.21	+7	18	30.78	0.6810	20.1
dic	7	2459190.75	1	8	2.98	+7	26	29.22	0.6887	20.0
dic	8	2459191.75	1	8	59.85	+7	34	36.54	0.6966	20.0
dic	9	2459192.75	1	9	58.79	+7	42	52.47	0.7044	19.9
dic	10	2459193.75	1	10	59.77	+7	51	16.80	0.7124	19.9
dic	11	2459194.75	1	12	2.75	+7	59	49.29	0.7204	19.8
dic	12	2459195.75	1	13	7.70	+8	8	29.74	0.7284	19.8
dic	13	2459196.75	1	14	14.59	+8	17	17.93	0.7366	19.7
dic	14	2459197.75	1	15	23.37	+8	26	13.63	0.7448	19.7
dic	15	2459198.75	1	16	34.02	+8	35	16.61	0.7530	19.7
dic	16	2459199.75	1	17	46.48	+8	44	26.59	0.7613	19.6
dic	17	2459200.75	1	19	0.73	+8	53	43.33	0.7697	19.6
dic	18	2459201.75	1	20	16.72	+9	3	6.53	0.7781	19.5
dic	19	2459202.75	1	21	34.41	+9	12	35.92	0.7866	19.5
dic	20	2459203.75	1	22	53.76	+9	22	11.22	0.7951	19.4
dic	21	2459204.75	1	24	14.73	+9	31	52.15	0.8037	19.4
dic	22	2459205.75	1	25	37.29	+9	41	38.44	0.8123	19.3
dic	23	2459206.75	1	27	1.39	+9	51	29.82	0.8209	19.3
dic	24	2459207.75	1	28	27.01	+10	1	26.01	0.8297	19.3
dic	25	2459208.75	1	29	54.11	+10	11	26.76	0.8384	19.2
dic	26	2459209.75	1	31	22.64	+10	21	31.79	0.8472	19.2
dic	27	2459210.75	1	32	52.59	+10	31	40.86	0.8560	19.1
dic	28	2459211.75	1	34	23.92	+10	41	53.70	0.8649	19.1
dic	29	2459212.75	1	35	56.59	+10	52	10.06	0.8738	19.1
dic	30	2459213.75	1	37	30.58	+11	2	29.70	0.8828	19.0
dic	31	2459214.75	1	39	5.86	+11	12	52.35	0.8918	19.0

Júpiter, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2458849.75	18	29	17.21	-23	10	37.90	6.2086	11.8
ene	2	2458850.75	18	30	17.29	-23	10	0.78	6.2071	11.7
ene	3	2458851.75	18	31	17.33	-23	9	22.22	6.2054	11.7
ene	4	2458852.75	18	32	17.33	-23	8	42.23	6.2035	11.7
ene	5	2458853.75	18	33	17.28	-23	8	0.83	6.2013	11.6
ene	6	2458854.75	18	34	17.18	-23	7	18.02	6.1990	11.6
ene	7	2458855.75	18	35	17.02	-23	6	33.82	6.1964	11.5
ene	8	2458856.75	18	36	16.79	-23	5	48.25	6.1936	11.5
ene	9	2458857.75	18	37	16.50	-23	5	1.34	6.1907	11.4
ene	10	2458858.75	18	38	16.13	-23	4	13.09	6.1875	11.4
ene	11	2458859.75	18	39	15.67	-23	3	23.53	6.1841	11.3
ene	12	2458860.75	18	40	15.13	-23	2	32.67	6.1804	11.3
ene	13	2458861.75	18	41	14.49	-23	1	40.51	6.1766	11.2
ene	14	2458862.75	18	42	13.74	-23	0	47.05	6.1726	11.2
ene	15	2458863.75	18	43	12.88	-22	59	52.30	6.1683	11.1
ene	16	2458864.75	18	44	11.91	-22	58	56.27	6.1639	11.1
ene	17	2458865.75	18	45	10.83	-22	57	58.95	6.1592	11.0
ene	18	2458866.75	18	46	9.63	-22	57	0.38	6.1543	11.0
ene	19	2458867.75	18	47	8.29	-22	56	0.57	6.1492	10.9
ene	20	2458868.75	18	48	6.83	-22	54	59.56	6.1439	10.9
ene	21	2458869.75	18	49	5.22	-22	53	57.36	6.1384	10.8
ene	22	2458870.75	18	50	3.47	-22	52	54.01	6.1327	10.8
ene	23	2458871.75	18	51	1.56	-22	51	49.53	6.1268	10.7
ene	24	2458872.75	18	51	59.48	-22	50	43.94	6.1207	10.7
ene	25	2458873.75	18	52	57.23	-22	49	37.26	6.1144	10.6
ene	26	2458874.75	18	53	54.80	-22	48	29.49	6.1079	10.6
ene	27	2458875.75	18	54	52.18	-22	47	20.66	6.1011	10.5
ene	28	2458876.75	18	55	49.37	-22	46	10.78	6.0942	10.5
ene	29	2458877.75	18	56	46.35	-22	44	59.86	6.0871	10.4
ene	30	2458878.75	18	57	43.13	-22	43	47.93	6.0798	10.4
ene	31	2458879.75	18	58	39.69	-22	42	35.01	6.0723	10.3
feb	1	2458880.75	18	59	36.04	-22	41	21.12	6.0646	10.3
feb	2	2458881.75	19	0	32.17	-22	40	6.29	6.0567	10.2
feb	3	2458882.75	19	1	28.07	-22	38	50.54	6.0486	10.2
feb	4	2458883.75	19	2	23.73	-22	37	33.92	6.0403	10.1
feb	5	2458884.75	19	3	19.16	-22	36	16.44	6.0318	10.1
feb	6	2458885.75	19	4	14.34	-22	34	58.16	6.0232	10.0
feb	7	2458886.75	19	5	9.27	-22	33	39.09	6.0143	10.0
feb	8	2458887.75	19	6	3.94	-22	32	19.28	6.0053	9.9
feb	9	2458888.75	19	6	58.35	-22	30	58.74	5.9961	9.9
feb	10	2458889.75	19	7	52.48	-22	29	37.50	5.9867	9.8
feb	11	2458890.75	19	8	46.33	-22	28	15.56	5.9772	9.8
feb	12	2458891.75	19	9	39.90	-22	26	52.94	5.9674	9.7
feb	13	2458892.75	19	10	33.18	-22	25	29.67	5.9575	9.7
feb	14	2458893.75	19	11	26.17	-22	24	5.76	5.9475	9.6
feb	15	2458894.75	19	12	18.87	-22	22	41.27	5.9372	9.6

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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	2458895.75	19	13	11.26	-22	21	16.22	5.9268	9.5
feb	17	2458896.75	19	14	3.34	-22	19	50.67	5.9162	9.5
feb	18	2458897.75	19	14	55.11	-22	18	24.65	5.9054	9.4
feb	19	2458898.75	19	15	46.55	-22	16	58.20	5.8945	9.4
feb	20	2458899.75	19	16	37.66	-22	15	31.36	5.8834	9.3
feb	21	2458900.75	19	17	28.42	-22	14	4.15	5.8721	9.2
feb	22	2458901.75	19	18	18.83	-22	12	36.61	5.8607	9.2
feb	23	2458902.75	19	19	8.88	-22	11	8.76	5.8491	9.1
feb	24	2458903.75	19	19	58.57	-22	9	40.63	5.8374	9.1
feb	25	2458904.75	19	20	47.89	-22	8	12.26	5.8255	9.0
feb	26	2458905.75	19	21	36.82	-22	6	43.67	5.8135	9.0
feb	27	2458906.75	19	22	25.38	-22	5	14.89	5.8013	8.9
feb	28	2458907.75	19	23	13.54	-22	3	45.96	5.7890	8.9
feb	29	2458908.75	19	24	1.31	-22	2	16.92	5.7765	8.8
mar	1	2458909.75	19	24	48.68	-22	0	47.81	5.7639	8.8
mar	2	2458910.75	19	25	35.65	-21	59	18.66	5.7511	8.7
mar	3	2458911.75	19	26	22.20	-21	57	49.52	5.7382	8.7
mar	4	2458912.75	19	27	8.34	-21	56	20.45	5.7252	8.6
mar	5	2458913.75	19	27	54.05	-21	54	51.47	5.7121	8.6
mar	6	2458914.75	19	28	39.32	-21	53	22.63	5.6988	8.5
mar	7	2458915.75	19	29	24.16	-21	51	53.98	5.6854	8.5
mar	8	2458916.75	19	30	8.55	-21	50	25.54	5.6719	8.4
mar	9	2458917.75	19	30	52.49	-21	48	57.34	5.6582	8.4
mar	10	2458918.75	19	31	35.97	-21	47	29.39	5.6445	8.3
mar	11	2458919.75	19	32	18.99	-21	46	1.74	5.6306	8.2
mar	12	2458920.75	19	33	1.54	-21	44	34.40	5.6166	8.2
mar	13	2458921.75	19	33	43.63	-21	43	7.41	5.6025	8.1
mar	14	2458922.75	19	34	25.24	-21	41	40.84	5.5883	8.1
mar	15	2458923.75	19	35	6.36	-21	40	14.72	5.5739	8.0
mar	16	2458924.75	19	35	47.00	-21	38	49.12	5.5595	8.0
mar	17	2458925.75	19	36	27.13	-21	37	24.08	5.5450	7.9
mar	18	2458926.75	19	37	6.76	-21	35	59.63	5.5304	7.9
mar	19	2458927.75	19	37	45.86	-21	34	35.83	5.5156	7.8
mar	20	2458928.75	19	38	24.44	-21	33	12.71	5.5008	7.8
mar	21	2458929.75	19	39	2.49	-21	31	50.30	5.4859	7.7
mar	22	2458930.75	19	39	39.99	-21	30	28.64	5.4709	7.6
mar	23	2458931.75	19	40	16.95	-21	29	7.76	5.4559	7.6
mar	24	2458932.75	19	40	53.35	-21	27	47.70	5.4407	7.5
mar	25	2458933.75	19	41	29.20	-21	26	28.50	5.4255	7.5
mar	26	2458934.75	19	42	4.48	-21	25	10.19	5.4102	7.4
mar	27	2458935.75	19	42	39.18	-21	23	52.82	5.3948	7.4
mar	28	2458936.75	19	43	13.31	-21	22	36.43	5.3794	7.3
mar	29	2458937.75	19	43	46.86	-21	21	21.06	5.3639	7.3
mar	30	2458938.75	19	44	19.82	-21	20	6.75	5.3483	7.2
mar	31	2458939.75	19	44	52.18	-21	18	53.56	5.3327	7.1
abr	1	2458940.75	19	45	23.94	-21	17	41.54	5.3171	7.1

Júpiter, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
abr	2	2458941.75	19	45	55.09	-21	16	30.71	5.3014	7.0
abr	3	2458942.75	19	46	25.63	-21	15	21.13	5.2856	7.0
abr	4	2458943.75	19	46	55.55	-21	14	12.84	5.2698	6.9
abr	5	2458944.75	19	47	24.83	-21	13	5.85	5.2540	6.9
abr	6	2458945.75	19	47	53.49	-21	12	0.20	5.2381	6.8
abr	7	2458946.75	19	48	21.50	-21	10	55.90	5.2222	6.7
abr	8	2458947.75	19	48	48.88	-21	9	52.98	5.2063	6.7
abr	9	2458948.75	19	49	15.61	-21	8	51.48	5.1903	6.6
abr	10	2458949.75	19	49	41.69	-21	7	51.42	5.1743	6.6
abr	11	2458950.75	19	50	7.12	-21	6	52.88	5.1583	6.5
abr	12	2458951.75	19	50	31.88	-21	5	55.89	5.1423	6.4
abr	13	2458952.75	19	50	55.98	-21	5	0.49	5.1263	6.4
abr	14	2458953.75	19	51	19.39	-21	4	6.75	5.1103	6.3
abr	15	2458954.75	19	51	42.12	-21	3	14.68	5.0942	6.3
abr	16	2458955.75	19	52	4.15	-21	2	24.32	5.0782	6.2
abr	17	2458956.75	19	52	25.48	-21	1	35.70	5.0621	6.2
abr	18	2458957.75	19	52	46.09	-21	0	48.84	5.0461	6.1
abr	19	2458958.75	19	53	6.00	-21	0	3.78	5.0301	6.0
abr	20	2458959.75	19	53	25.19	-20	59	20.54	5.0141	6.0
abr	21	2458960.75	19	53	43.65	-20	58	39.14	4.9981	5.9
abr	22	2458961.75	19	54	1.38	-20	57	59.62	4.9821	5.8
abr	23	2458962.75	19	54	18.38	-20	57	22.01	4.9662	5.8
abr	24	2458963.75	19	54	34.64	-20	56	46.32	4.9503	5.7
abr	25	2458964.75	19	54	50.16	-20	56	12.60	4.9344	5.7
abr	26	2458965.75	19	55	4.94	-20	55	40.87	4.9186	5.6
abr	27	2458966.75	19	55	18.96	-20	55	11.18	4.9028	5.5
abr	28	2458967.75	19	55	32.24	-20	54	43.54	4.8871	5.5
abr	29	2458968.75	19	55	44.75	-20	54	17.98	4.8714	5.4
abr	30	2458969.75	19	55	56.50	-20	53	54.54	4.8558	5.4
may	1	2458970.75	19	56	7.48	-20	53	33.23	4.8402	5.3
may	2	2458971.75	19	56	17.69	-20	53	14.06	4.8247	5.2
may	3	2458972.75	19	56	27.13	-20	52	57.04	4.8093	5.2
may	4	2458973.75	19	56	35.79	-20	52	42.17	4.7939	5.1
may	5	2458974.75	19	56	43.68	-20	52	29.45	4.7786	5.0
may	6	2458975.75	19	56	50.80	-20	52	18.89	4.7634	5.0
may	7	2458976.75	19	56	57.13	-20	52	10.50	4.7483	4.9
may	8	2458977.75	19	57	2.69	-20	52	4.30	4.7333	4.8
may	9	2458978.75	19	57	7.48	-20	52	0.31	4.7184	4.8
may	10	2458979.75	19	57	11.47	-20	51	58.56	4.7035	4.7
may	11	2458980.75	19	57	14.68	-20	51	59.08	4.6888	4.7
may	12	2458981.75	19	57	17.09	-20	52	1.86	4.6742	4.6
may	13	2458982.75	19	57	18.71	-20	52	6.91	4.6597	4.5
may	14	2458983.75	19	57	19.53	-20	52	14.23	4.6453	4.5
may	15	2458984.75	19	57	19.54	-20	52	23.83	4.6310	4.4
may	16	2458985.75	19	57	18.76	-20	52	35.68	4.6168	4.3
may	17	2458986.75	19	57	17.17	-20	52	49.79	4.6028	4.3

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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
may	18	2458987.75	19	57	14.78	-20	53	6.14	4.5889	4.2
may	19	2458988.75	19	57	11.59	-20	53	24.74	4.5751	4.1
may	20	2458989.75	19	57	7.60	-20	53	45.56	4.5615	4.1
may	21	2458990.75	19	57	2.82	-20	54	8.61	4.5480	4.0
may	22	2458991.75	19	56	57.25	-20	54	33.87	4.5346	3.9
may	23	2458992.75	19	56	50.89	-20	55	1.34	4.5215	3.9
may	24	2458993.75	19	56	43.74	-20	55	31.02	4.5084	3.8
may	25	2458994.75	19	56	35.80	-20	56	2.88	4.4956	3.7
may	26	2458995.75	19	56	27.09	-20	56	36.92	4.4829	3.7
may	27	2458996.75	19	56	17.60	-20	57	13.13	4.4704	3.6
may	28	2458997.75	19	56	7.34	-20	57	51.47	4.4580	3.5
may	29	2458998.75	19	55	56.30	-20	58	31.91	4.4458	3.5
may	30	2458999.75	19	55	44.51	-20	59	14.43	4.4339	3.4
may	31	2459000.75	19	55	31.96	-20	59	58.98	4.4221	3.3
jun	1	2459001.75	19	55	18.67	-21	0	45.51	4.4105	3.2
jun	2	2459002.75	19	55	4.64	-21	1	33.98	4.3991	3.2
jun	3	2459003.75	19	54	49.88	-21	2	24.35	4.3878	3.1
jun	4	2459004.75	19	54	34.41	-21	3	16.61	4.3768	3.0
jun	5	2459005.75	19	54	18.22	-21	4	10.71	4.3660	3.0
jun	6	2459006.75	19	54	1.33	-21	5	6.63	4.3554	2.9
jun	7	2459007.75	19	53	43.75	-21	6	4.35	4.3451	2.8
jun	8	2459008.75	19	53	25.47	-21	7	3.84	4.3349	2.8
jun	9	2459009.75	19	53	6.51	-21	8	5.05	4.3250	2.7
jun	10	2459010.75	19	52	46.88	-21	9	7.93	4.3152	2.6
jun	11	2459011.75	19	52	26.57	-21	10	12.43	4.3058	2.5
jun	12	2459012.75	19	52	5.62	-21	11	18.49	4.2965	2.5
jun	13	2459013.75	19	51	44.01	-21	12	26.07	4.2875	2.4
jun	14	2459014.75	19	51	21.78	-21	13	35.09	4.2787	2.3
jun	15	2459015.75	19	50	58.94	-21	14	45.51	4.2701	2.3
jun	16	2459016.75	19	50	35.49	-21	15	57.28	4.2618	2.2
jun	17	2459017.75	19	50	11.45	-21	17	10.32	4.2538	2.1
jun	18	2459018.75	19	49	46.84	-21	18	24.60	4.2460	2.0
jun	19	2459019.75	19	49	21.68	-21	19	40.05	4.2384	2.0
jun	20	2459020.75	19	48	55.98	-21	20	56.63	4.2311	1.9
jun	21	2459021.75	19	48	29.75	-21	22	14.27	4.2241	1.8
jun	22	2459022.75	19	48	3.02	-21	23	32.93	4.2174	1.7
jun	23	2459023.75	19	47	35.79	-21	24	52.55	4.2109	1.7
jun	24	2459024.75	19	47	8.10	-21	26	13.06	4.2046	1.6
jun	25	2459025.75	19	46	39.95	-21	27	34.40	4.1987	1.5
jun	26	2459026.75	19	46	11.37	-21	28	56.48	4.1930	1.4
jun	27	2459027.75	19	45	42.37	-21	30	19.23	4.1876	1.4
jun	28	2459028.75	19	45	12.98	-21	31	42.58	4.1825	1.3
jun	29	2459029.75	19	44	43.22	-21	33	6.44	4.1777	1.2
jun	30	2459030.75	19	44	13.12	-21	34	30.74	4.1731	1.2
jul	1	2459031.75	19	43	42.68	-21	35	55.43	4.1688	1.1
jul	2	2459032.75	19	43	11.95	-21	37	20.44	4.1648	1.0

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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	3	2459033.75	19	42	40.93	-21	38	45.73	4.1611	0.9
jul	4	2459034.75	19	42	9.64	-21	40	11.24	4.1577	0.9
jul	5	2459035.75	19	41	38.11	-21	41	36.92	4.1546	0.8
jul	6	2459036.75	19	41	6.35	-21	43	2.70	4.1517	0.7
jul	7	2459037.75	19	40	34.38	-21	44	28.53	4.1492	0.6
jul	8	2459038.75	19	40	2.23	-21	45	54.32	4.1469	0.6
jul	9	2459039.75	19	39	29.90	-21	47	20.02	4.1450	0.5
jul	10	2459040.75	19	38	57.44	-21	48	45.55	4.1433	0.4
jul	11	2459041.75	19	38	24.86	-21	50	10.84	4.1419	0.3
jul	12	2459042.75	19	37	52.18	-21	51	35.83	4.1408	0.3
jul	13	2459043.75	19	37	19.43	-21	53	0.47	4.1400	0.2
jul	14	2459044.75	19	36	46.63	-21	54	24.68	4.1395	0.1
jul	15	2459045.75	19	36	13.81	-21	55	48.42	4.1393	0.0
jul	16	2459046.75	19	35	41.00	-21	57	11.63	4.1394	24.0
jul	17	2459047.75	19	35	8.21	-21	58	34.27	4.1398	23.9
jul	18	2459048.75	19	34	35.47	-21	59	56.28	4.1405	23.8
jul	19	2459049.75	19	34	2.81	-22	1	17.62	4.1415	23.7
jul	20	2459050.75	19	33	30.24	-22	2	38.25	4.1428	23.7
jul	21	2459051.75	19	32	57.80	-22	3	58.12	4.1444	23.6
jul	22	2459052.75	19	32	25.50	-22	5	17.18	4.1463	23.5
jul	23	2459053.75	19	31	53.37	-22	6	35.36	4.1484	23.4
jul	24	2459054.75	19	31	21.44	-22	7	52.61	4.1509	23.4
jul	25	2459055.75	19	30	49.72	-22	9	8.87	4.1537	23.3
jul	26	2459056.75	19	30	18.25	-22	10	24.09	4.1567	23.2
jul	27	2459057.75	19	29	47.05	-22	11	38.23	4.1600	23.1
jul	28	2459058.75	19	29	16.14	-22	12	51.24	4.1636	23.1
jul	29	2459059.75	19	28	45.55	-22	14	3.11	4.1675	23.0
jul	30	2459060.75	19	28	15.29	-22	15	13.81	4.1717	22.9
jul	31	2459061.75	19	27	45.39	-22	16	23.32	4.1762	22.8
ago	1	2459062.75	19	27	15.86	-22	17	31.62	4.1809	22.8
ago	2	2459063.75	19	26	46.73	-22	18	38.67	4.1860	22.7
ago	3	2459064.75	19	26	18.00	-22	19	44.46	4.1912	22.6
ago	4	2459065.75	19	25	49.70	-22	20	48.94	4.1968	22.5
ago	5	2459066.75	19	25	21.84	-22	21	52.09	4.2026	22.5
ago	6	2459067.75	19	24	54.45	-22	22	53.88	4.2087	22.4
ago	7	2459068.75	19	24	27.54	-22	23	54.28	4.2151	22.3
ago	8	2459069.75	19	24	1.14	-22	24	53.26	4.2217	22.3
ago	9	2459070.75	19	23	35.25	-22	25	50.80	4.2286	22.2
ago	10	2459071.75	19	23	9.90	-22	26	46.89	4.2357	22.1
ago	11	2459072.75	19	22	45.11	-22	27	41.50	4.2431	22.0
ago	12	2459073.75	19	22	20.89	-22	28	34.63	4.2507	22.0
ago	13	2459074.75	19	21	57.27	-22	29	26.28	4.2586	21.9
ago	14	2459075.75	19	21	34.25	-22	30	16.42	4.2667	21.8
ago	15	2459076.75	19	21	11.85	-22	31	5.07	4.2751	21.7
ago	16	2459077.75	19	20	50.09	-22	31	52.21	4.2837	21.7
ago	17	2459078.75	19	20	28.98	-22	32	37.84	4.2926	21.6

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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
ago	18	2459079.75	19	20	8.53	-22	33	21.95	4.3016	21.5
ago	19	2459080.75	19	19	48.76	-22	34	4.53	4.3110	21.5
ago	20	2459081.75	19	19	29.68	-22	34	45.55	4.3205	21.4
ago	21	2459082.75	19	19	11.30	-22	35	25.00	4.3302	21.3
ago	22	2459083.75	19	18	53.63	-22	36	2.85	4.3402	21.2
ago	23	2459084.75	19	18	36.70	-22	36	39.10	4.3504	21.2
ago	24	2459085.75	19	18	20.51	-22	37	13.75	4.3608	21.1
ago	25	2459086.75	19	18	5.07	-22	37	46.80	4.3714	21.0
ago	26	2459087.75	19	17	50.39	-22	38	18.27	4.3821	21.0
ago	27	2459088.75	19	17	36.48	-22	38	48.17	4.3931	20.9
ago	28	2459089.75	19	17	23.34	-22	39	16.50	4.4043	20.8
ago	29	2459090.75	19	17	10.98	-22	39	43.27	4.4157	20.8
ago	30	2459091.75	19	16	59.39	-22	40	8.48	4.4272	20.7
ago	31	2459092.75	19	16	48.60	-22	40	32.13	4.4389	20.6
sep	1	2459093.75	19	16	38.59	-22	40	54.21	4.4508	20.6
sep	2	2459094.75	19	16	29.37	-22	41	14.71	4.4629	20.5
sep	3	2459095.75	19	16	20.96	-22	41	33.63	4.4751	20.4
sep	4	2459096.75	19	16	13.35	-22	41	50.97	4.4875	20.3
sep	5	2459097.75	19	16	6.55	-22	42	6.72	4.5000	20.3
sep	6	2459098.75	19	16	0.56	-22	42	20.89	4.5127	20.2
sep	7	2459099.75	19	15	55.39	-22	42	33.47	4.5256	20.1
sep	8	2459100.75	19	15	51.04	-22	42	44.49	4.5386	20.1
sep	9	2459101.75	19	15	47.52	-22	42	53.93	4.5517	20.0
sep	10	2459102.75	19	15	44.82	-22	43	1.82	4.5650	19.9
sep	11	2459103.75	19	15	42.96	-22	43	8.16	4.5784	19.9
sep	12	2459104.75	19	15	41.92	-22	43	12.96	4.5920	19.8
sep	13	2459105.75	19	15	41.72	-22	43	16.22	4.6056	19.7
sep	14	2459106.75	19	15	42.34	-22	43	17.94	4.6194	19.7
sep	15	2459107.75	19	15	43.80	-22	43	18.13	4.6333	19.6
sep	16	2459108.75	19	15	46.09	-22	43	16.77	4.6473	19.6
sep	17	2459109.75	19	15	49.20	-22	43	13.85	4.6615	19.5
sep	18	2459110.75	19	15	53.15	-22	43	9.36	4.6757	19.4
sep	19	2459111.75	19	15	57.94	-22	43	3.28	4.6900	19.4
sep	20	2459112.75	19	16	3.55	-22	42	55.62	4.7044	19.3
sep	21	2459113.75	19	16	10.00	-22	42	46.38	4.7190	19.2
sep	22	2459114.75	19	16	17.28	-22	42	35.58	4.7335	19.2
sep	23	2459115.75	19	16	25.39	-22	42	23.23	4.7482	19.1
sep	24	2459116.75	19	16	34.31	-22	42	9.34	4.7630	19.0
sep	25	2459117.75	19	16	44.05	-22	41	53.91	4.7778	19.0
sep	26	2459118.75	19	16	54.59	-22	41	36.95	4.7926	18.9
sep	27	2459119.75	19	17	5.94	-22	41	18.45	4.8076	18.9
sep	28	2459120.75	19	17	18.08	-22	40	58.40	4.8226	18.8
sep	29	2459121.75	19	17	31.01	-22	40	36.78	4.8376	18.7
sep	30	2459122.75	19	17	44.72	-22	40	13.61	4.8527	18.7
oct	1	2459123.75	19	17	59.22	-22	39	48.85	4.8679	18.6
oct	2	2459124.75	19	18	14.50	-22	39	22.52	4.8831	18.5

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
oct	3	2459125.75	19	18	30.55	-22	38	54.60	4.8983	18.5
oct	4	2459126.75	19	18	47.37	-22	38	25.09	4.9136	18.4
oct	5	2459127.75	19	19	4.95	-22	37	54.00	4.9288	18.4
oct	6	2459128.75	19	19	23.30	-22	37	21.32	4.9442	18.3
oct	7	2459129.75	19	19	42.40	-22	36	47.06	4.9595	18.2
oct	8	2459130.75	19	20	2.25	-22	36	11.21	4.9749	18.2
oct	9	2459131.75	19	20	22.84	-22	35	33.79	4.9902	18.1
oct	10	2459132.75	19	20	44.17	-22	34	54.79	5.0056	18.1
oct	11	2459133.75	19	21	6.23	-22	34	14.20	5.0210	18.0
oct	12	2459134.75	19	21	29.01	-22	33	32.03	5.0364	17.9
oct	13	2459135.75	19	21	52.52	-22	32	48.25	5.0518	17.9
oct	14	2459136.75	19	22	16.73	-22	32	2.85	5.0672	17.8
oct	15	2459137.75	19	22	41.64	-22	31	15.81	5.0826	17.8
oct	16	2459138.75	19	23	7.26	-22	30	27.10	5.0980	17.7
oct	17	2459139.75	19	23	33.58	-22	29	36.72	5.1133	17.6
oct	18	2459140.75	19	24	0.59	-22	28	44.67	5.1286	17.6
oct	19	2459141.75	19	24	28.29	-22	27	50.94	5.1440	17.5
oct	20	2459142.75	19	24	56.66	-22	26	55.56	5.1592	17.5
oct	21	2459143.75	19	25	25.70	-22	25	58.52	5.1745	17.4
oct	22	2459144.75	19	25	55.39	-22	24	59.83	5.1897	17.4
oct	23	2459145.75	19	26	25.74	-22	23	59.48	5.2049	17.3
oct	24	2459146.75	19	26	56.71	-22	22	57.46	5.2200	17.2
oct	25	2459147.75	19	27	28.32	-22	21	53.77	5.2351	17.2
oct	26	2459148.75	19	28	0.54	-22	20	48.39	5.2501	17.1
oct	27	2459149.75	19	28	33.38	-22	19	41.30	5.2650	17.1
oct	28	2459150.75	19	29	6.82	-22	18	32.49	5.2800	17.0
oct	29	2459151.75	19	29	40.85	-22	17	21.95	5.2948	17.0
oct	30	2459152.75	19	30	15.48	-22	16	9.68	5.3096	16.9
oct	31	2459153.75	19	30	50.69	-22	14	55.67	5.3243	16.8
nov	1	2459154.75	19	31	26.48	-22	13	39.91	5.3390	16.8
nov	2	2459155.75	19	32	2.84	-22	12	22.41	5.3536	16.7
nov	3	2459156.75	19	32	39.76	-22	11	3.16	5.3681	16.7
nov	4	2459157.75	19	33	17.23	-22	9	42.17	5.3825	16.6
nov	5	2459158.75	19	33	55.25	-22	8	19.43	5.3969	16.6
nov	6	2459159.75	19	34	33.81	-22	6	54.95	5.4111	16.5
nov	7	2459160.75	19	35	12.90	-22	5	28.71	5.4253	16.5
nov	8	2459161.75	19	35	52.52	-22	4	0.72	5.4394	16.4
nov	9	2459162.75	19	36	32.65	-22	2	30.97	5.4534	16.4
nov	10	2459163.75	19	37	13.28	-22	0	59.43	5.4673	16.3
nov	11	2459164.75	19	37	54.42	-21	59	26.09	5.4811	16.2
nov	12	2459165.75	19	38	36.05	-21	57	50.93	5.4948	16.2
nov	13	2459166.75	19	39	18.17	-21	56	13.94	5.5084	16.1
nov	14	2459167.75	19	40	0.77	-21	54	35.11	5.5219	16.1
nov	15	2459168.75	19	40	43.85	-21	52	54.43	5.5352	16.0
nov	16	2459169.75	19	41	27.41	-21	51	11.93	5.5485	16.0
nov	17	2459170.75	19	42	11.42	-21	49	27.61	5.5617	15.9

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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
nov	18	2459171.75	19	42	55.88	-21	47	41.48	5.5747	15.9
nov	19	2459172.75	19	43	40.78	-21	45	53.54	5.5876	15.8
nov	20	2459173.75	19	44	26.11	-21	44	3.80	5.6003	15.8
nov	21	2459174.75	19	45	11.85	-21	42	12.25	5.6130	15.7
nov	22	2459175.75	19	45	58.01	-21	40	18.87	5.6255	15.7
nov	23	2459176.75	19	46	44.56	-21	38	23.65	5.6379	15.6
nov	24	2459177.75	19	47	31.51	-21	36	26.59	5.6501	15.5
nov	25	2459178.75	19	48	18.85	-21	34	27.69	5.6622	15.5
nov	26	2459179.75	19	49	6.57	-21	32	26.94	5.6742	15.4
nov	27	2459180.75	19	49	54.66	-21	30	24.34	5.6860	15.4
nov	28	2459181.75	19	50	43.12	-21	28	19.89	5.6977	15.3
nov	29	2459182.75	19	51	31.94	-21	26	13.59	5.7092	15.3
nov	30	2459183.75	19	52	21.11	-21	24	5.46	5.7206	15.2
dic	1	2459184.75	19	53	10.63	-21	21	55.49	5.7318	15.2
dic	2	2459185.75	19	54	0.49	-21	19	43.70	5.7429	15.1
dic	3	2459186.75	19	54	50.68	-21	17	30.10	5.7538	15.1
dic	4	2459187.75	19	55	41.19	-21	15	14.68	5.7646	15.0
dic	5	2459188.75	19	56	32.02	-21	12	57.46	5.7752	15.0
dic	6	2459189.75	19	57	23.16	-21	10	38.42	5.7857	14.9
dic	7	2459190.75	19	58	14.60	-21	8	17.57	5.7960	14.9
dic	8	2459191.75	19	59	6.33	-21	5	54.89	5.8061	14.8
dic	9	2459192.75	19	59	58.35	-21	3	30.38	5.8161	14.8
dic	10	2459193.75	20	0	50.66	-21	1	4.03	5.8259	14.7
dic	11	2459194.75	20	1	43.24	-20	58	35.84	5.8355	14.7
dic	12	2459195.75	20	2	36.10	-20	56	5.80	5.8450	14.6
dic	13	2459196.75	20	3	29.23	-20	53	33.95	5.8542	14.6
dic	14	2459197.75	20	4	22.62	-20	51	0.28	5.8634	14.5
dic	15	2459198.75	20	5	16.27	-20	48	24.83	5.8723	14.5
dic	16	2459199.75	20	6	10.15	-20	45	47.62	5.8810	14.4
dic	17	2459200.75	20	7	4.26	-20	43	8.66	5.8896	14.4
dic	18	2459201.75	20	7	58.60	-20	40	27.95	5.8980	14.3
dic	19	2459202.75	20	8	53.15	-20	37	45.50	5.9062	14.3
dic	20	2459203.75	20	9	47.90	-20	35	1.30	5.9142	14.2
dic	21	2459204.75	20	10	42.86	-20	32	15.36	5.9220	14.2
dic	22	2459205.75	20	11	38.00	-20	29	27.69	5.9296	14.1
dic	23	2459206.75	20	12	33.34	-20	26	38.29	5.9371	14.1
dic	24	2459207.75	20	13	28.86	-20	23	47.17	5.9443	14.0
dic	25	2459208.75	20	14	24.55	-20	20	54.34	5.9514	14.0
dic	26	2459209.75	20	15	20.41	-20	17	59.81	5.9583	13.9
dic	27	2459210.75	20	16	16.44	-20	15	3.61	5.9650	13.9
dic	28	2459211.75	20	17	12.63	-20	12	5.75	5.9714	13.8
dic	29	2459212.75	20	18	8.97	-20	9	6.26	5.9777	13.8
dic	30	2459213.75	20	19	5.45	-20	6	5.14	5.9838	13.7
dic	31	2459214.75	20	20	2.07	-20	3	2.41	5.9897	13.7

Saturno, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2458849.75	19	32	35.04	-21	40	47.67	10.9972	12.9
ene	2	2458850.75	19	33	4.97	-21	39	45.91	11.0002	12.8
ene	3	2458851.75	19	33	34.94	-21	38	43.67	11.0030	12.7
ene	4	2458852.75	19	34	4.96	-21	37	40.96	11.0055	12.7
ene	5	2458853.75	19	34	35.02	-21	36	37.78	11.0078	12.6
ene	6	2458854.75	19	35	5.11	-21	35	34.16	11.0098	12.6
ene	7	2458855.75	19	35	35.23	-21	34	30.10	11.0115	12.5
ene	8	2458856.75	19	36	5.38	-21	33	25.62	11.0130	12.5
ene	9	2458857.75	19	36	35.55	-21	32	20.74	11.0142	12.4
ene	10	2458858.75	19	37	5.74	-21	31	15.48	11.0152	12.3
ene	11	2458859.75	19	37	35.94	-21	30	9.86	11.0159	12.3
ene	12	2458860.75	19	38	6.15	-21	29	3.87	11.0163	12.2
ene	13	2458861.75	19	38	36.40	-21	27	57.32	11.0165	12.2
ene	14	2458862.75	19	39	6.45	-21	26	51.07	11.0164	12.1
ene	15	2458863.75	19	39	36.66	-21	25	44.06	11.0161	12.0
ene	16	2458864.75	19	40	6.83	-21	24	36.72	11.0155	12.0
ene	17	2458865.75	19	40	36.97	-21	23	29.05	11.0146	11.9
ene	18	2458866.75	19	41	7.09	-21	22	21.06	11.0135	11.9
ene	19	2458867.75	19	41	37.19	-21	21	12.77	11.0121	11.8
ene	20	2458868.75	19	42	7.26	-21	20	4.19	11.0105	11.8
ene	21	2458869.75	19	42	37.29	-21	18	55.36	11.0086	11.7
ene	22	2458870.75	19	43	7.28	-21	17	46.30	11.0064	11.6
ene	23	2458871.75	19	43	37.23	-21	16	37.02	11.0040	11.6
ene	24	2458872.75	19	44	7.12	-21	15	27.54	11.0013	11.5
ene	25	2458873.75	19	44	36.94	-21	14	17.88	10.9983	11.5
ene	26	2458874.75	19	45	6.70	-21	13	8.04	10.9951	11.4
ene	27	2458875.75	19	45	36.39	-21	11	58.04	10.9917	11.4
ene	28	2458876.75	19	46	6.00	-21	10	47.88	10.9879	11.3
ene	29	2458877.75	19	46	35.53	-21	9	37.58	10.9840	11.2
ene	30	2458878.75	19	47	4.97	-21	8	27.14	10.9797	11.2
ene	31	2458879.75	19	47	34.32	-21	7	16.58	10.9752	11.1
feb	1	2458880.75	19	48	3.57	-21	6	5.91	10.9705	11.1
feb	2	2458881.75	19	48	32.73	-21	4	55.15	10.9655	11.0
feb	3	2458882.75	19	49	1.79	-21	3	44.32	10.9603	11.0
feb	4	2458883.75	19	49	30.75	-21	2	33.43	10.9548	10.9
feb	5	2458884.75	19	49	59.59	-21	1	22.52	10.9491	10.8
feb	6	2458885.75	19	50	28.31	-21	0	11.61	10.9431	10.8
feb	7	2458886.75	19	50	56.92	-20	59	0.73	10.9369	10.7
feb	8	2458887.75	19	51	25.40	-20	57	49.88	10.9304	10.7
feb	9	2458888.75	19	51	53.74	-20	56	39.10	10.9237	10.6
feb	10	2458889.75	19	52	21.95	-20	55	28.39	10.9168	10.6
feb	11	2458890.75	19	52	50.01	-20	54	17.75	10.9096	10.5
feb	12	2458891.75	19	53	17.93	-20	53	7.18	10.9022	10.4
feb	13	2458892.75	19	53	45.70	-20	51	56.69	10.8946	10.4
feb	14	2458893.75	19	54	13.32	-20	50	46.29	10.8867	10.3
feb	15	2458894.75	19	54	40.79	-20	49	36.01	10.8786	10.3

Saturno, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2458895.75	19	55	8.10	-20	48	25.87	10.8703	10.2
feb	17	2458896.75	19	55	35.25	-20	47	15.91	10.8617	10.1
feb	18	2458897.75	19	56	2.23	-20	46	6.15	10.8530	10.1
feb	19	2458898.75	19	56	29.04	-20	44	56.61	10.8440	10.0
feb	20	2458899.75	19	56	55.66	-20	43	47.32	10.8347	10.0
feb	21	2458900.75	19	57	22.10	-20	42	38.30	10.8253	9.9
feb	22	2458901.75	19	57	48.35	-20	41	29.56	10.8156	9.9
feb	23	2458902.75	19	58	14.40	-20	40	21.12	10.8057	9.8
feb	24	2458903.75	19	58	40.24	-20	39	12.99	10.7956	9.7
feb	25	2458904.75	19	59	5.88	-20	38	5.17	10.7853	9.7
feb	26	2458905.75	19	59	31.31	-20	36	57.70	10.7748	9.6
feb	27	2458906.75	19	59	56.53	-20	35	50.57	10.7641	9.6
feb	28	2458907.75	20	0	21.53	-20	34	43.82	10.7532	9.5
feb	29	2458908.75	20	0	46.30	-20	33	37.45	10.7421	9.4
mar	1	2458909.75	20	1	10.86	-20	32	31.49	10.7308	9.4
mar	2	2458910.75	20	1	35.19	-20	31	25.96	10.7193	9.3
mar	3	2458911.75	20	1	59.28	-20	30	20.89	10.7076	9.3
mar	4	2458912.75	20	2	23.14	-20	29	16.31	10.6957	9.2
mar	5	2458913.75	20	2	46.76	-20	28	12.24	10.6837	9.1
mar	6	2458914.75	20	3	10.13	-20	27	8.70	10.6714	9.1
mar	7	2458915.75	20	3	33.25	-20	26	5.72	10.6590	9.0
mar	8	2458916.75	20	3	56.12	-20	25	3.31	10.6464	9.0
mar	9	2458917.75	20	4	18.72	-20	24	1.48	10.6337	8.9
mar	10	2458918.75	20	4	41.06	-20	23	0.24	10.6208	8.9
mar	11	2458919.75	20	5	3.14	-20	21	59.57	10.6077	8.8
mar	12	2458920.75	20	5	24.95	-20	20	59.51	10.5944	8.7
mar	13	2458921.75	20	5	46.49	-20	20	0.06	10.5810	8.7
mar	14	2458922.75	20	6	7.76	-20	19	1.25	10.5674	8.6
mar	15	2458923.75	20	6	28.75	-20	18	3.11	10.5537	8.6
mar	16	2458924.75	20	6	49.47	-20	17	5.68	10.5398	8.5
mar	17	2458925.75	20	7	9.90	-20	16	8.98	10.5258	8.4
mar	18	2458926.75	20	7	30.03	-20	15	13.04	10.5117	8.4
mar	19	2458927.75	20	7	49.87	-20	14	17.86	10.4974	8.3
mar	20	2458928.75	20	8	9.41	-20	13	23.48	10.4829	8.3
mar	21	2458929.75	20	8	28.63	-20	12	29.90	10.4683	8.2
mar	22	2458930.75	20	8	47.55	-20	11	37.14	10.4536	8.1
mar	23	2458931.75	20	9	6.16	-20	10	45.21	10.4388	8.1
mar	24	2458932.75	20	9	24.44	-20	9	54.12	10.4238	8.0
mar	25	2458933.75	20	9	42.41	-20	9	3.88	10.4088	8.0
mar	26	2458934.75	20	10	0.06	-20	8	14.51	10.3936	7.9
mar	27	2458935.75	20	10	17.38	-20	7	26.03	10.3783	7.8
mar	28	2458936.75	20	10	34.37	-20	6	38.46	10.3629	7.8
mar	29	2458937.75	20	10	51.03	-20	5	51.81	10.3474	7.7
mar	30	2458938.75	20	11	7.36	-20	5	6.11	10.3318	7.6
mar	31	2458939.75	20	11	23.35	-20	4	21.38	10.3161	7.6
abr	1	2458940.75	20	11	39.00	-20	3	37.65	10.3003	7.5

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
abr	2	2458941.75	20	11	54.31	-20	2	54.94	10.2844	7.5
abr	3	2458942.75	20	12	9.27	-20	2	13.26	10.2685	7.4
abr	4	2458943.75	20	12	23.88	-20	1	32.63	10.2525	7.3
abr	5	2458944.75	20	12	38.13	-20	0	53.06	10.2364	7.3
abr	6	2458945.75	20	12	52.02	-20	0	14.56	10.2202	7.2
abr	7	2458946.75	20	13	5.56	-19	59	37.11	10.2040	7.2
abr	8	2458947.75	20	13	18.73	-19	59	0.71	10.1877	7.1
abr	9	2458948.75	20	13	31.55	-19	58	25.39	10.1714	7.0
abr	10	2458949.75	20	13	44.00	-19	57	51.15	10.1550	7.0
abr	11	2458950.75	20	13	56.10	-19	57	18.02	10.1385	6.9
abr	12	2458951.75	20	14	7.83	-19	56	46.03	10.1220	6.8
abr	13	2458952.75	20	14	19.18	-19	56	15.21	10.1055	6.8
abr	14	2458953.75	20	14	30.17	-19	55	45.56	10.0889	6.7
abr	15	2458954.75	20	14	40.77	-19	55	17.11	10.0723	6.7
abr	16	2458955.75	20	14	50.99	-19	54	49.87	10.0557	6.6
abr	17	2458956.75	20	15	0.83	-19	54	23.84	10.0390	6.5
abr	18	2458957.75	20	15	10.27	-19	53	59.03	10.0224	6.5
abr	19	2458958.75	20	15	19.33	-19	53	35.45	10.0057	6.4
abr	20	2458959.75	20	15	27.99	-19	53	13.09	9.9890	6.3
abr	21	2458960.75	20	15	36.27	-19	52	51.97	9.9723	6.3
abr	22	2458961.75	20	15	44.14	-19	52	32.09	9.9556	6.2
abr	23	2458962.75	20	15	51.63	-19	52	13.45	9.9389	6.1
abr	24	2458963.75	20	15	58.72	-19	51	56.08	9.9222	6.1
abr	25	2458964.75	20	16	5.41	-19	51	39.97	9.9055	6.0
abr	26	2458965.75	20	16	11.71	-19	51	25.15	9.8888	6.0
abr	27	2458966.75	20	16	17.60	-19	51	11.62	9.8722	5.9
abr	28	2458967.75	20	16	23.10	-19	50	59.40	9.8556	5.8
abr	29	2458968.75	20	16	28.20	-19	50	48.50	9.8390	5.8
abr	30	2458969.75	20	16	32.89	-19	50	38.92	9.8225	5.7
may	1	2458970.75	20	16	37.18	-19	50	30.69	9.8060	5.6
may	2	2458971.75	20	16	41.06	-19	50	23.78	9.7895	5.6
may	3	2458972.75	20	16	44.53	-19	50	18.20	9.7731	5.5
may	4	2458973.75	20	16	47.60	-19	50	13.94	9.7568	5.4
may	5	2458974.75	20	16	50.26	-19	50	10.98	9.7405	5.4
may	6	2458975.75	20	16	52.53	-19	50	9.31	9.7243	5.3
may	7	2458976.75	20	16	54.39	-19	50	8.94	9.7082	5.2
may	8	2458977.75	20	16	55.85	-19	50	9.87	9.6921	5.2
may	9	2458978.75	20	16	56.91	-19	50	12.11	9.6761	5.1
may	10	2458979.75	20	16	57.58	-19	50	15.69	9.6602	5.0
may	11	2458980.75	20	16	57.84	-19	50	20.61	9.6444	5.0
may	12	2458981.75	20	16	57.69	-19	50	26.87	9.6286	4.9
may	13	2458982.75	20	16	57.14	-19	50	34.48	9.6130	4.9
may	14	2458983.75	20	16	56.19	-19	50	43.42	9.5975	4.8
may	15	2458984.75	20	16	54.82	-19	50	53.69	9.5820	4.7
may	16	2458985.75	20	16	53.05	-19	51	5.27	9.5667	4.7
may	17	2458986.75	20	16	50.88	-19	51	18.15	9.5515	4.6

Saturno, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	18	2458987.75	20	16	48.31	-19	51	32.34	9.5364	4.5
may	19	2458988.75	20	16	45.33	-19	51	47.80	9.5214	4.5
may	20	2458989.75	20	16	41.96	-19	52	4.55	9.5066	4.4
may	21	2458990.75	20	16	38.20	-19	52	22.56	9.4918	4.3
may	22	2458991.75	20	16	34.04	-19	52	41.84	9.4773	4.3
may	23	2458992.75	20	16	29.49	-19	53	2.39	9.4628	4.2
may	24	2458993.75	20	16	24.55	-19	53	24.19	9.4485	4.1
may	25	2458994.75	20	16	19.23	-19	53	47.25	9.4344	4.1
may	26	2458995.75	20	16	13.53	-19	54	11.56	9.4204	4.0
may	27	2458996.75	20	16	7.44	-19	54	37.11	9.4066	3.9
may	28	2458997.75	20	16	0.98	-19	55	3.90	9.3930	3.9
may	29	2458998.75	20	15	54.13	-19	55	31.91	9.3795	3.8
may	30	2458999.75	20	15	46.91	-19	56	1.10	9.3662	3.7
may	31	2459000.75	20	15	39.32	-19	56	31.47	9.3530	3.6
jun	1	2459001.75	20	15	31.37	-19	57	2.97	9.3401	3.6
jun	2	2459002.75	20	15	23.05	-19	57	35.58	9.3273	3.5
jun	3	2459003.75	20	15	14.39	-19	58	9.28	9.3147	3.4
jun	4	2459004.75	20	15	5.37	-19	58	44.07	9.3023	3.4
jun	5	2459005.75	20	14	56.01	-19	59	19.92	9.2901	3.3
jun	6	2459006.75	20	14	46.31	-19	59	56.84	9.2781	3.2
jun	7	2459007.75	20	14	36.28	-20	0	34.83	9.2663	3.2
jun	8	2459008.75	20	14	25.90	-20	1	13.87	9.2547	3.1
jun	9	2459009.75	20	14	15.20	-20	1	53.94	9.2433	3.0
jun	10	2459010.75	20	14	4.16	-20	2	35.03	9.2322	3.0
jun	11	2459011.75	20	13	52.80	-20	3	17.10	9.2212	2.9
jun	12	2459012.75	20	13	41.11	-20	4	0.13	9.2105	2.8
jun	13	2459013.75	20	13	29.11	-20	4	44.09	9.2000	2.8
jun	14	2459014.75	20	13	16.80	-20	5	28.96	9.1897	2.7
jun	15	2459015.75	20	13	4.19	-20	6	14.70	9.1796	2.6
jun	16	2459016.75	20	12	51.28	-20	7	1.28	9.1698	2.5
jun	17	2459017.75	20	12	38.08	-20	7	48.70	9.1602	2.5
jun	18	2459018.75	20	12	24.59	-20	8	36.92	9.1509	2.4
jun	19	2459019.75	20	12	10.84	-20	9	25.92	9.1418	2.3
jun	20	2459020.75	20	11	56.81	-20	10	15.69	9.1330	2.3
jun	21	2459021.75	20	11	42.52	-20	11	6.21	9.1244	2.2
jun	22	2459022.75	20	11	27.97	-20	11	57.46	9.1160	2.1
jun	23	2459023.75	20	11	13.17	-20	12	49.41	9.1080	2.1
jun	24	2459024.75	20	10	58.13	-20	13	42.04	9.1002	2.0
jun	25	2459025.75	20	10	42.85	-20	14	35.33	9.0926	1.9
jun	26	2459026.75	20	10	27.34	-20	15	29.23	9.0853	1.9
jun	27	2459027.75	20	10	11.61	-20	16	23.70	9.0783	1.8
jun	28	2459028.75	20	9	55.66	-20	17	18.71	9.0716	1.7
jun	29	2459029.75	20	9	39.51	-20	18	14.20	9.0651	1.6
jun	30	2459030.75	20	9	23.16	-20	19	10.16	9.0589	1.6
jul	1	2459031.75	20	9	6.64	-20	20	6.55	9.0530	1.5
jul	2	2459032.75	20	8	49.94	-20	21	3.36	9.0473	1.4

Saturno, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
jul	3	2459033.75	20	8	33.07	-20	22	0.55	9.0419	1.4
jul	4	2459034.75	20	8	16.04	-20	22	58.13	9.0369	1.3
jul	5	2459035.75	20	7	58.85	-20	23	56.07	9.0320	1.2
jul	6	2459036.75	20	7	41.52	-20	24	54.34	9.0275	1.1
jul	7	2459037.75	20	7	24.05	-20	25	52.91	9.0233	1.1
jul	8	2459038.75	20	7	6.44	-20	26	51.75	9.0193	1.0
jul	9	2459039.75	20	6	48.70	-20	27	50.83	9.0157	0.9
jul	10	2459040.75	20	6	30.85	-20	28	50.11	9.0123	0.9
jul	11	2459041.75	20	6	12.89	-20	29	49.54	9.0092	0.8
jul	12	2459042.75	20	5	54.83	-20	30	49.10	9.0064	0.7
jul	13	2459043.75	20	5	36.68	-20	31	48.76	9.0040	0.7
jul	14	2459044.75	20	5	18.46	-20	32	48.48	9.0018	0.6
jul	15	2459045.75	20	5	0.16	-20	33	48.23	8.9999	0.5
jul	16	2459046.75	20	4	41.81	-20	34	48.00	8.9982	0.4
jul	17	2459047.75	20	4	23.41	-20	35	47.76	8.9969	0.4
jul	18	2459048.75	20	4	4.98	-20	36	47.48	8.9959	0.3
jul	19	2459049.75	20	3	46.51	-20	37	47.15	8.9952	0.2
jul	20	2459050.75	20	3	28.02	-20	38	46.74	8.9948	0.2
jul	21	2459051.75	20	3	9.52	-20	39	46.22	8.9947	0.1
jul	22	2459052.75	20	2	51.01	-20	40	45.57	8.9949	0.0
jul	23	2459053.75	20	2	32.51	-20	41	44.76	8.9954	23.9
jul	24	2459054.75	20	2	14.02	-20	42	43.73	8.9962	23.9
jul	25	2459055.75	20	1	55.56	-20	43	42.44	8.9973	23.8
jul	26	2459056.75	20	1	37.13	-20	44	40.87	8.9987	23.7
jul	27	2459057.75	20	1	18.76	-20	45	38.97	9.0004	23.7
jul	28	2459058.75	20	1	0.44	-20	46	36.73	9.0023	23.6
jul	29	2459059.75	20	0	42.20	-20	47	34.12	9.0046	23.5
jul	30	2459060.75	20	0	24.03	-20	48	31.12	9.0072	23.5
jul	31	2459061.75	20	0	5.95	-20	49	27.74	9.0101	23.4
ago	1	2459062.75	19	59	47.97	-20	50	23.94	9.0132	23.3
ago	2	2459063.75	19	59	30.09	-20	51	19.71	9.0167	23.2
ago	3	2459064.75	19	59	12.32	-20	52	15.04	9.0204	23.2
ago	4	2459065.75	19	58	54.66	-20	53	9.88	9.0244	23.1
ago	5	2459066.75	19	58	37.13	-20	54	4.22	9.0288	23.0
ago	6	2459067.75	19	58	19.73	-20	54	58.01	9.0334	23.0
ago	7	2459068.75	19	58	2.47	-20	55	51.24	9.0383	22.9
ago	8	2459069.75	19	57	45.37	-20	56	43.88	9.0434	22.8
ago	9	2459070.75	19	57	28.42	-20	57	35.90	9.0489	22.7
ago	10	2459071.75	19	57	11.65	-20	58	27.27	9.0546	22.7
ago	11	2459072.75	19	56	55.06	-20	59	17.99	9.0606	22.6
ago	12	2459073.75	19	56	38.66	-21	0	8.03	9.0669	22.5
ago	13	2459074.75	19	56	22.46	-21	0	57.39	9.0735	22.5
ago	14	2459075.75	19	56	6.46	-21	1	46.03	9.0803	22.4
ago	15	2459076.75	19	55	50.68	-21	2	33.97	9.0874	22.3
ago	16	2459077.75	19	55	35.13	-21	3	21.18	9.0948	22.3
ago	17	2459078.75	19	55	19.80	-21	4	7.65	9.1024	22.2

Saturno, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	18	2459079.75	19	55	4.71	-21	4	53.37	9.1103	22.1
ago	19	2459080.75	19	54	49.86	-21	5	38.31	9.1185	22.0
ago	20	2459081.75	19	54	35.26	-21	6	22.45	9.1269	22.0
ago	21	2459082.75	19	54	20.92	-21	7	5.75	9.1356	21.9
ago	22	2459083.75	19	54	6.85	-21	7	48.18	9.1445	21.8
ago	23	2459084.75	19	53	53.06	-21	8	29.73	9.1537	21.8
ago	24	2459085.75	19	53	39.55	-21	9	10.37	9.1631	21.7
ago	25	2459086.75	19	53	26.34	-21	9	50.11	9.1728	21.6
ago	26	2459087.75	19	53	13.43	-21	10	28.94	9.1827	21.6
ago	27	2459088.75	19	53	0.83	-21	11	6.87	9.1928	21.5
ago	28	2459089.75	19	52	48.54	-21	11	43.88	9.2032	21.4
ago	29	2459090.75	19	52	36.56	-21	12	19.98	9.2138	21.3
ago	30	2459091.75	19	52	24.90	-21	12	55.16	9.2246	21.3
ago	31	2459092.75	19	52	13.57	-21	13	29.39	9.2356	21.2
sep	1	2459093.75	19	52	2.56	-21	14	2.67	9.2468	21.1
sep	2	2459094.75	19	51	51.88	-21	14	34.98	9.2583	21.1
sep	3	2459095.75	19	51	41.54	-21	15	6.30	9.2700	21.0
sep	4	2459096.75	19	51	31.54	-21	15	36.62	9.2819	20.9
sep	5	2459097.75	19	51	21.90	-21	16	5.92	9.2939	20.9
sep	6	2459098.75	19	51	12.61	-21	16	34.20	9.3062	20.8
sep	7	2459099.75	19	51	3.68	-21	17	1.45	9.3187	20.7
sep	8	2459100.75	19	50	55.11	-21	17	27.66	9.3313	20.7
sep	9	2459101.75	19	50	46.92	-21	17	52.83	9.3442	20.6
sep	10	2459102.75	19	50	39.10	-21	18	16.97	9.3572	20.5
sep	11	2459103.75	19	50	31.66	-21	18	40.07	9.3704	20.5
sep	12	2459104.75	19	50	24.60	-21	19	2.13	9.3838	20.4
sep	13	2459105.75	19	50	17.93	-21	19	23.15	9.3974	20.3
sep	14	2459106.75	19	50	11.65	-21	19	43.13	9.4111	20.3
sep	15	2459107.75	19	50	5.75	-21	20	2.07	9.4250	20.2
sep	16	2459108.75	19	50	0.25	-21	20	19.94	9.4390	20.1
sep	17	2459109.75	19	49	55.14	-21	20	36.72	9.4532	20.1
sep	18	2459110.75	19	49	50.43	-21	20	52.41	9.4675	20.0
sep	19	2459111.75	19	49	46.13	-21	21	6.98	9.4820	19.9
sep	20	2459112.75	19	49	42.24	-21	21	20.42	9.4966	19.9
sep	21	2459113.75	19	49	38.77	-21	21	32.75	9.5114	19.8
sep	22	2459114.75	19	49	35.71	-21	21	43.96	9.5263	19.7
sep	23	2459115.75	19	49	33.06	-21	21	54.08	9.5413	19.7
sep	24	2459116.75	19	49	30.84	-21	22	3.10	9.5564	19.6
sep	25	2459117.75	19	49	29.03	-21	22	11.04	9.5717	19.5
sep	26	2459118.75	19	49	27.63	-21	22	17.89	9.5870	19.5
sep	27	2459119.75	19	49	26.65	-21	22	23.65	9.6025	19.4
sep	28	2459120.75	19	49	26.08	-21	22	28.32	9.6180	19.3
sep	29	2459121.75	19	49	25.93	-21	22	31.87	9.6337	19.3
sep	30	2459122.75	19	49	26.19	-21	22	34.32	9.6494	19.2
oct	1	2459123.75	19	49	26.87	-21	22	35.64	9.6653	19.1
oct	2	2459124.75	19	49	27.97	-21	22	35.83	9.6812	19.1

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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
oct	3	2459125.75	19	49	29.48	-21	22	34.90	9.6972	19.0
oct	4	2459126.75	19	49	31.42	-21	22	32.84	9.7132	18.9
oct	5	2459127.75	19	49	33.78	-21	22	29.66	9.7293	18.9
oct	6	2459128.75	19	49	36.56	-21	22	25.35	9.7455	18.8
oct	7	2459129.75	19	49	39.77	-21	22	19.93	9.7618	18.7
oct	8	2459130.75	19	49	43.39	-21	22	13.40	9.7781	18.7
oct	9	2459131.75	19	49	47.44	-21	22	5.77	9.7945	18.6
oct	10	2459132.75	19	49	51.90	-21	21	57.05	9.8109	18.5
oct	11	2459133.75	19	49	56.78	-21	21	47.23	9.8273	18.5
oct	12	2459134.75	19	50	2.08	-21	21	36.31	9.8438	18.4
oct	13	2459135.75	19	50	7.79	-21	21	24.30	9.8603	18.4
oct	14	2459136.75	19	50	13.92	-21	21	11.18	9.8768	18.3
oct	15	2459137.75	19	50	20.45	-21	20	56.94	9.8934	18.2
oct	16	2459138.75	19	50	27.40	-21	20	41.57	9.9100	18.2
oct	17	2459139.75	19	50	34.77	-21	20	25.05	9.9266	18.1
oct	18	2459140.75	19	50	42.55	-21	20	7.39	9.9432	18.0
oct	19	2459141.75	19	50	50.75	-21	19	48.60	9.9598	18.0
oct	20	2459142.75	19	50	59.35	-21	19	28.71	9.9764	17.9
oct	21	2459143.75	19	51	8.37	-21	19	7.72	9.9930	17.8
oct	22	2459144.75	19	51	17.79	-21	18	45.65	10.0095	17.8
oct	23	2459145.75	19	51	27.60	-21	18	22.51	10.0261	17.7
oct	24	2459146.75	19	51	37.82	-21	17	58.29	10.0426	17.7
oct	25	2459147.75	19	51	48.42	-21	17	32.99	10.0591	17.6
oct	26	2459148.75	19	51	59.41	-21	17	6.60	10.0756	17.5
oct	27	2459149.75	19	52	10.78	-21	16	39.13	10.0920	17.5
oct	28	2459150.75	19	52	22.54	-21	16	10.56	10.1084	17.4
oct	29	2459151.75	19	52	34.68	-21	15	40.90	10.1247	17.3
oct	30	2459152.75	19	52	47.20	-21	15	10.15	10.1410	17.3
oct	31	2459153.75	19	53	0.09	-21	14	38.31	10.1573	17.2
nov	1	2459154.75	19	53	13.36	-21	14	5.38	10.1735	17.2
nov	2	2459155.75	19	53	27.01	-21	13	31.37	10.1896	17.1
nov	3	2459156.75	19	53	41.02	-21	12	56.30	10.2057	17.0
nov	4	2459157.75	19	53	55.41	-21	12	20.17	10.2216	17.0
nov	5	2459158.75	19	54	10.15	-21	11	42.99	10.2376	16.9
nov	6	2459159.75	19	54	25.25	-21	11	4.76	10.2534	16.8
nov	7	2459160.75	19	54	40.71	-21	10	25.51	10.2691	16.8
nov	8	2459161.75	19	54	56.52	-21	9	45.22	10.2848	16.7
nov	9	2459162.75	19	55	12.67	-21	9	3.91	10.3004	16.7
nov	10	2459163.75	19	55	29.17	-21	8	21.56	10.3159	16.6
nov	11	2459164.75	19	55	46.01	-21	7	38.17	10.3313	16.5
nov	12	2459165.75	19	56	3.18	-21	6	53.73	10.3466	16.5
nov	13	2459166.75	19	56	20.69	-21	6	8.23	10.3617	16.4
nov	14	2459167.75	19	56	38.54	-21	5	21.66	10.3768	16.4
nov	15	2459168.75	19	56	56.72	-21	4	34.05	10.3917	16.3
nov	16	2459169.75	19	57	15.22	-21	3	45.41	10.4066	16.2
nov	17	2459170.75	19	57	34.06	-21	2	55.76	10.4213	16.2

Saturno, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	18	2459171.75	19	57	53.20	-21	2	5.12	10.4358	16.1
nov	19	2459172.75	19	58	12.66	-21	1	13.50	10.4503	16.1
nov	20	2459173.75	19	58	32.42	-21	0	20.90	10.4646	16.0
nov	21	2459174.75	19	58	52.48	-20	59	27.34	10.4787	15.9
nov	22	2459175.75	19	59	12.83	-20	58	32.80	10.4928	15.9
nov	23	2459176.75	19	59	33.46	-20	57	37.28	10.5066	15.8
nov	24	2459177.75	19	59	54.39	-20	56	40.79	10.5204	15.8
nov	25	2459178.75	20	0	15.59	-20	55	43.32	10.5339	15.7
nov	26	2459179.75	20	0	37.07	-20	54	44.87	10.5473	15.6
nov	27	2459180.75	20	0	58.83	-20	53	45.46	10.5606	15.6
nov	28	2459181.75	20	1	20.85	-20	52	45.10	10.5737	15.5
nov	29	2459182.75	20	1	43.15	-20	51	43.78	10.5866	15.5
nov	30	2459183.75	20	2	5.70	-20	50	41.52	10.5993	15.4
dic	1	2459184.75	20	2	28.52	-20	49	38.35	10.6119	15.3
dic	2	2459185.75	20	2	51.58	-20	48	34.26	10.6243	15.3
dic	3	2459186.75	20	3	14.90	-20	47	29.28	10.6365	15.2
dic	4	2459187.75	20	3	38.45	-20	46	23.41	10.6486	15.2
dic	5	2459188.75	20	4	2.25	-20	45	16.66	10.6605	15.1
dic	6	2459189.75	20	4	26.27	-20	44	9.04	10.6721	15.0
dic	7	2459190.75	20	4	50.53	-20	43	0.56	10.6836	15.0
dic	8	2459191.75	20	5	15.00	-20	41	51.19	10.6949	14.9
dic	9	2459192.75	20	5	39.70	-20	40	40.95	10.7060	14.9
dic	10	2459193.75	20	6	4.61	-20	39	29.83	10.7169	14.8
dic	11	2459194.75	20	6	29.73	-20	38	17.83	10.7276	14.7
dic	12	2459195.75	20	6	55.07	-20	37	4.95	10.7381	14.7
dic	13	2459196.75	20	7	20.61	-20	35	51.23	10.7484	14.6
dic	14	2459197.75	20	7	46.36	-20	34	36.67	10.7585	14.6
dic	15	2459198.75	20	8	12.30	-20	33	21.30	10.7683	14.5
dic	16	2459199.75	20	8	38.43	-20	32	5.15	10.7780	14.5
dic	17	2459200.75	20	9	4.74	-20	30	48.24	10.7874	14.4
dic	18	2459201.75	20	9	31.22	-20	29	30.56	10.7966	14.3
dic	19	2459202.75	20	9	57.87	-20	28	12.12	10.8056	14.3
dic	20	2459203.75	20	10	24.68	-20	26	52.92	10.8143	14.2
dic	21	2459204.75	20	10	51.65	-20	25	32.98	10.8229	14.2
dic	22	2459205.75	20	11	18.77	-20	24	12.28	10.8312	14.1
dic	23	2459206.75	20	11	46.04	-20	22	50.84	10.8392	14.0
dic	24	2459207.75	20	12	13.46	-20	21	28.67	10.8471	14.0
dic	25	2459208.75	20	12	41.02	-20	20	5.78	10.8547	13.9
dic	26	2459209.75	20	13	8.72	-20	18	42.18	10.8620	13.9
dic	27	2459210.75	20	13	36.55	-20	17	17.90	10.8692	13.8
dic	28	2459211.75	20	14	4.51	-20	15	52.94	10.8761	13.8
dic	29	2459212.75	20	14	32.60	-20	14	27.33	10.8827	13.7
dic	30	2459213.75	20	15	0.80	-20	13	1.08	10.8891	13.6
dic	31	2459214.75	20	15	29.11	-20	11	34.23	10.8953	13.6

Urano, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2458849.75	2	2	39.44	+11	56	28.67	19.4227	19.4
ene	2	2458850.75	2	2	37.53	+11	56	20.48	19.4387	19.3
ene	3	2458851.75	2	2	35.81	+11	56	13.35	19.4547	19.2
ene	4	2458852.75	2	2	34.29	+11	56	7.26	19.4709	19.2
ene	5	2458853.75	2	2	32.98	+11	56	2.25	19.4871	19.1
ene	6	2458854.75	2	2	31.86	+11	55	58.31	19.5035	19.0
ene	7	2458855.75	2	2	30.94	+11	55	55.46	19.5199	19.0
ene	8	2458856.75	2	2	30.23	+11	55	53.69	19.5364	18.9
ene	9	2458857.75	2	2	29.72	+11	55	53.02	19.5530	18.8
ene	10	2458858.75	2	2	29.41	+11	55	53.43	19.5697	18.8
ene	11	2458859.75	2	2	29.30	+11	55	54.93	19.5865	18.7
ene	12	2458860.75	2	2	29.39	+11	55	57.51	19.6033	18.6
ene	13	2458861.75	2	2	29.67	+11	56	1.14	19.6201	18.6
ene	14	2458862.75	2	2	30.15	+11	56	5.83	19.6370	18.5
ene	15	2458863.75	2	2	30.83	+11	56	11.56	19.6540	18.4
ene	16	2458864.75	2	2	31.71	+11	56	18.35	19.6710	18.4
ene	17	2458865.75	2	2	32.79	+11	56	26.20	19.6881	18.3
ene	18	2458866.75	2	2	34.08	+11	56	35.13	19.7052	18.2
ene	19	2458867.75	2	2	35.57	+11	56	45.14	19.7223	18.2
ene	20	2458868.75	2	2	37.26	+11	56	56.24	19.7394	18.1
ene	21	2458869.75	2	2	39.16	+11	57	8.44	19.7565	18.0
ene	22	2458870.75	2	2	41.26	+11	57	21.72	19.7737	18.0
ene	23	2458871.75	2	2	43.56	+11	57	36.09	19.7909	17.9
ene	24	2458872.75	2	2	46.07	+11	57	51.52	19.8080	17.8
ene	25	2458873.75	2	2	48.77	+11	58	8.02	19.8252	17.8
ene	26	2458874.75	2	2	51.66	+11	58	25.56	19.8424	17.7
ene	27	2458875.75	2	2	54.76	+11	58	44.15	19.8595	17.6
ene	28	2458876.75	2	2	58.04	+11	59	3.77	19.8766	17.6
ene	29	2458877.75	2	3	1.53	+11	59	24.42	19.8937	17.5
ene	30	2458878.75	2	3	5.21	+11	59	46.10	19.9108	17.5
ene	31	2458879.75	2	3	9.08	+12	0	8.80	19.9278	17.4
feb	1	2458880.75	2	3	13.15	+12	0	32.52	19.9448	17.3
feb	2	2458881.75	2	3	17.42	+12	0	57.26	19.9617	17.3
feb	3	2458882.75	2	3	21.88	+12	1	23.02	19.9786	17.2
feb	4	2458883.75	2	3	26.53	+12	1	49.80	19.9954	17.1
feb	5	2458884.75	2	3	31.37	+12	2	17.58	20.0121	17.1
feb	6	2458885.75	2	3	36.40	+12	2	46.37	20.0288	17.0
feb	7	2458886.75	2	3	41.62	+12	3	16.15	20.0455	16.9
feb	8	2458887.75	2	3	47.02	+12	3	46.89	20.0620	16.9
feb	9	2458888.75	2	3	52.60	+12	4	18.59	20.0785	16.8
feb	10	2458889.75	2	3	58.36	+12	4	51.21	20.0948	16.7
feb	11	2458890.75	2	4	4.30	+12	5	24.74	20.1111	16.7
feb	12	2458891.75	2	4	10.41	+12	5	59.18	20.1273	16.6
feb	13	2458892.75	2	4	16.70	+12	6	34.52	20.1434	16.6
feb	14	2458893.75	2	4	23.17	+12	7	10.76	20.1594	16.5
feb	15	2458894.75	2	4	29.82	+12	7	47.92	20.1753	16.4

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2458895.75	2	4	36.64	+12	8	25.99	20.1911	16.4
feb	17	2458896.75	2	4	43.64	+12	9	4.97	20.2067	16.3
feb	18	2458897.75	2	4	50.81	+12	9	44.84	20.2222	16.2
feb	19	2458898.75	2	4	58.15	+12	10	25.59	20.2377	16.2
feb	20	2458899.75	2	5	5.66	+12	11	7.21	20.2529	16.1
feb	21	2458900.75	2	5	13.33	+12	11	49.67	20.2681	16.0
feb	22	2458901.75	2	5	21.16	+12	12	32.95	20.2831	16.0
feb	23	2458902.75	2	5	29.15	+12	13	17.05	20.2980	15.9
feb	24	2458903.75	2	5	37.30	+12	14	1.94	20.3127	15.9
feb	25	2458904.75	2	5	45.61	+12	14	47.62	20.3272	15.8
feb	26	2458905.75	2	5	54.07	+12	15	34.08	20.3417	15.7
feb	27	2458906.75	2	6	2.68	+12	16	21.30	20.3559	15.7
feb	28	2458907.75	2	6	11.45	+12	17	9.28	20.3700	15.6
feb	29	2458908.75	2	6	20.37	+12	17	58.00	20.3839	15.5
mar	1	2458909.75	2	6	29.43	+12	18	47.47	20.3976	15.5
mar	2	2458910.75	2	6	38.65	+12	19	37.68	20.4112	15.4
mar	3	2458911.75	2	6	48.00	+12	20	28.61	20.4246	15.3
mar	4	2458912.75	2	6	57.50	+12	21	20.24	20.4378	15.3
mar	5	2458913.75	2	7	7.14	+12	22	12.57	20.4508	15.2
mar	6	2458914.75	2	7	16.91	+12	23	5.58	20.4637	15.2
mar	7	2458915.75	2	7	26.81	+12	23	59.23	20.4763	15.1
mar	8	2458916.75	2	7	36.84	+12	24	53.51	20.4887	15.0
mar	9	2458917.75	2	7	46.99	+12	25	48.39	20.5010	15.0
mar	10	2458918.75	2	7	57.27	+12	26	43.85	20.5130	14.9
mar	11	2458919.75	2	8	7.67	+12	27	39.88	20.5249	14.8
mar	12	2458920.75	2	8	18.19	+12	28	36.49	20.5365	14.8
mar	13	2458921.75	2	8	28.83	+12	29	33.67	20.5480	14.7
mar	14	2458922.75	2	8	39.60	+12	30	31.43	20.5592	14.7
mar	15	2458923.75	2	8	50.48	+12	31	29.75	20.5702	14.6
mar	16	2458924.75	2	9	1.48	+12	32	28.63	20.5810	14.5
mar	17	2458925.75	2	9	12.59	+12	33	28.04	20.5916	14.5
mar	18	2458926.75	2	9	23.80	+12	34	27.97	20.6019	14.4
mar	19	2458927.75	2	9	35.13	+12	35	28.40	20.6120	14.3
mar	20	2458928.75	2	9	46.55	+12	36	29.29	20.6219	14.3
mar	21	2458929.75	2	9	58.07	+12	37	30.65	20.6316	14.2
mar	22	2458930.75	2	10	9.68	+12	38	32.44	20.6410	14.2
mar	23	2458931.75	2	10	21.39	+12	39	34.65	20.6502	14.1
mar	24	2458932.75	2	10	33.20	+12	40	37.27	20.6591	14.0
mar	25	2458933.75	2	10	45.09	+12	41	40.29	20.6679	14.0
mar	26	2458934.75	2	10	57.07	+12	42	43.70	20.6763	13.9
mar	27	2458935.75	2	11	9.14	+12	43	47.49	20.6845	13.8
mar	28	2458936.75	2	11	21.29	+12	44	51.64	20.6925	13.8
mar	29	2458937.75	2	11	33.53	+12	45	56.15	20.7002	13.7
mar	30	2458938.75	2	11	45.84	+12	47	1.01	20.7077	13.7
mar	31	2458939.75	2	11	58.23	+12	48	6.20	20.7149	13.6
abr	1	2458940.75	2	12	10.69	+12	49	11.71	20.7219	13.5

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
abr	2	2458941.75	2	12	23.22	+12	50	17.51	20.7286	13.5
abr	3	2458942.75	2	12	35.82	+12	51	23.58	20.7351	13.4
abr	4	2458943.75	2	12	48.47	+12	52	29.91	20.7413	13.3
abr	5	2458944.75	2	13	1.18	+12	53	36.45	20.7472	13.3
abr	6	2458945.75	2	13	13.95	+12	54	43.20	20.7529	13.2
abr	7	2458946.75	2	13	26.77	+12	55	50.14	20.7583	13.2
abr	8	2458947.75	2	13	39.64	+12	56	57.25	20.7635	13.1
abr	9	2458948.75	2	13	52.57	+12	58	4.55	20.7683	13.0
abr	10	2458949.75	2	14	5.54	+12	59	12.03	20.7730	13.0
abr	11	2458950.75	2	14	18.57	+13	0	19.69	20.7773	12.9
abr	12	2458951.75	2	14	31.65	+13	1	27.52	20.7815	12.8
abr	13	2458952.75	2	14	44.76	+13	2	35.50	20.7853	12.8
abr	14	2458953.75	2	14	57.92	+13	3	43.62	20.7889	12.7
abr	15	2458954.75	2	15	11.11	+13	4	51.85	20.7922	12.7
abr	16	2458955.75	2	15	24.33	+13	6	0.16	20.7952	12.6
abr	17	2458956.75	2	15	37.57	+13	7	8.55	20.7980	12.5
abr	18	2458957.75	2	15	50.85	+13	8	16.98	20.8004	12.5
abr	19	2458958.75	2	16	4.14	+13	9	25.46	20.8027	12.4
abr	20	2458959.75	2	16	17.46	+13	10	33.96	20.8046	12.4
abr	21	2458960.75	2	16	30.80	+13	11	42.47	20.8063	12.3
abr	22	2458961.75	2	16	44.15	+13	12	50.98	20.8077	12.2
abr	23	2458962.75	2	16	57.52	+13	13	59.49	20.8088	12.2
abr	24	2458963.75	2	17	10.91	+13	15	7.98	20.8097	12.1
abr	25	2458964.75	2	17	24.31	+13	16	16.39	20.8102	12.0
abr	26	2458965.75	2	17	37.72	+13	17	24.04	20.8105	12.0
abr	27	2458966.75	2	17	51.07	+13	18	32.87	20.8106	11.9
abr	28	2458967.75	2	18	4.49	+13	19	41.41	20.8103	11.9
abr	29	2458968.75	2	18	17.90	+13	20	49.71	20.8098	11.8
abr	30	2458969.75	2	18	31.30	+13	21	57.87	20.8090	11.7
may	1	2458970.75	2	18	44.68	+13	23	5.90	20.8080	11.7
may	2	2458971.75	2	18	58.06	+13	24	13.78	20.8067	11.6
may	3	2458972.75	2	19	11.41	+13	25	21.48	20.8051	11.5
may	4	2458973.75	2	19	24.75	+13	26	29.00	20.8032	11.5
may	5	2458974.75	2	19	38.07	+13	27	36.33	20.8011	11.4
may	6	2458975.75	2	19	51.37	+13	28	43.46	20.7987	11.4
may	7	2458976.75	2	20	4.65	+13	29	50.39	20.7960	11.3
may	8	2458977.75	2	20	17.90	+13	30	57.14	20.7931	11.2
may	9	2458978.75	2	20	31.14	+13	32	3.69	20.7899	11.2
may	10	2458979.75	2	20	44.34	+13	33	10.04	20.7864	11.1
may	11	2458980.75	2	20	57.51	+13	34	16.16	20.7827	11.1
may	12	2458981.75	2	21	10.65	+13	35	22.03	20.7787	11.0
may	13	2458982.75	2	21	23.75	+13	36	27.64	20.7745	10.9
may	14	2458983.75	2	21	36.80	+13	37	32.97	20.7700	10.9
may	15	2458984.75	2	21	49.80	+13	38	37.99	20.7652	10.8
may	16	2458985.75	2	22	2.76	+13	39	42.69	20.7602	10.7
may	17	2458986.75	2	22	15.67	+13	40	47.07	20.7550	10.7

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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
may	18	2458987.75	2	22	28.53	+13	41	51.11	20.7494	10.6
may	19	2458988.75	2	22	41.34	+13	42	54.80	20.7436	10.6
may	20	2458989.75	2	22	54.09	+13	43	58.15	20.7376	10.5
may	21	2458990.75	2	23	6.78	+13	45	1.13	20.7313	10.4
may	22	2458991.75	2	23	19.42	+13	46	3.74	20.7248	10.4
may	23	2458992.75	2	23	31.99	+13	47	5.98	20.7180	10.3
may	24	2458993.75	2	23	44.50	+13	48	7.84	20.7109	10.2
may	25	2458994.75	2	23	56.94	+13	49	9.30	20.7037	10.2
may	26	2458995.75	2	24	9.31	+13	50	10.35	20.6961	10.1
may	27	2458996.75	2	24	21.60	+13	51	10.97	20.6884	10.1
may	28	2458997.75	2	24	33.82	+13	52	11.14	20.6804	10.0
may	29	2458998.75	2	24	45.95	+13	53	10.84	20.6721	9.9
may	30	2458999.75	2	24	58.00	+13	54	10.05	20.6637	9.9
may	31	2459000.75	2	25	9.96	+13	55	8.76	20.6550	9.8
jun	1	2459001.75	2	25	21.83	+13	56	6.95	20.6460	9.7
jun	2	2459002.75	2	25	33.61	+13	57	4.62	20.6369	9.7
jun	3	2459003.75	2	25	45.31	+13	58	1.79	20.6275	9.6
jun	4	2459004.75	2	25	56.92	+13	58	58.44	20.6179	9.6
jun	5	2459005.75	2	26	8.43	+13	59	54.59	20.6081	9.5
jun	6	2459006.75	2	26	19.85	+14	0	50.22	20.5980	9.4
jun	7	2459007.75	2	26	31.18	+14	1	45.33	20.5878	9.4
jun	8	2459008.75	2	26	42.40	+14	2	39.89	20.5773	9.3
jun	9	2459009.75	2	26	53.52	+14	3	33.90	20.5667	9.2
jun	10	2459010.75	2	27	4.52	+14	4	27.32	20.5558	9.2
jun	11	2459011.75	2	27	15.42	+14	5	20.14	20.5447	9.1
jun	12	2459012.75	2	27	26.21	+14	6	12.36	20.5334	9.1
jun	13	2459013.75	2	27	36.87	+14	7	3.96	20.5219	9.0
jun	14	2459014.75	2	27	47.43	+14	7	54.93	20.5103	8.9
jun	15	2459015.75	2	27	57.86	+14	8	45.27	20.4984	8.9
jun	16	2459016.75	2	28	8.18	+14	9	34.97	20.4863	8.8
jun	17	2459017.75	2	28	18.38	+14	10	24.03	20.4741	8.7
jun	18	2459018.75	2	28	28.46	+14	11	12.44	20.4616	8.7
jun	19	2459019.75	2	28	38.41	+14	12	0.21	20.4490	8.6
jun	20	2459020.75	2	28	48.24	+14	12	47.32	20.4362	8.6
jun	21	2459021.75	2	28	57.93	+14	13	33.77	20.4232	8.5
jun	22	2459022.75	2	29	7.50	+14	14	19.54	20.4101	8.4
jun	23	2459023.75	2	29	16.93	+14	15	4.62	20.3968	8.4
jun	24	2459024.75	2	29	26.22	+14	15	49.00	20.3833	8.3
jun	25	2459025.75	2	29	35.36	+14	16	32.65	20.3697	8.2
jun	26	2459026.75	2	29	44.37	+14	17	15.55	20.3559	8.2
jun	27	2459027.75	2	29	53.22	+14	17	57.70	20.3419	8.1
jun	28	2459028.75	2	30	1.93	+14	18	39.09	20.3278	8.0
jun	29	2459029.75	2	30	10.49	+14	19	19.71	20.3135	8.0
jun	30	2459030.75	2	30	18.91	+14	19	59.57	20.2992	7.9
jul	1	2459031.75	2	30	27.18	+14	20	38.67	20.2846	7.9
jul	2	2459032.75	2	30	35.30	+14	21	17.03	20.2700	7.8

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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
jul	3	2459033.75	2	30	43.27	+14	21	54.63	20.2552	7.7
jul	4	2459034.75	2	30	51.09	+14	22	31.49	20.2402	7.7
jul	5	2459035.75	2	30	58.76	+14	23	7.57	20.2252	7.6
jul	6	2459036.75	2	31	6.26	+14	23	42.87	20.2100	7.5
jul	7	2459037.75	2	31	13.60	+14	24	17.38	20.1947	7.5
jul	8	2459038.75	2	31	20.78	+14	24	51.07	20.1793	7.4
jul	9	2459039.75	2	31	27.79	+14	25	23.94	20.1638	7.3
jul	10	2459040.75	2	31	34.64	+14	25	55.98	20.1482	7.3
jul	11	2459041.75	2	31	41.32	+14	26	27.18	20.1325	7.2
jul	12	2459042.75	2	31	47.83	+14	26	57.54	20.1167	7.2
jul	13	2459043.75	2	31	54.17	+14	27	27.06	20.1008	7.1
jul	14	2459044.75	2	32	0.34	+14	27	55.74	20.0848	7.0
jul	15	2459045.75	2	32	6.35	+14	28	23.58	20.0687	7.0
jul	16	2459046.75	2	32	12.18	+14	28	50.58	20.0525	6.9
jul	17	2459047.75	2	32	17.84	+14	29	16.74	20.0363	6.8
jul	18	2459048.75	2	32	23.32	+14	29	42.05	20.0199	6.8
jul	19	2459049.75	2	32	28.63	+14	30	6.50	20.0035	6.7
jul	20	2459050.75	2	32	33.75	+14	30	30.10	19.9871	6.6
jul	21	2459051.75	2	32	38.70	+14	30	52.81	19.9706	6.6
jul	22	2459052.75	2	32	43.46	+14	31	14.64	19.9540	6.5
jul	23	2459053.75	2	32	48.03	+14	31	35.56	19.9374	6.5
jul	24	2459054.75	2	32	52.41	+14	31	55.56	19.9207	6.4
jul	25	2459055.75	2	32	56.61	+14	32	14.64	19.9040	6.3
jul	26	2459056.75	2	33	0.62	+14	32	32.80	19.8872	6.3
jul	27	2459057.75	2	33	4.44	+14	32	50.05	19.8705	6.2
jul	28	2459058.75	2	33	8.08	+14	33	6.39	19.8537	6.1
jul	29	2459059.75	2	33	11.53	+14	33	21.84	19.8368	6.1
jul	30	2459060.75	2	33	14.80	+14	33	36.41	19.8200	6.0
jul	31	2459061.75	2	33	17.89	+14	33	50.09	19.8031	5.9
ago	1	2459062.75	2	33	20.78	+14	34	2.87	19.7863	5.9
ago	2	2459063.75	2	33	23.48	+14	34	14.76	19.7694	5.8
ago	3	2459064.75	2	33	25.99	+14	34	25.73	19.7525	5.7
ago	4	2459065.75	2	33	28.31	+14	34	35.78	19.7356	5.7
ago	5	2459066.75	2	33	30.43	+14	34	44.90	19.7188	5.6
ago	6	2459067.75	2	33	32.35	+14	34	53.08	19.7019	5.5
ago	7	2459068.75	2	33	34.08	+14	35	0.33	19.6851	5.5
ago	8	2459069.75	2	33	35.62	+14	35	6.65	19.6683	5.4
ago	9	2459070.75	2	33	36.96	+14	35	12.03	19.6515	5.3
ago	10	2459071.75	2	33	38.11	+14	35	16.49	19.6347	5.3
ago	11	2459072.75	2	33	39.07	+14	35	20.03	19.6180	5.2
ago	12	2459073.75	2	33	39.84	+14	35	22.65	19.6013	5.2
ago	13	2459074.75	2	33	40.41	+14	35	24.36	19.5847	5.1
ago	14	2459075.75	2	33	40.79	+14	35	25.15	19.5681	5.0
ago	15	2459076.75	2	33	40.98	+14	35	25.04	19.5516	5.0
ago	16	2459077.75	2	33	40.97	+14	35	24.02	19.5351	4.9
ago	17	2459078.75	2	33	40.76	+14	35	22.07	19.5187	4.8

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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	18	2459079.75	2	33	40.36	+14	35	19.21	19.5024	4.8
ago	19	2459080.75	2	33	39.76	+14	35	15.40	19.4861	4.7
ago	20	2459081.75	2	33	38.96	+14	35	10.65	19.4699	4.6
ago	21	2459082.75	2	33	37.96	+14	35	4.95	19.4538	4.6
ago	22	2459083.75	2	33	36.76	+14	34	58.31	19.4378	4.5
ago	23	2459084.75	2	33	35.38	+14	34	50.74	19.4219	4.4
ago	24	2459085.75	2	33	33.80	+14	34	42.26	19.4061	4.4
ago	25	2459086.75	2	33	32.04	+14	34	32.89	19.3903	4.3
ago	26	2459087.75	2	33	30.09	+14	34	22.64	19.3747	4.2
ago	27	2459088.75	2	33	27.96	+14	34	11.52	19.3593	4.2
ago	28	2459089.75	2	33	25.64	+14	33	59.52	19.3439	4.1
ago	29	2459090.75	2	33	23.13	+14	33	46.66	19.3286	4.0
ago	30	2459091.75	2	33	20.43	+14	33	32.91	19.3135	4.0
ago	31	2459092.75	2	33	17.54	+14	33	18.29	19.2985	3.9
sep	1	2459093.75	2	33	14.47	+14	33	2.79	19.2837	3.8
sep	2	2459094.75	2	33	11.21	+14	32	46.41	19.2689	3.8
sep	3	2459095.75	2	33	7.77	+14	32	29.15	19.2544	3.7
sep	4	2459096.75	2	33	4.15	+14	32	11.03	19.2399	3.6
sep	5	2459097.75	2	33	0.34	+14	31	52.05	19.2257	3.6
sep	6	2459098.75	2	32	56.37	+14	31	32.23	19.2116	3.5
sep	7	2459099.75	2	32	52.21	+14	31	11.58	19.1976	3.4
sep	8	2459100.75	2	32	47.89	+14	30	50.10	19.1838	3.4
sep	9	2459101.75	2	32	43.39	+14	30	27.82	19.1702	3.3
sep	10	2459102.75	2	32	38.72	+14	30	4.74	19.1567	3.2
sep	11	2459103.75	2	32	33.89	+14	29	40.87	19.1435	3.2
sep	12	2459104.75	2	32	28.89	+14	29	16.21	19.1304	3.1
sep	13	2459105.75	2	32	23.72	+14	28	50.78	19.1175	3.0
sep	14	2459106.75	2	32	18.38	+14	28	24.57	19.1048	3.0
sep	15	2459107.75	2	32	12.88	+14	27	57.58	19.0923	2.9
sep	16	2459108.75	2	32	7.21	+14	27	29.81	19.0800	2.8
sep	17	2459109.75	2	32	1.38	+14	27	1.25	19.0679	2.8
sep	18	2459110.75	2	31	55.39	+14	26	31.93	19.0560	2.7
sep	19	2459111.75	2	31	49.25	+14	26	1.86	19.0443	2.6
sep	20	2459112.75	2	31	42.96	+14	25	31.06	19.0328	2.6
sep	21	2459113.75	2	31	36.53	+14	24	59.57	19.0216	2.5
sep	22	2459114.75	2	31	29.95	+14	24	27.40	19.0106	2.4
sep	23	2459115.75	2	31	23.24	+14	23	54.58	18.9998	2.4
sep	24	2459116.75	2	31	16.39	+14	23	21.12	18.9892	2.3
sep	25	2459117.75	2	31	9.40	+14	22	47.01	18.9789	2.2
sep	26	2459118.75	2	31	2.27	+14	22	12.27	18.9688	2.2
sep	27	2459119.75	2	30	55.02	+14	21	36.91	18.9590	2.1
sep	28	2459120.75	2	30	47.63	+14	21	0.92	18.9494	2.0
sep	29	2459121.75	2	30	40.11	+14	20	24.32	18.9401	1.9
sep	30	2459122.75	2	30	32.47	+14	19	47.12	18.9310	1.9
oct	1	2459123.75	2	30	24.71	+14	19	9.34	18.9221	1.8
oct	2	2459124.75	2	30	16.83	+14	18	30.99	18.9135	1.7

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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	3	2459125.75	2	30	8.84	+14	17	52.09	18.9052	1.7
oct	4	2459126.75	2	30	0.74	+14	17	12.67	18.8972	1.6
oct	5	2459127.75	2	29	52.54	+14	16	32.74	18.8894	1.5
oct	6	2459128.75	2	29	44.24	+14	15	52.33	18.8818	1.5
oct	7	2459129.75	2	29	35.84	+14	15	11.45	18.8746	1.4
oct	8	2459130.75	2	29	27.35	+14	14	30.12	18.8676	1.3
oct	9	2459131.75	2	29	18.76	+14	13	48.35	18.8609	1.3
oct	10	2459132.75	2	29	10.08	+14	13	6.16	18.8545	1.2
oct	11	2459133.75	2	29	1.32	+14	12	23.56	18.8483	1.1
oct	12	2459134.75	2	28	52.46	+14	11	40.56	18.8425	1.1
oct	13	2459135.75	2	28	43.53	+14	10	57.16	18.8369	1.0
oct	14	2459136.75	2	28	34.52	+14	10	13.37	18.8316	0.9
oct	15	2459137.75	2	28	25.43	+14	9	29.20	18.8266	0.9
oct	16	2459138.75	2	28	16.28	+14	8	44.69	18.8219	0.8
oct	17	2459139.75	2	28	7.06	+14	7	59.85	18.8175	0.7
oct	18	2459140.75	2	27	57.79	+14	7	14.73	18.8134	0.7
oct	19	2459141.75	2	27	48.47	+14	6	29.36	18.8096	0.6
oct	20	2459142.75	2	27	39.10	+14	5	43.77	18.8061	0.5
oct	21	2459143.75	2	27	29.69	+14	4	57.97	18.8029	0.4
oct	22	2459144.75	2	27	20.23	+14	4	11.99	18.8000	0.4
oct	23	2459145.75	2	27	10.74	+14	3	25.82	18.7974	0.3
oct	24	2459146.75	2	27	1.20	+14	2	39.49	18.7951	0.2
oct	25	2459147.75	2	26	51.64	+14	1	53.01	18.7931	0.2
oct	26	2459148.75	2	26	42.05	+14	1	6.38	18.7914	0.1
oct	27	2459149.75	2	26	32.43	+14	0	19.63	18.7900	0.0
oct	28	2459150.75	2	26	22.80	+13	59	32.78	18.7890	24.0
oct	29	2459151.75	2	26	13.15	+13	58	45.85	18.7882	23.9
oct	30	2459152.75	2	26	3.49	+13	57	58.87	18.7877	23.8
oct	31	2459153.75	2	25	53.83	+13	57	11.87	18.7876	23.8
nov	1	2459154.75	2	25	44.17	+13	56	24.86	18.7878	23.7
nov	2	2459155.75	2	25	34.51	+13	55	37.87	18.7882	23.6
nov	3	2459156.75	2	25	24.87	+13	54	50.94	18.7890	23.6
nov	4	2459157.75	2	25	15.23	+13	54	4.07	18.7901	23.5
nov	5	2459158.75	2	25	5.62	+13	53	17.29	18.7915	23.4
nov	6	2459159.75	2	24	56.02	+13	52	30.61	18.7932	23.4
nov	7	2459160.75	2	24	46.44	+13	51	44.06	18.7952	23.3
nov	8	2459161.75	2	24	36.89	+13	50	57.64	18.7975	23.2
nov	9	2459162.75	2	24	27.37	+13	50	11.36	18.8001	23.1
nov	10	2459163.75	2	24	17.88	+13	49	25.24	18.8031	23.1
nov	11	2459164.75	2	24	8.42	+13	48	39.29	18.8063	23.0
nov	12	2459165.75	2	23	59.01	+13	47	53.53	18.8098	22.9
nov	13	2459166.75	2	23	49.65	+13	47	8.00	18.8137	22.9
nov	14	2459167.75	2	23	40.34	+13	46	22.73	18.8178	22.8
nov	15	2459168.75	2	23	31.10	+13	45	37.75	18.8223	22.7
nov	16	2459169.75	2	23	21.92	+13	44	53.10	18.8271	22.7
nov	17	2459170.75	2	23	12.81	+13	44	8.80	18.8321	22.6

Urano, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	18	2459171.75	2	23	3.77	+13	43	24.88	18.8375	22.5
nov	19	2459172.75	2	22	54.80	+13	42	41.34	18.8431	22.5
nov	20	2459173.75	2	22	45.91	+13	41	58.19	18.8491	22.4
nov	21	2459174.75	2	22	37.10	+13	41	15.44	18.8553	22.3
nov	22	2459175.75	2	22	28.37	+13	40	33.11	18.8618	22.3
nov	23	2459176.75	2	22	19.73	+13	39	51.21	18.8687	22.2
nov	24	2459177.75	2	22	11.18	+13	39	9.76	18.8758	22.1
nov	25	2459178.75	2	22	2.73	+13	38	28.79	18.8831	22.1
nov	26	2459179.75	2	21	54.37	+13	37	48.31	18.8908	22.0
nov	27	2459180.75	2	21	46.13	+13	37	8.36	18.8987	21.9
nov	28	2459181.75	2	21	37.99	+13	36	28.95	18.9069	21.9
nov	29	2459182.75	2	21	29.96	+13	35	50.10	18.9154	21.8
nov	30	2459183.75	2	21	22.06	+13	35	11.85	18.9242	21.7
dic	1	2459184.75	2	21	14.27	+13	34	34.21	18.9332	21.7
dic	2	2459185.75	2	21	6.60	+13	33	57.19	18.9424	21.6
dic	3	2459186.75	2	20	59.06	+13	33	20.81	18.9520	21.5
dic	4	2459187.75	2	20	51.64	+13	32	45.07	18.9618	21.4
dic	5	2459188.75	2	20	44.36	+13	32	10.00	18.9718	21.4
dic	6	2459189.75	2	20	37.20	+13	31	35.59	18.9821	21.3
dic	7	2459190.75	2	20	30.18	+13	31	1.86	18.9927	21.2
dic	8	2459191.75	2	20	23.29	+13	30	28.81	19.0034	21.2
dic	9	2459192.75	2	20	16.54	+13	29	56.46	19.0145	21.1
dic	10	2459193.75	2	20	9.94	+13	29	24.83	19.0257	21.0
dic	11	2459194.75	2	20	3.49	+13	28	53.95	19.0372	21.0
dic	12	2459195.75	2	19	57.20	+13	28	23.84	19.0490	20.9
dic	13	2459196.75	2	19	51.07	+13	27	54.54	19.0609	20.8
dic	14	2459197.75	2	19	45.09	+13	27	26.07	19.0731	20.8
dic	15	2459198.75	2	19	39.29	+13	26	58.44	19.0855	20.7
dic	16	2459199.75	2	19	33.64	+13	26	31.66	19.0981	20.6
dic	17	2459200.75	2	19	28.16	+13	26	5.73	19.1109	20.6
dic	18	2459201.75	2	19	22.84	+13	25	40.65	19.1240	20.5
dic	19	2459202.75	2	19	17.69	+13	25	16.42	19.1372	20.4
dic	20	2459203.75	2	19	12.71	+13	24	53.06	19.1506	20.4
dic	21	2459204.75	2	19	7.91	+13	24	30.57	19.1642	20.3
dic	22	2459205.75	2	19	3.28	+13	24	8.96	19.1780	20.2
dic	23	2459206.75	2	18	58.83	+13	23	48.26	19.1920	20.2
dic	24	2459207.75	2	18	54.56	+13	23	28.47	19.2061	20.1
dic	25	2459208.75	2	18	50.47	+13	23	9.61	19.2205	20.0
dic	26	2459209.75	2	18	46.57	+13	22	51.70	19.2349	20.0
dic	27	2459210.75	2	18	42.86	+13	22	34.74	19.2496	19.9
dic	28	2459211.75	2	18	39.34	+13	22	18.76	19.2644	19.8
dic	29	2459212.75	2	18	36.01	+13	22	3.74	19.2794	19.8
dic	30	2459213.75	2	18	32.87	+13	21	49.71	19.2945	19.7
dic	31	2459214.75	2	18	29.91	+13	21	36.67	19.3097	19.6

Neptuno, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2458849.75	23	11	3.59	-6	21	46.24	30.3193	16.5
ene	2	2458850.75	23	11	7.93	-6	21	17.49	30.3351	16.4
ene	3	2458851.75	23	11	12.37	-6	20	48.05	30.3507	16.4
ene	4	2458852.75	23	11	16.92	-6	20	17.91	30.3663	16.3
ene	5	2458853.75	23	11	21.59	-6	19	47.10	30.3817	16.2
ene	6	2458854.75	23	11	26.37	-6	19	15.59	30.3969	16.2
ene	7	2458855.75	23	11	31.25	-6	18	43.42	30.4120	16.1
ene	8	2458856.75	23	11	36.25	-6	18	10.57	30.4270	16.0
ene	9	2458857.75	23	11	41.35	-6	17	37.07	30.4418	16.0
ene	10	2458858.75	23	11	46.56	-6	17	2.93	30.4565	15.9
ene	11	2458859.75	23	11	51.87	-6	16	28.17	30.4710	15.8
ene	12	2458860.75	23	11	57.28	-6	15	52.81	30.4853	15.8
ene	13	2458861.75	23	12	2.78	-6	15	16.87	30.4995	15.7
ene	14	2458862.75	23	12	8.38	-6	14	40.35	30.5135	15.7
ene	15	2458863.75	23	12	14.08	-6	14	3.25	30.5273	15.6
ene	16	2458864.75	23	12	19.87	-6	13	25.57	30.5409	15.5
ene	17	2458865.75	23	12	25.75	-6	12	47.32	30.5544	15.5
ene	18	2458866.75	23	12	31.73	-6	12	8.47	30.5676	15.4
ene	19	2458867.75	23	12	37.80	-6	11	29.05	30.5807	15.3
ene	20	2458868.75	23	12	43.97	-6	10	49.06	30.5936	15.3
ene	21	2458869.75	23	12	50.23	-6	10	8.52	30.6063	15.2
ene	22	2458870.75	23	12	56.58	-6	9	27.43	30.6187	15.1
ene	23	2458871.75	23	13	3.02	-6	8	45.83	30.6310	15.1
ene	24	2458872.75	23	13	9.54	-6	8	3.73	30.6430	15.0
ene	25	2458873.75	23	13	16.14	-6	7	21.14	30.6549	15.0
ene	26	2458874.75	23	13	22.82	-6	6	38.08	30.6665	14.9
ene	27	2458875.75	23	13	29.57	-6	5	54.55	30.6779	14.8
ene	28	2458876.75	23	13	36.41	-6	5	10.58	30.6890	14.8
ene	29	2458877.75	23	13	43.31	-6	4	26.16	30.7000	14.7
ene	30	2458878.75	23	13	50.29	-6	3	41.29	30.7107	14.6
ene	31	2458879.75	23	13	57.34	-6	2	55.99	30.7211	14.6
feb	1	2458880.75	23	14	4.46	-6	2	10.26	30.7314	14.5
feb	2	2458881.75	23	14	11.66	-6	1	24.11	30.7413	14.4
feb	3	2458882.75	23	14	18.92	-6	0	37.55	30.7511	14.4
feb	4	2458883.75	23	14	26.25	-5	59	50.59	30.7606	14.3
feb	5	2458884.75	23	14	33.64	-5	59	3.23	30.7698	14.3
feb	6	2458885.75	23	14	41.10	-5	58	15.51	30.7788	14.2
feb	7	2458886.75	23	14	48.61	-5	57	27.44	30.7876	14.1
feb	8	2458887.75	23	14	56.19	-5	56	39.04	30.7961	14.1
feb	9	2458888.75	23	15	3.82	-5	55	50.33	30.8043	14.0
feb	10	2458889.75	23	15	11.50	-5	55	1.33	30.8123	13.9
feb	11	2458890.75	23	15	19.22	-5	54	12.05	30.8200	13.9
feb	12	2458891.75	23	15	27.00	-5	53	22.48	30.8275	13.8
feb	13	2458892.75	23	15	34.82	-5	52	32.63	30.8347	13.7
feb	14	2458893.75	23	15	42.69	-5	51	42.49	30.8416	13.7
feb	15	2458894.75	23	15	50.62	-5	50	52.07	30.8483	13.6

Neptuno, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2458895.75	23	15	58.58	-5	50	1.38	30.8547	13.6
feb	17	2458896.75	23	16	6.60	-5	49	10.43	30.8608	13.5
feb	18	2458897.75	23	16	14.65	-5	48	19.25	30.8667	13.4
feb	19	2458898.75	23	16	22.75	-5	47	27.85	30.8722	13.4
feb	20	2458899.75	23	16	30.88	-5	46	36.26	30.8775	13.3
feb	21	2458900.75	23	16	39.04	-5	45	44.48	30.8826	13.2
feb	22	2458901.75	23	16	47.23	-5	44	52.55	30.8873	13.2
feb	23	2458902.75	23	16	55.45	-5	44	0.47	30.8918	13.1
feb	24	2458903.75	23	17	3.70	-5	43	8.24	30.8959	13.0
feb	25	2458904.75	23	17	11.97	-5	42	15.89	30.8998	13.0
feb	26	2458905.75	23	17	20.27	-5	41	23.42	30.9035	12.9
feb	27	2458906.75	23	17	28.59	-5	40	30.83	30.9068	12.9
feb	28	2458907.75	23	17	36.92	-5	39	38.13	30.9098	12.8
feb	29	2458908.75	23	17	45.28	-5	38	45.33	30.9126	12.7
mar	1	2458909.75	23	17	53.66	-5	37	52.44	30.9150	12.7
mar	2	2458910.75	23	18	2.05	-5	36	59.47	30.9172	12.6
mar	3	2458911.75	23	18	10.46	-5	36	6.44	30.9191	12.5
mar	4	2458912.75	23	18	18.88	-5	35	13.36	30.9207	12.5
mar	5	2458913.75	23	18	27.31	-5	34	20.26	30.9220	12.4
mar	6	2458914.75	23	18	35.75	-5	33	27.17	30.9231	12.3
mar	7	2458915.75	23	18	44.19	-5	32	34.14	30.9238	12.3
mar	8	2458916.75	23	18	52.63	-5	31	41.34	30.9243	12.2
mar	9	2458917.75	23	19	1.04	-5	30	48.33	30.9245	12.2
mar	10	2458918.75	23	19	9.46	-5	29	55.20	30.9244	12.1
mar	11	2458919.75	23	19	17.89	-5	29	2.21	30.9240	12.0
mar	12	2458920.75	23	19	26.32	-5	28	9.30	30.9233	12.0
mar	13	2458921.75	23	19	34.74	-5	27	16.46	30.9223	11.9
mar	14	2458922.75	23	19	43.15	-5	26	23.67	30.9211	11.8
mar	15	2458923.75	23	19	51.56	-5	25	30.97	30.9195	11.8
mar	16	2458924.75	23	19	59.96	-5	24	38.35	30.9177	11.7
mar	17	2458925.75	23	20	8.35	-5	23	45.85	30.9156	11.7
mar	18	2458926.75	23	20	16.72	-5	22	53.48	30.9133	11.6
mar	19	2458927.75	23	20	25.07	-5	22	1.26	30.9106	11.5
mar	20	2458928.75	23	20	33.40	-5	21	9.21	30.9076	11.5
mar	21	2458929.75	23	20	41.71	-5	20	17.33	30.9044	11.4
mar	22	2458930.75	23	20	50.00	-5	19	25.65	30.9009	11.3
mar	23	2458931.75	23	20	58.25	-5	18	34.16	30.8971	11.3
mar	24	2458932.75	23	21	6.48	-5	17	42.88	30.8931	11.2
mar	25	2458933.75	23	21	14.68	-5	16	51.80	30.8887	11.1
mar	26	2458934.75	23	21	22.85	-5	16	0.95	30.8841	11.1
mar	27	2458935.75	23	21	30.98	-5	15	10.32	30.8792	11.0
mar	28	2458936.75	23	21	39.09	-5	14	19.92	30.8741	11.0
mar	29	2458937.75	23	21	47.16	-5	13	29.77	30.8686	10.9
mar	30	2458938.75	23	21	55.19	-5	12	39.87	30.8629	10.8
mar	31	2458939.75	23	22	3.19	-5	11	50.24	30.8570	10.8
abr	1	2458940.75	23	22	11.14	-5	11	0.90	30.8508	10.7

Neptuno, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
abr	2	2458941.75	23	22	19.05	-5	10	11.87	30.8443	10.6
abr	3	2458942.75	23	22	26.92	-5	9	23.17	30.8375	10.6
abr	4	2458943.75	23	22	34.74	-5	8	34.81	30.8305	10.5
abr	5	2458944.75	23	22	42.50	-5	7	46.81	30.8233	10.4
abr	6	2458945.75	23	22	50.22	-5	6	59.17	30.8158	10.4
abr	7	2458946.75	23	22	57.87	-5	6	11.91	30.8080	10.3
abr	8	2458947.75	23	23	5.48	-5	5	25.00	30.8000	10.3
abr	9	2458948.75	23	23	13.03	-5	4	38.45	30.7917	10.2
abr	10	2458949.75	23	23	20.53	-5	3	52.27	30.7833	10.1
abr	11	2458950.75	23	23	27.98	-5	3	6.45	30.7745	10.1
abr	12	2458951.75	23	23	35.37	-5	2	21.01	30.7656	10.0
abr	13	2458952.75	23	23	42.70	-5	1	35.99	30.7563	9.9
abr	14	2458953.75	23	23	49.97	-5	0	51.39	30.7469	9.9
abr	15	2458954.75	23	23	57.17	-5	0	7.24	30.7372	9.8
abr	16	2458955.75	23	24	4.31	-4	59	23.54	30.7273	9.7
abr	17	2458956.75	23	24	11.38	-4	58	40.32	30.7172	9.7
abr	18	2458957.75	23	24	18.37	-4	57	57.58	30.7068	9.6
abr	19	2458958.75	23	24	25.29	-4	57	15.32	30.6963	9.6
abr	20	2458959.75	23	24	32.14	-4	56	33.56	30.6855	9.5
abr	21	2458960.75	23	24	38.92	-4	55	52.29	30.6745	9.4
abr	22	2458961.75	23	24	45.62	-4	55	11.51	30.6632	9.4
abr	23	2458962.75	23	24	52.24	-4	54	31.24	30.6518	9.3
abr	24	2458963.75	23	24	58.79	-4	53	51.49	30.6402	9.2
abr	25	2458964.75	23	25	5.26	-4	53	12.24	30.6283	9.2
abr	26	2458965.75	23	25	11.66	-4	52	33.52	30.6163	9.1
abr	27	2458966.75	23	25	17.97	-4	51	55.34	30.6041	9.0
abr	28	2458967.75	23	25	24.20	-4	51	17.72	30.5916	9.0
abr	29	2458968.75	23	25	30.34	-4	50	40.66	30.5790	8.9
abr	30	2458969.75	23	25	36.40	-4	50	4.18	30.5662	8.9
may	1	2458970.75	23	25	42.37	-4	49	28.31	30.5533	8.8
may	2	2458971.75	23	25	48.25	-4	48	53.04	30.5401	8.7
may	3	2458972.75	23	25	54.03	-4	48	18.39	30.5268	8.7
may	4	2458973.75	23	25	59.72	-4	47	44.36	30.5133	8.6
may	5	2458974.75	23	26	5.32	-4	47	10.95	30.4997	8.5
may	6	2458975.75	23	26	10.82	-4	46	38.14	30.4858	8.5
may	7	2458976.75	23	26	16.24	-4	46	5.93	30.4719	8.4
may	8	2458977.75	23	26	21.56	-4	45	34.32	30.4578	8.3
may	9	2458978.75	23	26	26.79	-4	45	3.33	30.4435	8.3
may	10	2458979.75	23	26	31.93	-4	44	32.96	30.4291	8.2
may	11	2458980.75	23	26	36.96	-4	44	3.25	30.4145	8.1
may	12	2458981.75	23	26	41.90	-4	43	34.19	30.3998	8.1
may	13	2458982.75	23	26	46.74	-4	43	5.82	30.3850	8.0
may	14	2458983.75	23	26	51.47	-4	42	38.13	30.3700	8.0
may	15	2458984.75	23	26	56.09	-4	42	11.13	30.3549	7.9
may	16	2458985.75	23	27	0.61	-4	41	44.83	30.3397	7.8
may	17	2458986.75	23	27	5.02	-4	41	19.22	30.3244	7.8

Neptuno, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	18	2458987.75	23	27	9.33	-4	40	54.32	30.3089	7.7
may	19	2458988.75	23	27	13.53	-4	40	30.10	30.2934	7.6
may	20	2458989.75	23	27	17.62	-4	40	6.59	30.2777	7.6
may	21	2458990.75	23	27	21.61	-4	39	43.77	30.2619	7.5
may	22	2458991.75	23	27	25.48	-4	39	21.65	30.2461	7.4
may	23	2458992.75	23	27	29.25	-4	39	0.24	30.2301	7.4
may	24	2458993.75	23	27	32.91	-4	38	39.54	30.2141	7.3
may	25	2458994.75	23	27	36.46	-4	38	19.56	30.1979	7.2
may	26	2458995.75	23	27	39.90	-4	38	0.32	30.1817	7.2
may	27	2458996.75	23	27	43.23	-4	37	41.82	30.1654	7.1
may	28	2458997.75	23	27	46.44	-4	37	24.08	30.1491	7.0
may	29	2458998.75	23	27	49.53	-4	37	7.10	30.1327	7.0
may	30	2458999.75	23	27	52.50	-4	36	50.90	30.1162	6.9
may	31	2459000.75	23	27	55.36	-4	36	35.46	30.0997	6.9
jun	1	2459001.75	23	27	58.09	-4	36	20.78	30.0831	6.8
jun	2	2459002.75	23	28	0.71	-4	36	6.85	30.0665	6.7
jun	3	2459003.75	23	28	3.22	-4	35	53.66	30.0498	6.7
jun	4	2459004.75	23	28	5.61	-4	35	41.20	30.0331	6.6
jun	5	2459005.75	23	28	7.89	-4	35	29.47	30.0164	6.5
jun	6	2459006.75	23	28	10.06	-4	35	18.49	29.9996	6.5
jun	7	2459007.75	23	28	12.11	-4	35	8.27	29.9828	6.4
jun	8	2459008.75	23	28	14.04	-4	34	58.81	29.9660	6.3
jun	9	2459009.75	23	28	15.85	-4	34	50.13	29.9492	6.3
jun	10	2459010.75	23	28	17.54	-4	34	42.24	29.9324	6.2
jun	11	2459011.75	23	28	19.11	-4	34	35.13	29.9155	6.1
jun	12	2459012.75	23	28	20.55	-4	34	28.81	29.8987	6.1
jun	13	2459013.75	23	28	21.87	-4	34	23.28	29.8818	6.0
jun	14	2459014.75	23	28	23.07	-4	34	18.52	29.8650	5.9
jun	15	2459015.75	23	28	24.15	-4	34	14.53	29.8482	5.9
jun	16	2459016.75	23	28	25.11	-4	34	11.31	29.8314	5.8
jun	17	2459017.75	23	28	25.96	-4	34	8.86	29.8146	5.7
jun	18	2459018.75	23	28	26.68	-4	34	7.16	29.7978	5.7
jun	19	2459019.75	23	28	27.28	-4	34	6.22	29.7811	5.6
jun	20	2459020.75	23	28	27.76	-4	34	6.04	29.7644	5.5
jun	21	2459021.75	23	28	28.13	-4	34	6.63	29.7478	5.5
jun	22	2459022.75	23	28	28.38	-4	34	7.98	29.7312	5.4
jun	23	2459023.75	23	28	28.50	-4	34	10.11	29.7146	5.4
jun	24	2459024.75	23	28	28.50	-4	34	13.02	29.6982	5.3
jun	25	2459025.75	23	28	28.38	-4	34	16.71	29.6817	5.2
jun	26	2459026.75	23	28	28.14	-4	34	21.19	29.6654	5.2
jun	27	2459027.75	23	28	27.77	-4	34	26.45	29.6491	5.1
jun	28	2459028.75	23	28	27.28	-4	34	32.48	29.6329	5.0
jun	29	2459029.75	23	28	26.68	-4	34	39.25	29.6167	5.0
jun	30	2459030.75	23	28	25.96	-4	34	46.77	29.6007	4.9
jul	1	2459031.75	23	28	25.12	-4	34	55.00	29.5847	4.8
jul	2	2459032.75	23	28	24.17	-4	35	3.95	29.5689	4.8

Neptuno, 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
jul	3	2459033.75	23	28	23.10	-4	35	13.62	29.5531	4.7
jul	4	2459034.75	23	28	21.93	-4	35	24.00	29.5374	4.6
jul	5	2459035.75	23	28	20.63	-4	35	35.11	29.5219	4.6
jul	6	2459036.75	23	28	19.23	-4	35	46.96	29.5064	4.5
jul	7	2459037.75	23	28	17.70	-4	35	59.54	29.4911	4.4
jul	8	2459038.75	23	28	16.06	-4	36	12.85	29.4759	4.4
jul	9	2459039.75	23	28	14.31	-4	36	26.89	29.4608	4.3
jul	10	2459040.75	23	28	12.43	-4	36	41.65	29.4458	4.2
jul	11	2459041.75	23	28	10.45	-4	36	57.12	29.4310	4.2
jul	12	2459042.75	23	28	8.35	-4	37	13.28	29.4163	4.1
jul	13	2459043.75	23	28	6.14	-4	37	30.13	29.4017	4.0
jul	14	2459044.75	23	28	3.83	-4	37	47.65	29.3873	4.0
jul	15	2459045.75	23	28	1.41	-4	38	5.84	29.3730	3.9
jul	16	2459046.75	23	27	58.88	-4	38	24.68	29.3589	3.8
jul	17	2459047.75	23	27	56.24	-4	38	44.17	29.3449	3.8
jul	18	2459048.75	23	27	53.51	-4	39	4.30	29.3312	3.7
jul	19	2459049.75	23	27	50.67	-4	39	25.08	29.3175	3.6
jul	20	2459050.75	23	27	47.72	-4	39	46.51	29.3041	3.6
jul	21	2459051.75	23	27	44.67	-4	40	8.58	29.2908	3.5
jul	22	2459052.75	23	27	41.52	-4	40	31.30	29.2777	3.4
jul	23	2459053.75	23	27	38.26	-4	40	54.67	29.2648	3.4
jul	24	2459054.75	23	27	34.90	-4	41	18.66	29.2521	3.3
jul	25	2459055.75	23	27	31.45	-4	41	43.26	29.2395	3.2
jul	26	2459056.75	23	27	27.89	-4	42	8.45	29.2272	3.2
jul	27	2459057.75	23	27	24.24	-4	42	34.22	29.2150	3.1
jul	28	2459058.75	23	27	20.50	-4	43	0.53	29.2031	3.0
jul	29	2459059.75	23	27	16.67	-4	43	27.37	29.1914	3.0
jul	30	2459060.75	23	27	12.75	-4	43	54.75	29.1799	2.9
jul	31	2459061.75	23	27	8.75	-4	44	22.65	29.1685	2.8
ago	1	2459062.75	23	27	4.66	-4	44	51.07	29.1575	2.8
ago	2	2459063.75	23	27	0.49	-4	45	20.02	29.1466	2.7
ago	3	2459064.75	23	26	56.23	-4	45	49.49	29.1359	2.6
ago	4	2459065.75	23	26	51.88	-4	46	19.48	29.1255	2.6
ago	5	2459066.75	23	26	47.45	-4	46	49.97	29.1153	2.5
ago	6	2459067.75	23	26	42.93	-4	47	20.95	29.1053	2.4
ago	7	2459068.75	23	26	38.34	-4	47	52.41	29.0956	2.4
ago	8	2459069.75	23	26	33.67	-4	48	24.33	29.0861	2.3
ago	9	2459070.75	23	26	28.92	-4	48	56.68	29.0768	2.2
ago	10	2459071.75	23	26	24.10	-4	49	29.46	29.0678	2.2
ago	11	2459072.75	23	26	19.21	-4	50	2.65	29.0591	2.1
ago	12	2459073.75	23	26	14.25	-4	50	36.24	29.0505	2.0
ago	13	2459074.75	23	26	9.23	-4	51	10.21	29.0423	2.0
ago	14	2459075.75	23	26	4.14	-4	51	44.54	29.0343	1.9
ago	15	2459076.75	23	25	58.99	-4	52	19.25	29.0265	1.8
ago	16	2459077.75	23	25	53.78	-4	52	54.31	29.0190	1.8
ago	17	2459078.75	23	25	48.50	-4	53	29.73	29.0118	1.7

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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
ago	18	2459079.75	23	25	43.17	-4	54	5.50	29.0048	1.6
ago	19	2459080.75	23	25	37.78	-4	54	41.61	28.9982	1.6
ago	20	2459081.75	23	25	32.32	-4	55	18.05	28.9917	1.5
ago	21	2459082.75	23	25	26.81	-4	55	54.80	28.9856	1.4
ago	22	2459083.75	23	25	21.25	-4	56	31.83	28.9797	1.4
ago	23	2459084.75	23	25	15.65	-4	57	9.12	28.9741	1.3
ago	24	2459085.75	23	25	10.00	-4	57	46.63	28.9688	1.2
ago	25	2459086.75	23	25	4.31	-4	58	24.35	28.9638	1.2
ago	26	2459087.75	23	24	58.58	-4	59	2.27	28.9590	1.1
ago	27	2459088.75	23	24	52.82	-4	59	40.38	28.9546	1.0
ago	28	2459089.75	23	24	47.02	-5	0	18.67	28.9504	1.0
ago	29	2459090.75	23	24	41.18	-5	0	57.14	28.9465	0.9
ago	30	2459091.75	23	24	35.32	-5	1	35.79	28.9429	0.8
ago	31	2459092.75	23	24	29.41	-5	2	14.59	28.9396	0.7
sep	1	2459093.75	23	24	23.48	-5	2	53.55	28.9365	0.7
sep	2	2459094.75	23	24	17.52	-5	3	32.64	28.9338	0.6
sep	3	2459095.75	23	24	11.54	-5	4	11.85	28.9314	0.5
sep	4	2459096.75	23	24	5.53	-5	4	51.15	28.9292	0.5
sep	5	2459097.75	23	23	59.50	-5	5	30.53	28.9273	0.4
sep	6	2459098.75	23	23	53.45	-5	6	9.96	28.9258	0.3
sep	7	2459099.75	23	23	47.40	-5	6	49.42	28.9245	0.3
sep	8	2459100.75	23	23	41.33	-5	7	28.90	28.9235	0.2
sep	9	2459101.75	23	23	35.25	-5	8	8.39	28.9229	0.1
sep	10	2459102.75	23	23	29.16	-5	8	47.86	28.9225	0.1
sep	11	2459103.75	23	23	23.08	-5	9	27.32	28.9224	0.0
sep	12	2459104.75	23	23	16.99	-5	10	6.74	28.9226	23.9
sep	13	2459105.75	23	23	10.89	-5	10	46.13	28.9231	23.9
sep	14	2459106.75	23	23	4.80	-5	11	25.47	28.9239	23.8
sep	15	2459107.75	23	22	58.71	-5	12	4.75	28.9250	23.7
sep	16	2459108.75	23	22	52.63	-5	12	43.97	28.9264	23.7
sep	17	2459109.75	23	22	46.54	-5	13	23.11	28.9282	23.6
sep	18	2459110.75	23	22	40.47	-5	14	2.14	28.9302	23.5
sep	19	2459111.75	23	22	34.41	-5	14	41.03	28.9325	23.5
sep	20	2459112.75	23	22	28.37	-5	15	19.74	28.9351	23.4
sep	21	2459113.75	23	22	22.35	-5	15	58.26	28.9380	23.3
sep	22	2459114.75	23	22	16.36	-5	16	36.57	28.9412	23.3
sep	23	2459115.75	23	22	10.39	-5	17	14.67	28.9447	23.2
sep	24	2459116.75	23	22	4.45	-5	17	52.54	28.9485	23.1
sep	25	2459117.75	23	21	58.54	-5	18	30.19	28.9526	23.1
sep	26	2459118.75	23	21	52.66	-5	19	7.61	28.9570	23.0
sep	27	2459119.75	23	21	46.81	-5	19	44.79	28.9616	22.9
sep	28	2459120.75	23	21	40.99	-5	20	21.71	28.9666	22.9
sep	29	2459121.75	23	21	35.21	-5	20	58.36	28.9718	22.8
sep	30	2459122.75	23	21	29.47	-5	21	34.73	28.9773	22.7
oct	1	2459123.75	23	21	23.76	-5	22	10.79	28.9832	22.7
oct	2	2459124.75	23	21	18.10	-5	22	46.52	28.9892	22.6

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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
oct	3	2459125.75	23	21	12.48	-5	23	21.91	28.9956	22.5
oct	4	2459126.75	23	21	6.92	-5	23	56.93	29.0023	22.5
oct	5	2459127.75	23	21	1.40	-5	24	31.57	29.0092	22.4
oct	6	2459128.75	23	20	55.94	-5	25	5.82	29.0164	22.3
oct	7	2459129.75	23	20	50.54	-5	25	39.66	29.0239	22.3
oct	8	2459130.75	23	20	45.20	-5	26	13.08	29.0316	22.2
oct	9	2459131.75	23	20	39.91	-5	26	46.09	29.0397	22.1
oct	10	2459132.75	23	20	34.69	-5	27	18.66	29.0480	22.1
oct	11	2459133.75	23	20	29.53	-5	27	50.79	29.0565	22.0
oct	12	2459134.75	23	20	24.44	-5	28	22.49	29.0653	21.9
oct	13	2459135.75	23	20	19.41	-5	28	53.73	29.0744	21.9
oct	14	2459136.75	23	20	14.44	-5	29	24.51	29.0837	21.8
oct	15	2459137.75	23	20	9.55	-5	29	54.81	29.0933	21.7
oct	16	2459138.75	23	20	4.72	-5	30	24.59	29.1032	21.7
oct	17	2459139.75	23	19	59.98	-5	30	53.85	29.1133	21.6
oct	18	2459140.75	23	19	55.31	-5	31	22.54	29.1236	21.5
oct	19	2459141.75	23	19	50.74	-5	31	50.65	29.1342	21.5
oct	20	2459142.75	23	19	46.24	-5	32	18.18	29.1451	21.4
oct	21	2459143.75	23	19	41.84	-5	32	45.12	29.1561	21.3
oct	22	2459144.75	23	19	37.52	-5	33	11.49	29.1674	21.3
oct	23	2459145.75	23	19	33.28	-5	33	37.27	29.1789	21.2
oct	24	2459146.75	23	19	29.14	-5	34	2.46	29.1907	21.1
oct	25	2459147.75	23	19	25.08	-5	34	27.07	29.2027	21.1
oct	26	2459148.75	23	19	21.11	-5	34	51.07	29.2149	21.0
oct	27	2459149.75	23	19	17.24	-5	35	14.44	29.2273	20.9
oct	28	2459150.75	23	19	13.45	-5	35	37.19	29.2399	20.9
oct	29	2459151.75	23	19	9.77	-5	35	59.29	29.2527	20.8
oct	30	2459152.75	23	19	6.18	-5	36	20.72	29.2657	20.7
oct	31	2459153.75	23	19	2.70	-5	36	41.48	29.2789	20.7
nov	1	2459154.75	23	18	59.32	-5	37	1.54	29.2923	20.6
nov	2	2459155.75	23	18	56.04	-5	37	20.91	29.3059	20.5
nov	3	2459156.75	23	18	52.87	-5	37	39.58	29.3197	20.5
nov	4	2459157.75	23	18	49.81	-5	37	57.54	29.3337	20.4
nov	5	2459158.75	23	18	46.85	-5	38	14.78	29.3478	20.3
nov	6	2459159.75	23	18	44.01	-5	38	31.32	29.3622	20.3
nov	7	2459160.75	23	18	41.27	-5	38	47.14	29.3767	20.2
nov	8	2459161.75	23	18	38.64	-5	39	2.25	29.3913	20.1
nov	9	2459162.75	23	18	36.13	-5	39	16.64	29.4061	20.1
nov	10	2459163.75	23	18	33.72	-5	39	30.31	29.4211	20.0
nov	11	2459164.75	23	18	31.42	-5	39	43.25	29.4362	19.9
nov	12	2459165.75	23	18	29.24	-5	39	55.45	29.4515	19.9
nov	13	2459166.75	23	18	27.18	-5	40	6.87	29.4670	19.8
nov	14	2459167.75	23	18	25.23	-5	40	17.50	29.4825	19.7
nov	15	2459168.75	23	18	23.41	-5	40	27.34	29.4982	19.7
nov	16	2459169.75	23	18	21.72	-5	40	36.36	29.5140	19.6
nov	17	2459170.75	23	18	20.15	-5	40	44.58	29.5300	19.5

Neptuno, 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	18	2459171.75	23	18	18.70	-5	40	52.01	29.5460	19.5
nov	19	2459172.75	23	18	17.37	-5	40	58.65	29.5622	19.4
nov	20	2459173.75	23	18	16.17	-5	41	4.52	29.5785	19.3
nov	21	2459174.75	23	18	15.08	-5	41	9.60	29.5949	19.3
nov	22	2459175.75	23	18	14.12	-5	41	13.91	29.6114	19.2
nov	23	2459176.75	23	18	13.28	-5	41	17.42	29.6279	19.1
nov	24	2459177.75	23	18	12.56	-5	41	20.14	29.6446	19.1
nov	25	2459178.75	23	18	11.97	-5	41	22.05	29.6613	19.0
nov	26	2459179.75	23	18	11.50	-5	41	23.15	29.6781	18.9
nov	27	2459180.75	23	18	11.16	-5	41	23.43	29.6950	18.9
nov	28	2459181.75	23	18	10.95	-5	41	22.88	29.7120	18.8
nov	29	2459182.75	23	18	10.87	-5	41	21.51	29.7290	18.7
nov	30	2459183.75	23	18	10.92	-5	41	19.31	29.7461	18.7
dic	1	2459184.75	23	18	11.10	-5	41	16.28	29.7632	18.6
dic	2	2459185.75	23	18	11.40	-5	41	12.43	29.7803	18.5
dic	3	2459186.75	23	18	11.84	-5	41	7.76	29.7975	18.5
dic	4	2459187.75	23	18	12.40	-5	41	2.29	29.8148	18.4
dic	5	2459188.75	23	18	13.09	-5	40	56.02	29.8320	18.3
dic	6	2459189.75	23	18	13.91	-5	40	48.95	29.8493	18.3
dic	7	2459190.75	23	18	14.85	-5	40	41.08	29.8666	18.2
dic	8	2459191.75	23	18	15.91	-5	40	32.42	29.8840	18.1
dic	9	2459192.75	23	18	17.11	-5	40	22.96	29.9013	18.1
dic	10	2459193.75	23	18	18.43	-5	40	12.68	29.9187	18.0
dic	11	2459194.75	23	18	19.87	-5	40	1.57	29.9360	17.9
dic	12	2459195.75	23	18	21.46	-5	39	49.63	29.9533	17.9
dic	13	2459196.75	23	18	23.17	-5	39	36.85	29.9707	17.8
dic	14	2459197.75	23	18	25.02	-5	39	23.25	29.9880	17.7
dic	15	2459198.75	23	18	26.99	-5	39	8.82	30.0052	17.7
dic	16	2459199.75	23	18	29.10	-5	38	53.59	30.0225	17.6
dic	17	2459200.75	23	18	31.33	-5	38	37.58	30.0397	17.6
dic	18	2459201.75	23	18	33.68	-5	38	20.79	30.0569	17.5
dic	19	2459202.75	23	18	36.15	-5	38	3.24	30.0740	17.4
dic	20	2459203.75	23	18	38.75	-5	37	44.92	30.0911	17.4
dic	21	2459204.75	23	18	41.47	-5	37	25.83	30.1081	17.3
dic	22	2459205.75	23	18	44.31	-5	37	5.97	30.1251	17.2
dic	23	2459206.75	23	18	47.27	-5	36	45.34	30.1420	17.2
dic	24	2459207.75	23	18	50.36	-5	36	23.93	30.1588	17.1
dic	25	2459208.75	23	18	53.57	-5	36	1.76	30.1756	17.0
dic	26	2459209.75	23	18	56.90	-5	35	38.82	30.1923	17.0
dic	27	2459210.75	23	19	0.35	- 5	35	15.11	30.2088	16.9
dic	28	2459211.75	23	19	3.93	- 5	34	50.65	30.2253	16.8
dic	29	2459212.75	23	19	7.62	- 5	34	25.44	30.2417	16.8
dic	30	2459213.75	23	19	11.44	- 5	33	59.51	30.2580	16.7
dic	31	2459214.75	23	19	15.36	- 5	33	32.85	30.2742	16.6

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
ene	1	2458849.75	19	37	11.88	-22	13	13.27	34.9112	12.9
ene	2	2458850.75	19	37	20.37	-22	12	58.91	34.9154	12.9
ene	3	2458851.75	19	37	28.89	-22	12	44.48	34.9192	12.8
ene	4	2458852.75	19	37	37.44	-22	12	29.98	34.9228	12.7
ene	5	2458853.75	19	37	46.00	-22	12	15.40	34.9261	12.7
ene	6	2458854.75	19	37	54.58	-22	12	0.77	34.9291	12.6
ene	7	2458855.75	19	38	3.17	-22	11	46.08	34.9318	12.5
ene	8	2458856.75	19	38	11.78	-22	11	31.35	34.9342	12.5
ene	9	2458857.75	19	38	20.41	-22	11	16.60	34.9363	12.4
ene	10	2458858.75	19	38	29.05	-22	11	1.83	34.9381	12.4
ene	11	2458859.75	19	38	37.69	-22	10	47.08	34.9396	12.3
ene	12	2458860.75	19	38	46.35	-22	10	32.38	34.9409	12.2
ene	13	2458861.75	19	38	54.99	-22	10	18.03	34.9418	12.2
ene	14	2458862.75	19	39	3.59	-22	10	3.14	34.9425	12.1
ene	15	2458863.75	19	39	12.23	-22	9	48.12	34.9428	12.0
ene	16	2458864.75	19	39	20.86	-22	9	33.27	34.9429	12.0
ene	17	2458865.75	19	39	29.49	-22	9	18.44	34.9427	11.9
ene	18	2458866.75	19	39	38.11	-22	9	3.61	34.9421	11.9
ene	19	2458867.75	19	39	46.73	-22	8	48.79	34.9413	11.8
ene	20	2458868.75	19	39	55.33	-22	8	33.97	34.9402	11.7
ene	21	2458869.75	19	40	3.93	-22	8	19.18	34.9388	11.7
ene	22	2458870.75	19	40	12.51	-22	8	4.44	34.9371	11.6
ene	23	2458871.75	19	40	21.08	-22	7	49.74	34.9351	11.5
ene	24	2458872.75	19	40	29.62	-22	7	35.11	34.9329	11.5
ene	25	2458873.75	19	40	38.14	-22	7	20.54	34.9303	11.4
ene	26	2458874.75	19	40	46.63	-22	7	6.04	34.9274	11.3
ene	27	2458875.75	19	40	55.10	-22	6	51.60	34.9243	11.3
ene	28	2458876.75	19	41	3.53	-22	6	37.22	34.9209	11.2
ene	29	2458877.75	19	41	11.93	-22	6	22.91	34.9171	11.2
ene	30	2458878.75	19	41	20.30	-22	6	8.65	34.9131	11.1
ene	31	2458879.75	19	41	28.63	-22	5	54.46	34.9089	11.0
feb	1	2458880.75	19	41	36.92	-22	5	40.34	34.9043	11.0
feb	2	2458881.75	19	41	45.18	-22	5	26.29	34.8995	10.9
feb	3	2458882.75	19	41	53.40	-22	5	12.32	34.8943	10.8
feb	4	2458883.75	19	42	1.59	-22	4	58.44	34.8889	10.8
feb	5	2458884.75	19	42	9.73	-22	4	44.67	34.8833	10.7
feb	6	2458885.75	19	42	17.82	-22	4	31.01	34.8773	10.6
feb	7	2458886.75	19	42	25.87	-22	4	17.48	34.8711	10.6
feb	8	2458887.75	19	42	33.87	-22	4	4.10	34.8647	10.5
feb	9	2458888.75	19	42	41.82	-22	3	50.86	34.8579	10.5
feb	10	2458889.75	19	42	49.71	-22	3	37.76	34.8510	10.4
feb	11	2458890.75	19	42	57.54	-22	3	24.80	34.8437	10.3
feb	12	2458891.75	19	43	5.31	-22	3	11.96	34.8362	10.3
feb	13	2458892.75	19	43	13.02	-22	2	59.24	34.8284	10.2
feb	14	2458893.75	19	43	20.68	-22	2	46.64	34.8204	10.1
feb	15	2458894.75	19	43	28.27	-22	2	34.17	34.8121	10.1

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
feb	16	2458895.75	19	43	35.81	-22	2	21.84	34.8036	10.0
feb	17	2458896.75	19	43	43.28	-22	2	9.66	34.7949	9.9
feb	18	2458897.75	19	43	50.69	-22	1	57.67	34.7859	9.9
feb	19	2458898.75	19	43	58.03	-22	1	45.85	34.7766	9.8
feb	20	2458899.75	19	44	5.30	-22	1	34.23	34.7671	9.8
feb	21	2458900.75	19	44	12.50	-22	1	22.81	34.7574	9.7
feb	22	2458901.75	19	44	19.61	-22	1	11.59	34.7475	9.6
feb	23	2458902.75	19	44	26.65	-22	1	0.57	34.7373	9.6
feb	24	2458903.75	19	44	33.61	-22	0	49.74	34.7269	9.5
feb	25	2458904.75	19	44	40.49	-22	0	39.11	34.7162	9.4
feb	26	2458905.75	19	44	47.29	-22	0	28.67	34.7054	9.4
feb	27	2458906.75	19	44	54.00	-22	0	18.42	34.6943	9.3
feb	28	2458907.75	19	45	0.63	-22	0	8.37	34.6831	9.2
feb	29	2458908.75	19	45	7.17	-21	59	58.52	34.6716	9.2
mar	1	2458909.75	19	45	13.63	-21	59	48.88	34.6599	9.1
mar	2	2458910.75	19	45	20.01	-21	59	39.45	34.6480	9.1
mar	3	2458911.75	19	45	26.29	-21	59	30.26	34.6359	9.0
mar	4	2458912.75	19	45	32.49	-21	59	21.29	34.6237	8.9
mar	5	2458913.75	19	45	38.60	-21	59	12.58	34.6112	8.9
mar	6	2458914.75	19	45	44.61	-21	59	4.13	34.5986	8.8
mar	7	2458915.75	19	45	50.53	-21	58	55.95	34.5858	8.7
mar	8	2458916.75	19	45	56.35	-21	58	48.03	34.5728	8.7
mar	9	2458917.75	19	46	2.06	-21	58	40.37	34.5596	8.6
mar	10	2458918.75	19	46	7.68	-21	58	32.96	34.5463	8.5
mar	11	2458919.75	19	46	13.19	-21	58	25.79	34.5328	8.5
mar	12	2458920.75	19	46	18.60	-21	58	18.84	34.5191	8.4
mar	13	2458921.75	19	46	23.91	-21	58	12.14	34.5053	8.4
mar	14	2458922.75	19	46	29.13	-21	58	5.68	34.4914	8.3
mar	15	2458923.75	19	46	34.24	-21	57	59.49	34.4773	8.2
mar	16	2458924.75	19	46	39.25	-21	57	53.58	34.4630	8.2
mar	17	2458925.75	19	46	44.16	-21	57	47.96	34.4486	8.1
mar	18	2458926.75	19	46	48.95	-21	57	42.64	34.4341	8.0
mar	19	2458927.75	19	46	53.64	-21	57	37.62	34.4194	8.0
mar	20	2458928.75	19	46	58.22	-21	57	32.90	34.4046	7.9
mar	21	2458929.75	19	47	2.68	-21	57	28.48	34.3897	7.8
mar	22	2458930.75	19	47	7.02	-21	57	24.36	34.3747	7.8
mar	23	2458931.75	19	47	11.25	-21	57	20.53	34.3595	7.7
mar	24	2458932.75	19	47	15.37	-21	57	16.99	34.3443	7.6
mar	25	2458933.75	19	47	19.37	-21	57	13.73	34.3289	7.6
mar	26	2458934.75	19	47	23.25	-21	57	10.76	34.3135	7.5
mar	27	2458935.75	19	47	27.02	-21	57	8.08	34.2979	7.4
mar	28	2458936.75	19	47	30.67	-21	57	5.69	34.2823	7.4
mar	29	2458937.75	19	47	34.21	-21	57	3.60	34.2666	7.3
mar	30	2458938.75	19	47	37.63	-21	57	1.82	34.2508	7.3
mar	31	2458939.75	19	47	40.93	-21	57	0.35	34.2349	7.2
abr	1	2458940.75	19	47	44.12	-21	56	59.21	34.2189	7.1

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
abr	2	2458941.75	19	47	47.19	-21	56	58.39	34.2029	7.1
abr	3	2458942.75	19	47	50.14	-21	56	57.92	34.1869	7.0
abr	4	2458943.75	19	47	52.96	-21	56	57.78	34.1708	6.9
abr	5	2458944.75	19	47	55.65	-21	56	57.97	34.1546	6.9
abr	6	2458945.75	19	47	58.23	-21	56	58.49	34.1384	6.8
abr	7	2458946.75	19	48	0.67	-21	56	59.31	34.1222	6.7
abr	8	2458947.75	19	48	3.00	-21	57	0.43	34.1059	6.7
abr	9	2458948.75	19	48	5.20	-21	57	1.83	34.0896	6.6
abr	10	2458949.75	19	48	7.29	-21	57	3.54	34.0732	6.5
abr	11	2458950.75	19	48	9.25	-21	57	5.55	34.0569	6.5
abr	12	2458951.75	19	48	11.10	-21	57	7.89	34.0405	6.4
abr	13	2458952.75	19	48	12.82	-21	57	10.57	34.0241	6.3
abr	14	2458953.75	19	48	14.42	-21	57	13.59	34.0077	6.3
abr	15	2458954.75	19	48	15.90	-21	57	16.96	33.9913	6.2
abr	16	2458955.75	19	48	17.24	-21	57	20.66	33.9749	6.1
abr	17	2458956.75	19	48	18.46	-21	57	24.71	33.9585	6.1
abr	18	2458957.75	19	48	19.55	-21	57	29.09	33.9421	6.0
abr	19	2458958.75	19	48	20.52	-21	57	33.79	33.9258	6.0
abr	20	2458959.75	19	48	21.35	-21	57	38.80	33.9095	5.9
abr	21	2458960.75	19	48	22.06	-21	57	44.13	33.8931	5.8
abr	22	2458961.75	19	48	22.65	-21	57	49.77	33.8769	5.8
abr	23	2458962.75	19	48	23.11	-21	57	55.72	33.8606	5.7
abr	24	2458963.75	19	48	23.45	-21	58	1.97	33.8444	5.6
abr	25	2458964.75	19	48	23.67	-21	58	8.54	33.8283	5.6
abr	26	2458965.75	19	48	23.76	-21	58	15.42	33.8122	5.5
abr	27	2458966.75	19	48	23.74	-21	58	22.62	33.7962	5.4
abr	28	2458967.75	19	48	23.59	-21	58	30.14	33.7802	5.4
abr	29	2458968.75	19	48	23.32	-21	58	38.00	33.7643	5.3
abr	30	2458969.75	19	48	22.92	-21	58	46.20	33.7485	5.2
may	1	2458970.75	19	48	22.41	-21	58	54.72	33.7328	5.2
may	2	2458971.75	19	48	21.76	-21	59	3.57	33.7171	5.1
may	3	2458972.75	19	48	21.00	-21	59	12.74	33.7015	5.0
may	4	2458973.75	19	48	20.11	-21	59	22.21	33.6860	5.0
may	5	2458974.75	19	48	19.10	-21	59	31.96	33.6707	4.9
may	6	2458975.75	19	48	17.97	-21	59	41.98	33.6554	4.8
may	7	2458976.75	19	48	16.72	-21	59	52.28	33.6402	4.8
may	8	2458977.75	19	48	15.37	-22	0	2.85	33.6251	4.7
may	9	2458978.75	19	48	13.90	-22	0	13.71	33.6102	4.6
may	10	2458979.75	19	48	12.32	-22	0	24.87	33.5953	4.6
may	11	2458980.75	19	48	10.62	-22	0	36.34	33.5806	4.5
may	12	2458981.75	19	48	8.81	-22	0	48.12	33.5660	4.4
may	13	2458982.75	19	48	6.88	-22	1	0.20	33.5516	4.4
may	14	2458983.75	19	48	4.83	-22	1	12.58	33.5373	4.3
may	15	2458984.75	19	48	2.67	-22	1	25.25	33.5231	4.2
may	16	2458985.75	19	48	0.40	-22	1	38.19	33.5090	4.2
may	17	2458986.75	19	47	58.01	-22	1	51.40	33.4951	4.1

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
may	18	2458987.75	19	47	55.51	-22	2	4.87	33.4814	4.0
may	19	2458988.75	19	47	52.90	-22	2	18.59	33.4678	4.0
may	20	2458989.75	19	47	50.18	-22	2	32.55	33.4544	3.9
may	21	2458990.75	19	47	47.36	-22	2	46.75	33.4412	3.8
may	22	2458991.75	19	47	44.43	-22	3	1.20	33.4281	3.8
may	23	2458992.75	19	47	41.41	-22	3	15.89	33.4152	3.7
may	24	2458993.75	19	47	38.28	-22	3	30.83	33.4024	3.6
may	25	2458994.75	19	47	35.06	-22	3	46.02	33.3899	3.6
may	26	2458995.75	19	47	31.73	-22	4	1.46	33.3775	3.5
may	27	2458996.75	19	47	28.31	-22	4	17.15	33.3654	3.4
may	28	2458997.75	19	47	24.78	-22	4	33.10	33.3534	3.4
may	29	2458998.75	19	47	21.16	-22	4	49.28	33.3416	3.3
may	30	2458999.75	19	47	17.44	-22	5	5.69	33.3301	3.2
may	31	2459000.75	19	47	13.62	-22	5	22.32	33.3187	3.2
jun	1	2459001.75	19	47	9.71	-22	5	39.14	33.3075	3.1
jun	2	2459002.75	19	47	5.72	-22	5	56.13	33.2966	3.0
jun	3	2459003.75	19	47	1.63	-22	6	13.31	33.2859	3.0
jun	4	2459004.75	19	46	57.46	-22	6	30.65	33.2753	2.9
jun	5	2459005.75	19	46	53.22	-22	6	48.17	33.2651	2.8
jun	6	2459006.75	19	46	48.89	-22	7	5.88	33.2550	2.8
jun	7	2459007.75	19	46	44.48	-22	7	23.79	33.2451	2.7
jun	8	2459008.75	19	46	40.00	-22	7	41.89	33.2355	2.6
jun	9	2459009.75	19	46	35.43	-22	8	0.19	33.2261	2.6
jun	10	2459010.75	19	46	30.78	-22	8	18.67	33.2170	2.5
jun	11	2459011.75	19	46	26.05	-22	8	37.33	33.2081	2.4
jun	12	2459012.75	19	46	21.25	-22	8	56.14	33.1994	2.4
jun	13	2459013.75	19	46	16.37	-22	9	15.10	33.1910	2.3
jun	14	2459014.75	19	46	11.42	-22	9	34.19	33.1828	2.2
jun	15	2459015.75	19	46	6.40	-22	9	53.41	33.1749	2.2
jun	16	2459016.75	19	46	1.31	-22	10	12.74	33.1672	2.1
jun	17	2459017.75	19	45	56.16	-22	10	32.19	33.1598	2.0
jun	18	2459018.75	19	45	50.95	-22	10	51.75	33.1526	2.0
jun	19	2459019.75	19	45	45.68	-22	11	11.42	33.1457	1.9
jun	20	2459020.75	19	45	40.36	-22	11	31.20	33.1391	1.8
jun	21	2459021.75	19	45	34.98	-22	11	51.08	33.1327	1.8
jun	22	2459022.75	19	45	29.55	-22	12	11.09	33.1266	1.7
jun	23	2459023.75	19	45	24.06	-22	12	31.20	33.1208	1.6
jun	24	2459024.75	19	45	18.52	-22	12	51.43	33.1152	1.6
jun	25	2459025.75	19	45	12.93	-22	13	11.75	33.1099	1.5
jun	26	2459026.75	19	45	7.30	-22	13	32.16	33.1049	1.4
jun	27	2459027.75	19	45	1.61	-22	13	52.64	33.1002	1.4
jun	28	2459028.75	19	44	55.88	-22	14	13.17	33.0957	1.3
jun	29	2459029.75	19	44	50.11	-22	14	33.74	33.0915	1.2
jun	30	2459030.75	19	44	44.31	-22	14	54.33	33.0876	1.2
jul	1	2459031.75	19	44	38.47	-22	15	14.95	33.0840	1.1
jul	2	2459032.75	19	44	32.60	-22	15	35.59	33.0807	1.0

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
jul	3	2459033.75	19	44	26.71	-22	15	56.26	33.0776	1.0
jul	4	2459034.75	19	44	20.79	-22	16	16.97	33.0748	0.9
jul	5	2459035.75	19	44	14.85	-22	16	37.72	33.0723	0.8
jul	6	2459036.75	19	44	8.88	-22	16	58.51	33.0701	0.8
jul	7	2459037.75	19	44	2.88	-22	17	19.34	33.0682	0.7
jul	8	2459038.75	19	43	56.86	-22	17	40.18	33.0666	0.6
jul	9	2459039.75	19	43	50.82	-22	18	1.03	33.0653	0.6
jul	10	2459040.75	19	43	44.76	-22	18	21.87	33.0642	0.5
jul	11	2459041.75	19	43	38.68	-22	18	42.69	33.0634	0.4
jul	12	2459042.75	19	43	32.59	-22	19	3.48	33.0630	0.4
jul	13	2459043.75	19	43	26.50	-22	19	24.23	33.0628	0.3
jul	14	2459044.75	19	43	20.39	-22	19	44.94	33.0629	0.2
jul	15	2459045.75	19	43	14.28	-22	20	5.60	33.0633	0.2
jul	16	2459046.75	19	43	8.17	-22	20	26.21	33.0640	0.1
jul	17	2459047.75	19	43	2.07	-22	20	46.76	33.0650	0.0
jul	18	2459048.75	19	42	55.97	-22	21	7.27	33.0663	23.9
jul	19	2459049.75	19	42	49.87	-22	21	27.73	33.0678	23.9
jul	20	2459050.75	19	42	43.78	-22	21	48.15	33.0697	23.8
jul	21	2459051.75	19	42	37.70	-22	22	8.52	33.0719	23.7
jul	22	2459052.75	19	42	31.63	-22	22	28.83	33.0743	23.7
jul	23	2459053.75	19	42	25.57	-22	22	49.08	33.0771	23.6
jul	24	2459054.75	19	42	19.52	-22	23	9.24	33.0801	23.5
jul	25	2459055.75	19	42	13.49	-22	23	29.31	33.0834	23.5
jul	26	2459056.75	19	42	7.47	-22	23	49.25	33.0870	23.4
jul	27	2459057.75	19	42	1.49	-22	24	9.06	33.0909	23.3
jul	28	2459058.75	19	41	55.53	-22	24	28.74	33.0951	23.3
jul	29	2459059.75	19	41	49.60	-22	24	48.29	33.0996	23.2
jul	30	2459060.75	19	41	43.70	-22	25	7.72	33.1044	23.1
jul	31	2459061.75	19	41	37.84	-22	25	27.04	33.1094	23.1
ago	1	2459062.75	19	41	32.02	-22	25	46.24	33.1147	23.0
ago	2	2459063.75	19	41	26.23	-22	26	5.32	33.1203	22.9
ago	3	2459064.75	19	41	20.47	-22	26	24.30	33.1262	22.9
ago	4	2459065.75	19	41	14.76	-22	26	43.14	33.1324	22.8
ago	5	2459066.75	19	41	9.08	-22	27	1.85	33.1388	22.7
ago	6	2459067.75	19	41	3.45	-22	27	20.40	33.1455	22.7
ago	7	2459068.75	19	40	57.85	-22	27	38.80	33.1525	22.6
ago	8	2459069.75	19	40	52.31	-22	27	57.01	33.1597	22.5
ago	9	2459070.75	19	40	46.81	-22	28	15.05	33.1673	22.5
ago	10	2459071.75	19	40	41.37	-22	28	32.90	33.1750	22.4
ago	11	2459072.75	19	40	35.99	-22	28	50.57	33.1831	22.3
ago	12	2459073.75	19	40	30.66	-22	29	8.04	33.1914	22.3
ago	13	2459074.75	19	40	25.39	-22	29	25.32	33.2000	22.2
ago	14	2459075.75	19	40	20.19	-22	29	42.41	33.2088	22.1
ago	15	2459076.75	19	40	15.06	-22	29	59.33	33.2179	22.1
ago	16	2459077.75	19	40	9.99	-22	30	16.06	33.2273	22.0
ago	17	2459078.75	19	40	4.98	-22	30	32.61	33.2369	21.9

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
ago	18	2459079.75	19	40	0.05	-22	30	48.98	33.2467	21.9
ago	19	2459080.75	19	39	55.18	-22	31	5.16	33.2568	21.8
ago	20	2459081.75	19	39	50.38	-22	31	21.13	33.2672	21.7
ago	21	2459082.75	19	39	45.65	-22	31	36.88	33.2778	21.7
ago	22	2459083.75	19	39	40.99	-22	31	52.39	33.2886	21.6
ago	23	2459084.75	19	39	36.42	-22	32	7.65	33.2996	21.5
ago	24	2459085.75	19	39	31.93	-22	32	22.65	33.3109	21.5
ago	25	2459086.75	19	39	27.53	-22	32	37.41	33.3225	21.4
ago	26	2459087.75	19	39	23.21	-22	32	51.92	33.3342	21.3
ago	27	2459088.75	19	39	18.98	-22	33	6.21	33.3462	21.3
ago	28	2459089.75	19	39	14.85	-22	33	20.26	33.3584	21.2
ago	29	2459090.75	19	39	10.80	-22	33	34.10	33.3708	21.1
ago	30	2459091.75	19	39	6.83	-22	33	47.71	33.3834	21.1
ago	31	2459092.75	19	39	2.96	-22	34	1.09	33.3962	21.0
sep	1	2459093.75	19	38	59.18	-22	34	14.22	33.4092	20.9
sep	2	2459094.75	19	38	55.49	-22	34	27.11	33.4224	20.9
sep	3	2459095.75	19	38	51.89	-22	34	39.74	33.4359	20.8
sep	4	2459096.75	19	38	48.39	-22	34	52.09	33.4495	20.7
sep	5	2459097.75	19	38	44.98	-22	35	4.17	33.4633	20.7
sep	6	2459098.75	19	38	41.68	-22	35	15.97	33.4773	20.6
sep	7	2459099.75	19	38	38.48	-22	35	27.48	33.4914	20.5
sep	8	2459100.75	19	38	35.38	-22	35	38.72	33.5058	20.5
sep	9	2459101.75	19	38	32.39	-22	35	49.67	33.5203	20.4
sep	10	2459102.75	19	38	29.51	-22	36	0.35	33.5350	20.3
sep	11	2459103.75	19	38	26.74	-22	36	10.77	33.5499	20.3
sep	12	2459104.75	19	38	24.08	-22	36	20.91	33.5649	20.2
sep	13	2459105.75	19	38	21.53	-22	36	30.80	33.5801	20.1
sep	14	2459106.75	19	38	19.08	-22	36	40.43	33.5955	20.1
sep	15	2459107.75	19	38	16.75	-22	36	49.79	33.6110	20.0
sep	16	2459108.75	19	38	14.52	-22	36	58.88	33.6266	19.9
sep	17	2459109.75	19	38	12.41	-22	37	7.68	33.6424	19.9
sep	18	2459110.75	19	38	10.40	-22	37	16.18	33.6583	19.8
sep	19	2459111.75	19	38	8.52	-22	37	24.36	33.6744	19.7
sep	20	2459112.75	19	38	6.75	-22	37	32.22	33.6906	19.7
sep	21	2459113.75	19	38	5.11	-22	37	39.76	33.7069	19.6
sep	22	2459114.75	19	38	3.58	-22	37	47.00	33.7233	19.5
sep	23	2459115.75	19	38	2.19	-22	37	53.95	33.7399	19.5
sep	24	2459116.75	19	38	0.91	-22	38	0.61	33.7565	19.4
sep	25	2459117.75	19	37	59.75	-22	38	7.00	33.7733	19.3
sep	26	2459118.75	19	37	58.72	-22	38	13.12	33.7901	19.3
sep	27	2459119.75	19	37	57.80	-22	38	18.95	33.8071	19.2
sep	28	2459120.75	19	37	57.00	-22	38	24.50	33.8241	19.1
sep	29	2459121.75	19	37	56.32	-22	38	29.75	33.8412	19.1
sep	30	2459122.75	19	37	55.77	-22	38	34.70	33.8584	19.0
oct	1	2459123.75	19	37	55.33	-22	38	39.34	33.8757	18.9
oct	2	2459124.75	19	37	55.02	-22	38	43.67	33.8930	18.9

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	“	dis UA	hp h
oct	3	2459125.75	19	37	54.83	-22	38	47.68	33.9105	18.8
oct	4	2459126.75	19	37	54.76	-22	38	51.37	33.9279	18.7
oct	5	2459127.75	19	37	54.83	-22	38	54.75	33.9454	18.7
oct	6	2459128.75	19	37	55.02	-22	38	57.82	33.9630	18.6
oct	7	2459129.75	19	37	55.34	-22	39	0.59	33.9807	18.5
oct	8	2459130.75	19	37	55.79	-22	39	3.06	33.9983	18.5
oct	9	2459131.75	19	37	56.37	-22	39	5.24	34.0160	18.4
oct	10	2459132.75	19	37	57.08	-22	39	7.13	34.0338	18.3
oct	11	2459133.75	19	37	57.91	-22	39	8.75	34.0515	18.3
oct	12	2459134.75	19	37	58.86	-22	39	10.08	34.0693	18.2
oct	13	2459135.75	19	37	59.94	-22	39	11.13	34.0871	18.1
oct	14	2459136.75	19	38	1.14	-22	39	11.88	34.1050	18.1
oct	15	2459137.75	19	38	2.47	-22	39	12.33	34.1228	18.0
oct	16	2459138.75	19	38	3.93	-22	39	12.45	34.1406	18.0
oct	17	2459139.75	19	38	5.51	-22	39	12.24	34.1584	17.9
oct	18	2459140.75	19	38	7.22	-22	39	11.71	34.1762	17.8
oct	19	2459141.75	19	38	9.06	-22	39	10.86	34.1940	17.8
oct	20	2459142.75	19	38	11.04	-22	39	9.71	34.2118	17.7
oct	21	2459143.75	19	38	13.14	-22	39	8.28	34.2296	17.6
oct	22	2459144.75	19	38	15.37	-22	39	6.58	34.2473	17.6
oct	23	2459145.75	19	38	17.73	-22	39	4.61	34.2650	17.5
oct	24	2459146.75	19	38	20.21	-22	39	2.37	34.2826	17.4
oct	25	2459147.75	19	38	22.80	-22	38	59.85	34.3002	17.4
oct	26	2459148.75	19	38	25.52	-22	38	57.05	34.3178	17.3
oct	27	2459149.75	19	38	28.36	-22	38	53.97	34.3353	17.2
oct	28	2459150.75	19	38	31.32	-22	38	50.58	34.3527	17.2
oct	29	2459151.75	19	38	34.40	-22	38	46.91	34.3701	17.1
oct	30	2459152.75	19	38	37.60	-22	38	42.93	34.3874	17.0
oct	31	2459153.75	19	38	40.92	-22	38	38.66	34.4046	17.0
nov	1	2459154.75	19	38	44.36	-22	38	34.10	34.4217	16.9
nov	2	2459155.75	19	38	47.93	-22	38	29.25	34.4388	16.8
nov	3	2459156.75	19	38	51.61	-22	38	24.12	34.4558	16.8
nov	4	2459157.75	19	38	55.42	-22	38	18.71	34.4726	16.7
nov	5	2459158.75	19	38	59.34	-22	38	13.05	34.4894	16.7
nov	6	2459159.75	19	39	3.39	-22	38	7.14	34.5061	16.6
nov	7	2459160.75	19	39	7.54	-22	38	0.97	34.5227	16.5
nov	8	2459161.75	19	39	11.82	-22	37	54.56	34.5391	16.5
nov	9	2459162.75	19	39	16.20	-22	37	47.90	34.5555	16.4
nov	10	2459163.75	19	39	20.69	-22	37	40.99	34.5717	16.3
nov	11	2459164.75	19	39	25.29	-22	37	33.82	34.5878	16.3
nov	12	2459165.75	19	39	30.00	-22	37	26.37	34.6038	16.2
nov	13	2459166.75	19	39	34.82	-22	37	18.65	34.6196	16.1
nov	14	2459167.75	19	39	39.75	-22	37	10.64	34.6353	16.1
nov	15	2459168.75	19	39	44.80	-22	37	2.36	34.6509	16.0
nov	16	2459169.75	19	39	49.95	-22	36	53.82	34.6663	15.9
nov	17	2459170.75	19	39	55.22	-22	36	45.04	34.6815	15.9

Plutón (planeta enano), 2020

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

mes	día	dj	h	α m	s	°	δ `	"	dis UA	hp h
nov	18	2459171.75	19	40	0.59	-22	36	36.04	34.6966	15.8
nov	19	2459172.75	19	40	6.07	-22	36	26.83	34.7115	15.8
nov	20	2459173.75	19	40	11.64	-22	36	17.41	34.7263	15.7
nov	21	2459174.75	19	40	17.31	-22	36	7.77	34.7408	15.6
nov	22	2459175.75	19	40	23.08	-22	35	57.91	34.7552	15.6
nov	23	2459176.75	19	40	28.94	-22	35	47.84	34.7695	15.5
nov	24	2459177.75	19	40	34.89	-22	35	37.53	34.7835	15.4
nov	25	2459178.75	19	40	40.94	-22	35	26.99	34.7974	15.4
nov	26	2459179.75	19	40	47.07	-22	35	16.22	34.8110	15.3
nov	27	2459180.75	19	40	53.30	-22	35	5.23	34.8245	15.2
nov	28	2459181.75	19	40	59.63	-22	34	54.01	34.8378	15.2
nov	29	2459182.75	19	41	6.04	-22	34	42.57	34.8508	15.1
nov	30	2459183.75	19	41	12.54	-22	34	30.93	34.8637	15.0
dic	1	2459184.75	19	41	19.13	-22	34	19.08	34.8763	15.0
dic	2	2459185.75	19	41	25.81	-22	34	7.06	34.8888	14.9
dic	3	2459186.75	19	41	32.57	-22	33	54.85	34.9010	14.9
dic	4	2459187.75	19	41	39.41	-22	33	42.48	34.9130	14.8
dic	5	2459188.75	19	41	46.32	-22	33	29.94	34.9248	14.7
dic	6	2459189.75	19	41	53.32	-22	33	17.24	34.9364	14.7
dic	7	2459190.75	19	42	0.38	-22	33	4.37	34.9477	14.6
dic	8	2459191.75	19	42	7.52	-22	32	51.33	34.9588	14.5
dic	9	2459192.75	19	42	14.73	-22	32	38.11	34.9697	14.5
dic	10	2459193.75	19	42	22.01	-22	32	24.71	34.9803	14.4
dic	11	2459194.75	19	42	29.36	-22	32	11.11	34.9907	14.3
dic	12	2459195.75	19	42	36.78	-22	31	57.34	35.0008	14.3
dic	13	2459196.75	19	42	44.28	-22	31	43.39	35.0107	14.2
dic	14	2459197.75	19	42	51.84	-22	31	29.29	35.0203	14.2
dic	15	2459198.75	19	42	59.47	-22	31	15.06	35.0297	14.1
dic	16	2459199.75	19	43	7.16	-22	31	0.71	35.0389	14.0
dic	17	2459200.75	19	43	14.90	-22	30	46.25	35.0477	14.0
dic	18	2459201.75	19	43	22.70	-22	30	31.69	35.0563	13.9
dic	19	2459202.75	19	43	30.55	-22	30	17.01	35.0647	13.8
dic	20	2459203.75	19	43	38.45	-22	30	2.22	35.0728	13.8
dic	21	2459204.75	19	43	46.39	-22	29	47.30	35.0806	13.7
dic	22	2459205.75	19	43	54.39	-22	29	32.27	35.0881	13.6
dic	23	2459206.75	19	44	2.42	-22	29	17.11	35.0954	13.6
dic	24	2459207.75	19	44	10.51	-22	29	1.83	35.1024	13.5
dic	25	2459208.75	19	44	18.63	-22	28	46.44	35.1091	13.5
dic	26	2459209.75	19	44	26.80	-22	28	30.94	35.1155	13.4
dic	27	2459210.75	19	44	35.02	-22	28	15.35	35.1217	13.3
dic	28	2459211.75	19	44	43.27	-22	27	59.67	35.1276	13.3
dic	29	2459212.75	19	44	51.55	-22	27	43.92	35.1332	13.2
dic	30	2459213.75	19	44	59.88	-22	27	28.11	35.1385	13.1
dic	31	2459214.75	19	45	8.23	-22	27	12.24	35.1436	13.1

Satélite de los planetas, 2020

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, 2020

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, 2020

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, 2020

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, 2020

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	1.94x104 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/s2

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, 2020

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/cm3
Factor dinámico (J2)	0.00108263x10^{-11} años-1
Gravedad normal (g)	g = 9.80621-0.02593 cos(2f)+0.00003 cos(4f) m/s2
Constante de gravitación geocéntrica	3.986005x10^{14} m3s-2

Luna

Radio medio	1738 km
Semidiámetro a la distancia media	15' 32.6"
Masa	7.3483x10^{22} kg
Densidad media	3.34 g/cm2
Gravedad superficial	1.62 m/s2 = 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/s2 = 0.0003 g

Nomenclatura de las estrellas brillantes, 2020

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, 2020

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, 2020

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, 2020

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), 2020

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), 2020

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

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Estrella			Estrella			Estrella			Estrella		
NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre	NH	NBSC	nombre
26220	1893	V101 Ori	27196	1971	27 Aur	28358	2077	δ Aur	29388	2176	41 Aur
26220	1893	θ^1 Ori	26868	1973	WZ Col	28358	2077	33 Aur	29034	2177	θ Col
26220	1893	θ^1 Ori	27181	1977	Y Tau	28237	2084	139 Tau	29064	2181	π^2 Col
26220	1894	41 Ori	27072	1983	γ Lep	28103	2085	η Lep	29379	2185	5 Gem
26220	1894	V101 Ori	27072	1983	13 Lep	28103	2085	16 Lep	29416	2190	TV Gem
26220	1894	θ^1 Ori	27265	1985	129 Tau	28010	2087	ξ Col	29433	2193	68 Ori
26220	1894	θ^1 Ori	27316	1989	131 Tau	28360	2088	β Aur	28909	2194	η^1 Dor
26221	1895	41 Ori	27338	1990	130 Tau	28360	2088	34 Aur	29323	2195	V653 Mon
26221	1895	θ^1 Ori	26264	1991	ι Men	28360	2088	β Aur	29450	2197	6 Gem
26224	1896	41 Ori	26264	1991	ι Men	28404	2091	35 Aur	29450	2197	BU Gem
26224	1896	θ^1 Ori	27592	1992	29 Cam	28404	2091	π Aur	29434	2198	f^1 Ori
26235	1897	θ^2 Ori	27364	1993	133 Tau	28404	2091	π Aur	29434	2198	69 Ori
26235	1897	43 Ori	27483	1995	29 Aur	28098	2092	σ Col	29426	2199	ξ Ori
26241	1899	44 Ori	27483	1995	τ Aur	28380	2095	37 Aur	29426	2199	70 Ori
26241	1899	ι Ori	27204	1996	μ Col	28380	2095	θ Aur	29730	2201	40 Cam
26263	1900	V137 Ori	27288	1998	ζ Lep	28380	2095	θ Aur	29401	2202	V638 Mon
26268	1901	45 Ori	27288	1998	14 Lep	28271	2100	V100 Ori	29263	2203	AF Col
26311	1903	ε Ori	27386	1999	52 Ori	28271	2100	59 Ori	29276	2212	δ πc
26311	1903	46 Ori	27341	2001	V103 Ori	28499	2101	V444 Aur	29276	2212	δ πc
26311	1903	ε Ori	27468	2002	132 Tau	28499	2101	36 Aur	29488	2213	IP CMa
26382	1905	122 Tau	27366	2004	κ Ori	28296	2103	60 Ori	29919	2215	UW Lyn
26366	1907	40 Ori	27366	2004	53 Ori	28199	2106	γ Col	29919	2215	1 Lyn
26366	1907	φ^2 Ori	27731	2006	30 Cam	28321	2107	V474 Mon	29655	2216	η Gem
26451	1910	ζ Tau	27511	2010	134 Tau	28321	2107	1 Mon	29655	2216	η Gem
26451	1910	123 Tau	27639	2011	31 Aur	28325	2108	2 Mon	29655	2216	7 Gem
26451	1910	ζ Tau	27639	2011	υ Aur	28677	2119	38 Aur	29696	2219	44 Aur
26536	1914	26 Aur	27673	2012	32 Aur	28328	2120	η Col	29696	2219	κ Aur
26069	1922	β Dor	27673	2012	ν Aur	28614	2124	61 Ori	29650	2220	71 Ori
26069	1922	β Dor	27100	2015	δ Dor	28614	2124	μ Ori	29134	2221	ν Dor
26606	1924	V433 Aur	27581	2016	135 Tau	27566	2125	κ Men	29704	2223	f^2 Ori
26412	1926	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	1 Pup	39023	3123	12 Pup
35550	2777	55 Gem	36723	2887	δ^2 CMi	37908	3003	g Gem	39191	3124	ω^1 Cnc
35412	2781	29 CMa	36723	2887	8 CMi	37908	3003	81 Gem	39191	3124	2 Cnc
35412	2781	UW CMa	36608	2889	PS Pup	37751	3004	V390 Pup	38834	3126	V341 Car
35415	2782	30 CMa	36850	2890	66 Gem	37921	3008	11 CMi	39177	3128	3 Cnc
35415	2782	τ CMa	36850	2890	α Gem	37842	3009	PV Pup	38957	3129	V Pup
35415	2782	τ CMa	36850	2890	66 Gem	37842	3009	2 Pup	39263	3132	ω^2 Cnc
35783	2783	19 Lyn	36850	2891	66 Gem	37843	3010	2 Pup	39263	3132	4 Cnc
35785	2784	19 Lyn	36850	2891	α Gem	38016	3013	π Gem	39236	3134	5 Cnc
35363	2787	NV Pup	36850	2891	66 Gem	38016	3013	80 Gem	39172	3135	V695 Mon
35487	2788	R CMa	36965	2898	CC Lyn	37891	3015	4 Pup	39211	3141	28 Mon
35406	2790	ν^2 Pup	36812	2901	δ^3 CMi	37819	3017	c Pup	39211	3141	V645 Mon
35406	2790	NW Pup	36812	2901	9 CMi	38106	3021	82 Gem	38994	3147	V374 Car
35393	2791	F Pup	36773	2902	KQ Pup	37915	3022	V392 Pup	39424	3149	x Gem
35710	2793	65 Aur	36962	2905	69 Gem	37504	3024	ζ Vol	39153	3151	PY Pup
35699	2795	56 Gem	36962	2905	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), 2020

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), 2020

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

Nombre de estrellas (Catálogo Hiparco), 2020

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), 2020

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), 2020

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, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
118243	0	0	3.5	+55	52	8.4	0.014631	+55.869013	4.88	-0.071	-0.05	B1V...
118268	0	0	21.9	+ 6	58	36.5	0.091326	+ 6.976811	4.03	0.419	0.49	F4IV
118322	0	0	58.0	-65	27	47.3	0.241875	-65.463143	4.49	-0.075	-0.04	B9IV
122	0	2	37.3	-76	57	9.4	0.655443	-76.952599	4.78	1.254	1.26	K2III
154	0	3	0.7	- 5	54	0.7	0.752841	- 5.900195	4.37	1.631	2.35	M3III
301	0	4	47.3	-17	13	19.0	1.197094	-17.221935	4.55	-0.047	-0.03	B9IVn
355	0	5	33.0	-10	23	43.8	1.387626	-10.395504	4.99	1.619	1.64	K3Ibvar
443	0	6	23.1	- 5	35	35.0	1.596217	- 5.593053	4.61	1.029	1.04	K1III
677	0	9	27.1	+29	12	12.8	2.362882	+29.203553	2.07	-0.038	-0.10	B9p
746	0	10	17.0	+59	15	46.0	2.570962	+59.262787	2.28	0.380	0.40	F2III-IV
765	0	10	26.7	-45	38	3.9	2.611214	-45.634421	3.88	1.013	1.00	K0III
910	0	12	18.4	-15	21	19.8	3.076600	-15.355512	4.89	0.487	0.59	F5V
1067	0	14	17.6	+15	17	50.8	3.573495	+15.297457	2.83	-0.190	-0.22	B2IV
1168	0	15	40.0	+20	19	14.1	3.916634	+20.320576	4.79	1.572	1.93	M2III
1170	0	15	40.8	-18	49	9.9	3.919959	-18.819412	4.44	1.640	1.96	M1III
1366	0	18	10.1	+38	47	43.1	4.542221	+38.795312	4.61	0.059	0.07	A2V
1473	0	19	24.3	+36	53	55.4	4.851104	+36.898715	4.51	0.054	0.06	A2V
1562	0	20	28.3	- 8	42	37.6	5.117998	- 8.710451	3.56	1.214	1.13	K2III
1599	0	21	7.4	-64	45	16.8	5.280890	-64.754663	4.23	0.576	0.65	F9V
2021	0	26	47.7	-77	8	20.7	6.698642	-77.139075	2.82	0.618	0.68	G2IV
2072	0	27	12.4	-43	33	58.7	6.801642	-43.566308	3.93	0.175	0.20	A7V
2081	0	27	17.6	-42	11	40.6	6.823334	-42.194612	2.40	1.083	1.11	K0III...
2210	0	28	56.5	-32	53	39.2	7.235418	-32.894211	4.86	1.634	2.32	M2/M3III
2472	0	32	24.0	-48	41	25.4	8.099846	-48.690398	4.76	0.018	0.01	A0V
2484	0	32	28.5	-62	50	43.9	8.118698	-62.845518	4.36	-0.064	-0.02	B9V
2487	0	32	29.3	-62	51	10.1	8.122082	-62.852815	4.53	0.147	0.14	A2V
2505	0	32	54.9	+54	38	6.7	8.228755	+54.635185	4.74	-0.098	-0.08	B8Vn
2599	0	34	10.9	+63	2	40.8	8.545339	+63.044660	4.17	0.130	0.17	B1Ia
2912	0	37	58.9	+33	49	54.9	9.495351	+33.831918	4.34	-0.123	-0.08	B5V
2920	0	38	7.5	+54	0	34.0	9.531227	+54.009443	3.69	-0.196	-0.23	B2IV
3031	0	39	38.6	+29	25	22.1	9.911012	+29.422796	4.34	0.871	0.92	G5III...
3092	0	40	25.7	+30	58	22.6	10.107193	+30.972952	3.27	1.268	1.23	K3III...
3179	0	41	41.0	+56	38	58.0	10.420835	+56.649435	2.24	1.170	1.13	K0II-IIIvar
3245	0	42	17.4	-45	58	22.0	10.572405	-45.972782	4.59	0.953	0.95	G8III
3300	0	43	13.1	+50	37	28.7	10.804643	+50.624633	4.80	-0.105	-0.10	B2.5V
3405	0	44	16.1	-57	21	3.4	11.067158	-57.350940	4.36	0.024	0.02	A0IV
3414	0	44	36.7	+47	8	10.9	11.152826	+47.136352	4.95	0.170	0.19	A5V
3419	0	44	37.0	-17	52	27.9	11.154308	-17.874417	2.04	1.019	1.00	K0III
3455	0	45	13.4	-10	29	53.6	11.305976	-10.498235	4.77	0.998	0.98	K0IIIvar
3504	0	45	52.6	+48	23	46.4	11.469293	+48.396212	4.48	-0.069	0.00	B5III
3693	0	48	25.8	+24	22	42.1	12.107402	+24.378354	4.08	1.100	1.06	K1II
3786	0	49	44.9	+ 7	41	46.6	12.436961	+ 7.696290	4.44	1.500	1.58	K5III
3801	0	50	0.4	+51	4	46.5	12.501500	+51.079583	4.90	-0.091	-0.07	B9III
3821	0	50	21.4	+57	55	24.6	12.589317	+57.923511	3.46	0.587	0.66	G0V SB
3881	0	50	57.1	+41	11	24.6	12.738065	+41.190177	4.53	-0.136	-0.14	B5V SB
4147	0	54	3.4	- 1	2	0.0	13.514225	- 1.033337	4.78	1.550	1.66	M0III
4151	0	54	18.6	+61	14	9.3	13.577475	+61.235909	4.80	0.540	0.61	F8V
4292	0	56	14.1	+59	4	59.7	14.058626	+59.083240	4.83	1.216	1.19	K2III
4422	0	57	54.1	+59	17	28.9	14.475317	+59.291371	4.62	0.957	1.01	G8III-IV
4427	0	57	57.8	+60	49	38.2	14.490633	+60.827279	2.15	-0.046	-0.02	B0IV:evar
4436	0	57	53.9	+38	36	36.4	14.474612	+38.610110	3.86	0.130	0.14	A5V
4463	0	58	18.3	+23	31	40.4	14.576390	+23.527900	4.40	0.940	0.94	G8III-IV
4577	0	59	35.5	-29	14	49.5	14.897945	-29.247075	4.30	-0.154	-0.12	B7IIIp
4906	1	4	0.6	+ 8	0	0.2	16.002403	+ 8.000043	4.27	0.952	0.98	K0III
5165	1	6	59.6	-46	36	32.0	16.748469	-46.608901	3.32	0.885	0.90	G8IIIvar
5348	1	9	14.5	-55	8	11.7	17.310465	-55.136588	3.94	-0.120	-0.08	B6V + B0V
5364	1	9	37.3	-10	4	26.6	17.405260	-10.074069	3.46	1.161	1.11	K2III
5372	1	11	58.0	+86	21	56.9	17.991489	+86.365804	4.24	1.213	1.16	K2II-III
5434	1	10	42.1	+47	21	1.9	17.675420	+47.350536	4.26	0.012	-0.02	B7III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
5447	1	10	53.2	+35	43	43.4	17.721588	+35.728718	2.07	1.576	1.74	M0IIIvar
5542	1	12	21.9	+55	15	30.1	18.091077	+55.258361	4.34	0.170	0.19	A7Vvar
5571	1	12	33.6	+21	8	35.2	18.139898	+21.143118	4.66	1.024	0.99	K0III
5586	1	12	47.7	+30	11	52.5	18.198803	+30.197921	4.51	1.092	1.05	K0III-IV...
5742	1	14	52.0	+24	41	30.3	18.716698	+24.691762	4.67	1.047	1.02	K0III...
5862	1	16	6.4	-45	25	21.8	19.026627	-45.422723	4.97	0.571	0.62	F8V
5896	1	16	27.7	-68	46	2.4	19.115258	-68.767344	4.25	0.480	0.55	F6IV
6193	1	20	35.9	+27	22	16.4	20.149610	+27.371219	4.74	0.032	0.10	A3V
6242	1	21	23.2	+58	20	19.3	20.346816	+58.338704	4.95	0.683	0.93	F0Ia
6411	1	23	33.4	+45	38	8.0	20.889206	+45.635546	4.87	1.077	1.04	K0III-IV
6537	1	25	2.9	- 8	4	40.7	21.262167	- 8.077969	3.60	1.065	1.05	K0III
6670	1	26	37.7	-14	29	33.9	21.657154	-14.492743	4.90	1.231	1.29	K2III
6686	1	27	10.5	+60	20	27.9	21.793622	+60.341089	2.66	0.160	0.19	A5Vv SB
6692	1	27	24.6	+68	14	10.4	21.852433	+68.236210	4.72	1.047	1.01	K0III
6813	1	28	53.5	+45	30	42.6	22.223117	+45.511831	4.83	0.421	0.49	F5IV
6867	1	29	15.2	-43	12	49.5	22.313266	-43.213736	3.41	1.542	1.73	K5II-III
7007	1	31	15.7	+ 6	14	55.9	22.815360	+ 6.248850	4.84	1.372	1.42	K4III
7083	1	32	6.1	-48	58	0.3	23.025580	-48.966742	3.93	0.972	1.00	K0III-IV
7097	1	32	35.0	+15	27	3.0	23.145937	+15.450839	3.62	0.974	0.94	G8III
7294	1	35	17.3	+59	20	11.2	23.822041	+59.336438	4.68	0.991	1.01	K0III
7513	1	38	0.5	+41	30	26.3	24.502260	+41.507303	4.10	0.536	0.58	F8V
7588	1	38	28.5	-57	7	59.4	24.618606	-57.133162	0.45	-0.158	-0.17	B3Vp
7607	1	39	15.7	+48	43	52.7	24.815445	+48.731296	3.59	1.275	1.23	K3III
7818	1	41	47.9	+40	40	48.3	25.449662	+40.680088	4.96	-0.068	-0.06	B8III
7884	1	42	30.0	+ 5	35	26.3	25.625160	+ 5.590637	4.45	1.347	1.37	K3III
7918	1	43	2.5	+42	42	55.0	25.760487	+42.715272	4.96	0.618	0.67	G2V
7999	1	43	45.8	- 3	35	15.6	25.940698	- 3.587664	4.98	1.378	1.26	K3II-III
8068	1	44	57.4	+50	47	28.1	26.239374	+50.791153	4.01	-0.098	-0.08	B2Vpe
8102	1	45	1.3	-15	49	49.0	26.255396	-15.830286	3.49	0.727	0.82	G8V
8198	1	46	28.7	+ 9	15	36.3	26.619741	+ 9.260089	4.26	0.942	0.93	K0III
8497	1	50	35.6	-10	35	8.7	27.648148	-10.585736	4.66	0.333	0.38	F3III
8645	1	52	28.4	-10	14	4.2	28.118271	-10.234486	3.74	1.136	1.07	K2III
8796	1	54	15.4	+29	40	40.4	28.564043	+29.677893	3.42	0.488	0.55	F6IV
8832	1	54	39.5	+19	23	36.8	28.664788	+19.393562	3.88	-0.047	-0.03	A1p Si
8833	1	54	37.2	+ 3	17	16.6	28.654806	+ 3.287932	4.61	0.928	0.93	K0III SB
8837	1	54	27.9	-46	12	10.5	28.616401	-46.202906	4.39	1.597	2.49	M4III SB
8886	1	55	53.6	+63	46	12.0	28.973172	+63.770008	3.35	-0.150	-0.12	B2pvar
8903	1	55	46.6	+20	54	26.7	28.944190	+20.907426	2.64	0.165	0.18	A5V...
8928	1	55	27.4	-67	32	48.8	28.864264	-67.546899	4.68	0.931	0.95	G5III
9007	1	56	45.2	-51	30	27.4	29.188296	-51.507601	3.69	0.844	0.90	G5IV
9009	1	57	37.4	+68	47	5.3	29.406015	+68.784796	4.97	-0.084	-0.06	B8III
9061	1	57	37.8	-22	25	38.7	29.407400	-22.427427	4.92	1.434	1.45	K3III
9095	1	57	58.7	-47	17	8.9	29.494695	-47.285806	4.82	0.864	0.89	G8III
9153	1	59	4.5	+23	41	42.6	29.768930	+23.695176	4.79	0.290	0.33	F0V
9236	1	59	24.9	-61	28	14.4	29.853710	-61.470662	2.86	0.290	0.34	F0V
9347	2	0	58.2	-20	58	45.4	30.242690	-20.979266	3.99	1.554	1.79	K5/M0III
9480	2	3	40.8	+71	0	18.3	30.919894	+71.005076	4.49	0.164	0.20	A3IV
9487	2	3	6.6	+ 2	51	43.0	30.777425	+ 2.861933	3.82	0.024	0.05	A2
9505	2	3	40.9	+54	35	8.1	30.920310	+54.585593	4.99	-0.071	-0.02	B8III
9598	2	5	13.7	+72	31	8.9	31.307110	+72.519148	3.95	-0.002	0.03	A2V
9640	2	5	10.0	+42	25	37.6	31.291594	+42.427118	2.10	1.370	1.37	B8V
9677	2	5	24.5	-29	11	57.1	31.352233	-29.199203	4.68	-0.156	-0.12	B9.5p (Si)
9884	2	8	20.0	+23	33	30.4	32.083411	+23.558450	2.01	1.151	1.13	K2III
9977	2	9	43.9	+37	57	19.1	32.433085	+37.955313	4.78	0.120	0.16	A5IV-V
10053	2	10	35.7	+26	2	9.4	32.648569	+26.035947	4.98	0.339	0.40	F2III
10064	2	10	46.2	+35	4	59.8	32.692621	+35.083278	3.00	0.140	0.17	A5III
10280	2	13	34.0	+30	23	53.4	33.391679	+30.398166	4.94	0.770	0.81	F5V comp SB
10324	2	14	5.4	+ 8	56	30.9	33.522292	+ 8.941919	4.36	0.878	0.90	G8II:
10340	2	14	31.0	+44	19	36.3	33.629355	+44.326760	4.84	1.476	1.49	K4III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
10602	2	17	14.5	-51	25	4.5	34.310303	-51.417928	3.56	-0.120	-0.11	B8IV-V
10644	2	18	18.7	+34	19	1.2	34.577785	+34.316990	4.84	0.607	0.76	G0V
10670	2	18	32.4	+33	56	27.5	34.634949	+33.940965	4.03	0.019	-0.02	A1Vnn
11001	2	22	7.2	-68	33	59.3	35.529992	-68.566485	4.08	0.034	0.04	A3V
11313	2	27	0.2	+50	22	12.7	36.750748	+50.370188	4.73	1.532	1.58	K4III
11345	2	26	56.5	-12	11	56.2	36.735317	-12.198945	4.88	-0.027	-0.01	A0V
11407	2	27	44.2	-47	36	45.2	36.934055	-47.612545	4.24	-0.136	-0.11	B5IV
11484	2	29	15.1	+ 8	33	3.2	37.312938	+ 8.550895	4.30	-0.053	-0.06	B9III
11569	2	30	47.0	+67	29	35.6	37.695879	+67.493234	4.46	0.153	0.17	A5p Sr
11767	2	57	49.4	+89	21	0.0	44.455661	+89.350011	1.97	0.636	0.70	F7:Ib-IIv SB
11783	2	33	3.6	-15	9	20.7	38.264800	-15.155747	4.74	0.454	0.55	F5V
11918	2	34	44.6	-28	8	35.3	38.685686	-28.143138	4.96	-0.050	-0.04	B9V
12093	2	36	57.2	+ 5	40	54.0	39.238208	+ 5.681672	4.87	0.880	0.89	G8III
12387	2	40	32.1	+ 0	24	57.3	40.133841	+ 0.415908	4.08	-0.212	-0.22	B2IV
12390	2	40	33.4	-11	47	9.9	40.139215	-11.786074	4.83	0.447	0.53	F5V
12394	2	39	54.7	-68	10	46.0	39.977910	-68.179449	4.12	-0.061	-0.07	B9III
12413	2	40	34.8	-42	48	15.8	40.145193	-42.804400	4.74	0.061	0.09	A2V
12486	2	41	28.5	-39	46	6.4	40.368939	-39.768457	4.11	1.006	1.05	K0III
12623	2	43	33.0	+40	16	45.9	40.887656	+40.279411	4.91	0.582	0.62	F9V
12706	2	44	21.9	+ 3	19	16.3	41.091263	+ 3.321188	3.47	0.093	0.10	A3V
12719	2	44	39.6	+27	47	35.5	41.165023	+27.793194	4.65	-0.122	-0.12	B3V
12770	2	45	5.9	-13	46	22.2	41.274745	-13.772822	4.24	-0.122	-0.11	B7IV
12777	2	45	36.7	+49	18	49.6	41.402763	+49.313771	4.10	0.514	0.59	F7V
12828	2	46	3.2	+10	11	58.6	41.513347	+10.199606	4.27	0.311	0.37	F1III-IV
12843	2	46	3.6	-18	29	12.3	41.515050	-18.486760	4.47	0.481	0.54	F5/F6V
12876	2	45	52.0	-67	31	50.9	41.466628	-67.530811	4.83	0.058	0.08	A2IV/V
13061	2	49	8.1	+29	19	51.8	42.283768	+29.331046	4.52	1.112	1.04	K1III
13147	2	49	56.9	-32	19	14.6	42.487041	-32.320721	4.45	0.981	1.00	G8III
13209	2	51	11.7	+27	20	37.7	42.798915	+27.343792	3.61	-0.100	-0.08	B8Vn
13244	2	50	22.0	-74	58	59.2	42.591681	-74.983107	4.76	1.337	1.27	K3III
13254	2	51	53.2	+38	24	6.3	42.971474	+38.401753	4.22	0.343	0.41	F2III
13268	2	52	12.4	+55	58	44.6	43.051819	+55.979061	3.77	1.690	1.64	K3Ib comp SB
13288	2	51	58.2	-20	55	13.8	42.992326	-20.920487	4.76	0.906	0.91	K0III
13328	2	52	47.0	+35	8	34.1	43.195921	+35.142796	4.56	1.554	1.67	K5III
13531	2	55	43.4	+52	50	41.6	43.931004	+52.844887	3.93	0.758	0.80	G4III...
13701	2	57	25.8	- 8	49	3.4	44.357536	- 8.817604	3.89	1.088	1.08	K1III-IV
13847	2	59	2.3	-40	13	24.1	44.759613	-40.223366	2.88	0.128	0.17	A4III+...
13879	3	0	4.8	+39	44	36.2	45.019939	+39.743395	4.68	0.065	0.11	A2Vn
13884	2	59	11.3	-63	59	24.8	44.797138	-63.990211	4.98	0.126	0.14	A5III
13905	3	0	20.3	+35	15	50.2	45.084531	+35.263955	4.94	1.235	1.19	K2III
13914	3	0	23.3	+21	25	16.1	45.097141	+21.421152	4.63	0.048	0.05	A2Vs
13954	3	0	49.0	+ 8	59	16.4	45.204160	+ 8.987877	4.71	-0.109	-0.09	B6III
14135	3	3	21.2	+ 4	10	8.4	45.838346	+ 4.168988	2.54	1.630	1.97	M2III
14146	3	3	17.8	-23	32	42.4	45.824002	-23.545099	4.08	0.163	0.18	A4V
14328	3	6	17.7	+53	35	6.5	46.573605	+53.585130	2.91	0.716	0.77	G8III+...
14354	3	6	29.9	+38	55	5.8	46.624385	+38.918289	3.32	1.528	2.76	M3IIIvar
14382	3	7	5.7	+56	47	4.4	46.773940	+56.784544	4.77	1.018	0.99	K0II-III
14576	3	9	30.6	+41	1	59.4	47.377646	+41.033157	2.09	-0.003	0.02	B8V
14632	3	10	33.4	+49	41	23.7	47.639174	+49.689922	4.05	0.595	0.65	G0V
14668	3	10	53.3	+44	56	1.6	47.721927	+44.933776	3.79	0.980	0.94	K0III
14817	3	12	37.2	+39	41	16.7	48.155133	+39.687981	4.61	1.115	1.09	K1III
14838	3	12	48.3	+19	48	10.5	48.201398	+19.802905	4.35	1.033	0.96	K2IIIvar
14862	3	14	12.7	+74	28	8.9	48.553042	+74.469137	4.85	0.035	0.05	A2Vnn
14879	3	12	56.8	-28	54	29.0	48.236858	-28.908052	3.80	0.543	0.63	F8V
15110	3	16	5.0	+21	7	8.6	49.020991	+21.119067	4.87	-0.007	0.02	A1V
15197	3	16	49.9	- 8	44	41.1	49.207724	- 8.744738	4.80	0.232	0.28	A5m
15382	3	19	16.5	-22	26	14.1	49.818798	-22.437248	4.86	0.904	0.91	K0III
15416	3	20	1.1	+34	17	46.3	50.004648	+34.296192	4.85	1.491	1.41	K2II
15457	3	20	26.3	+ 3	26	38.8	50.109731	+ 3.444104	4.84	0.681	0.73	G5Vvar

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
15474	3	20	25.8	-21	41	3.6	50.107292	-21.684326	3.70	1.614	2.42	M3/M4III
15510	3	20	44.6	-42	59	33.1	50.185897	-42.992540	4.26	0.711	0.79	G8V
15520	3	21	48.9	+65	43	30.8	50.453895	+65.725218	4.74	-0.108	-0.12	B2.5Vne
15549	3	21	35.1	+29	7	16.9	50.396212	+29.121349	4.47	1.555	1.61	K2II-III
15648	3	22	49.4	+43	24	7.9	50.706039	+43.402181	4.96	0.051	0.06	A3V
15863	3	25	47.8	+49	55	56.8	51.449245	+49.932437	1.79	0.481	0.63	F5Ib
15900	3	25	55.1	+ 9	5	58.9	51.479737	+ 9.099707	3.61	0.887	0.90	G8III
16083	3	28	17.0	+ 9	48	10.2	52.070702	+ 9.802829	3.73	-0.082	-0.07	B9Vn
16147	3	29	31.1	+49	7	57.6	52.379687	+49.132663	4.99	-0.091	-0.07	B5V
16228	3	30	44.7	+60	0	35.4	52.686447	+60.009823	4.21	0.419	0.58	B9Ia
16244	3	30	50.6	+49	34	41.6	52.710898	+49.578211	4.67	-0.096	-0.07	B3V
16245	3	29	44.4	-62	51	56.9	52.435132	-62.865818	4.71	0.410	0.49	F5IV-V
16281	3	31	33.9	+58	56	52.5	52.891237	+58.947918	4.55	0.489	0.79	A0Ia SB:
16335	3	32	1.8	+48	3	51.4	53.007415	+48.064268	4.36	1.367	1.42	K3III
16341	3	31	38.2	- 5	0	21.9	52.909097	- 5.006084	4.74	-0.092	-0.07	B9Vs
16369	3	32	0.5	+13	0	20.0	53.001936	+13.005565	4.14	1.112	1.01	K0II-III...
16537	3	33	53.9	- 9	23	24.2	53.474620	- 9.390048	3.72	0.881	0.94	K2V
16611	3	34	41.6	-21	33	54.9	53.673538	-21.565256	4.26	-0.106	-0.09	B9V
16826	3	37	57.4	+48	15	32.6	54.488969	+48.259060	4.32	-0.058	0.07	B5Ve
16852	3	37	55.3	+ 0	27	55.8	54.480301	+ 0.465494	4.29	0.575	0.66	F9V
16870	3	37	49.9	-40	12	29.3	54.457827	-40.208142	4.57	1.023	1.07	K0III
17304	3	43	3.9	-31	52	26.1	55.766093	-31.873919	4.99	-0.159	-0.15	B5III
17313	3	43	41.0	+34	1	45.1	55.920644	+34.029207	4.97	-0.048	-0.03	B0.5V
17351	3	43	35.7	-37	14	59.2	55.898706	-37.249781	4.59	1.191	1.12	K2IIICN...
17358	3	44	23.6	+47	51	4.6	56.098390	+47.851269	3.01	-0.125	-0.07	B5III SB
17378	3	44	13.9	- 9	41	43.3	56.058000	- 9.695354	3.52	0.915	0.94	K0IV
17440	3	44	27.7	-64	44	34.1	56.115548	-64.742795	3.84	1.133	1.11	K0IV SB
17448	3	45	36.6	+32	21	5.8	56.402423	+32.351602	3.84	0.022	0.12	B1III
17499	3	46	5.8	+24	10	34.6	56.524260	+24.176285	3.72	-0.105	-0.09	B6III
17529	3	46	35.6	+42	38	29.7	56.648494	+42.641584	3.77	0.425	0.52	F5IIvar
17531	3	46	26.0	+24	31	48.4	56.608151	+24.530103	4.30	-0.110	-0.08	B6V
17573	3	47	3.0	+24	25	49.1	56.762672	+24.430298	3.87	-0.063	-0.02	B8III
17587	3	47	51.0	+63	24	27.3	56.962680	+63.407590	4.78	0.747	0.79	A3V...
17593	3	47	6.8	-12	2	18.7	56.778127	-12.038535	4.43	1.604	1.89	M1III
17608	3	47	32.8	+24	0	38.6	56.886758	+24.010714	4.14	-0.051	0.02	B6IV
17651	3	47	43.9	-23	11	24.8	56.932718	-23.190213	4.22	0.434	0.51	F3/F5V
17678	3	46	56.6	-74	10	32.9	56.735932	-74.175794	3.26	1.590	1.94	M2III
17702	3	48	42.4	+24	10	1.2	57.176795	+24.167007	2.85	-0.086	-0.01	B7III
17797	3	49	21.3	-37	33	30.5	57.338781	-37.558474	4.30	-0.038	-0.02	A+...
17847	3	50	23.1	+24	6	52.5	57.596325	+24.114574	3.62	-0.070	-0.03	B8III
17874	3	50	13.3	-36	8	21.1	57.555483	-36.139185	4.17	0.927	0.92	G8III
17884	3	51	25.2	+65	35	13.2	57.854954	+65.587009	4.39	1.870	2.58	M1III
17959	3	52	33.4	+71	23	33.8	58.139080	+71.392731	4.59	0.064	0.13	A2IVn
18216	3	54	35.1	-24	33	9.8	58.646220	-24.552710	4.64	-0.136	-0.13	B5V
18246	3	55	25.5	+31	56	34.4	58.856386	+31.942876	2.84	0.271	0.18	B1Ib
18255	3	55	19.4	- 2	53	43.6	58.830721	- 2.895442	4.46	0.672	0.73	G8III
18488	3	58	54.1	+61	10	0.2	59.725528	+61.166712	4.99	1.435	1.53	K3I-II
18505	3	59	15.1	+63	7	48.2	59.812731	+63.130068	4.95	-0.074	-0.01	B9.5V
18532	3	59	14.1	+40	4	3.9	59.808917	+40.067763	2.90	-0.199	-0.19	B0.5V
18543	3	58	59.2	-13	27	5.2	59.746736	-13.451437	2.97	1.588	1.78	M1IIIb Ca-1
18597	3	59	4.5	-61	20	33.9	59.768655	-61.342741	4.56	1.590	1.85	M2III
18614	4	0	18.0	+35	50	53.7	60.075160	+35.848259	3.98	0.016	0.16	O7.5Iab:
18673	4	0	48.0	-23	57	33.2	60.199867	-23.959221	4.62	-0.121	-0.07	Ap Si
18724	4	1	49.1	+12	32	48.5	60.454662	+12.546796	3.41	-0.099	-0.08	B3V + A
18744	4	1	11.9	-62	6	9.0	60.299467	-62.102487	4.48	1.500	2.42	M4III
18772	4	1	38.3	-61	1	18.8	60.409715	-61.021877	4.97	1.386	1.41	K4III
18907	4	4	14.9	+ 6	2	41.1	61.062258	+ 6.044747	3.91	0.032	0.03	A1V
19018	4	6	10.5	+59	12	36.9	61.543627	+59.210254	5.00	0.495	0.69	F0II
19038	4	5	54.6	+22	8	10.9	61.477669	+22.136354	4.36	1.064	1.02	K0III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
19167	4	8	7.2	+50	24	17.7	62.030047	+50.404916	4.25	-0.011	0.08	A0IVn
19343	4	10	9.5	+47	45	55.0	62.539418	+47.765279	3.96	-0.025	0.08	B3Ve
19515	4	11	32.1	-41	56	27.7	62.883629	-41.941026	4.93	0.334	0.41	A9V
19587	4	12	52.1	- 6	47	7.8	63.216961	- 6.785488	4.04	0.327	0.38	F2II-III
19740	4	15	3.4	+ 9	18	51.7	63.764239	+ 9.314348	4.84	0.799	0.86	G5III
19747	4	14	40.9	-42	14	41.1	63.670525	-42.244736	3.85	1.085	1.09	K1III
19777	4	15	22.3	-10	12	24.0	63.842822	-10.206662	4.87	1.156	1.12	K3III
19780	4	14	41.6	-62	25	22.5	63.673329	-62.422916	3.33	0.915	0.91	G7III
19811	4	16	17.4	+40	32	1.5	64.072408	+40.533758	4.67	1.007	1.07	G5II comp
19812	4	16	24.6	+48	27	33.9	64.102675	+48.459412	4.12	0.935	0.93	G0Ib...
19849	4	16	13.0	- 7	37	18.2	64.054316	- 7.621721	4.43	0.820	0.89	K1V
19860	4	16	39.0	+ 8	56	32.0	64.162414	+ 8.942217	4.27	-0.054	-0.02	B3IV
19893	4	16	33.9	-51	26	8.6	64.141294	-51.435735	4.26	0.312	0.37	F4III
19921	4	16	50.5	-59	15	12.1	64.210230	-59.253362	4.44	1.078	1.05	K2IV
19990	4	18	27.9	+20	37	38.8	64.616350	+20.627437	4.93	0.259	0.30	A3m
20042	4	18	40.3	-33	44	57.8	64.667717	-33.749387	3.55	-0.108	-0.09	B9V
20070	4	19	47.6	+50	20	37.9	64.948354	+50.343856	4.60	0.043	0.16	A2V
20205	4	20	57.8	+15	40	32.0	65.240644	+15.675563	3.65	0.981	0.95	G8III
20250	4	21	37.1	+27	23	53.2	65.404505	+27.398106	4.97	1.150	1.35	K1III
20252	4	21	44.8	+34	36	51.9	65.436600	+34.614424	4.93	0.950	0.94	G8III
20354	4	23	2.5	+46	32	45.1	65.760573	+46.545869	4.80	-0.022	0.03	B4IV
20455	4	24	7.2	+17	35	20.3	66.029951	+17.588981	3.77	0.983	0.93	G8III
20535	4	24	48.5	-33	58	13.1	66.202008	-33.970307	3.97	1.468	1.53	K4III
20542	4	25	16.8	+17	29	24.2	66.320123	+17.490043	4.80	0.154	0.18	A7V
20635	4	26	35.7	+22	20	20.9	66.648573	+22.339137	4.21	0.136	0.16	A7IV-V
20648	4	26	40.7	+17	58	23.5	66.669604	+17.973192	4.30	0.049	0.08	A2IV
20711	4	27	32.2	+22	51	30.3	66.884362	+22.858407	4.28	0.263	0.32	A8Vn
20713	4	27	31.0	+15	39	47.4	66.879064	+15.663155	4.48	0.262	0.33	F0V...
20732	4	27	46.0	+14	45	30.8	66.941725	+14.758568	4.69	0.979	0.96	G8III
20877	4	29	36.8	+16	24	14.0	67.403491	+16.403886	4.96	1.137	1.12	K2IIIvar
20885	4	29	44.9	+16	0	22.1	67.437123	+16.006150	3.84	0.952	1.02	G7III
20889	4	29	49.0	+19	13	27.3	67.454093	+19.224255	3.53	1.014	1.04	K0III
20894	4	29	50.1	+15	54	53.1	67.458822	+15.914749	3.40	0.179	0.21	A7III
21029	4	31	44.2	+16	14	13.2	67.934099	+16.237013	4.78	0.170	0.19	A6IV
21139	4	32	55.7	- 0	0	5.4	68.232015	- 0.001496	4.91	1.320	1.25	K3II-III
21248	4	34	18.8	-29	43	34.1	68.578536	-29.726138	4.49	0.972	1.00	K0III
21273	4	35	0.9	+14	53	9.2	68.753587	+14.885901	4.65	0.255	0.28	A8V
21281	4	34	26.5	-55	0	11.5	68.610443	-55.003185	3.30	-0.079	-0.08	A0V:
21393	4	36	20.9	-30	31	17.4	69.087123	-30.521495	3.81	0.957	0.93	G8III
21402	4	36	46.9	+10	12	4.6	69.195608	+10.201290	4.25	0.184	0.21	A5m
21421	4	37	6.0	+16	32	56.1	69.274798	+16.548905	0.87	1.538	1.67	K5III
21444	4	37	20.7	- 3	18	43.1	69.336186	- 3.311978	3.93	-0.210	-0.20	B2III SB
21476	4	38	7.0	+41	18	17.8	69.528975	+41.304942	4.25	1.171	1.13	G8II comp
21589	4	39	18.3	+12	33	1.4	69.826422	+12.550375	4.27	0.122	0.15	A6V
21594	4	39	7.2	-14	15	55.3	69.780041	-14.265350	3.86	1.082	1.09	K1III
21644	4	39	51.0	-12	5	2.0	69.962434	-12.083897	4.99	0.074	0.13	A0V
21683	4	40	27.0	+15	57	25.1	70.112480	+15.956960	4.67	0.147	0.19	A5Vn
21763	4	41	20.4	-19	38	0.3	70.334913	-19.633422	4.32	1.599	2.27	M3/M4III
21770	4	41	13.4	-41	49	32.0	70.305885	-41.825558	4.44	0.342	0.40	F2V
21881	4	43	28.7	+22	59	40.2	70.869538	+22.994499	4.27	-0.112	-0.10	B3V
22109	4	46	31.7	- 3	13	6.7	71.632237	- 3.218533	4.01	-0.148	-0.13	B5IV
22449	4	50	57.3	+ 6	59	43.7	72.738598	+ 6.995462	3.19	0.484	0.53	F6V
22453	4	51	17.7	+37	31	21.1	72.823617	+37.522516	4.89	1.447	1.51	K4II
22509	4	51	43.9	+ 8	56	1.5	72.932736	+ 8.933757	4.35	0.010	0.04	A1Vn
22549	4	52	18.0	+ 5	38	18.9	73.074866	+ 5.638589	3.68	-0.157	-0.16	B2III SB
22667	4	53	41.7	+14	16	59.4	73.423581	+14.283161	4.71	1.773	2.63	M3Sv
22678	4	54	0.5	+36	44	9.2	73.502244	+36.735898	4.79	1.414	1.46	K3III
22701	4	53	54.2	- 5	25	11.5	73.475751	- 5.419861	4.36	0.257	0.33	A9IV
22783	4	56	6.1	+66	22	28.6	74.025478	+66.374613	4.26	-0.008	0.09	O9.5Ia SB:

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
22797	4	55	19.3	+ 2	28	21.7	73.830240	+ 2.472706	3.71	-0.179	-0.18	B2III SB
22845	4	56	1.5	+10	10	54.6	74.006380	+10.181830	4.64	0.085	0.11	A0V
22957	4	57	31.5	+13	32	42.8	74.381423	+13.545209	4.06	1.158	1.16	K2III
23015	4	58	19.9	+33	11	47.9	74.582944	+33.196643	2.69	1.490	1.46	K3IIvar
23040	4	58	56.2	+53	46	57.3	74.734143	+53.782584	4.43	-0.017	0.06	A1V
23123	4	59	36.7	+ 1	44	38.2	74.903037	+ 1.743947	4.47	1.369	1.32	K2IIvar
23179	5	0	39.1	+37	55	9.3	75.162981	+37.919256	4.93	0.037	0.06	A1V
23231	5	0	52.9	-12	30	30.8	75.220605	-12.508561	4.78	0.267	0.33	F0V
23362	5	2	19.0	-20	1	24.1	75.579147	-20.023372	4.91	-0.047	-0.04	B9V
23364	5	2	26.0	- 7	8	43.2	75.608523	- 7.145336	4.80	-0.164	-0.18	B3V
23416	5	3	26.6	+43	51	5.5	75.861026	+43.851525	3.03	0.537	0.61	F0Ia
23453	5	3	54.9	+41	6	13.4	75.978696	+41.103711	3.69	1.154	1.12	K4II comp
23497	5	4	19.4	+21	37	2.9	76.080823	+21.617480	4.62	0.155	0.19	A7V
23522	5	5	15.0	+60	28	10.6	76.312528	+60.469607	4.03	0.921	0.89	G0Ib
23595	5	5	8.7	-35	27	21.6	76.286212	-35.455996	4.55	1.177	1.19	K2III
23607	5	5	44.5	+15	25	51.5	76.435600	+15.430979	4.65	-0.064	0.02	A0p Si
23685	5	6	19.8	-22	20	41.1	76.582380	-22.344746	3.19	1.460	1.50	K4III
23693	5	5	51.9	-57	26	42.9	76.466196	-57.445262	4.71	0.526	0.60	F7V
23767	5	7	57.4	+41	15	36.5	76.989002	+41.260133	3.18	-0.148	-0.17	B3V
23783	5	8	17.3	+51	37	21.6	77.071924	+51.622674	4.98	0.343	0.40	F0V
23835	5	8	39.8	+18	40	14.9	77.165846	+18.670793	4.91	0.657	0.74	G4V
23875	5	8	51.5	- 5	3	40.9	77.214728	- 5.061368	2.78	0.161	0.16	A3IIIvar
23972	5	10	7.7	- 8	43	45.2	77.532102	- 8.729219	4.25	-0.187	-0.16	B2IVn
24010	5	10	52.4	+15	37	18.1	77.718537	+15.621700	4.81	0.313	0.40	F2IV
24244	5	13	15.3	-11	50	45.8	78.313913	-11.846047	4.45	-0.099	-0.08	B8V
24305	5	13	51.2	-16	10	57.0	78.463358	-16.182513	3.29	-0.110	-0.09	B9IV: HgMn
24327	5	14	10.7	-12	55	6.3	78.544720	-12.918406	4.36	-0.094	-0.07	B7V
24331	5	14	21.9	+ 2	53	2.9	78.591098	+ 2.884126	4.46	1.166	1.12	K3III...
24340	5	14	50.1	+38	30	24.4	78.708599	+38.506781	4.82	0.189	0.23	A4m
24372	5	13	44.8	-67	9	43.8	78.436670	-67.162169	4.81	1.274	1.22	K2III
24436	5	15	31.4	- 8	10	45.8	78.881000	- 8.179398	0.18	-0.030	0.03	B8Ia
24608	5	18	12.4	+46	1	0.1	79.551727	+46.016682	0.08	0.795	0.83	M1: comp
24659	5	18	13.5	-34	52	34.4	79.556249	-34.876213	4.81	0.987	1.00	K0/K1III/IV
24674	5	18	36.2	- 6	49	25.4	79.650722	- 6.823720	3.59	-0.115	-0.10	B5III
24727	5	19	31.4	+33	23	27.9	79.880848	+33.391096	4.54	1.252	1.32	K3III...
24813	5	20	35.1	+40	6	54.8	80.146354	+40.115236	4.69	0.630	0.70	G0V
24822	5	20	30.6	+22	6	57.3	80.127567	+22.115910	4.96	0.937	0.92	G8III
24845	5	20	31.2	-13	9	25.3	80.130178	-13.157024	4.29	-0.235	-0.26	B0.5IV
24927	5	21	19.5	-21	13	13.6	80.331169	-21.220439	4.70	-0.048	-0.03	A0V
25044	5	22	48.6	- 0	21	49.5	80.702517	- 0.363764	4.72	-0.168	-0.17	B2IV-V
25142	5	23	54.7	+ 3	33	45.4	80.977950	+ 3.562621	4.99	-0.096	-0.14	B1V
25247	5	24	56.1	- 7	47	26.5	81.233895	- 7.790681	4.13	0.943	0.97	G8III
25278	5	25	37.3	+17	24	3.0	81.405515	+17.400838	5.00	0.544	0.62	F8V SB
25281	5	25	30.5	- 2	22	47.3	81.377160	- 2.379803	3.35	-0.240	-0.16	B1V + B2
25302	5	25	48.7	+ 1	51	49.2	81.453063	+ 1.863661	4.89	-0.200	-0.19	B1V:pe
25336	5	26	13.9	+ 6	21	59.9	81.557918	+ 6.366651	1.64	-0.224	-0.22	B2III
25428	5	27	35.4	+28	37	22.4	81.897359	+28.622884	1.65	-0.130	-0.09	B7III
25473	5	27	54.7	+ 3	6	42.7	81.978043	+ 3.111857	4.59	-0.199	-0.21	B2IV
25539	5	28	52.0	+21	57	9.7	82.216866	+21.952683	4.88	-0.140	-0.13	B2.5IV
25606	5	29	7.5	-20	44	39.8	82.281113	-20.744376	2.81	0.807	0.86	G5II
25737	5	30	46.5	- 1	4	39.4	82.693746	- 1.077616	4.71	1.592	1.70	K5III
25813	5	31	52.9	+ 5	57	43.9	82.970527	+ 5.962194	4.20	-0.143	-0.14	B5V
25859	5	31	56.5	-35	27	23.7	82.985311	-35.456594	3.86	1.130	1.09	K1II/III
25923	5	32	55.4	- 7	17	16.3	83.230876	- 7.287867	4.62	-0.261	-0.28	B0V
25930	5	33	3.3	- 0	17	7.6	83.263732	- 0.285446	2.25	-0.175	-0.21	O9.5II
25945	5	33	24.9	+18	36	27.8	83.353894	+18.607712	4.32	2.060	2.54	M2Ib
25984	5	34	3.8	+32	12	18.8	83.515964	+32.205215	4.71	0.281	0.51	B5Iab
25985	5	33	38.1	-17	48	32.3	83.408795	-17.808959	2.58	0.211	0.32	F0Ib
26069	5	33	48.3	-62	28	36.1	83.451354	-62.476698	3.76	0.640	0.69	F6Ia

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
26176	5	35	56.8	+ 9	30	6.5	83.986756	+ 9.501797	4.39	-0.157	-0.13	B0IV...
26199	5	36	2.9	- 5	59	23.5	84.011890	- 5.989872	4.78	-0.248	-0.27	B0.5V
26207	5	36	16.1	+ 9	56	46.4	84.067000	+ 9.946222	3.39	-0.160	-0.13	O...
26220	5	36	16.3	- 5	22	31.0	84.067864	- 5.375273	4.98	0.000	0.00	O7
26235	5	36	23.4	- 5	24	14.6	84.097313	- 5.404068	4.98	-0.097	0.03	O9.5Vpe
26237	5	36	23.9	- 4	49	35.1	84.099579	- 4.826418	4.58	-0.183	-0.19	B2III...
26241	5	36	26.2	- 5	53	52.6	84.109169	- 5.897946	2.75	-0.210	-0.22	O9III
26311	5	37	15.3	- 1	11	25.3	84.313659	- 1.190363	1.69	-0.184	-0.16	B0Ia
26366	5	38	2.0	+ 9	18	0.7	84.508378	+ 9.300181	4.09	0.951	1.02	G8III-IV
26451	5	38	52.3	+21	9	11.7	84.717780	+21.153257	2.97	-0.148	-0.15	B4IIIp
26549	5	39	46.6	- 2	35	23.1	84.944040	- 2.589761	3.77	-0.190	-0.25	O9.5V...
26563	5	39	52.6	- 7	12	10.3	84.969353	- 7.202853	4.77	0.139	0.16	A4V
26594	5	40	16.1	+ 4	7	53.6	85.067279	+ 4.131547	4.50	-0.098	-0.02	B3IIIe
26634	5	40	23.5	-34	3	51.5	85.098002	-34.064307	2.65	-0.120	-0.07	B7IV
26727	5	41	47.6	- 1	55	59.7	85.448502	- 1.933247	1.74	-0.199	-0.18	O9.5Ib SB
26736	5	41	53.2	- 1	7	10.3	85.471700	- 1.119525	4.95	-0.197	-0.21	B2IV-V
26777	5	42	28.9	+16	32	35.1	85.620270	+16.543074	4.84	-0.125	-0.10	B3IV...
26885	5	43	32.3	+ 1	28	58.8	85.884562	+ 1.482998	4.90	1.144	1.17	K1III
27072	5	45	19.1	-22	26	34.5	86.329627	-22.442911	3.59	0.481	0.57	F7V
27100	5	44	48.7	-65	43	40.5	86.202944	-65.727926	4.34	0.217	0.27	A7V
27288	5	47	53.1	-14	48	56.5	86.971321	-14.815698	3.55	0.104	0.11	A2Vann
27321	5	47	46.3	-51	3	35.5	86.942845	-51.059853	3.85	0.171	0.18	A3V
27366	5	48	43.8	- 9	39	49.5	87.182348	- 9.663761	2.07	-0.168	-0.14	B0.5Iavar
27468	5	50	16.5	+24	34	21.5	87.568855	+24.572642	4.88	1.021	1.04	G8IIIvar
27483	5	50	35.7	+39	11	9.5	87.648843	+39.185963	4.51	0.949	0.95	G8III
27511	5	50	42.1	+12	39	22.1	87.675315	+12.656141	4.89	-0.068	-0.05	B9IV
27530	5	50	12.1	-56	9	43.5	87.550301	-56.162094	4.50	1.075	1.06	K1III
27628	5	51	41.0	-35	45	42.3	87.920851	-35.761742	3.12	1.146	1.10	K1.5III
27639	5	52	26.4	+37	18	34.0	88.109943	+37.309434	4.72	1.621	1.90	M1III
27654	5	52	12.2	-20	52	42.9	88.050889	-20.878591	3.76	0.984	1.05	G8III/IV
27673	5	52	54.7	+39	9	8.5	88.228038	+39.152363	3.97	1.132	1.07	K0III
27750	5	53	30.3	+ 1	51	30.9	88.376451	+ 1.858576	4.76	1.382	1.31	K2IIvar
27810	5	53	51.6	-33	47	52.6	88.464913	-33.797940	4.88	-0.154	-0.14	B5V
27830	5	54	37.0	+27	36	54.8	88.654185	+27.615208	4.56	-0.008	0.00	A0V
27890	5	54	15.5	-63	5	0.8	88.564623	-63.083547	4.65	1.022	1.03	K1III/IV
27913	5	55	35.9	+20	16	41.2	88.899574	+20.278119	4.39	0.594	0.66	G0V
27949	5	56	34.0	+55	42	33.0	89.141492	+55.709179	4.96	0.052	0.09	A2V
27989	5	56	16.9	+ 7	24	33.3	89.070558	+ 7.409249	0.45	1.500	2.32	M2Ib
28010	5	56	12.3	-37	7	7.5	89.051191	-37.118738	4.97	1.102	1.03	K1IIICN...
28103	5	57	20.4	-14	9	55.3	89.334809	-14.165372	3.71	0.337	0.39	F1V
28199	5	58	15.9	-35	16	55.8	89.566080	-35.282174	4.36	-0.165	-0.16	B2.5IV
28237	5	59	16.0	+25	57	16.5	89.816723	+25.954583	4.81	-0.088	-0.04	B1Ib
28328	5	59	46.5	-42	48	53.8	89.943735	-42.814932	3.96	1.146	1.06	K0III
28358	6	1	13.0	+54	17	1.4	90.303982	+54.283724	3.72	1.010	0.99	K0III
28360	6	1	2.0	+44	56	50.2	90.258271	+44.947287	1.90	0.077	0.05	A2V
28380	6	1	7.2	+37	12	43.1	90.279867	+37.211965	2.65	-0.083	-0.06	A0p Si
28404	6	1	27.4	+45	56	10.8	90.364265	+45.936347	4.30	1.701	2.51	M3IIvar
28413	6	1	4.9	- 3	4	29.8	90.270496	- 3.074942	4.53	1.202	1.26	K2IIIvar
28574	6	2	48.3	-10	35	56.6	90.701332	-10.599068	4.92	-0.128	-0.08	B5III
28614	6	3	30.7	+ 9	38	44.2	90.877934	+ 9.645599	4.12	0.170	0.19	Am...
28716	6	5	8.3	+20	8	10.2	91.284417	+20.136180	4.64	0.236	0.41	B2Iavar
28734	6	5	22.0	+23	15	37.1	91.341721	+23.260313	4.16	0.835	0.88	G7III
28816	6	5	54.1	-16	29	13.8	91.475209	-16.487164	4.92	0.196	0.21	Ap shell
28910	6	7	5.0	-14	56	18.5	91.770955	-14.938478	4.67	0.046	0.04	A0V
29034	6	8	13.8	-37	15	24.6	92.057703	-37.256842	5.00	-0.095	-0.08	B8:IV
29038	6	8	44.6	+14	45	51.5	92.185739	+14.764292	4.42	-0.164	-0.17	B3IV
29276	6	10	41.9	-54	58	25.8	92.674587	-54.973835	4.72	-0.229	-0.24	B0.5IV
29426	6	13	6.3	+14	12	8.7	93.276448	+14.202419	4.45	-0.180	-0.16	B3IV
29434	6	13	14.2	+16	7	26.5	93.309274	+16.124018	4.95	-0.149	-0.12	B5Vn

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
29651	6	15	51.3	- 6	16	57.1	93.963957	- 6.282529	3.99	1.319	1.27	K3III
29655	6	16	6.9	+22	29	56.5	94.028826	+22.499031	3.31	1.600	2.70	M3III
29696	6	16	41.1	+29	29	19.1	94.171101	+29.488645	4.32	1.021	1.04	G8IIIvar
29735	6	16	41.3	-13	43	35.6	94.171932	-13.726545	5.00	-0.078	-0.05	B9V
29807	6	17	16.9	-35	8	54.4	94.320586	-35.148449	4.37	0.978	0.94	G8II
29997	6	21	6.1	+69	18	33.4	95.275248	+69.309289	4.76	0.025	0.05	A0Vn
30060	6	21	25.8	+59	0	3.2	95.357571	+59.000892	4.44	0.032	0.05	A2Vs
30093	6	21	1.2	- 2	57	16.9	95.255068	- 2.954697	4.91	1.613	1.90	M1III
30122	6	21	6.0	-30	4	25.1	95.275189	-30.073644	3.02	-0.160	-0.20	B2.5V
30277	6	22	51.8	-33	26	52.3	95.715919	-33.447872	3.85	0.858	0.88	G7II
30324	6	23	36.2	-17	58	2.7	95.900745	-17.967430	1.98	-0.240	-0.24	B1II/III
30343	6	24	12.0	+22	30	4.5	96.050119	+22.501259	2.87	1.621	2.30	M3IIIvar
30419	6	24	51.3	+ 4	34	51.0	96.213641	+ 4.580841	4.39	0.215	0.25	A5IV
30438	6	24	24.4	-52	42	27.2	96.101802	-52.707548	-0.62	0.164	0.23	F0Ib
30520	6	26	28.6	+49	16	30.4	96.618983	+49.275115	4.92	1.905	1.94	K5Iabvar
30788	6	28	55.8	-32	35	38.8	97.232697	-32.594116	4.47	-0.169	-0.16	B4V
30867	6	29	48.7	- 7	2	51.5	97.453073	- 7.047648	3.76	-0.113	-0.11	B3Ve
30883	6	30	10.8	+20	11	50.5	97.545021	+20.197370	4.13	-0.115	-0.10	B6III
31125	6	32	42.6	-23	26	3.9	98.177688	-23.434408	4.34	-0.245	-0.24	B1III
31216	6	34	0.7	+ 7	18	58.8	98.503069	+ 7.316331	4.47	0.023	0.09	A0Ib
31407	6	35	25.7	-52	59	34.8	98.857079	-52.993004	4.35	-0.021	0.06	B9III
31416	6	35	55.0	-22	58	56.3	98.979031	-22.982301	4.54	-0.035	-0.01	A0III
31592	6	37	34.7	-19	16	28.8	99.394625	-19.274677	3.95	1.037	1.02	K1III+...
31681	6	38	53.7	+16	22	47.6	99.723635	+16.379896	1.93	0.001	0.04	A0IV
31685	6	38	23.3	-43	12	53.4	99.597222	-43.214828	3.17	-0.103	-0.07	B8III SB
31700	6	38	47.5	-18	15	23.5	99.698085	-18.256528	4.42	1.137	1.12	K0II/III
31827	6	40	13.0	-14	9	55.8	100.053971	-14.165496	4.82	1.459	1.45	K2III
31832	6	40	47.6	+42	28	7.4	100.198128	+42.468721	4.80	1.236	1.17	K3III
31978	6	42	6.4	+ 9	52	30.6	100.526607	+ 9.875168	4.66	-0.233	-0.22	O7
32246	6	45	11.5	+25	6	32.4	101.298115	+25.109003	3.06	1.377	1.22	A3mA6-A9
32249	6	45	8.6	+13	12	20.4	101.285966	+13.205678	4.49	1.167	1.11	K1III
32349	6	46	3.1	-16	44	43.7	101.512986	-16.745464	-1.44	0.009	-0.02	A0m...
32362	6	46	26.4	+12	52	18.6	101.609907	+12.871845	3.35	0.443	0.48	F5IV
32438	6	48	2.5	+59	25	5.9	102.010429	+59.418315	4.86	0.084	0.10	A3V
32533	6	48	26.6	+ 8	0	48.7	102.110867	+ 8.013517	4.77	1.396	1.36	K4III
32578	6	48	55.8	+ 2	23	17.4	102.232441	+ 2.388171	4.48	1.099	1.06	K0III
32607	6	48	24.0	-61	57	50.1	102.100098	-61.963917	3.24	0.225	0.28	A7IV
32759	6	50	36.4	-32	31	59.8	102.651801	-32.533264	3.50	-0.116	-0.10	B1.5IVne
32761	6	50	18.0	-53	38	49.5	102.575128	-53.647090	4.41	0.899	0.92	G6II
32768	6	50	26.7	-50	38	23.0	102.611229	-50.639719	2.94	1.207	1.14	K0III...
32844	6	52	12.8	+41	45	18.1	103.053240	+41.755040	4.99	1.256	1.23	K3III
32855	6	51	37.1	-34	23	33.4	102.904665	-34.392619	4.99	1.379	1.28	K2/K3III
33018	6	54	8.3	+33	56	4.6	103.534594	+33.934608	3.60	0.102	0.14	A3III
33092	6	54	26.1	-20	15	3.1	103.608807	-20.250868	4.82	-0.212	-0.21	B1Ib
33152	6	54	59.0	-24	12	39.9	103.745914	-24.211094	3.89	1.740	1.58	K3Iab
33160	6	55	8.6	-12	3	56.4	103.785658	-12.065671	4.08	1.418	1.49	K4III
33202	6	55	48.0	+13	9	0.6	103.949932	+13.150163	4.73	0.321	0.36	F0Vp
33302	6	56	30.8	-20	9	50.1	104.128272	-20.163917	4.66	0.374	0.46	F2IV/V
33345	6	57	3.0	-14	4	16.6	104.262606	-14.071280	5.00	1.182	1.30	B9.5V
33347	6	57	3.1	-17	4	55.7	104.262914	-17.082126	4.36	-0.063	0.01	B3Ib/II
33357	6	56	48.8	-48	44	56.3	104.203157	-48.748966	4.94	1.668	2.05	M1III
33449	6	59	2.8	+58	23	36.3	104.761493	+58.393422	4.35	0.850	0.85	G5III-IV
33485	6	59	6.7	+45	3	55.2	104.777814	+45.065328	4.90	0.027	0.05	A2Vn
33579	6	59	25.9	-29	0	4.1	104.857966	-29.001140	1.50	-0.211	-0.20	B2II
33694	7	3	1.5	+76	56	49.4	105.756387	+76.947050	4.55	1.365	1.35	K4III
33856	7	2	32.2	-27	57	55.3	105.634040	-27.965363	3.49	1.729	1.82	K4III
33971	7	3	55.8	- 4	16	13.4	105.982675	- 4.270394	4.99	-0.195	-0.19	B1V
33977	7	3	52.9	-23	51	52.1	105.970233	-23.864460	3.02	-0.077	-0.03	B3Ia
34045	7	4	41.2	-15	39	53.7	106.171460	-15.664910	4.11	-0.112	-0.09	B8II

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
34059	7	4	25.6	-49	36	52.8	106.106679	-49.614679	4.92	0.140	0.15	A4IV
34088	7	5	19.4	+20	32	18.6	106.330907	+20.538494	4.01	0.899	0.90	G3Ibv SB
34444	7	9	13.5	-26	25	37.0	107.306329	-26.426931	1.83	0.671	0.67	F8Ia
34481	7	8	34.0	-70	31	55.2	107.141816	-70.532010	3.78	1.006	0.94	G8IIIvar
34495	7	9	32.4	-39	41	22.4	107.384971	-39.689551	4.83	-0.179	-0.17	B3IV/V
34622	7	11	14.8	- 4	16	14.0	107.811554	- 4.270562	4.91	1.020	1.03	K0III
34693	7	12	26.5	+30	12	35.0	108.110562	+30.209729	4.41	1.261	1.25	K2III
34752	7	13	3.7	+39	17	6.5	108.265598	+39.285126	4.91	1.451	1.48	K4II-III
34769	7	12	54.7	- 0	31	41.4	108.227748	- 0.528175	4.15	-0.005	0.02	A2V
34834	7	13	8.7	-46	47	39.8	108.286303	-46.794378	4.49	0.324	0.40	F0IV
34899	7	13	50.2	-45	13	9.2	108.459010	-45.219217	4.87	-0.003	0.02	Ap
34922	7	14	9.9	-44	40	26.7	108.541182	-44.674072	4.42	1.331	3.46	M5e
34981	7	15	5.4	-26	23	20.4	108.772377	-26.389012	4.42	-0.170	-0.12	B3III
35020	7	15	12.1	-48	18	30.8	108.800263	-48.308567	4.75	-0.091	-0.07	B8/B9V
35037	7	15	38.6	-26	48	33.9	108.910742	-26.809413	4.01	-0.150	-0.08	B2IV/Ve
35205	7	17	24.3	-27	55	6.9	109.351317	-27.918584	4.66	1.589	2.11	M2III
35210	7	17	28.7	-23	21	11.6	109.369605	-23.353223	4.83	1.601	1.77	K4III
35228	7	16	48.9	-67	59	40.7	109.203776	-67.994645	3.97	0.760	0.78	F6II
35264	7	17	52.0	-37	8	7.0	109.466747	-37.135291	2.71	1.616	1.65	K3Ib
35350	7	19	16.2	+16	30	6.3	109.817481	+16.501760	3.58	0.106	0.12	A3V...
35363	7	19	2.1	-36	46	20.5	109.758939	-36.772360	4.65	-0.099	0.11	B2V+...
35384	7	20	5.1	+49	25	33.9	110.021307	+49.426071	5.00	0.087	0.16	A4IIIn
35412	7	19	31.6	-24	35	50.3	109.881746	-24.597295	4.88	-0.160	-0.06	O7f
35415	7	19	33.5	-24	59	34.7	109.889637	-24.992979	4.37	-0.132	-0.10	O9Ib
35550	7	21	20.7	+21	56	34.5	110.336451	+21.942904	3.50	0.374	0.44	F0IV...
35727	7	23	7.7	-19	3	24.9	110.782153	-19.056916	4.94	-0.039	0.01	B5II/III
35904	7	24	54.4	-29	20	39.1	111.226577	-29.344195	2.45	-0.083	0.01	B5Ia
36041	7	26	46.1	+ 9	14	2.9	111.691980	+ 9.234129	4.99	0.991	0.96	G8III
36046	7	26	59.9	+27	45	20.2	111.749408	+27.755620	3.78	1.024	1.01	G9III+...
36145	7	28	15.3	+49	10	7.5	112.063729	+49.168746	4.61	-0.001	0.02	A1V
36188	7	28	15.7	+ 8	14	47.4	112.065409	+ 8.246489	2.89	-0.097	-0.07	B8Vvar
36284	7	29	16.7	+ 8	52	57.0	112.319663	+ 8.882509	4.33	1.425	1.48	K3III SB
36366	7	30	25.7	+31	44	31.4	112.606970	+31.742062	4.16	0.320	0.40	F0V...
36377	7	29	52.9	-43	20	37.9	112.470296	-43.343850	3.25	1.509	1.54	K5III SB
36425	7	30	56.2	+11	57	45.4	112.734098	+11.962618	4.55	1.276	1.21	K2III
36431	7	30	43.7	-23	4	5.0	112.682007	-23.068065	4.85	0.243	0.35	A6Ib/II
36514	7	31	30.5	-31	0	23.2	112.876884	-31.006456	4.65	0.904	0.89	G2Ib...
36547	7	35	15.7	+82	21	58.0	113.815430	+82.366106	4.92	1.633	2.66	M4IIIa
36773	7	34	44.5	-14	34	10.2	113.685293	-14.569499	4.82	1.362	1.37	A4Ia
36795	7	34	55.9	-22	20	29.5	113.732722	-22.341535	4.44	0.521	0.60	F6V
36850	7	35	54.1	+31	50	29.0	113.975602	+31.841380	1.58	0.034	0.05	A2Vm
36917	7	36	12.3	-28	24	56.7	114.051225	-28.415748	4.65	-0.111	-0.12	B8V
36942	7	36	10.1	-52	34	49.0	114.042196	-52.580278	4.93	1.373	1.39	K3III
36962	7	37	11.0	+26	50	54.5	114.295761	+26.848474	4.06	1.540	1.66	K5III
37096	7	38	7.7	-35	0	56.3	114.531942	-35.015647	4.53	-0.081	-0.08	B8IV/V
37173	7	39	9.3	-25	24	45.0	114.788600	-25.412494	4.69	-0.100	-0.07	B8IV
37229	7	39	40.3	-26	51	5.8	114.917934	-26.851597	3.80	-0.159	-0.15	B5IV
37265	7	40	30.0	+34	32	7.9	115.125029	+34.535538	4.89	0.413	0.47	F3III
37279	7	40	22.4	+ 5	10	15.9	115.093533	+ 5.171095	0.40	0.432	0.49	F5IV-V
37297	7	40	10.7	-38	21	21.9	115.044588	-38.356077	4.84	-0.189	-0.17	B3V
37379	7	41	19.5	-15	18	45.7	115.331109	-15.312689	4.98	1.543	1.49	K3III
37447	7	42	13.6	- 9	36	0.9	115.556627	- 9.600250	3.94	1.022	1.01	K0III
37504	7	41	33.4	-72	39	18.0	115.389019	-72.655002	3.93	1.033	1.02	K0III
37609	7	44	43.8	+58	39	36.4	116.182605	+58.660105	4.93	0.104	0.17	A3IVn
37629	7	44	35.4	+28	49	56.0	116.147575	+28.832221	4.23	1.118	1.12	K1III SB
37648	7	44	22.1	-28	27	38.6	116.091946	-28.460724	4.63	1.632	1.76	K5III
37677	7	44	37.9	-29	0	17.7	116.157779	-29.004928	3.94	0.160	0.34	A2Iab
37740	7	45	41.0	+24	20	49.8	116.420746	+24.347179	3.57	0.932	0.90	G8III
37819	7	45	59.1	-38	1	9.5	116.496453	-38.019300	3.62	1.706	1.82	K4III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
37826	7	46	34.1	+27	58	30.2	116.641962	+27.975054	1.16	0.991	0.97	K0IIIvar
37908	7	47	18.6	+18	27	30.7	116.827304	+18.458520	4.89	1.425	1.54	K5III
38070	7	48	56.3	-25	59	21.0	117.234650	-25.989176	4.40	-0.070	0.13	B1IV:nne
38089	7	48	56.8	-47	7	48.9	117.236533	-47.130249	4.69	1.039	1.03	K0III
38164	7	49	51.8	-46	25	32.3	117.465761	-46.425649	4.10	-0.160	-0.17	B0III
38170	7	50	9.4	-24	54	44.5	117.539177	-24.912361	3.34	1.218	1.08	G6Ia
38414	7	52	55.3	-40	37	46.5	118.230590	-40.629581	3.71	1.012	1.04	G5III...
38455	7	53	22.2	-38	55	0.5	118.342511	-38.916806	4.49	-0.188	-0.18	B2V
38500	7	53	38.3	-49	40	1.7	118.409522	-49.667129	4.63	-0.228	-0.24	B1.5Vp
38518	7	53	54.3	-48	9	25.8	118.476260	-48.157179	4.22	-0.130	-0.11	B0.5Ib
38538	7	54	44.9	+26	42	40.0	118.687153	+26.711105	4.97	0.098	0.14	A3V
38827	7	57	18.0	-53	2	17.0	119.324852	-53.038043	3.46	-0.177	-0.17	B3IVp
38835	7	57	44.4	-22	56	9.4	119.435158	-22.935940	4.20	0.718	0.75	F7/F8II
38901	7	58	29.2	-30	23	26.7	119.621517	-30.390757	4.76	0.151	0.24	A7III
38957	7	58	49.8	-49	18	4.7	119.707517	-49.301298	4.47	-0.180	-0.14	B1Vp + B2
39079	8	0	45.6	- 3	44	12.3	120.189892	- 3.736757	4.93	1.205	1.22	K2III
39095	8	0	47.2	-18	27	23.8	120.196566	-18.456621	4.61	0.087	0.11	A1V
39138	8	0	35.3	-63	37	28.6	120.146989	-63.624605	4.81	-0.173	-0.16	B3V
39211	8	2	15.9	- 1	27	3.0	120.566118	- 1.450837	4.69	1.475	1.54	K4III
39311	8	3	19.9	+ 2	16	36.8	120.832830	+ 2.276897	4.39	1.252	1.27	K2III
39424	8	4	46.4	+27	44	7.1	121.193428	+27.735301	4.94	1.130	1.09	K2III
39429	8	4	18.3	-40	3	42.5	121.076254	-40.061804	2.21	-0.269	-0.22	O5IAf
39757	8	8	25.1	-24	21	52.3	122.104394	-24.364530	2.83	0.458	0.42	F2mF5IIp
39794	8	7	59.3	-68	40	38.4	121.997085	-68.677347	4.35	-0.113	-0.10	B6IV
39847	8	9	59.4	+51	26	44.4	122.497607	+51.445671	4.78	0.048	0.10	A2V
39863	8	9	37.4	- 3	2	41.1	122.405990	- 3.044747	4.36	0.970	0.92	G2Ib
39903	8	9	20.9	-61	21	54.2	122.337187	-61.365051	4.74	0.437	0.53	F5V
39906	8	9	56.6	-19	18	22.1	122.485689	-19.306142	4.40	-0.160	-0.14	B5V
39953	8	10	9.9	-47	23	52.0	122.541124	-47.397783	1.75	-0.145	-0.14	WC8 + O9I
40084	8	12	14.0	-12	59	20.4	123.058387	-12.989002	4.72	0.939	0.93	K0III
40091	8	12	5.5	-39	40	50.0	123.022750	-39.680565	4.44	1.590	1.62	K4III
40096	8	12	7.5	-43	2	57.5	123.031119	-43.049311	4.73	0.164	0.30	A7Ib
40167	8	13	23.1	+17	35	4.0	123.346140	+17.584447	4.67	0.531	0.60	G0V
40259	8	14	16.5	-15	51	4.1	123.568788	-15.851140	4.99	1.066	1.02	G5Ib/II
40274	8	14	16.0	-35	57	44.6	123.566585	-35.962396	4.78	-0.110	-0.01	B2ne
40326	8	14	46.6	-40	24	41.1	123.694301	-40.411412	4.42	1.170	1.15	K1II/III
40526	8	17	37.5	+ 9	7	15.7	124.406399	+ 9.121021	3.53	1.481	1.47	K4III
40702	8	17	57.9	-76	59	1.9	124.491314	-76.983867	4.05	0.413	0.49	F5III
40706	8	19	19.4	-36	43	25.5	124.830785	-36.723749	4.44	0.222	0.25	A4m...
40888	8	19	59.5	-77	32	59.4	124.998074	-77.549832	4.34	1.161	1.10	K0III-IV
40945	8	22	11.5	-33	7	13.9	125.547928	-33.120534	4.83	1.419	1.35	K2/K3III
41037	8	22	56.0	-59	34	33.3	125.733209	-59.575917	1.86	1.196	1.16	K3III+B2V
41039	8	23	9.6	-48	33	25.0	125.789818	-48.556952	4.79	-0.146	-0.12	B1V
41075	8	24	13.9	+43	7	14.5	126.057908	+43.120691	4.25	1.550	1.61	K5III
41307	8	26	41.1	- 3	58	28.2	126.671083	- 3.974505	3.91	-0.012	-0.02	A0V
41312	8	25	57.2	-66	12	20.0	126.488478	-66.205551	3.77	1.132	1.10	K2IIIvar
41704	8	31	57.1	+60	38	51.6	127.987842	+60.647666	3.35	0.856	0.87	G4II-III
42134	8	35	48.7	-58	4	50.6	128.952927	-58.080725	4.84	0.981	0.98	K0III
42312	8	38	21.9	-43	3	41.8	129.591343	-43.061616	4.11	0.109	0.20	A6II
42313	8	38	44.4	+ 5	37	51.9	129.684997	+ 5.631081	4.14	0.003	0.02	A1Vnn
42402	8	39	49.7	+ 3	16	5.7	129.956910	+ 3.268263	4.45	1.216	1.12	K2III
42483	8	40	33.6	-29	38	6.0	130.139812	-29.634993	4.86	0.900	0.99	G5III
42509	8	40	59.7	-12	32	56.1	130.248946	-12.548913	4.98	1.415	1.40	K3III
42515	8	40	54.3	-35	22	55.2	130.226413	-35.382014	3.97	0.936	0.91	G5II/III
42527	8	41	59.1	+64	15	15.5	130.496112	+64.254314	4.59	1.179	1.18	K2III
42536	8	40	52.8	-52	59	43.0	130.220097	-52.995267	3.60	-0.168	-0.16	B3IV
42568	8	41	4.1	-59	50	4.7	130.267120	-59.834648	4.31	-0.117	-0.08	B1.5III
42570	8	41	18.4	-46	43	20.8	130.326735	-46.722440	3.77	0.670	0.92	F3Ia
42624	8	41	53.5	-47	23	27.7	130.472890	-47.391029	4.74	0.137	0.25	A5II

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
42662	8	42	40.4	-16	1	5.2	130.668387	-16.018108	4.87	1.063	1.04	K0IIICN...
42726	8	43	0.6	-53	11	17.7	130.752704	-53.188238	4.83	-0.173	-0.18	B3IV
42799	8	44	17.7	+ 3	19	26.0	131.073734	+ 3.323880	4.30	-0.192	-0.20	B3V...
42806	8	44	28.1	+21	23	36.5	131.117255	+21.393463	4.66	0.010	0.03	A1IV
42828	8	44	25.0	-33	15	40.3	131.104203	-33.261194	3.68	-0.180	-0.17	B1.5III
42835	8	44	40.8	- 7	18	31.2	131.169808	- 7.308668	4.63	0.840	0.85	G2Ib
42884	8	45	7.9	-42	43	27.6	131.283028	-42.724321	4.05	0.874	0.89	G5III
42911	8	45	50.8	+18	4	39.7	131.461818	+18.077699	3.94	1.083	1.01	K0III
42913	8	45	16.2	-54	47	4.7	131.317463	-54.784636	1.93	0.043	0.05	A1V
43023	8	46	43.4	-46	7	2.1	131.680767	-46.117255	3.87	0.015	0.09	A1III
43067	8	47	20.7	-13	37	25.3	131.836055	-13.623689	4.32	0.900	0.91	G8III
43103	8	47	56.0	+28	41	0.8	131.983346	+28.683550	4.03	1.007	0.96	G8Iab:
43105	8	47	14.3	-56	50	44.5	131.809675	-56.845705	4.50	-0.169	-0.16	B3Vne
43109	8	47	51.5	+ 6	20	32.9	131.964642	+ 6.342483	3.38	0.685	0.78	G0III-IV
43234	8	49	31.0	+ 5	45	39.3	132.379324	+ 5.760929	4.35	-0.044	-0.03	A0Vn
43347	8	50	30.2	-45	23	5.8	132.625921	-45.384944	4.94	0.043	0.06	A2III
43409	8	51	24.2	-27	47	12.5	132.850719	-27.786803	4.02	1.272	1.24	K3III
43783	8	55	30.6	-60	43	24.2	133.877474	-60.723386	3.84	-0.104	-0.08	B8III
43813	8	56	28.6	+ 5	51	59.0	134.119011	+ 5.866398	3.11	0.978	0.96	G8III-IV
43825	8	56	24.4	-27	45	42.1	134.101553	-27.761691	4.87	0.142	0.16	A3IV
43878	8	56	56.4	-52	48	10.4	134.235026	-52.802890	4.68	-0.115	-0.11	B5V
43937	8	57	28.5	-59	18	32.4	134.368582	-59.308998	4.93	-0.182	-0.21	B2IV-V
44066	8	59	36.4	+11	46	37.9	134.901576	+11.777184	4.26	0.141	0.14	A5m
44127	9	0	36.1	+47	57	35.9	135.150512	+47.959976	3.12	0.223	0.25	A7IV
44191	9	0	51.4	-41	20	3.0	135.214141	-41.334159	4.45	0.646	0.75	Fp
44248	9	1	57.7	+41	42	2.0	135.490464	+41.700547	3.96	0.463	0.53	F5V
44382	9	2	45.9	-66	28	41.6	135.691350	-66.478212	4.00	0.145	0.15	Am
44390	9	4	21.9	+67	32	52.2	136.091212	+67.547822	4.74	1.542	2.15	M3III
44471	9	5	0.9	+47	4	26.5	136.253912	+47.074019	3.57	0.007	0.03	A1Vn
44511	9	4	51.8	-47	10	48.2	136.215695	-47.180053	3.75	1.174	1.11	K2III
44599	9	5	11.3	-72	41	6.8	136.296911	-72.685221	4.47	0.607	0.67	F6II-III
44626	9	5	47.8	-70	37	16.0	136.449362	-70.621121	4.66	-0.149	-0.13	B2IVe
44659	9	7	3.0	+ 5	0	33.5	136.762646	+ 5.009304	4.99	1.189	1.17	K2II-III
44700	9	7	49.6	+38	22	8.2	136.956735	+38.368958	4.56	1.037	0.97	G8Ib-II
44816	9	8	45.1	-43	30	57.9	137.187791	-43.516095	2.23	1.665	1.69	K4Ib-II
44824	9	8	56.9	-25	56	31.8	137.237153	-25.942160	4.62	1.594	1.66	K4/K5III
44901	9	10	18.4	+51	31	13.7	137.576460	+51.520473	4.46	0.288	0.30	Am
45038	9	12	10.1	+67	2	56.2	138.042232	+67.048950	4.80	0.489	0.57	F7IV-V
45075	9	12	35.1	+63	25	42.9	138.146420	+63.428572	4.67	0.381	0.45	Am
45080	9	11	30.4	-59	3	4.9	137.876871	-59.051366	3.43	-0.190	-0.17	B2IV
45085	9	11	49.1	-44	57	9.0	137.954605	-44.952496	4.99	0.222	0.36	B5Ia
45101	9	11	44.6	-62	24	5.5	137.935696	-62.401529	3.96	-0.180	-0.18	B3IV
45238	9	13	25.0	-69	48	6.6	138.354241	-69.801839	1.67	0.070	0.02	A2IV
45336	9	15	25.8	+ 2	13	36.5	138.857320	+ 2.226818	3.89	-0.060	-0.07	B9.5V
45439	9	16	25.3	-38	39	22.1	139.105292	-38.656126	4.92	1.084	1.06	K1III
45448	9	16	34.4	-37	29	57.7	139.143252	-37.499361	4.63	0.473	0.52	F3/F5V
45493	9	17	39.1	+53	56	8.8	139.412779	+53.935766	4.80	0.199	0.26	A5V
45496	9	16	46.8	-57	37	40.2	139.195038	-57.627839	4.34	1.602	1.83	M1III
45556	9	17	38.3	-59	21	42.2	139.409641	-59.361724	2.21	0.189	0.28	A8Ib
45688	9	20	6.8	+36	42	52.8	140.028358	+36.714660	3.82	0.066	0.12	A1V
45751	9	20	45.6	-12	3	44.2	140.190138	-12.062287	4.77	0.927	0.91	G8III
45811	9	21	29.1	- 9	38	36.9	140.371122	- 9.643574	4.80	0.913	0.92	F5V+...
45856	9	21	26.3	-62	29	32.7	140.359457	-62.492428	4.79	0.926	0.96	G6III
45860	9	22	17.9	+34	18	16.9	140.574576	+34.304694	3.14	1.550	1.65	M0IIIvar
45902	9	22	24.1	-26	3	12.7	140.600424	-26.053526	4.71	1.633	1.91	M0III
45941	9	22	45.0	-55	5	55.7	140.687303	-55.098795	2.47	-0.141	-0.17	B2IV
46026	9	24	5.6	-28	55	20.4	141.023178	-28.922331	4.71	0.892	0.91	G8III
46146	9	25	50.6	+26	5	34.7	141.461020	+26.092984	4.47	1.222	1.20	K2III
46371	9	28	14.7	-22	26	4.1	142.061375	-22.434472	4.72	1.154	1.11	K1III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
46390	9	28	35.7	- 8	44	54.1	142.148648	- 8.748369	1.99	1.440	1.39	K3III
46509	9	30	11.2	- 2	51	33.9	142.546845	- 2.859414	4.59	0.411	0.52	F6V
46515	9	30	5.6	-36	2	30.3	142.523235	-36.041740	4.51	1.408	1.37	K3III
46651	9	31	30.6	-40	33	26.5	142.877575	-40.557365	3.60	0.371	0.43	F2IV
46701	9	31	50.7	-57	7	31.2	142.961436	-57.125339	3.16	1.538	1.59	K5III
46733	9	33	7.4	+62	58	14.8	143.280686	+62.970776	3.65	0.360	0.41	F0IV
46750	9	32	53.2	+22	52	35.5	143.221621	+22.876527	4.32	1.541	1.63	K5IIIvar
46771	9	33	2.9	+11	12	29.1	143.262159	+11.208076	4.99	1.046	0.89	K0IIIvar
46776	9	33	1.6	- 1	16	33.5	143.256631	- 1.275972	4.54	0.109	0.16	A3V
46853	9	34	13.1	+51	34	57.8	143.554425	+51.582735	3.17	0.475	0.56	F6IV
46952	9	35	28.4	+36	18	19.6	143.868140	+36.305449	4.54	0.914	0.91	G8III
46974	9	35	2.4	-59	19	18.0	143.759846	-59.321670	4.08	-0.013	0.01	B5II
46977	9	36	15.5	+69	44	19.1	144.064690	+69.738639	4.54	0.781	0.83	G4III-IV
47006	9	36	13.0	+51	57	32.7	144.054128	+51.959090	4.47	0.027	0.08	A2V
47029	9	36	20.1	+39	31	45.8	144.083915	+39.529376	4.81	0.992	1.00	K0III
47175	9	37	33.7	-49	26	50.9	144.390237	-49.447458	4.34	0.173	0.18	A5V
47193	9	39	51.6	+81	13	59.7	144.964815	+81.233254	4.28	1.488	1.46	K3III
47205	9	38	17.5	+ 6	44	34.9	144.572920	+ 6.743033	5.00	1.051	1.03	K1IIIvar
47310	9	39	31.4	+ 4	33	21.0	144.880712	+ 4.555829	4.68	1.310	1.35	K3III
47391	9	39	55.1	-61	25	16.8	144.979527	-61.421329	4.51	-0.070	-0.06	B9V
47431	9	40	54.1	- 1	14	12.3	145.225548	- 1.236745	3.90	1.313	1.29	K3IIIvar
47508	9	42	14.6	+ 9	47	53.3	145.560696	+ 9.798142	3.52	0.516	0.59	A5V+...
47522	9	42	13.2	-23	41	7.7	145.554985	-23.685471	4.76	-0.117	-0.10	B5V
47592	9	43	10.0	-24	0	30.1	145.791678	-24.008348	4.93	0.534	0.58	G0V
47758	9	45	7.0	-27	51	50.6	146.279172	-27.864049	4.78	0.516	0.61	A7V+...
47854	9	45	48.6	-62	36	10.4	146.452540	-62.602885	3.69	1.010	1.03	G5Iab/Ib
47908	9	47	0.7	+23	40	44.1	146.752759	+23.678925	2.97	0.808	0.81	G0II
48002	9	47	36.8	-65	10	3.0	146.903398	-65.167509	2.92	0.273	0.42	A9
48319	9	52	25.8	+58	56	28.3	148.107581	+58.941197	3.78	0.291	0.39	F0IV
48356	9	52	27.9	-14	56	36.6	148.116209	-14.943491	4.11	0.918	0.92	G6/G8III
48374	9	52	28.3	-46	38	39.7	148.117980	-46.644360	4.58	1.172	1.10	G5Ib
48402	9	53	29.3	+53	58	2.8	148.371889	+53.967455	4.55	0.038	0.09	A3IV
48455	9	53	55.5	+25	54	34.3	148.481362	+25.909520	3.88	1.222	1.13	K0III
48559	9	55	8.1	-26	1	46.2	148.783908	-26.029502	4.87	1.199	1.19	K2III
48615	9	55	50.3	-19	6	26.0	148.959498	-19.107214	4.94	1.559	1.75	K5III
48774	9	57	35.1	-54	39	57.2	149.396081	-54.665902	3.52	-0.067	-0.04	B5Ib
49029	10	1	17.7	+ 7	56	42.3	150.323791	+ 7.945088	4.68	1.589	1.96	M2III
49402	10	6	7.4	-13	9	53.0	151.530819	-13.164711	4.60	-0.087	-0.07	B8V
49583	10	8	26.8	+16	39	43.0	152.111854	+16.661931	3.48	-0.031	0.06	A0Ib
49593	10	8	37.9	+35	8	38.2	152.158091	+35.143933	4.49	0.190	0.19	A7V
49637	10	8	59.4	+ 9	53	46.6	152.247662	+ 9.896291	4.39	1.448	1.51	K4III
49641	10	8	59.2	- 0	28	21.1	152.246594	- 0.472521	4.48	-0.032	-0.01	A0III
49669	10	9	27.7	+11	51	58.6	152.365397	+11.866265	1.36	-0.087	-0.10	B7V
49712	10	9	43.0	-51	54	44.4	152.429349	-51.912323	4.85	-0.120	-0.10	B3IV
49841	10	11	35.3	-12	27	22.0	152.896997	-12.456109	3.61	1.007	0.96	K0III
50099	10	14	13.4	-70	8	23.9	153.555697	-70.139981	3.29	-0.074	-0.03	B8III
50191	10	15	36.0	-42	13	26.6	153.899830	-42.224047	3.85	0.051	0.03	A2V
50335	10	17	49.6	+23	18	52.0	154.456690	+23.314432	3.43	0.307	0.39	F0III
50371	10	17	46.2	-61	26	6.5	154.442569	-61.435143	3.39	1.541	1.45	K3II
50372	10	18	19.5	+42	48	40.3	154.581184	+42.811193	3.45	0.029	0.05	A2IV
50555	10	20	23.2	-55	7	57.7	155.096533	-55.132704	4.59	1.600	1.50	K3II
50564	10	20	50.9	+19	21	58.5	155.212263	+19.366239	4.78	0.452	0.53	F6IV
50583	10	21	6.0	+19	44	13.6	155.274874	+19.737104	2.01	1.128	1.17	K0III
50676	10	21	40.8	-56	8	48.9	155.419886	-56.146905	4.50	-0.102	-0.08	B3III
50799	10	23	12.5	-41	45	13.0	155.802178	-41.753619	4.82	1.095	1.06	K1IIIvar
50801	10	23	32.6	+41	23	44.4	155.885701	+41.395675	3.06	1.603	1.77	M0III SB
50847	10	23	34.7	-67	0	19.9	155.894709	-67.005537	4.97	-0.128	-0.12	B8V
50933	10	25	35.1	+65	27	42.8	156.396256	+65.461886	4.94	-0.052	-0.02	A0sp...
50954	10	24	47.8	-74	8	10.1	156.199273	-74.136134	3.99	0.369	0.43	F2IV

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
51056	10	27	5.0	+33	41	27.8	156.770764	+33.691045	4.72	0.260	0.31	F0V
51069	10	27	5.0	-16	56	29.4	156.770763	-16.941500	3.83	1.456	1.47	K4III
51172	10	28	5.5	-31	10	21.7	157.023009	-31.172694	4.28	1.429	1.47	K4III
51192	10	28	10.5	-57	44	37.6	157.043868	-57.743786	4.65	0.474	0.69	A6Ia
51232	10	28	38.1	-58	50	40.1	157.158796	-58.844483	3.81	0.317	0.41	F2II
51233	10	29	3.7	+36	36	5.3	157.265597	+36.601469	4.20	0.908	0.89	G8III-IV
51438	10	30	51.1	-72	5	54.6	157.713083	-72.098500	4.72	0.042	0.06	A2III
51459	10	31	55.5	+55	52	28.9	157.981154	+55.874682	4.82	0.541	0.58	F8V
51495	10	31	30.6	-73	19	37.6	157.877704	-73.327116	4.94	1.677	1.71	K4/K5III
51523	10	32	9.9	-53	49	12.3	158.041137	-53.820079	4.89	0.500	0.58	F6V
51576	10	32	45.4	-61	47	28.1	158.189355	-61.791146	3.30	-0.089	0.02	B4Vne
51624	10	33	53.3	+ 9	12	1.8	158.472262	+ 9.200511	3.84	-0.148	-0.13	B1Ib SB
51658	10	34	25.2	+40	19	10.1	158.605090	+40.319463	4.72	0.222	0.23	A7IV
51808	10	36	46.7	+75	36	22.8	159.194522	+75.606342	4.86	0.957	0.94	K0III
51839	10	35	41.7	-78	42	51.1	158.923771	-78.714181	4.11	1.580	1.71	M0III
51849	10	36	22.8	-57	39	51.0	159.095070	-57.664168	4.45	1.604	1.62	K3/K4II
51979	10	38	11.6	-27	31	9.7	159.548267	-27.519351	4.87	1.626	1.89	M1III
51986	10	38	10.1	-48	19	56.9	159.542166	-48.332469	3.84	0.300	0.35	A3m+...
52009	10	38	34.1	-13	29	29.9	159.641964	-13.491651	4.89	2.800	2.27	C
52085	10	39	35.0	-16	59	0.6	159.895686	-16.983498	4.91	0.922	0.85	G8III
52098	10	39	52.1	+31	52	9.0	159.967204	+31.869166	4.68	0.823	0.82	G0II
52102	10	39	32.1	-59	17	24.3	159.883722	-59.290078	4.69	1.562	1.63	K4/K5III:
52154	10	40	7.6	-55	42	37.5	160.031769	-55.710428	4.29	1.025	0.96	G2II
52370	10	42	58.1	-64	34	26.5	160.741898	-64.574031	4.76	-0.139	-0.13	B3V
52419	10	43	41.6	-64	30	7.8	160.923189	-64.502169	2.74	-0.220	-0.24	B0Vp
52468	10	44	19.4	-60	40	28.2	161.080955	-60.674487	4.58	1.700	1.79	K3Ib
52502	10	44	51.7	-64	4	8.3	161.215478	-64.068980	4.80	-0.134	-0.12	B5Vn
52633	10	45	57.2	-80	38	54.1	161.488260	-80.648349	4.45	-0.188	-0.19	B2.5IV
52727	10	47	39.3	-49	31	44.3	161.913890	-49.528960	2.69	0.901	0.91	G5III SB
52736	10	47	36.3	-64	29	30.6	161.901321	-64.491832	4.87	-0.149	-0.18	B3IV
52943	10	50	38.3	-16	18	5.0	162.659389	-16.301394	3.11	1.232	1.22	K0/K1III
53229	10	54	27.2	+34	6	14.0	163.613219	+34.103884	3.79	1.040	1.07	K0III-IV
53253	10	54	20.0	-58	57	44.5	163.583248	-58.962358	3.78	0.945	0.96	K0III-IV...
53295	10	55	9.1	+43	4	49.2	163.787841	+43.080326	4.66	-0.039	0.01	A1Vs
53417	10	56	43.2	+24	38	23.7	164.179902	+24.639920	4.30	0.016	0.07	A1
53502	10	57	40.6	-37	14	53.9	164.419101	-37.248313	4.60	1.006	0.99	K0III
53740	11	0	46.5	-18	24	30.0	165.193774	-18.408326	4.08	1.079	1.06	K1III
53773	11	1	6.0	-42	20	10.1	165.274823	-42.336139	4.37	0.116	0.13	A3IV
53807	11	1	37.1	+ 3	30	25.3	165.404727	+ 3.507040	4.84	1.144	1.13	K1III
53824	11	1	48.5	+ 5	59	27.4	165.452086	+ 5.990938	4.98	0.166	0.18	A5III
53907	11	2	52.4	- 2	35	43.1	165.718402	- 2.595308	4.73	1.593	1.77	K5III
53910	11	3	3.9	+56	16	19.5	165.766325	+56.272079	2.34	0.033	0.02	A1V
53954	11	3	25.3	+20	4	10.1	165.855286	+20.069475	4.42	0.053	0.03	A1m
54061	11	4	58.5	+61	38	24.3	166.243928	+61.640072	1.81	1.061	1.03	F7V comp
54182	11	6	4.4	+ 7	13	29.4	166.518414	+ 7.224837	4.62	0.332	0.39	F2III-IVvar
54204	11	6	19.3	-27	24	16.5	166.580565	-27.404590	4.92	0.369	0.43	F3IV/V
54301	11	7	23.3	-62	32	6.5	166.847075	-62.535131	4.62	0.988	0.97	G8III
54463	11	9	28.3	-59	5	10.8	167.368098	-59.086328	3.93	1.225	1.19	G0Ia0
54539	11	10	48.5	+44	23	12.8	167.702123	+44.386901	3.00	1.144	1.09	K1III
54682	11	12	40.1	-22	56	16.9	168.167219	-22.938034	4.46	0.025	0.04	A1V
54751	11	13	29.2	-60	25	45.6	168.371793	-60.429339	4.59	0.541	0.70	A6Ia
54872	11	15	11.7	+20	24	40.0	168.798942	+20.411105	2.56	0.128	0.12	A4V
54879	11	15	18.8	+15	19	2.0	168.828463	+15.317230	3.33	-0.003	0.01	A2V
54951	11	16	17.5	+22	59	0.4	169.072763	+22.983457	4.56	1.657	2.27	M3III
55084	11	17	42.3	- 3	45	50.1	169.426076	- 3.763927	4.45	0.210	0.25	A7IVn
55219	11	19	34.9	+32	58	55.8	169.895387	+32.982164	3.49	1.400	1.37	K3III SB
55266	11	20	14.6	+38	4	22.2	170.060821	+38.072826	4.76	0.113	0.11	A2V
55282	11	20	22.0	-14	53	23.1	170.091848	-14.889760	3.56	1.112	1.12	K0III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
55425	11	21	56.9	-54	36	12.7	170.487179	-54.603536	3.90	-0.157	-0.16	B5Vn
55434	11	22	11.6	+ 5	55	0.2	170.548249	+ 5.916730	4.05	-0.058	-0.06	B9.5Vs
55560	11	23	56.7	+43	22	11.9	170.986131	+43.369966	4.99	0.998	0.94	G8II
55588	11	24	12.5	-36	16	38.9	171.052117	-36.277458	5.00	1.464	1.47	K4III
55642	11	24	59.5	+10	24	58.8	171.247736	+10.416333	4.00	0.423	0.47	F2IV SB
55687	11	25	38.8	-10	58	19.1	171.411622	-10.971982	4.81	1.556	1.67	K5III
55705	11	25	54.5	-17	47	48.5	171.477090	-17.796807	4.06	0.216	0.24	A9V
55945	11	28	59.5	+ 2	44	35.4	172.247826	+ 2.743173	4.95	1.000	0.95	G8II-III
56127	11	31	21.8	- 3	7	0.4	172.840690	- 3.116786	4.77	1.529	1.62	K4III
56211	11	32	35.9	+69	13	3.8	173.149653	+69.217709	3.82	1.613	1.79	M0IIIvar
56280	11	33	17.6	-29	22	24.7	173.323260	-29.373530	4.93	0.540	0.61	F8V
56343	11	34	0.9	-31	58	16.3	173.503548	-31.971208	3.54	0.947	0.92	G8III
56480	11	35	44.5	-54	22	38.8	173.935211	-54.377447	4.62	-0.077	-0.06	B9V
56561	11	36	44.2	-63	8	0.2	174.184337	-63.133381	3.11	-0.044	-0.01	B9II:
56633	11	37	43.4	- 9	54	56.8	174.430800	- 9.915780	4.70	-0.073	-0.06	B9.5Vn
56647	11	37	59.9	- 0	56	13.5	174.499677	- 0.937070	4.30	0.983	0.98	G9III
56922	11	41	14.2	-34	51	30.2	175.308960	-34.858380	4.70	-0.070	-0.05	B9V
56986	11	41	52.4	-62	12	13.8	175.468409	-62.203832	4.93	1.111	1.11	G3Ib
57175	11	44	30.5	-62	36	11.6	176.127224	-62.603225	5.00	0.784	0.87	F9Ia
57283	11	45	48.3	-18	27	52.9	176.451086	-18.464689	4.71	0.958	0.94	G8III
57328	11	46	20.4	+ 8	8	38.8	176.584983	+ 8.144098	4.84	0.174	0.19	A4V
57363	11	46	35.2	-66	50	32.9	176.646835	-66.842481	3.63	0.160	0.17	A7III
57380	11	46	54.7	+ 6	24	52.1	176.728119	+ 6.414465	4.04	1.501	1.79	M0III
57399	11	47	7.5	+47	39	56.3	176.781386	+47.665646	3.69	1.181	1.15	K0III
57439	11	47	31.0	-61	17	32.7	176.879038	-61.292419	4.11	0.895	0.88	G0II
57443	11	47	30.1	-40	36	43.3	176.875368	-40.612041	4.89	0.664	0.73	G3/G5V
57565	11	49	2.5	+20	6	17.8	177.260269	+20.104939	4.50	0.547	0.69	A comp SB
57581	11	49	14.5	-66	55	44.3	177.310514	-66.928976	4.75	1.522	1.62	K4III
57632	11	50	6.2	+14	27	26.8	177.526016	+14.457433	2.14	0.090	0.10	A3Vvar
57669	11	50	41.7	-63	54	8.9	177.673566	-63.902462	4.30	-0.149	-0.09	B3V
57696	11	50	56.4	-70	20	23.3	177.735126	-70.339815	4.98	1.360	1.31	G5Ib
57757	11	51	45.8	+ 1	38	57.1	177.940707	+ 1.649182	3.59	0.518	0.61	F8V
57803	11	52	10.6	-45	17	15.2	178.044092	-45.287556	4.47	1.283	1.24	K4III
57851	11	52	52.2	-65	19	12.0	178.217363	-65.319996	4.89	-0.123	-0.11	B4V
57936	11	53	56.9	-34	1	19.8	178.487209	-34.022177	4.29	-0.100	-0.07	Ap Si
58001	11	54	54.0	+53	34	50.7	178.725147	+53.580744	2.41	0.044	0.06	A0V SB
58484	12	0	40.4	-78	20	9.6	180.168426	-78.335999	4.88	-0.054	-0.02	B9Vn
58590	12	1	55.4	+ 6	30	0.2	180.480842	+ 6.500047	4.65	0.122	0.14	A5V
58758	12	4	4.9	-63	25	37.2	181.020527	-63.426995	4.32	0.280	0.36	Am
58867	12	5	23.3	-63	16	47.3	181.347277	-63.279798	4.72	-0.081	-0.06	B2IV
58948	12	6	15.2	+ 8	37	9.2	181.563206	+ 8.619228	4.12	0.967	0.96	G8III
59072	12	7	57.9	-64	43	40.8	181.991302	-64.727991	4.14	0.353	0.41	F2III
59173	12	9	9.4	-50	46	31.3	182.289352	-50.775365	4.46	-0.163	-0.16	B2IIIne
59196	12	9	25.7	-50	50	11.4	182.357222	-50.836488	2.58	-0.128	-0.12	B2IVne
59199	12	9	28.5	-24	50	35.2	182.368705	-24.843120	4.02	0.334	0.40	F0IV/V
59316	12	11	10.9	-22	44	1.3	182.795586	-22.733697	3.02	1.326	1.23	K2III
59449	12	12	43.9	-52	28	57.1	183.183098	-52.482514	3.97	-0.156	-0.17	B3V
59747	12	16	14.7	-58	51	46.2	184.061453	-58.862833	2.79	-0.193	-0.25	B2IV
59774	12	16	25.9	+56	55	7.8	184.107993	+56.918823	3.32	0.077	0.03	A3Vvar
59803	12	16	51.8	-17	39	20.3	184.215822	-17.655629	2.58	-0.107	-0.10	B8III
59847	12	17	22.6	+23	49	53.7	184.344328	+23.831572	4.93	0.957	0.94	K0III
59856	12	17	31.8	+32	56	49.6	184.382338	+32.947107	4.99	1.140	1.12	K1III
59929	12	18	41.8	-68	4	28.7	184.674368	-68.074638	4.06	1.603	2.82	M5III
60000	12	19	35.6	-79	25	33.2	184.898525	-79.425895	4.24	-0.123	-0.11	B5Vn
60009	12	19	33.8	-64	7	0.7	184.891008	-64.116849	4.06	-0.168	-0.18	B2.5V
60129	12	20	57.3	- 0	46	50.1	185.238918	- 0.780592	3.89	0.026	0.03	A2IV
60172	12	21	23.5	+ 3	11	54.9	185.347826	+ 3.198585	4.97	1.172	1.19	K1III
60202	12	21	45.1	+17	40	47.1	185.437889	+17.679736	4.72	1.010	1.02	G8III
60260	12	22	28.8	-60	30	51.2	185.619973	-60.514228	3.59	1.389	1.39	K3/K4III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
60351	12	23	32.0	+25	43	57.3	185.883336	+25.732573	4.78	0.515	0.61	F8:p...
60485	12	25	0.9	+51	26	55.9	186.253652	+51.448859	4.76	0.877	0.89	G7III
60697	12	27	25.4	+27	9	17.5	186.855931	+27.154853	4.92	0.277	0.28	F0p
60710	12	27	38.8	-51	33	50.4	186.911607	-51.564007	4.82	-0.141	-0.16	B3Vn
60718	12	27	45.2	-63	12	44.9	186.938438	-63.212485	0.77	-0.243	-0.26	B0.5IV
60742	12	27	57.4	+28	9	16.8	186.989259	+28.154677	4.35	1.128	1.04	K2IIICN+...
60746	12	28	0.7	+26	42	44.5	187.002737	+26.712356	4.98	0.088	0.05	A4V
60823	12	29	9.4	-50	20	38.1	187.289375	-50.343929	3.91	-0.192	-0.20	B3V
60965	12	30	55.7	-16	37	45.5	187.731970	-16.629317	2.94	-0.012	-0.04	B9.5V
61084	12	32	18.9	-57	13	39.7	188.078835	-57.227700	1.59	1.600	2.37	M4III
61174	12	33	7.8	-16	18	33.5	188.282504	-16.309293	4.30	0.388	0.44	F2V
61199	12	33	43.1	-72	14	45.4	188.429555	-72.245942	3.84	-0.157	-0.14	B5V
61281	12	34	20.8	+69	40	31.6	188.586735	+69.675435	3.85	-0.116	-0.02	B6IIIp
61317	12	34	42.7	+41	14	46.5	188.678101	+41.246264	4.24	0.588	0.67	G0V
61359	12	35	28.1	-23	30	35.5	188.866964	-23.509860	2.65	0.893	0.88	G5II
61384	12	35	35.4	+69	54	32.4	188.897700	+69.908990	4.95	1.312	1.27	K2III
61394	12	35	52.3	+22	30	60.0	188.967835	+22.516660	4.80	0.012	0.03	A0IV
61585	12	38	25.7	-69	14	53.5	189.607231	-69.248197	2.69	-0.176	-0.23	B2IV-V
61622	12	38	50.0	-48	39	13.9	189.708257	-48.653866	3.85	0.049	0.06	A2V
61740	12	40	18.4	- 8	6	29.2	190.076514	- 8.108100	4.66	1.240	1.15	K2III
61789	12	40	59.5	-40	5	59.2	190.248032	-40.099782	4.63	-0.082	-0.06	B8II/III
61932	12	42	39.4	-49	4	19.5	190.664359	-49.072089	2.20	-0.023	-0.01	A1IV
61941	12	42	42.0	- 1	33	40.4	190.674929	- 1.561224	2.74	0.368	0.43	F0V+...
61960	12	42	55.3	+10	7	22.7	190.730397	+10.122963	4.88	0.076	0.08	A0V
61966	12	43	8.2	-59	47	52.8	190.784162	-59.797992	4.91	-0.044	-0.02	B6IV
62012	12	43	44.1	-48	55	31.3	190.933772	-48.925372	4.66	1.075	1.03	K0III
62268	12	46	51.3	-61	5	36.5	191.713795	-61.093476	4.69	1.049	1.03	K1III
62322	12	47	33.6	-68	13	11.7	191.889955	-68.219906	3.04	-0.178	-0.19	B2V
62327	12	47	34.1	-56	36	2.2	191.892093	-56.600621	4.62	-0.150	-0.16	B3V
62434	12	48	56.0	-59	48	1.5	192.233312	-59.800420	1.25	-0.238	-0.27	B0.5III
62683	12	51	48.3	-34	6	38.4	192.951067	-34.110654	4.90	-0.031	-0.01	B9V
62763	12	52	41.7	+27	25	46.2	193.173840	+27.429498	4.93	0.681	0.70	G0III
62867	12	54	17.1	-49	3	16.0	193.571215	-49.054450	4.33	1.344	1.33	K3/K4III
62886	12	54	18.2	+21	8	1.6	193.576023	+21.133782	4.89	0.904	0.91	G8III
62896	12	54	34.8	-40	17	23.8	193.644845	-40.289952	4.25	0.224	0.27	A4IV
62956	12	54	55.5	+55	50	55.9	193.731332	+55.848868	1.76	-0.022	-0.04	A0p
62985	12	55	25.3	- 9	38	59.9	193.855285	- 9.649960	4.77	1.590	2.18	M3IIIvar
63003	12	55	48.7	-57	17	19.7	193.953051	-57.288818	4.03	-0.180	-0.26	B2IV-V
63007	12	55	53.1	-59	15	27.3	193.971252	-59.257594	4.62	-0.153	-0.15	B4Vn
63090	12	56	38.2	+ 3	17	11.3	194.159258	+ 3.286468	3.39	1.571	2.24	M3III
63125	12	56	59.0	+38	12	28.9	194.245960	+38.208023	2.89	-0.115	-0.13	A0spe...
63355	12	59	56.2	+17	17	57.6	194.984271	+17.299342	4.76	1.568	1.79	M0III
63462	13	1	15.2	+30	40	29.5	195.313344	+30.674861	4.88	1.165	1.13	K1IIIp
63503	13	1	36.2	+56	15	22.6	195.400653	+56.256280	4.93	0.368	0.45	F2V
63608	13	3	11.8	+10	50	57.8	195.799291	+10.849390	2.85	0.934	0.83	G8IIIvar
63613	13	3	42.8	-71	39	31.7	195.928163	-71.658813	3.61	1.190	1.17	K2III
63724	13	4	45.1	-49	38	13.2	196.188030	-49.636997	4.83	0.029	0.05	A0V
63945	13	7	28.6	-48	34	21.6	196.869114	-48.572659	4.71	-0.148	-0.14	B5V
64004	13	8	7.1	-50	0	55.8	197.029501	-50.015512	4.27	-0.182	-0.18	B1.5V
64022	13	8	9.7	+27	30	54.7	197.040209	+27.515188	4.80	1.482	1.55	K5III
64166	13	10	9.8	-23	13	37.9	197.540746	-23.227181	4.94	1.048	1.02	K0III
64238	13	11	0.8	- 5	38	52.6	197.753283	- 5.647951	4.38	-0.008	0.01	A1V
64241	13	10	59.1	+17	25	17.0	197.746143	+17.421393	4.32	0.455	0.53	F5V
64394	13	12	49.7	+27	46	28.6	198.207196	+27.774612	4.23	0.572	0.67	G0V
64408	13	13	12.2	-37	54	40.3	198.300850	-37.911192	4.85	0.693	0.73	G3V
64425	13	13	35.4	-60	1	44.6	198.397420	-60.029058	4.58	-0.073	-0.07	B8V
64540	13	14	38.5	+40	2	41.2	198.660614	+40.044784	4.94	1.061	1.03	K0III
64583	13	15	32.3	-59	12	43.8	198.884378	-59.212168	4.90	0.489	0.56	F7IV
64661	13	16	39.8	-68	0	9.2	199.166007	-68.002551	4.79	-0.078	-0.09	B8V

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
64820	13	18	37.3	-66	53	27.8	199.655583	-66.891054	4.86	1.480	1.50	K2Ib/II
64844	13	18	27.5	+40	27	54.5	199.614742	+40.465143	4.72	0.306	0.31	F3III
64852	13	18	38.4	+ 5	21	44.6	199.660152	+ 5.362378	4.78	1.638	1.97	M2III
64924	13	19	28.9	-18	25	28.3	199.870476	-18.424517	4.74	0.709	0.75	G5V
64962	13	20	2.4	-23	16	44.6	200.010093	-23.279059	2.99	0.920	0.90	G8III
65109	13	21	45.4	-36	49	11.3	200.439082	-36.819813	2.75	0.068	0.02	A2V
65271	13	23	58.5	-61	5	42.5	200.993615	-61.095134	4.52	-0.141	-0.13	B3V
65378	13	24	44.9	+54	49	7.6	201.186880	+54.818767	2.23	0.057	0.07	A2V
65387	13	25	24.4	-64	38	31.9	201.351796	-64.642191	4.52	0.822	0.87	G5III-IV
65474	13	26	16.5	-11	16	3.8	201.568906	-11.267719	0.98	-0.235	-0.25	B1V
65477	13	26	2.6	+54	52	53.9	201.510858	+54.881625	3.99	0.169	0.19	A5V SB
65639	13	28	33.0	-16	4	45.3	202.137388	-16.079261	4.76	1.096	1.02	K1IIICN...
65721	13	29	26.0	+13	40	11.8	202.358284	+13.669957	4.97	0.714	0.77	G5V
65936	13	32	14.4	-39	30	44.9	203.060157	-39.512480	3.90	1.186	1.10	G8II/III
66006	13	33	2.0	- 6	21	39.6	203.258194	- 6.361001	4.68	1.606	2.06	M3III
66200	13	35	10.3	+ 3	33	15.5	203.793034	+ 3.554315	4.92	0.029	0.03	A1p SrCrEu
66234	13	35	17.4	+48	54	41.9	203.822390	+48.911650	4.68	0.132	0.10	A5V
66249	13	35	44.4	- 0	41	59.8	203.934903	- 0.699956	3.38	0.114	0.12	A3V
66257	13	35	42.6	+37	4	40.7	203.927538	+37.077963	4.91	0.404	0.55	F2IV SB
66458	13	38	22.2	+36	11	28.2	204.592435	+36.191174	4.82	0.239	0.31	A7III
66657	13	41	12.0	-53	34	11.2	205.299955	-53.569771	2.29	-0.171	-0.23	B1III
66738	13	41	30.8	+54	34	42.2	205.378267	+54.578388	4.63	1.630	1.97	M2IIIvar
66821	13	43	4.4	-54	39	44.9	205.768175	-54.662470	4.99	-0.055	-0.03	B8Vn+...
67153	13	46	51.5	-33	8	47.7	206.714691	-33.146597	4.23	0.390	0.44	F3V
67234	13	47	58.0	-51	32	5.1	206.991508	-51.534751	4.64	0.955	0.93	G8/K0III
67275	13	48	14.2	+17	21	19.7	207.059223	+17.355474	4.50	0.508	0.51	F7V
67301	13	48	20.8	+49	12	41.4	207.086633	+49.211491	1.85	-0.099	-0.08	B3V SB
67457	13	50	38.4	-34	33	8.3	207.659912	-34.552318	4.19	1.520	3.00	M5III
67459	13	50	28.0	+15	41	48.9	207.616574	+15.696906	4.05	1.520	1.60	K5IIIvar
67464	13	50	44.6	-41	47	20.4	207.685652	-41.789013	3.41	-0.225	-0.24	B2IV
67472	13	50	51.6	-42	34	30.0	207.714994	-42.575003	3.47	-0.170	-0.21	B2IV-Ve
67480	13	50	41.0	+21	9	46.9	207.670742	+21.163027	4.92	1.432	1.38	K4III
67494	13	50	59.3	-18	14	7.8	207.747270	-18.235497	4.96	1.059	1.09	K0III
67627	13	52	1.9	+64	37	20.7	208.007783	+64.622429	4.58	1.572	2.35	M3III
67665	13	52	41.7	+34	20	36.1	208.173559	+34.343365	4.76	1.611	1.63	K5III
67669	13	53	1.0	-33	5	41.7	208.254034	-33.094913	4.32	-0.146	-0.12	B5
67786	13	54	23.7	-32	1	40.8	208.598730	-32.028003	4.75	-0.111	-0.10	B4IV
67927	13	55	39.7	+18	17	44.6	208.915210	+18.295724	2.68	0.580	0.65	G0IV
68002	13	56	49.7	-47	23	18.2	209.207226	-47.388384	2.55	-0.176	-0.18	B2.5IV
68191	13	59	9.2	-63	47	10.0	209.788371	-63.786098	4.71	1.075	1.05	K4III
68245	13	59	31.5	-42	11	59.9	209.881445	-42.199961	3.83	-0.224	-0.23	B2IV
68282	13	59	57.3	-44	54	9.7	209.988670	-44.902698	3.87	-0.208	-0.22	B2IV-V
68520	14	2	41.5	+ 1	26	46.1	210.672853	+ 1.446135	4.23	0.121	0.14	A3V
68523	14	3	0.8	-45	42	6.4	210.753307	-45.701766	4.34	0.598	0.65	F6II
68702	14	5	17.3	-60	28	15.1	211.322072	-60.470849	0.61	-0.231	-0.25	B1III
68756	14	4	56.7	+64	16	41.9	211.236334	+64.278304	3.67	-0.049	-0.08	A0III SB
68862	14	7	18.4	-41	16	36.7	211.826482	-41.276873	4.36	-0.198	-0.21	B2V
68895	14	7	32.6	-26	46	48.7	211.886038	-26.780190	3.25	1.091	1.10	K2III
68933	14	7	53.8	-36	28	11.3	211.974061	-36.469793	2.06	1.011	1.01	K0IIIb
69112	14	8	47.9	+77	27	4.1	212.199722	+77.451145	4.80	1.368	1.34	K3III
69191	14	11	17.5	-53	32	7.9	212.822848	-53.535529	4.74	0.938	0.92	G8III
69226	14	11	20.0	+24	59	43.2	212.833396	+24.995334	4.82	0.541	0.57	F9IVw
69269	14	11	57.9	-16	23	52.6	212.991171	-16.397954	4.93	1.684	1.94	M1III
69389	14	13	18.2	+ 2	18	49.7	213.325658	+ 2.313798	4.99	-0.118	-0.11	B9p Si
69427	14	13	59.5	-10	22	5.6	213.498045	-10.368229	4.18	1.323	1.35	K3III
69483	14	14	13.0	+51	41	41.0	213.554254	+51.694709	4.53	0.233	0.23	A8IV
69673	14	16	35.8	+19	4	36.2	214.149357	+19.076732	-0.05	1.239	1.22	K2IIIp
69701	14	17	5.5	- 6	5	50.4	214.272899	- 6.097328	4.07	0.511	0.59	F7V
69713	14	16	53.4	+51	16	23.8	214.222689	+51.273271	4.75	0.236	0.19	A9V

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
69732	14	17	9.7	+45	59	41.3	214.290536	+45.994801	4.18	0.087	0.04	A0sh
69879	14	18	51.8	+35	24	56.4	214.715747	+35.415663	4.80	1.057	1.00	K1III
69896	14	20	56.3	-81	6	6.2	215.234581	-81.101718	4.89	0.243	0.24	A2m...
69974	14	20	13.3	-13	27	52.2	215.055581	-13.464502	4.52	0.128	0.11	A1V
69996	14	20	43.6	-46	9	5.7	215.181509	-46.151571	3.55	-0.184	-0.18	B2.5IV
70027	14	20	43.5	+16	12	50.0	215.181176	+16.213876	4.84	1.228	1.16	K3III
70069	14	21	46.4	-56	28	47.0	215.443250	-56.479714	4.30	0.082	0.21	B6Ib
70090	14	21	48.7	-37	58	42.6	215.452864	-37.978494	4.05	-0.030	-0.02	A0IV
70104	14	22	1.7	-45	16	50.0	215.506901	-45.280552	4.78	0.310	0.36	F0IV
70264	14	24	6.2	-58	33	5.5	216.025646	-58.551528	4.76	0.795	0.83	G8/K1 + F/G
70300	14	24	18.5	-39	36	15.7	216.077083	-39.604354	4.41	-0.185	-0.20	B2V
70306	14	24	17.0	-27	50	49.5	216.070727	-27.847075	4.78	1.300	1.31	K3III
70327	14	24	23.3	+ 8	21	15.2	216.096876	+ 8.354211	4.86	0.010	0.07	A0V
70497	14	25	53.7	+51	45	24.0	216.473628	+51.756661	4.04	0.497	0.59	F7V
70574	14	27	27.8	-45	18	46.8	216.865628	-45.312994	4.56	-0.147	-0.14	B2IV
70576	14	27	30.5	-45	28	14.8	216.877027	-45.470791	4.33	0.434	0.58	A7:+...
70638	14	30	27.3	-83	45	32.0	217.613796	-83.758888	4.31	1.300	1.30	K2III
70692	14	27	30.4	+75	36	17.4	216.876552	+75.604837	4.25	1.431	1.42	K4III
70753	14	29	22.8	-29	34	57.6	217.345006	-29.582670	4.97	-0.074	-0.05	B7/B8V
70755	14	29	15.6	- 2	19	8.0	217.315161	- 2.318888	4.81	0.693	0.73	G2III
71053	14	32	42.8	+30	16	56.2	218.178281	+30.282267	3.57	1.298	1.22	K3III
71075	14	32	54.2	+38	13	9.6	218.225715	+38.219325	3.04	0.191	0.17	A7IIIvar
71121	14	34	0.6	-50	32	48.3	218.502633	-50.546757	4.44	-0.177	-0.18	B2III
71284	14	35	34.4	+29	39	24.9	218.893135	+29.656913	4.47	0.364	0.41	F3Vwvar
71352	14	36	49.0	-42	14	47.9	219.204312	-42.246636	2.33	-0.157	-0.17	B1Vn + A
71536	14	39	16.6	-49	30	49.9	219.819328	-49.513857	4.05	-0.152	-0.16	B5V
71681	14	40	59.9	-60	55	9.1	220.249562	-60.919202	1.35	0.900	0.88	K1V
71683	14	41	1.1	-60	55	7.1	220.254580	-60.918627	-0.01	0.710	0.69	G2V
71762	14	41	41.4	+16	19	52.9	220.422527	+16.331350	4.49	-0.002	0.02	B9p MnHg
71795	14	42	7.7	+13	38	28.8	220.532218	+13.641342	3.78	0.044	0.06	A3IVn
71832	14	42	39.2	+ 8	4	30.2	220.663454	+ 8.075059	4.86	0.992	0.96	G8IIIvar
71860	14	43	18.2	-47	28	29.7	220.825711	-47.474907	2.30	-0.154	-0.21	B1.5III
71865	14	43	14.4	-37	52	48.9	220.810125	-37.880246	4.01	-0.157	-0.18	B2.5V
71908	14	44	11.3	-65	3	46.0	221.047012	-65.062775	3.18	0.256	0.26	F1Vp
71957	14	44	8.6	- 5	44	46.4	221.035772	- 5.746235	3.87	0.385	0.47	F2III
71995	14	44	19.4	+26	26	29.7	221.080951	+26.441595	4.80	1.672	2.13	M3III
72010	14	44	55.1	-35	15	38.4	221.229473	-35.260665	4.06	1.356	1.35	K3III
72104	14	46	15.0	-35	16	38.7	221.562684	-35.277427	4.92	0.013	0.02	A0V
72105	14	45	52.9	+26	59	19.3	221.470584	+26.988682	2.35	0.966	0.95	A0
72125	14	46	11.9	+16	52	42.4	221.549556	+16.878441	4.60	0.972	0.94	K0III
72220	14	47	17.2	+ 1	48	27.2	221.821718	+ 1.807553	3.73	-0.005	0.01	A0V
72370	14	50	30.3	-79	7	45.3	222.626221	-79.129245	3.83	1.433	1.42	K5III
72571	14	51	29.9	-28	2	40.4	222.874433	-28.044549	4.42	1.366	1.43	K3III
72607	14	50	40.0	+74	4	18.0	222.666565	+74.071670	2.07	1.465	1.46	K4IIIvar
72622	14	52	1.0	-16	7	32.9	223.004040	-16.125805	2.75	0.147	0.16	A3IV
72631	14	52	5.0	- 2	23	0.4	223.020758	- 2.383445	4.93	0.988	0.97	G8...
72659	14	52	20.2	+19	0	59.6	223.084071	+19.016562	4.54	0.720	0.82	G8V + K4V
72683	14	52	59.1	-43	39	31.9	223.246304	-43.658858	4.32	-0.154	-0.14	B5IV
73165	14	58	15.4	- 4	25	43.7	224.564048	- 4.428809	4.47	0.318	0.38	F0V
73199	14	57	54.9	+65	51	4.2	224.478891	+65.851162	4.63	1.590	2.85	M5III
73273	14	59	53.0	-43	12	54.5	224.970845	-43.215141	2.68	-0.184	-0.23	B2III
73334	15	0	30.2	-42	11	6.2	225.125824	-42.185060	3.13	-0.208	-0.21	B2IV
73473	15	2	4.2	- 8	35	56.8	225.517603	- 8.599114	4.91	0.000	0.07	B9.5V
73555	15	2	43.1	+40	18	37.9	225.679601	+40.310539	3.49	0.956	0.89	G8III
73568	15	3	0.4	+24	55	41.1	225.751724	+24.928085	4.80	1.506	1.54	K4III
73620	15	3	56.3	+ 2	0	42.8	225.984543	+ 2.011898	4.39	1.026	1.04	K0III
73695	15	4	27.9	+47	34	29.8	226.116146	+47.574939	4.83	0.647	0.71	G2V + G2V
73714	15	5	16.5	-25	21	40.5	226.318705	-25.361240	3.25	1.674	2.23	M3/M4III
73745	15	5	19.5	+26	52	7.2	226.331142	+26.868672	4.52	1.240	1.23	K2III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
73807	15	6	31.4	-47	7	47.9	226.630946	-47.129976	3.91	-0.144	-0.15	B5
73996	15	8	12.1	+24	47	25.3	227.050461	+24.790374	4.93	0.429	0.51	F5V
74117	15	10	14.0	-45	21	26.2	227.558309	-45.357265	4.07	-0.162	-0.18	B3V
74376	15	13	22.2	-48	48	51.1	228.342503	-48.814200	3.88	-0.029	-0.02	B9V
74392	15	13	23.6	-19	52	4.6	228.348475	-19.867948	4.54	-0.071	-0.06	Asp...
74395	15	13	46.2	-52	10	32.2	228.442351	-52.175617	3.41	0.918	0.91	G8III
74449	15	14	12.7	-44	34	34.8	228.553032	-44.576329	4.83	-0.177	-0.19	B3IV
74604	15	15	53.0	-31	35	39.3	228.970808	-31.594255	4.91	0.374	0.48	F3III
74666	15	16	19.8	+33	14	21.6	229.082370	+33.239324	3.46	0.961	0.96	G8III
74785	15	18	6.8	- 9	27	26.3	229.528190	- 9.457309	2.61	-0.071	-0.08	B8V
74824	15	19	8.1	-58	52	33.4	229.783787	-58.875948	4.07	0.088	0.08	A3V
74837	15	19	24.1	-63	41	3.6	229.850211	-63.684328	4.85	1.260	1.20	K2.5III
74857	15	19	5.0	-30	13	21.5	229.770798	-30.222634	4.35	1.100	1.03	K1II/III
74911	15	19	58.2	-47	56	56.7	229.992311	-47.949089	4.27	-0.086	-0.07	B8V
74946	15	20	51.2	-68	45	11.2	230.213344	-68.753118	2.87	0.014	0.04	A1V
75097	15	20	42.7	+71	45	39.7	230.177918	+71.761040	3.00	0.058	0.12	A3II-III
75141	15	22	43.5	-40	43	12.8	230.681206	-40.720217	3.22	-0.227	-0.23	B1.5IV
75177	15	23	6.8	-36	20	3.3	230.778324	-36.334262	3.57	1.534	1.59	K5III
75206	15	23	34.5	-48	0	2.8	230.893892	-48.000783	4.99	0.515	0.59	F8V
75264	15	24	4.9	-44	45	42.4	231.020415	-44.761786	3.37	-0.191	-0.20	B2IV-V
75304	15	24	28.3	-36	55	49.8	231.117993	-36.930493	4.54	-0.155	-0.16	B4V
75312	15	24	3.1	+30	12	53.6	231.013085	+30.214876	4.99	0.577	0.65	G2V
75323	15	25	1.6	-59	23	33.8	231.256682	-59.392725	4.48	0.169	0.18	B5III + F8
75379	15	25	18.7	-10	23	40.7	231.328038	-10.394634	4.92	0.453	0.52	F5IV
75411	15	25	15.9	+37	18	22.2	231.316345	+37.306164	4.31	0.309	0.35	F0V
75458	15	25	23.3	+58	53	41.3	231.347147	+58.894799	3.29	1.166	1.07	K2III
75501	15	26	40.4	-38	48	17.0	231.668272	-38.804729	4.60	0.000	0.02	A0V
75695	15	28	40.5	+29	2	9.7	232.168656	+29.036029	3.66	0.319	0.37	F0p
76008	15	30	50.8	+77	16	49.3	232.711586	+77.280361	5.00	1.545	1.61	K5III
76041	15	32	31.1	+40	49	50.3	233.129402	+40.830636	4.98	0.086	0.15	A5V
76127	15	33	45.4	+31	17	27.4	233.439221	+31.290945	4.14	-0.127	-0.12	B6Vnn
76219	15	35	18.1	-10	8	0.3	233.825321	-10.133407	4.61	1.000	1.02	K1IV
76267	15	35	33.4	+26	38	48.4	233.889067	+26.646771	2.22	0.032	0.05	A0V
76276	15	35	47.0	+10	28	17.5	233.945753	+10.471527	3.80	0.268	0.30	F0IV
76297	15	36	30.8	-41	14	2.5	234.128490	-41.234041	2.80	-0.216	-0.22	B2IV
76333	15	36	40.6	-14	51	23.5	234.169027	-14.856530	3.91	1.007	1.02	K0III
76371	15	37	18.4	-45	1	31.2	234.326807	-45.025340	4.55	-0.175	-0.20	B3IVp
76440	15	38	37.2	-66	23	1.5	234.654992	-66.383739	4.11	1.161	1.12	K0III
76470	15	38	16.4	-28	12	5.4	234.568282	-28.201506	3.60	1.361	1.36	K3III
76552	15	39	26.5	-42	37	58.8	234.860499	-42.632997	4.34	1.412	1.42	K4.5III
76600	15	39	55.2	-29	50	37.1	234.979971	-29.843643	3.66	-0.177	-0.18	B2.5V
76669	15	40	9.0	+36	34	12.8	235.037616	+36.570228	4.64	-0.103	-0.09	B7V+...
76705	15	41	4.4	-34	28	38.2	235.268442	-34.477282	4.66	0.964	0.97	G8/K0III
76742	15	41	29.8	-23	52	59.6	235.374373	-23.883212	4.97	1.302	1.25	K3III
76829	15	42	36.4	-44	43	38.5	235.651739	-44.727357	4.64	0.413	0.47	F5IV-V
76852	15	42	27.9	+19	36	19.9	235.616450	+19.605530	4.51	0.062	0.07	A1V
76880	15	43	7.9	-19	44	37.8	235.782843	-19.743820	4.75	1.574	1.74	K5III
76945	15	43	59.7	-34	46	28.8	235.998870	-34.774659	4.75	-0.151	-0.15	B5V
76952	15	43	36.3	+26	13	54.4	235.901053	+26.231768	3.81	0.020	0.04	A1Vs
77055	15	43	22.1	+77	43	50.0	235.842006	+77.730551	4.29	0.038	0.05	A3Vn
77070	15	45	16.7	+ 6	21	44.6	236.319737	+ 6.362383	2.63	1.167	1.09	K2III
77233	15	47	8.1	+15	21	32.0	236.783684	+15.358889	3.65	0.073	0.09	A3V
77257	15	47	26.4	+ 7	17	24.4	236.859997	+ 7.290101	4.42	0.604	0.66	G0Vvar
77450	15	49	39.8	+18	4	45.9	237.415826	+18.079424	4.09	1.616	1.73	M1III
77512	15	50	27.3	+26	0	24.3	237.613642	+26.006738	4.59	0.794	0.82	G5III-IV
77516	15	50	41.5	- 3	29	29.8	237.672944	- 3.491607	3.54	-0.036	-0.03	A0V
77622	15	51	50.4	+ 4	25	2.4	237.959856	+ 4.417321	3.71	0.147	0.13	A2m
77634	15	52	16.0	-33	41	16.6	238.066701	-33.687937	3.97	-0.045	-0.05	B9.5III-IV
77635	15	52	13.0	-25	48	43.5	238.054010	-25.812073	4.63	-0.072	-0.04	B1.5Vn

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
77655	15	52	0.3	+35	35	41.4	238.001349	+35.594822	4.79	0.996	0.97	K0III-IV
77661	15	52	10.0	+20	55	2.7	238.041575	+20.917429	4.74	1.534	1.60	K5III
77760	15	53	23.1	+42	23	41.9	238.346166	+42.394984	4.60	0.563	0.63	F9V
77840	15	54	50.8	-25	23	12.5	238.711678	-25.386808	4.59	-0.073	-0.06	B2.5Vn
77853	15	54	59.7	-16	47	16.8	238.748952	-16.787990	4.13	1.003	1.02	K0III
77952	15	56	58.0	-63	29	30.2	239.241856	-63.491709	2.83	0.315	0.36	F2III
78072	15	57	24.1	+15	35	46.0	239.350265	+15.596120	3.85	0.478	0.54	F6V
78104	15	58	9.3	-29	16	20.4	239.538667	-29.272334	3.87	-0.199	-0.18	B2IV/V
78159	15	58	26.2	+26	49	10.7	239.609264	+26.819635	4.14	1.231	1.17	K3III
78180	15	58	16.8	+54	41	32.8	239.569868	+54.692452	4.96	0.269	0.29	F0IV
78207	15	59	20.4	-14	20	13.3	239.835058	-14.337039	4.95	-0.080	-0.06	B8Ia/Iab
78265	16	0	5.8	-26	10	17.5	240.023969	-26.171530	2.89	-0.180	-0.18	B1V + B2V
78323	16	0	54.4	-41	48	5.4	240.226782	-41.801495	4.99	0.988	0.97	G8III
78384	16	1	29.2	-38	27	12.8	240.371605	-38.453565	3.42	-0.206	-0.23	B2.5IV
78401	16	1	32.9	-22	40	42.8	240.387275	-22.678564	2.29	-0.117	-0.09	B0.2IV
78493	16	2	15.9	+29	47	41.2	240.566161	+29.794769	4.98	-0.050	-0.03	A0p...
78527	16	2	16.6	+58	30	39.4	240.569142	+58.510955	4.01	0.528	0.55	F8IV-V
78554	16	3	10.7	+22	44	55.4	240.794597	+22.748716	4.82	0.066	0.09	A3V
78592	16	3	26.3	+45	58	50.4	240.859493	+45.980660	4.72	-0.094	-0.06	B9III
78639	16	4	43.8	-49	17	5.9	241.182572	-49.284971	4.65	0.902	0.91	G8III
78650	16	4	35.2	-25	55	14.8	241.146585	-25.920786	4.96	1.234	1.25	K3III
78655	16	4	46.3	-38	39	28.7	241.193072	-38.657983	4.90	-0.146	-0.15	B6III/IV
78662	16	5	12.9	-57	49	50.4	241.303765	-57.830659	4.63	0.252	0.30	A7IV
78727	0	1	3.0	+ 0	6	50.8	0.262632	+ 0.114113	4.16	0.460	0.53	F6IV
78820	16	6	37.9	-19	51	36.1	241.658059	-19.860025	2.56	-0.065	-0.04	B0.5V
78821	16	6	38.2	-19	51	22.8	241.659234	-19.856333	4.90	-0.024	0.00	B2V
78914	16	7	56.8	-45	13	36.8	241.986705	-45.226894	4.73	0.230	0.20	Am
78918	16	7	56.6	-36	51	22.9	241.985952	-36.856354	4.22	-0.184	-0.19	B2.5Vn
78933	16	8	0.6	-20	43	23.4	242.002356	-20.723156	3.93	-0.046	0.01	B1V
78990	16	8	36.7	-20	55	21.3	242.152723	-20.922584	4.31	0.831	0.85	G6/G8III
79043	16	9	0.1	+16	59	37.0	242.250407	+16.993615	5.00	0.931	0.93	G8III
79101	16	9	25.0	+44	52	55.3	242.354147	+44.882015	4.23	-0.045	-0.02	B9MNp...
79119	16	9	43.3	+36	26	23.5	242.430567	+36.439874	4.73	1.015	1.00	K0III-IV
79374	16	13	11.4	-19	30	44.6	243.297494	-19.512390	4.00	0.076	0.14	B2IV
79375	16	13	7.3	-10	6	57.5	243.280576	-10.115964	4.93	0.087	0.09	A3IV
79404	16	13	34.2	-27	58	40.4	243.392486	-27.977890	4.58	-0.172	-0.15	B2V
79509	16	15	6.3	-54	40	53.0	243.776376	-54.681378	4.95	1.017	0.99	G4III
79593	16	15	25.3	- 3	44	44.3	243.855444	- 3.745639	2.73	1.584	1.82	M1III
79664	16	17	19.2	-63	44	8.2	244.329925	-63.735610	3.86	1.105	1.03	G5II
79790	16	18	33.5	-50	7	2.5	244.639599	-50.117365	4.97	0.788	0.88	F9Ia
79822	16	16	55.8	+75	42	26.2	244.232444	+75.707283	4.95	0.393	0.46	F5V
79881	16	19	34.4	-28	39	47.8	244.893350	-28.663284	4.80	0.008	-0.01	A0V:
79882	16	19	24.5	- 4	44	27.7	244.851975	- 4.741024	3.23	0.966	0.96	G8III
79992	16	20	21.5	+46	15	55.4	245.089483	+46.265382	3.91	-0.151	-0.19	B5IV
80000	16	21	22.9	-50	12	13.5	245.345538	-50.203751	4.01	1.080	1.03	G8III
80047	16	23	28.7	-78	44	35.9	245.869543	-78.743309	4.68	1.680	2.67	M5III
80079	16	21	52.4	-24	13	1.4	245.468275	-24.217060	4.55	0.758	0.80	A4II/III
80112	16	22	26.3	-25	38	25.1	245.609489	-25.640302	2.90	0.299	0.31	B1III
80170	16	22	49.5	+19	6	22.4	245.706368	+19.106226	3.74	0.299	0.34	A9III
80179	16	23	6.7	+ 0	58	56.1	245.778060	+ 0.982253	4.82	0.338	0.39	F0V
80181	16	22	53.8	+30	50	43.8	245.724136	+30.845498	4.86	0.970	0.93	K0III
80331	16	24	16.4	+61	28	5.4	246.068311	+61.468175	2.73	0.910	0.84	G8III
80343	16	25	18.3	-20	5	1.3	246.326391	-20.083683	4.48	0.996	0.99	K0III
80463	16	26	21.8	+13	59	14.6	246.590723	+13.987385	4.57	0.002	0.02	B9p Cr
80473	16	26	49.1	-23	29	33.8	246.704376	-23.492727	4.57	0.227	0.25	B2V
80569	16	28	12.9	-18	30	4.1	247.053656	-18.501135	4.22	0.217	0.24	B2Vne
80582	16	28	41.6	-47	35	58.3	247.173432	-47.599515	4.46	-0.070	-0.04	B4V
80628	16	28	54.9	- 8	24	58.4	247.228544	- 8.416223	4.62	0.185	0.20	A3m
80650	16	27	57.1	+68	43	25.4	246.988101	+68.723724	4.94	-0.051	0.02	A0III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
80686	16	30	41.8	-70	7	39.5	247.674270	-70.127642	4.90	0.555	0.64	F9V
80704	16	29	19.0	+41	50	15.0	247.329179	+41.837510	4.83	1.289	3.61	M6III:var
80763	16	30	40.1	-26	28	32.8	247.666951	-26.475782	1.06	1.865	2.90	M1Ib + B2.5V
80815	16	31	27.4	-25	9	31.2	247.864135	-25.158656	4.79	-0.116	-0.12	B3V
80816	16	31	6.1	+21	26	46.2	247.775534	+21.446169	2.78	0.947	0.94	G8III
80883	16	31	56.9	+ 1	56	25.8	247.987265	+ 1.940509	3.82	0.022	0.03	A2V
80894	16	32	18.9	-16	39	20.9	248.078834	-16.655816	4.29	0.924	0.89	G8/K0III
80911	16	32	43.5	-34	44	49.9	248.181449	-34.747190	4.24	-0.168	-0.17	B2III-IV
80975	16	33	21.3	-21	30	30.9	248.338621	-21.508590	4.45	0.130	0.12	Ap
81008	16	33	33.9	+11	26	43.3	248.391335	+11.445356	4.84	1.495	1.58	K4III
81065	16	36	39.6	-78	56	20.1	249.164910	-78.938914	3.86	0.923	0.92	K0IV SB
81122	16	35	32.8	-44	5	12.4	248.886465	-44.086772	4.86	0.045	0.18	B0Ia
81126	16	34	45.9	+42	23	44.7	248.691244	+42.395753	4.20	-0.013	0.02	B9Vvar
81266	16	37	9.7	-28	15	24.4	249.290478	-28.256792	2.82	-0.206	-0.24	B0V
81304	16	37	43.6	-35	17	44.4	249.431856	-35.295663	4.18	1.535	1.72	K5III
81377	16	38	17.4	-10	36	25.3	249.572415	-10.607039	2.54	0.038	0.10	O9.5V
81497	16	39	18.3	+48	53	20.4	249.826312	+48.889008	4.86	1.562	2.03	M2.5III
81660	16	41	3.9	+64	33	1.4	250.266420	+64.550393	4.84	1.212	1.19	K1p
81693	16	42	3.6	+31	33	59.0	250.515010	+31.566396	2.81	0.650	0.70	F9IV
81724	16	42	45.7	-17	46	48.7	250.690232	-17.780184	4.91	1.095	1.13	G8II/III
81833	16	43	36.0	+38	53	3.4	250.899935	+38.884279	3.48	0.916	0.89	G8III-IV
81852	16	46	3.2	-77	33	22.7	251.513381	-77.556298	4.23	1.060	1.04	K0III
82020	16	45	41.3	+56	44	44.9	251.422115	+56.745800	4.84	0.375	0.44	F2V
82080	16	43	56.5	+82	0	2.1	250.985422	+82.000588	4.21	0.897	0.91	G5IIIvar
82273	16	50	51.2	-69	3	44.4	252.713229	-69.062325	1.91	1.447	1.45	K2IIb-IIIa
82321	16	49	50.3	+45	56	54.6	252.459565	+45.948505	4.82	0.087	0.10	A2p...
82363	16	51	33.9	-59	4	31.8	252.891258	-59.075510	3.77	1.562	1.67	K5III
82369	16	50	58.2	-10	49	3.3	252.742388	-10.817577	4.64	0.478	0.55	F7IV
82396	16	51	29.7	-34	19	42.9	252.873760	-34.328576	2.29	1.144	1.10	K2IIIb
82514	16	53	15.8	-38	4	50.1	253.315724	-38.080592	3.00	-0.200	-0.20	B1.5IV + B
82545	16	53	43.7	-38	3	1.9	253.431954	-38.050538	3.56	-0.210	-0.21	B2IV
82671	16	55	26.7	-42	23	38.8	253.861414	-42.394101	4.70	0.444	0.71	B1Iae
82673	16	54	58.7	+10	7	58.8	253.744694	+10.132993	4.39	-0.088	-0.13	B8V
82729	16	56	1.8	-42	23	39.7	254.007535	-42.394363	3.62	1.393	1.37	K4III
82860	16	56	8.7	+65	6	13.2	254.036267	+65.103670	4.88	0.481	0.56	F6Vvar
83000	16	58	38.4	+ 9	20	40.4	254.659925	+ 9.344557	3.19	1.160	1.10	K2IIIvar
83081	17	0	19.4	-56	1	12.4	255.080844	-56.020124	3.12	1.552	1.60	K5III
83153	17	1	13.4	-53	11	22.8	255.305950	-53.189657	4.06	1.452	1.42	K4III
83207	17	1	4.5	+30	53	50.5	255.268661	+30.897349	3.92	-0.018	-0.04	A0V
83262	17	2	8.5	- 4	15	6.6	255.535597	- 4.251839	4.82	1.483	1.49	K4III
83430	17	4	4.3	+14	3	49.7	256.017824	+14.063798	4.97	1.600	2.08	M3III
83574	17	6	10.4	-34	8	59.4	256.543469	-34.149829	4.83	0.257	0.38	B2Iab
83608	17	5	45.7	+54	26	36.9	256.440577	+54.443596	4.91	0.471	0.54	F5
83613	17	6	19.8	+12	42	50.6	256.582405	+12.714058	4.89	0.125	0.11	A4IV
83895	17	8	51.0	+65	41	22.3	257.212518	+65.689518	3.17	-0.120	-0.14	B6III
84012	17	11	33.3	-15	44	54.9	257.888821	-15.748595	2.43	0.059	0.06	A2.5Va
84143	17	13	37.5	-43	15	50.7	258.406202	-43.264076	3.32	0.441	0.47	F3p
84345	17	15	35.0	+14	22	5.9	258.895807	+14.368310	2.78	1.164	1.13	M5IIvar
84379	17	15	52.5	+24	48	58.6	258.968663	+24.816288	3.12	0.080	0.06	A3IVv SB
84380	17	15	45.7	+36	47	13.6	258.940500	+36.787113	3.16	1.437	1.31	K3IIvar
84405	17	16	36.8	-26	37	51.5	259.153239	-26.630969	4.33	0.855	0.92	K2:III:
84514	17	17	39.9	- 0	28	0.7	259.416200	- 0.466868	4.72	1.119	1.09	K2III
84573	17	18	5.1	+33	4	44.9	259.521043	+33.079130	4.80	-0.166	-0.17	B1.5Vp
84606	17	18	22.7	+37	16	15.9	259.594640	+37.271070	4.64	0.043	0.07	A2V
84880	17	21	58.9	-12	51	57.5	260.495472	-12.865985	4.32	0.037	0.07	A0/A1V
84893	17	22	14.2	-21	7	59.1	260.559220	-21.133087	4.39	0.394	0.47	F2/F3V
84969	17	24	8.6	-67	47	20.5	261.035636	-67.789021	4.76	1.194	1.18	K1III
84970	17	23	16.2	-25	1	5.5	260.817515	-25.018195	3.27	-0.186	-0.21	B2IV
85112	17	24	23.4	+37	7	41.4	261.097608	+37.128165	4.15	-0.011	0.01	B9.5III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
85258	17	27	0.5	-55	32	48.5	261.751968	-55.546811	2.84	1.479	1.50	K3Ib-II
85267	17	27	7.4	-56	23	40.4	261.781010	-56.394553	3.31	-0.150	-0.12	B1Ib
85340	17	27	37.4	-24	11	32.4	261.905903	-24.192338	4.16	0.283	0.30	A3IV:m
85355	17	27	32.0	+ 4	7	26.5	261.883147	+ 4.124038	4.34	1.480	1.44	K3IIvar
85365	17	27	43.2	- 5	6	11.2	261.930030	- 5.103120	4.53	0.385	0.46	F3V
85423	17	28	39.9	-29	53	1.2	262.166280	-29.883672	4.28	0.402	0.45	F3III
85670	17	30	53.8	+52	17	12.8	262.724258	+52.286886	2.79	0.954	0.93	G2II
85693	17	31	34.1	+26	5	47.1	262.891900	+26.096415	4.41	1.434	1.39	K3IIIvar
85696	17	32	9.6	-37	18	36.5	263.039852	-37.310144	2.70	-0.179	-0.23	B2IV
85727	17	32	57.2	-60	41	53.9	263.238423	-60.698293	3.60	-0.104	-0.10	B8V
85755	17	32	40.1	-23	58	36.0	263.166993	-23.976672	4.78	0.016	0.08	A0V
85792	17	33	25.7	-49	53	24.4	263.357220	-49.890110	2.84	-0.136	-0.15	B2Vne
85819	17	32	34.9	+55	10	15.0	263.145256	+55.170827	4.89	0.251	0.28	Am...
85822	17	25	42.3	+86	34	16.9	261.426219	+86.571353	4.35	0.021	0.04	A1Vn
85829	17	32	40.3	+55	9	34.7	263.168002	+55.159634	4.86	0.279	0.30	Am
85927	17	35	0.1	-37	7	0.3	263.750529	-37.116753	1.62	-0.231	-0.24	B1.5IV+...
86032	17	35	53.2	+12	32	47.7	263.971623	+12.546580	2.08	0.155	0.17	A5III
86092	17	37	11.3	-46	31	3.4	264.297051	-46.517614	4.56	-0.020	0.01	A0V
86170	17	37	57.6	-38	38	51.5	264.490087	-38.647627	4.26	1.075	1.09	G8/K0III/IV
86201	17	36	50.0	+68	44	53.8	264.208524	+68.748269	4.77	0.430	0.49	F5V
86228	17	38	47.6	-43	0	31.5	264.698325	-43.008737	1.86	0.406	0.48	F1II
86263	17	38	45.7	-15	24	35.1	264.690376	-15.409747	3.54	0.262	0.29	F0IIIp
86284	17	38	57.6	- 8	7	46.6	264.740087	- 8.129620	4.58	0.132	0.22	B8II-IIIMNp
86414	17	40	2.7	+45	59	46.6	265.011055	+45.996288	3.82	-0.179	-0.21	B3V SB
86486	17	41	58.9	-49	25	33.3	265.495586	-49.425927	4.76	0.415	0.49	F3IV
86565	17	42	34.0	-12	53	4.5	265.641872	-12.884570	4.24	0.086	0.10	A2Va
86614	17	41	34.8	+72	8	17.8	265.394852	+72.138274	4.57	0.434	0.50	F5IV-V
86670	17	43	54.4	-39	2	18.5	265.976835	-39.038482	2.39	-0.171	-0.22	B1.5III
86736	17	44	39.5	-21	41	29.0	266.164791	-21.691379	4.86	0.469	0.54	F6/F7V
86742	17	44	29.1	+ 4	33	36.8	266.121455	+ 4.560216	2.76	1.168	1.10	K2III
86929	17	47	44.9	-64	43	50.8	266.937071	-64.730782	3.61	1.161	1.09	K1III
86974	17	47	15.8	+27	42	35.9	266.815652	+27.709971	3.42	0.750	0.71	G5IV
87072	17	48	51.1	-27	50	12.2	267.212883	-27.836716	4.53	0.600	0.76	F7II
87073	17	49	1.2	-40	7	58.3	267.254876	-40.132854	2.99	0.509	0.64	F3Ia
87108	17	48	55.3	+ 2	42	3.9	267.230289	+ 2.701090	3.75	0.043	0.05	A0V
87220	17	50	30.4	-31	42	29.9	267.626734	-31.708303	4.79	-0.028	0.01	B8Ib/II
87261	17	51	15.2	-37	2	52.3	267.813492	-37.047848	3.19	1.192	1.15	K0/K1III
87294	17	51	37.2	-40	5	41.9	267.904953	-40.094977	4.78	0.259	0.41	A6Ib
87585	17	53	53.0	+56	52	11.8	268.470996	+56.869948	3.73	1.177	1.11	K2III
87808	17	56	57.4	+37	14	56.0	269.239139	+37.248890	3.86	1.350	1.17	K1IIvar
87833	17	57	5.0	+51	29	13.9	269.270712	+51.487197	2.24	1.521	1.54	K5III
87846	17	58	17.2	-44	20	36.9	269.571722	-44.343579	4.85	1.176	1.15	K2III
87933	17	58	33.7	+29	14	48.7	269.640449	+29.246863	3.70	0.935	0.89	K0III
87936	17	59	15.2	-41	43	1.6	269.813536	-41.717112	4.88	1.617	1.88	M0III
87998	17	59	17.2	+30	11	19.5	269.821865	+30.188746	4.41	0.380	0.51	F2II
88048	18	0	9.3	- 9	46	28.1	270.038863	- 9.774479	3.32	0.987	0.95	K0III
88060	18	0	24.3	-30	15	11.5	270.101211	-30.253196	5.00	1.654	2.00	K5/M0III
88116	18	1	2.7	-23	48	58.3	270.261106	-23.816203	4.74	-0.030	-0.01	B9V
88128	18	0	58.2	+16	45	4.0	270.242475	+16.751117	4.67	1.254	1.12	K0II-III
88149	18	1	16.7	+ 4	22	8.1	270.319751	+ 4.368929	4.79	-0.100	-0.08	B2Ve
88175	18	1	34.0	- 3	41	24.0	270.391727	- 3.690003	4.62	0.390	0.45	F3V
88192	18	1	40.3	+ 2	55	55.6	270.418105	+ 2.932100	3.93	0.029	0.10	B5Ib
88267	18	2	22.6	+21	35	49.1	270.594204	+21.596966	4.26	0.406	0.47	G5
88290	18	2	47.6	+ 1	18	22.1	270.698444	+ 1.306134	4.42	0.046	0.06	A2Vn
88404	18	4	11.9	- 8	10	43.5	271.049615	- 8.178744	4.77	0.410	0.45	F5V+...
88567	18	6	19.8	-29	34	38.2	271.582511	-29.577286	4.66	0.774	0.81	G0Ib/II
88601	18	6	29.3	+ 2	29	51.8	271.622041	+ 2.497726	4.03	0.860	0.96	K0V SB
88635	18	7	7.5	-30	25	18.8	271.781287	-30.421879	2.98	0.981	0.99	K0III
88657	18	6	53.7	+22	13	19.4	271.723872	+22.222069	4.96	1.656	2.18	M3IIIa+...

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
88714	18	8	13.6	-50	5	16.2	272.056711	-50.087829	3.65	-0.101	-0.06	B2Ib
88726	18	8	18.8	-43	25	19.3	272.078530	-43.422027	4.92	0.255	0.29	A5V
88765	18	8	17.2	+ 8	44	16.5	272.071662	+ 8.737918	4.64	0.951	0.92	G8III-IV
88771	18	8	19.3	+ 9	34	5.5	272.080498	+ 9.568192	3.71	0.159	0.18	A4IVs
88788	18	8	5.8	+43	27	55.6	272.024307	+43.465448	5.00	0.913	0.91	G8III...
88794	18	8	20.6	+28	45	59.3	272.085654	+28.766486	3.84	-0.018	-0.02	B9.5V
88839	18	9	22.9	-28	27	10.5	272.345333	-28.452920	4.55	0.938	1.00	K0IIICNpvar
88866	18	10	33.2	-63	39	53.8	272.638266	-63.664943	4.33	0.228	0.23	Am
88886	18	9	38.1	+20	49	8.8	272.408810	+20.819102	4.37	-0.164	-0.19	B2IV
89112	18	12	45.0	-45	56	55.2	273.187652	-45.948656	4.52	1.009	0.95	G5III
89153	18	12	58.4	-23	41	42.9	273.243248	-23.695243	4.96	1.055	1.02	K0III
89172	18	12	40.5	+31	24	41.8	273.168613	+31.411607	4.96	1.643	2.16	M3III
89341	18	14	59.4	-21	3	6.1	273.747359	-21.051686	3.84	0.195	0.21	B2III:
89348	18	14	0.9	+64	24	16.0	273.503716	+64.404438	4.99	0.440	0.51	F5V
89642	18	19	0.8	-36	45	12.6	274.753513	-36.753499	3.10	1.582	2.24	M2III
89678	18	19	20.2	-27	2	0.1	274.834000	-27.033357	4.66	1.629	1.62	K3III
89826	18	20	34.8	+36	4	29.4	275.145180	+36.074834	4.33	1.162	1.10	K2IIIvar
89861	18	21	10.0	+21	58	16.6	275.291542	+21.971278	4.92	1.594	1.82	M1III
89908	18	20	27.7	+71	20	53.7	275.115218	+71.348262	4.22	-0.093	-0.11	A0p (Si)
89918	18	21	53.5	+ 3	23	16.2	275.472855	+ 3.387843	4.85	0.911	0.90	G8III
89931	18	22	18.3	-29	49	2.9	275.576452	-29.817484	2.72	1.380	1.35	K3III
89937	18	20	41.0	+72	44	28.6	275.170999	+72.741278	3.55	0.489	0.62	F7Vvar
89962	18	22	22.3	- 2	53	30.7	275.592838	- 2.891861	3.23	0.941	0.96	K0III-IV
90098	18	25	6.8	-61	28	54.8	276.278289	-61.481878	4.35	1.462	1.50	M1III SB
90135	18	24	47.0	- 8	55	19.4	276.195685	- 8.922053	4.66	0.932	0.94	K0III
90139	18	24	34.3	+21	46	49.4	276.143011	+21.780400	3.85	1.168	1.13	K2III
90156	18	24	12.6	+58	48	46.9	276.052317	+58.813040	4.98	0.082	0.05	A3V
90185	18	25	31.9	-34	22	22.6	276.382973	-34.372954	1.79	-0.031	0.01	B9.5III
90289	18	26	34.3	-20	31	44.2	276.642821	-20.528938	4.81	1.310	1.27	A1/A2V
90344	18	26	2.6	+65	34	34.5	276.510879	+65.576258	4.82	1.179	1.16	K2III
90422	18	28	29.5	-45	57	17.9	277.123046	-45.954979	3.49	-0.179	-0.18	B3IV
90496	18	29	14.1	-25	24	30.7	277.308826	-25.408529	2.82	1.025	1.04	K1IIIb
90568	18	30	24.5	-49	3	25.7	277.602019	-49.057151	4.10	0.995	1.02	G8/K0III
90595	18	30	21.9	-14	33	3.8	277.591426	-14.551044	4.67	0.076	0.10	A1IV/V
90797	18	33	17.0	-62	15	45.0	278.320984	-62.262510	4.63	-0.116	-0.11	B8III
90830	18	33	16.4	-45	53	55.8	278.318505	-45.898837	4.92	-0.101	-0.08	B6IV
90905	18	32	55.7	+57	3	42.5	278.232195	+57.061813	4.77	0.611	0.67	F7Ib
90982	18	34	57.9	-42	17	44.3	278.741342	-42.295643	4.62	0.994	0.95	G5III
91117	18	36	19.3	- 8	13	41.1	279.080621	- 8.228084	3.85	1.317	1.28	K2III
91262	18	37	38.0	+38	48	13.6	279.408280	+38.803775	0.03	-0.001	-0.01	A0Vvar
91726	18	43	23.8	- 9	1	52.8	280.848964	- 9.031332	4.70	0.358	0.40	F2IIIp d Del
91792	18	45	25.1	-71	24	25.6	281.354686	-71.407106	4.01	1.134	1.14	K2III
91845	18	44	38.2	- 8	15	12.0	281.159240	- 8.253337	4.88	1.112	1.07	G8II
91918	18	45	41.6	-35	37	11.5	281.423526	-35.619869	4.86	-0.168	-0.19	B2V
91919	18	45	1.1	+39	41	33.2	281.254597	+39.692565	4.67	0.170	0.19	F1V
91926	18	45	3.6	+39	38	6.5	281.264901	+39.635136	4.59	0.180	0.20	A8Vn
91971	18	45	28.7	+37	37	39.3	281.369761	+37.627588	4.34	0.192	0.18	Am
92024	18	47	27.2	-64	50	56.8	281.863338	-64.849113	4.78	0.199	0.21	A7V
92041	18	46	56.2	-26	58	4.4	281.733971	-26.967879	3.17	-0.107	-0.10	B8.5III
92043	18	46	32.7	+20	34	2.1	281.636170	+20.567245	4.19	0.483	0.55	F6V
92088	18	46	54.1	+26	41	6.9	281.725263	+26.685255	4.83	1.199	1.16	K3III
92161	18	47	55.6	+18	12	20.3	281.981725	+18.205651	4.34	0.148	0.16	A5III
92175	18	48	15.7	- 4	43	27.7	282.065475	- 4.724366	4.22	1.087	1.09	G5II...
92420	18	50	50.2	+33	23	15.2	282.709259	+33.387565	3.52	0.003	0.02	A8:V comp SB
92512	18	51	30.2	+59	24	49.9	282.875736	+59.413850	4.63	1.185	1.20	K0II-III SB
92609	18	54	6.6	-62	9	41.2	283.527338	-62.161433	4.22	-0.150	-0.14	B2II-III
92689	18	53	44.0	+50	44	4.0	283.433368	+50.734456	4.92	0.903	0.88	G8III
92761	18	55	24.4	-22	43	4.2	283.851502	-22.717844	4.86	1.412	1.35	K1II
92782	18	54	8.4	+71	19	27.1	283.534940	+71.324197	4.82	1.151	1.10	K0III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
92791	18	55	13.3	+36	55	32.5	283.805495	+36.925690	4.22	1.575	2.60	M4IIvar
92818	18	55	36.8	+22	40	20.3	283.903428	+22.672294	4.57	0.782	0.86	G4III+...
92845	18	56	21.4	-22	38	38.5	284.089287	-22.644017	5.00	1.348	1.25	K1Ib/II
92855	18	56	32.1	-26	16	10.0	284.133763	-26.269455	2.05	-0.134	-0.13	B2.5V
92862	18	55	57.5	+43	58	26.3	283.989724	+43.973974	4.08	1.397	3.14	M5IIIvar
92946	18	57	14.3	+ 4	13	54.1	284.309609	+ 4.231705	4.62	0.161	0.20	A5V
92951	18	57	15.8	+ 4	13	49.0	284.315782	+ 4.230278	4.98	0.204	0.22	A5Vn
93015	18	59	3.2	-67	12	17.4	284.763201	-67.204828	4.40	0.530	0.59	F5Ib-II:
93026	18	58	9.5	- 5	49	5.4	284.539551	- 5.818156	4.83	1.057	1.03	K1III
93085	18	58	57.1	-21	4	40.7	284.737942	-21.077985	3.52	1.151	1.09	G8/K0II/III
93148	19	0	5.9	-52	54	34.2	285.024423	-52.909488	4.85	-0.051	-0.03	A0V
93174	19	0	6.2	-37	4	43.4	285.025847	-37.078718	4.83	0.396	0.44	F3IV/V
93194	18	59	42.7	+32	43	7.6	284.927711	+32.718780	3.25	-0.049	-0.03	B9III
93244	19	0	33.2	+15	5	50.9	285.138282	+15.097466	4.02	1.082	1.00	K2III
93279	19	0	47.2	+32	10	31.1	285.196839	+32.175297	4.94	1.465	1.32	K3III
93408	19	2	1.2	+46	57	52.9	285.504872	+46.964701	5.00	0.186	0.23	A7V
93429	19	2	46.5	- 5	42	31.4	285.693629	- 5.708730	4.02	1.079	1.08	K1IIIvar
93506	19	3	54.9	-29	50	56.3	285.978559	-29.848983	2.60	0.062	0.06	A3IV
93542	19	4	33.8	-42	3	50.3	286.140764	-42.063978	4.74	-0.027	-0.02	A0Vn
93683	19	5	54.6	-21	42	35.1	286.477482	-21.709743	3.76	1.012	0.98	K0III
93747	19	6	21.1	+13	53	43.1	286.588086	+13.895303	2.99	0.014	-0.01	A0Vn
93805	19	7	20.2	- 4	51	1.0	286.834071	- 4.850267	3.43	-0.096	-0.09	B9Vn
93825	19	7	48.1	-37	1	55.4	286.950408	-37.032049	4.23	0.523	0.59	F7IV-V
93864	19	8	13.1	-27	38	19.1	287.054566	-27.638651	3.32	1.169	1.15	K1/K2III
94005	19	9	46.4	-40	27	46.7	287.443360	-40.462982	4.57	1.070	1.06	K1III
94114	19	10	51.8	-37	52	14.2	287.715991	-37.870615	4.11	0.042	0.03	A0/A1V
94141	19	10	58.9	-20	59	21.6	287.745365	-20.989327	2.88	0.377	0.44	F2II/III
94160	19	11	26.2	-39	18	22.8	287.859056	-39.306337	4.10	1.163	1.11	K0II/IIICN.
94376	19	12	33.3	+67	41	51.3	288.138620	+67.697582	3.07	0.990	0.94	G9III
94481	19	14	27.4	+39	10	56.0	288.614020	+39.182225	4.43	-0.150	-0.19	B2.5IV
94490	19	14	17.0	+57	44	27.6	288.570922	+57.741009	5.00	1.156	1.12	K2III
94643	19	16	47.7	-25	13	10.6	289.198886	-25.219623	4.86	0.569	0.67	K0/K1III+..
94648	19	15	8.7	+73	23	34.4	288.786409	+73.392891	4.45	1.257	1.15	K3III
94703	19	17	5.9	+21	25	40.3	289.274708	+21.427856	4.76	-0.058	-0.05	B4IV
94713	19	17	4.8	+38	10	16.4	289.270023	+38.171231	4.35	1.258	1.13	K0II
94779	19	17	34.6	+53	24	24.9	289.393972	+53.406926	3.80	0.950	0.85	K0III
94820	19	18	49.9	-18	54	53.2	289.708123	-18.914764	4.88	1.013	0.99	K0III
95066	19	21	38.5	- 5	22	33.5	290.410478	- 5.375974	4.98	0.937	0.93	G8III-IV...
95081	19	20	46.1	+65	45	14.9	290.192273	+65.754129	4.60	0.033	0.01	A2IIIs
95168	19	22	51.6	-17	48	25.1	290.714994	-17.806985	3.92	0.228	0.25	F0III/IV
95176	19	22	54.0	-15	54	53.8	290.724907	-15.914942	4.52	0.079	0.34	F2p
95241	19	24	6.4	-44	25	6.5	291.026816	-44.418485	3.96	-0.085	-0.07	B9V
95294	19	24	41.7	-44	45	33.1	291.173819	-44.759200	4.27	0.350	0.42	F2III
95347	19	25	18.2	-40	34	31.6	291.325645	-40.575439	3.96	-0.105	-0.10	B8V
95372	19	24	56.1	+29	39	45.1	291.233709	+29.662540	4.99	-0.120	-0.11	B3IV
95501	19	26	31.9	+ 3	9	25.4	291.632808	+ 3.157056	3.36	0.319	0.38	F0IV
95585	19	27	34.0	+ 0	22	51.1	291.891499	+ 0.380864	4.64	0.576	0.75	F2Ib
95771	19	29	33.5	+24	42	27.3	292.389698	+24.707581	4.44	1.502	1.68	M0 comp
95853	19	30	13.3	+51	46	26.9	292.555563	+51.774145	3.76	0.148	0.18	A5Vn
95947	19	31	32.9	+28	0	13.8	292.887025	+28.003842	3.05	1.088	1.05	K3II+...
96052	19	32	32.0	+34	29	51.4	293.133540	+34.497607	4.74	-0.150	-0.12	B3IV
96100	19	32	18.9	+69	41	46.6	293.078774	+69.696267	4.67	0.786	0.85	K0V
96229	19	35	5.4	+ 7	25	25.9	293.772549	+ 7.423852	4.45	1.176	1.14	K3III
96275	19	35	28.9	+19	49	9.8	293.870518	+19.819390	5.00	-0.093	-0.08	B8IIIn
96341	19	36	43.9	-48	3	10.8	294.182782	-48.053006	4.88	1.096	1.06	G9III
96441	19	36	59.5	+50	16	9.5	294.247973	+50.269305	4.49	0.395	0.44	F4V
96465	19	37	57.1	-24	50	12.2	294.488033	-24.836732	4.59	-0.075	-0.06	B8/B9V
96468	19	37	46.9	- 1	14	23.0	294.445258	- 1.239732	4.36	-0.079	-0.06	B5III
96483	19	37	59.5	- 6	58	49.5	294.498115	- 6.980422	4.93	-0.046	0.03	B0.5III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
96683	19	40	11.2	+30	12	5.9	295.046669	+30.201651	4.68	0.971	0.89	G8III-IV...
96757	19	41	0.8	+18	3	44.1	295.253211	+18.062259	4.39	0.777	0.77	G0II
96837	19	41	58.2	+17	31	29.1	295.492423	+17.524760	4.39	1.041	0.96	G8II
97118	19	45	1.0	+37	24	17.5	296.254076	+37.404865	4.89	0.948	0.94	G8III
97165	19	45	36.9	+45	10	54.1	296.403790	+45.181683	2.86	-0.002	-0.02	B9.5III
97278	19	47	14.0	+10	39	52.2	296.808482	+10.664495	2.72	1.507	1.44	K3II
97290	19	47	33.4	-19	42	37.0	296.889012	-19.710267	4.87	1.061	1.03	K0III
97295	19	47	12.3	+33	46	35.0	296.801336	+33.776387	5.00	0.476	0.55	F5
97365	19	48	18.1	+18	35	9.9	297.075381	+18.586086	3.68	1.313	1.27	M2II + B6
97433	19	48	5.6	+70	19	12.1	297.023296	+70.320015	3.84	0.888	0.88	G8III
97649	19	51	47.0	+ 8	55	25.4	297.945680	+ 8.923725	0.76	0.221	0.27	A7IV-V
97679	19	51	57.1	+22	39	47.9	297.987827	+22.663312	4.90	-0.153	-0.12	B2.5V
97804	19	53	31.0	+ 1	3	34.7	298.379057	+ 1.059631	3.87	0.630	0.73	F6Ibv SB
97886	19	54	20.0	+24	8	3.2	298.583283	+24.134222	4.57	-0.047	-0.02	B9.5III
97938	19	55	14.5	+ 8	30	56.8	298.810267	+ 8.515778	4.71	1.023	1.03	K0III
98032	19	56	40.2	-41	48	45.7	299.167581	-41.812692	4.12	1.063	1.09	K0III
98036	19	56	19.2	+ 6	27	33.6	299.079940	+ 6.459334	3.71	0.855	0.89	G8IVvar
98055	19	56	9.6	+52	29	38.6	299.039801	+52.494054	4.91	0.124	0.12	A4Vn
98066	19	57	5.5	-26	14	36.8	299.272928	-26.243565	4.70	0.748	0.79	G3/G5III
98068	19	56	35.7	+38	32	31.7	299.148933	+38.542133	4.95	-0.086	-0.07	B5IV
98073	19	56	18.7	+58	54	4.4	299.078048	+58.901229	4.98	1.584	1.56	K5II-III
98110	19	57	4.5	+35	8	20.0	299.268895	+35.138895	3.89	1.019	0.98	K0IIIvar
98162	19	58	12.1	-27	6	50.3	299.550457	-27.113973	4.54	1.462	1.39	K3III
98337	19	59	40.1	+19	32	56.4	299.917187	+19.548992	3.51	1.571	1.65	K5III
98353	20	0	11.9	-26	8	19.5	300.049782	-26.138755	4.84	0.882	0.91	G8II/III
98412	20	1	4.0	-35	13	9.2	300.266515	-35.219214	4.37	-0.150	-0.15	B2.5IV
98495	20	2	55.6	-72	51	12.3	300.731739	-72.853417	3.97	-0.032	-0.04	A0V
98543	20	1	56.7	+27	48	40.7	300.486333	+27.811308	4.66	0.184	0.19	A4III
98608	20	3	27.6	-59	19	4.3	300.864929	-59.317866	4.95	1.356	3.25	M6III
98688	20	3	54.9	-27	39	4.7	300.978743	-27.651296	4.43	1.640	2.50	M4III
98702	20	2	54.2	+67	55	55.6	300.725706	+67.932117	4.51	1.313	1.23	K3III
98761	20	4	54.9	-37	52	56.3	301.228631	-37.882298	4.77	1.417	1.40	K4III
98842	20	5	37.3	-31	59	49.8	301.405576	-31.997166	4.99	1.208	1.17	K1III/IV
99120	20	8	56.8	-52	49	12.8	302.236668	-52.820213	4.93	1.591	1.83	M1II
99240	20	10	42.9	-66	7	37.7	302.678910	-66.127135	3.55	0.751	0.76	G5IV-Vvar
99255	20	8	9.7	+77	46	20.1	302.040435	+77.772246	4.38	-0.046	-0.06	B9III
99303	20	10	11.3	+36	54	3.3	302.547179	+36.900927	4.93	-0.139	-0.13	B2.5V
99473	20	12	21.7	- 0	45	33.6	303.090339	- 0.759345	3.24	-0.066	-0.06	B9.5III
99639	20	13	56.7	+46	52	42.6	303.486354	+46.878514	4.80	0.100	0.19	A5IIIn
99655	20	13	52.4	+56	37	51.6	303.468223	+56.631013	4.28	0.114	0.14	A3IV-Vn
99675	20	14	16.6	+46	48	15.5	303.569360	+46.804305	3.80	1.270	1.15	K2II+...
99742	20	15	13.5	+15	15	40.4	303.806349	+15.261227	4.94	0.072	0.09	A2V
99770	20	15	18.1	+36	52	12.2	303.825486	+36.870049	4.93	0.151	0.21	A2V
99824	20	16	8.0	+25	39	20.2	304.033490	+25.655617	4.79	-0.181	-0.22	B3V
99848	20	16	6.4	+47	46	40.6	304.026470	+47.777940	3.96	1.451	1.45	K3Ib-II comp
99874	20	16	37.1	+27	52	41.4	304.154696	+27.878167	4.50	1.258	1.30	K3III
100027	20	18	46.9	-12	26	36.5	304.695507	-12.443484	4.30	0.928	1.05	G3Ib
100044	20	18	32.6	+38	5	51.3	304.635670	+38.097595	4.77	0.377	0.44	B2pe
100064	20	19	11.4	-12	28	47.8	304.797378	-12.479945	3.58	0.883	0.92	G6/G8III
100310	20	21	47.9	-12	41	35.5	305.449652	-12.693206	4.77	-0.047	-0.06	B9IV
100345	20	22	9.7	-14	42	54.7	305.540212	-14.715190	3.05	0.790	0.90	A5:n
100453	20	22	57.9	+40	19	23.5	305.741130	+40.323183	2.23	0.673	0.65	F8Ib
100587	20	24	40.8	+32	15	26.4	306.169812	+32.257324	4.43	1.331	1.31	K3III
100751	20	27	15.4	-56	40	3.0	306.814066	-56.667510	1.94	-0.118	-0.10	B2IV
101027	20	30	1.6	-17	44	40.1	307.506681	-17.744481	4.77	0.386	0.44	F3V
101076	20	30	14.0	+30	26	16.6	307.558420	+30.437947	4.01	0.404	0.46	F5II
101093	20	29	55.3	+63	3	48.2	307.480492	+63.063402	4.21	0.199	0.20	A7III
101101	20	30	43.2	- 2	48	58.0	307.680039	- 2.816113	4.91	1.160	1.12	K2III
101138	20	30	41.6	+49	1	16.4	307.673506	+49.021229	4.94	-0.087	-0.06	B2.5IV

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
101421	20	34	11.5	+11	22	26.5	308.547980	+11.374026	4.03	-0.123	-0.10	B6III
101474	20	34	42.1	+35	19	19.1	308.675260	+35.321978	4.61	1.593	1.78	K2Ib comp
101589	20	36	16.0	+14	44	45.6	309.066822	+14.746011	4.64	0.120	0.14	A3V
101612	20	37	15.7	-60	30	38.9	309.315448	-60.510802	4.75	0.291	0.34	F1III
101692	20	37	47.6	- 2	28	39.9	309.448359	- 2.477745	4.91	1.606	1.66	K5II
101769	20	38	30.6	+14	40	2.7	309.627581	+14.667420	3.64	0.425	0.50	F5IV
101772	20	39	0.0	-47	13	6.4	309.750006	-47.218440	3.11	0.998	0.98	K0III
101773	20	39	17.4	-61	27	27.2	309.822327	-61.457562	4.86	0.447	0.52	Fm delta Del
101847	20	39	23.7	- 1	1	56.3	309.848867	- 1.032297	4.31	0.949	0.91	G8III SB
101867	20	39	26.3	+21	16	26.8	309.859555	+21.274122	4.81	-0.030	-0.01	A0V
101958	20	40	35.4	+15	59	7.8	310.147504	+15.985511	3.77	-0.057	-0.01	B9V
102098	20	42	7.9	+45	21	15.8	310.532812	+45.354375	1.25	0.092	0.16	A2Ia
102281	20	44	25.0	+15	8	57.1	311.103981	+15.149191	4.43	0.302	0.34	A7IIIp d Del
102333	20	45	32.0	-51	50	46.0	311.383197	-51.846107	4.51	0.278	0.30	A6:var
102388	20	45	45.8	+25	20	42.0	311.440715	+25.344990	4.92	1.183	1.11	K2III
102395	20	46	46.8	-66	7	39.3	311.695163	-66.127588	3.42	0.163	0.20	A5IV
102422	20	45	42.2	+61	55	7.5	311.425798	+61.918753	3.41	0.912	0.94	K0IV
102431	20	45	51.6	+57	39	14.0	311.465053	+57.653884	4.52	0.535	0.58	F8IV-V
102453	20	46	30.6	+30	47	43.8	311.627375	+30.795495	4.22	1.051	1.01	K0III
102485	20	47	18.3	-25	11	45.2	311.826372	-25.195893	4.13	0.426	0.49	F5V
102488	20	47	2.5	+34	2	52.6	311.760334	+34.047941	2.48	1.021	1.00	K0III
102532	20	47	36.6	+16	11	57.3	311.902416	+16.199242	4.27	1.042	1.03	K1IV
102571	20	47	59.9	+34	27	1.3	311.999511	+34.450375	4.93	1.294	1.25	K3IIIvar
102589	20	48	12.5	+36	34	1.0	312.052112	+36.566958	4.53	-0.083	-0.12	B6IV
102618	20	48	47.0	- 9	25	10.3	312.195889	- 9.419529	3.78	0.000	-0.01	A1V
102624	20	48	49.0	- 4	57	5.3	312.204325	- 4.951464	4.43	1.639	2.21	M3IIIvar
102724	20	49	38.2	+46	11	27.4	312.409318	+46.190953	4.81	0.571	0.59	B3Ia
102790	20	50	53.1	-46	8	58.2	312.721237	-46.149512	4.90	1.494	1.57	K5III
102831	20	51	14.6	-33	42	9.1	312.810725	-33.702518	4.89	1.004	0.97	G8III
102978	20	53	2.4	-26	50	28.2	313.260190	-26.841164	4.12	1.633	1.76	K4III
103004	20	53	0.4	+27	10	28.8	313.251499	+27.174673	4.56	0.835	0.87	G8III
103045	20	53	45.5	- 8	54	18.9	313.439440	- 8.905237	4.73	0.325	0.36	A3m
103089	20	53	58.3	+44	27	56.4	313.492932	+44.465657	4.80	-0.134	-0.16	B5V
103227	20	56	23.8	-58	22	30.6	314.099095	-58.375164	3.67	1.250	1.11	K0III
103413	20	57	56.3	+41	14	48.6	314.484699	+41.246829	3.94	0.027	0.01	A1Vn
103632	21	0	31.4	+47	36	6.2	315.130998	+47.601718	4.74	-0.084	-0.06	B1ne
103738	21	2	32.6	-32	10	35.1	315.635788	-32.176405	4.67	0.890	0.90	G8III
104019	21	5	34.1	-19	46	21.7	316.392085	-19.772699	4.82	0.169	0.18	A5V
104060	21	5	40.7	+44	0	37.4	316.419445	+44.010391	3.72	1.609	1.63	K5Ibv SB
104139	21	7	5.8	-17	9	0.9	316.774122	-17.150249	4.08	-0.010	0.00	A1V
104194	21	7	18.5	+47	43	53.4	316.827162	+47.731500	4.56	1.569	1.54	K4II
104234	21	8	19.4	-24	55	21.8	317.080692	-24.922730	4.49	1.604	1.81	K5/M0III
104459	21	10	42.5	-11	17	15.3	317.677122	-11.287595	4.50	0.926	0.92	G8III
104521	21	11	20.3	+10	12	54.5	317.834547	+10.215152	4.70	0.262	0.26	F0p
104732	21	13	48.6	+30	18	42.5	318.452519	+30.311797	3.21	0.990	0.97	G8II SB
104858	21	15	28.7	+10	5	27.9	318.869600	+10.091084	4.47	0.529	0.57	F5V+...
104887	21	15	36.7	+38	8	0.4	318.902979	+38.133458	3.74	0.393	0.46	F1IV
104987	21	16	50.9	+ 5	20	0.8	319.212009	+ 5.333554	3.92	0.549	0.62	G0III+...
105102	21	18	13.3	+39	28	53.0	319.555592	+39.481376	4.22	0.098	0.25	B9Iab
105138	21	18	45.7	+34	59	1.7	319.690510	+34.983819	4.41	-0.103	-0.09	B2Vne
105140	21	19	10.5	-32	5	8.6	319.793924	-32.085709	4.71	0.070	0.09	A0V
105199	21	19	4.0	+62	40	22.4	319.766776	+62.672881	2.45	0.257	0.26	A7IV-V
105319	21	21	18.9	-53	21	43.9	320.328735	-53.362194	4.39	0.191	0.21	A5V
105382	21	22	3.9	-40	43	17.4	320.516137	-40.721500	4.80	0.029	0.07	A2p
105502	21	23	2.1	+19	53	35.1	320.758798	+19.893087	4.08	1.108	1.05	K1III
105515	21	23	23.1	-16	44	46.3	320.846267	-16.746202	4.28	0.888	0.89	G8III
105858	21	28	6.7	-65	16	19.4	322.028044	-65.272048	4.21	0.494	0.61	F6V
105881	21	27	50.0	-22	19	17.5	321.958420	-22.321535	3.77	1.002	0.88	G4Ibp...
106032	21	28	55.0	+70	39	3.3	322.229148	+70.650929	3.23	-0.201	-0.25	B2IIIv SB

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
106039	21	29	53.3	-21	43	0.8	322.472107	-21.716888	4.50	0.889	0.89	K0III
106140	21	30	52.7	+23	43	46.3	322.719443	+23.729515	4.52	1.618	1.82	M1III
106278	21	32	38.2	- 5	28	48.2	323.159123	- 5.480045	2.90	0.828	0.82	G0Ib
106481	21	34	45.2	+45	40	59.4	323.688403	+45.683156	3.98	0.885	0.94	G8III
106551	21	35	36.9	+38	37	36.0	323.903716	+38.626657	4.87	1.085	1.06	K1III
106723	21	38	13.5	-19	22	23.5	324.556251	-19.373206	4.51	-0.180	-0.17	B3V:p
106786	21	38	50.5	- 7	45	40.9	324.710298	- 7.761349	4.68	0.175	0.19	A7V
106801	21	38	28.2	+62	10	29.6	324.617558	+62.174882	4.76	0.246	0.38	B2Ib
106985	21	41	13.4	-16	34	7.6	325.305904	-16.568767	3.69	0.320	0.32	A7III:mp...
107089	21	43	40.9	-77	17	49.8	325.920412	-77.297173	3.73	1.008	0.98	K0III
107119	21	42	12.9	+71	24	21.6	325.553581	+71.406006	4.55	1.108	1.07	K0III
107136	21	42	49.4	+51	17	1.6	325.706022	+51.283784	4.69	-0.119	-0.12	B3IV
107188	21	43	48.0	-18	46	19.1	325.949956	-18.771983	4.72	0.868	0.91	G8III
107259	21	44	8.2	+58	52	28.5	326.034010	+58.874585	4.23	2.242	3.57	M2Ia
107310	21	45	3.6	+28	50	9.8	326.265095	+28.836057	4.49	0.512	0.58	F6V
107315	21	45	11.6	+ 9	58	11.3	326.298180	+ 9.969815	2.38	1.520	1.42	K2Ibvar
107348	21	45	29.0	+17	26	41.4	326.370710	+17.444839	4.34	1.161	1.05	G5Ib
107354	21	45	34.5	+25	44	24.1	326.393834	+25.740023	4.14	0.425	0.48	F5IV
107380	21	46	9.7	-32	55	52.6	326.540538	-32.931268	4.35	-0.053	-0.05	B9.5V
107418	21	46	2.4	+61	12	57.2	326.510179	+61.215883	4.25	0.474	0.73	A2Iavar
107533	21	47	33.2	+49	24	18.1	326.888230	+49.405039	4.23	-0.120	-0.13	B3III
107556	21	48	10.2	-16	2	0.0	327.042305	-16.033334	2.85	0.180	0.35	A5mF2 (IV)
108085	21	55	9.8	-37	16	2.9	328.790756	-37.267479	3.00	-0.084	-0.10	B8III
108431	21	59	17.9	-54	53	38.8	329.824691	-54.894118	4.40	0.297	0.35	F0IV
108870	22	4	54.5	-56	42	0.8	331.227289	-56.700210	4.69	1.056	1.15	K5V
108874	22	4	22.4	- 2	3	20.4	331.093323	- 2.055656	4.74	-0.100	-0.03	B7IVe
108917	22	4	23.1	+64	43	41.9	331.096302	+64.728296	4.26	0.379	0.44	Am
109068	22	6	42.8	+ 5	9	33.9	331.678135	+ 5.159425	4.86	1.443	1.45	K4III
109074	22	6	50.2	- 0	13	10.4	331.708969	- 0.219547	2.95	0.969	0.92	G2Ib
109111	22	7	20.6	-39	26	36.9	331.835758	-39.443591	4.47	1.349	1.31	M0III
109139	22	7	32.5	-13	46	10.1	331.885440	-13.769477	4.29	-0.075	-0.06	B8V
109176	22	7	58.0	+25	26	45.2	331.991692	+25.445899	3.77	0.435	0.51	F5V
109268	22	9	30.9	-46	51	39.0	332.378801	-46.860837	1.73	-0.070	-0.05	B7IV
109285	22	9	34.4	-32	53	15.5	332.393460	-32.887644	4.50	0.054	0.06	A2V
109289	22	9	37.6	-33	56	35.2	332.406543	-33.943119	4.99	1.499	1.50	K4III
109400	22	10	11.8	+72	26	32.8	332.549025	+72.442445	4.79	0.919	0.91	G8III
109410	22	10	54.0	+33	16	46.0	332.725011	+33.279446	4.28	0.471	0.52	F5III
109422	22	11	20.5	-32	26	49.0	332.835393	-32.446938	4.94	0.489	0.54	F6V
109427	22	11	14.0	+ 6	17	57.9	332.808411	+ 6.299424	3.52	0.086	0.09	A2V
109492	22	11	34.1	+58	18	10.0	332.892138	+58.302783	3.39	1.558	1.58	K1Ibv SB
109754	22	14	45.7	+39	49	2.0	333.690360	+39.817209	4.50	1.385	1.36	K3III
109857	22	15	47.7	+57	8	46.7	333.948916	+57.146303	4.18	0.278	0.33	F0IV
109908	22	16	50.6	-41	14	38.3	334.210656	-41.243972	4.79	0.790	0.83	G8III+...
109937	22	16	51.9	+37	51	5.0	334.216439	+37.851397	4.14	1.447	1.33	K3III
110003	22	17	54.8	- 7	40	50.0	334.478491	- 7.680549	4.17	0.979	0.95	G8III-IV
110130	22	19	53.3	-60	9	23.6	334.972092	-60.156548	2.87	1.390	1.37	K3III
110351	22	21	52.6	+46	38	25.1	335.468969	+46.640306	4.55	-0.100	-0.10	B6V
110371	22	22	16.2	+28	26	3.7	335.567704	+28.434358	4.78	-0.010	0.06	B9III
110386	22	22	31.6	+12	18	32.6	335.631868	+12.309061	4.82	-0.132	-0.16	B2IV-V
110395	22	22	42.8	- 1	17	0.3	335.678515	- 1.283405	3.86	-0.057	-0.06	A0V
110538	22	24	22.2	+52	19	56.1	336.092578	+52.332252	4.42	1.015	1.03	G9III
110609	22	25	21.1	+49	34	50.9	336.337818	+49.580810	4.55	0.092	0.18	B9Iab
110672	22	26	19.4	+ 1	28	55.3	336.580859	+ 1.482029	4.80	-0.171	-0.18	B1Ve
110838	22	28	46.1	-64	51	40.5	337.191922	-64.861245	4.51	-0.029	-0.01	B8V
110882	22	28	53.8	+ 4	47	56.7	337.224051	+ 4.799072	4.78	1.039	1.07	K0III
110960	22	29	53.2	+ 0	5	7.9	337.471636	+ 0.085541	3.65	0.406	0.50	F3III-IV
110991	22	29	56.2	+58	31	14.0	337.484078	+58.520560	4.07	0.778	0.81	G2Ibvar
110997	22	30	29.2	-43	23	24.7	337.621632	-43.390184	3.97	1.022	0.98	G6/G8III
111022	22	30	23.3	+47	48	44.2	337.597108	+47.812287	4.34	1.679	1.90	M0II

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
111043	22	30	58.4	-43	38	37.4	337.743387	-43.643717	4.12	1.570	2.49	M4.5IIIa
111104	22	31	22.6	+43	13	44.2	337.843962	+43.228948	4.52	-0.086	-0.09	B2IV
111123	22	31	43.8	-10	34	20.8	337.932465	-10.572444	4.82	-0.053	-0.04	A0IVs
111169	22	32	8.4	+50	23	18.0	338.035036	+50.388338	3.76	0.031	0.05	A1V
111188	22	32	39.9	-32	14	25.3	338.166392	-32.240357	4.29	0.011	0.03	A1V
111310	22	34	22.1	-61	52	34.0	338.592071	-61.876118	4.91	1.612	2.50	M4III
111497	22	36	24.5	- 0	0	40.7	339.102255	- 0.011296	4.04	-0.083	-0.07	B9IV-Vn
111674	22	38	13.2	+51	39	5.0	339.555044	+51.651400	4.64	0.254	0.28	A8IV
111841	22	40	11.1	+39	9	26.7	340.046131	+39.157422	4.89	-0.207	-0.23	O9V
111944	22	41	25.0	+44	23	1.5	340.354259	+44.383756	4.50	1.318	1.25	K3III
111954	22	41	47.1	-26	56	10.3	340.446271	-26.936184	4.18	-0.105	-0.07	B8V
112029	22	42	29.1	+10	56	19.9	340.621245	+10.938867	3.41	-0.086	-0.06	B8.5V
112051	22	42	43.3	+29	24	54.5	340.680454	+29.415138	4.80	-0.013	0.02	A1IV
112122	22	43	52.9	-46	46	36.6	340.970578	-46.776823	2.07	1.610	2.60	M5III
112158	22	43	58.0	+30	19	44.1	340.991459	+30.328913	2.93	0.852	0.87	G2II-III..
112203	22	44	40.9	-41	18	25.0	341.170280	-41.306958	4.84	1.027	1.01	K0III
112211	22	44	41.2	-18	43	21.4	341.171860	-18.722612	4.68	1.358	1.35	K3III
112374	22	46	52.7	-53	23	30.4	341.719432	-53.391768	4.84	1.180	1.21	K2IIICNIV
112405	22	48	2.2	-81	16	23.6	342.009337	-81.273230	4.13	0.208	0.24	A9IV/V
112440	22	47	31.2	+23	40	26.3	341.880183	+23.673973	3.97	1.070	0.99	G8II-III
112447	22	47	43.1	+12	16	42.8	341.929488	+12.278560	4.20	0.502	0.60	F7V
112519	22	47	20.7	+83	15	45.1	341.836437	+83.262531	4.77	1.257	1.25	K3III
112623	22	49	46.9	-51	12	30.7	342.445602	-51.208523	3.49	0.083	0.10	A3V
112716	22	50	40.5	-13	29	2.4	342.668733	-13.483996	4.05	1.570	1.72	K5III
112724	22	50	24.9	+66	18	30.8	342.603843	+66.308554	3.50	1.053	1.06	K0III
112748	22	50	59.7	+24	42	36.9	342.748674	+24.710245	3.51	0.933	0.89	M2III
112917	22	52	57.8	+43	25	18.3	343.240658	+43.421737	4.95	1.559	1.71	M0III
112948	22	53	39.6	-32	45	58.8	343.414988	-32.766342	4.46	-0.037	-0.01	A0III
112961	22	53	41.0	- 7	28	12.4	343.420725	- 7.470124	3.73	1.626	2.07	M2IIIvar
113116	22	54	10.3	+84	27	20.8	343.543112	+84.455767	4.70	1.418	1.38	K4III
113136	22	55	44.1	-15	42	41.0	343.933918	-15.711377	3.27	0.066	0.08	A3V
113186	22	56	15.6	+ 8	55	33.5	344.065133	+ 8.925985	4.91	-0.003	0.00	A1V
113246	22	57	4.7	-32	25	46.9	344.269653	-32.429697	4.20	0.952	0.96	G8III
113288	22	57	20.2	+49	50	36.0	344.334258	+49.843342	4.99	1.778	1.87	K5Ibvar
113368	22	58	46.7	-29	30	47.4	344.694670	-29.513156	1.17	0.145	0.16	A3V
113638	23	2	4.8	-52	38	37.7	345.519914	-52.643795	4.11	0.960	1.01	G8III
113726	23	2	52.1	+42	26	11.4	345.717171	+42.436508	3.62	-0.099	-0.05	B6pv SB
113881	23	4	46.2	+28	11	39.5	346.192694	+28.194310	2.44	1.655	2.31	M2II-IIIvar
113889	23	4	55.2	+ 3	55	50.7	346.230071	+ 3.930761	4.48	-0.115	-0.09	B6Ve
113919	23	5	6.5	+50	9	49.8	346.277187	+50.163821	4.64	1.058	1.02	K0III
113963	23	5	47.0	+15	18	57.3	346.445844	+15.315903	2.49	-0.002	0.00	B9.5III
114104	23	7	29.2	+59	31	51.0	346.871798	+59.530830	4.84	-0.060	-0.02	B0.5IV
114119	23	7	46.7	-23	37	55.2	346.944609	-23.632011	4.48	0.892	0.92	G8III
114131	23	8	1.6	-43	24	33.5	347.006548	-43.409309	4.28	0.423	0.44	F5me...
114144	23	8	2.3	+ 9	31	14.0	347.009434	+ 9.520555	4.54	1.559	1.79	M2III
114155	23	8	6.8	+25	34	45.2	347.028368	+25.579219	4.76	1.285	1.30	K0IIp
114222	23	8	33.3	+75	29	54.7	347.138716	+75.498515	4.41	0.802	0.84	G2III
114341	23	10	32.2	-21	3	39.0	347.634159	-21.060828	3.68	1.202	1.16	K1III
114375	23	11	0.4	-22	20	46.3	347.751683	-22.346197	4.71	0.674	0.75	A3IV:
114421	23	11	30.7	-45	8	7.3	347.877820	-45.135349	3.88	0.998	0.95	K0III SB
114570	23	13	29.7	+49	31	6.5	348.373755	+49.518463	4.53	0.302	0.35	F0V
114724	23	15	23.0	- 5	56	17.5	348.845900	- 5.938185	4.22	1.545	1.89	M2III
114855	23	16	57.8	- 8	58	32.8	349.241027	- 8.975774	4.24	1.107	1.06	K0III
114939	23	17	54.6	- 7	36	52.0	349.477616	- 7.614444	4.93	1.613	2.56	M3III
114971	23	18	13.7	+ 3	23	40.4	349.557049	+ 3.394564	3.70	0.916	0.97	G7III
114996	23	18	36.8	-58	7	23.1	349.653146	-58.123088	3.99	0.410	0.50	F1III
115022	23	18	42.0	+49	7	39.2	349.675097	+49.127560	4.82	1.668	2.14	M2III
115033	23	18	58.1	- 9	4	13.2	349.741945	- 9.070325	4.41	-0.144	-0.14	B5Vn
115088	23	19	28.6	+68	13	25.7	349.869052	+68.223802	4.75	0.836	0.86	K0III

Posiciones medias de estrellas brillantes, 2020

Estrella	α			δ			α	δ				
NH	h	m	s	º	‘	“	º	º	V	U-V	B-V	Espectro
115102	23	19	55.6	-32	25	12.5	349.981569	-32.420138	4.41	1.109	1.08	K1III
115115	23	20	1.6	- 9	29	54.4	350.006572	- 9.498458	4.99	-0.022	0.00	A0V
115250	23	21	39.3	+23	51	9.9	350.413671	+23.852763	4.58	0.180	0.23	A5V
115438	23	24	2.7	-19	59	18.4	351.011133	-19.988448	3.96	1.082	1.10	K0III
115590	23	25	45.4	+62	23	43.9	351.439367	+62.395540	4.96	1.676	1.94	M1III
115623	23	26	24.3	+23	31	1.8	351.601392	+23.517156	4.42	0.617	0.67	F8IV
115669	23	27	7.2	-20	31	46.1	351.780169	-20.529462	4.38	1.460	1.52	K4III
115738	23	27	59.0	+ 1	22	5.0	351.995884	+ 1.368048	4.95	0.036	0.01	A0p
115830	23	29	0.5	+ 6	29	30.4	352.252238	+ 6.491788	4.27	1.062	1.03	K1III
115919	23	30	11.6	+12	52	25.7	352.548279	+12.873809	4.54	0.939	0.93	G8III
115990	23	30	59.3	+58	39	43.6	352.746923	+58.662113	4.89	-0.122	-0.11	B3IV
116231	23	34	3.9	-37	42	16.9	353.516246	-37.704707	4.38	-0.095	-0.09	B9.5IVMNpe.
116247	23	34	20.8	-20	48	3.9	353.586838	-20.801087	4.70	0.020	0.03	A0V
116310	23	34	58.4	+31	26	18.9	353.743501	+31.438580	4.97	1.383	1.36	K4III
116389	23	36	10.3	-42	30	5.6	354.043088	-42.501547	4.69	0.078	0.10	A2V
116584	23	38	34.4	+46	34	9.8	354.643434	+46.569402	3.81	0.984	0.96	G8III-IV
116602	23	38	56.8	-45	22	43.7	354.736577	-45.378813	4.74	0.082	0.08	A2V
116631	23	39	8.9	+43	22	54.1	354.787001	+43.381684	4.29	-0.083	-0.06	B8V
116727	23	40	12.5	+77	44	47.9	355.052156	+77.746652	3.21	1.031	0.99	K1IV
116758	23	40	50.8	-14	6	31.7	355.211515	-14.108794	4.97	0.257	0.29	A7IV
116771	23	41	0.3	+ 5	44	15.2	355.251437	+ 5.737563	4.13	0.507	0.59	F7V
116805	23	41	25.5	+44	26	51.2	355.356091	+44.447544	4.15	-0.071	-0.06	B9IVn
116901	23	42	49.5	-17	42	9.9	355.706391	-17.702760	4.82	0.822	0.81	G2Ib/II
116928	23	43	5.6	+ 1	53	34.7	355.773326	+ 1.892964	4.49	0.200	0.22	A7V
116971	23	43	47.0	-14	25	53.3	355.945949	-14.431467	4.49	-0.032	-0.04	B9V
117073	23	45	1.6	+29	28	30.3	356.256599	+29.475080	4.93	0.935	0.93	K0III
117221	23	47	3.4	+46	32	3.0	356.764184	+46.534157	4.97	1.086	1.05	G5Ib
117245	23	47	26.4	+ 3	36	2.2	356.860019	+ 3.600599	4.95	2.508	2.57	C5II
117301	23	48	4.2	+58	45	58.5	357.017495	+58.766249	4.88	1.122	1.08	K1III
117452	23	49	59.4	-28	1	0.7	357.497501	-28.016853	4.59	0.001	-0.01	A0V
117863	23	55	25.1	+57	36	48.4	358.854561	+57.613448	4.51	1.190	1.15	F8Iavar
118121	23	58	38.8	-64	11	4.1	359.661738	-64.184461	5.00	0.060	0.07	A1V
118131	23	58	48.4	+25	15	19.2	359.701701	+25.255332	4.63	1.584	2.21	M3III
118209	23	59	43.3	- 3	26	32.2	359.930581	- 3.442273	4.88	0.930	0.92	G9III

Posiciones aparentes de estrellas brillantes, 2020

(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	0.21209	0.19529	-35.02680	17.52
ene	8	0.21205	0.19523	-35.02684	17.06
ene	15	0.21203	0.19519	-35.02675	16.60
ene	22	0.21200	0.19514	-35.02667	16.14
ene	29	0.21198	0.19510	-35.02651	15.68
feb	5	0.21195	0.19506	-35.02633	15.22
feb	12	0.21194	0.19503	-35.02606	14.76
feb	19	0.21192	0.19499	-35.02576	14.30
feb	26	0.21191	0.19497	-35.02543	13.84
mar	4	0.21190	0.19495	-35.02507	13.38
mar	11	0.21191	0.19494	-35.02465	12.92
mar	18	0.21191	0.19493	-35.02418	12.46
mar	25	0.21192	0.19493	-35.02373	12.00
abr	1	0.21193	0.19494	-35.02323	11.54
abr	8	0.21196	0.19495	-35.02271	11.08
abr	15	0.21199	0.19496	-35.02214	10.62
abr	22	0.21202	0.19499	-35.02163	10.16
abr	29	0.21206	0.19501	-35.02106	9.70
may	6	0.21210	0.19504	-35.02054	9.24
may	13	0.21216	0.19508	-35.01995	8.78
may	20	0.21221	0.19512	-35.01947	8.32
may	27	0.21228	0.19516	-35.01893	7.86
jun	3	0.21234	0.19520	-35.01848	7.40
jun	10	0.21242	0.19525	-35.01797	6.94
jun	17	0.21248	0.19530	-35.01761	6.48
jun	24	0.21255	0.19535	-35.01719	6.02
jul	1	0.21262	0.19540	-35.01691	5.56
jul	8	0.21270	0.19545	-35.01657	5.10
jul	15	0.21276	0.19550	-35.01640	4.64
jul	22	0.21283	0.19555	-35.01619	4.18
jul	29	0.21289	0.19559	-35.01612	3.72
ago	5	0.21296	0.19563	-35.01602	3.26
ago	12	0.21300	0.19567	-35.01609	2.80
ago	19	0.21306	0.19571	-35.01610	2.34
ago	26	0.21310	0.19574	-35.01626	1.88
sep	2	0.21314	0.19576	-35.01640	1.42
sep	9	0.21316	0.19578	-35.01667	0.96
sep	16	0.21319	0.19579	-35.01689	0.50
sep	23	0.21321	0.19580	-35.01722	0.04
sep	30	0.21322	0.19580	-35.01753	23.58
oct	7	0.21322	0.19579	-35.01793	23.12
oct	14	0.21323	0.19578	-35.01826	22.66
oct	21	0.21322	0.19576	-35.01865	22.20
oct	28	0.21321	0.19573	-35.01901	21.74
nov	4	0.21319	0.19570	-35.01940	21.28
nov	11	0.21317	0.19567	-35.01972	20.82
nov	18	0.21315	0.19562	-35.02004	20.36
nov	25	0.21312	0.19558	-35.02033	19.90
dic	2	0.21309	0.19553	-35.02060	19.44
dic	9	0.21307	0.19548	-35.02080	18.98
dic	16	0.21304	0.19543	-35.02095	18.52
dic	23	0.21301	0.19538	-35.02108	18.06

1599

		V	Sp		
		4.23	F9V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	0.35128	0.33447	-64.76468	17.66
ene	8	0.35119	0.33437	-64.76458	17.20
ene	15	0.35113	0.33429	-64.76433	16.74
ene	22	0.35105	0.33419	-64.76406	16.28
ene	29	0.35100	0.33412	-64.76369	15.82
feb	5	0.35093	0.33404	-64.76330	15.36
feb	12	0.35089	0.33398	-64.76279	14.90
feb	19	0.35085	0.33392	-64.76225	14.44
feb	26	0.35082	0.33388	-64.76167	13.98
mar	4	0.35079	0.33383	-64.76106	13.52
mar	11	0.35078	0.33382	-64.76039	13.06
mar	18	0.35077	0.33379	-64.75968	12.60
mar	25	0.35078	0.33380	-64.75900	12.14
abr	1	0.35079	0.33380	-64.75828	11.68
abr	8	0.35083	0.33382	-64.75756	11.22
abr	15	0.35087	0.33384	-64.75681	10.76
abr	22	0.35092	0.33389	-64.75614	10.30
abr	29	0.35098	0.33393	-64.75543	9.84
may	6	0.35105	0.33399	-64.75479	9.38
may	13	0.35113	0.33405	-64.75411	8.92
may	20	0.35122	0.33412	-64.75357	8.46
may	27	0.35132	0.33420	-64.75299	8.00
jun	3	0.35142	0.33429	-64.75253	7.54
jun	10	0.35154	0.33437	-64.75204	7.08
jun	17	0.35165	0.33447	-64.75172	6.62
jun	24	0.35177	0.33456	-64.75137	6.16
jul	1	0.35189	0.33467	-64.75118	5.70
jul	8	0.35201	0.33476	-64.75096	5.24
jul	15	0.35212	0.33486	-64.75093	4.78
jul	22	0.35224	0.33495	-64.75087	4.32
jul	29	0.35234	0.33505	-64.75098	3.86
ago	5	0.35246	0.33513	-64.75107	3.40
ago	12	0.35254	0.33521	-64.75134	2.94
ago	19	0.35264	0.33529	-64.75157	2.48
ago	26	0.35271	0.33534	-64.75195	2.02
sep	2	0.35278	0.33540	-64.75231	1.56
sep	9	0.35282	0.33544	-64.75282	1.10
sep	16	0.35288	0.33547	-64.75326	0.64
sep	23	0.35289	0.33548	-64.75381	0.18
sep	30	0.35292	0.33550	-64.75433	23.72
oct	7	0.35291	0.33548	-64.75492	23.26
oct	14	0.35291	0.33546	-64.75544	22.80
oct	21	0.35288	0.33542	-64.75600	22.34
oct	28	0.35286	0.33538	-64.75651	21.88
nov	4	0.35281	0.33532	-64.75703	21.42
nov	11	0.35277	0.33526	-64.75745	20.96
nov	18	0.35270	0.33517	-64.75784	20.50
nov	25	0.35264	0.33510	-64.75817	20.04
dic	2	0.35256	0.33500	-64.75845	19.58
dic	9	0.35250	0.33491	-64.75863	19.12
dic	16	0.35242	0.33480	-64.75873	18.66
dic	23	0.35234	0.33471	-64.75878	18.20

Posiciones aparentes de estrellas brillantes, 2020

(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	0.44579	0.42899	-77.14942	17.75
ene	8	0.44562	0.42880	-77.14928	17.29
ene	15	0.44548	0.42863	-77.14898	16.83
ene	22	0.44531	0.42845	-77.14866	16.37
ene	29	0.44519	0.42831	-77.14823	15.91
feb	5	0.44505	0.42815	-77.14778	15.45
feb	12	0.44495	0.42804	-77.14721	14.99
feb	19	0.44484	0.42791	-77.14661	14.53
feb	26	0.44478	0.42784	-77.14598	14.07
mar	4	0.44470	0.42775	-77.14531	13.61
mar	11	0.44468	0.42772	-77.14459	13.15
mar	18	0.44464	0.42766	-77.14384	12.69
mar	25	0.44465	0.42767	-77.14312	12.23
abr	1	0.44466	0.42766	-77.14236	11.77
abr	8	0.44471	0.42771	-77.14162	11.31
abr	15	0.44476	0.42774	-77.14084	10.85
abr	22	0.44485	0.42782	-77.14015	10.39
abr	29	0.44494	0.42789	-77.13944	9.93
may	6	0.44507	0.42801	-77.13879	9.47
may	13	0.44520	0.42811	-77.13812	9.01
may	20	0.44535	0.42826	-77.13758	8.56
may	27	0.44552	0.42839	-77.13702	8.10
jun	3	0.44570	0.42856	-77.13659	7.64
jun	10	0.44589	0.42873	-77.13613	7.18
jun	17	0.44609	0.42891	-77.13584	6.72
jun	24	0.44630	0.42909	-77.13553	6.26
jul	1	0.44650	0.42928	-77.13539	5.80
jul	8	0.44672	0.42947	-77.13522	5.34
jul	15	0.44692	0.42966	-77.13524	4.88
jul	22	0.44713	0.42984	-77.13523	4.42
jul	29	0.44732	0.43002	-77.13541	3.96
ago	5	0.44752	0.43019	-77.13555	3.50
ago	12	0.44768	0.43035	-77.13588	3.04
ago	19	0.44784	0.43049	-77.13617	2.58
ago	26	0.44797	0.43061	-77.13662	2.12
sep	2	0.44810	0.43072	-77.13704	1.66
sep	9	0.44819	0.43080	-77.13760	1.20
sep	16	0.44827	0.43087	-77.13809	0.74
sep	23	0.44831	0.43090	-77.13870	0.28
sep	30	0.44835	0.43093	-77.13926	23.82
oct	7	0.44833	0.43090	-77.13990	23.36
oct	14	0.44833	0.43088	-77.14046	22.90
oct	21	0.44826	0.43080	-77.14105	22.44
oct	28	0.44821	0.43073	-77.14158	21.98
nov	4	0.44810	0.43061	-77.14212	21.52
nov	11	0.44801	0.43050	-77.14255	21.06
nov	18	0.44786	0.43033	-77.14295	20.60
nov	25	0.44774	0.43019	-77.14327	20.14
dic	2	0.44757	0.43000	-77.14354	19.68
dic	9	0.44743	0.42984	-77.14370	19.22
dic	16	0.44725	0.42963	-77.14378	18.76
dic	23	0.44709	0.42946	-77.14380	18.30

3419

		V	Sp		
		2.04	K0III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	0.74293	0.72613	-17.88120	18.05
ene	8	0.74290	0.72609	-17.88134	17.59
ene	15	0.74289	0.72604	-17.88137	17.13
ene	22	0.74286	0.72600	-17.88142	16.67
ene	29	0.74284	0.72596	-17.88141	16.21
feb	5	0.74281	0.72592	-17.88140	15.75
feb	12	0.74280	0.72589	-17.88130	15.29
feb	19	0.74278	0.72585	-17.88119	14.83
feb	26	0.74276	0.72583	-17.88105	14.37
mar	4	0.74275	0.72580	-17.88088	13.91
mar	11	0.74275	0.72578	-17.88065	13.45
mar	18	0.74275	0.72577	-17.88038	12.99
mar	25	0.74275	0.72576	-17.88011	12.53
abr	1	0.74276	0.72576	-17.87979	12.07
abr	8	0.74277	0.72576	-17.87944	11.61
abr	15	0.74279	0.72577	-17.87903	11.15
abr	22	0.74281	0.72578	-17.87865	10.69
abr	29	0.74285	0.72580	-17.87821	10.23
may	6	0.74288	0.72582	-17.87778	9.77
may	13	0.74293	0.72584	-17.87728	9.31
may	20	0.74297	0.72588	-17.87686	8.85
may	27	0.74303	0.72591	-17.87636	8.39
jun	3	0.74308	0.72594	-17.87593	7.93
jun	10	0.74315	0.72598	-17.87542	7.47
jun	17	0.74320	0.72602	-17.87502	7.01
jun	24	0.74327	0.72606	-17.87455	6.55
jul	1	0.74333	0.72611	-17.87419	6.09
jul	8	0.74340	0.72615	-17.87377	5.63
jul	15	0.74345	0.72619	-17.87349	5.17
jul	22	0.74352	0.72623	-17.87314	4.71
jul	29	0.74357	0.72627	-17.87293	4.25
ago	5	0.74364	0.72631	-17.87267	3.79
ago	12	0.74368	0.72635	-17.87256	3.33
ago	19	0.74374	0.72638	-17.87239	2.87
ago	26	0.74377	0.72641	-17.87237	2.41
sep	2	0.74382	0.72644	-17.87231	1.95
sep	9	0.74384	0.72646	-17.87239	1.49
sep	16	0.74388	0.72648	-17.87241	1.03
sep	23	0.74390	0.72649	-17.87256	0.57
sep	30	0.74392	0.72649	-17.87268	0.11
oct	7	0.74392	0.72649	-17.87291	23.65
oct	14	0.74394	0.72649	-17.87308	23.19
oct	21	0.74394	0.72648	-17.87333	22.73
oct	28	0.74394	0.72646	-17.87356	22.27
nov	4	0.74393	0.72644	-17.87385	21.81
nov	11	0.74392	0.72642	-17.87408	21.35
nov	18	0.74391	0.72638	-17.87434	20.89
nov	25	0.74390	0.72635	-17.87458	20.43
dic	2	0.74388	0.72631	-17.87483	19.97
dic	9	0.74386	0.72627	-17.87503	19.51
dic	16	0.74384	0.72623	-17.87521	19.05
dic	23	0.74382	0.72619	-17.87539	18.59

Posiciones aparentes de estrellas brillantes, 2020

(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	0.85188	0.83507	-10.54032	18.16
ene	8	0.85185	0.83503	-10.54048	17.70
ene	15	0.85183	0.83499	-10.54054	17.24
ene	22	0.85180	0.83494	-10.54063	16.78
ene	29	0.85178	0.83490	-10.54066	16.32
feb	5	0.85176	0.83486	-10.54072	15.86
feb	12	0.85174	0.83483	-10.54067	15.40
feb	19	0.85172	0.83480	-10.54064	14.94
feb	26	0.85171	0.83477	-10.54057	14.48
mar	4	0.85169	0.83474	-10.54049	14.02
mar	11	0.85169	0.83473	-10.54033	13.56
mar	18	0.85169	0.83471	-10.54015	13.10
mar	25	0.85169	0.83470	-10.53997	12.64
abr	1	0.85169	0.83470	-10.53974	12.18
abr	8	0.85171	0.83470	-10.53946	11.72
abr	15	0.85173	0.83470	-10.53913	11.26
abr	22	0.85175	0.83472	-10.53884	10.80
abr	29	0.85178	0.83473	-10.53847	10.34
may	6	0.85181	0.83475	-10.53810	9.88
may	13	0.85186	0.83477	-10.53766	9.42
may	20	0.85190	0.83480	-10.53729	8.96
may	27	0.85196	0.83483	-10.53683	8.50
jun	3	0.85200	0.83487	-10.53643	8.04
jun	10	0.85207	0.83490	-10.53594	7.58
jun	17	0.85212	0.83494	-10.53557	7.12
jun	24	0.85219	0.83498	-10.53510	6.66
jul	1	0.85224	0.83502	-10.53474	6.20
jul	8	0.85231	0.83507	-10.53430	5.74
jul	15	0.85237	0.83511	-10.53400	5.28
jul	22	0.85243	0.83515	-10.53361	4.82
jul	29	0.85249	0.83519	-10.53336	4.36
ago	5	0.85255	0.83522	-10.53305	3.90
ago	12	0.85259	0.83526	-10.53289	3.44
ago	19	0.85265	0.83529	-10.53266	2.98
ago	26	0.85268	0.83532	-10.53256	2.52
sep	2	0.85273	0.83535	-10.53243	2.06
sep	9	0.85275	0.83537	-10.53244	1.60
sep	16	0.85279	0.83538	-10.53238	1.14
sep	23	0.85281	0.83540	-10.53244	0.68
sep	30	0.85283	0.83540	-10.53248	0.22
oct	7	0.85284	0.83540	-10.53263	23.76
oct	14	0.85285	0.83540	-10.53272	23.30
oct	21	0.85285	0.83539	-10.53290	22.84
oct	28	0.85285	0.83538	-10.53305	22.38
nov	4	0.85285	0.83536	-10.53328	21.92
nov	11	0.85284	0.83534	-10.53345	21.46
nov	18	0.85283	0.83531	-10.53366	21.00
nov	25	0.85282	0.83527	-10.53385	20.54
dic	2	0.85280	0.83524	-10.53407	20.08
dic	9	0.85279	0.83520	-10.53425	19.62
dic	16	0.85277	0.83516	-10.53441	19.16
dic	23	0.85275	0.83512	-10.53458	18.70

5364

		V	Sp		
		3.46	K2III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.15971	1.14291	-10.08002	18.47
ene	8	1.15968	1.14286	-10.08019	18.01
ene	15	1.15966	1.14282	-10.08025	17.55
ene	22	1.15964	1.14277	-10.08036	17.09
ene	29	1.15961	1.14273	-10.08040	16.63
feb	5	1.15959	1.14269	-10.08046	16.17
feb	12	1.15957	1.14266	-10.08042	15.71
feb	19	1.15955	1.14262	-10.08040	15.25
feb	26	1.15953	1.14259	-10.08034	14.79
mar	4	1.15951	1.14256	-10.08027	14.33
mar	11	1.15950	1.14254	-10.08012	13.87
mar	18	1.15950	1.14252	-10.07995	13.41
mar	25	1.15949	1.14251	-10.07977	12.95
abr	1	1.15950	1.14250	-10.07955	12.49
abr	8	1.15951	1.14250	-10.07928	12.03
abr	15	1.15953	1.14250	-10.07896	11.57
abr	22	1.15954	1.14251	-10.07867	11.11
abr	29	1.15957	1.14252	-10.07831	10.65
may	6	1.15960	1.14254	-10.07794	10.19
may	13	1.15964	1.14256	-10.07751	9.73
may	20	1.15968	1.14258	-10.07714	9.27
may	27	1.15973	1.14261	-10.07668	8.81
jun	3	1.15978	1.14264	-10.07627	8.35
jun	10	1.15984	1.14268	-10.07579	7.89
jun	17	1.15989	1.14272	-10.07540	7.43
jun	24	1.15996	1.14275	-10.07494	6.97
jul	1	1.16002	1.14280	-10.07456	6.51
jul	8	1.16009	1.14284	-10.07411	6.05
jul	15	1.16014	1.14288	-10.07380	5.59
jul	22	1.16021	1.14292	-10.07340	5.13
jul	29	1.16026	1.14296	-10.07314	4.67
ago	5	1.16032	1.14300	-10.07281	4.21
ago	12	1.16037	1.14304	-10.07264	3.75
ago	19	1.16042	1.14307	-10.07239	3.29
ago	26	1.16046	1.14310	-10.07229	2.83
sep	2	1.16051	1.14313	-10.07214	2.37
sep	9	1.16054	1.14316	-10.07213	1.91
sep	16	1.16058	1.14318	-10.07206	1.45
sep	23	1.16060	1.14319	-10.07212	0.99
sep	30	1.16063	1.14320	-10.07215	0.53
oct	7	1.16064	1.14321	-10.07230	0.07
oct	14	1.16066	1.14321	-10.07238	23.61
oct	21	1.16066	1.14320	-10.07256	23.15
oct	28	1.16067	1.14319	-10.07271	22.69
nov	4	1.16066	1.14318	-10.07294	22.23
nov	11	1.16067	1.14316	-10.07311	21.77
nov	18	1.16066	1.14313	-10.07333	21.31
nov	25	1.16065	1.14310	-10.07353	20.85
dic	2	1.16063	1.14307	-10.07376	20.39
dic	9	1.16062	1.14303	-10.07394	19.93
dic	16	1.16061	1.14299	-10.07412	19.47
dic	23	1.16058	1.14295	-10.07429	19.01

Posiciones aparentes de estrellas brillantes, 2020

(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	1.41686	1.40006	-8.08364	18.73
ene	8	1.41683	1.40001	-8.08383	18.27
ene	15	1.41682	1.39997	-8.08389	17.81
ene	22	1.41679	1.39993	-8.08402	17.35
ene	29	1.41677	1.39988	-8.08407	16.89
feb	5	1.41674	1.39984	-8.08415	16.43
feb	12	1.41672	1.39980	-8.08413	15.97
feb	19	1.41670	1.39977	-8.08413	15.51
feb	26	1.41667	1.39973	-8.08409	15.05
mar	4	1.41665	1.39970	-8.08404	14.59
mar	11	1.41664	1.39968	-8.08391	14.13
mar	18	1.41664	1.39966	-8.08377	13.67
mar	25	1.41663	1.39964	-8.08362	13.21
abr	1	1.41663	1.39963	-8.08343	12.75
abr	8	1.41663	1.39963	-8.08318	12.29
abr	15	1.41665	1.39962	-8.08289	11.83
abr	22	1.41666	1.39963	-8.08262	11.37
abr	29	1.41669	1.39964	-8.08229	10.91
may	6	1.41671	1.39965	-8.08194	10.45
may	13	1.41676	1.39967	-8.08152	9.99
may	20	1.41679	1.39969	-8.08116	9.53
may	27	1.41684	1.39972	-8.08073	9.07
jun	3	1.41689	1.39975	-8.08033	8.61
jun	10	1.41695	1.39978	-8.07985	8.15
jun	17	1.41700	1.39982	-8.07947	7.69
jun	24	1.41706	1.39985	-8.07901	7.23
jul	1	1.41712	1.39990	-8.07863	6.77
jul	8	1.41718	1.39994	-8.07818	6.31
jul	15	1.41724	1.39998	-8.07785	5.85
jul	22	1.41731	1.40002	-8.07745	5.39
jul	29	1.41736	1.40006	-8.07717	4.93
ago	5	1.41742	1.40010	-8.07683	4.47
ago	12	1.41747	1.40014	-8.07663	4.01
ago	19	1.41753	1.40017	-8.07637	3.55
ago	26	1.41757	1.40021	-8.07624	3.09
sep	2	1.41762	1.40024	-8.07607	2.63
sep	9	1.41765	1.40026	-8.07604	2.17
sep	16	1.41769	1.40029	-8.07595	1.71
sep	23	1.41771	1.40030	-8.07598	1.25
sep	30	1.41774	1.40032	-8.07599	0.79
oct	7	1.41776	1.40033	-8.07611	0.33
oct	14	1.41778	1.40033	-8.07617	23.87
oct	21	1.41779	1.40033	-8.07633	23.41
oct	28	1.41780	1.40032	-8.07647	22.95
nov	4	1.41780	1.40031	-8.07669	22.49
nov	11	1.41780	1.40029	-8.07684	22.03
nov	18	1.41780	1.40027	-8.07705	21.57
nov	25	1.41779	1.40024	-8.07724	21.11
dic	2	1.41777	1.40021	-8.07747	20.65
dic	9	1.41776	1.40018	-8.07764	20.19
dic	16	1.41775	1.40014	-8.07783	19.73
dic	23	1.41773	1.40010	-8.07800	19.27

7884					
		V	Sp		
		4.45	K3III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.70773	1.69093	5.58641	19.02
ene	8	1.70771	1.69089	5.58624	18.56
ene	15	1.70769	1.69085	5.58617	18.10
ene	22	1.70766	1.69080	5.58603	17.64
ene	29	1.70764	1.69076	5.58594	17.18
feb	5	1.70761	1.69071	5.58579	16.72
feb	12	1.70759	1.69067	5.58574	16.26
feb	19	1.70756	1.69064	5.58564	15.80
feb	26	1.70754	1.69060	5.58558	15.34
mar	4	1.70752	1.69057	5.58550	14.88
mar	11	1.70750	1.69054	5.58550	14.42
mar	18	1.70750	1.69052	5.58549	13.96
mar	25	1.70748	1.69050	5.58550	13.50
abr	1	1.70748	1.69048	5.58552	13.04
abr	8	1.70748	1.69048	5.58561	12.58
abr	15	1.70750	1.69047	5.58571	12.12
abr	22	1.70750	1.69047	5.58584	11.66
abr	29	1.70753	1.69048	5.58602	11.20
may	6	1.70755	1.69049	5.58622	10.74
may	13	1.70759	1.69051	5.58649	10.28
may	20	1.70762	1.69053	5.58672	9.82
may	27	1.70767	1.69055	5.58703	9.36
jun	3	1.70772	1.69058	5.58733	8.90
jun	10	1.70778	1.69061	5.58772	8.44
jun	17	1.70782	1.69065	5.58803	7.98
jun	24	1.70789	1.69068	5.58843	7.52
jul	1	1.70794	1.69072	5.58877	7.06
jul	8	1.70801	1.69076	5.58920	6.60
jul	15	1.70807	1.69080	5.58952	6.14
jul	22	1.70813	1.69085	5.58994	5.68
jul	29	1.70819	1.69089	5.59026	5.22
ago	5	1.70825	1.69093	5.59065	4.76
ago	12	1.70830	1.69097	5.59091	4.30
ago	19	1.70836	1.69101	5.59127	3.84
ago	26	1.70840	1.69104	5.59150	3.38
sep	2	1.70845	1.69107	5.59178	2.92
sep	9	1.70849	1.69110	5.59194	2.46
sep	16	1.70853	1.69113	5.59217	2.00
sep	23	1.70856	1.69115	5.59228	1.54
sep	30	1.70859	1.69117	5.59243	1.08
oct	7	1.70861	1.69118	5.59246	0.62
oct	14	1.70863	1.69119	5.59256	0.16
oct	21	1.70865	1.69119	5.59255	23.70
oct	28	1.70866	1.69119	5.59258	23.24
nov	4	1.70867	1.69118	5.59251	22.78
nov	11	1.70867	1.69117	5.59251	22.32
nov	18	1.70867	1.69115	5.59243	21.86
nov	25	1.70867	1.69112	5.59236	21.40
dic	2	1.70866	1.69109	5.59224	20.94
dic	9	1.70865	1.69107	5.59217	20.48
dic	16	1.70864	1.69103	5.59206	20.02
dic	23	1.70862	1.69099	5.59195	19.56

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

8102

		V	Sp		
		3.49	G8V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	1.74979	1.73299	-15.83657	19.06
ene	8	1.74976	1.73295	-15.83677	18.60
ene	15	1.74974	1.73290	-15.83683	18.14
ene	22	1.74972	1.73285	-15.83694	17.68
ene	29	1.74969	1.73281	-15.83696	17.22
feb	5	1.74966	1.73276	-15.83701	16.76
feb	12	1.74963	1.73272	-15.83694	16.30
feb	19	1.74961	1.73268	-15.83689	15.84
feb	26	1.74958	1.73264	-15.83677	15.38
mar	4	1.74956	1.73261	-15.83666	14.92
mar	11	1.74954	1.73258	-15.83644	14.46
mar	18	1.74953	1.73255	-15.83623	14.00
mar	25	1.74952	1.73253	-15.83598	13.54
abr	1	1.74951	1.73252	-15.83570	13.08
abr	8	1.74951	1.73251	-15.83536	12.62
abr	15	1.74953	1.73250	-15.83499	12.16
abr	22	1.74953	1.73250	-15.83462	11.70
abr	29	1.74955	1.73250	-15.83420	11.24
may	6	1.74958	1.73252	-15.83377	10.78
may	13	1.74962	1.73253	-15.83328	10.32
may	20	1.74965	1.73255	-15.83285	9.86
may	27	1.74969	1.73257	-15.83235	9.40
jun	3	1.74974	1.73260	-15.83189	8.94
jun	10	1.74979	1.73263	-15.83136	8.48
jun	17	1.74984	1.73266	-15.83093	8.02
jun	24	1.74991	1.73270	-15.83044	7.56
jul	1	1.74996	1.73274	-15.83003	7.10
jul	8	1.75003	1.73278	-15.82956	6.64
jul	15	1.75008	1.73282	-15.82923	6.18
jul	22	1.75015	1.73286	-15.82883	5.72
jul	29	1.75020	1.73291	-15.82856	5.26
ago	5	1.75027	1.73295	-15.82824	4.80
ago	12	1.75032	1.73299	-15.82807	4.34
ago	19	1.75038	1.73302	-15.82784	3.88
ago	26	1.75042	1.73306	-15.82776	3.42
sep	2	1.75047	1.73309	-15.82764	2.96
sep	9	1.75051	1.73312	-15.82768	2.50
sep	16	1.75055	1.73315	-15.82765	2.04
sep	23	1.75058	1.73317	-15.82777	1.58
sep	30	1.75061	1.73319	-15.82785	1.12
oct	7	1.75063	1.73320	-15.82806	0.66
oct	14	1.75065	1.73320	-15.82820	0.20
oct	21	1.75066	1.73320	-15.82846	23.74
oct	28	1.75068	1.73320	-15.82867	23.28
nov	4	1.75068	1.73319	-15.82898	22.82
nov	11	1.75068	1.73317	-15.82921	22.36
nov	18	1.75068	1.73315	-15.82951	21.90
nov	25	1.75067	1.73312	-15.82977	21.44
dic	2	1.75066	1.73309	-15.83006	20.98
dic	9	1.75065	1.73306	-15.83029	20.52
dic	16	1.75063	1.73302	-15.83053	20.06
dic	23	1.75061	1.73298	-15.83073	19.60

10320

		V	Sp		
		5.27	A0V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	2.22973	2.21292	-30.63560	19.54
ene	8	2.22969	2.21287	-30.63586	19.08
ene	15	2.22967	2.21282	-30.63596	18.62
ene	22	2.22963	2.21277	-30.63609	18.16
ene	29	2.22960	2.21272	-30.63611	17.70
feb	5	2.22956	2.21266	-30.63614	17.24
feb	12	2.22953	2.21262	-30.63602	16.78
feb	19	2.22949	2.21257	-30.63592	16.32
feb	26	2.22946	2.21252	-30.63573	15.86
mar	4	2.22943	2.21248	-30.63554	15.40
mar	11	2.22940	2.21244	-30.63522	14.94
mar	18	2.22938	2.21240	-30.63490	14.48
mar	25	2.22936	2.21238	-30.63453	14.02
abr	1	2.22935	2.21235	-30.63414	13.56
abr	8	2.22934	2.21233	-30.63367	13.10
abr	15	2.22934	2.21232	-30.63317	12.64
abr	22	2.22934	2.21231	-30.63267	12.18
abr	29	2.22936	2.21231	-30.63214	11.72
may	6	2.22937	2.21231	-30.63157	11.26
may	13	2.22941	2.21232	-30.63098	10.80
may	20	2.22943	2.21234	-30.63042	10.34
may	27	2.22947	2.21235	-30.62983	9.88
jun	3	2.22952	2.21238	-30.62926	9.42
jun	10	2.22957	2.21241	-30.62866	8.96
jun	17	2.22962	2.21244	-30.62815	8.50
jun	24	2.22968	2.21248	-30.62760	8.04
jul	1	2.22974	2.21252	-30.62714	7.58
jul	8	2.22981	2.21256	-30.62664	7.12
jul	15	2.22987	2.21260	-30.62628	6.66
jul	22	2.22994	2.21265	-30.62588	6.20
jul	29	2.23000	2.21270	-30.62561	5.74
ago	5	2.23007	2.21275	-30.62532	5.28
ago	12	2.23013	2.21279	-30.62519	4.82
ago	19	2.23019	2.21284	-30.62502	4.36
ago	26	2.23025	2.21288	-30.62501	3.90
sep	2	2.23031	2.21293	-30.62497	3.44
sep	9	2.23035	2.21296	-30.62511	2.98
sep	16	2.23040	2.21300	-30.62519	2.52
sep	23	2.23044	2.21303	-30.62543	2.06
sep	30	2.23048	2.21306	-30.62563	1.60
oct	7	2.23050	2.21307	-30.62599	1.14
oct	14	2.23054	2.21309	-30.62628	0.68
oct	21	2.23055	2.21309	-30.62669	0.22
oct	28	2.23057	2.21310	-30.62705	23.76
nov	4	2.23058	2.21309	-30.62752	23.30
nov	11	2.23059	2.21308	-30.62790	22.84
nov	18	2.23058	2.21306	-30.62836	22.38
nov	25	2.23058	2.21303	-30.62875	21.92
dic	2	2.23057	2.21300	-30.62918	21.46
dic	9	2.23056	2.21297	-30.62952	21.00
dic	16	2.23054	2.21293	-30.62988	20.54
dic	23	2.23052	2.21289	-30.63017	20.08

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

10670

V 4.03 Sp A1Vnn

m	d	α h	α_c h	δ °	Hp h
ene	1	2.30839	2.29158	33.93948	19.62
ene	8	2.30836	2.29154	33.93946	19.16
ene	15	2.30833	2.29149	33.93951	18.70
ene	22	2.30830	2.29144	33.93943	18.24
ene	29	2.30826	2.29138	33.93938	17.78
feb	5	2.30823	2.29133	33.93921	17.32
feb	12	2.30819	2.29128	33.93911	16.86
feb	19	2.30816	2.29123	33.93891	16.40
feb	26	2.30812	2.29118	33.93872	15.94
mar	4	2.30809	2.29114	33.93846	15.48
mar	11	2.30806	2.29110	33.93826	15.02
mar	18	2.30804	2.29107	33.93801	14.56
mar	25	2.30802	2.29104	33.93776	14.10
abr	1	2.30801	2.29101	33.93748	13.64
abr	8	2.30800	2.29100	33.93728	13.18
abr	15	2.30801	2.29099	33.93707	12.72
abr	22	2.30801	2.29098	33.93686	12.26
abr	29	2.30803	2.29098	33.93668	11.80
may	6	2.30805	2.29099	33.93655	11.34
may	13	2.30810	2.29101	33.93647	10.88
may	20	2.30812	2.29103	33.93638	10.42
may	27	2.30818	2.29105	33.93637	9.96
jun	3	2.30822	2.29108	33.93638	9.50
jun	10	2.30829	2.29112	33.93648	9.04
jun	17	2.30834	2.29116	33.93655	8.58
jun	24	2.30841	2.29120	33.93672	8.12
jul	1	2.30847	2.29125	33.93688	7.66
jul	8	2.30855	2.29130	33.93715	7.20
jul	15	2.30861	2.29135	33.93736	6.74
jul	22	2.30869	2.29140	33.93769	6.28
jul	29	2.30875	2.29145	33.93796	5.82
ago	5	2.30883	2.29150	33.93835	5.36
ago	12	2.30888	2.29155	33.93865	4.90
ago	19	2.30896	2.29160	33.93907	4.44
ago	26	2.30901	2.29165	33.93941	3.98
sep	2	2.30907	2.29169	33.93985	3.52
sep	9	2.30912	2.29173	33.94017	3.06
sep	16	2.30918	2.29177	33.94062	2.60
sep	23	2.30922	2.29181	33.94096	2.14
sep	30	2.30926	2.29184	33.94138	1.68
oct	7	2.30929	2.29186	33.94169	1.22
oct	14	2.30933	2.29188	33.94210	0.76
oct	21	2.30936	2.29190	33.94240	0.30
oct	28	2.30938	2.29190	33.94276	23.84
nov	4	2.30939	2.29190	33.94301	23.38
nov	11	2.30941	2.29190	33.94334	22.92
nov	18	2.30942	2.29189	33.94358	22.46
nov	25	2.30942	2.29187	33.94383	22.00
dic	2	2.30941	2.29185	33.94400	21.54
dic	9	2.30941	2.29182	33.94421	21.08
dic	16	2.30940	2.29179	33.94434	20.62
dic	23	2.30938	2.29175	33.94447	20.16

15510

V 4.26 Sp G8V

m	d	α h	α_c h	δ °	Hp h
ene	1	3.34556	3.32876	-42.99917	20.65
ene	8	3.34552	3.32871	-42.99956	20.19
ene	15	3.34549	3.32865	-42.99977	19.73
ene	22	3.34545	3.32859	-43.00003	19.27
ene	29	3.34541	3.32853	-43.00013	18.81
feb	5	3.34536	3.32846	-43.00025	18.35
feb	12	3.34532	3.32840	-43.00020	17.89
feb	19	3.34527	3.32834	-43.00017	17.43
feb	26	3.34522	3.32828	-43.00001	16.97
mar	4	3.34517	3.32822	-42.99986	16.51
mar	11	3.34513	3.32816	-42.99954	16.05
mar	18	3.34509	3.32811	-42.99925	15.59
mar	25	3.34505	3.32806	-42.99885	15.13
abr	1	3.34501	3.32802	-42.99845	14.67
abr	8	3.34499	3.32798	-42.99793	14.21
abr	15	3.34497	3.32795	-42.99742	13.75
abr	22	3.34495	3.32792	-42.99685	13.29
abr	29	3.34495	3.32790	-42.99628	12.83
may	6	3.34495	3.32789	-42.99563	12.37
may	13	3.34496	3.32788	-42.99498	11.91
may	20	3.34498	3.32788	-42.99433	11.45
may	27	3.34500	3.32788	-42.99367	10.99
jun	3	3.34504	3.32790	-42.99300	10.53
jun	10	3.34508	3.32791	-42.99233	10.07
jun	17	3.34512	3.32794	-42.99171	9.61
jun	24	3.34518	3.32797	-42.99108	9.16
jul	1	3.34523	3.32801	-42.99052	8.70
jul	8	3.34530	3.32805	-42.98994	8.24
jul	15	3.34536	3.32810	-42.98948	7.78
jul	22	3.34543	3.32815	-42.98900	7.32
jul	29	3.34550	3.32820	-42.98865	6.86
ago	5	3.34558	3.32826	-42.98829	6.40
ago	12	3.34565	3.32832	-42.98809	5.94
ago	19	3.34572	3.32837	-42.98787	5.48
ago	26	3.34579	3.32843	-42.98782	5.02
sep	2	3.34587	3.32849	-42.98775	4.56
sep	9	3.34593	3.32854	-42.98787	4.10
sep	16	3.34599	3.32859	-42.98795	3.64
sep	23	3.34605	3.32864	-42.98820	3.18
sep	30	3.34611	3.32868	-42.98843	2.72
oct	7	3.34615	3.32872	-42.98883	2.26
oct	14	3.34620	3.32875	-42.98918	1.80
oct	21	3.34624	3.32877	-42.98968	1.34
oct	28	3.34627	3.32879	-42.99012	0.88
nov	4	3.34629	3.32880	-42.99070	0.42
nov	11	3.34631	3.32881	-42.99119	23.96
nov	18	3.34633	3.32880	-42.99178	23.50
nov	25	3.34633	3.32879	-42.99229	23.04
dic	2	3.34633	3.32876	-42.99288	22.58
dic	9	3.34632	3.32874	-42.99334	22.12
dic	16	3.34631	3.32870	-42.99386	21.66
dic	23	3.34629	3.32866	-42.99428	21.20

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

17378

		V	Sp		
		3.52	K0IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	3.73682	3.72001	-9.69941	21.05
ene	8	3.73680	3.71998	-9.69969	20.59
ene	15	3.73679	3.71994	-9.69984	20.13
ene	22	3.73676	3.71990	-9.70006	19.67
ene	29	3.73674	3.71986	-9.70017	19.21
feb	5	3.73670	3.71981	-9.70033	18.75
feb	12	3.73668	3.71976	-9.70035	18.29
feb	19	3.73665	3.71972	-9.70044	17.83
feb	26	3.73661	3.71967	-9.70042	17.37
mar	4	3.73658	3.71962	-9.70044	16.91
mar	11	3.73654	3.71958	-9.70033	16.45
mar	18	3.73652	3.71954	-9.70026	15.99
mar	25	3.73649	3.71950	-9.70011	15.53
abr	1	3.73646	3.71947	-9.69998	15.07
abr	8	3.73644	3.71944	-9.69974	14.61
abr	15	3.73643	3.71941	-9.69952	14.15
abr	22	3.73642	3.71939	-9.69924	13.69
abr	29	3.73642	3.71937	-9.69897	13.23
may	6	3.73642	3.71936	-9.69861	12.77
may	13	3.73643	3.71935	-9.69825	12.31
may	20	3.73644	3.71934	-9.69788	11.85
may	27	3.73647	3.71935	-9.69749	11.39
jun	3	3.73649	3.71936	-9.69706	10.93
jun	10	3.73653	3.71937	-9.69661	10.47
jun	17	3.73656	3.71938	-9.69620	10.01
jun	24	3.73661	3.71941	-9.69575	9.55
jul	1	3.73665	3.71943	-9.69532	9.09
jul	8	3.73671	3.71946	-9.69486	8.63
jul	15	3.73676	3.71950	-9.69449	8.17
jul	22	3.73682	3.71953	-9.69407	7.71
jul	29	3.73687	3.71957	-9.69373	7.25
ago	5	3.73694	3.71961	-9.69336	6.79
ago	12	3.73699	3.71965	-9.69311	6.33
ago	19	3.73705	3.71970	-9.69281	5.87
ago	26	3.73710	3.71974	-9.69264	5.41
sep	2	3.73716	3.71978	-9.69243	4.95
sep	9	3.73721	3.71983	-9.69237	4.49
sep	16	3.73727	3.71987	-9.69225	4.03
sep	23	3.73732	3.71991	-9.69228	3.57
sep	30	3.73737	3.71994	-9.69227	3.11
oct	7	3.73740	3.71997	-9.69242	2.65
oct	14	3.73745	3.72000	-9.69249	2.19
oct	21	3.73749	3.72003	-9.69270	1.73
oct	28	3.73752	3.72005	-9.69286	1.27
nov	4	3.73755	3.72006	-9.69316	0.81
nov	11	3.73758	3.72007	-9.69336	0.35
nov	18	3.73760	3.72007	-9.69368	23.89
nov	25	3.73761	3.72007	-9.69393	23.43
dic	2	3.73762	3.72006	-9.69427	22.97
dic	9	3.73763	3.72005	-9.69451	22.51
dic	16	3.73764	3.72002	-9.69483	22.05
dic	23	3.73763	3.72000	-9.69507	21.59

23693

		V	Sp		
		4.71	F7V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	5.09815	5.08135	-57.44895	22.41
ene	8	5.09812	5.08130	-57.44956	21.95
ene	15	5.09808	5.08124	-57.45001	21.49
ene	22	5.09803	5.08117	-57.45052	21.03
ene	29	5.09798	5.08110	-57.45087	20.57
feb	5	5.09791	5.08101	-57.45125	20.11
feb	12	5.09784	5.08093	-57.45144	19.65
feb	19	5.09777	5.08084	-57.45168	19.19
feb	26	5.09769	5.08075	-57.45175	18.73
mar	4	5.09761	5.08065	-57.45183	18.27
mar	11	5.09753	5.08056	-57.45173	17.81
mar	18	5.09745	5.08047	-57.45166	17.35
mar	25	5.09737	5.08038	-57.45144	16.89
abr	1	5.09729	5.08029	-57.45123	16.43
abr	8	5.09722	5.08021	-57.45085	15.97
abr	15	5.09716	5.08013	-57.45050	15.51
abr	22	5.09710	5.08007	-57.45003	15.05
abr	29	5.09705	5.08000	-57.44957	14.59
may	6	5.09700	5.07994	-57.44898	14.13
may	13	5.09697	5.07989	-57.44842	13.67
may	20	5.09695	5.07985	-57.44778	13.21
may	27	5.09693	5.07981	-57.44715	12.75
jun	3	5.09693	5.07979	-57.44645	12.29
jun	10	5.09694	5.07977	-57.44577	11.83
jun	17	5.09695	5.07977	-57.44508	11.37
jun	24	5.09698	5.07977	-57.44439	10.91
jul	1	5.09701	5.07979	-57.44371	10.45
jul	8	5.09706	5.07981	-57.44305	9.99
jul	15	5.09710	5.07984	-57.44243	9.53
jul	22	5.09717	5.07988	-57.44184	9.07
jul	29	5.09723	5.07993	-57.44131	8.61
ago	5	5.09731	5.07998	-57.44080	8.15
ago	12	5.09738	5.08005	-57.44041	7.69
ago	19	5.09746	5.08011	-57.44003	7.23
ago	26	5.09755	5.08019	-57.43979	6.77
sep	2	5.09764	5.08026	-57.43956	6.31
sep	9	5.09772	5.08034	-57.43949	5.85
sep	16	5.09781	5.08041	-57.43943	5.39
sep	23	5.09790	5.08049	-57.43954	4.93
sep	30	5.09798	5.08056	-57.43965	4.47
oct	7	5.09806	5.08063	-57.43994	4.01
oct	14	5.09814	5.08069	-57.44021	3.55
oct	21	5.09821	5.08075	-57.44066	3.09
oct	28	5.09828	5.08080	-57.44107	2.63
nov	4	5.09833	5.08084	-57.44166	2.17
nov	11	5.09839	5.08088	-57.44217	1.71
nov	18	5.09843	5.08090	-57.44284	1.25
nov	25	5.09846	5.08091	-57.44344	0.79
dic	2	5.09848	5.08091	-57.44415	0.33
dic	9	5.09849	5.08091	-57.44476	23.87
dic	16	5.09850	5.08088	-57.44547	23.41
dic	23	5.09849	5.08086	-57.44606	22.95

Posiciones aparentes de estrellas brillantes, 2020

(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	5.79785	5.78105	-14.81714	23.11
ene	8	5.79785	5.78103	-14.81757	22.65
ene	15	5.79785	5.78101	-14.81787	22.19
ene	22	5.79785	5.78098	-14.81825	21.73
ene	29	5.79783	5.78095	-14.81849	21.27
feb	5	5.79781	5.78091	-14.81879	20.81
feb	12	5.79779	5.78087	-14.81895	20.35
feb	19	5.79776	5.78083	-14.81918	19.89
feb	26	5.79772	5.78079	-14.81926	19.43
mar	4	5.79769	5.78074	-14.81940	18.97
mar	11	5.79765	5.78069	-14.81939	18.51
mar	18	5.79762	5.78064	-14.81944	18.05
mar	25	5.79758	5.78059	-14.81936	17.59
abr	1	5.79754	5.78054	-14.81933	17.13
abr	8	5.79750	5.78050	-14.81915	16.67
abr	15	5.79748	5.78045	-14.81903	16.21
abr	22	5.79744	5.78041	-14.81879	15.75
abr	29	5.79742	5.78037	-14.81860	15.29
may	6	5.79740	5.78034	-14.81828	14.83
may	13	5.79740	5.78031	-14.81800	14.37
may	20	5.79738	5.78028	-14.81764	13.91
may	27	5.79738	5.78026	-14.81730	13.45
jun	3	5.79738	5.78025	-14.81688	12.99
jun	10	5.79740	5.78024	-14.81649	12.53
jun	17	5.79741	5.78023	-14.81606	12.07
jun	24	5.79744	5.78023	-14.81564	11.61
jul	1	5.79746	5.78024	-14.81519	11.15
jul	8	5.79749	5.78025	-14.81475	10.69
jul	15	5.79752	5.78026	-14.81432	10.23
jul	22	5.79757	5.78028	-14.81391	9.77
jul	29	5.79761	5.78031	-14.81352	9.31
ago	5	5.79766	5.78034	-14.81313	8.85
ago	12	5.79770	5.78037	-14.81282	8.39
ago	19	5.79776	5.78041	-14.81250	7.93
ago	26	5.79781	5.78045	-14.81228	7.47
sep	2	5.79787	5.78049	-14.81204	7.01
sep	9	5.79792	5.78053	-14.81193	6.55
sep	16	5.79798	5.78058	-14.81180	6.09
sep	23	5.79803	5.78062	-14.81181	5.63
sep	30	5.79809	5.78067	-14.81179	5.17
oct	7	5.79814	5.78071	-14.81192	4.71
oct	14	5.79820	5.78075	-14.81201	4.25
oct	21	5.79826	5.78079	-14.81226	3.79
oct	28	5.79831	5.78083	-14.81246	3.33
nov	4	5.79835	5.78087	-14.81280	2.87
nov	11	5.79840	5.78090	-14.81308	2.41
nov	18	5.79845	5.78092	-14.81351	1.95
nov	25	5.79849	5.78094	-14.81384	1.49
dic	2	5.79852	5.78095	-14.81431	1.03
dic	9	5.79855	5.78097	-14.81467	0.57
dic	16	5.79858	5.78097	-14.81515	0.11
dic	23	5.79860	5.78096	-14.81551	23.65

27654

V 3.76 Sp G8III/IV

m	d	α h	α_c h	δ °	Hp h
ene	1	5.86987	5.85307	-20.88002	23.18
ene	8	5.86987	5.85305	-20.88050	22.72
ene	15	5.86988	5.85303	-20.88087	22.26
ene	22	5.86987	5.85300	-20.88130	21.80
ene	29	5.86985	5.85297	-20.88160	21.34
feb	5	5.86983	5.85293	-20.88195	20.88
feb	12	5.86980	5.85289	-20.88215	20.42
feb	19	5.86977	5.85285	-20.88241	19.96
feb	26	5.86974	5.85280	-20.88253	19.50
mar	4	5.86970	5.85275	-20.88269	19.04
mar	11	5.86966	5.85270	-20.88270	18.58
mar	18	5.86962	5.85265	-20.88276	18.12
mar	25	5.86958	5.85260	-20.88268	17.66
abr	1	5.86954	5.85255	-20.88265	17.20
abr	8	5.86950	5.85250	-20.88246	16.74
abr	15	5.86948	5.85245	-20.88233	16.28
abr	22	5.86944	5.85241	-20.88207	15.82
abr	29	5.86942	5.85237	-20.88185	15.36
may	6	5.86939	5.85233	-20.88150	14.90
may	13	5.86938	5.85230	-20.88119	14.44
may	20	5.86937	5.85227	-20.88079	13.98
may	27	5.86937	5.85225	-20.88041	13.52
jun	3	5.86936	5.85223	-20.87995	13.06
jun	10	5.86938	5.85221	-20.87951	12.60
jun	17	5.86939	5.85221	-20.87903	12.14
jun	24	5.86941	5.85220	-20.87856	11.68
jul	1	5.86943	5.85221	-20.87807	11.22
jul	8	5.86947	5.85222	-20.87758	10.76
jul	15	5.86949	5.85223	-20.87711	10.30
jul	22	5.86954	5.85225	-20.87665	9.84
jul	29	5.86958	5.85228	-20.87623	9.38
ago	5	5.86963	5.85230	-20.87581	8.92
ago	12	5.86967	5.85234	-20.87546	8.46
ago	19	5.86973	5.85237	-20.87512	8.00
ago	26	5.86978	5.85242	-20.87487	7.54
sep	2	5.86984	5.85246	-20.87462	7.08
sep	9	5.86989	5.85250	-20.87449	6.62
sep	16	5.86995	5.85255	-20.87436	6.16
sep	23	5.87001	5.85259	-20.87437	5.70
sep	30	5.87007	5.85264	-20.87436	5.24
oct	7	5.87012	5.85269	-20.87450	4.78
oct	14	5.87018	5.85273	-20.87462	4.32
oct	21	5.87023	5.85277	-20.87489	3.86
oct	28	5.87029	5.85281	-20.87512	3.40
nov	4	5.87033	5.85285	-20.87550	2.94
nov	11	5.87039	5.85288	-20.87583	2.48
nov	18	5.87043	5.85290	-20.87630	2.02
nov	25	5.87047	5.85292	-20.87669	1.56
dic	2	5.87050	5.85294	-20.87721	1.10
dic	9	5.87054	5.85295	-20.87763	0.64
dic	16	5.87056	5.85295	-20.87817	0.18
dic	23	5.87058	5.85295	-20.87860	23.72

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

28103

		V	Sp		
		3.71	F1V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	5.95542	5.93861	-14.16656	23.26
ene	8	5.95542	5.93860	-14.16698	22.80
ene	15	5.95542	5.93858	-14.16729	22.34
ene	22	5.95542	5.93855	-14.16767	21.88
ene	29	5.95540	5.93852	-14.16791	21.42
feb	5	5.95538	5.93849	-14.16822	20.96
feb	12	5.95536	5.93845	-14.16838	20.50
feb	19	5.95533	5.93841	-14.16862	20.04
feb	26	5.95530	5.93836	-14.16871	19.58
mar	4	5.95526	5.93831	-14.16886	19.12
mar	11	5.95523	5.93827	-14.16885	18.66
mar	18	5.95520	5.93822	-14.16891	18.20
mar	25	5.95515	5.93817	-14.16884	17.74
abr	1	5.95512	5.93812	-14.16882	17.28
abr	8	5.95508	5.93808	-14.16865	16.82
abr	15	5.95506	5.93803	-14.16854	16.36
abr	22	5.95502	5.93799	-14.16832	15.90
abr	29	5.95500	5.93795	-14.16814	15.44
may	6	5.95498	5.93791	-14.16782	14.98
may	13	5.95497	5.93788	-14.16756	14.52
may	20	5.95495	5.93786	-14.16721	14.06
may	27	5.95495	5.93783	-14.16689	13.60
jun	3	5.95495	5.93782	-14.16648	13.14
jun	10	5.95497	5.93780	-14.16610	12.68
jun	17	5.95497	5.93780	-14.16568	12.22
jun	24	5.95500	5.93779	-14.16527	11.76
jul	1	5.95502	5.93780	-14.16483	11.30
jul	8	5.95506	5.93781	-14.16440	10.84
jul	15	5.95508	5.93782	-14.16398	10.39
jul	22	5.95513	5.93784	-14.16357	9.93
jul	29	5.95516	5.93786	-14.16319	9.47
ago	5	5.95521	5.93789	-14.16281	9.01
ago	12	5.95525	5.93792	-14.16249	8.55
ago	19	5.95531	5.93796	-14.16218	8.09
ago	26	5.95536	5.93800	-14.16195	7.63
sep	2	5.95542	5.93804	-14.16172	7.17
sep	9	5.95547	5.93808	-14.16160	6.71
sep	16	5.95553	5.93813	-14.16147	6.25
sep	23	5.95558	5.93817	-14.16147	5.79
sep	30	5.95564	5.93822	-14.16145	5.33
oct	7	5.95569	5.93826	-14.16157	4.87
oct	14	5.95575	5.93831	-14.16166	4.41
oct	21	5.95581	5.93835	-14.16191	3.95
oct	28	5.95586	5.93839	-14.16209	3.49
nov	4	5.95591	5.93842	-14.16244	3.03
nov	11	5.95596	5.93845	-14.16271	2.57
nov	18	5.95601	5.93848	-14.16313	2.11
nov	25	5.95605	5.93850	-14.16346	1.65
dic	2	5.95608	5.93851	-14.16392	1.19
dic	9	5.95611	5.93853	-14.16428	0.73
dic	16	5.95614	5.93853	-14.16476	0.27
dic	23	5.95616	5.93853	-14.16512	23.81

29271

		V	Sp		
		5.08	G5V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	6.16235	6.14555	-74.76028	23.47
ene	8	6.16231	6.14549	-74.76097	23.01
ene	15	6.16223	6.14539	-74.76155	22.55
ene	22	6.16214	6.14528	-74.76219	22.09
ene	29	6.16203	6.14515	-74.76268	21.63
feb	5	6.16191	6.14501	-74.76321	21.17
feb	12	6.16177	6.14485	-74.76358	20.71
feb	19	6.16161	6.14468	-74.76399	20.25
feb	26	6.16145	6.14451	-74.76423	19.79
mar	4	6.16128	6.14432	-74.76450	19.33
mar	11	6.16110	6.14414	-74.76458	18.87
mar	18	6.16092	6.14394	-74.76471	18.41
mar	25	6.16074	6.14375	-74.76466	17.95
abr	1	6.16056	6.14356	-74.76463	17.49
abr	8	6.16038	6.14338	-74.76443	17.03
abr	15	6.16021	6.14318	-74.76426	16.57
abr	22	6.16005	6.14302	-74.76393	16.11
abr	29	6.15990	6.14285	-74.76363	15.65
may	6	6.15976	6.14270	-74.76317	15.19
may	13	6.15963	6.14255	-74.76274	14.73
may	20	6.15953	6.14243	-74.76220	14.27
may	27	6.15943	6.14231	-74.76168	13.81
jun	3	6.15936	6.14222	-74.76104	13.35
jun	10	6.15930	6.14213	-74.76044	12.89
jun	17	6.15927	6.14209	-74.75977	12.43
jun	24	6.15924	6.14204	-74.75913	11.97
jul	1	6.15925	6.14203	-74.75844	11.51
jul	8	6.15926	6.14201	-74.75777	11.05
jul	15	6.15931	6.14205	-74.75711	10.59
jul	22	6.15936	6.14207	-74.75648	10.13
jul	29	6.15944	6.14214	-74.75588	9.67
ago	5	6.15953	6.14221	-74.75530	9.21
ago	12	6.15965	6.14231	-74.75480	8.75
ago	19	6.15976	6.14241	-74.75432	8.29
ago	26	6.15990	6.14254	-74.75395	7.83
sep	2	6.16005	6.14267	-74.75360	7.37
sep	9	6.16021	6.14282	-74.75338	6.91
sep	16	6.16036	6.14296	-74.75319	6.45
sep	23	6.16053	6.14312	-74.75316	5.99
sep	30	6.16069	6.14327	-74.75313	5.53
oct	7	6.16086	6.14343	-74.75328	5.07
oct	14	6.16102	6.14357	-74.75343	4.61
oct	21	6.16117	6.14371	-74.75377	4.15
oct	28	6.16132	6.14384	-74.75408	3.69
nov	4	6.16145	6.14396	-74.75457	3.23
nov	11	6.16157	6.14406	-74.75502	2.77
nov	18	6.16167	6.14414	-74.75564	2.31
nov	25	6.16175	6.14421	-74.75620	1.85
dic	2	6.16182	6.14425	-74.75690	1.39
dic	9	6.16186	6.14427	-74.75752	0.93
dic	16	6.16188	6.14426	-74.75827	0.47
dic	23	6.16188	6.14425	-74.75891	0.01

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

32361

		V	Sp		
		8.81	A5		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	6.77974	6.76294	46.84191	0.09
ene	8	6.77976	6.76294	46.84217	23.63
ene	15	6.77979	6.76294	46.84252	23.17
ene	22	6.77979	6.76293	46.84278	22.71
ene	29	6.77979	6.76291	46.84314	22.25
feb	5	6.77978	6.76288	46.84340	21.79
feb	12	6.77976	6.76285	46.84374	21.33
feb	19	6.77974	6.76281	46.84395	20.87
feb	26	6.77970	6.76276	46.84425	20.41
mar	4	6.77966	6.76270	46.84440	19.95
mar	11	6.77961	6.76265	46.84463	19.49
mar	18	6.77957	6.76259	46.84471	19.03
mar	25	6.77951	6.76253	46.84486	18.57
abr	1	6.77946	6.76247	46.84486	18.11
abr	8	6.77941	6.76241	46.84492	17.65
abr	15	6.77937	6.76235	46.84484	17.19
abr	22	6.77932	6.76229	46.84481	16.73
abr	29	6.77929	6.76224	46.84465	16.27
may	6	6.77925	6.76219	46.84456	15.81
may	13	6.77924	6.76215	46.84434	15.35
may	20	6.77920	6.76211	46.84418	14.89
may	27	6.77920	6.76208	46.84391	14.43
jun	3	6.77919	6.76205	46.84372	13.97
jun	10	6.77920	6.76204	46.84344	13.51
jun	17	6.77920	6.76202	46.84320	13.05
jun	24	6.77923	6.76202	46.84291	12.59
jul	1	6.77925	6.76203	46.84266	12.13
jul	8	6.77929	6.76204	46.84239	11.67
jul	15	6.77932	6.76206	46.84214	11.21
jul	22	6.77938	6.76209	46.84187	10.75
jul	29	6.77942	6.76212	46.84163	10.29
ago	5	6.77949	6.76216	46.84141	9.83
ago	12	6.77954	6.76221	46.84119	9.37
ago	19	6.77961	6.76226	46.84099	8.91
ago	26	6.77968	6.76231	46.84079	8.45
sep	2	6.77976	6.76238	46.84065	7.99
sep	9	6.77982	6.76244	46.84048	7.53
sep	16	6.77991	6.76251	46.84037	7.07
sep	23	6.77999	6.76258	46.84023	6.61
sep	30	6.78008	6.76265	46.84018	6.15
oct	7	6.78015	6.76272	46.84009	5.69
oct	14	6.78024	6.76279	46.84008	5.23
oct	21	6.78032	6.76286	46.84002	4.77
oct	28	6.78041	6.76293	46.84009	4.31
nov	4	6.78048	6.76300	46.84009	3.85
nov	11	6.78057	6.76306	46.84021	3.39
nov	18	6.78065	6.76312	46.84026	2.93
nov	25	6.78072	6.76317	46.84046	2.47
dic	2	6.78078	6.76322	46.84057	2.01
dic	9	6.78085	6.76326	46.84082	1.55
dic	16	6.78091	6.76329	46.84099	1.09
dic	23	6.78095	6.76332	46.84130	0.63

34834

		V	Sp		
		4.49	F0IV		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	7.21926	7.20245	-46.79303	0.53
ene	8	7.21927	7.20245	-46.79374	0.07
ene	15	7.21928	7.20243	-46.79435	23.61
ene	22	7.21927	7.20241	-46.79504	23.15
ene	29	7.21926	7.20238	-46.79559	22.69
feb	5	7.21924	7.20234	-46.79620	22.23
feb	12	7.21921	7.20230	-46.79666	21.77
feb	19	7.21918	7.20225	-46.79718	21.31
feb	26	7.21913	7.20219	-46.79754	20.85
mar	4	7.21908	7.20213	-46.79793	20.39
mar	11	7.21903	7.20206	-46.79815	19.93
mar	18	7.21897	7.20200	-46.79843	19.47
mar	25	7.21891	7.20193	-46.79853	19.01
abr	1	7.21885	7.20186	-46.79866	18.55
abr	8	7.21879	7.20179	-46.79861	18.09
abr	15	7.21874	7.20171	-46.79861	17.63
abr	22	7.21868	7.20165	-46.79844	17.17
abr	29	7.21863	7.20158	-46.79830	16.71
may	6	7.21857	7.20151	-46.79799	16.25
may	13	7.21854	7.20145	-46.79773	15.79
may	20	7.21849	7.20139	-46.79732	15.33
may	27	7.21846	7.20134	-46.79694	14.87
jun	3	7.21843	7.20129	-46.79643	14.41
jun	10	7.21841	7.20125	-46.79596	13.95
jun	17	7.21839	7.20122	-46.79538	13.49
jun	24	7.21839	7.20119	-46.79484	13.03
jul	1	7.21839	7.20117	-46.79421	12.57
jul	8	7.21840	7.20115	-46.79362	12.11
jul	15	7.21841	7.20115	-46.79299	11.65
jul	22	7.21843	7.20115	-46.79240	11.19
jul	29	7.21846	7.20116	-46.79179	10.73
ago	5	7.21849	7.20117	-46.79122	10.27
ago	12	7.21853	7.20120	-46.79067	9.81
ago	19	7.21858	7.20123	-46.79017	9.35
ago	26	7.21863	7.20127	-46.78973	8.89
sep	2	7.21869	7.20131	-46.78931	8.43
sep	9	7.21874	7.20136	-46.78900	7.97
sep	16	7.21881	7.20141	-46.78872	7.51
sep	23	7.21888	7.20147	-46.78857	7.05
sep	30	7.21895	7.20152	-46.78844	6.59
oct	7	7.21902	7.20159	-46.78846	6.13
oct	14	7.21909	7.20164	-46.78850	5.67
oct	21	7.21917	7.20171	-46.78870	5.21
oct	28	7.21924	7.20176	-46.78890	4.75
nov	4	7.21931	7.20182	-46.78927	4.29
nov	11	7.21938	7.20187	-46.78962	3.83
nov	18	7.21945	7.20192	-46.79014	3.37
nov	25	7.21951	7.20196	-46.79062	2.91
dic	2	7.21956	7.20200	-46.79125	2.45
dic	9	7.21961	7.20202	-46.79181	1.99
dic	16	7.21965	7.20204	-46.79252	1.53
dic	23	7.21969	7.20205	-46.79314	1.07

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

36795					
		V	Sp		
		4.44	F6V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	7.58200	7.56520	-22.33996	0.89
ene	8	7.58202	7.56520	-22.34051	0.43
ene	15	7.58204	7.56520	-22.34098	23.97
ene	22	7.58205	7.56519	-22.34151	23.51
ene	29	7.58205	7.56517	-22.34193	23.05
feb	5	7.58205	7.56515	-22.34239	22.59
feb	12	7.58204	7.56513	-22.34273	22.13
feb	19	7.58202	7.56509	-22.34313	21.67
feb	26	7.58200	7.56506	-22.34338	21.21
mar	4	7.58197	7.56502	-22.34368	20.75
mar	11	7.58194	7.56498	-22.34383	20.29
mar	18	7.58191	7.56493	-22.34404	19.83
mar	25	7.58187	7.56488	-22.34410	19.37
abr	1	7.58183	7.56483	-22.34421	18.91
abr	8	7.58179	7.56478	-22.34416	18.45
abr	15	7.58176	7.56473	-22.34418	17.99
abr	22	7.58171	7.56468	-22.34404	17.53
abr	29	7.58168	7.56463	-22.34395	17.07
may	6	7.58165	7.56459	-22.34372	16.61
may	13	7.58163	7.56454	-22.34355	16.15
may	20	7.58160	7.56450	-22.34324	15.69
may	27	7.58158	7.56446	-22.34299	15.23
jun	3	7.58156	7.56443	-22.34260	14.77
jun	10	7.58156	7.56439	-22.34228	14.31
jun	17	7.58155	7.56437	-22.34185	13.85
jun	24	7.58155	7.56435	-22.34147	13.39
jul	1	7.58155	7.56433	-22.34101	12.93
jul	8	7.58157	7.56432	-22.34059	12.47
jul	15	7.58158	7.56431	-22.34012	12.01
jul	22	7.58160	7.56431	-22.33970	11.55
jul	29	7.58162	7.56432	-22.33925	11.09
ago	5	7.58165	7.56433	-22.33883	10.63
ago	12	7.58168	7.56435	-22.33843	10.17
ago	19	7.58172	7.56437	-22.33807	9.71
ago	26	7.58176	7.56440	-22.33775	9.25
sep	2	7.58181	7.56443	-22.33746	8.79
sep	9	7.58185	7.56446	-22.33723	8.33
sep	16	7.58190	7.56450	-22.33705	7.87
sep	23	7.58195	7.56454	-22.33696	7.41
sep	30	7.58201	7.56459	-22.33688	6.95
oct	7	7.58206	7.56463	-22.33692	6.49
oct	14	7.58213	7.56468	-22.33697	6.03
oct	21	7.58219	7.56473	-22.33717	5.57
oct	28	7.58225	7.56477	-22.33734	5.11
nov	4	7.58231	7.56482	-22.33765	4.65
nov	11	7.58237	7.56486	-22.33795	4.19
nov	18	7.58243	7.56490	-22.33839	3.73
nov	25	7.58248	7.56494	-22.33877	3.27
dic	2	7.58254	7.56497	-22.33928	2.81
dic	9	7.58258	7.56500	-22.33973	2.35
dic	16	7.58263	7.56502	-22.34031	1.89
dic	23	7.58267	7.56504	-22.34078	1.43

44382					
		V	Sp		
		4.00	Am		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	9.04671	9.02990	-66.47229	2.36
ene	8	9.04677	9.02995	-66.47299	1.90
ene	15	9.04681	9.02996	-66.47371	1.44
ene	22	9.04684	9.02998	-66.47448	0.98
ene	29	9.04685	9.02997	-66.47520	0.52
feb	5	9.04686	9.02996	-66.47596	0.06
feb	12	9.04684	9.02993	-66.47666	23.60
feb	19	9.04682	9.02989	-66.47740	23.14
feb	26	9.04677	9.02983	-66.47803	22.68
mar	4	9.04673	9.02977	-66.47870	22.22
mar	11	9.04666	9.02969	-66.47924	21.76
mar	18	9.04659	9.02961	-66.47984	21.30
mar	25	9.04650	9.02952	-66.48027	20.84
abr	1	9.04642	9.02943	-66.48073	20.38
abr	8	9.04632	9.02932	-66.48103	19.92
abr	15	9.04623	9.02921	-66.48138	19.46
abr	22	9.04613	9.02909	-66.48154	19.00
abr	29	9.04603	9.02898	-66.48173	18.54
may	6	9.04592	9.02886	-66.48175	18.08
may	13	9.04583	9.02874	-66.48181	17.62
may	20	9.04573	9.02863	-66.48168	17.16
may	27	9.04564	9.02852	-66.48158	16.70
jun	3	9.04555	9.02841	-66.48131	16.24
jun	10	9.04547	9.02830	-66.48108	15.78
jun	17	9.04539	9.02821	-66.48068	15.32
jun	24	9.04532	9.02812	-66.48032	14.86
jul	1	9.04526	9.02804	-66.47982	14.40
jul	8	9.04521	9.02796	-66.47935	13.94
jul	15	9.04517	9.02791	-66.47877	13.48
jul	22	9.04514	9.02785	-66.47822	13.02
jul	29	9.04512	9.02782	-66.47759	12.56
ago	5	9.04512	9.02779	-66.47700	12.10
ago	12	9.04512	9.02779	-66.47635	11.64
ago	19	9.04514	9.02779	-66.47576	11.18
ago	26	9.04517	9.02781	-66.47515	10.72
sep	2	9.04521	9.02783	-66.47458	10.26
sep	9	9.04527	9.02788	-66.47403	9.80
sep	16	9.04533	9.02793	-66.47355	9.34
sep	23	9.04541	9.02800	-66.47313	8.88
sep	30	9.04550	9.02807	-66.47276	8.42
oct	7	9.04559	9.02816	-66.47247	7.96
oct	14	9.04569	9.02825	-66.47225	7.50
oct	21	9.04581	9.02835	-66.47216	7.04
oct	28	9.04592	9.02844	-66.47210	6.58
nov	4	9.04604	9.02855	-66.47218	6.12
nov	11	9.04616	9.02865	-66.47230	5.66
nov	18	9.04628	9.02875	-66.47259	5.20
nov	25	9.04639	9.02884	-66.47287	4.74
dic	2	9.04651	9.02894	-66.47331	4.28
dic	9	9.04661	9.02902	-66.47376	3.82
dic	16	9.04671	9.02910	-66.47437	3.36
dic	23	9.04679	9.02916	-66.47493	2.90

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

45238

V 1.67 Sp A2IV

m	d	α h	α_c h	δ °	Hp h
ene	1	9.22440	9.20759	-69.79546	2.53
ene	8	9.22447	9.20765	-69.79615	2.07
ene	15	9.22452	9.20767	-69.79686	1.61
ene	22	9.22456	9.20770	-69.79762	1.15
ene	29	9.22458	9.20770	-69.79834	0.69
feb	5	9.22459	9.20769	-69.79911	0.23
feb	12	9.22457	9.20765	-69.79982	23.77
feb	19	9.22455	9.20762	-69.80058	23.31
feb	26	9.22450	9.20756	-69.80123	22.85
mar	4	9.22445	9.20749	-69.80192	22.39
mar	11	9.22437	9.20741	-69.80250	21.93
mar	18	9.22430	9.20732	-69.80312	21.47
mar	25	9.22420	9.20721	-69.80358	21.01
abr	1	9.22410	9.20711	-69.80408	20.55
abr	8	9.22399	9.20699	-69.80442	20.09
abr	15	9.22389	9.20686	-69.80481	19.63
abr	22	9.22377	9.20673	-69.80501	19.17
abr	29	9.22366	9.20660	-69.80524	18.71
may	6	9.22353	9.20647	-69.80530	18.25
may	13	9.22342	9.20633	-69.80540	17.79
may	20	9.22330	9.20620	-69.80531	17.33
may	27	9.22319	9.20607	-69.80525	16.87
jun	3	9.22308	9.20594	-69.80501	16.41
jun	10	9.22298	9.20582	-69.80482	15.95
jun	17	9.22288	9.20571	-69.80445	15.49
jun	24	9.22280	9.20560	-69.80412	15.03
jul	1	9.22272	9.20550	-69.80364	14.57
jul	8	9.22266	9.20541	-69.80320	14.11
jul	15	9.22260	9.20534	-69.80262	13.65
jul	22	9.22256	9.20527	-69.80210	13.19
jul	29	9.22253	9.20523	-69.80147	12.73
ago	5	9.22252	9.20519	-69.80088	12.27
ago	12	9.22251	9.20518	-69.80023	11.81
ago	19	9.22252	9.20517	-69.79963	11.35
ago	26	9.22255	9.20519	-69.79901	10.89
sep	2	9.22259	9.20521	-69.79843	10.43
sep	9	9.22265	9.20527	-69.79786	9.97
sep	16	9.22272	9.20531	-69.79736	9.51
sep	23	9.22280	9.20539	-69.79691	9.05
sep	30	9.22289	9.20547	-69.79651	8.59
oct	7	9.22300	9.20557	-69.79619	8.13
oct	14	9.22311	9.20566	-69.79594	7.67
oct	21	9.22324	9.20578	-69.79580	7.21
oct	28	9.22337	9.20589	-69.79570	6.75
nov	4	9.22350	9.20602	-69.79574	6.29
nov	11	9.22363	9.20613	-69.79583	5.83
nov	18	9.22378	9.20625	-69.79607	5.37
nov	25	9.22390	9.20635	-69.79633	4.91
dic	2	9.22403	9.20647	-69.79673	4.45
dic	9	9.22415	9.20656	-69.79715	3.99
dic	16	9.22427	9.20665	-69.79773	3.53
dic	23	9.22436	9.20673	-69.79827	3.08

50954

V 3.99 Sp F2IV

m	d	α h	α_c h	δ °	Hp h
ene	1	10.41389	10.39709	-74.12759	3.72
ene	8	10.41402	10.39720	-74.12816	3.26
ene	15	10.41412	10.39728	-74.12880	2.80
ene	22	10.41423	10.39736	-74.12950	2.34
ene	29	10.41429	10.39741	-74.13020	1.88
feb	5	10.41435	10.39746	-74.13094	1.42
feb	12	10.41437	10.39746	-74.13169	0.96
feb	19	10.41440	10.39747	-74.13247	0.50
feb	26	10.41439	10.39745	-74.13320	0.04
mar	4	10.41438	10.39742	-74.13396	23.58
mar	11	10.41432	10.39736	-74.13466	23.12
mar	18	10.41428	10.39730	-74.13539	22.66
mar	25	10.41420	10.39722	-74.13601	22.20
abr	1	10.41413	10.39713	-74.13665	21.74
abr	8	10.41402	10.39701	-74.13718	21.28
abr	15	10.41392	10.39690	-74.13775	20.82
abr	22	10.41379	10.39676	-74.13815	20.36
abr	29	10.41368	10.39663	-74.13858	19.90
may	6	10.41353	10.39647	-74.13886	19.44
may	13	10.41341	10.39632	-74.13918	18.98
may	20	10.41326	10.39616	-74.13930	18.52
may	27	10.41313	10.39600	-74.13946	18.06
jun	3	10.41298	10.39584	-74.13944	17.60
jun	10	10.41284	10.39568	-74.13946	17.14
jun	17	10.41270	10.39552	-74.13928	16.68
jun	24	10.41258	10.39537	-74.13914	16.22
jul	1	10.41245	10.39523	-74.13884	15.76
jul	8	10.41233	10.39508	-74.13856	15.30
jul	15	10.41222	10.39496	-74.13813	14.84
jul	22	10.41213	10.39484	-74.13773	14.38
jul	29	10.41205	10.39475	-74.13720	13.92
ago	5	10.41198	10.39466	-74.13671	13.46
ago	12	10.41193	10.39460	-74.13610	13.00
ago	19	10.41190	10.39454	-74.13555	12.54
ago	26	10.41189	10.39452	-74.13492	12.08
sep	2	10.41188	10.39450	-74.13433	11.62
sep	9	10.41191	10.39452	-74.13370	11.16
sep	16	10.41195	10.39454	-74.13315	10.70
sep	23	10.41201	10.39460	-74.13259	10.24
sep	30	10.41209	10.39466	-74.13208	9.78
oct	7	10.41219	10.39476	-74.13160	9.32
oct	14	10.41229	10.39485	-74.13121	8.86
oct	21	10.41244	10.39497	-74.13089	8.40
oct	28	10.41257	10.39509	-74.13063	7.94
nov	4	10.41273	10.39524	-74.13046	7.48
nov	11	10.41288	10.39537	-74.13037	7.02
nov	18	10.41306	10.39553	-74.13040	6.56
nov	25	10.41322	10.39567	-74.13048	6.10
dic	2	10.41340	10.39583	-74.13068	5.64
dic	9	10.41355	10.39597	-74.13093	5.18
dic	16	10.41373	10.39612	-74.13134	4.72
dic	23	10.41387	10.39624	-74.13174	4.26

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

51814

		V	Sp		
		5.16	F1V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	10.60723	10.59043	56.97607	3.92
ene	8	10.60731	10.59049	56.97615	3.46
ene	15	10.60741	10.59057	56.97626	3.00
ene	22	10.60749	10.59062	56.97645	2.54
ene	29	10.60756	10.59068	56.97672	2.08
feb	5	10.60761	10.59072	56.97705	1.62
feb	12	10.60767	10.59076	56.97742	1.16
feb	19	10.60770	10.59078	56.97781	0.70
feb	26	10.60773	10.59079	56.97829	0.24
mar	4	10.60774	10.59079	56.97875	23.78
mar	11	10.60775	10.59079	56.97924	23.32
mar	18	10.60774	10.59076	56.97968	22.86
mar	25	10.60772	10.59074	56.98021	22.40
abr	1	10.60769	10.59070	56.98065	21.94
abr	8	10.60766	10.59066	56.98111	21.48
abr	15	10.60763	10.59060	56.98145	21.02
abr	22	10.60758	10.59055	56.98186	20.56
abr	29	10.60753	10.59048	56.98214	20.10
may	6	10.60747	10.59041	56.98243	19.64
may	13	10.60743	10.59034	56.98257	19.18
may	20	10.60737	10.59027	56.98277	18.72
may	27	10.60732	10.59019	56.98281	18.26
jun	3	10.60726	10.59013	56.98287	17.80
jun	10	10.60722	10.59006	56.98277	17.34
jun	17	10.60717	10.58999	56.98273	16.88
jun	24	10.60713	10.58993	56.98252	16.42
jul	1	10.60709	10.58987	56.98235	15.96
jul	8	10.60707	10.58982	56.98202	15.50
jul	15	10.60703	10.58977	56.98176	15.04
jul	22	10.60702	10.58973	56.98134	14.58
jul	29	10.60699	10.58969	56.98097	14.12
ago	5	10.60700	10.58967	56.98048	13.66
ago	12	10.60698	10.58965	56.98005	13.20
ago	19	10.60700	10.58964	56.97949	12.74
ago	26	10.60700	10.58964	56.97897	12.28
sep	2	10.60703	10.58965	56.97839	11.82
sep	9	10.60704	10.58966	56.97785	11.36
sep	16	10.60709	10.58969	56.97723	10.90
sep	23	10.60712	10.58971	56.97664	10.44
sep	30	10.60718	10.58976	56.97604	9.98
oct	7	10.60723	10.58980	56.97548	9.52
oct	14	10.60730	10.58986	56.97488	9.06
oct	21	10.60737	10.58991	56.97431	8.60
oct	28	10.60746	10.58998	56.97379	8.14
nov	4	10.60753	10.59005	56.97330	7.68
nov	11	10.60764	10.59013	56.97283	7.22
nov	18	10.60773	10.59020	56.97238	6.76
nov	25	10.60784	10.59029	56.97205	6.30
dic	2	10.60793	10.59037	56.97173	5.84
dic	9	10.60804	10.59046	56.97150	5.38
dic	16	10.60815	10.59054	56.97128	4.92
dic	23	10.60826	10.59062	56.97121	4.46

53910

		V	Sp		
		2.34	A1V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	11.05050	11.03370	56.27180	4.36
ene	8	11.05059	11.03377	56.27182	3.90
ene	15	11.05069	11.03385	56.27186	3.44
ene	22	11.05077	11.03391	56.27199	2.98
ene	29	11.05085	11.03397	56.27221	2.52
feb	5	11.05091	11.03401	56.27249	2.06
feb	12	11.05097	11.03406	56.27282	1.60
feb	19	11.05102	11.03409	56.27318	1.14
feb	26	11.05105	11.03411	56.27363	0.68
mar	4	11.05107	11.03412	56.27409	0.22
mar	11	11.05109	11.03412	56.27457	23.76
mar	18	11.05109	11.03411	56.27502	23.30
mar	25	11.05108	11.03410	56.27555	22.84
abr	1	11.05106	11.03406	56.27602	22.38
abr	8	11.05104	11.03403	56.27650	21.92
abr	15	11.05101	11.03398	56.27689	21.46
abr	22	11.05096	11.03393	56.27734	21.00
abr	29	11.05092	11.03387	56.27767	20.54
may	6	11.05087	11.03381	56.27801	20.08
may	13	11.05083	11.03374	56.27820	19.62
may	20	11.05077	11.03367	56.27846	19.16
may	27	11.05072	11.03360	56.27856	18.70
jun	3	11.05067	11.03353	56.27868	18.24
jun	10	11.05063	11.03346	56.27863	17.78
jun	17	11.05057	11.03339	56.27865	17.32
jun	24	11.05053	11.03332	56.27849	16.86
jul	1	11.05048	11.03326	56.27837	16.40
jul	8	11.05046	11.03321	56.27809	15.94
jul	15	11.05041	11.03315	56.27787	15.48
jul	22	11.05039	11.03311	56.27749	15.02
jul	29	11.05036	11.03306	56.27715	14.56
ago	5	11.05036	11.03303	56.27669	14.10
ago	12	11.05033	11.03300	56.27628	13.64
ago	19	11.05034	11.03299	56.27573	13.18
ago	26	11.05033	11.03297	56.27523	12.72
sep	2	11.05035	11.03297	56.27464	12.26
sep	9	11.05036	11.03297	56.27410	11.80
sep	16	11.05039	11.03299	56.27346	11.34
sep	23	11.05042	11.03301	56.27286	10.88
sep	30	11.05046	11.03304	56.27223	10.42
oct	7	11.05050	11.03307	56.27164	9.96
oct	14	11.05057	11.03312	56.27101	9.50
oct	21	11.05062	11.03316	56.27040	9.04
oct	28	11.05070	11.03323	56.26983	8.58
nov	4	11.05077	11.03328	56.26929	8.12
nov	11	11.05086	11.03336	56.26876	7.66
nov	18	11.05095	11.03342	56.26825	7.20
nov	25	11.05105	11.03351	56.26784	6.74
dic	2	11.05115	11.03358	56.26747	6.28
dic	9	11.05126	11.03367	56.26716	5.82
dic	16	11.05136	11.03375	56.26687	5.36
dic	23	11.05146	11.03383	56.26673	4.90

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

54872

V 2.56 Sp A4V

m	d	α h	α_c h	δ °	Hp h
ene	1	11.25267	11.23587	20.41326	4.56
ene	8	11.25273	11.23591	20.41300	4.10
ene	15	11.25279	11.23595	20.41273	3.64
ene	22	11.25285	11.23599	20.41254	3.18
ene	29	11.25290	11.23602	20.41240	2.72
feb	5	11.25294	11.23605	20.41231	2.26
feb	12	11.25299	11.23607	20.41226	1.80
feb	19	11.25302	11.23609	20.41224	1.34
feb	26	11.25304	11.23610	20.41230	0.88
mar	4	11.25306	11.23611	20.41239	0.42
mar	11	11.25308	11.23611	20.41251	23.96
mar	18	11.25308	11.23611	20.41262	23.50
mar	25	11.25308	11.23610	20.41284	23.04
abr	1	11.25308	11.23608	20.41302	22.58
abr	8	11.25307	11.23606	20.41324	22.12
abr	15	11.25306	11.23604	20.41341	21.66
abr	22	11.25304	11.23601	20.41367	21.20
abr	29	11.25302	11.23597	20.41386	20.74
may	6	11.25300	11.23594	20.41409	20.28
may	13	11.25299	11.23590	20.41423	19.82
may	20	11.25296	11.23586	20.41447	19.36
may	27	11.25294	11.23582	20.41459	18.90
jun	3	11.25291	11.23577	20.41477	18.44
jun	10	11.25290	11.23573	20.41483	17.98
jun	17	11.25287	11.23569	20.41499	17.52
jun	24	11.25285	11.23565	20.41502	17.06
jul	1	11.25283	11.23561	20.41511	16.60
jul	8	11.25282	11.23557	20.41507	16.14
jul	15	11.25279	11.23553	20.41513	15.68
jul	22	11.25279	11.23550	20.41505	15.22
jul	29	11.25277	11.23547	20.41503	14.76
ago	5	11.25277	11.23545	20.41489	14.30
ago	12	11.25276	11.23543	20.41483	13.84
ago	19	11.25277	11.23541	20.41464	13.38
ago	26	11.25276	11.23540	20.41450	12.92
sep	2	11.25277	11.23539	20.41427	12.46
sep	9	11.25278	11.23539	20.41408	12.00
sep	16	11.25280	11.23540	20.41378	11.54
sep	23	11.25281	11.23540	20.41350	11.08
sep	30	11.25284	11.23542	20.41316	10.62
oct	7	11.25286	11.23543	20.41285	10.16
oct	14	11.25291	11.23546	20.41245	9.70
oct	21	11.25294	11.23548	20.41205	9.24
oct	28	11.25299	11.23552	20.41165	8.78
nov	4	11.25304	11.23555	20.41124	8.32
nov	11	11.25310	11.23559	20.41079	7.86
nov	18	11.25316	11.23563	20.41033	7.40
nov	25	11.25322	11.23568	20.40991	6.94
dic	2	11.25329	11.23572	20.40948	6.48
dic	9	11.25336	11.23577	20.40907	6.02
dic	16	11.25343	11.23582	20.40864	5.56
dic	23	11.25350	11.23586	20.40830	5.10

58001

V 2.41 Sp A0V

m	d	α h	α_c h	δ °	Hp h
ene	1	11.91437	11.89757	53.58052	5.22
ene	8	11.91446	11.89764	53.58041	4.76
ene	15	11.91456	11.89772	53.58030	4.30
ene	22	11.91464	11.89778	53.58031	3.84
ene	29	11.91473	11.89785	53.58040	3.38
feb	5	11.91480	11.89790	53.58058	2.92
feb	12	11.91487	11.89796	53.58079	2.46
feb	19	11.91493	11.89800	53.58107	2.00
feb	26	11.91498	11.89804	53.58144	1.54
mar	4	11.91501	11.89806	53.58186	1.08
mar	11	11.91504	11.89808	53.58229	0.62
mar	18	11.91506	11.89808	53.58273	0.16
mar	25	11.91507	11.89808	53.58325	23.70
abr	1	11.91506	11.89807	53.58374	23.24
abr	8	11.91506	11.89805	53.58425	22.78
abr	15	11.91504	11.89802	53.58468	22.32
abr	22	11.91502	11.89799	53.58519	21.86
abr	29	11.91499	11.89794	53.58560	21.40
may	6	11.91495	11.89789	53.58602	20.94
may	13	11.91492	11.89783	53.58632	20.48
may	20	11.91487	11.89778	53.58668	20.02
may	27	11.91483	11.89771	53.58689	19.56
jun	3	11.91478	11.89765	53.58712	19.10
jun	10	11.91474	11.89758	53.58719	18.64
jun	17	11.91469	11.89751	53.58732	18.18
jun	24	11.91465	11.89744	53.58728	17.72
jul	1	11.91460	11.89738	53.58727	17.26
jul	8	11.91457	11.89732	53.58710	16.80
jul	15	11.91452	11.89726	53.58699	16.34
jul	22	11.91449	11.89720	53.58670	15.88
jul	29	11.91445	11.89715	53.58646	15.42
ago	5	11.91443	11.89711	53.58606	14.96
ago	12	11.91439	11.89706	53.58573	14.50
ago	19	11.91438	11.89703	53.58524	14.04
ago	26	11.91436	11.89700	53.58479	13.58
sep	2	11.91436	11.89698	53.58423	13.12
sep	9	11.91435	11.89696	53.58373	12.66
sep	16	11.91436	11.89696	53.58310	12.20
sep	23	11.91437	11.89696	53.58251	11.74
sep	30	11.91439	11.89697	53.58185	11.28
oct	7	11.91441	11.89698	53.58125	10.82
oct	14	11.91446	11.89701	53.58056	10.36
oct	21	11.91449	11.89703	53.57991	9.90
oct	28	11.91455	11.89708	53.57926	9.44
nov	4	11.91460	11.89712	53.57865	8.99
nov	11	11.91468	11.89717	53.57802	8.53
nov	18	11.91475	11.89722	53.57743	8.07
nov	25	11.91484	11.89729	53.57689	7.61
dic	2	11.91492	11.89735	53.57640	7.15
dic	9	11.91502	11.89743	53.57596	6.69
dic	16	11.91511	11.89750	53.57554	6.23
dic	23	11.91521	11.89758	53.57525	5.77

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

58803

		V	Sp		
		5.15	F6V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.07818	12.06138	-42.54060	5.39
ene	8	12.07826	12.06144	-42.54101	4.93
ene	15	12.07833	12.06149	-42.54154	4.47
ene	22	12.07841	12.06154	-42.54205	4.01
ene	29	12.07847	12.06159	-42.54262	3.55
feb	5	12.07852	12.06163	-42.54318	3.09
feb	12	12.07858	12.06166	-42.54379	2.63
feb	19	12.07862	12.06170	-42.54439	2.17
feb	26	12.07866	12.06172	-42.54498	1.71
mar	4	12.07869	12.06174	-42.54556	1.25
mar	11	12.07871	12.06175	-42.54614	0.79
mar	18	12.07873	12.06175	-42.54673	0.33
mar	25	12.07874	12.06175	-42.54723	23.87
abr	1	12.07874	12.06175	-42.54774	23.41
abr	8	12.07874	12.06173	-42.54820	22.95
abr	15	12.07874	12.06171	-42.54868	22.49
abr	22	12.07872	12.06169	-42.54903	22.03
abr	29	12.07871	12.06166	-42.54941	21.57
may	6	12.07868	12.06162	-42.54969	21.11
may	13	12.07867	12.06158	-42.55000	20.65
may	20	12.07863	12.06154	-42.55016	20.19
may	27	12.07861	12.06149	-42.55036	19.73
jun	3	12.07857	12.06144	-42.55043	19.27
jun	10	12.07855	12.06139	-42.55055	18.81
jun	17	12.07851	12.06133	-42.55050	18.35
jun	24	12.07848	12.06127	-42.55050	17.89
jul	1	12.07844	12.06122	-42.55035	17.43
jul	8	12.07841	12.06116	-42.55026	16.97
jul	15	12.07837	12.06111	-42.55001	16.51
jul	22	12.07834	12.06106	-42.54982	16.05
jul	29	12.07831	12.06101	-42.54949	15.59
ago	5	12.07828	12.06096	-42.54922	15.13
ago	12	12.07825	12.06092	-42.54882	14.67
ago	19	12.07823	12.06088	-42.54849	14.21
ago	26	12.07821	12.06085	-42.54806	13.75
sep	2	12.07820	12.06082	-42.54769	13.29
sep	9	12.07819	12.06081	-42.54723	12.83
sep	16	12.07820	12.06079	-42.54687	12.37
sep	23	12.07820	12.06079	-42.54645	11.91
sep	30	12.07822	12.06079	-42.54610	11.45
oct	7	12.07823	12.06080	-42.54572	10.99
oct	14	12.07827	12.06082	-42.54545	10.53
oct	21	12.07831	12.06084	-42.54519	10.07
oct	28	12.07835	12.06087	-42.54500	9.61
nov	4	12.07840	12.06091	-42.54483	9.15
nov	11	12.07846	12.06095	-42.54477	8.69
nov	18	12.07853	12.06100	-42.54477	8.23
nov	25	12.07860	12.06105	-42.54483	7.77
dic	2	12.07867	12.06111	-42.54495	7.31
dic	9	12.07875	12.06116	-42.54515	6.85
dic	16	12.07883	12.06122	-42.54544	6.39
dic	23	12.07891	12.06128	-42.54576	5.93

58948

		V	Sp		
		4.12	G8III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.10356	12.08676	8.62258	5.41
ene	8	12.10362	12.08680	8.62223	4.95
ene	15	12.10369	12.08684	8.62183	4.49
ene	22	12.10374	12.08688	8.62152	4.03
ene	29	12.10380	12.08692	8.62122	3.57
feb	5	12.10384	12.08695	8.62100	3.11
feb	12	12.10389	12.08698	8.62077	2.65
feb	19	12.10393	12.08701	8.62061	2.19
feb	26	12.10397	12.08703	8.62050	1.73
mar	4	12.10399	12.08704	8.62044	1.27
mar	11	12.10402	12.08705	8.62040	0.81
mar	18	12.10404	12.08706	8.62038	0.35
mar	25	12.10404	12.08706	8.62045	23.89
abr	1	12.10405	12.08705	8.62052	23.43
abr	8	12.10405	12.08704	8.62062	22.97
abr	15	12.10405	12.08703	8.62070	22.51
abr	22	12.10404	12.08701	8.62087	22.05
abr	29	12.10403	12.08698	8.62100	21.59
may	6	12.10402	12.08696	8.62118	21.13
may	13	12.10401	12.08693	8.62128	20.67
may	20	12.10399	12.08689	8.62149	20.21
may	27	12.10398	12.08685	8.62162	19.75
jun	3	12.10395	12.08682	8.62181	19.29
jun	10	12.10394	12.08678	8.62189	18.83
jun	17	12.10391	12.08674	8.62209	18.37
jun	24	12.10390	12.08669	8.62217	17.91
jul	1	12.10387	12.08665	8.62233	17.45
jul	8	12.10386	12.08661	8.62237	16.99
jul	15	12.10384	12.08658	8.62251	16.53
jul	22	12.10383	12.08654	8.62252	16.07
jul	29	12.10380	12.08650	8.62261	15.61
ago	5	12.10380	12.08647	8.62259	15.15
ago	12	12.10377	12.08644	8.62265	14.69
ago	19	12.10377	12.08642	8.62258	14.23
ago	26	12.10376	12.08640	8.62257	13.77
sep	2	12.10376	12.08638	8.62246	13.31
sep	9	12.10375	12.08637	8.62241	12.85
sep	16	12.10376	12.08636	8.62225	12.39
sep	23	12.10377	12.08636	8.62211	11.93
sep	30	12.10378	12.08636	8.62189	11.47
oct	7	12.10380	12.08636	8.62170	11.01
oct	14	12.10382	12.08638	8.62140	10.55
oct	21	12.10385	12.08639	8.62111	10.09
oct	28	12.10389	12.08642	8.62077	9.63
nov	4	12.10393	12.08644	8.62045	9.17
nov	11	12.10398	12.08647	8.62005	8.71
nov	18	12.10403	12.08650	8.61963	8.25
nov	25	12.10409	12.08654	8.61922	7.79
dic	2	12.10414	12.08658	8.61880	7.33
dic	9	12.10421	12.08662	8.61835	6.87
dic	16	12.10428	12.08666	8.61789	6.41
dic	23	12.10434	12.08671	8.61748	5.96

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

59774

		V	Sp		
		3.32	A3Vvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.27321	12.25641	56.91840	5.58
ene	8	12.27331	12.25649	56.91826	5.12
ene	15	12.27342	12.25657	56.91812	4.66
ene	22	12.27351	12.25664	56.91811	4.20
ene	29	12.27360	12.25672	56.91816	3.74
feb	5	12.27368	12.25678	56.91833	3.28
feb	12	12.27376	12.25685	56.91853	2.82
feb	19	12.27383	12.25690	56.91881	2.36
feb	26	12.27389	12.25695	56.91917	1.90
mar	4	12.27393	12.25698	56.91959	1.44
mar	11	12.27397	12.25701	56.92003	0.98
mar	18	12.27400	12.25702	56.92049	0.52
mar	25	12.27401	12.25703	56.92103	0.06
abr	1	12.27401	12.25702	56.92156	23.60
abr	8	12.27401	12.25701	56.92209	23.14
abr	15	12.27400	12.25698	56.92256	22.68
abr	22	12.27398	12.25695	56.92310	22.22
abr	29	12.27395	12.25690	56.92356	21.76
may	6	12.27392	12.25685	56.92402	21.30
may	13	12.27388	12.25679	56.92436	20.84
may	20	12.27383	12.25674	56.92475	20.38
may	27	12.27379	12.25667	56.92501	19.92
jun	3	12.27374	12.25660	56.92528	19.46
jun	10	12.27369	12.25653	56.92539	19.00
jun	17	12.27363	12.25645	56.92556	18.54
jun	24	12.27358	12.25638	56.92556	18.08
jul	1	12.27353	12.25631	56.92557	17.62
jul	8	12.27349	12.25624	56.92543	17.16
jul	15	12.27343	12.25617	56.92534	16.70
jul	22	12.27339	12.25610	56.92507	16.24
jul	29	12.27334	12.25604	56.92484	15.78
ago	5	12.27331	12.25599	56.92445	15.32
ago	12	12.27327	12.25594	56.92413	14.86
ago	19	12.27325	12.25589	56.92363	14.40
ago	26	12.27321	12.25585	56.92318	13.94
sep	2	12.27320	12.25582	56.92261	13.48
sep	9	12.27318	12.25580	56.92210	13.02
sep	16	12.27319	12.25578	56.92145	12.56
sep	23	12.27318	12.25577	56.92083	12.10
sep	30	12.27320	12.25578	56.92015	11.64
oct	7	12.27321	12.25578	56.91953	11.18
oct	14	12.27325	12.25580	56.91880	10.72
oct	21	12.27328	12.25582	56.91813	10.26
oct	28	12.27334	12.25586	56.91743	9.80
nov	4	12.27339	12.25590	56.91679	9.34
nov	11	12.27346	12.25595	56.91612	8.88
nov	18	12.27353	12.25600	56.91549	8.42
nov	25	12.27362	12.25607	56.91491	7.96
dic	2	12.27370	12.25613	56.91438	7.50
dic	9	12.27380	12.25621	56.91389	7.04
dic	16	12.27389	12.25628	56.91344	6.58
dic	23	12.27400	12.25637	56.91310	6.12

61084

		V	Sp		
		1.59	M4III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	12.53788	12.52108	-57.21844	5.85
ene	8	12.53798	12.52116	-57.21876	5.39
ene	15	12.53808	12.52123	-57.21923	4.93
ene	22	12.53817	12.52131	-57.21969	4.47
ene	29	12.53826	12.52138	-57.22023	4.01
feb	5	12.53834	12.52144	-57.22077	3.55
feb	12	12.53841	12.52149	-57.22140	3.09
feb	19	12.53848	12.52155	-57.22203	2.63
feb	26	12.53852	12.52158	-57.22268	2.17
mar	4	12.53857	12.52162	-57.22332	1.71
mar	11	12.53861	12.52164	-57.22399	1.25
mar	18	12.53865	12.52167	-57.22466	0.79
mar	25	12.53866	12.52167	-57.22529	0.33
abr	1	12.53867	12.52168	-57.22592	23.87
abr	8	12.53867	12.52166	-57.22652	23.41
abr	15	12.53868	12.52165	-57.22713	22.95
abr	22	12.53866	12.52163	-57.22764	22.49
abr	29	12.53865	12.52160	-57.22816	22.03
may	6	12.53862	12.52155	-57.22860	21.57
may	13	12.53860	12.52151	-57.22907	21.11
may	20	12.53855	12.52146	-57.22939	20.65
may	27	12.53852	12.52140	-57.22973	20.19
jun	3	12.53847	12.52133	-57.22994	19.73
jun	10	12.53844	12.52127	-57.23019	19.27
jun	17	12.53837	12.52120	-57.23027	18.81
jun	24	12.53833	12.52112	-57.23039	18.35
jul	1	12.53827	12.52105	-57.23035	17.89
jul	8	12.53822	12.52097	-57.23035	17.43
jul	15	12.53816	12.52090	-57.23017	16.97
jul	22	12.53811	12.52082	-57.23004	16.51
jul	29	12.53805	12.52075	-57.22976	16.05
ago	5	12.53801	12.52068	-57.22952	15.59
ago	12	12.53795	12.52062	-57.22912	15.13
ago	19	12.53791	12.52056	-57.22879	14.67
ago	26	12.53787	12.52051	-57.22832	14.21
sep	2	12.53785	12.52047	-57.22791	13.75
sep	9	12.53782	12.52043	-57.22739	13.29
sep	16	12.53781	12.52040	-57.22695	12.83
sep	23	12.53780	12.52039	-57.22642	12.37
sep	30	12.53781	12.52038	-57.22597	11.91
oct	7	12.53782	12.52039	-57.22546	11.45
oct	14	12.53785	12.52040	-57.22506	10.99
oct	21	12.53789	12.52043	-57.22463	10.53
oct	28	12.53793	12.52046	-57.22429	10.07
nov	4	12.53799	12.52051	-57.22396	9.61
nov	11	12.53806	12.52055	-57.22374	9.15
nov	18	12.53814	12.52062	-57.22356	8.69
nov	25	12.53822	12.52068	-57.22346	8.23
dic	2	12.53832	12.52075	-57.22342	7.77
dic	9	12.53841	12.52082	-57.22348	7.31
dic	16	12.53852	12.52091	-57.22363	6.85
dic	23	12.53861	12.52098	-57.22383	6.39

Posiciones aparentes de estrellas brillantes, 2020

(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	12.90888	12.89208	-40.28196	6.22
ene	8	12.90895	12.89213	-40.28228	5.76
ene	15	12.90903	12.89219	-40.28273	5.30
ene	22	12.90911	12.89225	-40.28315	4.84
ene	29	12.90918	12.89230	-40.28365	4.38
feb	5	12.90924	12.89235	-40.28412	3.92
feb	12	12.90930	12.89239	-40.28467	3.46
feb	19	12.90936	12.89243	-40.28520	3.00
feb	26	12.90941	12.89247	-40.28574	2.54
mar	4	12.90945	12.89250	-40.28626	2.08
mar	11	12.90948	12.89252	-40.28681	1.62
mar	18	12.90952	12.89254	-40.28734	1.16
mar	25	12.90954	12.89255	-40.28783	0.70
abr	1	12.90956	12.89256	-40.28830	0.24
abr	8	12.90957	12.89256	-40.28876	23.78
abr	15	12.90958	12.89256	-40.28922	23.32
abr	22	12.90958	12.89254	-40.28959	22.86
abr	29	12.90958	12.89253	-40.28997	22.40
may	6	12.90956	12.89250	-40.29028	21.94
may	13	12.90956	12.89248	-40.29062	21.48
may	20	12.90954	12.89244	-40.29083	21.02
may	27	12.90953	12.89241	-40.29107	20.56
jun	3	12.90950	12.89236	-40.29120	20.10
jun	10	12.90948	12.89232	-40.29138	19.64
jun	17	12.90945	12.89227	-40.29141	19.18
jun	24	12.90943	12.89222	-40.29148	18.72
jul	1	12.90939	12.89217	-40.29142	18.26
jul	8	12.90936	12.89211	-40.29141	17.80
jul	15	12.90932	12.89206	-40.29125	17.34
jul	22	12.90929	12.89201	-40.29114	16.88
jul	29	12.90925	12.89195	-40.29091	16.42
ago	5	12.90923	12.89190	-40.29073	15.96
ago	12	12.90919	12.89186	-40.29040	15.50
ago	19	12.90917	12.89181	-40.29016	15.04
ago	26	12.90914	12.89178	-40.28980	14.58
sep	2	12.90912	12.89174	-40.28950	14.12
sep	9	12.90910	12.89171	-40.28909	13.66
sep	16	12.90909	12.89169	-40.28879	13.20
sep	23	12.90908	12.89167	-40.28840	12.74
sep	30	12.90909	12.89166	-40.28809	12.28
oct	7	12.90909	12.89166	-40.28771	11.82
oct	14	12.90911	12.89166	-40.28746	11.36
oct	21	12.90914	12.89168	-40.28717	10.90
oct	28	12.90917	12.89169	-40.28697	10.44
nov	4	12.90921	12.89172	-40.28676	9.98
nov	11	12.90926	12.89175	-40.28666	9.52
nov	18	12.90932	12.89179	-40.28660	9.06
nov	25	12.90938	12.89183	-40.28660	8.60
dic	2	12.90944	12.89188	-40.28664	8.14
dic	9	12.90951	12.89193	-40.28678	7.68
dic	16	12.90960	12.89199	-40.28698	7.22
dic	23	12.90967	12.89204	-40.28722	6.76

63608

		V	Sp		
		2.85	G8IIIvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	13.05255	13.03575	10.85246	6.36
ene	8	13.05261	13.03579	10.85209	5.90
ene	15	13.05268	13.03583	10.85166	5.44
ene	22	13.05274	13.03588	10.85134	4.98
ene	29	13.05280	13.03592	10.85101	4.52
feb	5	13.05285	13.03596	10.85079	4.06
feb	12	13.05291	13.03600	10.85054	3.60
feb	19	13.05296	13.03603	10.85037	3.14
feb	26	13.05300	13.03606	10.85026	2.68
mar	4	13.05304	13.03609	10.85021	2.22
mar	11	13.05307	13.03611	10.85017	1.76
mar	18	13.05310	13.03612	10.85018	1.30
mar	25	13.05312	13.03614	10.85026	0.84
abr	1	13.05314	13.03614	10.85036	0.38
abr	8	13.05315	13.03615	10.85049	23.92
abr	15	13.05317	13.03614	10.85061	23.46
abr	22	13.05316	13.03613	10.85081	23.00
abr	29	13.05317	13.03612	10.85099	22.54
may	6	13.05316	13.03610	10.85120	22.08
may	13	13.05316	13.03607	10.85136	21.62
may	20	13.05314	13.03605	10.85161	21.16
may	27	13.05314	13.03601	10.85178	20.70
jun	3	13.05312	13.03598	10.85200	20.24
jun	10	13.05311	13.03595	10.85213	19.78
jun	17	13.05308	13.03591	10.85235	19.32
jun	24	13.05307	13.03587	10.85247	18.86
jul	1	13.05305	13.03583	10.85264	18.40
jul	8	13.05303	13.03578	10.85270	17.94
jul	15	13.05300	13.03574	10.85285	17.48
jul	22	13.05299	13.03570	10.85288	17.02
jul	29	13.05296	13.03566	10.85297	16.56
ago	5	13.05295	13.03562	10.85294	16.10
ago	12	13.05292	13.03559	10.85300	15.64
ago	19	13.05291	13.03555	10.85292	15.18
ago	26	13.05288	13.03552	10.85290	14.72
sep	2	13.05288	13.03550	10.85277	14.26
sep	9	13.05286	13.03547	10.85271	13.80
sep	16	13.05286	13.03545	10.85251	13.34
sep	23	13.05285	13.03544	10.85235	12.88
sep	30	13.05285	13.03543	10.85210	12.42
oct	7	13.05285	13.03542	10.85190	11.96
oct	14	13.05287	13.03542	10.85157	11.50
oct	21	13.05289	13.03543	10.85127	11.04
oct	28	13.05292	13.03544	10.85089	10.58
nov	4	13.05294	13.03545	10.85055	10.12
nov	11	13.05298	13.03548	10.85011	9.66
nov	18	13.05303	13.03550	10.84969	9.20
nov	25	13.05308	13.03553	10.84923	8.74
dic	2	13.05313	13.03556	10.84880	8.28
dic	9	13.05319	13.03560	10.84831	7.82
dic	16	13.05325	13.03564	10.84784	7.36
dic	23	13.05331	13.03568	10.84738	6.90

Posiciones aparentes de estrellas brillantes, 2020

(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	13.21308	13.19628	27.77610	6.52
ene	8	13.21314	13.19632	27.77575	6.06
ene	15	13.21322	13.19637	27.77536	5.60
ene	22	13.21328	13.19642	27.77510	5.14
ene	29	13.21335	13.19647	27.77485	4.68
feb	5	13.21341	13.19651	27.77474	4.22
feb	12	13.21347	13.19656	27.77461	3.76
feb	19	13.21353	13.19660	27.77459	3.30
feb	26	13.21357	13.19663	27.77462	2.84
mar	4	13.21361	13.19666	27.77475	2.38
mar	11	13.21365	13.19669	27.77488	1.92
mar	18	13.21369	13.19671	27.77507	1.46
mar	25	13.21371	13.19672	27.77534	1.00
abr	1	13.21373	13.19673	27.77564	0.54
abr	8	13.21374	13.19673	27.77594	0.08
abr	15	13.21375	13.19673	27.77625	23.62
abr	22	13.21375	13.19672	27.77663	23.16
abr	29	13.21375	13.19670	27.77698	22.70
may	6	13.21375	13.19668	27.77735	22.24
may	13	13.21374	13.19666	27.77765	21.78
may	20	13.21373	13.19663	27.77803	21.32
may	27	13.21371	13.19659	27.77832	20.86
jun	3	13.21369	13.19656	27.77863	20.40
jun	10	13.21368	13.19651	27.77884	19.94
jun	17	13.21365	13.19647	27.77911	19.48
jun	24	13.21363	13.19643	27.77927	19.02
jul	1	13.21360	13.19638	27.77946	18.56
jul	8	13.21358	13.19633	27.77951	18.10
jul	15	13.21355	13.19629	27.77964	17.64
jul	22	13.21353	13.19624	27.77962	17.18
jul	29	13.21349	13.19620	27.77964	16.72
ago	5	13.21348	13.19615	27.77953	16.26
ago	12	13.21344	13.19611	27.77949	15.80
ago	19	13.21343	13.19607	27.77928	15.34
ago	26	13.21340	13.19604	27.77913	14.88
sep	2	13.21339	13.19601	27.77885	14.42
sep	9	13.21336	13.19598	27.77863	13.96
sep	16	13.21336	13.19596	27.77827	13.50
sep	23	13.21335	13.19594	27.77794	13.04
sep	30	13.21335	13.19593	27.77751	12.58
oct	7	13.21335	13.19592	27.77713	12.12
oct	14	13.21336	13.19591	27.77662	11.66
oct	21	13.21338	13.19591	27.77615	11.20
oct	28	13.21340	13.19593	27.77561	10.74
nov	4	13.21343	13.19594	27.77512	10.28
nov	11	13.21347	13.19596	27.77453	9.82
nov	18	13.21351	13.19598	27.77398	9.36
nov	25	13.21356	13.19601	27.77340	8.90
dic	2	13.21361	13.19604	27.77288	8.44
dic	9	13.21367	13.19609	27.77231	7.98
dic	16	13.21374	13.19612	27.77179	7.52
dic	23	13.21380	13.19617	27.77130	7.06

66249

V 3.38 Sp A3V

m	d	α h	α_c h	δ °	Hp h
ene	1	13.59486	13.57806	-0.69590	6.90
ene	8	13.59492	13.57810	-0.69627	6.44
ene	15	13.59499	13.57814	-0.69672	5.98
ene	22	13.59505	13.57819	-0.69708	5.52
ene	29	13.59511	13.57823	-0.69746	5.06
feb	5	13.59517	13.57827	-0.69775	4.60
feb	12	13.59522	13.57831	-0.69810	4.14
feb	19	13.59528	13.57835	-0.69835	3.68
feb	26	13.59532	13.57838	-0.69858	3.22
mar	4	13.59536	13.57841	-0.69873	2.76
mar	11	13.59540	13.57844	-0.69891	2.30
mar	18	13.59544	13.57846	-0.69902	1.84
mar	25	13.59546	13.57848	-0.69908	1.38
abr	1	13.59549	13.57849	-0.69910	0.92
abr	8	13.59551	13.57850	-0.69912	0.47
abr	15	13.59553	13.57850	-0.69911	0.01
abr	22	13.59553	13.57850	-0.69904	23.55
abr	29	13.59554	13.57849	-0.69897	23.09
may	6	13.59554	13.57848	-0.69887	22.63
may	13	13.59555	13.57846	-0.69881	22.17
may	20	13.59554	13.57844	-0.69866	21.71
may	27	13.59554	13.57842	-0.69855	21.25
jun	3	13.59552	13.57839	-0.69840	20.79
jun	10	13.59552	13.57836	-0.69832	20.33
jun	17	13.59550	13.57832	-0.69814	19.87
jun	24	13.59549	13.57828	-0.69805	19.41
jul	1	13.59546	13.57824	-0.69789	18.95
jul	8	13.59545	13.57820	-0.69782	18.49
jul	15	13.59542	13.57816	-0.69765	18.03
jul	22	13.59541	13.57812	-0.69759	17.57
jul	29	13.59538	13.57808	-0.69746	17.11
ago	5	13.59536	13.57804	-0.69743	16.65
ago	12	13.59533	13.57800	-0.69730	16.19
ago	19	13.59532	13.57796	-0.69730	15.73
ago	26	13.59529	13.57793	-0.69722	15.27
sep	2	13.59528	13.57790	-0.69725	14.81
sep	9	13.59526	13.57787	-0.69720	14.35
sep	16	13.59525	13.57785	-0.69728	13.89
sep	23	13.59524	13.57783	-0.69730	13.43
sep	30	13.59524	13.57781	-0.69742	12.97
oct	7	13.59523	13.57780	-0.69747	12.51
oct	14	13.59524	13.57779	-0.69766	12.05
oct	21	13.59525	13.57779	-0.69782	11.59
oct	28	13.59527	13.57780	-0.69807	11.13
nov	4	13.59529	13.57781	-0.69827	10.67
nov	11	13.59533	13.57782	-0.69860	10.21
nov	18	13.59537	13.57784	-0.69890	9.75
nov	25	13.59541	13.57787	-0.69926	9.29
dic	2	13.59546	13.57789	-0.69960	8.83
dic	9	13.59551	13.57793	-0.70002	8.37
dic	16	13.59558	13.57796	-0.70042	7.91
dic	23	13.59564	13.57800	-0.70085	7.45

Posiciones aparentes de estrellas brillantes, 2020

(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	13.84895	13.83214	-18.22988	7.16
ene	8	13.84901	13.83219	-18.23018	6.70
ene	15	13.84908	13.83224	-18.23060	6.24
ene	22	13.84915	13.83228	-18.23095	5.78
ene	29	13.84921	13.83233	-18.23137	5.32
feb	5	13.84927	13.83238	-18.23170	4.86
feb	12	13.84933	13.83242	-18.23212	4.40
feb	19	13.84939	13.83246	-18.23247	3.94
feb	26	13.84944	13.83250	-18.23283	3.48
mar	4	13.84948	13.83253	-18.23312	3.02
mar	11	13.84953	13.83256	-18.23346	2.56
mar	18	13.84957	13.83259	-18.23374	2.10
mar	25	13.84960	13.83261	-18.23399	1.64
abr	1	13.84963	13.83263	-18.23420	1.18
abr	8	13.84965	13.83264	-18.23442	0.72
abr	15	13.84967	13.83265	-18.23462	0.26
abr	22	13.84968	13.83265	-18.23475	23.80
abr	29	13.84970	13.83265	-18.23488	23.34
may	6	13.84970	13.83264	-18.23498	22.88
may	13	13.84971	13.83262	-18.23510	22.42
may	20	13.84970	13.83261	-18.23513	21.96
may	27	13.84971	13.83258	-18.23519	21.50
jun	3	13.84969	13.83256	-18.23519	21.04
jun	10	13.84969	13.83253	-18.23524	20.58
jun	17	13.84967	13.83249	-18.23518	20.12
jun	24	13.84966	13.83246	-18.23518	19.66
jul	1	13.84964	13.83242	-18.23510	19.20
jul	8	13.84963	13.83238	-18.23509	18.74
jul	15	13.84959	13.83233	-18.23495	18.28
jul	22	13.84958	13.83229	-18.23490	17.82
jul	29	13.84955	13.83225	-18.23475	17.36
ago	5	13.84953	13.83220	-18.23469	16.90
ago	12	13.84949	13.83216	-18.23450	16.44
ago	19	13.84948	13.83212	-18.23441	15.98
ago	26	13.84945	13.83208	-18.23423	15.52
sep	2	13.84943	13.83205	-18.23414	15.06
sep	9	13.84940	13.83202	-18.23394	14.60
sep	16	13.84939	13.83199	-18.23386	14.14
sep	23	13.84938	13.83196	-18.23370	13.68
sep	30	13.84937	13.83195	-18.23364	13.22
oct	7	13.84936	13.83193	-18.23350	12.76
oct	14	13.84937	13.83192	-18.23349	12.30
oct	21	13.84938	13.83192	-18.23344	11.84
oct	28	13.84940	13.83192	-18.23347	11.38
nov	4	13.84942	13.83193	-18.23345	10.92
nov	11	13.84945	13.83195	-18.23356	10.46
nov	18	13.84949	13.83197	-18.23366	10.00
nov	25	13.84954	13.83199	-18.23383	9.54
dic	2	13.84959	13.83202	-18.23399	9.08
dic	9	13.84964	13.83205	-18.23426	8.62
dic	16	13.84971	13.83209	-18.23452	8.16
dic	23	13.84976	13.83213	-18.23484	7.70

68895

		V	Sp		
		3.25	K2III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	14.12480	14.10800	-26.77399	7.43
ene	8	14.12486	14.10804	-26.77424	6.97
ene	15	14.12494	14.10809	-26.77462	6.51
ene	22	14.12501	14.10814	-26.77493	6.05
ene	29	14.12508	14.10819	-26.77533	5.59
feb	5	14.12514	14.10824	-26.77566	5.13
feb	12	14.12520	14.10829	-26.77609	4.67
feb	19	14.12527	14.10834	-26.77645	4.21
feb	26	14.12532	14.10838	-26.77685	3.75
mar	4	14.12537	14.10842	-26.77718	3.29
mar	11	14.12542	14.10845	-26.77758	2.83
mar	18	14.12547	14.10849	-26.77792	2.37
mar	25	14.12550	14.10851	-26.77825	1.91
abr	1	14.12553	14.10854	-26.77854	1.46
abr	8	14.12556	14.10855	-26.77885	1.00
abr	15	14.12559	14.10857	-26.77913	0.54
abr	22	14.12560	14.10857	-26.77936	0.08
abr	29	14.12562	14.10857	-26.77958	23.62
may	6	14.12563	14.10857	-26.77979	23.16
may	13	14.12564	14.10856	-26.78000	22.70
may	20	14.12564	14.10854	-26.78013	22.24
may	27	14.12564	14.10852	-26.78027	21.78
jun	3	14.12563	14.10850	-26.78036	21.32
jun	10	14.12563	14.10847	-26.78049	20.86
jun	17	14.12561	14.10843	-26.78051	20.40
jun	24	14.12560	14.10840	-26.78058	19.94
jul	1	14.12558	14.10836	-26.78056	19.48
jul	8	14.12557	14.10832	-26.78059	19.02
jul	15	14.12553	14.10827	-26.78050	18.56
jul	22	14.12552	14.10823	-26.78048	18.10
jul	29	14.12548	14.10818	-26.78035	17.64
ago	5	14.12546	14.10814	-26.78029	17.18
ago	12	14.12542	14.10809	-26.78010	16.72
ago	19	14.12540	14.10805	-26.78000	16.26
ago	26	14.12537	14.10800	-26.77979	15.80
sep	2	14.12534	14.10796	-26.77967	15.34
sep	9	14.12531	14.10793	-26.77942	14.88
sep	16	14.12530	14.10790	-26.77928	14.42
sep	23	14.12528	14.10787	-26.77905	13.96
sep	30	14.12527	14.10785	-26.77891	13.50
oct	7	14.12526	14.10783	-26.77869	13.04
oct	14	14.12526	14.10782	-26.77858	12.58
oct	21	14.12527	14.10781	-26.77842	12.12
oct	28	14.12529	14.10781	-26.77835	11.66
nov	4	14.12530	14.10782	-26.77823	11.20
nov	11	14.12534	14.10783	-26.77823	10.74
nov	18	14.12538	14.10785	-26.77822	10.28
nov	25	14.12542	14.10787	-26.77829	9.82
dic	2	14.12547	14.10790	-26.77834	9.36
dic	9	14.12552	14.10794	-26.77851	8.90
dic	16	14.12559	14.10798	-26.77868	8.44
dic	23	14.12565	14.10802	-26.77892	7.98

Posiciones aparentes de estrellas brillantes, 2020

(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	14.13062	14.11381	-36.46280	7.44
ene	8	14.13069	14.11387	-36.46299	6.98
ene	15	14.13077	14.11392	-36.46334	6.52
ene	22	14.13084	14.11398	-36.46362	6.06
ene	29	14.13092	14.11403	-36.46401	5.60
feb	5	14.13098	14.11409	-36.46435	5.14
feb	12	14.13105	14.11414	-36.46480	4.68
feb	19	14.13112	14.11419	-36.46519	4.22
feb	26	14.13118	14.11424	-36.46563	3.76
mar	4	14.13124	14.11428	-36.46603	3.30
mar	11	14.13129	14.11432	-36.46649	2.84
mar	18	14.13134	14.11436	-36.46691	2.38
mar	25	14.13137	14.11439	-36.46733	1.92
abr	1	14.13141	14.11442	-36.46772	1.46
abr	8	14.13144	14.11443	-36.46813	1.00
abr	15	14.13147	14.11445	-36.46852	0.54
abr	22	14.13148	14.11445	-36.46886	0.08
abr	29	14.13151	14.11446	-36.46919	23.62
may	6	14.13151	14.11445	-36.46950	23.16
may	13	14.13153	14.11444	-36.46982	22.70
may	20	14.13152	14.11442	-36.47005	22.24
may	27	14.13152	14.11440	-36.47030	21.78
jun	3	14.13151	14.11437	-36.47049	21.32
jun	10	14.13151	14.11434	-36.47070	20.86
jun	17	14.13148	14.11431	-36.47081	20.40
jun	24	14.13147	14.11427	-36.47094	19.94
jul	1	14.13144	14.11422	-36.47098	19.48
jul	8	14.13143	14.11418	-36.47107	19.02
jul	15	14.13139	14.11413	-36.47102	18.56
jul	22	14.13137	14.11408	-36.47103	18.10
jul	29	14.13133	14.11403	-36.47091	17.64
ago	5	14.13130	14.11398	-36.47086	17.18
ago	12	14.13126	14.11393	-36.47066	16.72
ago	19	14.13123	14.11388	-36.47054	16.26
ago	26	14.13119	14.11383	-36.47030	15.80
sep	2	14.13117	14.11379	-36.47012	15.34
sep	9	14.13113	14.11375	-36.46982	14.88
sep	16	14.13111	14.11371	-36.46962	14.42
sep	23	14.13109	14.11368	-36.46931	13.96
sep	30	14.13108	14.11365	-36.46908	13.50
oct	7	14.13107	14.11363	-36.46876	13.04
oct	14	14.13107	14.11362	-36.46856	12.58
oct	21	14.13108	14.11362	-36.46829	12.12
oct	28	14.13109	14.11362	-36.46811	11.66
nov	4	14.13111	14.11362	-36.46788	11.20
nov	11	14.13114	14.11364	-36.46778	10.74
nov	18	14.13119	14.11366	-36.46765	10.28
nov	25	14.13123	14.11369	-36.46762	9.82
dic	2	14.13129	14.11372	-36.46758	9.36
dic	9	14.13135	14.11376	-36.46765	8.90
dic	16	14.13142	14.11381	-36.46774	8.44
dic	23	14.13148	14.11385	-36.46790	7.98

71957					
		V	Sp		
		3.87	F2III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	14.73479	14.71799	-5.74237	8.04
ene	8	14.73485	14.71803	-5.74269	7.58
ene	15	14.73492	14.71807	-5.74312	7.12
ene	22	14.73498	14.71812	-5.74345	6.66
ene	29	14.73504	14.71816	-5.74383	6.20
feb	5	14.73510	14.71821	-5.74411	5.74
feb	12	14.73517	14.71825	-5.74448	5.28
feb	19	14.73522	14.71830	-5.74473	4.82
feb	26	14.73528	14.71834	-5.74500	4.36
mar	4	14.73533	14.71838	-5.74517	3.90
mar	11	14.73538	14.71841	-5.74539	3.44
mar	18	14.73543	14.71845	-5.74552	2.98
mar	25	14.73546	14.71848	-5.74564	2.52
abr	1	14.73550	14.71850	-5.74568	2.06
abr	8	14.73553	14.71852	-5.74576	1.61
abr	15	14.73557	14.71854	-5.74578	1.15
abr	22	14.73558	14.71855	-5.74576	0.69
abr	29	14.73561	14.71856	-5.74571	0.23
may	6	14.73562	14.71856	-5.74567	23.77
may	13	14.73564	14.71855	-5.74563	23.31
may	20	14.73564	14.71855	-5.74553	22.85
may	27	14.73565	14.71853	-5.74544	22.39
jun	3	14.73565	14.71851	-5.74533	21.93
jun	10	14.73566	14.71849	-5.74526	21.47
jun	17	14.73564	14.71846	-5.74513	21.01
jun	24	14.73564	14.71843	-5.74504	20.55
jul	1	14.73562	14.71840	-5.74491	20.09
jul	8	14.73561	14.71837	-5.74485	19.63
jul	15	14.73559	14.71833	-5.74471	19.17
jul	22	14.73557	14.71829	-5.74465	18.71
jul	29	14.73554	14.71824	-5.74452	18.25
ago	5	14.73553	14.71820	-5.74449	17.79
ago	12	14.73549	14.71816	-5.74436	17.33
ago	19	14.73547	14.71812	-5.74434	16.87
ago	26	14.73544	14.71808	-5.74424	16.41
sep	2	14.73542	14.71804	-5.74425	15.95
sep	9	14.73539	14.71800	-5.74417	15.49
sep	16	14.73537	14.71797	-5.74421	15.03
sep	23	14.73535	14.71794	-5.74417	14.57
sep	30	14.73533	14.71791	-5.74425	14.11
oct	7	14.73532	14.71789	-5.74425	13.65
oct	14	14.73532	14.71787	-5.74438	13.19
oct	21	14.73531	14.71785	-5.74445	12.73
oct	28	14.73532	14.71785	-5.74462	12.27
nov	4	14.73533	14.71784	-5.74473	11.81
nov	11	14.73535	14.71784	-5.74499	11.35
nov	18	14.73538	14.71785	-5.74520	10.89
nov	25	14.73541	14.71787	-5.74549	10.43
dic	2	14.73545	14.71788	-5.74574	9.97
dic	9	14.73550	14.71791	-5.74610	9.51
dic	16	14.73555	14.71794	-5.74642	9.05
dic	23	14.73560	14.71797	-5.74680	8.59

Posiciones aparentes de estrellas brillantes, 2020

(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	15.08686	15.07005	-25.35611	8.40
ene	8	15.08692	15.07010	-25.35628	7.94
ene	15	15.08699	15.07015	-25.35659	7.48
ene	22	15.08706	15.07019	-25.35681	7.02
ene	29	15.08713	15.07025	-25.35714	6.56
feb	5	15.08719	15.07030	-25.35738	6.10
feb	12	15.08726	15.07035	-25.35774	5.64
feb	19	15.08733	15.07040	-25.35801	5.18
feb	26	15.08739	15.07045	-25.35834	4.72
mar	4	15.08744	15.07049	-25.35859	4.26
mar	11	15.08750	15.07054	-25.35892	3.80
mar	18	15.08756	15.07058	-25.35918	3.34
mar	25	15.08760	15.07061	-25.35946	2.88
abr	1	15.08764	15.07065	-25.35967	2.42
abr	8	15.08768	15.07068	-25.35993	1.96
abr	15	15.08773	15.07070	-25.36015	1.50
abr	22	15.08775	15.07072	-25.36034	1.04
abr	29	15.08778	15.07073	-25.36051	0.58
may	6	15.08780	15.07074	-25.36069	0.12
may	13	15.08783	15.07074	-25.36086	23.66
may	20	15.08784	15.07074	-25.36098	23.20
may	27	15.08785	15.07073	-25.36110	22.74
jun	3	15.08785	15.07072	-25.36120	22.28
jun	10	15.08786	15.07070	-25.36132	21.82
jun	17	15.08785	15.07067	-25.36137	21.36
jun	24	15.08785	15.07065	-25.36144	20.90
jul	1	15.08783	15.07061	-25.36146	20.44
jul	8	15.08783	15.07058	-25.36153	19.98
jul	15	15.08780	15.07054	-25.36149	19.52
jul	22	15.08778	15.07050	-25.36151	19.06
jul	29	15.08775	15.07045	-25.36144	18.60
ago	5	15.08773	15.07041	-25.36144	18.14
ago	12	15.08769	15.07036	-25.36132	17.68
ago	19	15.08767	15.07032	-25.36128	17.22
ago	26	15.08763	15.07027	-25.36114	16.76
sep	2	15.08761	15.07023	-25.36108	16.30
sep	9	15.08757	15.07018	-25.36090	15.84
sep	16	15.08755	15.07014	-25.36081	15.38
sep	23	15.08752	15.07011	-25.36063	14.92
sep	30	15.08750	15.07007	-25.36054	14.46
oct	7	15.08748	15.07005	-25.36035	14.00
oct	14	15.08747	15.07002	-25.36028	13.54
oct	21	15.08747	15.07001	-25.36012	13.08
oct	28	15.08747	15.06999	-25.36008	12.62
nov	4	15.08748	15.06999	-25.35995	12.16
nov	11	15.08749	15.06999	-25.35997	11.70
nov	18	15.08752	15.06999	-25.35991	11.24
nov	25	15.08755	15.07001	-25.35996	10.78
dic	2	15.08759	15.07003	-25.35996	10.32
dic	9	15.08764	15.07005	-25.36009	9.86
dic	16	15.08770	15.07008	-25.36019	9.40
dic	23	15.08775	15.07012	-25.36037	8.94

74824					
		V	Sp		
		4.07	A3V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	15.31738	15.30058	-58.86905	8.63
ene	8	15.31747	15.30065	-58.86894	8.17
ene	15	15.31758	15.30074	-58.86900	7.71
ene	22	15.31769	15.30083	-58.86901	7.25
ene	29	15.31780	15.30092	-58.86917	6.79
feb	5	15.31790	15.30101	-58.86929	6.33
feb	12	15.31801	15.30110	-58.86957	5.87
feb	19	15.31812	15.30119	-58.86981	5.41
feb	26	15.31822	15.30128	-58.87015	4.95
mar	4	15.31832	15.30137	-58.87046	4.49
mar	11	15.31841	15.30145	-58.87090	4.03
mar	18	15.31851	15.30153	-58.87130	3.57
mar	25	15.31858	15.30160	-58.87176	3.11
abr	1	15.31866	15.30166	-58.87219	2.65
abr	8	15.31872	15.30172	-58.87271	2.19
abr	15	15.31880	15.30177	-58.87320	1.73
abr	22	15.31884	15.30181	-58.87371	1.27
abr	29	15.31890	15.30185	-58.87419	0.81
may	6	15.31893	15.30186	-58.87471	0.35
may	13	15.31897	15.30189	-58.87522	23.89
may	20	15.31898	15.30188	-58.87570	23.43
may	27	15.31901	15.30189	-58.87617	22.97
jun	3	15.31900	15.30187	-58.87662	22.51
jun	10	15.31901	15.30185	-58.87707	22.05
jun	17	15.31899	15.30181	-58.87745	21.59
jun	24	15.31898	15.30178	-58.87783	21.13
jul	1	15.31894	15.30172	-58.87813	20.67
jul	8	15.31892	15.30167	-58.87845	20.21
jul	15	15.31887	15.30161	-58.87865	19.75
jul	22	15.31883	15.30154	-58.87887	19.29
jul	29	15.31877	15.30147	-58.87896	18.83
ago	5	15.31872	15.30140	-58.87909	18.37
ago	12	15.31865	15.30132	-58.87906	17.91
ago	19	15.31859	15.30124	-58.87906	17.45
ago	26	15.31852	15.30116	-58.87893	16.99
sep	2	15.31846	15.30108	-58.87883	16.53
sep	9	15.31839	15.30101	-58.87857	16.07
sep	16	15.31834	15.30094	-58.87836	15.61
sep	23	15.31828	15.30087	-58.87802	15.15
sep	30	15.31824	15.30082	-58.87773	14.69
oct	7	15.31820	15.30077	-58.87730	14.23
oct	14	15.31817	15.30072	-58.87696	13.77
oct	21	15.31816	15.30069	-58.87650	13.31
oct	28	15.31815	15.30067	-58.87612	12.85
nov	4	15.31815	15.30066	-58.87565	12.39
nov	11	15.31817	15.30066	-58.87529	11.93
nov	18	15.31821	15.30068	-58.87486	11.47
nov	25	15.31824	15.30070	-58.87453	11.01
dic	2	15.31830	15.30074	-58.87416	10.55
dic	9	15.31836	15.30078	-58.87392	10.09
dic	16	15.31845	15.30084	-58.87365	9.63
dic	23	15.31853	15.30090	-58.87350	9.17

Posiciones aparentes de estrellas brillantes, 2020

(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	15.42231	15.40550	58.89414	8.73
ene	8	15.42238	15.40556	58.89361	8.27
ene	15	15.42247	15.40563	58.89303	7.81
ene	22	15.42256	15.40570	58.89262	7.35
ene	29	15.42266	15.40578	58.89221	6.89
feb	5	15.42275	15.40586	58.89198	6.43
feb	12	15.42286	15.40594	58.89173	5.97
feb	19	15.42295	15.40602	58.89166	5.51
feb	26	15.42305	15.40611	58.89162	5.05
mar	4	15.42313	15.40618	58.89176	4.59
mar	11	15.42323	15.40626	58.89188	4.13
mar	18	15.42330	15.40633	58.89215	3.67
mar	25	15.42338	15.40640	58.89247	3.21
abr	1	15.42344	15.40645	58.89291	2.75
abr	8	15.42350	15.40650	58.89333	2.29
abr	15	15.42355	15.40653	58.89384	1.83
abr	22	15.42359	15.40656	58.89438	1.37
abr	29	15.42362	15.40657	58.89498	0.91
may	6	15.42364	15.40658	58.89555	0.45
may	13	15.42366	15.40657	58.89614	23.99
may	20	15.42366	15.40656	58.89675	23.53
may	27	15.42365	15.40653	58.89734	23.07
jun	3	15.42364	15.40650	58.89790	22.61
jun	10	15.42362	15.40645	58.89840	22.15
jun	17	15.42358	15.40640	58.89892	21.69
jun	24	15.42355	15.40634	58.89935	21.23
jul	1	15.42350	15.40628	58.89976	20.77
jul	8	15.42345	15.40620	58.90006	20.31
jul	15	15.42339	15.40613	58.90037	19.85
jul	22	15.42333	15.40604	58.90056	19.39
jul	29	15.42326	15.40596	58.90073	18.93
ago	5	15.42319	15.40587	58.90077	18.47
ago	12	15.42312	15.40579	58.90083	18.01
ago	19	15.42305	15.40570	58.90072	17.55
ago	26	15.42297	15.40561	58.90063	17.09
sep	2	15.42290	15.40552	58.90038	16.63
sep	9	15.42283	15.40544	58.90017	16.17
sep	16	15.42276	15.40536	58.89979	15.71
sep	23	15.42269	15.40528	58.89943	15.25
sep	30	15.42264	15.40521	58.89892	14.79
oct	7	15.42258	15.40515	58.89847	14.33
oct	14	15.42254	15.40509	58.89784	13.87
oct	21	15.42250	15.40504	58.89727	13.41
oct	28	15.42248	15.40500	58.89656	12.95
nov	4	15.42245	15.40497	58.89593	12.49
nov	11	15.42245	15.40495	58.89515	12.03
nov	18	15.42246	15.40493	58.89445	11.57
nov	25	15.42248	15.40493	58.89366	11.11
dic	2	15.42250	15.40493	58.89296	10.65
dic	9	15.42254	15.40496	58.89217	10.19
dic	16	15.42259	15.40498	58.89147	9.73
dic	23	15.42266	15.40502	58.89075	9.27

76440

		V	Sp		
		4.11	K0III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	15.64175	15.62495	-66.37712	8.95
ene	8	15.64186	15.62504	-66.37690	8.49
ene	15	15.64199	15.62515	-66.37686	8.03
ene	22	15.64213	15.62526	-66.37678	7.57
ene	29	15.64226	15.62538	-66.37685	7.11
feb	5	15.64239	15.62550	-66.37688	6.65
feb	12	15.64253	15.62562	-66.37709	6.19
feb	19	15.64267	15.62574	-66.37725	5.73
feb	26	15.64280	15.62586	-66.37754	5.27
mar	4	15.64293	15.62597	-66.37780	4.81
mar	11	15.64304	15.62608	-66.37820	4.35
mar	18	15.64317	15.62619	-66.37856	3.89
mar	25	15.64327	15.62629	-66.37901	3.43
abr	1	15.64338	15.62639	-66.37943	2.97
abr	8	15.64347	15.62646	-66.37996	2.51
abr	15	15.64357	15.62655	-66.38046	2.05
abr	22	15.64363	15.62660	-66.38099	1.59
abr	29	15.64371	15.62666	-66.38151	1.13
may	6	15.64376	15.62669	-66.38207	0.67
may	13	15.64382	15.62673	-66.38262	0.21
may	20	15.64384	15.62674	-66.38316	23.75
may	27	15.64388	15.62675	-66.38369	23.29
jun	3	15.64387	15.62674	-66.38422	22.83
jun	10	15.64389	15.62673	-66.38473	22.37
jun	17	15.64387	15.62669	-66.38519	21.91
jun	24	15.64386	15.62665	-66.38564	21.45
jul	1	15.64381	15.62659	-66.38604	20.99
jul	8	15.64379	15.62654	-66.38643	20.53
jul	15	15.64372	15.62646	-66.38671	20.07
jul	22	15.64367	15.62638	-66.38701	19.61
jul	29	15.64359	15.62629	-66.38718	19.15
ago	5	15.64352	15.62620	-66.38738	18.69
ago	12	15.64343	15.62610	-66.38742	18.23
ago	19	15.64335	15.62600	-66.38748	17.77
ago	26	15.64326	15.62590	-66.38740	17.31
sep	2	15.64318	15.62580	-66.38734	16.85
sep	9	15.64308	15.62570	-66.38712	16.39
sep	16	15.64301	15.62561	-66.38695	15.93
sep	23	15.64293	15.62552	-66.38661	15.47
sep	30	15.64286	15.62544	-66.38633	15.01
oct	7	15.64280	15.62537	-66.38589	14.55
oct	14	15.64276	15.62531	-66.38553	14.09
oct	21	15.64272	15.62526	-66.38504	13.63
oct	28	15.64270	15.62523	-66.38463	13.17
nov	4	15.64269	15.62521	-66.38409	12.71
nov	11	15.64270	15.62520	-66.38367	12.25
nov	18	15.64274	15.62521	-66.38317	11.79
nov	25	15.64278	15.62523	-66.38276	11.33
dic	2	15.64284	15.62527	-66.38229	10.87
dic	9	15.64291	15.62532	-66.38196	10.41
dic	16	15.64300	15.62539	-66.38159	9.95
dic	23	15.64309	15.62546	-66.38134	9.49

Posiciones aparentes de estrellas brillantes, 2020

(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	15.86301	15.84621	4.41945	9.17
ene	8	15.86306	15.84624	4.41910	8.71
ene	15	15.86312	15.84628	4.41864	8.25
ene	22	15.86318	15.84632	4.41831	7.79
ene	29	15.86324	15.84636	4.41791	7.33
feb	5	15.86330	15.84640	4.41764	6.87
feb	12	15.86336	15.84645	4.41729	6.41
feb	19	15.86342	15.84649	4.41709	5.95
feb	26	15.86348	15.84654	4.41685	5.49
mar	4	15.86353	15.84658	4.41675	5.03
mar	11	15.86359	15.84663	4.41659	4.57
mar	18	15.86365	15.84667	4.41656	4.11
mar	25	15.86369	15.84671	4.41653	3.65
abr	1	15.86374	15.84674	4.41660	3.19
abr	8	15.86378	15.84677	4.41664	2.73
abr	15	15.86382	15.84680	4.41676	2.27
abr	22	15.86385	15.84682	4.41689	1.81
abr	29	15.86389	15.84684	4.41709	1.35
may	6	15.86391	15.84685	4.41726	0.89
may	13	15.86395	15.84686	4.41747	0.43
may	20	15.86396	15.84686	4.41770	23.97
may	27	15.86398	15.84686	4.41794	23.51
jun	3	15.86399	15.84685	4.41816	23.05
jun	10	15.86400	15.84684	4.41838	22.59
jun	17	15.86400	15.84682	4.41862	22.13
jun	24	15.86400	15.84680	4.41883	21.67
jul	1	15.86399	15.84677	4.41905	21.21
jul	8	15.86399	15.84674	4.41920	20.75
jul	15	15.86397	15.84671	4.41941	20.29
jul	22	15.86396	15.84667	4.41954	19.83
jul	29	15.86393	15.84663	4.41970	19.37
ago	5	15.86392	15.84659	4.41977	18.91
ago	12	15.86388	15.84655	4.41990	18.45
ago	19	15.86386	15.84651	4.41993	17.99
ago	26	15.86382	15.84646	4.42001	17.53
sep	2	15.86380	15.84642	4.41997	17.07
sep	9	15.86376	15.84637	4.42001	16.61
sep	16	15.86374	15.84633	4.41993	16.15
sep	23	15.86370	15.84629	4.41990	15.69
sep	30	15.86368	15.84626	4.41975	15.23
oct	7	15.86365	15.84622	4.41968	14.77
oct	14	15.86364	15.84619	4.41947	14.31
oct	21	15.86363	15.84616	4.41932	13.85
oct	28	15.86362	15.84614	4.41904	13.39
nov	4	15.86361	15.84613	4.41885	12.93
nov	11	15.86362	15.84612	4.41851	12.47
nov	18	15.86364	15.84611	4.41823	12.01
nov	25	15.86365	15.84611	4.41784	11.55
dic	2	15.86368	15.84611	4.41753	11.09
dic	9	15.86371	15.84612	4.41709	10.63
dic	16	15.86375	15.84614	4.41672	10.17
dic	23	15.86379	15.84616	4.41627	9.71

81724

		V	Sp		
		4.91	G8II/III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	16.71153	16.69473	-17.77776	10.02
ene	8	16.71158	16.69476	-17.77788	9.56
ene	15	16.71164	16.69479	-17.77812	9.10
ene	22	16.71169	16.69483	-17.77827	8.64
ene	29	16.71175	16.69487	-17.77851	8.18
feb	5	16.71181	16.69491	-17.77866	7.72
feb	12	16.71187	16.69496	-17.77891	7.26
feb	19	16.71194	16.69501	-17.77904	6.80
feb	26	16.71200	16.69506	-17.77926	6.34
mar	4	16.71206	16.69511	-17.77936	5.88
mar	11	16.71212	16.69516	-17.77956	5.42
mar	18	16.71218	16.69521	-17.77964	4.96
mar	25	16.71224	16.69525	-17.77978	4.50
abr	1	16.71229	16.69530	-17.77982	4.04
abr	8	16.71234	16.69534	-17.77993	3.58
abr	15	16.71240	16.69538	-17.77996	3.12
abr	22	16.71244	16.69541	-17.78001	2.66
abr	29	16.71249	16.69544	-17.78000	2.20
may	6	16.71253	16.69546	-17.78005	1.74
may	13	16.71257	16.69549	-17.78004	1.28
may	20	16.71260	16.69550	-17.78004	0.82
may	27	16.71263	16.69551	-17.78001	0.36
jun	3	16.71265	16.69551	-17.78002	23.90
jun	10	16.71268	16.69552	-17.78001	23.44
jun	17	16.71269	16.69551	-17.77999	22.98
jun	24	16.71270	16.69550	-17.77997	22.52
jul	1	16.71270	16.69548	-17.77995	22.06
jul	8	16.71271	16.69546	-17.77996	21.60
jul	15	16.71269	16.69543	-17.77993	21.14
jul	22	16.71269	16.69540	-17.77993	20.68
jul	29	16.71267	16.69537	-17.77989	20.22
ago	5	16.71266	16.69533	-17.77991	19.76
ago	12	16.71262	16.69529	-17.77986	19.30
ago	19	16.71260	16.69525	-17.77987	18.84
ago	26	16.71257	16.69521	-17.77981	18.38
sep	2	16.71254	16.69516	-17.77983	17.92
sep	9	16.71250	16.69512	-17.77976	17.46
sep	16	16.71247	16.69507	-17.77978	17.00
sep	23	16.71244	16.69503	-17.77970	16.54
sep	30	16.71241	16.69499	-17.77972	16.08
oct	7	16.71237	16.69494	-17.77964	15.62
oct	14	16.71236	16.69491	-17.77967	15.16
oct	21	16.71233	16.69487	-17.77961	14.70
oct	28	16.71232	16.69485	-17.77966	14.24
nov	4	16.71231	16.69482	-17.77961	13.78
nov	11	16.71231	16.69480	-17.77969	13.32
nov	18	16.71232	16.69479	-17.77968	12.86
nov	25	16.71233	16.69478	-17.77979	12.40
dic	2	16.71234	16.69478	-17.77979	11.94
dic	9	16.71237	16.69478	-17.77996	11.48
dic	16	16.71241	16.69479	-17.78004	11.02
dic	23	16.71244	16.69481	-17.78023	10.56

Posiciones aparentes de estrellas brillantes, 2020

(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	16.72575	16.70895	38.88417	10.03
ene	8	16.72579	16.70897	38.88359	9.57
ene	15	16.72585	16.70900	38.88294	9.11
ene	22	16.72590	16.70904	38.88243	8.66
ene	29	16.72596	16.70908	38.88188	8.20
feb	5	16.72603	16.70913	38.88151	7.74
feb	12	16.72609	16.70918	38.88108	7.28
feb	19	16.72616	16.70923	38.88084	6.82
feb	26	16.72623	16.70929	38.88058	6.36
mar	4	16.72630	16.70934	38.88051	5.90
mar	11	16.72637	16.70940	38.88041	5.44
mar	18	16.72643	16.70945	38.88049	4.98
mar	25	16.72649	16.70951	38.88058	4.52
abr	1	16.72655	16.70956	38.88083	4.06
abr	8	16.72661	16.70960	38.88105	3.60
abr	15	16.72666	16.70964	38.88141	3.14
abr	22	16.72671	16.70968	38.88178	2.68
abr	29	16.72675	16.70970	38.88226	2.22
may	6	16.72679	16.70973	38.88270	1.76
may	13	16.72683	16.70974	38.88322	1.30
may	20	16.72685	16.70975	38.88374	0.84
may	27	16.72688	16.70975	38.88431	0.38
jun	3	16.72689	16.70975	38.88484	23.92
jun	10	16.72690	16.70974	38.88537	23.46
jun	17	16.72690	16.70972	38.88590	23.00
jun	24	16.72690	16.70970	38.88641	22.54
jul	1	16.72689	16.70967	38.88689	22.08
jul	8	16.72688	16.70963	38.88731	21.62
jul	15	16.72686	16.70960	38.88774	21.16
jul	22	16.72684	16.70955	38.88809	20.70
jul	29	16.72680	16.70950	38.88842	20.24
ago	5	16.72677	16.70945	38.88865	19.78
ago	12	16.72672	16.70939	38.88889	19.32
ago	19	16.72669	16.70933	38.88901	18.86
ago	26	16.72664	16.70928	38.88913	18.40
sep	2	16.72659	16.70921	38.88911	17.94
sep	9	16.72654	16.70916	38.88913	17.48
sep	16	16.72650	16.70909	38.88900	17.02
sep	23	16.72645	16.70903	38.88888	16.56
sep	30	16.72640	16.70898	38.88861	16.10
oct	7	16.72636	16.70892	38.88839	15.64
oct	14	16.72632	16.70887	38.88801	15.18
oct	21	16.72628	16.70882	38.88766	14.72
oct	28	16.72626	16.70878	38.88716	14.26
nov	4	16.72623	16.70874	38.88672	13.80
nov	11	16.72622	16.70871	38.88613	13.34
nov	18	16.72621	16.70868	38.88559	12.88
nov	25	16.72621	16.70866	38.88492	12.42
dic	2	16.72622	16.70865	38.88434	11.96
dic	9	16.72623	16.70865	38.88362	11.50
dic	16	16.72626	16.70865	38.88299	11.04
dic	23	16.72629	16.70866	38.88228	10.58

82396

		V	Sp		
		2.29	K2IIIb		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	16.85693	16.84013	-34.32565	10.17
ene	8	16.85698	16.84016	-34.32559	9.71
ene	15	16.85705	16.84020	-34.32566	9.25
ene	22	16.85711	16.84025	-34.32564	8.79
ene	29	16.85718	16.84030	-34.32575	8.33
feb	5	16.85724	16.84035	-34.32578	7.87
feb	12	16.85732	16.84040	-34.32594	7.41
feb	19	16.85739	16.84046	-34.32600	6.95
feb	26	16.85746	16.84052	-34.32617	6.49
mar	4	16.85753	16.84057	-34.32625	6.03
mar	11	16.85760	16.84063	-34.32645	5.57
mar	18	16.85767	16.84069	-34.32656	5.11
mar	25	16.85773	16.84075	-34.32674	4.65
abr	1	16.85780	16.84080	-34.32685	4.19
abr	8	16.85786	16.84085	-34.32706	3.73
abr	15	16.85792	16.84090	-34.32720	3.27
abr	22	16.85797	16.84094	-34.32739	2.81
abr	29	16.85803	16.84098	-34.32752	2.35
may	6	16.85807	16.84101	-34.32772	1.89
may	13	16.85812	16.84104	-34.32788	1.43
may	20	16.85815	16.84106	-34.32806	0.97
may	27	16.85820	16.84107	-34.32821	0.51
jun	3	16.85822	16.84108	-34.32841	0.05
jun	10	16.85825	16.84109	-34.32858	23.59
jun	17	16.85826	16.84108	-34.32875	23.13
jun	24	16.85828	16.84108	-34.32891	22.67
jul	1	16.85828	16.84106	-34.32908	22.21
jul	8	16.85829	16.84104	-34.32925	21.75
jul	15	16.85827	16.84101	-34.32937	21.29
jul	22	16.85827	16.84098	-34.32952	20.83
jul	29	16.85824	16.84094	-34.32961	20.37
ago	5	16.85823	16.84091	-34.32974	19.91
ago	12	16.85819	16.84086	-34.32979	19.45
ago	19	16.85817	16.84082	-34.32987	18.99
ago	26	16.85813	16.84077	-34.32987	18.53
sep	2	16.85810	16.84072	-34.32992	18.07
sep	9	16.85805	16.84066	-34.32986	17.61
sep	16	16.85802	16.84061	-34.32986	17.15
sep	23	16.85797	16.84056	-34.32975	16.69
sep	30	16.85794	16.84051	-34.32971	16.23
oct	7	16.85790	16.84047	-34.32955	15.77
oct	14	16.85787	16.84042	-34.32948	15.31
oct	21	16.85785	16.84039	-34.32929	14.85
oct	28	16.85783	16.84035	-34.32920	14.39
nov	4	16.85781	16.84032	-34.32899	13.93
nov	11	16.85781	16.84030	-34.32889	13.47
nov	18	16.85782	16.84029	-34.32870	13.01
nov	25	16.85783	16.84028	-34.32861	12.55
dic	2	16.85784	16.84028	-34.32844	12.09
dic	9	16.85787	16.84029	-34.32839	11.63
dic	16	16.85791	16.84030	-34.32825	11.17
dic	23	16.85795	16.84032	-34.32823	10.71

Posiciones aparentes de estrellas brillantes, 2020

(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	17.76121	17.74441	-51.84106	11.07
ene	8	17.76126	17.74444	-51.84074	10.61
ene	15	17.76133	17.74448	-51.84055	10.15
ene	22	17.76140	17.74453	-51.84027	9.69
ene	29	17.76147	17.74459	-51.84013	9.23
feb	5	17.76155	17.74465	-51.83992	8.77
feb	12	17.76164	17.74473	-51.83985	8.31
feb	19	17.76173	17.74480	-51.83970	7.85
feb	26	17.76181	17.74487	-51.83969	7.39
mar	4	17.76190	17.74495	-51.83960	6.93
mar	11	17.76200	17.74503	-51.83967	6.47
mar	18	17.76209	17.74511	-51.83965	6.01
mar	25	17.76218	17.74519	-51.83975	5.55
abr	1	17.76227	17.74527	-51.83979	5.09
abr	8	17.76235	17.74535	-51.83997	4.63
abr	15	17.76245	17.74542	-51.84008	4.17
abr	22	17.76252	17.74549	-51.84029	3.71
abr	29	17.76261	17.74556	-51.84045	3.25
may	6	17.76268	17.74561	-51.84072	2.79
may	13	17.76276	17.74567	-51.84095	2.33
may	20	17.76281	17.74571	-51.84124	1.87
may	27	17.76288	17.74576	-51.84150	1.41
jun	3	17.76292	17.74578	-51.84185	0.95
jun	10	17.76298	17.74581	-51.84215	0.49
jun	17	17.76300	17.74582	-51.84250	0.03
jun	24	17.76304	17.74584	-51.84282	23.57
jul	1	17.76305	17.74583	-51.84318	23.11
jul	8	17.76308	17.74583	-51.84352	22.65
jul	15	17.76306	17.74580	-51.84385	22.19
jul	22	17.76307	17.74578	-51.84417	21.73
jul	29	17.76304	17.74575	-51.84447	21.27
ago	5	17.76303	17.74571	-51.84477	20.81
ago	12	17.76299	17.74566	-51.84500	20.35
ago	19	17.76296	17.74561	-51.84524	19.89
ago	26	17.76291	17.74555	-51.84540	19.43
sep	2	17.76287	17.74549	-51.84557	18.97
sep	9	17.76281	17.74542	-51.84564	18.51
sep	16	17.76276	17.74536	-51.84573	18.05
sep	23	17.76270	17.74529	-51.84569	17.59
sep	30	17.76265	17.74523	-51.84570	17.13
oct	7	17.76259	17.74516	-51.84557	16.67
oct	14	17.76255	17.74510	-51.84548	16.21
oct	21	17.76250	17.74504	-51.84525	15.75
oct	28	17.76246	17.74499	-51.84509	15.29
nov	4	17.76243	17.74494	-51.84479	14.83
nov	11	17.76241	17.74490	-51.84457	14.37
nov	18	17.76240	17.74487	-51.84421	13.91
nov	25	17.76239	17.74484	-51.84396	13.45
dic	2	17.76240	17.74483	-51.84358	12.99
dic	9	17.76241	17.74483	-51.84331	12.53
dic	16	17.76245	17.74483	-51.84293	12.07
dic	23	17.76248	17.74485	-51.84267	11.61

91262

		V	Sp		
		0.03	A0Vvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	18.62627	18.60946	38.80313	11.94
ene	8	18.62628	18.60946	38.80254	11.48
ene	15	18.62631	18.60947	38.80187	11.02
ene	22	18.62634	18.60948	38.80131	10.56
ene	29	18.62638	18.60950	38.80068	10.10
feb	5	18.62643	18.60953	38.80019	9.64
feb	12	18.62648	18.60956	38.79965	9.18
feb	19	18.62653	18.60960	38.79927	8.72
feb	26	18.62659	18.60965	38.79885	8.26
mar	4	18.62665	18.60970	38.79861	7.80
mar	11	18.62671	18.60975	38.79834	7.34
mar	18	18.62678	18.60980	38.79826	6.88
mar	25	18.62684	18.60986	38.79816	6.42
abr	1	18.62691	18.60991	38.79825	5.96
abr	8	18.62697	18.60997	38.79831	5.50
abr	15	18.62704	18.61002	38.79854	5.04
abr	22	18.62710	18.61007	38.79876	4.58
abr	29	18.62716	18.61011	38.79915	4.12
may	6	18.62722	18.61016	38.79949	3.66
may	13	18.62728	18.61019	38.79998	3.20
may	20	18.62732	18.61023	38.80043	2.74
may	27	18.62737	18.61025	38.80100	2.28
jun	3	18.62741	18.61027	38.80152	1.82
jun	10	18.62745	18.61028	38.80212	1.36
jun	17	18.62747	18.61029	38.80269	0.90
jun	24	18.62750	18.61029	38.80331	0.44
jul	1	18.62751	18.61029	38.80387	23.98
jul	8	18.62752	18.61028	38.80445	23.52
jul	15	18.62752	18.61026	38.80499	23.06
jul	22	18.62752	18.61023	38.80553	22.60
jul	29	18.62750	18.61020	38.80602	22.14
ago	5	18.62749	18.61017	38.80647	21.68
ago	12	18.62746	18.61013	38.80689	21.22
ago	19	18.62743	18.61008	38.80726	20.76
ago	26	18.62739	18.61003	38.80759	20.30
sep	2	18.62736	18.60997	38.80782	19.84
sep	9	18.62731	18.60992	38.80806	19.38
sep	16	18.62726	18.60986	38.80819	18.92
sep	23	18.62721	18.60980	38.80831	18.46
sep	30	18.62716	18.60974	38.80829	18.00
oct	7	18.62711	18.60968	38.80829	17.54
oct	14	18.62706	18.60961	38.80816	17.08
oct	21	18.62701	18.60955	38.80804	16.62
oct	28	18.62697	18.60949	38.80775	16.16
nov	4	18.62693	18.60944	38.80751	15.70
nov	11	18.62689	18.60939	38.80712	15.24
nov	18	18.62686	18.60933	38.80677	14.78
nov	25	18.62684	18.60929	38.80625	14.32
dic	2	18.62682	18.60925	38.80580	13.86
dic	9	18.62681	18.60922	38.80520	13.40
dic	16	18.62681	18.60920	38.80467	12.94
dic	23	18.62681	18.60918	38.80400	12.48

Posiciones aparentes de estrellas brillantes, 2020

(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	18.82153	18.80473	-14.68547	12.13
ene	8	18.82155	18.80473	-14.68555	11.67
ene	15	18.82159	18.80474	-14.68570	11.21
ene	22	18.82162	18.80476	-14.68576	10.75
ene	29	18.82166	18.80478	-14.68590	10.29
feb	5	18.82170	18.80481	-14.68594	9.83
feb	12	18.82175	18.80484	-14.68607	9.37
feb	19	18.82181	18.80488	-14.68608	8.91
feb	26	18.82186	18.80492	-14.68617	8.45
mar	4	18.82191	18.80496	-14.68615	7.99
mar	11	18.82197	18.80500	-14.68620	7.53
mar	18	18.82203	18.80505	-14.68613	7.07
mar	25	18.82208	18.80510	-14.68614	6.61
abr	1	18.82214	18.80515	-14.68602	6.15
abr	8	18.82220	18.80520	-14.68599	5.69
abr	15	18.82227	18.80524	-14.68584	5.23
abr	22	18.82232	18.80529	-14.68577	4.77
abr	29	18.82238	18.80533	-14.68558	4.31
may	6	18.82244	18.80537	-14.68549	3.85
may	13	18.82250	18.80541	-14.68530	3.39
may	20	18.82254	18.80545	-14.68519	2.93
may	27	18.82260	18.80548	-14.68500	2.47
jun	3	18.82264	18.80550	-14.68489	2.01
jun	10	18.82269	18.80553	-14.68473	1.55
jun	17	18.82272	18.80554	-14.68462	1.09
jun	24	18.82276	18.80555	-14.68447	0.63
jul	1	18.82278	18.80556	-14.68439	0.17
jul	8	18.82281	18.80556	-14.68429	23.71
jul	15	18.82282	18.80555	-14.68423	23.25
jul	22	18.82283	18.80555	-14.68416	22.79
jul	29	18.82283	18.80553	-14.68412	22.33
ago	5	18.82283	18.80551	-14.68410	21.87
ago	12	18.82282	18.80549	-14.68407	21.41
ago	19	18.82281	18.80546	-14.68407	20.95
ago	26	18.82279	18.80542	-14.68407	20.49
sep	2	18.82277	18.80539	-14.68411	20.03
sep	9	18.82273	18.80535	-14.68411	19.57
sep	16	18.82271	18.80531	-14.68416	19.11
sep	23	18.82267	18.80526	-14.68416	18.65
sep	30	18.82264	18.80522	-14.68424	18.19
oct	7	18.82260	18.80517	-14.68425	17.73
oct	14	18.82257	18.80513	-14.68433	17.27
oct	21	18.82254	18.80508	-14.68433	16.81
oct	28	18.82251	18.80504	-14.68444	16.35
nov	4	18.82248	18.80500	-14.68445	15.89
nov	11	18.82247	18.80496	-14.68455	15.43
nov	18	18.82245	18.80492	-14.68456	14.97
nov	25	18.82244	18.80490	-14.68469	14.51
dic	2	18.82244	18.80487	-14.68471	14.05
dic	9	18.82244	18.80485	-14.68485	13.59
dic	16	18.82245	18.80484	-14.68488	13.13
dic	23	18.82246	18.80483	-14.68503	12.67

99240

		V	Sp		
		3.55	G5IV-Vvar		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	20.17639	20.15959	-66.13144	13.49
ene	8	20.17639	20.15957	-66.13092	13.03
ene	15	20.17642	20.15958	-66.13043	12.57
ene	22	20.17645	20.15959	-66.12987	12.11
ene	29	20.17651	20.15963	-66.12938	11.65
feb	5	20.17656	20.15966	-66.12882	11.19
feb	12	20.17664	20.15973	-66.12834	10.73
feb	19	20.17672	20.15979	-66.12779	10.27
feb	26	20.17681	20.15987	-66.12736	9.81
mar	4	20.17690	20.15995	-66.12687	9.35
mar	11	20.17702	20.16006	-66.12650	8.89
mar	18	20.17713	20.16016	-66.12605	8.43
mar	25	20.17725	20.16027	-66.12576	7.97
abr	1	20.17737	20.16038	-66.12540	7.51
abr	8	20.17750	20.16050	-66.12520	7.05
abr	15	20.17764	20.16062	-66.12492	6.59
abr	22	20.17777	20.16074	-66.12481	6.13
abr	29	20.17790	20.16085	-66.12465	5.67
may	6	20.17803	20.16097	-66.12465	5.21
may	13	20.17818	20.16109	-66.12459	4.75
may	20	20.17830	20.16120	-66.12469	4.29
may	27	20.17843	20.16131	-66.12475	3.83
jun	3	20.17854	20.16140	-66.12496	3.37
jun	10	20.17867	20.16150	-66.12512	2.91
jun	17	20.17876	20.16158	-66.12543	2.45
jun	24	20.17886	20.16166	-66.12570	1.99
jul	1	20.17893	20.16171	-66.12608	1.53
jul	8	20.17902	20.16177	-66.12644	1.07
jul	15	20.17907	20.16181	-66.12689	0.61
jul	22	20.17913	20.16184	-66.12731	0.15
jul	29	20.17915	20.16185	-66.12780	23.69
ago	5	20.17918	20.16186	-66.12827	23.23
ago	12	20.17917	20.16184	-66.12876	22.77
ago	19	20.17917	20.16182	-66.12923	22.31
ago	26	20.17913	20.16177	-66.12970	21.85
sep	2	20.17911	20.16173	-66.13015	21.39
sep	9	20.17905	20.16166	-66.13056	20.93
sep	16	20.17900	20.16160	-66.13094	20.47
sep	23	20.17892	20.16151	-66.13126	20.01
sep	30	20.17886	20.16143	-66.13156	19.55
oct	7	20.17876	20.16133	-66.13177	19.09
oct	14	20.17869	20.16124	-66.13195	18.63
oct	21	20.17860	20.16113	-66.13201	18.17
oct	28	20.17852	20.16104	-66.13208	17.71
nov	4	20.17842	20.16094	-66.13201	17.25
nov	11	20.17836	20.16085	-66.13193	16.79
nov	18	20.17828	20.16075	-66.13170	16.33
nov	25	20.17822	20.16068	-66.13151	15.87
dic	2	20.17816	20.16060	-66.13117	15.41
dic	9	20.17813	20.16054	-66.13087	14.95
dic	16	20.17810	20.16049	-66.13041	14.49
dic	23	20.17808	20.16045	-66.13003	14.03

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

102485

		V	Sp		
		4.13	F5V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	20.78724	20.77044	-25.20030	14.10
ene	8	20.78724	20.77042	-25.20022	13.64
ene	15	20.78725	20.77041	-25.20016	13.18
ene	22	20.78727	20.77040	-25.20003	12.72
ene	29	20.78729	20.77041	-25.19996	12.26
feb	5	20.78730	20.77041	-25.19980	11.80
feb	12	20.78734	20.77042	-25.19968	11.34
feb	19	20.78737	20.77044	-25.19947	10.88
feb	26	20.78740	20.77046	-25.19934	10.42
mar	4	20.78744	20.77049	-25.19911	9.96
mar	11	20.78749	20.77053	-25.19894	9.50
mar	18	20.78754	20.77056	-25.19866	9.04
mar	25	20.78759	20.77060	-25.19848	8.58
abr	1	20.78764	20.77065	-25.19819	8.12
abr	8	20.78770	20.77069	-25.19799	7.66
abr	15	20.78777	20.77074	-25.19767	7.20
abr	22	20.78782	20.77079	-25.19747	6.74
abr	29	20.78789	20.77084	-25.19716	6.28
may	6	20.78795	20.77089	-25.19696	5.82
may	13	20.78803	20.77094	-25.19665	5.36
may	20	20.78808	20.77099	-25.19647	4.90
may	27	20.78816	20.77103	-25.19620	4.44
jun	3	20.78821	20.77108	-25.19605	3.98
jun	10	20.78828	20.77112	-25.19582	3.52
jun	17	20.78833	20.77115	-25.19572	3.06
jun	24	20.78839	20.77119	-25.19555	2.60
jul	1	20.78844	20.77122	-25.19550	2.14
jul	8	20.78849	20.77124	-25.19539	1.68
jul	15	20.78852	20.77126	-25.19540	1.22
jul	22	20.78856	20.77128	-25.19535	0.76
jul	29	20.78858	20.77128	-25.19541	0.30
ago	5	20.78861	20.77129	-25.19544	23.84
ago	12	20.78862	20.77128	-25.19554	23.38
ago	19	20.78863	20.77128	-25.19562	22.92
ago	26	20.78862	20.77126	-25.19574	22.46
sep	2	20.78862	20.77124	-25.19588	22.00
sep	9	20.78860	20.77122	-25.19604	21.54
sep	16	20.78859	20.77119	-25.19618	21.08
sep	23	20.78857	20.77115	-25.19633	20.62
sep	30	20.78854	20.77112	-25.19650	20.16
oct	7	20.78851	20.77108	-25.19665	19.70
oct	14	20.78848	20.77103	-25.19680	19.24
oct	21	20.78845	20.77099	-25.19690	18.78
oct	28	20.78842	20.77094	-25.19705	18.32
nov	4	20.78838	20.77089	-25.19713	17.86
nov	11	20.78835	20.77085	-25.19724	17.40
nov	18	20.78833	20.77080	-25.19725	16.94
nov	25	20.78830	20.77076	-25.19734	16.48
dic	2	20.78828	20.77071	-25.19733	16.02
dic	9	20.78826	20.77068	-25.19738	15.56
dic	16	20.78826	20.77064	-25.19731	15.10
dic	23	20.78825	20.77062	-25.19733	14.64

105199

		V	Sp		
		2.45	A7IV-V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	21.31687	21.30006	62.67278	14.63
ene	8	21.31682	21.30000	62.67226	14.17
ene	15	21.31678	21.29994	62.67169	13.71
ene	22	21.31676	21.29990	62.67111	13.25
ene	29	21.31674	21.29986	62.67045	12.79
feb	5	21.31673	21.29984	62.66982	12.33
feb	12	21.31674	21.29982	62.66916	11.87
feb	19	21.31676	21.29983	62.66857	11.41
feb	26	21.31678	21.29984	62.66791	10.95
mar	4	21.31683	21.29988	62.66736	10.49
mar	11	21.31687	21.29991	62.66680	10.03
mar	18	21.31694	21.29996	62.66638	9.57
mar	25	21.31700	21.30002	62.66592	9.11
abr	1	21.31709	21.30009	62.66563	8.65
abr	8	21.31717	21.30016	62.66533	8.19
abr	15	21.31727	21.30024	62.66522	7.73
abr	22	21.31736	21.30033	62.66507	7.27
abr	29	21.31747	21.30042	62.66512	6.81
may	6	21.31756	21.30050	62.66515	6.35
may	13	21.31767	21.30058	62.66538	5.89
may	20	21.31777	21.30067	62.66557	5.43
may	27	21.31787	21.30075	62.66594	4.97
jun	3	21.31796	21.30083	62.66629	4.51
jun	10	21.31806	21.30089	62.66680	4.05
jun	17	21.31814	21.30096	62.66726	3.59
jun	24	21.31822	21.30101	62.66787	3.13
jul	1	21.31828	21.30106	62.66844	2.67
jul	8	21.31834	21.30109	62.66912	2.21
jul	15	21.31838	21.30112	62.66975	1.75
jul	22	21.31842	21.30114	62.67048	1.29
jul	29	21.31845	21.30115	62.67115	0.83
ago	5	21.31846	21.30114	62.67188	0.37
ago	12	21.31846	21.30113	62.67254	23.91
ago	19	21.31846	21.30110	62.67326	23.45
ago	26	21.31844	21.30108	62.67392	22.99
sep	2	21.31841	21.30103	62.67456	22.53
sep	9	21.31837	21.30098	62.67515	22.07
sep	16	21.31832	21.30092	62.67574	21.61
sep	23	21.31826	21.30085	62.67627	21.15
sep	30	21.31820	21.30077	62.67673	20.69
oct	7	21.31813	21.30070	62.67715	20.23
oct	14	21.31805	21.30060	62.67751	19.77
oct	21	21.31797	21.30051	62.67782	19.31
oct	28	21.31788	21.30041	62.67801	18.85
nov	4	21.31780	21.30031	62.67818	18.39
nov	11	21.31771	21.30020	62.67823	17.93
nov	18	21.31763	21.30010	62.67827	17.47
nov	25	21.31754	21.29999	62.67814	17.01
dic	2	21.31746	21.29990	62.67801	16.55
dic	9	21.31738	21.29980	62.67773	16.09
dic	16	21.31732	21.29970	62.67747	15.63
dic	23	21.31725	21.29962	62.67703	15.17

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

105858

		V	Sp		
		4.21	F6V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	21.46668	21.44988	-65.27909	14.78
ene	8	21.46665	21.44983	-65.27864	14.32
ene	15	21.46665	21.44980	-65.27815	13.86
ene	22	21.46664	21.44978	-65.27760	13.40
ene	29	21.46665	21.44977	-65.27706	12.94
feb	5	21.46666	21.44977	-65.27647	12.48
feb	12	21.46671	21.44979	-65.27590	12.02
feb	19	21.46674	21.44981	-65.27526	11.56
feb	26	21.46680	21.44986	-65.27470	11.10
mar	4	21.46685	21.44990	-65.27408	10.64
mar	11	21.46693	21.44997	-65.27353	10.18
mar	18	21.46701	21.45003	-65.27292	9.72
mar	25	21.46710	21.45012	-65.27243	9.26
abr	1	21.46719	21.45020	-65.27189	8.80
abr	8	21.46730	21.45029	-65.27146	8.34
abr	15	21.46741	21.45039	-65.27096	7.88
abr	22	21.46753	21.45049	-65.27062	7.42
abr	29	21.46765	21.45060	-65.27024	6.96
may	6	21.46777	21.45071	-65.27000	6.50
may	13	21.46790	21.45082	-65.26970	6.04
may	20	21.46802	21.45092	-65.26957	5.58
may	27	21.46815	21.45103	-65.26941	5.12
jun	3	21.46827	21.45114	-65.26940	4.66
jun	10	21.46841	21.45124	-65.26935	4.20
jun	17	21.46851	21.45134	-65.26947	3.74
jun	24	21.46863	21.45143	-65.26955	3.28
jul	1	21.46873	21.45151	-65.26978	2.82
jul	8	21.46884	21.45159	-65.26998	2.36
jul	15	21.46891	21.45165	-65.27032	1.90
jul	22	21.46900	21.45171	-65.27063	1.44
jul	29	21.46905	21.45175	-65.27105	0.98
ago	5	21.46911	21.45179	-65.27144	0.52
ago	12	21.46913	21.45180	-65.27193	0.06
ago	19	21.46917	21.45181	-65.27237	23.60
ago	26	21.46916	21.45180	-65.27287	23.14
sep	2	21.46917	21.45179	-65.27335	22.68
sep	9	21.46914	21.45175	-65.27386	22.22
sep	16	21.46912	21.45172	-65.27431	21.76
sep	23	21.46907	21.45166	-65.27475	21.30
sep	30	21.46902	21.45160	-65.27517	20.84
oct	7	21.46895	21.45152	-65.27555	20.38
oct	14	21.46889	21.45144	-65.27587	19.92
oct	21	21.46881	21.45135	-65.27611	19.46
oct	28	21.46873	21.45126	-65.27634	19.00
nov	4	21.46864	21.45115	-65.27647	18.54
nov	11	21.46857	21.45106	-65.27655	18.08
nov	18	21.46849	21.45096	-65.27651	17.62
nov	25	21.46842	21.45087	-65.27647	17.16
dic	2	21.46834	21.45077	-65.27629	16.70
dic	9	21.46828	21.45070	-65.27611	16.24
dic	16	21.46823	21.45061	-65.27578	15.78
dic	23	21.46818	21.45055	-65.27548	15.32

108870

		V	Sp		
		4.69	K5V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	22.08041	22.06360	-56.70802	15.39
ene	8	22.08037	22.06355	-56.70770	14.93
ene	15	22.08037	22.06352	-56.70732	14.47
ene	22	22.08035	22.06349	-56.70689	14.01
ene	29	22.08036	22.06348	-56.70645	13.55
feb	5	22.08036	22.06346	-56.70596	13.09
feb	12	22.08038	22.06347	-56.70546	12.63
feb	19	22.08040	22.06347	-56.70489	12.17
feb	26	22.08043	22.06350	-56.70438	11.71
mar	4	22.08047	22.06352	-56.70381	11.25
mar	11	22.08052	22.06356	-56.70327	10.79
mar	18	22.08058	22.06360	-56.70267	10.33
mar	25	22.08063	22.06365	-56.70218	9.87
abr	1	22.08070	22.06370	-56.70162	9.41
abr	8	22.08078	22.06377	-56.70115	8.95
abr	15	22.08086	22.06384	-56.70061	8.49
abr	22	22.08094	22.06391	-56.70021	8.03
abr	29	22.08104	22.06398	-56.69975	7.57
may	6	22.08113	22.06407	-56.69942	7.11
may	13	22.08124	22.06415	-56.69903	6.65
may	20	22.08133	22.06423	-56.69881	6.19
may	27	22.08144	22.06431	-56.69853	5.73
jun	3	22.08153	22.06440	-56.69841	5.27
jun	10	22.08165	22.06448	-56.69824	4.81
jun	17	22.08173	22.06456	-56.69824	4.35
jun	24	22.08184	22.06463	-56.69819	3.89
jul	1	22.08192	22.06470	-56.69831	3.43
jul	8	22.08202	22.06477	-56.69838	2.97
jul	15	22.08209	22.06483	-56.69862	2.51
jul	22	22.08217	22.06488	-56.69881	2.05
jul	29	22.08222	22.06492	-56.69914	1.59
ago	5	22.08229	22.06496	-56.69943	1.13
ago	12	22.08232	22.06499	-56.69985	0.67
ago	19	22.08236	22.06501	-56.70022	0.21
ago	26	22.08238	22.06502	-56.70068	23.75
sep	2	22.08240	22.06502	-56.70112	23.29
sep	9	22.08239	22.06500	-56.70161	22.83
sep	16	22.08239	22.06499	-56.70205	22.37
sep	23	22.08236	22.06495	-56.70252	21.91
sep	30	22.08235	22.06492	-56.70296	21.45
oct	7	22.08230	22.06487	-56.70339	20.99
oct	14	22.08227	22.06482	-56.70377	20.53
oct	21	22.08222	22.06476	-56.70409	20.07
oct	28	22.08217	22.06470	-56.70440	19.61
nov	4	22.08211	22.06462	-56.70464	19.15
nov	11	22.08206	22.06456	-56.70483	18.69
nov	18	22.08200	22.06448	-56.70492	18.23
nov	25	22.08196	22.06441	-56.70500	17.77
dic	2	22.08190	22.06433	-56.70497	17.31
dic	9	22.08186	22.06427	-56.70491	16.85
dic	16	22.08182	22.06420	-56.70472	16.39
dic	23	22.08178	22.06415	-56.70456	15.93

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

111449

		V		Sp	
		5.21		F7V	
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	22.59590	22.57909	-20.60890	15.90
ene	8	22.59588	22.57906	-20.60892	15.44
ene	15	22.59587	22.57903	-20.60888	14.98
ene	22	22.59586	22.57900	-20.60882	14.53
ene	29	22.59586	22.57898	-20.60876	14.07
feb	5	22.59586	22.57896	-20.60866	13.61
feb	12	22.59586	22.57895	-20.60853	13.15
feb	19	22.59587	22.57894	-20.60835	12.69
feb	26	22.59588	22.57894	-20.60819	12.23
mar	4	22.59590	22.57894	-20.60796	11.77
mar	11	22.59592	22.57896	-20.60773	11.31
mar	18	22.59595	22.57897	-20.60742	10.85
mar	25	22.59598	22.57899	-20.60717	10.39
abr	1	22.59601	22.57901	-20.60683	9.93
abr	8	22.59605	22.57905	-20.60652	9.47
abr	15	22.59610	22.57908	-20.60612	9.01
abr	22	22.59615	22.57911	-20.60580	8.55
abr	29	22.59620	22.57915	-20.60539	8.09
may	6	22.59626	22.57919	-20.60504	7.63
may	13	22.59632	22.57924	-20.60460	7.17
may	20	22.59638	22.57928	-20.60428	6.71
may	27	22.59645	22.57932	-20.60386	6.25
jun	3	22.59651	22.57937	-20.60355	5.79
jun	10	22.59658	22.57942	-20.60315	5.33
jun	17	22.59664	22.57946	-20.60289	4.87
jun	24	22.59671	22.57950	-20.60254	4.41
jul	1	22.59676	22.57954	-20.60233	3.95
jul	8	22.59683	22.57958	-20.60205	3.49
jul	15	22.59687	22.57961	-20.60191	3.03
jul	22	22.59693	22.57964	-20.60171	2.57
jul	29	22.59697	22.57967	-20.60163	2.11
ago	5	22.59702	22.57969	-20.60152	1.65
ago	12	22.59704	22.57971	-20.60153	1.19
ago	19	22.59708	22.57972	-20.60149	0.73
ago	26	22.59709	22.57973	-20.60156	0.27
sep	2	22.59711	22.57973	-20.60161	23.81
sep	9	22.59711	22.57973	-20.60175	23.35
sep	16	22.59712	22.57972	-20.60185	22.89
sep	23	22.59712	22.57971	-20.60201	22.43
sep	30	22.59711	22.57969	-20.60218	21.97
oct	7	22.59709	22.57966	-20.60239	21.51
oct	14	22.59708	22.57963	-20.60256	21.05
oct	21	22.59706	22.57960	-20.60275	20.59
oct	28	22.59704	22.57956	-20.60296	20.13
nov	4	22.59701	22.57952	-20.60315	19.67
nov	11	22.59699	22.57948	-20.60333	19.21
nov	18	22.59696	22.57943	-20.60346	18.75
nov	25	22.59694	22.57939	-20.60363	18.29
dic	2	22.59691	22.57934	-20.60375	17.83
dic	9	22.59689	22.57930	-20.60387	17.37
dic	16	22.59687	22.57926	-20.60391	16.91
dic	23	22.59685	22.57922	-20.60401	16.45

112440

		V		Sp	
		3.97		G8II-III	
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	22.79117	22.77436	23.67142	16.10
ene	8	22.79114	22.77432	23.67113	15.64
ene	15	22.79113	22.77428	23.67085	15.18
ene	22	22.79111	22.77425	23.67053	14.72
ene	29	22.79110	22.77422	23.67018	14.26
feb	5	22.79109	22.77420	23.66983	13.80
feb	12	22.79109	22.77418	23.66949	13.34
feb	19	22.79109	22.77416	23.66918	12.88
feb	26	22.79109	22.77415	23.66883	12.42
mar	4	22.79110	22.77415	23.66854	11.96
mar	11	22.79112	22.77416	23.66826	11.50
mar	18	22.79114	22.77417	23.66806	11.04
mar	25	22.79117	22.77418	23.66783	10.58
abr	1	22.79120	22.77420	23.66771	10.12
abr	8	22.79124	22.77423	23.66759	9.66
abr	15	22.79129	22.77426	23.66761	9.20
abr	22	22.79133	22.77429	23.66757	8.74
abr	29	22.79138	22.77433	23.66769	8.28
may	6	22.79143	22.77437	23.66779	7.82
may	13	22.79150	22.77441	23.66803	7.36
may	20	22.79155	22.77446	23.66822	6.90
may	27	22.79162	22.77450	23.66856	6.44
jun	3	22.79168	22.77454	23.66885	5.98
jun	10	22.79175	22.77459	23.66929	5.52
jun	17	22.79181	22.77463	23.66964	5.06
jun	24	22.79188	22.77467	23.67013	4.60
jul	1	22.79193	22.77471	23.67056	4.14
jul	8	22.79199	22.77474	23.67109	3.68
jul	15	22.79204	22.77478	23.67153	3.22
jul	22	22.79209	22.77480	23.67208	2.76
jul	29	22.79213	22.77483	23.67255	2.30
ago	5	22.79217	22.77485	23.67308	1.84
ago	12	22.79220	22.77487	23.67352	1.38
ago	19	22.79223	22.77488	23.67404	0.92
ago	26	22.79224	22.77488	23.67446	0.46
sep	2	22.79226	22.77488	23.67491	0.00
sep	9	22.79226	22.77488	23.67527	23.54
sep	16	22.79227	22.77487	23.67568	23.08
sep	23	22.79227	22.77485	23.67601	22.62
sep	30	22.79226	22.77484	23.67632	22.16
oct	7	22.79224	22.77481	23.67656	21.70
oct	14	22.79223	22.77478	23.67680	21.24
oct	21	22.79221	22.77475	23.67700	20.78
oct	28	22.79219	22.77471	23.67713	20.32
nov	4	22.79216	22.77467	23.67722	19.86
nov	11	22.79214	22.77463	23.67729	19.40
nov	18	22.79211	22.77458	23.67733	18.94
nov	25	22.79208	22.77453	23.67727	18.48
dic	2	22.79205	22.77449	23.67721	18.02
dic	9	22.79203	22.77444	23.67708	17.56
dic	16	22.79200	22.77439	23.67696	17.10
dic	23	22.79198	22.77434	23.67673	16.64

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

112623

		V	Sp		
		3.49	A3V		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	22.82857	22.81177	-51.21704	16.14
ene	8	22.82853	22.81171	-51.21683	15.68
ene	15	22.82851	22.81167	-51.21654	15.22
ene	22	22.82849	22.81162	-51.21620	14.76
ene	29	22.82848	22.81159	-51.21583	14.30
feb	5	22.82846	22.81156	-51.21541	13.84
feb	12	22.82846	22.81155	-51.21495	13.38
feb	19	22.82846	22.81154	-51.21443	12.92
feb	26	22.82848	22.81154	-51.21393	12.46
mar	4	22.82849	22.81153	-51.21338	12.00
mar	11	22.82852	22.81155	-51.21283	11.54
mar	18	22.82855	22.81157	-51.21222	11.08
mar	25	22.82858	22.81160	-51.21168	10.62
abr	1	22.82863	22.81163	-51.21109	10.16
abr	8	22.82868	22.81167	-51.21054	9.70
abr	15	22.82874	22.81172	-51.20993	9.24
abr	22	22.82880	22.81177	-51.20944	8.78
abr	29	22.82887	22.81182	-51.20889	8.32
may	6	22.82895	22.81188	-51.20845	7.86
may	13	22.82903	22.81195	-51.20793	7.40
may	20	22.82911	22.81201	-51.20758	6.94
may	27	22.82920	22.81208	-51.20717	6.48
jun	3	22.82928	22.81215	-51.20690	6.02
jun	10	22.82938	22.81222	-51.20657	5.56
jun	17	22.82946	22.81228	-51.20642	5.10
jun	24	22.82956	22.81235	-51.20622	4.64
jul	1	22.82964	22.81241	-51.20618	4.18
jul	8	22.82973	22.81248	-51.20610	3.72
jul	15	22.82979	22.81253	-51.20619	3.26
jul	22	22.82987	22.81259	-51.20624	2.80
jul	29	22.82993	22.81263	-51.20643	2.34
ago	5	22.83000	22.81268	-51.20660	1.88
ago	12	22.83004	22.81271	-51.20691	1.42
ago	19	22.83009	22.81274	-51.20718	0.96
ago	26	22.83011	22.81275	-51.20756	0.50
sep	2	22.83014	22.81276	-51.20792	0.04
sep	9	22.83015	22.81276	-51.20837	23.58
sep	16	22.83016	22.81276	-51.20876	23.12
sep	23	22.83015	22.81274	-51.20921	22.66
sep	30	22.83015	22.81272	-51.20964	22.20
oct	7	22.83012	22.81268	-51.21010	21.74
oct	14	22.83010	22.81265	-51.21050	21.28
oct	21	22.83006	22.81260	-51.21088	20.82
oct	28	22.83003	22.81255	-51.21124	20.36
nov	4	22.82998	22.81249	-51.21156	19.90
nov	11	22.82994	22.81243	-51.21183	19.44
nov	18	22.82989	22.81236	-51.21202	18.98
nov	25	22.82985	22.81230	-51.21219	18.52
dic	2	22.82980	22.81223	-51.21228	18.06
dic	9	22.82976	22.81217	-51.21232	17.60
dic	16	22.82972	22.81210	-51.21225	17.14
dic	23	22.82968	22.81205	-51.21219	16.68

112724

		V	Sp		
		3.50	K0III		
		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	22.83939	22.82259	66.30885	16.15
ene	8	22.83931	22.82250	66.30851	15.69
ene	15	22.83924	22.82239	66.30816	15.23
ene	22	22.83917	22.82231	66.30772	14.77
ene	29	22.83911	22.82223	66.30721	14.31
feb	5	22.83907	22.82217	66.30666	13.85
feb	12	22.83902	22.82211	66.30609	13.39
feb	19	22.83901	22.82208	66.30552	12.93
feb	26	22.83899	22.82205	66.30487	12.47
mar	4	22.83900	22.82204	66.30427	12.01
mar	11	22.83900	22.82204	66.30367	11.55
mar	18	22.83904	22.82206	66.30314	11.09
mar	25	22.83907	22.82209	66.30257	10.63
abr	1	22.83914	22.82214	66.30210	10.17
abr	8	22.83920	22.82219	66.30165	9.71
abr	15	22.83929	22.82226	66.30134	9.25
abr	22	22.83937	22.82234	66.30099	8.79
abr	29	22.83947	22.82242	66.30081	8.33
may	6	22.83957	22.82251	66.30063	7.87
may	13	22.83969	22.82260	66.30063	7.41
may	20	22.83980	22.82270	66.30060	6.95
may	27	22.83992	22.82280	66.30075	6.49
jun	3	22.84003	22.82289	66.30089	6.03
jun	10	22.84016	22.82299	66.30120	5.57
jun	17	22.84026	22.82308	66.30147	5.11
jun	24	22.84038	22.82317	66.30192	4.65
jul	1	22.84047	22.82325	66.30234	4.19
jul	8	22.84058	22.82333	66.30290	3.73
jul	15	22.84066	22.82340	66.30341	3.27
jul	22	22.84074	22.82345	66.30407	2.81
jul	29	22.84081	22.82351	66.30468	2.35
ago	5	22.84086	22.82354	66.30539	1.89
ago	12	22.84091	22.82358	66.30603	1.43
ago	19	22.84094	22.82359	66.30679	0.97
ago	26	22.84097	22.82361	66.30748	0.51
sep	2	22.84098	22.82360	66.30821	0.05
sep	9	22.84097	22.82359	66.30888	23.59
sep	16	22.84096	22.82356	66.30961	23.13
sep	23	22.84094	22.82353	66.31027	22.67
sep	30	22.84090	22.82348	66.31091	22.21
oct	7	22.84086	22.82343	66.31149	21.75
oct	14	22.84080	22.82335	66.31208	21.29
oct	21	22.84075	22.82329	66.31260	20.83
oct	28	22.84067	22.82319	66.31304	20.37
nov	4	22.84060	22.82311	66.31343	19.91
nov	11	22.84051	22.82301	66.31377	19.45
nov	18	22.84043	22.82291	66.31405	18.99
nov	25	22.84034	22.82279	66.31421	18.53
dic	2	22.84025	22.82269	66.31432	18.07
dic	9	22.84015	22.82257	66.31434	17.61
dic	16	22.84007	22.82246	66.31432	17.15
dic	23	22.83997	22.82234	66.31414	16.69

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

112748

V 3.51 Sp M2III

m	d	α h	α_c h	δ °	Hp h
ene	1	22.84907	22.83227	24.70776	16.16
ene	8	22.84905	22.83223	24.70747	15.70
ene	15	22.84903	22.83219	24.70719	15.24
ene	22	22.84901	22.83215	24.70687	14.78
ene	29	22.84900	22.83212	24.70652	14.32
feb	5	22.84899	22.83210	24.70616	13.86
feb	12	22.84899	22.83207	24.70582	13.40
feb	19	22.84899	22.83206	24.70550	12.94
feb	26	22.84899	22.83205	24.70514	12.48
mar	4	22.84900	22.83205	24.70484	12.02
mar	11	22.84901	22.83205	24.70455	11.56
mar	18	22.84904	22.83206	24.70434	11.10
mar	25	22.84906	22.83208	24.70409	10.64
abr	1	22.84910	22.83210	24.70396	10.18
abr	8	22.84913	22.83212	24.70383	9.72
abr	15	22.84918	22.83215	24.70384	9.26
abr	22	22.84922	22.83219	24.70379	8.80
abr	29	22.84928	22.83223	24.70389	8.34
may	6	22.84933	22.83227	24.70398	7.88
may	13	22.84939	22.83231	24.70422	7.42
may	20	22.84945	22.83235	24.70440	6.96
may	27	22.84952	22.83240	24.70473	6.50
jun	3	22.84958	22.83244	24.70502	6.04
jun	10	22.84965	22.83248	24.70545	5.58
jun	17	22.84970	22.83253	24.70580	5.12
jun	24	22.84977	22.83257	24.70629	4.66
jul	1	22.84983	22.83261	24.70671	4.20
jul	8	22.84989	22.83264	24.70725	3.74
jul	15	22.84993	22.83267	24.70769	3.28
jul	22	22.84999	22.83270	24.70825	2.82
jul	29	22.85003	22.83273	24.70872	2.36
ago	5	22.85007	22.83275	24.70926	1.90
ago	12	22.85010	22.83277	24.70971	1.44
ago	19	22.85013	22.83278	24.71023	0.98
ago	26	22.85015	22.83279	24.71067	0.52
sep	2	22.85016	22.83278	24.71113	0.06
sep	9	22.85017	22.83278	24.71150	23.60
sep	16	22.85018	22.83277	24.71192	23.14
sep	23	22.85017	22.83276	24.71226	22.68
sep	30	22.85016	22.83274	24.71258	22.22
oct	7	22.85015	22.83272	24.71283	21.76
oct	14	22.85014	22.83269	24.71309	21.30
oct	21	22.85012	22.83266	24.71330	20.84
oct	28	22.85009	22.83262	24.71344	20.38
nov	4	22.85007	22.83258	24.71355	19.92
nov	11	22.85004	22.83254	24.71362	19.46
nov	18	22.85002	22.83249	24.71367	19.00
nov	25	22.84999	22.83244	24.71362	18.54
dic	2	22.84996	22.83239	24.71356	18.08
dic	9	22.84993	22.83235	24.71344	17.62
dic	16	22.84991	22.83230	24.71333	17.16
dic	23	22.84988	22.83225	24.71310	16.70

115102

V 4.41 Sp K1III

m	d	α h	α_c h	δ °	Hp h
ene	1	23.33119	23.31439	-32.42786	16.64
ene	8	23.33116	23.31434	-32.42784	16.18
ene	15	23.33115	23.31431	-32.42772	15.72
ene	22	23.33113	23.31427	-32.42759	15.26
ene	29	23.33112	23.31424	-32.42741	14.80
feb	5	23.33110	23.31421	-32.42721	14.34
feb	12	23.33110	23.31419	-32.42694	13.88
feb	19	23.33110	23.31417	-32.42663	13.42
feb	26	23.33110	23.31416	-32.42632	12.96
mar	4	23.33110	23.31415	-32.42596	12.50
mar	11	23.33112	23.31415	-32.42558	12.04
mar	18	23.33114	23.31416	-32.42513	11.58
mar	25	23.33116	23.31417	-32.42473	11.12
abr	1	23.33118	23.31419	-32.42426	10.66
abr	8	23.33122	23.31421	-32.42381	10.20
abr	15	23.33126	23.31424	-32.42328	9.74
abr	22	23.33130	23.31427	-32.42284	9.28
abr	29	23.33136	23.31430	-32.42233	8.82
may	6	23.33141	23.31435	-32.42188	8.36
may	13	23.33147	23.31439	-32.42135	7.90
may	20	23.33153	23.31443	-32.42095	7.44
may	27	23.33160	23.31448	-32.42048	6.98
jun	3	23.33167	23.31453	-32.42012	6.52
jun	10	23.33174	23.31458	-32.41968	6.06
jun	17	23.33181	23.31463	-32.41940	5.60
jun	24	23.33188	23.31468	-32.41905	5.14
jul	1	23.33194	23.31472	-32.41884	4.68
jul	8	23.33202	23.31477	-32.41858	4.22
jul	15	23.33208	23.31481	-32.41848	3.76
jul	22	23.33214	23.31486	-32.41832	3.30
jul	29	23.33219	23.31489	-32.41831	2.84
ago	5	23.33225	23.31493	-32.41827	2.38
ago	12	23.33229	23.31496	-32.41837	1.92
ago	19	23.33233	23.31498	-32.41842	1.46
ago	26	23.33236	23.31500	-32.41859	1.00
sep	2	23.33239	23.31501	-32.41875	0.54
sep	9	23.33240	23.31502	-32.41902	0.08
sep	16	23.33242	23.31502	-32.41923	23.62
sep	23	23.33242	23.31501	-32.41953	23.16
sep	30	23.33243	23.31500	-32.41982	22.70
oct	7	23.33241	23.31498	-32.42016	22.24
oct	14	23.33241	23.31496	-32.42045	21.78
oct	21	23.33239	23.31493	-32.42077	21.32
oct	28	23.33237	23.31490	-32.42108	20.86
nov	4	23.33234	23.31486	-32.42139	20.40
nov	11	23.33232	23.31482	-32.42165	19.94
nov	18	23.33229	23.31477	-32.42187	19.48
nov	25	23.33227	23.31472	-32.42210	19.02
dic	2	23.33224	23.31467	-32.42227	18.56
dic	9	23.33221	23.31462	-32.42241	18.10
dic	16	23.33218	23.31457	-32.42246	17.64
dic	23	23.33216	23.31452	-32.42254	17.18

Posiciones aparentes de estrellas brillantes, 2020

(a las 0^h del meridiano 90° W.G.)

115623

V 4.42 Sp F8IV

m	d	α h	α_χ h	δ °	Hπ h
ene	1	23.43929	23.42249	23.51448	16.75
ene	8	23.43926	23.42244	23.51423	16.29
ene	15	23.43924	23.42240	23.51401	15.83
ene	22	23.43922	23.42236	23.51373	15.37
ene	29	23.43921	23.42233	23.51344	14.91
feb	5	23.43919	23.42230	23.51311	14.45
feb	12	23.43918	23.42227	23.51282	13.99
feb	19	23.43918	23.42225	23.51253	13.53
feb	26	23.43917	23.42223	23.51221	13.07
mar	4	23.43917	23.42222	23.51192	12.61
mar	11	23.43918	23.42222	23.51166	12.15
mar	18	23.43920	23.42222	23.51146	11.69
mar	25	23.43921	23.42223	23.51123	11.23
abr	1	23.43924	23.42224	23.51109	10.77
abr	8	23.43927	23.42226	23.51096	10.31
abr	15	23.43931	23.42228	23.51095	9.85
abr	22	23.43934	23.42231	23.51089	9.39
abr	29	23.43940	23.42235	23.51097	8.93
may	6	23.43944	23.42238	23.51104	8.47
may	13	23.43951	23.42242	23.51125	8.01
may	20	23.43956	23.42246	23.51140	7.55
may	27	23.43963	23.42250	23.51170	7.09
jun	3	23.43968	23.42255	23.51196	6.63
jun	10	23.43976	23.42259	23.51236	6.17
jun	17	23.43981	23.42263	23.51268	5.71
jun	24	23.43988	23.42268	23.51314	5.25
jul	1	23.43994	23.42272	23.51353	4.79
jul	8	23.44001	23.42276	23.51404	4.33
jul	15	23.44006	23.42279	23.51446	3.87
jul	22	23.44012	23.42283	23.51499	3.41
jul	29	23.44016	23.42286	23.51544	2.95
ago	5	23.44021	23.42289	23.51597	2.49
ago	12	23.44024	23.42291	23.51639	2.03
ago	19	23.44028	23.42293	23.51691	1.57
ago	26	23.44030	23.42294	23.51732	1.11
sep	2	23.44033	23.42295	23.51779	0.65
sep	9	23.44034	23.42296	23.51815	0.19
sep	16	23.44036	23.42296	23.51857	23.73
sep	23	23.44036	23.42295	23.51890	23.27
sep	30	23.44036	23.42294	23.51924	22.81
oct	7	23.44035	23.42292	23.51949	22.35
oct	14	23.44035	23.42290	23.51977	21.89
oct	21	23.44034	23.42288	23.51998	21.43
oct	28	23.44032	23.42285	23.52015	20.97
nov	4	23.44030	23.42281	23.52027	20.51
nov	11	23.44028	23.42277	23.52038	20.05
nov	18	23.44026	23.42273	23.52045	19.59
nov	25	23.44023	23.42269	23.52045	19.13
dic	2	23.44021	23.42264	23.52042	18.67
dic	9	23.44018	23.42260	23.52035	18.21
dic	16	23.44016	23.42255	23.52027	17.75
dic	23	23.44013	23.42250	23.52010	17.29

115738

V 4.95 Sp A0p

m	d	α h	α_χ h	δ °	Hp h
ene	1	23.46557	23.44877	1.36327	16.77
ene	8	23.46555	23.44873	1.36309	16.31
ene	15	23.46554	23.44869	1.36298	15.85
ene	22	23.46552	23.44866	1.36284	15.39
ene	29	23.46551	23.44863	1.36270	14.93
feb	5	23.46549	23.44860	1.36257	14.47
feb	12	23.46549	23.44858	1.36248	14.01
feb	19	23.46549	23.44856	1.36241	13.55
feb	26	23.46548	23.44855	1.36233	13.09
mar	4	23.46549	23.44854	1.36229	12.63
mar	11	23.46550	23.44853	1.36230	12.17
mar	18	23.46551	23.44853	1.36234	11.71
mar	25	23.46553	23.44854	1.36236	11.25
abr	1	23.46555	23.44856	1.36247	10.80
abr	8	23.46558	23.44857	1.36258	10.34
abr	15	23.46562	23.44860	1.36280	9.88
abr	22	23.46565	23.44862	1.36296	9.42
abr	29	23.46570	23.44865	1.36323	8.96
may	6	23.46574	23.44868	1.36348	8.50
may	13	23.46580	23.44872	1.36384	8.04
may	20	23.46585	23.44875	1.36412	7.58
may	27	23.46592	23.44879	1.36451	7.12
jun	3	23.46597	23.44883	1.36485	6.66
jun	10	23.46604	23.44887	1.36529	6.20
jun	17	23.46609	23.44891	1.36563	5.74
jun	24	23.46616	23.44896	1.36608	5.28
jul	1	23.46621	23.44899	1.36643	4.82
jul	8	23.46628	23.44903	1.36688	4.36
jul	15	23.46633	23.44907	1.36720	3.90
jul	22	23.46639	23.44910	1.36761	3.44
jul	29	23.46643	23.44913	1.36791	2.98
ago	5	23.46648	23.44916	1.36827	2.52
ago	12	23.46651	23.44918	1.36851	2.06
ago	19	23.46655	23.44920	1.36882	1.60
ago	26	23.46658	23.44922	1.36901	1.14
sep	2	23.46660	23.44922	1.36924	0.68
sep	9	23.46661	23.44923	1.36936	0.22
sep	16	23.46663	23.44923	1.36953	23.76
sep	23	23.46664	23.44923	1.36961	23.30
sep	30	23.46664	23.44922	1.36969	22.84
oct	7	23.46663	23.44920	1.36970	22.38
oct	14	23.46663	23.44918	1.36974	21.92
oct	21	23.46662	23.44916	1.36972	21.46
oct	28	23.46661	23.44913	1.36968	21.00
nov	4	23.46659	23.44910	1.36960	20.54
nov	11	23.46657	23.44907	1.36954	20.08
nov	18	23.46656	23.44903	1.36946	19.62
nov	25	23.46653	23.44899	1.36934	19.16
dic	2	23.46651	23.44895	1.36922	18.70
dic	9	23.46649	23.44891	1.36909	18.24
dic	16	23.46647	23.44886	1.36899	17.78
dic	23	23.46645	23.44882	1.36882	17.32

Posiciones aparentes de la estrella Polar, 2020

(a las 0^h del meridiano 90° W.G.)

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

		α	α_c	δ	Hp
m	d	h	h	°	h
ene	1	2.96548	2.94867	89.35112	20.27
ene	2	2.96502	2.94822	89.35119	20.21
ene	3	2.96457	2.94777	89.35124	20.14
ene	4	2.96414	2.94733	89.35130	20.08
ene	5	2.96372	2.94692	89.35135	20.01
ene	6	2.96333	2.94652	89.35140	19.94
ene	7	2.96296	2.94615	89.35145	19.88
ene	8	2.96260	2.94578	89.35151	19.81
ene	9	2.96223	2.94541	89.35157	19.75
ene	10	2.96185	2.94502	89.35163	19.68
ene	11	2.96142	2.94459	89.35170	19.61
ene	12	2.96095	2.94412	89.35177	19.55
ene	13	2.96044	2.94360	89.35183	19.48
ene	14	2.95990	2.94306	89.35188	19.41
ene	15	2.95935	2.94251	89.35193	19.35
ene	16	2.95881	2.94197	89.35197	19.28
ene	17	2.95830	2.94145	89.35201	19.22
ene	18	2.95782	2.94097	89.35204	19.15
ene	19	2.95737	2.94052	89.35207	19.08
ene	20	2.95694	2.94009	89.35210	19.02
ene	21	2.95651	2.93966	89.35214	18.95
ene	22	2.95607	2.93921	89.35218	18.89
ene	23	2.95561	2.93874	89.35222	18.82
ene	24	2.95511	2.93823	89.35226	18.75
ene	25	2.95457	2.93770	89.35230	18.69
ene	26	2.95401	2.93713	89.35234	18.62
ene	27	2.95342	2.93654	89.35237	18.55
ene	28	2.95283	2.93595	89.35240	18.49
ene	29	2.95223	2.93535	89.35241	18.42
ene	30	2.95165	2.93477	89.35243	18.36
ene	31	2.95108	2.93420	89.35244	18.29
feb	1	2.95054	2.93366	89.35244	18.22
feb	2	2.95003	2.93314	89.35245	18.16
feb	3	2.94954	2.93265	89.35245	18.09
feb	4	2.94907	2.93218	89.35246	18.02
feb	5	2.94860	2.93171	89.35247	17.96
feb	6	2.94813	2.93123	89.35248	17.89
feb	7	2.94763	2.93073	89.35250	17.83
feb	8	2.94710	2.93019	89.35252	17.76
feb	9	2.94653	2.92962	89.35254	17.69
feb	10	2.94592	2.92901	89.35255	17.63
feb	11	2.94530	2.92839	89.35255	17.56
feb	12	2.94470	2.92778	89.35254	17.49
feb	13	2.94412	2.92721	89.35253	17.43
feb	14	2.94359	2.92667	89.35251	17.36
feb	15	2.94309	2.92617	89.35249	17.30
feb	16	2.94262	2.92570	89.35247	17.23
feb	17	2.94216	2.92524	89.35246	17.16
feb	18	2.94170	2.92477	89.35245	17.10
feb	19	2.94122	2.92429	89.35244	17.03
feb	20	2.94071	2.92378	89.35243	16.96
feb	21	2.94018	2.92324	89.35242	16.90
feb	22	2.93962	2.92268	89.35241	16.83
feb	23	2.93904	2.92210	89.35239	16.77
feb	24	2.93846	2.92152	89.35237	16.70
feb	25	2.93788	2.92094	89.35234	16.63
feb	26	2.93731	2.92037	89.35231	16.57
feb	27	2.93677	2.91983	89.35227	16.50
feb	28	2.93625	2.91931	89.35222	16.43
feb	29	2.93577	2.91883	89.35218	16.37
mar	1	2.93532	2.91838	89.35213	16.30
mar	2	2.93489	2.91794	89.35209	16.24
mar	3	2.93448	2.91753	89.35205	16.17
mar	4	2.93407	2.91711	89.35202	16.10
mar	5	2.93365	2.91669	89.35198	16.04
mar	6	2.93320	2.91625	89.35195	15.97
mar	7	2.93273	2.91577	89.35193	15.90
mar	8	2.93222	2.91526	89.35189	15.84
mar	9	2.93169	2.91473	89.35185	15.77
mar	10	2.93117	2.91421	89.35180	15.71
mar	11	2.93069	2.91372	89.35174	15.64
mar	12	2.93024	2.91328	89.35168	15.57
mar	13	2.92985	2.91289	89.35162	15.51
mar	14	2.92950	2.91254	89.35156	15.44
mar	15	2.92917	2.91221	89.35150	15.38
mar	16	2.92885	2.91187	89.35144	15.31
mar	17	2.92851	2.91153	89.35139	15.24
mar	18	2.92814	2.91117	89.35134	15.18
mar	19	2.92776	2.91078	89.35129	15.11
mar	20	2.92735	2.91037	89.35124	15.05
mar	21	2.92693	2.90995	89.35118	14.98
mar	22	2.92651	2.90952	89.35112	14.91
mar	23	2.92609	2.90911	89.35105	14.85
mar	24	2.92569	2.90870	89.35098	14.78
mar	25	2.92531	2.90833	89.35090	14.71
mar	26	2.92497	2.90798	89.35082	14.65
mar	27	2.92466	2.90767	89.35074	14.58
mar	28	2.92438	2.90740	89.35066	14.52
mar	29	2.92414	2.90715	89.35058	14.45
mar	30	2.92391	2.90692	89.35051	14.38
mar	31	2.92370	2.90670	89.35044	14.32
abr	1	2.92348	2.90648	89.35037	14.25
abr	2	2.92325	2.90625	89.35030	14.19
abr	3	2.92299	2.90599	89.35024	14.12
abr	4	2.92271	2.90571	89.35018	14.06
abr	5	2.92241	2.90540	89.35011	13.99
abr	6	2.92210	2.90510	89.35004	13.92
abr	7	2.92182	2.90482	89.34995	13.86
abr	8	2.92158	2.90458	89.34986	13.79
abr	9	2.92140	2.90440	89.34977	13.73
abr	10	2.92127	2.90427	89.34968	13.66
abr	11	2.92118	2.90417	89.34960	13.59
abr	12	2.92110	2.90408	89.34952	13.53
abr	13	2.92101	2.90399	89.34944	13.46
abr	14	2.92090	2.90388	89.34937	13.40
abr	15	2.92077	2.90374	89.34930	13.33

Posiciones aparentes de la estrella Polar, 2020

(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	16	2.92061	2.90359	89.34923	13.26
abr	17	2.92045	2.90342	89.34915	13.20
abr	18	2.92027	2.90324	89.34907	13.13
abr	19	2.92010	2.90307	89.34899	13.07
abr	20	2.91995	2.90292	89.34890	13.00
abr	21	2.91982	2.90279	89.34880	12.94
abr	22	2.91973	2.90270	89.34871	12.87
abr	23	2.91967	2.90264	89.34861	12.80
abr	24	2.91965	2.90261	89.34852	12.74
abr	25	2.91966	2.90262	89.34842	12.67
abr	26	2.91970	2.90266	89.34833	12.61
abr	27	2.91974	2.90270	89.34825	12.54
abr	28	2.91979	2.90275	89.34817	12.48
abr	29	2.91983	2.90278	89.34810	12.41
abr	30	2.91985	2.90279	89.34803	12.34
may	1	2.91984	2.90279	89.34795	12.28
may	2	2.91982	2.90276	89.34788	12.21
may	3	2.91978	2.90272	89.34780	12.15
may	4	2.91976	2.90270	89.34771	12.08
may	5	2.91977	2.90271	89.34762	12.02
may	6	2.91984	2.90278	89.34753	11.95
may	7	2.91996	2.90290	89.34743	11.88
may	8	2.92012	2.90306	89.34734	11.82
may	9	2.92032	2.90324	89.34726	11.75
may	10	2.92051	2.90343	89.34718	11.69
may	11	2.92068	2.90360	89.34711	11.62
may	12	2.92083	2.90375	89.34704	11.56
may	13	2.92095	2.90387	89.34698	11.49
may	14	2.92106	2.90397	89.34690	11.43
may	15	2.92115	2.90406	89.34683	11.36
may	16	2.92124	2.90415	89.34675	11.29
may	17	2.92135	2.90426	89.34667	11.23
may	18	2.92148	2.90439	89.34658	11.16
may	19	2.92164	2.90454	89.34650	11.10
may	20	2.92183	2.90474	89.34641	11.03
may	21	2.92206	2.90497	89.34632	10.97
may	22	2.92233	2.90523	89.34624	10.90
may	23	2.92262	2.90551	89.34616	10.84
may	24	2.92292	2.90581	89.34608	10.77
may	25	2.92323	2.90612	89.34601	10.70
may	26	2.92352	2.90641	89.34595	10.64
may	27	2.92380	2.90668	89.34589	10.57
may	28	2.92405	2.90692	89.34583	10.51
may	29	2.92428	2.90715	89.34578	10.44
may	30	2.92449	2.90736	89.34571	10.38
may	31	2.92471	2.90758	89.34564	10.31
jun	1	2.92496	2.90782	89.34557	10.25
jun	2	2.92524	2.90811	89.34550	10.18
jun	3	2.92558	2.90844	89.34542	10.12
jun	4	2.92597	2.90883	89.34535	10.05
jun	5	2.92638	2.90924	89.34528	9.98
jun	6	2.92681	2.90966	89.34522	9.92
jun	7	2.92723	2.91007	89.34517	9.85
jun	8	2.92762	2.91046	89.34512	9.79
jun	9	2.92798	2.91082	89.34507	9.72
jun	10	2.92831	2.91115	89.34503	9.66
jun	11	2.92863	2.91146	89.34498	9.59
jun	12	2.92894	2.91177	89.34493	9.53
jun	13	2.92926	2.91208	89.34487	9.46
jun	14	2.92959	2.91242	89.34481	9.40
jun	15	2.92995	2.91278	89.34475	9.33
jun	16	2.93034	2.91317	89.34469	9.27
jun	17	2.93077	2.91359	89.34462	9.20
jun	18	2.93122	2.91404	89.34457	9.14
jun	19	2.93171	2.91452	89.34451	9.07
jun	20	2.93221	2.91502	89.34446	9.00
jun	21	2.93271	2.91552	89.34442	8.94
jun	22	2.93320	2.91600	89.34439	8.87
jun	23	2.93367	2.91647	89.34436	8.81
jun	24	2.93411	2.91691	89.34433	8.74
jun	25	2.93452	2.91732	89.34430	8.68
jun	26	2.93492	2.91771	89.34427	8.61
jun	27	2.93531	2.91810	89.34424	8.55
jun	28	2.93572	2.91851	89.34419	8.48
jun	29	2.93617	2.91895	89.34415	8.42
jun	30	2.93665	2.91944	89.34411	8.35
jul	1	2.93718	2.91996	89.34406	8.29
jul	2	2.93775	2.92053	89.34403	8.22
jul	3	2.93833	2.92110	89.34400	8.16
jul	4	2.93890	2.92167	89.34398	8.09
jul	5	2.93946	2.92222	89.34396	8.03
jul	6	2.93998	2.92273	89.34395	7.96
jul	7	2.94046	2.92322	89.34394	7.90
jul	8	2.94093	2.92368	89.34393	7.83
jul	9	2.94137	2.92412	89.34391	7.77
jul	10	2.94182	2.92457	89.34389	7.70
jul	11	2.94228	2.92503	89.34387	7.64
jul	12	2.94276	2.92550	89.34384	7.57
jul	13	2.94326	2.92601	89.34382	7.50
jul	14	2.94380	2.92654	89.34379	7.44
jul	15	2.94436	2.92710	89.34377	7.37
jul	16	2.94495	2.92768	89.34375	7.31
jul	17	2.94555	2.92829	89.34374	7.24
jul	18	2.94617	2.92889	89.34373	7.18
jul	19	2.94677	2.92949	89.34373	7.11
jul	20	2.94735	2.93007	89.34374	7.05
jul	21	2.94790	2.93061	89.34375	6.98
jul	22	2.94841	2.93113	89.34376	6.92
jul	23	2.94890	2.93161	89.34377	6.85
jul	24	2.94938	2.93209	89.34377	6.79
jul	25	2.94987	2.93257	89.34377	6.72
jul	26	2.95038	2.93309	89.34376	6.66
jul	27	2.95093	2.93364	89.34376	6.59
jul	28	2.95153	2.93423	89.34375	6.53
jul	29	2.95216	2.93486	89.34375	6.46
jul	30	2.95280	2.93549	89.34376	6.40

Posiciones aparentes de la estrella Polar, 2020

(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
jul	31	2.95344	2.93613	89.34378	6.33
ago	1	2.95405	2.93674	89.34380	6.27
ago	2	2.95464	2.93732	89.34382	6.20
ago	3	2.95519	2.93787	89.34385	6.14
ago	4	2.95571	2.93839	89.34388	6.07
ago	5	2.95621	2.93889	89.34390	6.01
ago	6	2.95670	2.93938	89.34392	5.94
ago	7	2.95720	2.93987	89.34394	5.88
ago	8	2.95770	2.94038	89.34395	5.81
ago	9	2.95823	2.94091	89.34396	5.75
ago	10	2.95879	2.94146	89.34398	5.68
ago	11	2.95937	2.94204	89.34399	5.62
ago	12	2.95997	2.94264	89.34401	5.55
ago	13	2.96059	2.94326	89.34403	5.48
ago	14	2.96122	2.94388	89.34406	5.42
ago	15	2.96184	2.94450	89.34410	5.35
ago	16	2.96244	2.94510	89.34414	5.29
ago	17	2.96301	2.94567	89.34419	5.22
ago	18	2.96355	2.94620	89.34424	5.16
ago	19	2.96404	2.94669	89.34429	5.09
ago	20	2.96452	2.94717	89.34433	5.03
ago	21	2.96499	2.94764	89.34437	4.96
ago	22	2.96549	2.94814	89.34441	4.90
ago	23	2.96602	2.94867	89.34444	4.83
ago	24	2.96660	2.94924	89.34447	4.77
ago	25	2.96720	2.94984	89.34451	4.70
ago	26	2.96782	2.95046	89.34455	4.64
ago	27	2.96844	2.95107	89.34460	4.57
ago	28	2.96903	2.95167	89.34466	4.51
ago	29	2.96960	2.95223	89.34472	4.44
ago	30	2.97012	2.95275	89.34478	4.38
ago	31	2.97062	2.95324	89.34484	4.31
sep	1	2.97108	2.95370	89.34490	4.25
sep	2	2.97153	2.95415	89.34496	4.18
sep	3	2.97198	2.95460	89.34501	4.12
sep	4	2.97243	2.95505	89.34507	4.05
sep	5	2.97290	2.95552	89.34511	3.99
sep	6	2.97339	2.95601	89.34516	3.92
sep	7	2.97391	2.95653	89.34521	3.86
sep	8	2.97444	2.95706	89.34526	3.79
sep	9	2.97500	2.95761	89.34532	3.73
sep	10	2.97555	2.95817	89.34538	3.66
sep	11	2.97611	2.95872	89.34545	3.59
sep	12	2.97664	2.95925	89.34552	3.53
sep	13	2.97715	2.95975	89.34560	3.46
sep	14	2.97762	2.96022	89.34569	3.40
sep	15	2.97805	2.96065	89.34577	3.33
sep	16	2.97845	2.96104	89.34585	3.27
sep	17	2.97883	2.96143	89.34592	3.20
sep	18	2.97922	2.96182	89.34599	3.14
sep	19	2.97965	2.96225	89.34605	3.07
sep	20	2.98012	2.96271	89.34612	3.01
sep	21	2.98062	2.96321	89.34618	2.94
sep	22	2.98114	2.96373	89.34625	2.88
sep	23	2.98166	2.96425	89.34633	2.81
sep	24	2.98216	2.96474	89.34642	2.75
sep	25	2.98262	2.96520	89.34651	2.68
sep	26	2.98304	2.96562	89.34660	2.62
sep	27	2.98343	2.96600	89.34670	2.55
sep	28	2.98378	2.96635	89.34679	2.49
sep	29	2.98411	2.96668	89.34688	2.42
sep	30	2.98443	2.96701	89.34696	2.35
oct	1	2.98475	2.96733	89.34704	2.29
oct	2	2.98509	2.96766	89.34711	2.22
oct	3	2.98544	2.96802	89.34719	2.16
oct	4	2.98582	2.96839	89.34727	2.09
oct	5	2.98621	2.96878	89.34734	2.03
oct	6	2.98661	2.96919	89.34742	1.96
oct	7	2.98703	2.96960	89.34751	1.90
oct	8	2.98743	2.97000	89.34760	1.83
oct	9	2.98783	2.97039	89.34770	1.77
oct	10	2.98819	2.97075	89.34780	1.70
oct	11	2.98852	2.97107	89.34791	1.64
oct	12	2.98880	2.97136	89.34801	1.57
oct	13	2.98905	2.97161	89.34812	1.51
oct	14	2.98928	2.97183	89.34822	1.44
oct	15	2.98950	2.97205	89.34831	1.37
oct	16	2.98974	2.97229	89.34840	1.31
oct	17	2.99001	2.97257	89.34848	1.24
oct	18	2.99033	2.97288	89.34857	1.18
oct	19	2.99068	2.97323	89.34866	1.11
oct	20	2.99103	2.97358	89.34876	1.05
oct	21	2.99137	2.97391	89.34886	0.98
oct	22	2.99166	2.97420	89.34897	0.92
oct	23	2.99191	2.97445	89.34909	0.85
oct	24	2.99212	2.97465	89.34920	0.79
oct	25	2.99229	2.97481	89.34931	0.72
oct	26	2.99243	2.97495	89.34941	0.65
oct	27	2.99256	2.97508	89.34951	0.59
oct	28	2.99268	2.97520	89.34961	0.52
oct	29	2.99281	2.97533	89.34970	0.46
oct	30	2.99296	2.97548	89.34980	0.39
oct	31	2.99312	2.97564	89.34989	0.33
nov	1	2.99330	2.97582	89.34998	0.26
nov	2	2.99350	2.97602	89.35007	0.20
nov	3	2.99370	2.97622	89.35017	0.13
nov	4	2.99390	2.97641	89.35027	0.06
nov	5	2.99408	2.97659	89.35038	24.00
nov	6	2.99423	2.97674	89.35049	23.93
nov	7	2.99435	2.97685	89.35061	23.87
nov	8	2.99443	2.97692	89.35072	23.80
nov	9	2.99446	2.97696	89.35084	23.74
nov	10	2.99447	2.97696	89.35095	23.67
nov	11	2.99446	2.97696	89.35105	23.60
nov	12	2.99446	2.97695	89.35115	23.54
nov	13	2.99449	2.97698	89.35124	23.47

Posiciones aparentes de la estrella Polar, 2020

(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
nov	14	2.99455	2.97704	89.35134	23.41
nov	15	2.99465	2.97714	89.35143	23.34
nov	16	2.99477	2.97726	89.35153	23.28
nov	17	2.99489	2.97736	89.35164	23.21
nov	18	2.99496	2.97743	89.35175	23.15
nov	19	2.99499	2.97746	89.35187	23.08
nov	20	2.99497	2.97743	89.35198	23.01
nov	21	2.99491	2.97737	89.35210	22.95
nov	22	2.99481	2.97727	89.35221	22.88
nov	23	2.99469	2.97715	89.35231	22.82
nov	24	2.99456	2.97702	89.35241	22.75
nov	25	2.99444	2.97690	89.35250	22.69
nov	26	2.99433	2.97679	89.35259	22.62
nov	27	2.99424	2.97669	89.35268	22.55
nov	28	2.99417	2.97662	89.35277	22.49
nov	29	2.99411	2.97655	89.35286	22.42
nov	30	2.99406	2.97650	89.35295	22.36
dic	1	2.99400	2.97644	89.35305	22.29
dic	2	2.99393	2.97637	89.35315	22.22
dic	3	2.99384	2.97627	89.35326	22.16
dic	4	2.99371	2.97613	89.35336	22.09
dic	5	2.99354	2.97596	89.35347	22.03
dic	6	2.99333	2.97575	89.35358	21.96
dic	7	2.99308	2.97550	89.35368	21.90
dic	8	2.99282	2.97524	89.35378	21.83
dic	9	2.99256	2.97497	89.35387	21.76
dic	10	2.99231	2.97472	89.35395	21.70
dic	11	2.99210	2.97451	89.35403	21.63
dic	12	2.99193	2.97433	89.35411	21.57
dic	13	2.99178	2.97418	89.35419	21.50
dic	14	2.99164	2.97403	89.35428	21.43
dic	15	2.99147	2.97387	89.35438	21.37
dic	16	2.99127	2.97366	89.35448	21.30
dic	17	2.99101	2.97340	89.35458	21.24
dic	18	2.99071	2.97309	89.35468	21.17
dic	19	2.99036	2.97274	89.35477	21.10
dic	20	2.98999	2.97236	89.35486	21.04
dic	21	2.98961	2.97198	89.35494	20.97
dic	22	2.98924	2.97161	89.35501	20.91
dic	23	2.98887	2.97124	89.35508	20.84
dic	24	2.98853	2.97089	89.35515	20.77
dic	25	2.98820	2.97056	89.35522	20.71
dic	26	2.98789	2.97025	89.35528	20.64
dic	27	2.98759	2.96995	89.35535	20.58
dic	28	2.98729	2.96965	89.35542	20.51
dic	29	2.98699	2.96934	89.35549	20.44

Constelaciones, 2020

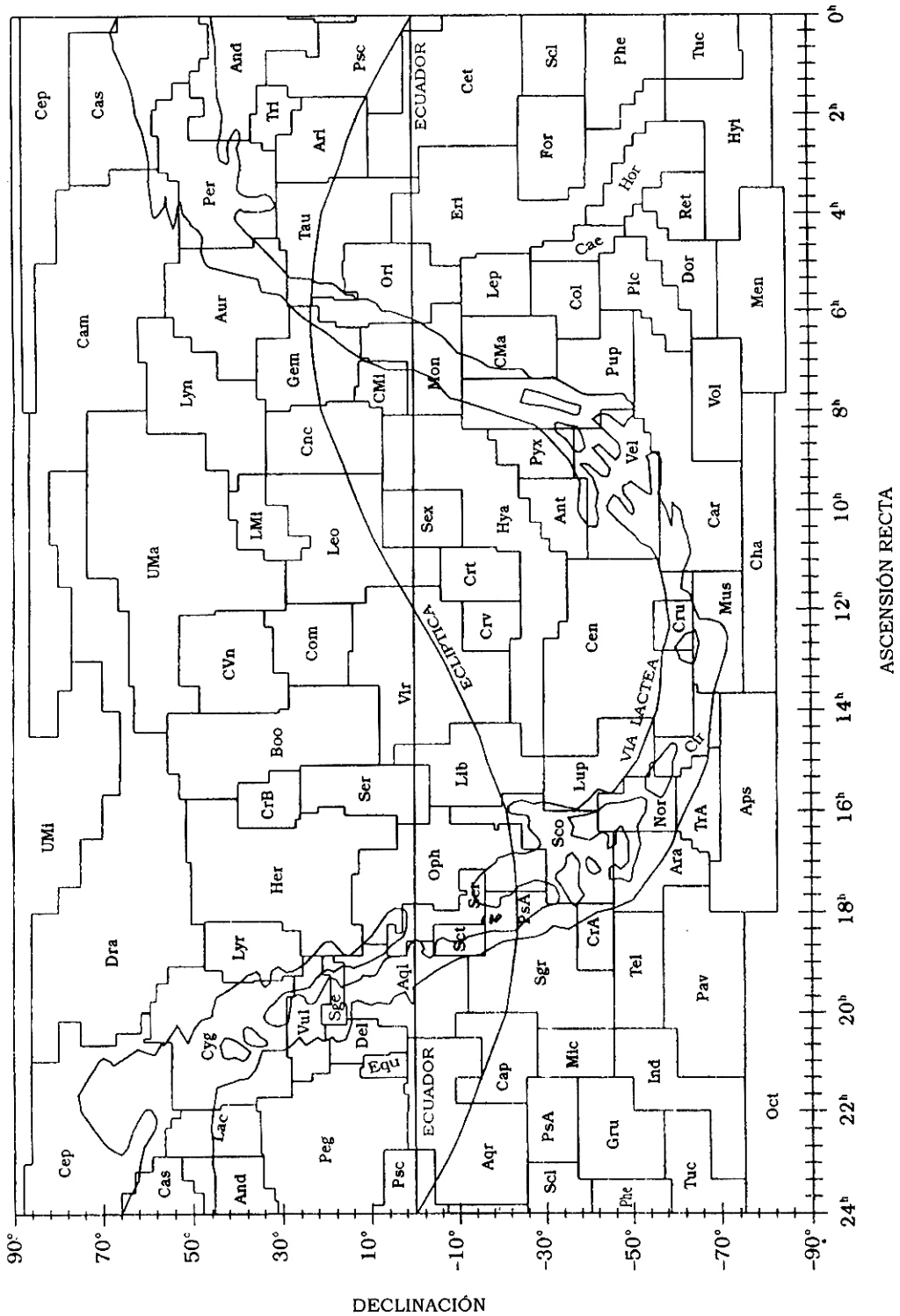
Nombres y significados

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, 2020

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, 2020



Objetos Messier, 2020

M	NGC	α h	α m	α s	δ °	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, 2020

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 m	inicia d	máximo m	máximo d	termina m	termina d	α h	α m	δ °	δ ‘	obj./h	Cometa asociado
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, 2020

Hora del meridiano 90º W.G.

Mes		Eventos	
d	h	objeto	suceso
Enero			
1	20	Luna	Apogeo
2	23	Luna	Cuarto Menguante
4	12	Urano	5º al norte de la Luna
5	2	Tierra	Perihelio
10	9	Mercurio	Conjunción superior
10	13	Luna	Luna Llena**
11	1	Urano	Estacionario
13	7	Plutón	Conjunción con el Sol
13	9	Saturno	Conjunción con el Sol
13	14	Luna	Perigeo
16	22	Marte	5º al norte de Antares
17	7	Luna	Cuarto Menguante
20	13	Marte	2º al sur de la Luna
22	21	Júpiter	0.4º al norte de la Luna*
24	16	Luna	Luna Nueva
27	13	Venus	0.08º al sur de Neptuno
28	0	Neptuno	4º al norte de la Luna
28	1	Venus	4º al norte de la Luna
29	15	Luna	Apogeo
31	21	Urano	5º al norte de la Luna
Febrero			
1	20	Luna	Cuarto Menguante
9	2	Luna	Luna Llena
10	8	Mercurio	Elongación máxima al E(18º)
10	14	Luna	Perigeo
15	16	Luna	Cuarto Menguante
16	4	Mercurio	Estacionario
18	7	Marte	0.8º al sur de la Luna*
19	14	Júpiter	0.9º al norte de la Luna*
20	2	Plutón	0.7º al norte de la Luna*
20	8	Saturno	1.7º al norte de la Luna
23	10	Luna	Luna Nueva
25	20	Mercurio	Conjunción inferior
26	6	Luna	Apogeo
27	6	Venus	6º al norte de la Luna
28	6	Urano	4º al norte de la Luna
Marzo			
2	14	Luna	Cuarto Menguante
8	6	Neptuno	Conjunción con el Sol
9	2	Mercurio	Estacionario
9	9	Venus	2º al norte de Urano
9	12	Luna	Luna Llena
10	0	Luna	Perigeo
16	4	Luna	Cuarto Menguante
18	2	Marte	0.7º al norte de la Luna*
18	4	Júpiter	1.5º al norte de la Luna
18	9	Plutón	0.9º al norte de la Luna*
18	18	Saturno	2º al norte de la Lunaa
19	22	Sol	Equinoccio
20	0	Marte	0.7º al sur de Júpiter
21	12	Mercurio	4º al norte de la Luna
23	20	Mercurio	Elongación máxima al E(28º)
24	3	Luna	4º al norte de la Luna
24	9	Luna	Apogeo
24	16	Venus	Elongación máxima al E(46º)
26	15	Urano	4º al norte de la Luna
28	5	Venus	7º al norte de la Luna
31	5	Marte	0.9º al sur de Saturno
Abril			
1	4	Luna	Cuarto Menguante
3	9	Mercurio	1.4º al sur de Neptuno
7	12	Luna	Perigeo
7	21	Luna	Luna Llena
14	16	Plutón	1.2º al norte de la Luna*
14	17	Júpiter	2º al norte de la Luna
14	17	Luna	Cuarto Menguante
15	3	Saturno	2º al norte de la Luna
15	23	Marte	2º al norte de la Luna
17	14	Venus	Al norte de Aldebaran
19	1	Neptuno	4º al norte de la Luna
20	13	Luna	Apogeo
22	20	Luna	Luna Nueva
26	3	Urano	Conjunción con el Sol
26	7	Plutón	Estacionario
26	9	Venus	6º al norte de la Luna
27	19	Venus	Máximo brillo
30	15	Luna	Cuarto Menguante
Mayo			
4	16	Mercurio	Conjunción superior
5	21	Luna	Perigeo
7	5	Luna	Luna Llena
11	3	Saturno	Estacionario
12	4	Júpiter	2º al norte de la Luna
12	12	Saturno	3º al norte de la Luna
13	4	Venus	Estacionario
14	8	Luna	Cuarto Menguante
14	12	Júpiter	Estacionario
14	20	Marte	3º al norte de la Luna
16	9	Neptuno	4º al norte de la Luna
17	3	Mercurio	7º al norte de Aldebarán
18	2	Luna	Apogeo
20	10	Urano	4º al norte de la Luna
22	2	Mercurio	0.9 al sur de Venus
22	12	Luna	Luna Nueva
23	21	Venus	4º al norte de la Luna
24	5	Mercurio	3º al norte de la Luna
29	21	Luna	Cuarto Menguante
Junio			
2	22	Luna	Perigeo
3	12	Venus	Conjunción inferior
4	7	Mercurio	Elongación máxima al E(24º)
5	13	Luna	Luna Llena
8	11	Júpiter	2º al norte de la Luna
8	20	Saturno	3º al norte de la Luna
12	6	Marte	1.7º al sur de Neptuno
12	17	Neptuno	4º al norte de la Luna
12	18	Marte	3º al norte de la Luna
13	0	Luna	Cuarto Menguante
14	19	Luna	Apogeo
16	20	Urano	4º al norte de la Luna
17	14	Mercurio	Estacionario
19	3	Venus	0.7º al sur de la Luna*
20	16	Sol	Solsticio
21	1	Luna	Luna Nueva**
23	12	Neptuno	Estacionario
24	12	Venus	Estacionario
28	2	Luna	Cuarto Menguante
29	20	Luna	Perigeo
30	21	Mercurio	Conjunción inferior
Julio			
4	6	Tierra	Afelio
4	23	Luna	Luna Llena**
5	16	Júpiter	1.9º al norte de la Luna

Eventos Planetarios, 2020

Hora del meridiano 90º W.G.

Mes		Eventos	
d	h	objeto	suceso
6	3	Saturno	2º al norte de la Luna
10	1	Neptuno	4º al norte de la Luna
10	2	Venus	Máximo brillo
11	14	Marte	2º al norte de la Luna
12	1	Mercurio	Estacionario
12	1	Venus	1º al norte de Aldebarán
12	13	Luna	Apogeo
12	17	Luna	Cuarto Menguante
14	2	Júpiter	Oposición
14	6	Urano	4º al norte de la Luna
15	13	Plutón	Oposición
17	1	Venus	3º al sur de la Luna
18	22	Mercurio	4º al sur de la Luna
20	12	Luna	Luna Nueva
20	16	Saturno	Oposición
22	9	Mercurio	Elongación máxima al O(20º)
24	23	Luna	Perigeo
27	7	Luna	Cuarto Menguante
Agosto			
1	18	Júpiter	1.5º al norte de la Luna
2	0	Mercurio	7º al sur de Polux
2	0	Plutón	1.1º al norte de la Luna*
2	7	Saturno	2º al norte de la Luna
3	10	Luna	Luna Llena
6	9	Neptuno	4º al norte de la Luna
9	2	Marte	0.8º al norte de la Luna*
9	8	Luna	Apogeo
10	15	Urano	4º al norte de la Luna
11	11	Luna	Cuarto Menguante
12	18	Venus	Elongación máxima al O(46º)
15	7	Venus	4º al sur de la Luna
15	11	Urano	Estacionario
17	9	Mercurio	Conjunción superior
18	21	Luna	Luna Nueva
21	5	Luna	Perigeo
25	12	Luna	Cuarto Menguante
28	20	Júpiter	1.4º al norte de la Luna
29	5	Plutón	1.2º al norte de la Luna*
29	11	Saturno	2º al norte de la Luna
Septiembre			
1	11	Venus	9º al sur de Polux
1	23	Luna	Luna Llena
2	15	Neptuno	4º al norte de la Luna
5	23	Marte	0.03º al sur de la Luna*
7	0	Luna	Apogeo
6	22	Urano	3º al norte de la Luna
9	12	Marte	Estacionario
10	3	Luna	Cuarto Menguante
11	14	Neptuno	Oposición
12	18	Júpiter	Estacionario
13	23	Venus	4º al sur de la Luna
17	5	Luna	Luna Nueva
18	8	Luna	Perigeo
18	16	Mercurio	6º al sur de la Luna
22	3	Mercurio	0.4º al norte de Espiga
22	8	Sol	Equinoccio
23	20	Luna	Cuarto Menguante
25	1	Júpiter	1.6º al norte de la Luna
25	15	Saturno	2º al norte de la Luna
28	21	Saturno	Estacionario
29	20	Neptuno	4º al norte de la Luna

* Ocultaciones.
** Eclipses

Mes		Eventos	
d	h	objeto	suceso
Octubre			
1	10	Mercurio	Elongación máxima al O(26º)
1	15	Luna	Luna Llena
2	18	Venus	0.09º al sur de Régulo
2	21	Marte	0.7º al norte de la Luna*
3	11	Luna	Apogeo
4	0	Plutón	Estacionario
4	3	Urano	3º al norte de la Luna
6	8	Marte	Distancia mínima
9	19	Luna	Cuarto Menguante
13	17	Marte	Oposición
13	18	Venus	4º al sur de la Luna
13	22	Mercurio	Estacionario
16	14	Luna	Luna Nueva
16	18	Luna	Perigeo
17	13	Mercurio	7º al sur de la Luna
22	11	Júpiter	2º al norte de la Luna
22	22	Saturno	3º al norte de la Luna
23	7	Luna	Cuarto Menguante
25	12	Mercurio	Conjunción inferior
27	0	Neptuno	4º al norte de la Luna
29	10	Marte	3º al norte de la Luna
30	13	Luna	Apogeo
31	7	Urano	3º al norte de la Luna
31	9	Luna	Luna Llena
31	10	Urano	Oposición
Noviembre			
3	2	Mercurio	Estacionario
8	8	Luna	Cuarto Menguante
10	11	Mercurio	Elongación máxima al O(19º)
12	15	Venus	3º al sur de la Luna
13	15	Mercurio	1.7º al sur de la Luna
14	6	Luna	Perigeo
14	23	Luna	Luna Nueva
15	7	Venus	4º al norte de Espiga
15	13	Marte	Estacionario
19	3	Júpiter	2º al norte de la Luna
19	9	Saturno	3º al norte de la Luna
21	23	Luna	Cuarto Menguante
23	6	Neptuno	5º al norte de la Luna
25	14	Marte	5º al norte de la Luna
26	18	Luna	Apogeo
27	11	Urano	3º al norte de la Luna
29	3	Neptuno	Estacionario
30	3	Luna	Luna Llena
Diciembre			
7	19	Luna	Cuarto Menguante
12	15	Luna	Perigeo
12	15	Venus	0.8º al sur de la Luna*
14	10	Luna	Luna Nueva
16	22	Júpiter	3º al norte de la Luna
16	23	Saturno	3º al norte de la Luna
19	21	Mercurio	Conjunción superior
20	14	Neptuno	5º al norte de la Luna
21	4	Sol	Solsticio
21	8	Júpiter	0.1º al sur de Saturno
21	18	Luna	Cuarto Menguante
22	19	Venus	6º al norte de Antares
23	13	Marte	6º al norte de la Luna
24	11	Luna	Apogeo
30	17	Urano	3º al norte de la Luna
29	21	Luna	Luna Llena

Fases de la Luna, 2020

Hora del meridiano 90º W.G.

Luna Nueva

mes	d	h	m
	...	...	...
ene	24	15	42
feb	23	9	32
mar	24	3	28
abr	22	20	26
may	22	11	39
jun	21	0	41
jul	20	11	33
ago	18	20	42
sep	17	5	0
oct	16	13	31
nov	14	23	7
dic	14	10	16

Luna Llena

mes	d	h	m
ene	10	13	21
feb	9	1	33
mar	9	11	48
abr	7	20	35
may	7	4	45
jun	5	13	12
jul	4	22	44
ago	3	9	59
sep	1	23	22
oct	1	15	5
oct	31	8	49
nov	30	3	30
dic	29	21	28

Cuarto Creciente

mes	d	h	m
ene	2	22	41
feb	1	19	42
mar	2	13	57
abr	1	4	21
abr	30	14	38
may	29	21	30
jun	28	2	16
jul	27	6	32
ago	25	11	58
sep	23	19	55
oct	23	7	23
nov	21	22	45
dic	21	17	41

Cuarto Menguante

mes	d	h	m
ene	17	6	58
feb	15	16	17
mar	16	3	34
abr	14	16	56
may	14	8	3
jun	13	0	24
jul	12	17	29
ago	11	10	45
sep	10	3	26
oct	9	18	39
nov	8	7	46
dic	7	18	36
	...	...	...

Crepúsculos, salidas y puestas de Sol, 2019

Hora local

LATITUD 30°

	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 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 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 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, 2019

Hora local

LATITUD 25°

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

LATITUD 20°

	AM	CM	SS	PS	CV	AV		AM	CM	SS	PS	CV	AV
	h m	h m	h m	h m	h m	h m		h m	h m	h m	h m	h m	h m
Ene 1	5 17	6 11	6 35	17 32	17 56	18 51	May 1	4 13	5 08	5 31	18 24	18 47	19 42
7	5 19	6 13	6 37	17 36	18 00	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, 2019

Hora local

LATITUD 20º

	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 15º

	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 2020

Hora del meridiano 90º W.G.

Ocurrirán seis eclipses, dos de Sol y cuatro de Luna.

I.- Eclipse penumbral de Luna el 10 de enero de 2020

La oposición ocurrirá a las 13h 4m, no se observará en le República Mexicana. Se observará en Canadá, el Océano Atlántico, África, Europa, Así y el Océano Pacífico.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicio el eclipse penumbral	ene	10	11	5	43
Máximo del eclipse	ene	10	13	10	0
Termina el eclipse penumbral	ene	10	15	14	23

II.- Eclipse penumbral de Luna el 5 de junio de 2020

La oposición ocurrirá a las 12h 58m, no se observará en le República Mexicana. Se observará en el extremo oriental de América del Sur, Brasil, la costa de Argentina, Uruguay y la Patagonia, en el Océano Atlántico, Europa, África , Asaa, el Océano Índico, Nueva Zelanda y Australia exceptuando su costa Este.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicio el eclipse penumbral	jun	5	11	43	24
Máximo del eclipse	jun	5	13	25	5
Termina el eclipse penumbral	jun	5	15	6	35

III.- Eclipse anular de sol del 20 al 21 de junio de 2020

La conjunción ocurrirá a las 0h 41m, no se observará en la República Mexicana. La franja de anularidad se observará desde la región central de África, el sur de la Península Arábiga, el norte de la India y el sur de China. Se observará como parcial hasta la región central de Europa, Asia, Japón, y hasta el sur de África, el Océano Índico hasta Nueva Zelanda y el norte de Australia.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicia el eclipse penumbral	jun	20	21	46	1
Inicia el eclipse umbral	jun	20	22	48	12
Inicia el eclipse anular	jun	20	22	48	30
Máximo del eclipse anular	jun	21	0	41	24
Termina el eclipse anular	jun	21	2	31	42
Termina el eclipse umbral	jun	21	2	31	53
Termina el eclipse penumbral	jun	21	3	34	6

Eclipses 2020

Hora del meridiano 90º W.G.

IV.- Eclipse penumbral de Luna el 4 de julio de 2020

La oposición ocurrirá a las 22h 29m, será observable en la República Mexicana. Se observará en Océano Pacífico, el continente Americano con excepción de su extremo norte, en el Océano Atlántico, en la región occidental de Europa y África.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicio el eclipse penumbral	jul	4	21	4	18
Máximo del eclipse	jul	4	22	30	1
Termina el eclipse penumbral	jul	4	23	55	30

V.- Eclipse penumbral de Luna el 30 de noviembre de 2020

La oposición ocurrirá a las 3h 8m, será observable en le República Mexicana. Se observará en el Continente Americano, el extremo norte de Europa, en Asia desde su región central a su extremo oriental, el extremo este del Océano Índico, Nueva Zelanda, Australia, Japón y el Océano Pacífico.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicio el eclipse penumbral	nov	30	1	30	0
Máximo del eclipse	nov	30	3	42	54
Termina el eclipse penumbral	nov	30	5	55	48

VI.- Eclipse total de sol el 14 de diciembre de 2020

La conjunción ocurrirá a las 10h 18m, no se observará en la República Mexicana. La franja de totalidad iniciará en la región central del Océano Pacífico, cruzará en la parte media de Chile y Argentina y terminará frente a las costas del sur de África.

Circunstancias del eclipse	*mes*	*día*	*h*	*m*	*s*
Inicia el eclipse parcial	dic	14	7	33	54
Inicia el eclipse umbral	dic	14	8	32	42
Máximo del eclipse	dic	14	10	18	13
Termina el eclipse umbral	dic	14	11	54	1
Termina el eclipse parcial	dic	14	12	53	6

Poblaciones de la República Méxicana, 2020

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 35	-7
Asientos	22 14 18	102 5 29	2164	5 30	-7
Calvillo	21 50 45	102 44 14	1702	5 45	-7
Jesús María	21 57 45	102 20 48	1907	5 36	-7
Puertecito	21 57 52	102 15 15	2052	5 34	-7
Rincón de Romos	22 13 49	102 19 22	1957	5 36	-7
Baja California					
Bailador Isla	31 56 56	116 5 12	0	10 56	-5
Cedros Isla	28 3 53	115 11 35	0	10 4	-5
Ensenada	31 51 10	116 38 9	2	11 3	-5
Granito Isla	29 33 0	113 32 0	0	9 54	-5
Guadalupe Isla	29 10 45	118 19 30	0	10 53	-4
Mejia Isla	29 33 8	113 35 18	0	9 55	-5
Mexicali	32 40 0	115 27 0	0	10 55	-5
Miramar Isla	30 2 30	114 31 30	0	10 14	-5
Salsipuedes Isla	28 44 0	112 50 30	0	9 36	-5
San Benito Isla	28 18 8	115 36 12	0	10 11	-5
San Felipe	31 1 36	114 49 46	0	10 29	-5
San Jerónimo Isla	29 47 20	115 48 14	0	10 29	-5
San Pedro Mártir	31 2 39	115 27 49	2800	10 38	-5
San Quintín	30 22 16	115 59 10	0	10 38	-5
Baja California Sur					
Asunción Isla	27 6 21	114 18 15	0	9 42	-5
Catalina Isla	25 35 35	110 47 48	0	8 37	-5
Cerralvo Isla	24 22 0	109 55 29	0	8 14	-6
Coronados Isla	26 6 12	111 15 38	0	8 48	-5
Danaznte Isla	25 48 0	111 12 0	0	8 45	-5
El Triunfo	23 48 13	110 8 41	432	8 14	-5
Espíritu Santo Isla	24 34 43	110 21 30	0	8 22	-5
José del Cabo	23 4 8	109 40 36	7	8 2	-6
La Paz	24 9 41	110 20 44	10	8 19	-5
Miraflores	23 22 25	109 48 33	183	8 6	-6
Muleje	26 53 33	111 46 41	35	9 3	-5
Roca Alijos Isla	24 58 6	113 44 47	0	9 15	-5
San Bartolo	23 44 16	109 52 15	353	8 9	-6
San Marcos Isla	27 14 35	112 5 23	0	9 11	-5
Santa Ines Isla	27 2 34	111 53 28	0	9 6	-5
Santiago	23 28 24	109 43 21	98	8 5	-6
Tortugas Isla	27 26 59	111 52 59	0	9 9	-5
Campeche					
Becal	20 26 34	90 1 36	12	0 -16	-8
Bolonchenticul	20 0 21	89 44 53	14	0 -23	-8
Calkini	20 22 21	90 3 3	52	0 -15	-8
Campeche	19 50 47	90 32 14	5	0 5	-8
Carmen	18 38 22	91 50 16	3	0 56	-8
Carmen Isla	18 38 44	91 50 16	0	0 56	-8
Champoton	19 21 4	90 43 0	27	0 15	-8
Dzibalchen	19 27 41	89 43 55	100	0 -19	-8

Poblaciones de la República Méxicana, 2020

Coordenadas geográficas (Anuario del Observatorio 1984)

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

Poblaciones de la República Méxicana, 2020

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

Poblaciones de la República Méxicana, 2020

Coordenadas geográficas (Anuario del Observatorio 1984)

ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Ixtacalco	19	23	22	99	7	16	2261	4	20	-7
Ixtapalapa	19	21	22	99	5	30	2280	4	20	-7
La Piedad	19	24	3	99	9	20	2253	4	21	-7
México	19	25	59	99	7	58	2233	4	21	-7
Mixcoac	19	22	37	99	10	55	2200	4	22	-7
Mixquic	19	13	28	98	57	52	2260	4	17	-7
Nativitas	19	23	12	99	8	48	2246	4	21	-7
San Jerónimo	19	19	33	99	13	20	2394	4	23	-7
San Simón	19	22	36	99	8	39	2100	4	21	-7
Tacubaya	19	24	10	99	11	40	2298	4	22	-7
Tlahuac	19	16	6	99	0	16	2264	4	18	-7
Tlalpam	19	17	16	99	9	57	2294	4	22	-7
Villa Obregón	19	20	41	99	11	21	2340	4	22	-7
Xochimilco	19	15	44	99	6	7	2274	4	20	-7
Durango										
Ciudad Lerdo	25	32	14	103	31	28	1135	6	11	-7
Cuencame	24	52	18	103	38	6	1889	6	11	-7
Durango	24	1	31	104	40	11	1889	6	32	-6
Gómez Palacio	25	34	18	103	30	17	1195	6	10	-7
Guanacevi	25	55	59	105	57	31	2230	7	7	-6
Inde	25	54	45	105	10	16	2049	6	50	-6
Llano Grande	23	52	2	105	12	7	2406	6	43	-6
Mezquital	23	28	57	104	22	18	1468	6	24	-7
Nazas	25	13	40	104	6	53	1264	6	23	-7
Nombre de Dios	23	51	4	104	15	25	1855	6	22	-7
Pueblo Nuevo	23	22	35	105	22	18	1982	6	45	-6
San J. de Guadalupe	24	37	0	102	45	8	1520	5	49	-7
San Juan del Río	24	46	45	104	23	22	1737	6	28	-7
Santa María del Oro	25	56	53	105	19	56	1871	6	54	-6
Santa María Ocotlán	22	54	44	104	36	10	365	6	27	-6
Santiago Papasquiaro	25	2	47	105	25	30	1716	6	52	-6
Tamazula	24	58	11	106	58	13	240	7	24	-6
Tayoltita	24	6	27	105	55	30	500	6	59	-6
Tepehuanes	25	21	19	105	47	9	1967	7	1	-6
Tizonazo	25	58	4	105	15	33	1981	6	52	-6
Topia	25	12	19	106	34	34	1851	7	17	-6
Tlahualilo	26	6	31	103	26	21	1132	6	10	-7
Guerrero										
Acapulco	16	50	21	99	55	1	82	4	46	-7
Acayahualco	18	13	30	99	28	52	790	4	32	-7
Coahuayutla	18	18	52	101	48	37	358	5	24	-7
Coatepec	18	20	22	99	42	56	1260	4	37	-7
Coyuca de Catalán	18	20	2	100	39	0	210	4	59	-7
Chaucingo	18	18	7	99	6	53	810	4	23	-7
Chilpancingo	17	33	10	99	30	3	1360	4	34	-7
Huamuxtitlan	17	48	37	99	34	2	1125	4	35	-7
Iguana	18	21	1	99	32	24	731	4	33	-7
La Unión	17	58	52	101	48	49	174	5	25	-7
Mayanalan	18	10	29	99	26	1	0	4	31	-7
Mezcala	17	56	13	99	36	6	420	4	35	-7
Pericotepec	17	57	40	100	13	0	770	4	50	-7

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

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ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
San José	20	56	13	100	58	32	2002	5	4	-7
San Luis de la Paz	21	17	57	100	30	52	2020	4	52	-7
San Miguel de Allende	20	54	52	100	44	47	1870	4	58	-7
Santa Catarina	21	8	27	100	14	10	1845	4	45	-7
Santa Cruz Galeana	20	38	35	100	59	50	1000	5	4	-7
Santiago Maravatio	20	10	28	100	59	38	1790	5	4	-7
Silao	20	56	24	101	25	59	1780	5	14	-7
Tarandacuao	20	1	14	100	32	3	1920	4	54	-7
Tarimoro	20	17	39	100	45	20	1790	4	59	-7
Tierra Blanca	21	6	9	100	4	44	1760	4	42	-7
Uriangato	20	8	46	100	8	10	1800	4	44	-7
Valle de Santiago	20	23	31	101	11	21	1760	5	9	-7
Victoria	21	12	23	100	13	9	1760	4	45	-7
Villa Ocampo	21	38	52	101	28	50	2420	5	15	-7
Villagran	20	29	40	100	59	52	1790	5	4	-7
Xichu	21	18	0	100	3	37	1334	4	41	-7
Yuriria	20	12	51	100	8	19	1882	4	44	-7
Hidalgo										
Acayuca	20	1	48	98	50	30	2570	4	12	-7
Actopan	20	16	12	96	56	42	2069	3	21	-8
Ahuehueco	21	1	43	98	54	24	2500	4	12	-7
Altajayucan	20	24	40	99	20	59	1898	4	24	-7
Apan	19	39	35	98	24	10	2493	4	2	-7
Atotonilco Grande	20	17	6	98	40	13	2138	4	7	-7
Bonanza	20	43	12	99	14	36	1900	4	21	-7
Chapantongo	20	17	16	99	24	50	2145	4	26	-7
Chapulhuacan	21	9	29	98	54	22	1500	4	12	-7
Chicautla	20	19	54	99	13	49	1884	4	21	-7
Epazoyuca	20	1	33	98	37	26	2461	4	6	-7
Huasca	20	12	12	98	34	42	1900	4	5	-7
Huautla	21	2	3	98	16	54	1900	3	55	-7
Huejutla	21	8	43	98	24	58	2490	3	59	-7
Huichapan	20	22	37	99	38	58	2102	4	32	-7
Ixmiquilpan	20	29	4	99	13	5	1745	4	21	-7
Metxtitlan	20	35	45	98	45	30	1353	4	9	-7
Mexquititlan	20	32	0	98	38	27	1421	4	6	-7
Nopala	20	15	19	98	38	52	2437	4	6	-7
Orizatlan	21	10	35	98	36	40	1900	4	4	-7
Pachuca	20	7	44	98	43	54	2426	4	9	-7
Pisa Flores	21	11	44	99	0	15	1900	4	14	-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	13	-7
San Gabriel	19	52	44	98	36	58	1900	4	7	-7
San Juanico	19	54	14	98	40	17	1900	4	8	-7
San Pablo	20	38	38	98	55	21	1900	4	13	-7
Santa Mónica	19	58	55	98	37	16	1900	4	6	-7
Singuilucan	20	1	52	98	19	59	2714	3	59	-7
Tasquillo	20	33	7	99	18	21	1720	4	23	-7
Tepetitlan	20	11	14	99	22	59	2000	4	25	-7
Tezontepec	19	52	44	98	49	10	2326	4	12	-7
Tianguistengo	20	44	0	98	37	34	1687	4	5	-7

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ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Tulancingo	20	4	58	98	22	8	2222	4	0	-7
Tlaxcoapan	20	5	40	99	13	29	2100	4	22	-7
Yolotepec	20	23	36	99	4	31	1900	4	17	-7
Zempoala	19	54	54	98	40	2	2532	4	8	-7
Zimapan	20	44	20	99	22	58	1813	4	25	-7
Jalisco										
Ameca	20	32	47	104	2	46	1235	6	11	-7
Atoyac	20	0	40	103	31	12	1350	6	0	-7
Autlan de Navarro	19	46	13	104	22	4	688	6	16	-6
Bolanos	21	46	31	103	46	58	910	6	7	-7
Cabo Corriente	20	24	42	105	40	50	81	6	42	-6
Carranza	19	44	46	103	46	18	0	6	4	-7
Cihuatlan	19	14	8	104	33	36	0	6	19	-6
Ciudad Guzmán	19	42	13	103	27	53	1507	5	58	-7
Cocula	20	23	55	103	49	27	1432	6	6	-7
Colotlan	22	6	51	103	16	8	0	5	57	-7
Encarnación de Díaz	21	31	37	102	14	6	1814	5	33	-7
Guachinango	20	34	38	104	22	59	1285	6	18	-6
Guadalajara	20	42	32	103	23	9	1567	5	57	-7
Guerrero	21	59	4	103	35	52	1785	6	4	-7
Hostotipaquillo	21	3	46	104	4	21	1079	6	12	-7
Huejuquilla	22	37	42	103	53	58	1480	6	12	-7
La Barca	20	16	37	102	32	53	1517	5	39	-7
La Rosa	19	45	7	103	10	2	0	5	52	-7
Lagos de Moreno	21	21	20	101	55	24	1942	5	26	-7
Ojuelos	21	52	5	101	35	20	2254	5	18	-7
Puerto Vallarta	20	36	56	105	14	42	5	6	34	-6
San Miguel del Alto	21	1	52	102	24	12	2385	5	36	-7
San Pedro Analco	21	14	54	103	57	57	0	6	10	-7
Talpa de Allende	20	23	41	104	49	52	1039	6	26	-6
Tapatitlán	20	48	48	102	45	41	1764	5	44	-7
Tecatitlán	19	28	16	103	18	30	1036	5	55	-7
Tecomates	19	33	8	104	29	18	0	6	18	-6
Tecaltiche	21	26	11	102	34	32	2240	5	41	-7
Tequila	20	53	33	103	50	8	1215	6	7	-7
Unión de Tula	19	57	37	104	16	7	1385	6	14	-6
México										
Acambay	19	57	18	99	50	47	2552	4	37	-7
Amecameca	19	7	36	98	46	0	2468	4	12	-7
Analco de Becerra	19	15	34	100	1	26	2511	4	43	-7
Atlacomulco	19	48	7	98	52	48	2526	4	13	-7
Ayotla	19	18	55	98	56	8	2251	4	16	-7
Chalco	19	15	53	98	54	12	2280	4	15	-7
Chapa de Mota	19	47	24	99	31	23	3070	4	30	-7
Chicoloapan	19	25	3	98	54	11	2235	4	15	-7
Chimalhuacán	19	25	45	98	56	57	2255	4	16	-7
Coatlichan	19	27	4	98	52	34	2200	4	14	-7
Ecatzingo de Hidalgo	18	57	2	98	45	29	2340	4	12	-7
Huexotla	19	28	50	98	52	25	2200	4	14	-7
Huizquilucan	19	21	47	99	21	39	2750	4	26	-7
Ixtapan de La Sal	18	50	13	99	40	28	1900	4	35	-7

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ESTADO Población	latitud °	‘	“	longitud °	‘	“	alt m	δm °	‘	Δδm ‘/año
Ixtlahuaca	19	52	54	98	51	39	2640	4	13	-7
Jilotepec	19	57	13	99	31	45	2525	4	29	-7
Lerma	19	17	16	99	30	34	2599	4	30	-7
Los Reyes	19	21	27	98	52	42	2200	4	14	-7
Naucalpan	19	28	36	99	13	45	2298	4	23	-7
Otumba	19	41	59	98	45	33	2349	4	11	-7
Ozumba	19	2	3	98	47	50	2500	4	13	-7
Progreso Industrial	19	37	37	99	20	32	2449	4	25	-7
Popocatepetl	19	1	17	98	37	34	5452	4	9	-7
Popocatepetl	19	5	3	98	39	12	5450	4	9	-7
Remedios	19	28	25	99	15	2	2383	4	23	-7
San Antonio del Rosario	18	24	4	100	18	43	3350	4	51	-7
San Cristobal	19	24	24	99	19	40	2239	4	25	-7
San Pedro Atzapotzaltongo	19	37	38	99	18	54	2420	4	25	-7
San Pedro Atzompa	19	40	56	99	0	36	2243	4	17	-7
Sultepec	18	50	0	99	51	44	2336	4	40	-7
Tecamac	19	42	21	98	58	10	2300	4	16	-7
Temascalapa	19	49	37	98	54	11	2347	4	14	-7
Temascaltepec	19	2	24	100	2	47	1640	4	44	-7
Tenancingo	18	57	51	99	35	45	2022	4	33	-7
Teoloyucan	19	44	48	99	10	53	2280	4	21	-7
Texcoco	19	30	52	98	52	57	2278	4	14	-7
Tlalmanalco	19	12	36	98	48	27	2412	4	13	-7
Tlalnepantla	19	32	20	99	11	39	2278	4	22	-7
Toluca	19	17	33	99	39	38	2680	4	34	-7
Michoacán										
Aguililla	18	44	17	102	44	9	970	5	43	-7
Agostitlán	19	32	6	100	37	13	2500	4	56	-7
Apatzingan	19	4	54	102	15	31	682	5	33	-7
Apo	19	26	38	102	25	2	0	5	36	-7
Ario de Rosales	19	12	21	101	44	19	2050	5	22	-7
Buenavista	19	12	3	102	35	35	586	5	40	-7
Coahuayana	18	45	9	103	40	30	20	6	2	-7
Cotija	19	48	41	102	42	26	1751	5	43	-7
Hidalgo	19	41	19	100	33	23	2360	4	55	-7
Huajumbaro	19	40	52	100	44	29	2390	4	59	-7
Irimbo	19	41	54	100	28	58	2015	4	53	-7
Janitzio	19	34	27	101	39	11	2120	5	20	-7
Jiquilpan	19	59	31	102	43	16	1654	5	43	-7
La Huacana	18	57	36	101	48	39	550	5	24	-7
Los Reyes	19	35	23	102	28	57	1280	5	38	-7
Maravatio	19	53	33	100	26	43	2080	4	52	-7
Morelia	19	42	16	101	11	30	1941	5	9	-7
Ostula	18	29	50	103	28	19	229	5	58	-7
Panindicuaro	19	59	7	102	45	40	1638	5	44	-7
Paracuaro	19	8	46	103	13	32	586	5	53	-7
Paracho	19	38	44	102	3	1	1567	5	28	-7
Patzcuaro	19	32	24	101	37	0	2174	5	19	-7
Penjamillo	20	6	31	101	55	40	1645	5	26	-7
Piedad de Cavadas	20	20	44	102	1	32	1696	5	28	-7
Pueblo Viejo	19	46	16	101	34	3	2210	5	18	-7

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ESTADO Población	latitud ° ‘ “	longitud ° ‘ “	alt m	δm ° ‘	Δδm ‘/año
Puruandiro	20 5 21	101 30 59	1994	5 16	-7
San Pedro Jacuaro	19 43 1	100 38 49	2004	4 57	-7
Senguio	19 44 11	100 21 31	2030	4 50	-7
Tacambaro	19 13 52	101 27 34	1577	5 16	-7
Tequicheo	18 54 0	100 44 21	440	5 0	-7
Tepalcatepec	19 11 31	102 50 35	320	5 45	-7
Tumbiscatio	18 31 33	102 22 28	820	5 36	-7
Turicato	19 3 0	101 25 14	795	5 15	-7
Tuzantla	19 12 19	100 34 39	640	4 56	-7
Uruapan	19 24 56	102 3 46	1634	5 29	-7
Villa Madero	19 23 30	101 16 34	800	5 11	-7
Zacapu	19 49 11	101 47 34	1980	5 23	-7
Zamora	19 59 17	102 18 52	1567	5 34	-7
Zinapecuaro	19 53 5	100 40 32	1920	4 57	-7
Zitacuaro	19 25 51	100 21 50	1781	4 50	-7
Morelos					
Acapatzingo	18 54 11	99 13 17	1465	4 24	-7
Acatlipa	18 49 30	99 13 42	1215	4 24	-7
Ahuacatitlán	18 58 42	99 15 19	1955	4 25	-7
Atlatlahuacán	18 56 5	98 53 53	1656	4 16	-7
Coatetelco	18 43 55	99 19 48	1029	4 27	-7
Cuajomulco	19 2 2	99 12 17	2651	4 23	-7
Cuautla	18 48 20	98 57 13	1309	4 18	-7
Cuernavaca	18 54 54	99 14 14	1542	4 24	-7
Chapultepec	18 55 11	99 12 49	1492	4 24	-7
Huautla	18 26 24	99 1 44	1075	4 20	-7
Huitzilac	19 1 39	99 16 2	2540	4 25	-7
Itzamatitlán	18 53 58	99 1 30	1235	4 19	-7
Jojutla	18 36 39	99 10 52	890	4 24	-7
Oaxtepec	18 54 2	98 58 11	1385	4 18	-7
San Miguel	18 41 42	98 48 40	1403	4 14	-7
Tejalpa	18 53 43	99 9 57	1337	4 23	-7
Tepalcingo	18 35 34	98 50 43	1220	4 16	-7
Tetelcingo	18 51 55	98 55 47	1425	4 17	-7
Xiutepec	18 52 31	99 10 27	1355	4 23	-7
Xochitepec	18 47 4	99 13 50	1154	4 25	-7
Yautepec	18 52 38	99 3 46	1282	4 20	-7
Yecapixtla	18 52 56	98 51 55	1603	4 15	-7
Nayarit					
Acaponeta	22 29 21	105 21 41	30	6 42	-6
Amatlán de Jara	21 23 9	104 8 47	1150	6 14	-7
Huajimic	21 41 29	104 18 18	1170	6 18	-6
Ixtapan	21 18 16	105 9 44	0	6 34	-6
Ixtlán del Río	21 2 9	104 22 16	1042	6 18	-6
Jesús María	22 15 9	104 31 10	610	6 24	-6
Mezcaltitan	21 54 18	105 28 39	0	6 42	-6
Ruiz	21 57 29	105 8 35	24	6 36	-6
San Blas	21 32 27	105 17 16	2	6 38	-6
San Martín de Bolanos	21 29 42	104 1 35	0	6 12	-7
Tepic	21 30 47	104 53 42	915	6 30	-6
Tuxpan	21 54 10	104 8 6	39	6 15	-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	27	-7
Arramberri	24	6	10	99	49	3	1076	4	34	-7
Cadereyta Jiménez	25	35	34	99	59	54	360	4	39	-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	43	-7
Galeana	24	49	41	100	3	53	1654	4	40	-7
García	25	48	49	100	35	21	697	4	56	-7
Lampazos de Naranjo	27	1	32	100	30	33	340	4	55	-7
Linares	24	51	39	99	34	5	684	4	27	-7
Los Aldamas	26	3	58	99	11	30	288	4	16	-7
Mier y Noriega	23	25	19	100	7	11	1681	4	42	-7
Montemorelos	25	11	34	99	49	31	432	4	34	-7
Monterrey	25	40	11	100	18	26	538	4	48	-7
Parras	26	30	5	99	31	5	165	4	26	-7
Sabinas Hidalgo	26	29	59	100	10	9	313	4	45	-7
Salinas Victoria	25	57	34	100	18	0	464	4	48	-7
Santiago Huajuco	25	25	35	100	8	17	445	4	43	-7
Vallecillo	26	39	41	99	58	2	274	4	39	-7
Villa Aldama	26	29	49	100	25	50	469	4	52	-7
Zaragoza	23	50	52	99	36	19	1377	4	28	-7
Oaxaca										
Ayutla	18	1	48	96	39	46	733	3	21	-8
Ayoquezco	16	41	13	96	50	2	0	3	32	-8
Ayotzintepec	17	40	38	96	8	17	64	3	9	-8
Coatzopan	18	2	56	96	45	31	1922	3	24	-8
Colotepec	15	53	33	96	56	28	0	3	38	-8
Cuicatlán	17	48	11	96	57	36	595	3	30	-8
Chacalapa	15	55	20	95	55	48	555	3	12	-8
Chalcatongo	17	1	57	97	34	24	2365	3	49	-8
Ecatepec	16	17	8	95	52	39	1690	3	9	-8
Ejutla de Crespo	16	33	48	96	43	44	1440	3	30	-8
Etla	17	12	17	96	47	49	1640	3	28	-8
Guichicovi	16	58	35	95	13	52	297	2	47	-8
Guelatao	17	19	15	96	29	34	1698	3	20	-8
Guelatao	17	19	10	96	29	31	1600	3	20	-8
Huajuapan de León	17	48	30	97	46	31	1680	3	51	-8
Huamelulas Pedro	16	1	39	95	40	1	1030	3	4	-8
Huatulco	15	49	44	96	19	11	325	3	23	-8
Huautla	18	7	53	96	50	45	1714	3	26	-8
Jamiltepec	16	16	33	97	49	23	240	3	58	-8
Juchitlán de Zaragoza	16	25	56	95	1	31	38	2	45	-8
Juguila	16	14	6	97	17	45	1500	3	45	-8
Juxtlahuaca	17	20	11	98	0	56	1650	3	59	-7
Lachiguiri	16	23	9	97	20	8	1780	3	46	-8
Loxicha	16	0	31	96	37	20	1885	3	29	-8
Mazatlán	17	2	11	95	26	48	642	2	53	-8
Miahuatlán	16	20	1	96	35	44	1607	3	27	-8
Nejapa	16	36	50	95	58	48	1000	3	10	-8
Niltepec	16	33	47	94	36	48	110	2	32	-8
Nochixtlan	17	27	33	97	13	29	2200	3	38	-8

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

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

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Zacatlán de Las Manzanas	19	56	7	97	57	27	2059	3	49	-8
Zapotitlán	18	19	56	97	28	23	2407	3	41	-8
Zautla	19	43	6	97	40	21	2020	3	42	-8
Zinacatepec	18	19	57	97	14	41	1139	3	36	-8
Querétaro										
Amealco	20	11	17	100	8	38	2075	4	44	-7
Arroyo Seco	21	32	54	99	41	13	1008	4	31	-7
Boye	20	40	58	99	44	47	1000	4	34	-7
Cadereyta	20	41	41	99	48	58	2077	4	35	-7
Ezequiel Montes	20	40	2	99	53	54	1000	4	38	-7
Huimilpan	20	22	39	100	16	32	2307	4	47	-7
Jalpan	21	13	8	99	28	16	860	4	26	-7
Queretaro	20	35	36	100	23	11	1000	4	50	-7
San Juan del Río	20	23	30	99	59	49	1978	4	40	-7
Tequisquiapan	20	31	26	99	53	42	1717	4	38	-7
Toliman	20	54	35	99	55	45	1535	4	38	-7
Quintana Roo										
Ascensión	19	46	31	87	28	0	0	-1	40	-8
Cabo Catoche	21	36	25	87	6	21	157	-2	8	-8
Carrillo Puerto	19	34	50	88	2	38	30	-1	19	-8
Contoy	21	31	45	86	48	12	0	-2	18	-8
Cozumel	20	31	20	86	57	12	0	-2	5	-8
Chetumal	18	29	39	88	17	56	0	-1	1	-8
Filomeno Mata	19	52	8	88	23	47	0	-1	8	-8
Icaiche	18	4	17	89	10	7	183	0	-28	-8
Kantunil Kin	21	6	14	87	29	12	20	-1	50	-8
Leona Vicario	20	59	23	87	12	22	0	-1	59	-8
Polyuc	19	36	50	88	33	58	0	-1	1	-8
Put	19	39	8	89	24	46	0	0	-32	-8
Saban	20	2	12	88	32	16	0	-1	5	-8
Santa Cruz Chico	18	56	3	88	9	44	0	-1	9	-8
Tulum	20	12	34	87	25	34	150	-1	45	-8
Vigia Chico	19	46	27	87	35	2	0	-1	36	-8
Xkalak	18	13	32	87	50	50	0	-1	15	-8
Xkanha	19	6	13	89	20	5	0	0	-30	-8
San Luis Potosí										
Ahualco	22	23	56	101	9	58	1902	5	8	-7
Alaquines	22	7	41	99	35	27	1300	4	28	-7
Arista	22	38	46	100	51	2	1560	5	0	-7
Arriaga	21	54	44	101	22	58	2660	5	13	-7
Cárdenas	21	59	49	99	38	28	1201	4	30	-7
Catorce	23	41	34	100	53	23	2756	5	2	-7
Cerritos	22	25	55	100	16	51	1153	4	46	-7
Ciudad del Maíz	22	24	8	99	36	9	1239	4	28	-7
Charcas	23	7	47	101	6	37	2057	5	7	-7
Guadalcazar	22	37	1	100	23	56	1673	4	49	-7
Matehuala	23	38	41	100	38	26	1615	4	55	-7
Moctezuma	22	45	7	101	5	0	1777	5	6	-7
Pastora	22	8	2	100	3	25	920	4	40	-7
Ramos	22	49	59	101	55	3	2210	5	27	-7

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

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

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Casas	23	43	44	98	44	27	120	4	4	-7
Ciudad Victoria	23	44	6	99	7	51	321	4	15	-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	22	-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	4	-7
Matamoros	25	52	45	97	31	9	12	3	26	-7
Méndez	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	23	-7
Padilla	24	0	39	98	46	27	153	4	5	-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	-8
Tula	22	59	50	99	42	55	1173	4	31	-7
Villagrán	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	6	-7
Cuaula	19	36	10	98	38	44	2703	4	8	-7
Cuauhutotohuatlan	19	7	7	98	10	9	2308	3	57	-7
Huamantla	19	18	53	97	55	39	2553	3	50	-8
Tenancingo	19	8	47	98	11	57	2281	3	58	-7
Tlaxcala	19	19	4	98	14	9	2252	3	58	-7
San Aparicio	19	6	0	98	9	30	2293	3	57	-7
San Juan de Los Llanos	19	27	54	97	41	0	2448	3	43	-8
San Martín Tezmelucan	19	16	59	98	25	59	2278	4	3	-7
Veracruz										
Acayucan	17	56	42	95	54	43	88	3	1	-8
Acayucan	17	56	34	94	54	13	88	2	33	-8
Acayucan	17	56	42	94	54	48	158	2	33	-8
Actopan	19	30	11	96	36	45	311	3	14	-8
Alvarado	18	46	14	95	45	56	9	2	53	-8
Ciudad Azueta	18	4	43	95	42	18	0	2	55	-8
Coatepec	19	27	8	96	57	1	1252	3	24	-8
Coatzacoalcos	18	8	56	94	24	40	2	2	18	-8
Coatzintla	20	29	6	97	26	12	144	3	34	-8
Córdoba	18	53	34	96	55	52	924	3	25	-8
Cosamaloapan	18	21	46	95	48	32	96	2	57	-8
Coscomatepec	19	4	23	97	2	5	1588	3	27	-8
Cuatotolopan	18	7	16	95	18	7	23	2	43	-8
Cuichapa	18	46	28	96	52	8	642	3	24	-8
Chiconamel	21	14	0	98	27	36	158	4	0	-7
Chicontepec	20	58	31	98	9	54	595	3	52	-7

Poblaciones de la República Méxicana, 2020

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

Poblaciones de la República Méxicana, 2020

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	-40	-8
Celestum	20	51	36	90	24	5	3	0	-6	-8
Cuyo	21	31	9	87	40	48	8	-1	46	-8
Chancenote	20	59	36	87	46	56	0	-1	39	-8
Chavihau	21	21	28	89	7	7	0	0	-54	-8
Espita	21	0	36	88	18	27	22	-1	20	-8
Halacho	20	28	44	90	4	51	6	0	-15	-8
Huhi	20	43	42	89	10	0	15	0	-48	-8
Izamal	20	56	16	88	57	14	14	0	-57	-8
Maxcanu	20	35	11	89	59	55	8	0	-18	-8
Merida	20	59	0	89	38	43	9	0	-33	-8
Molas	20	49	0	89	37	48	10	0	-32	-8
Progreso	21	18	0	89	39	30	8	0	-35	-8
San Felipe	21	34	8	88	13	58	0	-1	27	-8
Sisal	21	9	59	90	1	55	0	0	-21	-8
Tekax	20	12	18	98	17	20	35	3	57	-7
Telchac	21	20	35	89	15	50	10	0	-49	-8
Tzimin	21	8	1	88	9	6	17	-1	27	-8
Valladolid	20	41	24	88	12	23	20	-1	21	-8
Yalkubul	21	31	26	88	36	55	0	-1	13	-8
Zacatecas										
Calera	22	57	2	102	42	10	2236	5	45	-7
Concepción del Oro	24	36	54	101	25	43	2070	5	16	-7
Chalchihuites	23	28	42	103	53	15	2321	6	13	-7
Fresnillo	23	10	35	102	52	39	2250	5	50	-7
Guadalupe	22	45	30	102	31	9	2265	5	41	-7
Jeréz	22	38	51	102	59	48	2027	5	52	-7
Juchipila	21	24	46	103	7	29	1350	5	53	-7
Nieves	23	59	41	103	1	12	2017	5	55	-7
Nochistlán	21	21	47	102	50	55	1930	5	47	-7
Observatorio Astronómico	22	43	56	102	32	26	2717	5	41	-7
Observatorio Astronómico	22	46	1	102	32	56	2425	5	41	-7
Ojo Caliente	22	34	44	102	15	20	2114	5	34	-7
Ojuelos	21	52	5	101	35	20	2000	5	18	-7
Panuco	22	52	45	102	32	30	2321	5	41	-7
Pinos	22	17	54	101	34	23	2419	5	18	-7
Río Grande	23	49	40	103	2	17	2000	5	55	-7
San Juan del Mezquital	24	17	28	103	23	47	2000	6	4	-7
Sombrerete	23	37	53	103	38	30	2351	6	8	-7
Tlatenango	21	47	0	103	18	44	1724	5	57	-7
Valparaiso	22	46	13	103	34	5	2140	6	5	-7
Villa de Cos	23	17	40	102	20	55	2050	5	37	-7
Villanueva	22	21	16	102	53	13	1955	5	49	-7
Zacateca	22	46	30	102	34	45	2496	5	42	-7

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.

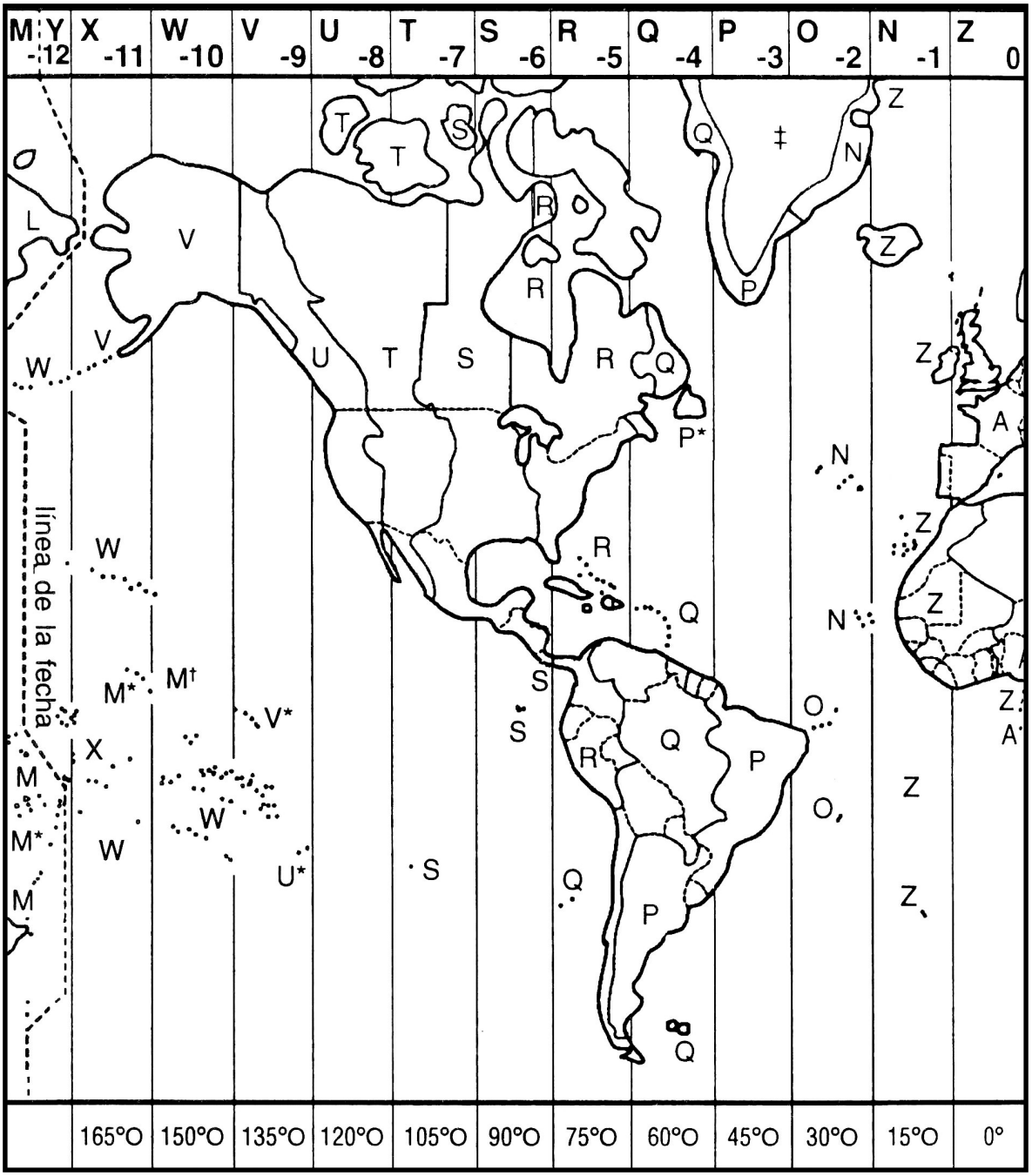
° ’	zona	h	m
00	Z	0	
+15	A	+ 1	
+30	B	+ 2	
+45	C	+ 3	
+52 30	C*	+ 3	30
+60	D	+ 4	
+67 30	D*	+ 4	30
+75	E	+ 5	
+82 30	E*	+ 5	30

° ’	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	

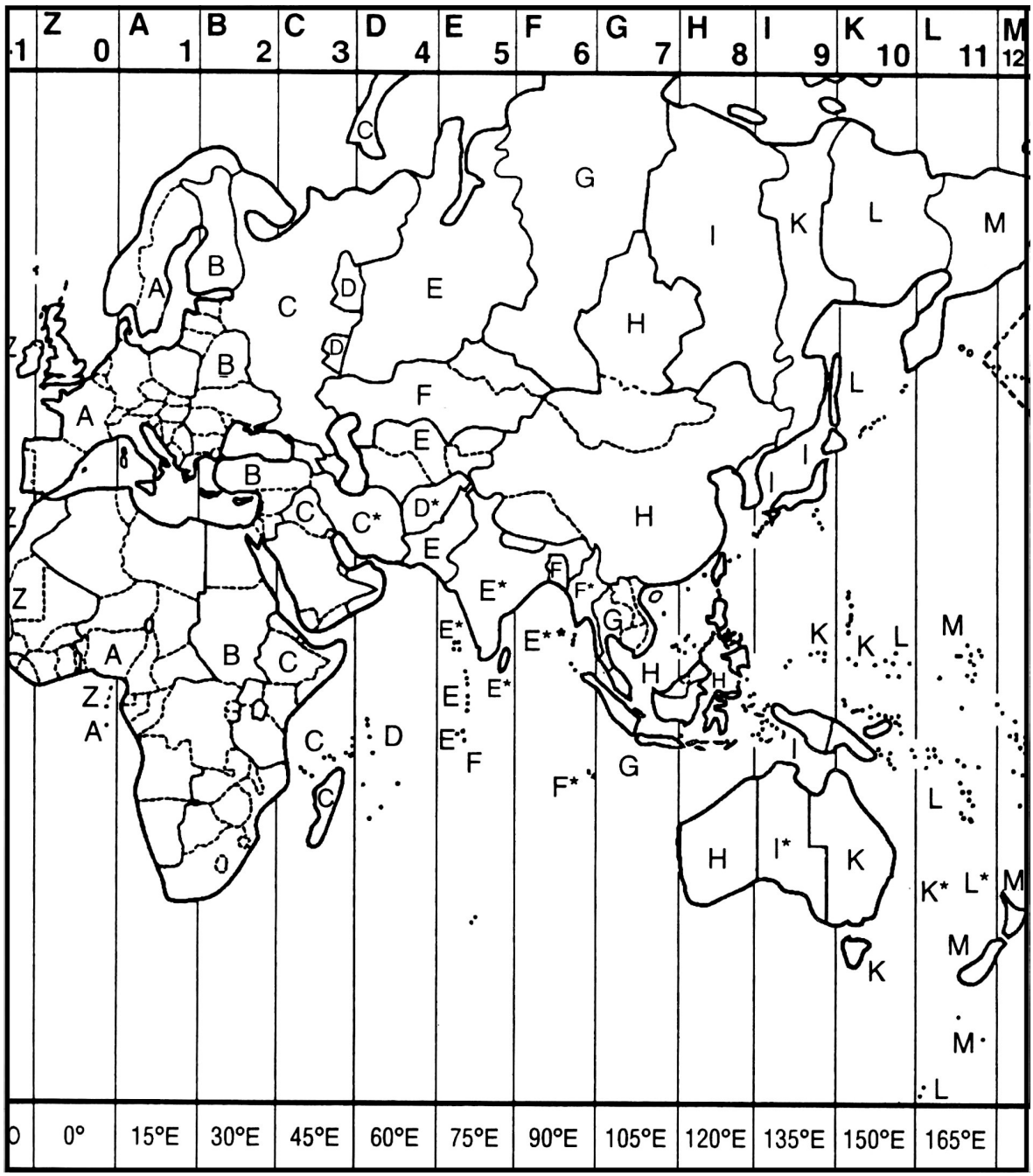
° ’	zona	h	m
+180	M	+ 12	
+18730	M*	+ 12	30
-15	N	- 1	
-30	O	- 2	
-45	P	- 3	
-52 30	P*	- 3	30
-60	Q	- 4	
-75	R	- 5	
-90	S	- 6	

° ’	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	

Mapa de zonas horarias



Mapa de zonas horarias



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
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*: Observatorio de centelleo interplanetario	19 48 39	101 41 39		Michoacán 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 ,

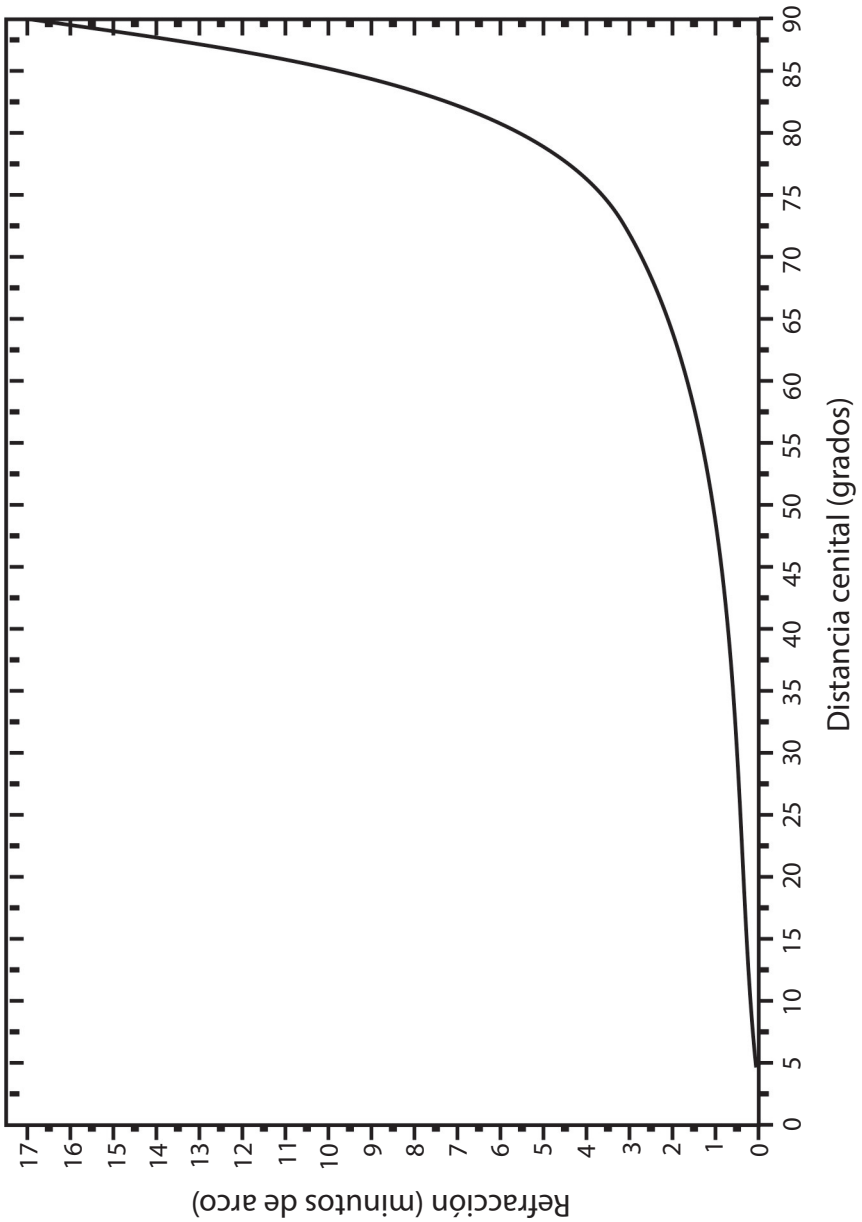
donde r está dada en minutos de arco, y sus coeficientes son:

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	$7.48708\ 10^{-15}$

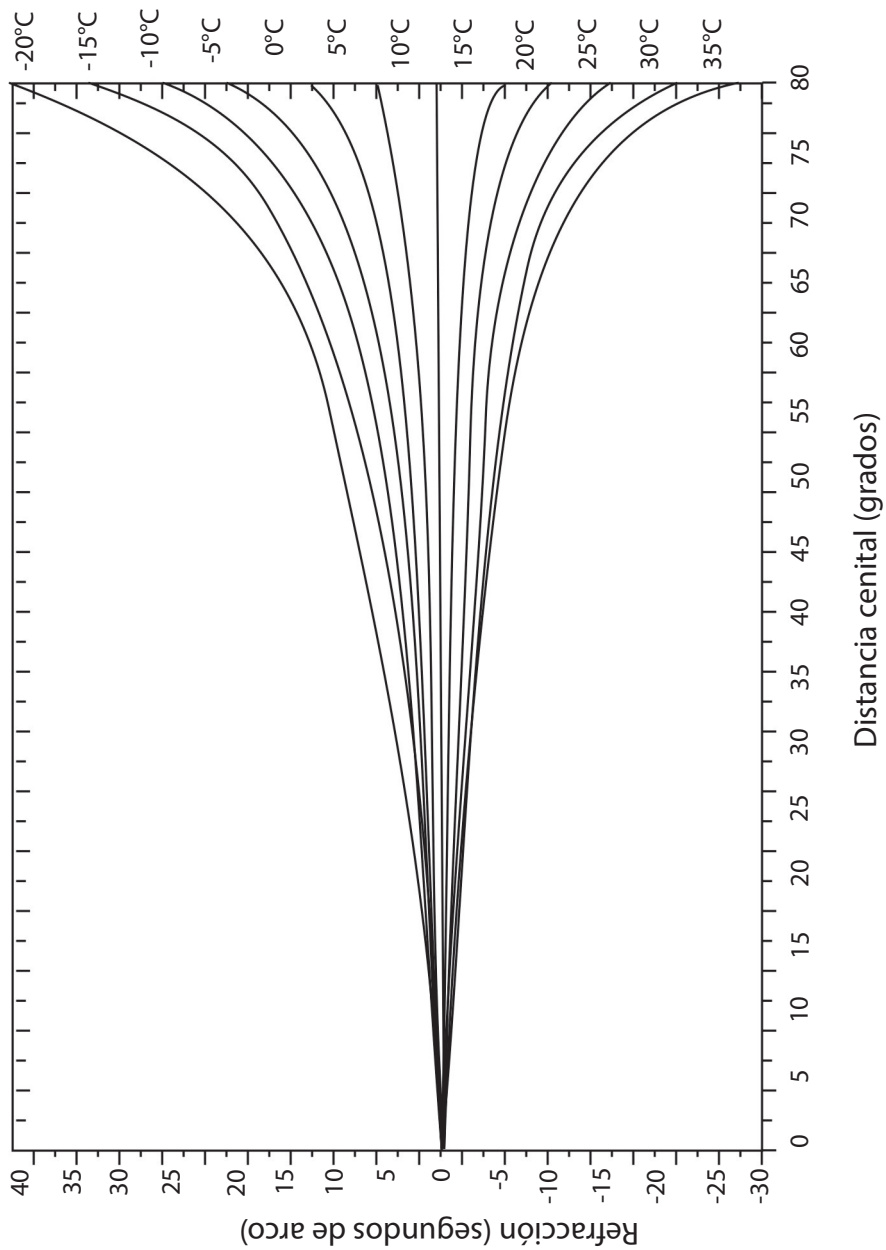
Con la gráfica de corrección por temperatura, se determina el valor en segundos de arco, que se deberá sumar algebraicamente a la refracción media. Cada curva corresponde a las temperaturas, en grados centígrados, señaladas al extremo derecho de cada una de ellas.

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.

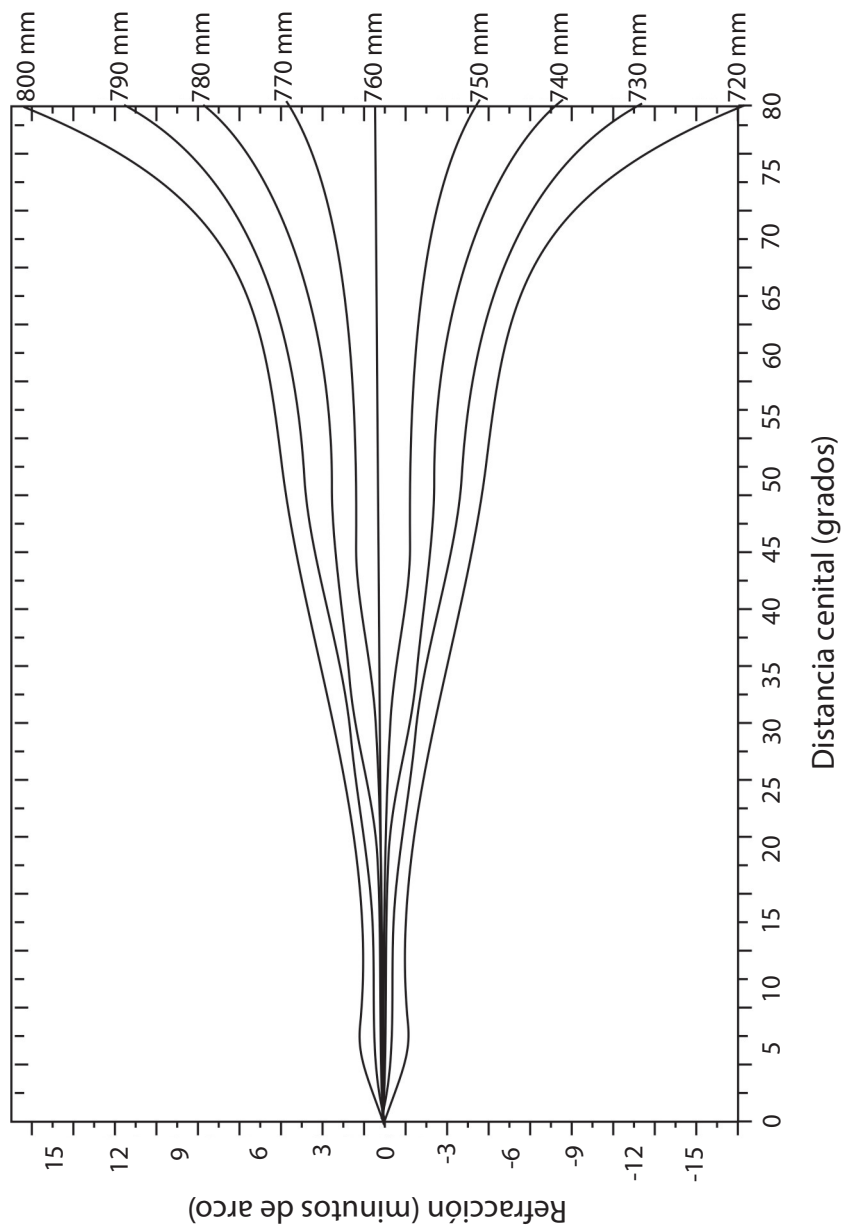
Corrección por distancia cenital



Corrección por temperatura



Corrección por presión



Abreviaturas

Dia 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.

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

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

Septuagésima. 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

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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