

Sky this Month

February 2026

By David Mills

MOON

FULL MOON

Moon

- The full Moon is on February 1st, at 5:09 p.m.
- Moonrise on February 1st is at 5:11 p.m. in the northeastern sky.
- This month's full moon is called the Snow Moon.

Moon



Type: moon

Magnitude: -13.01 (reduced to -8.68 by 33.94 Airmasses)

Absolute Magnitude: 0.21

Mean Opposition Magnitude: -12.74

RA/Dec (J2000.0): 9h06m28.53s/+18°27'11.6"

RA/Dec (on date): 9h07m57.32s/+18°20'54.2"

HA/Dec: 16h44m57.45s/+18°42'53.7" (apparent)

Az./Alt.: +63°44'36.9"+0°20'55.5" (apparent)

Gal. long./lat.: +209°55'51.4"/+37°50'28.4"

Supergal. long./lat.: +71°08'10.3"/-42°56'44.5"

Ecl. long./lat. (J2000.0): +133°36'42.2"/+1°47'26.1"

Ecl. long./lat. (on date): +133°58'42.0"/+1°47'40.3"

Ecliptic obliquity (on date): +23°26'09.2"

Mean Sidereal Time: 1h51m29.0s

Apparent Sidereal Time: 1h51m29.4s

Rise: 17h12m

Transit: —

Set: 7h36m

Parallactic Angle: -42°39'45.3"

IAU Constellation: Cnc

Zodiac: ♈ 16°59'

Hourly motion: +0°37'56" towards 104.1°

Hourly motion: da=+0°38'37" dδ=-0°09'44"

Elongation: 177°59'28.4"

Elong. in Ecl. Long.: W179°05'29"

Phase angle: +2°00'13.4"

Illuminated: 100.0%

Distance from Sun: 0.988 AU (147.788 M km)

Distance: 0.002482 AU (371375.742 km)

Light time: 0h00m01.2s

Orbital velocity: 1.063 km/s

Heliocentric velocity: 31.280 km/s

Sidereal period: 27.32 days (0.075 a)

Synodic period: 29.53 days (0.081 a)

Apparent diameter: +0°32'09.92"

Diameter: 3474.8 km

Sidereal day: 655h43m11.6s

Mean solar day: 708h44m02.9s

Equatorial rotation velocity: 4.624 m/s

Moon age: 14.8 days old (Full Moon)

Position angle of bright limb: +43°48'40"

Position Angle of axis: +15°20'57"

Libration: +5°23'54" towards +56°39'07" (WSW!!)

Libration: +4°30'34"/-2°58'03"

Subsolar point: +4°23'49"/-0°41'10"

Colongitude: +85°36'11"

Albedo: 0.12

Solar Az./Alt.: +245°44'54"/+0°42'54"



REGULUS OCCULTATION

Moon – Regulus Occultation – Very Rare

- On February 2nd, the Moon occults Regulus in Leo the Lion.
- At sunset, the moon can be seen moving directly towards the star.
- At 8:35 p.m. in the southeastern sky the Moon begins its final approach to Regulus. From Peterborough we have a full Lunar Occultation lasting 1 hour from 8:48 p.m. to 9:53 p.m.
- This will not happen again for another 30 years.

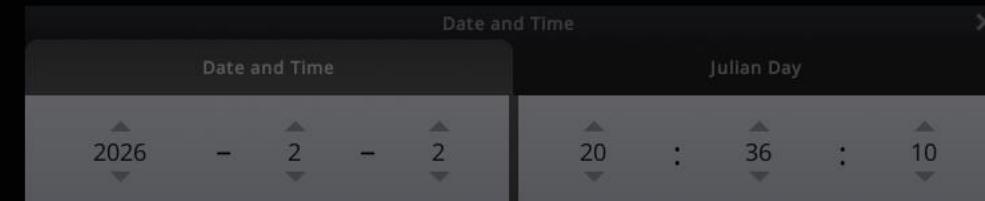
Moon



Type: moon
Magnitude: -12.44 (reduced to -12.07 by 2.86 Airmasses)
Absolute Magnitude: 0.21
Mean Opposition Magnitude: -12.74
RA/Dec (J2000.0): 10h07m09.62s/+12°11'21.1"
RA/Dec (on date): 10h08m33.95s/+12°03'41.0"
HA/Dec: 19h07m29.52s/+12°05'29.4" (apparent)
Az./Alt.: +92°57'17.7"+20°27'07.0" (apparent)
Gal. long./lat.: +225°55'10.9"+48°46'29.2"
Supergal. long./lat.: +88°50'05.3"-34°53'26.1"
Ecl. long./lat. (J2000.0): +149°28'25.9"+0°34'07.4"
Ecl. long./lat. (on date): +149°50'25.6"+0°34'17.0"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h15m55.1s
Apparent Sidereal Time: 5h15m55.6s
Rise: 18h30m
Transit: 0h46m
Set: 8h04m
Parallactic Angle: -46°57'59.9"
IAU Constellation: Leo
Zodiac: Λ 2°8'
Hourly motion: +0°30'57" towards 114.0°
Hourly motion: da=+0°28'49" dδ=-0°12'50"
Elongation: 164°22'28.7"
Elong. in Ecl.Long.: W164°23'05"
Phase angle: +15°35'10.8"
Illuminated: 98.2%
Distance from Sun: 0.988 AU (147.806 M km)
Distance: 0.002499 AU (373887.718 km)
Light time: 0h00m01.2s
Orbital velocity: 1.049 km/s
Heliocentric velocity: 31.239 km/s
Sidereal period: 27.32 days (0.075 a)
Synodic period: 29.53 days (0.081 a)
Apparent diameter: +0°31'56.95"
Diameter: 3474.8 km
Sidereal day: 655h43m11.6s
Mean solar day: 708h44m02.9s
Equatorial rotation velocity: 4.624 m/s
Moon age: 16.0 days old (Waning Gibbous)
Position angle of bright limb: +108°33'14"
Position Angle of axis: +18°56'29"
Libration: +5°28'05" towards +77°26'27" (WSW!!)
Libration: +5°20'14"/-1°11'21"
Subsolar point: -9°25'02"/-0°39'08"
Colongitude: +99°25'02"
Albedo: 0.12
Solar Az./Alt.: +280°44'05"/-34°26'26"



Regulus



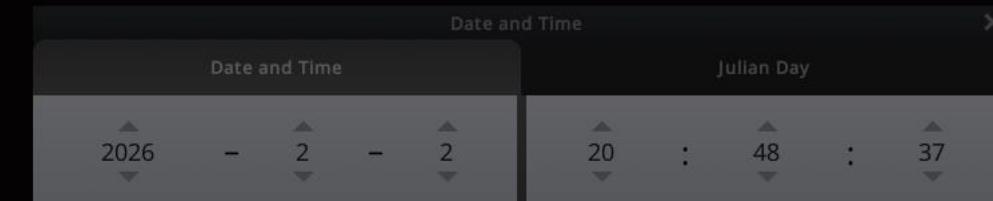
Moon

- On February 2nd, the Moon occults Regulus in Leo the Lion.
- At sunset, the moon can be seen moving directly towards the star.
- We have a full Lunar Occultation lasting 1 hour from 8:48 p.m. to 9:53 p.m.

Moon



Type: moon
Magnitude: -12.44 (reduced to -12.10 by 2.60 Airmasses)
Absolute Magnitude: 0.21
Mean Opposition Magnitude: -12.74
RA/Dec (J2000.0): 10h07m33.19s/+12°08'41.2"
RA/Dec (on date): 10h08m57.49s/+12°01'00.7"
HA/Dec: 19h19m34.55s/+12°02'38.5" (apparent)
Az./Alt.: +95°09'45.4"/+22°34'33.7" (apparent)
Gal. long./lat.: +226°02'48.6"/+48°50'21.9"
Supergal. long./lat.: +88°56'20.8"/-34°49'42.3"
Ecl. long./lat. (J2000.0): +149°34'45.7"/+0°33'38.9"
Ecl. long./lat. (on date): +149°56'45.4"/+0°33'48.5"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h28m24.5s
Apparent Sidereal Time: 5h28m24.9s
Rise: 18h30m
Transit: 0h46m
Set: 8h04m
Parallactic Angle: -46°47'18.6"
IAU Constellation: Leo
Zodiac: ♈ 2°14'
Hourly motion: +0°30'27" towards 114.5°
Hourly motion: da=+0°28'13" dδ=-0°12'53"
Elongation: 164°16'41.9"
Elong. in Ecl.Long.: W164°17'17"
Phase angle: +15°40'56.8"
Illuminated: 98.1%
Distance from Sun: 0.988 AU (147.806 M km)
Distance: 0.002498 AU (373708.583 km)
Light time: 0h00m01.2s
Orbital velocity: 1.049 km/s
Heliocentric velocity: 31.238 km/s
Sidereal period: 27.32 days (0.075 a)
Synodic period: 29.53 days (0.081 a)
Apparent diameter: +0°31'57.87"
Diameter: 3474.8 km
Sidereal day: 655h43m11.6s
Mean solar day: 708h44m02.9s
Equatorial rotation velocity: 4.624 m/s
Moon age: 16.0 days old (Waning Gibbous)
Position angle of bright limb: +108°36'53"
Position Angle of axis: +18°57'47"
Libration: +5°28'10" towards +77°35'34" (WSW!!)
Libration: +5°20'30"/-1°10'31"
Subsolar point: 9°31'20"/-0°39'07"
Colongitude: +99°31'20"
Albedo: 0.12
Solar Az./Alt.: +283°14'33"/-36°37'07"



Moon

- 3rd Contact, at 9:52 the star Regulus reemerges from behind the moon.
- 2 minutes later we have 4th contact. The occultation is over.
- This will not happen for another 30 years. According to NASA.

Moon



Type: moon
Magnitude: -12.43 (apparent)
Absolute Magnitude: 1.2
Mean Observed Magnitude: -12.74
RA/Dec (J2000.0): 10h10m27.24s+11°54'45.3"
RA/Dec (on date): 10h10m51.42s+11°47'02.7"
IAU/Dec 20h24m18.42s/+11°48'07.9" (apparent)
Az/Alt: +107°25'01.7"/+39°15'40.6" (apparent)
Gal/long./lat.: +226°46'28.0"/+49°08'33.6"
Supergal/long./lat.: +80°27'35.3"/-34°32'02.9"
Ecl. long./lat. (J2000.0): +150°05'46.1"/+0°30'24.3"
Ecliptic obliquity (on date): 0.49000000000000004
Mean Sidereal Time (on date): 10h23m00.0s
Apparent Sidereal Time (on date): 10h23m00.0s
Rise: 18h30m
Transit: 0h46m
Set: 8h04m
Parallactic Angle: -44°14'10.0"
IAU Constellation: Leo
Zodiac: III 2°42'
Hourly motion: +0°28'16" towards +117.5°
Hourly motion: due +0°25'29" db -0°18'17"
Elongation: 163°48'32.4"
Elong: in EclLong.: W163°49'00"
Phase angle: +16°05'02.5"
Illuminated: 99.0%
Distance from Sun: 0.988 AU (147,506 M km)
Distance: 0.002492 AU (372886.951 km)
Luminance: 6600m01.2s
Orbital velocity: 1.048 km/s
Heliocentric velocity: 31.235 km/s
Sidereal period: 27.32 days (0.075 a)
Synodic period: 29.53 days (0.081 a)
Apparent diameter: +0°32'02.20"
Diameter: 3474.8 km
Sidereal day: 655h43m11.6s
Mean solar day: 708h44m02.9s
Equatorial rotation velocity: 4.624 m/s
Moon age: 100 days old (Waning Gibbous)
Position angle of bright limb: +108°57'12"
Position Angle of axis: +1°04'21"
Inclination: +28°37" towards +79°22'19" (WSW)
Longitude: +10°21'53" 17°00'14"
Latitude: +18°44'41" 18°00'00"
Ecliptic longitude: +150°05'46.1" 0°30'24.3"
Ecliptic latitude: +0°30'24.3" 0°00'00"



NEW MOON

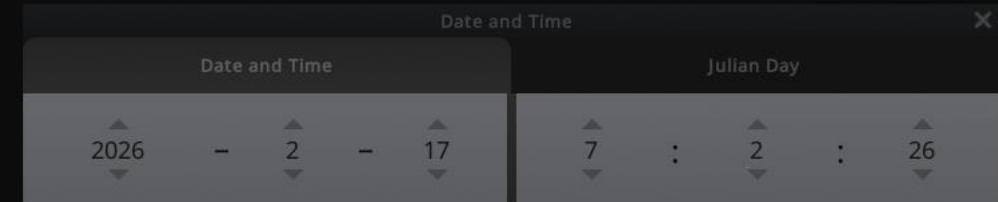
Moon

- The New Moon is on February 17th, at 7:01 a.m.
- This month's moon is the New Worm Moon.
- The Moon is south of the sun.

Moon



Type: moon
Magnitude: -2.92
Absolute Magnitude: 0.21
Mean Opposition Magnitude: -12.74
RA/Dec (J2000.0): 22h06m35.89s/-13°32'18.5"
RA/Dec (on date): 22h08m00.78s/-13°24'38.5"
HA/Dec: 18h31m05.78s/-13°24'38.5"
Az./Alt.: +104°58'48.0"/-3°53'18.3"
Gal. long./lat.: +43°59'18.8"/-49°15'36.1"
Supergal. long./lat.: +267°19'40.4"/+34°20'29.7"
Ecl. long./lat. (J2000.0): +328°52'21.6"/-1°47'04.1"
Ecl. long./lat. (on date): +329°14'23.5"/-1°47'14.0"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 16h39m06.1s
Apparent Sidereal Time: 16h39m06.6s
Rise: 7h21m
Transit: 12h39m
Set: 18h09m
Parallactic Angle: -45°15'18.9"
IAU Constellation: Aqr
Zodiac: 00 2°0'
Hourly motion: +0°30'48" towards 67.9°
Hourly motion: da=+0°29'13" dδ=+0°11'52"
Elongation: 1°49'43.3"
Elong. in Ecl.Long.: E0°24'11"
Phase angle: +178°09'59.5"
Illuminated: 0.0%
Distance from Sun: 0.986 AU (147.449 M km)
Distance: 0.002573 AU (384862.168 km)
Light time: 0h00m01.3s
Orbital velocity: 1.028 km/s
Heliocentric velocity: 29.118 km/s
Sidereal period: 27.32 days (0.075 a)
Synodic period: 29.53 days (0.081 a)
Apparent diameter: +0°31'02.29"
Diameter: 3474.8 km
Sidereal day: 655h43m11.6s
Mean solar day: 708h44m02.9s
Equatorial rotation velocity: 4.624 m/s
Moon age: 0.0 days old (New Moon)
Position angle of bright limb: -33°18'46"
Position Angle of axis: +341°05'18"
Libration: +5°11'13" towards +256°01'07" (ENE!!)
Libration: -5°02'00"/+1°15'12"
Subsolar point: +174°56'12"/-0°19'27"
Colongitude: +275°03'48"
Albedo: 0.12
Solar Az./Alt.: +104°36'01"/-2°05'58"



Moon

- The planets Mercury and Venus are southeast of the sun.
- Both planets are moving east and slowly rising out of the solar glare at sunset.
- Mars is still in solar conjunction and not visible this month.

Moon



Type: moon
Magnitude: -2.92
Absolute Magnitude: 0.21
Mean Opposition Magnitude: -12.74
RA/Dec (J2000.0): 22h06m46.11s/-13°31'15.9"
RA/Dec (on date): 22h08m10.99s/-13°23'35.7"
HA/Dec: 18h36m13.39s/-13°23'35.7"
Az/Alt.: +105°50'53.3"/-2°59'30.5"
Gal. long./lat.: +44°02'25.3"/-49°17'22.4"
Supergal. long./lat.: +267°22'16.4"/+34°18'52.2"
Ecl. long./lat. (J2000.0): +328°55'03.1"/-1°46'57.7"
Ecl. long./lat. (on date): +329°17'05.0"/-1°47'07.6"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 16h44m23.9s
Apparent Sidereal Time: 16h44m24.4s
Rise: 7h21m
Transit: 12h39m
Set: 18h09m
Parallactic Angle: -44°57'56.8"
IAU Constellation: Aqr
Zodiac: 00 2°2'
Hourly motion: +0°30'36" towards 67.7°
Hourly motion: da=+0°28'59" dδ=+0°11'53"
Elongation: 1°50'11.3"
Elong. in Ecl.Long.: E0°26'39"
Phase angle: +178°09'31.4"
Illuminated: 0.0%
Distance from Sun: 0.986 AU (147.449 M km)
Distance: 0.002572 AU (384748.009 km)
Light time: 0h00m01.3s
Orbital velocity: 1.028 km/s
Heliocentric velocity: 29.117 km/s
Sidereal period: 27.32 days (0.075 a)
Synodic period: 29.53 days (0.081 a)
Apparent diameter: +0°31'02.84"
Diameter: 3474.8 km
Sidereal day: 655h43m11.6s
Mean solar day: 708h44m02.9s
Equatorial rotation velocity: 4.624 m/s
Moon age: 0.0 days old (New Moon)
Position angle of bright limb: -34°35'12"
Position Angle of axis: +341°04'46"
Libration: +5°11'09" towards +256°04'48" (ENE!!)
Libration: -5°02'01"/+1°14'51"
Subsolar point: +174°53'31"/-0°19'27"
Colongitude: +275°06'29"
Albedo: 0.12
Solar Az./Alt.: +105°30'53"/-1°11'09"



MERCURY

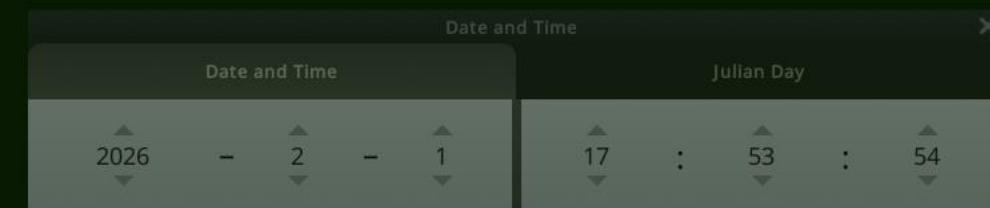
Mercury

- On February 1st, Mercury is still deep in the solar glare at sunset.
- Mercury is just 2 degrees above the western horizon at sunset.
- By February 8th Mercury is higher on the western horizon rising out of the sun's glare. As the days get longer this offsets Mercury's eastward ascent.

Mercury



Type: **planet**
Magnitude: -1.23 (reduced to 2.56 by 29.23 Airmasses)
Absolute Magnitude: -0.60
RA/Dec (J2000.0): 21h35m12.75s/-16°16'55.0"
RA/Dec (on date): 21h36m39.55s/-16°09'54.7"
HA/Dec: 4h51m22.34s/-15°50'42.4" (apparent)
Az/Alt.: +24°49'08.1"/+0°42'38.9" (apparent)
Gal. long./lat.: +35°52'39.1"/-43°26'46.6"
Supergal. long./lat.: +259°14'55.7"/+39°09'23.0"
Eq. long./lat. (J2000.0): +320°48'23.8"/-1°49'07.7"
Eq. long./lat. (on date): +321°0'23.7"/-1°49'19.9"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 2h29m16.5s
Apparent Sidereal Time: 2h29m16.9s
Rise: 8h04m
Transit: 13h01m
Set: 17h59m
Parallactic Angle: +43°08'55.8"
IAU Constellation: Cap
Zodiac: ≈ 24°9'
Hourly motion: +0°04'25" towards 69.6"
Hourly motion: da=+0°04'18" dδ=+0°01'36"
Elongation: 8°16'40.8"
Elong. in Eq. Long.: 88°04'36"
Phase angle: +22°03'30.4"
Illuminated: 96.3%
Distance from Sun: 0.378 AU (56.516 M km)
Distance: 1.325 AU (198.262 M km)
Light time: 0h11m01.3s
Orbital velocity: 49.038 km/s
Sidereal period: 87.97 days (0.241 a)
Synodic period: 115.88 days (0.317 a)
Apparent diameter: +0°00'05.08"
Equatorial diameter: 4881.1 km
Sidereal day: 1407h30m27.0s
Mean solar day: 4222h26m51.1s
Equatorial rotation velocity: 3.026 m/s
Position Angle of axis: +340°51'28"
Center point: L_c=+9°11'52" φ_c=-5°12'37"
Subsolar point: L_s=+347°43'44" φ_s=-0°01'28"
Albedo: 0.06
Solar Az./Alt.: +252°13'13"/-6°00'35"
Lunar Az./Alt.: +70°01'14"/+5°52'42"



Mercury

- On February 8th, Mercury is only 5 degrees over the western horizon at sunset. Still within the solar glare at twilight.

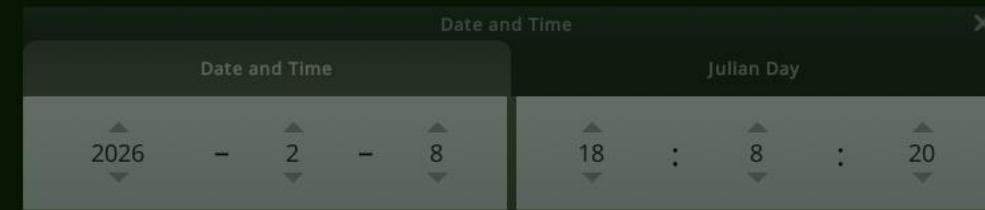
Mercury



Type: **planet**
Magnitude: -1.14 (reduced to **0.25** by **10.65** Airmasses)
Absolute Magnitude: -0.60
RA/Dec (J2000.0): 22h21m55.16s/-11°20'30.1"
RA/Dec (on date): 22h23m18.84s/-11°12'34.5"
HA/Dec: 4h47m34.09s/-11°05'13.4" (apparent)
Az./Alt.: +249°23'48.7"/-4°49'03.7" (apparent)
Gal. long./lat.: +49°46'41.5"/-51°32'34.6"
Supergal. long./lat.: +271°46'04.0"/+32°06'00.5"
Ecl. long./lat. (J2000.0): +333°09'04.5"/-1°03'51.1"
Ecl. long./lat. (on date): +333°31'04.7"/-1°03'59.5"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 3h11m20.5s
Apparent Sidereal Time: 3h11m21.0s
Rise: 8h02m
Transit: 13h20m
Set: 18h39m
Parallactic Angle: +43°03'05.8"
IAU Constellation: Aqr
Zodiac: 00 5°49'
Hourly motion: +0°04'19" towards 64.1"
Hourly motion: da=+0°03'57" dδ=+0°01'55"
Elongation: 13°21'33.3"
Elong. in Ecl.Long.: E13°19'03"
Phase angle: +42°21'34.9"
Illuminated: 86.9%
Distance from Sun: 0.338 AU (50,611 M km)
Distance: 1.210 AU (180,992 M km)
Light time: 0h10m03.7s
Orbital velocity: 54,338 km/s
Sidereal period: 87.97 days (0.241 a)
Synodic period: 115.88 days (0.317 a)
Apparent diameter: +0°00'05.56"
Equatorial diameter: 4881.1 km
Sidereal day: 1407h30m27.0s
Mean solar day: 4222h26m51.1s
Equatorial rotation velocity: 3.026 m/s
Position Angle of axis: +36°53'56"
Center point: $L_c=+39°49'22"$ $\phi_c=-5°44'00"$
Subsolar point: $L_s=+357°48'50"$ $\phi_s=0°00'27"$
Albedo: 0.06
Solar Az./Alt.: +256°06'23"/-6°54'35"
Lunar Az./Alt.: +17°45'22"/-65°47'22"



Venus



Mercury

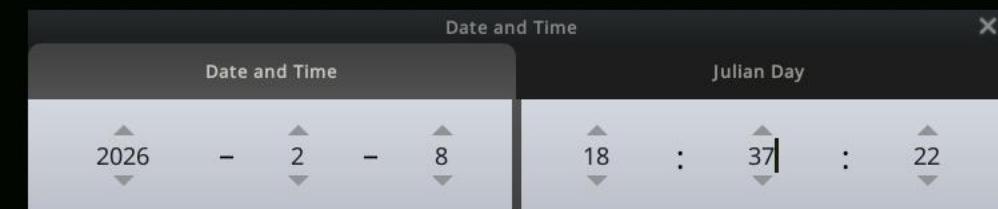
- On February 8th, Mercury sets at 6:39 p.m. in the western sky.

Mercury



Type: planet
Magnitude: -1.14 (reduced to 3.37 by 35.52 Airmasses)
Absolute Magnitude: -0.60
RA/Dec (J2000.0): 22h22m02.81s/-11°19'34.7"
RA/Dec (on date): 22h23m26.49s/-11°11'39.0"
HA/Dec: 5h15m32.53s/-10°49'36.5" (apparent)
Az./Alt.: +254°32'00.5"/+0°14'50.3" (apparent)
Gal. long./lat.: +49°49'28.6"/-51°33'44.8"
Supergal. long./lat.: +271°48'02.4"/+32°04'45.1"
Ecl. long./lat. (J2000.0): +333°11'09.5"/-1°03'40.2"
Ecl. long./lat. (on date): +333°33'09.7"/-1°03'48.6"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 3h40m27.3s
Apparent Sidereal Time: 3h40m27.7s
Rise: 8h02m
Transit: 13h20m
Set: 18h39m
Parallactic Angle: +44°36'35.1"
IAU Constellation: Aqr
Zodiac: 06 5°51'
Hourly motion: +0°04'19" towards 64.1"
Hourly motion: da=+0°03'57" dδ=+0°01'55"
Elongation: 13°22'23.7"
Elong. in Ecl.Long.: E13°19'54"
Phase angle: +42°25'47.7"
Illuminated: 86.9%
Distance from Sun: 0.338 AU (50.596 M km)
Distance: 1.209 AU (180.932 M km)
Light time: 0h10m03.5s
Orbital velocity: 54.353 km/s
Sidereal period: 87.97 days (0.241 a)
Synodic period: 115.88 days (0.317 a)
Apparent diameter: +0°00'05.56"
Equatorial diameter: 4881.1 km
Sidereal day: 1407h30m27.0s
Mean solar day: 4222h26m51.1s
Equatorial rotation velocity: 3.026 m/s
Position Angle of axis: +336°53'21"
Center point: L_α=+39°54'42" φ_α=-5°44'07"
Subsolar point: L_α=+357°47'55" φ_α=-0°00'27"
Albedo: 0.06
Solar Az./Alt.: +261°00'44"/-11°59'43"
Lunar Az./Alt.: +32°16'11"/-63°45'33"

Mercury



Mercury

- On February 18th, Mercury and a young 1 day old Moon share a close conjunction in the western evening sky at sunset.
- On the same evening the planets Saturn, Mercury, Moon and Venus all share a wide conjunction and form a curved short line in the evening twilight sky looking west.

Mercury



Type: planet
Magnitude: -0.52 (reduced to 0.26 by 6.06 Airmasses)
Absolute Magnitude: -0.60
RA/Dec (J2000.0): 23h14m22.55s/-3°49'30.9"
RA/Dec (on date): 23h15m43.84s/-3°40'56.1"
HA/Dec: 4h53m24.55s/-3°36'46.7" (apparent)
Az./Alt.: +255°38'24.9"/+9°14'33.7" (apparent)
Gal. long./lat.: +73°50'52.6"/-57°08'13.4"
Supergal. long./lat.: +285°14'05.2"/+22°58'22.4"
Ecl. long./lat. (J2000.0): +348°01'04.5"/+0°59'24.7"
Ecl. long./lat. (on date): +348°23'05.6"/+0°59'21.4"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 4h09m24.0s
Apparent Sidereal Time: 4h09m24.5s
Rise: 7h46m
Transit: 13h33m
Set: 19h22m
Parallactic Angle: +44°00'15.4"
IAU Constellation: Aqr
Zodiac: 06 18°55'
Hourly motion: +0°02'46" towards 53.9"
Hourly motion: da=+0°02'15" dδ=+0°01'38"
Elongation: 18°05'19.9"
Elong. in Ecl.Long.: E18°03'45"
Phase angle: +86°17'25.2"
Illuminated: 53.2%
Distance from Sun: 0.308 AU (46,012 M km)
Distance: 0.960 AU (143,548 M km)
Light time: 0h07m58.8s
Orbital velocity: 58.965 km/s
Sidereal period: 87.97 days (0.241 a)
Synodic period: 115.88 days (0.317 a)
Apparent diameter: +0°00'07.01"
Equatorial diameter: 4881.1 km
Sidereal day: 1407h30m27.0s
Mean solar day: 4222h26m51.1s
Equatorial rotation velocity: 3.026 m/s
Position Angle of axis: +333°30'04"
Center point: L_a=+86°15'06" φ_a=-7°05'22"
Subsolar point: L_s=+359°59'43" φ_s=+0°01'29"
Albedo: 0.06
Solar Az./Alt.: +261°47'15"/-7°52'28"
Lunar Az./Alt.: +255°28'55"/+8°23'57"



Mercury

- On February 28th, Mercury forms a small triangle with Saturn and Venus.
- All 3 planets are low on the western horizon at sunset. Mercury and Venus are low in the solar glare at sunset.
- Venus sets first then Mercury sets at 7:04 p.m. in the western sky.

Mercury

Type: planet
Magnitude: 1.96 (reduced to 4.21 by 17.15 Airmasses)
Absolute Magnitude: -0.60
RA/Dec (J2000.0): 23h23m57.71s/-0°18'09.7"
RA/Dec (on date): 23h25m18.63s/-0°09'30.1"
HA/Dec: 5h46m26.40s/+0°01'41.7" (apparent)
Az./Alt.: +267°39'04.2"/-2°26'42.9" (apparent)
Gal. long./lat.: +81°15'32.8"/-55°55'43.0"
Supergal. long./lat.: +289°39'24.9"/+21°46'47.7"
Ecl. long./lat. (J2000.0): +351°36'13.8"/+3°17'35.1"
Ecl. long./lat. (on date): +351°58'15.5"/+3°17'33.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h12m30.4s
Apparent Sidereal Time: 5h12m30.8s
Rise: 7h04m
Transit: 13h05m
Set: 19h06m
Parallactic Angle: +45°39'02.1"
IAU Constellation: Psc
Zodiac: 06 21°19'
Hourly motion: +0°01'08" towards 266.8"
Hourly motion: da=-0°01'08" dδ=-0°00'04"
Elongation: 12°01'18.7"
Elong. in Ecl.Long.: E11°34'05"
Phase angle: +141°47'34.9"
Illuminated: 10.7%
Distance from Sun: 0.334 AU (49.910 M km)
Distance: 0.707 AU (105.740 M km)
Light time: 0h05m52.7s
Orbital velocity: 55.012 km/s
Sidereal period: 87.97 days (0.241 a)
Synodic period: 115.88 days (0.317 a)
Apparent diameter: +0°00'09.52"
Equatorial diameter: 4881.1 km
Sidereal day: 1407h30m27.0s
Mean solar day: 4222h26m51.1s
Equatorial rotation velocity: 3.026 m/s
Position Angle of axis: +332°53'20"
Center point: $L_c=+143^\circ58'46''$ $\phi_c: -9^\circ09'19''$
Subsolar point: $L_s=+1^\circ14'57''$ $\phi_s: +0^\circ01'58''$
Albedo: 0.06
Solar Az./Alt.: +268°48'25"/-9°47'18"
Lunar Az./Alt.: +99°54'38"/+38°55'56"



VENUS

Venus

- On February 1st, Venus is still deep in the solar glare at sunset.
- The planet is only a few degrees above the western horizon at sunset.
- By February 12th, Venus rises high enough to shine through the solar glare at twilight.
- As the days get longer Venus needs more time to escape the sun's glare.

Venus - Evening Star



Type: planet
Magnitude: -3.90 (reduced to -0.70 by 24.51 Airmasses)
Absolute Magnitude: -5.18
Color Index (B-V): 0.91
RA/Dec (J2000.0): 22h21m15.34s/-11°49'57.9"
RA/Dec (on date): 22h22m39.23s/-11°42'02.7"
HA/Dec: 5h07m28.34s/-1°25'56.1" (apparent)
Az./Alt.: +252°41'43.8"/+1°2'00.0" (apparent)
Gal. long./lat.: +48°57'39.9"/-51°38'32.1"
Supergal. long./lat.: +271°09'52.2"/+32°01'18.0"
Ed. long./lat. (J2000.0): +332°49'19.3"/-1°27'47.6"
Ed. long./lat. (on date): +333°11'20.4"/-1°27'56.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 3h31m11.2s
Apparent Sidereal Time: 3h31m11.6s
Rise: 7h48m
Transit: 13h04m
Set: 18h21m
Parallactic Angle: +44°11'49.5"
IAU Constellation: Aqr
Zodiac: 00° 5'39"
Hourly motion: +0°03'08" towards 69.2"
Hourly motion: da=+0°02'59" dδ=+0'01'08"
Elongation: 9°03'21.8"
Elong. in Ed.Long.: 88°56'16"
Phase angle: +12°20'08.1"
Illuminated: 98.8%
Distance from Sun: 0.727 AU (108,820 M km)
Distance: 1.686 AU (252,165 M km)
Light time: 0h14m01.1s
Orbital velocity: 34.824 km/s
Sidereal period: 224.70 days (0.615 a)
Synodic period: 583.92 days (1.599 a)
Apparent diameter: +0°00'09.90"
Equatorial diameter: 12103.6 km
Sidereal day: 5832h26m37.0s
Mean solar day: 2802h00m22.2s
Equatorial rotation velocity: 1.811 m/s
Position Angle of axis: +339°47'16"
Center point: L_e=+81°34'33" φ_e=+0°47'39"
Subsolar point: L_s=+93°47'40" φ_s=+2°31'09"
Albedo: 0.77
Solar Az./Alt.: +257°44'33"/-6°42'04"
Lunar Az./Alt.: +283°54'42"/-55°32'51"



Venus



Venus

- On February 28th, Venus is low on the western horizon at sunset.
- On the same evening Venus and Mercury share a close conjunction in the evening western sky at sunset.
- The planet Saturn forms a triple conjunction and small triangle in the western sky at sunset.

Venus - Evening Star



Type: planet
Magnitude: -3.90 (reduced to -1.53 by 18.06 Airmasses)
Absolute Magnitude: -5.18
Color Index (B-V): 0.91
RA/Dec (J2000.0): 23h35m53.02s/-4°05'13.5"
RA/Dec (on date): 23h37m14.20s/-3°56'30.0"
HA/Dec: 5h32m44.74s/-3°44'40.0" (apparent)
Az/Alt.: +262°33'29.1"/+2°14'30.4" (apparent)
Gal. long./lat.: +81°34'52.3"/-60°44'27.8"
Supergal. long./lat.: +286°46'30.7"/+17°47'59.8"
Ecl. long./lat. (J2000.0): +352°50'51.8"/-1°21'32.6"
Ecl. long./lat. (on date): +353°12'55.2"/-1°21'34.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h10m46.5s
Apparent Sidereal Time: 5h10m46.9s
Rise: 7h28m
Transit: 13h15m
Set: 19h03m
Parallactic Angle: +45°19'51.9"
IAU Constellation: Aqr
Zodiac: 00 24°18'
Hourly motion: +0°03'07" towards 66.0"
Hourly motion: da=+0°02'51" dδ=+0°01'16"
Elongation: 12°53'03.2"
Elong. in Ecl.Long.: E12°48'49"
Phase angle: +17°43'09.6"
Illuminated: 97.6%
Distance from Sun: 0.726 AU (108.584 M km)
Distance: 1.657 AU (247.911 M km)
Light time: 0h13m46.9s
Orbital velocity: 34.899 km/s
Sidereal period: 224.70 days (0.615 a)
Synodic period: 583.92 days (1.599 a)
Apparent diameter: +0°00'10.07"
Equatorial diameter: 12103.6 km
Sidereal day: 5832h26m37.0s
Mean solar day: 2802h00m22.2s
Equatorial rotation velocity: 1.811 m/s
Position Angle of axis: +33°25'45"
Center point: $L_e = +125^\circ19'54"$ $\phi_e = +0^\circ22'24"$
Subsolar point: $L_s = +142^\circ59'05"$ $\phi_s = +1^\circ56'15"$
Albedo: 0.77
Solar Az./Alt.: +268°30'22"/-9°28'47"
Lunar Az./Alt.: +99°34'22"/+38°38'22"



Venus

- On February 28th, Venus sets at 7:02 p.m. in the western sky.

Venus - Evening Star



Type: planet
Magnitude: -3.90 (reduced to 0.83 by 37.58 Airmasses)
Absolute Magnitude: -5.18
Color Index (B-V): 0.91
RA/Dec (J2000.0): 23h35m55.56s/-4°04'56.6"
RA/Dec (on date): 23h37m16.74s/-3°56'13.0"
HA/Dec: 5h45m22.02s/-3°33'35.0" (apparent)
Az./Alt.: +264°53'56.0"/+0°07'36.4" (apparent)
Gal. long./lat.: +81°36'15.6"/-60°44'36.6"
Supergal. long./lat.: +286°47'00.0"/+17°47'28.9"
Ecl. long./lat. (J2000.0): +352°51'33.4"/-1°21'32.1"
Ecl. long./lat. (on date): +353°13'36.9"/-1°21'33.6"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h24m10.9s
Apparent Sidereal Time: 5h24m11.4s
Rise: 7h28m
Transit: 13h15m
Set: 19h03m
Parallactic Angle: +45°34'49.8"
IAU Constellation: Aqr
Zodiac: 00 24°19'
Hourly motion: +0°03'07" towards 66.0°
Hourly motion: da=+0°02'51" dδ=+0°01'16"
Elongation: 12°53'11.1"
Elong. in Ecl.Long.: E12°48'57"
Phase angle: +17°43'21.0"
Illuminated: 97.6%
Distance from Sun: 0.726 AU (108.584 M km)
Distance: 1.657 AU (247.908 M km)
Light time: 0h13m46.9s
Orbital velocity: 34.899 km/s
Sidereal period: 224.70 days (0.615 a)
Synodic period: 583.92 days (1.599 a)
Apparent diameter: +0°00'10.07"
Equatorial diameter: 12103.6 km
Sidereal day: 5832h26m37.0s
Mean solar day: 2802h00m22.2s
Equatorial rotation velocity: 1.811 m/s
Position Angle of axis: +33°25'43"
Center point: L_e=+125°21'25" φ_e=+0°22'23"
Subsolar point: L_s=+143°00'47" φ_s=+1°56'14"
Albedo: 0.77
Solar Az./Alt.: +270°29'/-11°52'11"
Lunar Az./Alt.: +102°14'25"/+40°53'52"



MARS

Mars

- Mars is leaving solar conjunction and is not visible this month.
- Mars is close to the sun and sitting on the solar Azimuth all month.

JUPITER

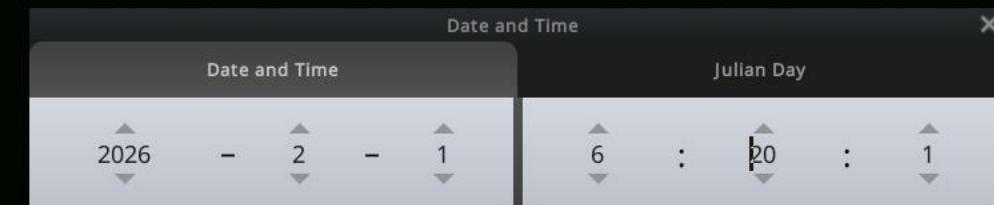
Jupiter

- On February 1st, Jupiter sets at 6:20 a.m. in the western sky at morning twilight.

Jupiter



Type: planet
Magnitude: -2.62 (reduced to 2.01 by 36.64 Airmasses)
Absolute Magnitude: -9.40
Mean Opposition Magnitude: -2.70
Color Index (B-V): 0.96
RA/Dec (J2000.0): 7h13m37.14s/+22°39'57.5"
RA/Dec (on date): 7h15m11.74s/+22°37'17.8"
HA/Dec: 7h36m47.87s/+23°01'21.8" (apparent)
Az./Alt.: +302°54'54.2"/+0°10'48.3" (apparent)
Gal. long./lat.: +194°42'47.3"/+14°46'41.2"
Supergal. long./lat.: +33°19'53.0"/-51°21'21.5"
Ecl. long./lat. (J2000.0): +106°56'19.1"/+0°18'08.8"
Ecl. long./lat. (on date): +107°18'18.3"/+0°18'28.3"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 14h53m28.9s
Apparent Sidereal Time: 14h53m29.4s
Rise: 15h00m
Transit: 22h39m
Set: 6h21m
Parallactic Angle: +40°45'11.6"
IAU Constellation: Gem
Zodiac: ♈ 18°47'
Hourly motion: +0°00'16" towards 277.3°
Hourly motion: $d\alpha = 0^{\circ}00'18''$ $d\delta = +0^{\circ}00'02''$
Elongation: 154°41'33.1"
Elong. in Ecl.Long.: E154°41'39"
Phase angle: +4°37'31.8"
Illuminated: 99.8%
Distance from Sun: 5.223 AU (781.395 M km)
Distance: 4.315 AU (645.588 M km)
Light time: 0h35m53.4s
Orbital velocity: 13.012 km/s
Sidereal period: 4331.87 days (11.860 a)
Synodic period: 398.89 days (1.092 a)
Apparent diameter: +0°00'45.68"
Equatorial diameter: 142984.0 km
Sidereal day: 9h55m40.6s
Mean solar day: 9h55m44.0s
Equatorial rotation velocity: 12.568 km/s
Position Angle of axis: +8°45'44"
Center point: $L_{\text{Re}} = +121^{\circ}58'29'' \phi_e = +1^{\circ}25'17''$
Subsolar point: $L_{\text{Re}} = +117^{\circ}20'55'' \phi_e = +1^{\circ}21'21''$
Albedo: 0.51
Solar Az./Alt.: +101°13'32"/-12°59'31"
Lunar Az./Alt.: +287°55'12"/+11°22'46"



Jupiter

- On February 1st, Jupiter is well placed above the eastern horizon at sunset.

Jupiter



Type: planet
Magnitude: -2.62 (reduced to -2.32 by 2.32 Airmasses)
Absolute Magnitude: -9.40
Mean Opposition Magnitude: -2.70
Color Index (B-V): 0.96
RA/Dec (J2000.0): 7h13m24.03s/+22°40'24.1"
RA/Dec (on date): 7h14m58.64s/+22°37'45.0"
HA/Dec: 18h56m45.71s/+22°39'04.7" (apparent)
Az./Alt.: +82°30'38.4"/+25°31'26.9" (apparent)
Gal. long./lat.: +194°41'06.8"/+14°44'05.7"
Supergal. long./lat.: +33°14'59.5"/-51°21'17.6"
Ecl. long./lat. (J2000.0): +106°53'15.7"/+0°18'12.4"
Ecl. long./lat. (on date): +107°15'15.1"/+0°18'31.9"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 2h11m37.0s
Apparent Sidereal Time: 2h11m37.4s
Rise: 15h00m
Transit: 22h39m
Set: 6h21m
Parallactic Angle: -50°15'16.8"
IAU Constellation: Gem
Zodiac: ♈ 18°44'
Hourly motion: +0°00'17" towards 278.0°
Hourly motion: dα = -0°00'18" dδ = +0°00'02"
Elongation: 154°10'07.0"
Elong. in Ecl.Long.: E154°10'13"
Phase angle: +4°42'54.3"
Illuminated: 99.8%
Distance from Sun: 5.233 AU (781,420 M km)
Distance: 4.319 AU (646,088 M km)
Light time: 0.0559581 s
Critical velocity: 13.812 km/s
Minimum period: 4031.87 days (11.8604 d)
Apogee period: 368.96 days (1.0252 d)
Opposition diameter: +0°19'30.0"
Opposition distance: +0°46'03.0"
Opposition mag: +0.0000403
Opposition mag: +0.0000403
Equatorial rotation velocity: 12.568 km/s
Position Angle of axis: +8°44'23"
Center point: $L_{\text{II}} = +170^{\circ}43'25"$ $\phi_c = +1^{\circ}25'19"$
Subsolar point: $L_{\text{II}} = +166^{\circ}00'25"$ $\phi_s = +1^{\circ}21'15"$
Albedo: 0.51
Solar Az./Alt.: +249°13'29"/-2°32'32"
Lunar Az./Alt.: +67°06'51"/-3°10'34"

Julian Day

Jupiter

- On February 26th, Jupiter and the waxing Gibbous Moon share a wide conjunction at sunset in the southeastern sky.

Jupiter



Type: planet
Magnitude: -2.46 (reduced to -2.30 by 1.22 Airmasses)
Absolute Magnitude: -9.40
Mean Opposition Magnitude: -2.70
Color Index (B-V): 0.96
RA/Dec (J2000.0): 7h05m06.92s/+22°56'12.3"
RA/Dec (on date): 7h06m42.11s/+22°53'51.3"
HA/Dec: 21h46m31.26s/+22°54'21.3" (apparent)
Az./Alt.: +117°03'01.0"/+55°19'35.2" (apparent)
Gal. long./lat.: +193°38'22.5"/+13°05'46.8"
Supergal. long./lat.: +30°10'06.7"/-51°16'31.5"
Ecl. long./lat. (J2000.0): +104°57'38.0"/+0°20'20.2"
Ecl. long./lat. (on date): +105°19'40.6"/+0°20'40.3"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 4h53m10.8s
Apparent Sidereal Time: 4h53m11.3s
Rise: 13h12m
Transit: 20h52m
Set: 4h36m
Parallactic Angle: -43°47'09.1"
IAU Constellation: Gem
Zodiac: ♈ 16°40'
Hourly motion: +0°00'06" towards 277.8"
Hourly motion: $d\alpha = -0^{\circ}00'07"$ $d\delta = +0^{\circ}00'01"$
Elongation: 126°56'26.8"
Elong. in Ecl.Long.: E126°56'29"
Phase angle: +8°41'59.7"
Illuminated: 99.4%
Distance from Sun: 5.232 AU (782.771 M km)
Distance: 4.577 AU (684.734 M km)
Light time: 0h38m04.0s
Orbital velocity: 12.989 km/s
Sidereal period: 4331.87 days (11.860 a)
Synodic period: 398.89 days (1.092 a)
Apparent diameter: +0°00'43.07"
Equatorial diameter: 142984.0 km
Sidereal day: 9h55m40.6s
Mean solar day: 9h55m44.0s
Equatorial rotation velocity: 12.568 km/s
Position Angle of axis: +7°53'30"
Center point: $L_{\text{IIe}} = +6^{\circ}04'22"$ $\phi_e = +1^{\circ}25'57"$
Subsolar point: $L_{\text{IIe}} = +357^{\circ}22'20"$ $\phi_e = +1^{\circ}15'06"$
Albedo: 0.51
Solar Az./Alt.: +266°12'37"/-8°12'28"
Lunar Az./Alt.: +116°16'26"/+60°54'04"



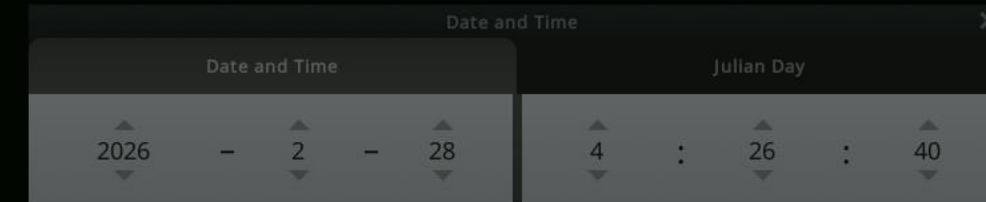
Jupiter

- On February 28th, Jupiter sets at 4:26 a.m. the northwestern sky.

Jupiter



Type: planet
Magnitude: -2.44 (reduced to 2.20 by 36.82 Airmasses)
Absolute Magnitude: -9.40
Mean Opposition Magnitude: -2.70
Color Index (B-V): 0.96
RA/Dec (J2000.0): 7h04m53.23s/+22°56'38.2"
RA/Dec (on date): 7h06m28.45s/+22°54'17.8"
HA/Dec: 7h38m18.82s/+23°18'30.3" (apparent)
Az./Alt.: +303°21'55.7"/+0°10'10.8" (apparent)
Gal. long./lat.: +193°36'38.5"/+13°03'04.9"
Supergal. long./lat.: +30°05'02.3"/-51°16'18.3"
Ecl. long./lat. (J2000.0): +104°54'27.2"/+0°20'24.9"
Ecl. long./lat. (on date): +105°16'30.1"/+0°20'45.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 14h46m16.8s
Apparent Sidereal Time: 14h46m17.3s
Rise: 13h04m
Transit: 20h44m
Set: 4h28m
Parallactic Angle: +40°36'19.9"
IAU Constellation: Gem
Zodiac: ♈ 16°37'
Hourly motion: +0°00'05" towards 276.6"
Hourly motion: $d\alpha = -0^{\circ}00'05"$ $d\delta = +0^{\circ}00'01"$
Elongation: 125°28'14.0"
Elong. in Ecl.Long.: E125°28'16"
Phase angle: +8°52'06.3"
Illuminated: 99.4%
Distance from Sun: 5.233 AU (782.847 M km)
Distance: 4.596 AU (687.495 M km)
Light time: 0h38m13.2s
Orbital velocity: 12.988 km/s
Sidereal period: 4331.87 days (11.860 a)
Synodic period: 398.89 days (1.092 a)
Apparent diameter: +0°00'42.90"
Equatorial diameter: 142984.0 km
Sidereal day: 9h55m40.6s
Mean solar day: 9h55m44.0s
Equatorial rotation velocity: 12.568 km/s
Position Angle of axis: +7°52'06"
Center point: $L_{\text{Re}} = +151^{\circ}23'25" \phi_e = +1^{\circ}25'56"$
Subsolar point: $L_{\text{Re}} = +142^{\circ}31'18" \phi_e = +1^{\circ}14'46"$
Albedo: 0.51
Solar Az./Alt.: +74°04'35"/-26°36'58"
Lunar Az./Alt.: +292°08'33"/+9°45'58"



Jupiter

- On February 28th, Jupiter is high in the southeastern sky at sunset.

Jupiter



Type: planet
Magnitude: -2.44 (reduced to -2.28 by 1.20 Airmasses)
Absolute Magnitude: -9.40
Mean Opposition Magnitude: -2.70
Color Index (B-V): 0.96
RA/Dec (J2000.0): 7h04m48.17s/+22°56'49.3"
RA/Dec (on date): 7h06m23.40s/+22°54'29.0"
HA/Dec: 21h55m02.04s/+22°54'58.2" (apparent)
Az./Alt.: +119°35'44.6"/+56°40'29.3" (apparent)
Gal. long./lat.: +193°35'58.8"/+13°02'05.7"
Supergal. long./lat.: +30°03'09.6"/-51°16'11.9"
Ecl. long./lat. (J2000.0): +104°53'16.5"/+0°20'28.2"
Ecl. long./lat. (on date): +105°15'19.5"/+0°20'48.4"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h01m23.1s
Apparent Sidereal Time: 5h01m23.5s
Rise: 13h04m
Transit: 20h44m
Set: 4h28m
Parallactic Angle: -42°30'14.2"
IAU Constellation: Gem
Zodiac: ♈ 16°35'
Hourly motion: +0°00'05" towards 278.0"
Hourly motion: $\Delta\alpha = -0^{\circ}00'06"$ $\Delta\delta = +0^{\circ}00'01"$
Elongation: 124°51'34.4"
Elong. in Ecl.Long.: E124°51'37"
Phase angle: +8°56'11.9"
Illuminated: 99.4%
Distance from Sun: 5.233 AU (782.878 M km)
Distance: 4.603 AU (688.663 M km)
Light time: 0h38m17.1s
Orbital velocity: 12.988 km/s
Sidereal period: 4331.87 days (11.860 a)
Synodic period: 398.89 days (1.092 a)
Apparent diameter: +0°00'42.83"
Equatorial diameter: 142984.0 km
Sidereal day: 9h55m40.6s
Mean solar day: 9h55m44.0s
Equatorial rotation velocity: 12.568 km/s
Position Angle of axis: +7°51'34"
Center point: $L_{\text{IIe}} = +306^{\circ}44'43" \phi_e = +1^{\circ}25'55"$
Subsolar point: $L_{\text{IIe}} = +297^{\circ}48'29" \phi_e = +1^{\circ}14'37"$
Albedo: 0.51
Solar Az./Alt.: +266°52'45"/-7°48'26"
Lunar Az./Alt.: +97°46'19"/+37°02'51"



SATURN

Saturn

- On February 1st, Saturn is getting lower on the western horizon at sunset.

Saturn



Type: planet
Magnitude: 1.03 (reduced to 1.30 by 2.08 Airmasses)
Absolute Magnitude: -8.88
Mean Opposition Magnitude: 0.67
Color Index (B-V): 1.22
RA/Dec (J2000.0): 23h57m29.80s/-2°38'16.7"
RA/Dec (on date): 23h58m50.51s/-2°29'31.1"
HA/Dec: 2h57m58.02s/-2°28'01.6" (apparent)
Az./Alt.: +232°57'00.4"/+28°41'08.0" (apparent)
Gal. long./lat.: +92°50'22.2"/-62°18'56.3"
Supergal. long./lat.: +289°52'43.1"/+13°04'58.2"
Ecl. long./lat. (J2000.0): +358°22'34.0"/-2°10'16.7"
Ecl. long./lat. (on date): +358°44'34.1"/-2°10'16.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 2h56m52.2s
Apparent Sidereal Time: 2h56m52.7s
Rise: 9h31m
Transit: 15h24m
Set: 21h16m
Parallactic Angle: +34°52'15.7"
IAU Constellation: Psc
Zodiac: ♓ 29°42'
Hourly motion: +0°00'15" towards 65.1°
Hourly motion: $d\alpha=+0^{\circ}00'13"$ $d\delta=+0^{\circ}00'06"$
Elongation: 45°40'01.9"
Elong. in Ecl.Long.: E45°37'37"
Phase angle: +4°15'04.4"
Illuminated: 99.9%
Distance from Sun: 9.509 AU (1422.477 M km)
Distance: 10.171 AU (1521.584 M km)
Light time: 1h24m35.5s
Orbital velocity: 9.679 km/s
Sidereal period: 10760.00 days (29.459 a)
Synodic period: 378.09 days (1.035 a)
Apparent diameter: +0°00'16.34", with rings: +0°00'38.06"
Equatorial diameter: 120536.0 km
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Equatorial rotation velocity: 9.871 km/s
Position Angle of axis: +4°15'24"
Center point: $L_{\text{IIIe}}=+18^{\circ}42'54"$ $\phi_e: -2^{\circ}14'59"$
Subsolar point: $L_{\text{IIIi}}=+14^{\circ}52'19"$ $\phi_i: -4^{\circ}05'49"$
Albedo: 0.50
Solar Az./Alt.: +256°50'19"/-10°44'60"
Lunar Az./Alt.: +74°30'03"/+10°17'07"

SW

W



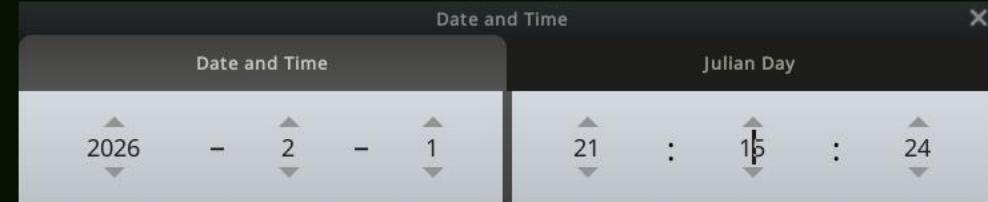
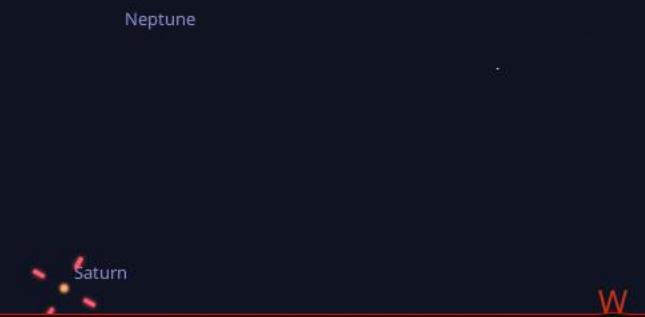
Saturn

- On February 1st, Saturn sets at 9:15 p.m. in the western sky.

Saturn



Type: planet
Magnitude: 1.03 (reduced to 5.72 by 37.20 Airmasses)
Absolute Magnitude: -8.88
Mean Opposition Magnitude: 0.67
Color Index (B-V): 1.22
RA/Dec (J2000.0): 23h57m32.41s/-2°37'58.6"
RA/Dec (on date): 23h58m53.12s/-2°29'13.0"
HA/Dec: 5h50m55.05s/-2°06'46.9" (apparent)
Az./Alt.: +266°54'07.8"/+0°08'53.2" (apparent)
Gal. long./lat.: +92°51'55.0"/-62°18'57.6"
Supergal. long./lat.: +289°53'12.5"/+13°04'26.0"
Ecl. long./lat. (J2000.0): +358°23'17.1"/-2°10'15.6"
Ecl. long./lat. (on date): +358°45'17.2"/-2°10'15.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h51m19.6s
Apparent Sidereal Time: 5h51m20.1s
Rise: 9h31m
Transit: 15h24m
Set: 21h16m
Parallactic Angle: +45°39'14.4"
IAU Constellation: Psc
Zodiac: ♓ 29°43'
Hourly motion: +0°00'15" towards 65.3°
Hourly motion: $d\alpha=+0^{\circ}00'14''$ $d\delta=+0^{\circ}00'06''$
Elongation: 45°33'22.4"
Elong. in Ecl.Long.: E45°30'57"
Phase angle: +4°14'36.0"
Illuminated: 99.9%
Distance from Sun: 9.509 AU (1422.472 M km)
Distance: 10.173 AU (1521.801 M km)
Light time: 1h24m36.2s
Orbital velocity: 9.679 km/s
Sidereal period: 10760.00 days (29.459 a)
Synodic period: 378.09 days (1.035 a)
Apparent diameter: +0°00'16.34", with rings: +0°00'38.06"
Equatorial diameter: 120536.0 km
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Equatorial rotation velocity: 9.871 km/s
Position Angle of axis: +4°15'21"
Center point: $L_{\text{IIIe}}=+116^{\circ}39'51''$ $\phi_e=-2^{\circ}15'20''$
Subsolar point: $L_{\text{IIIi}}=+112^{\circ}49'40''$ $\phi_i=-4^{\circ}05'56''$
Albedo: 0.50
Solar Az./Alt.: +288°45'13"/-41°26'35"
Lunar Az./Alt.: +104°56'06"/+39°40'41"



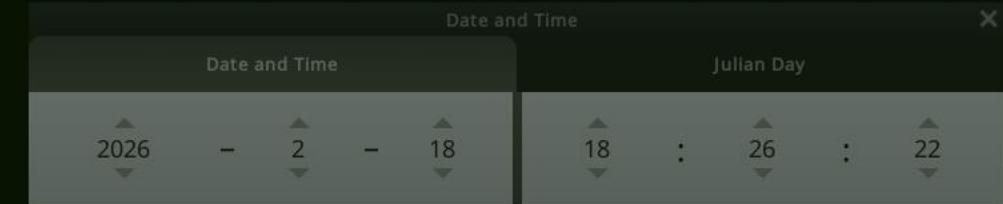
Saturn

- On February 18th, Saturn shares a wide grouping with the Moon and Mercury side by side, and Venus in the western sky at sunset.
- All 4 objects form a short, curved line in the sky.
- Mercury, Moon and Venus are low on the western horizon at sunset. The observing window is short lived.

Saturn



Type: **planet**
Magnitude: 1.01 (reduced to **1.40** by **3.04** Airmasses)
Absolute Magnitude: -8.88
Mean Opposition Magnitude: 0.67
Color Index (B-V): **1.22**
RA/Dec (J2000.0): 0h04m07.53s/-1°53'15.3"
RA/Dec (on date): 0h05m28.32s/-1°44'28.6"
HA/Dec: 4h03m15.29s/-1°42'21.0" (apparent)
Az./Alt.: +247°29'04.9"/+19°09'04.3" (apparent)
Gal. long./lat.: +96°45'14.1"/-62°19'48.3"
Supergal. long./lat.: +291°06'00.0"/+11°42'39.4"
Ecl. long./lat. (J2000.0): +0°11'42.5"/-2°08'31.3"
Ecl. long./lat. (on date): +0°33'44.7"/-2°08'30.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 4h08m50.7s
Apparent Sidereal Time: 4h08m51.1s
Rise: 8h28m
Transit: 14h24m
Set: 20h19m
Parallactic Angle: +41°24'33.2"
IAU Constellation: Psc
Zodiac: ♏ 1°22'
Hourly motion: +0°00'17" towards 65.8°
Hourly motion: da=+0°00'15" dδ=+0°00'07"
Elongation: 30°18'32.1"
Elong. in Ecl.Long.: E30°14'25"
Phase angle: +3°00'32.5"
Illuminated: 99.9%
Distance from Sun: 9.503 AU (1421.692 M km)
Distance: 10.344 AU (1547.399 M km)
Light time: 1h26m01.6s
Orbital velocity: 9.684 km/s
Sidereal period: 10760.00 days (29.459 a) FM
Synodic period: 378.09 days (1.035 a)
Apparent diameter: +0°00'16.07", with rings: +0°00'37.43"
Equatorial diameter: 120536.0 km
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Equatorial rotation velocity: 9.871 km/s
Position Angle of axis: +4°07'17"
Center point: $L_{\text{IIIe}}=+123^{\circ}23'33'' \phi_e: -3^{\circ}07'39''$
Subsolar point: $L_{\text{IIIi}}=+120^{\circ}38'02'' \phi_i: -4^{\circ}21'14''$
Albedo: 0.50
Solar Az./Alt.: +261°41'33"/-7°46'35"
Lunar Az./Alt.: +255°22'56"/+8°29'23"



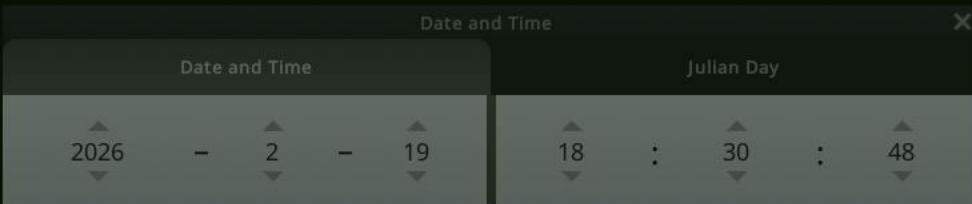
Saturn

- On February 19th , Saturn and the Moon share a wide conjunction in the evening western sky at sunset.
- The planets Mercury and Venus are also visible at evening twilight.

Saturn



Type: planet
Magnitude: 1.01 (reduced to 1.43 by 3.25 Airmasses)
Absolute Magnitude: -8.88
Mean Opposition Magnitude: 0.67
Color Index (B-V): 1.22
RA/Dec (J2000.0): 0h04m32.56s/-1°50'27.4"
RA/Dec (on date): 0h05m53.35s/-1°41'40.7"
HA/Dec: 4h11m13.33s/-1°39'24.7" (apparent)
Az./Alt.: +249°05'12.5"/+17°51'48.2" (apparent)
Gal. long./lat.: +96°59'59.3"/-62°19'40.6"
Supergal. long./lat.: +291°10'33.0"/+11°37'27.0"
Ecl. long./lat. (J2000.0): +0°18'33.9"/-2°08'26.6"
Ecl. long./lat. (on date): +0°40'36.1"/-2°08'25.3"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 4h17m14.4s
Apparent Sidereal Time: 4h17m14.8s
Rise: 8h24m
Transit: 14h20m
Set: 20h16m
Parallactic Angle: +41°58'34.6"
IAU Constellation: Psc
Zodiac: ♏ 1°28'
Hourly motion: +0°00'17" towards 65.8°
Hourly motion: da=+0°00'16" dδ=+0°00'07"
Elongation: 29°24'49.7"
Elong. in Ecl.Long.: E29°20'34"
Phase angle: +2°55'44.0"
Illuminated: 99.9%
Distance from Sun: 9.503 AU (1421.646 M km)
Distance: 10.352 AU (1548.633 M km)
Light time: 1h26m05.7s
Orbital velocity: 9.684 km/s
Sidereal period: 10760.00 days (29.459 a)
Synodic period: 378.09 days (1.035 a)
Apparent diameter: +0°00'16.05", with rings: +0°00'37.40"
Equatorial diameter: 120536.0 km
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Equatorial rotation velocity: 9.871 km/s
Position Angle of axis: +4°06'46"
Center point: $L_{\text{line}}=+216^{\circ}35'09"$ $\phi=-3^{\circ}10'55"$
Subsolar point: $L_{\text{line}}=+213^{\circ}53'52"$ $\phi=-4^{\circ}22'09"$
Albedo: 0.50
Solar Az./Alt.: +262°43'50"/-8°19'59"
Lunar Az./Alt.: +252°31'29"/+20°04'03"



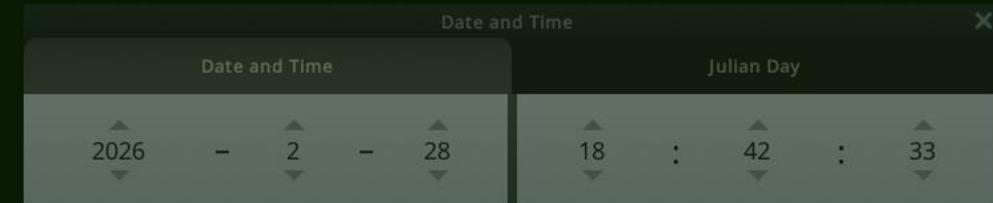
Saturn

- On February 28th , Saturn is low on the western horizon at sunset.
- Both Mercury and Venus are below Saturn and are positioned just above the western horizon at sunset.

Saturn



Type: planet
Magnitude: 0.99 (reduced to 1.67 by 5.26 Airmasses)
Absolute Magnitude: -8.88
Mean Opposition Magnitude: 0.67
Color Index (B-V): 1.22
RA/Dec (J2000.0): 0h08m23.35s/-1°24'49.2"
RA/Dec (on date): 0h09m44.22s/-1°16'02.1"
HA/Dec: 4h54m32.54s/-1°12'26.9" (apparent)
Az./Alt.: +257°32'54.8"/+10°46'14.8" (apparent)
Gal. long./lat.: +99°15'43.6"/-62°17'26.1"
Supergal. long./lat.: +291°52'11.8"/+10°49'20.3"
Ecl. long./lat. (J2000.0): +1°21'43.2"/-2°07'52.3"
Ecl. long./lat. (on date): +1°43'47.0"/-2°07'50.7"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h04m30.4s
Apparent Sidereal Time: 5h04m30.8s
Rise: 7h51m
Transit: 13h49m
Set: 19h46m
Parallactic Angle: +44°20'52.3"
IAU Constellation: Psc
Zodiac: ♏ 2°26'
Hourly motion: +0°00'18" towards 66.1°
Hourly motion: da=+0°00'16" dδ=+0°00'07"
Elongation: 21°26'00.4"
Elong. in Ecl.Long.: E21°19'56"
Phase angle: +2°11'02.0"
Illuminated: 100.0%
Distance from Sun: 9.500 AU (1421230 M km)
Distance: 10.416 AU (1558158 M km)
Light time: 1h26m37.5s
Orbital velocity: 9.687 km/s
Sidereal period: 10760.00 days (29.459 a)
Synodic period: 378.09 days (1.035 a)
Apparent diameter: +0°00'15.96", with rings: +0°00'37.17"
Equatorial diameter: 120536.0 km
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Equatorial rotation velocity: 9.871 km/s
Position Angle of axis: +4°01'58"
Center point: $L_{\text{IIIe}}=+319^{\circ}25'00'' \phi_e=-3^{\circ}40'52''$
Subsolar point: $L_{\text{IIIi}}=+317^{\circ}23'11'' \phi_i=-4^{\circ}30'19''$
Albedo: 0.50
Solar Az./Alt.: +267°25'10"/-8°21'46"
Lunar Az./Alt.: +98°21'53"/-37°34'39"



URANUS

Uranus

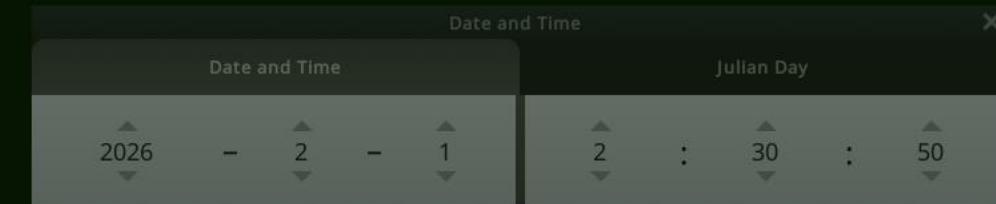
- On February 1st, Uranus sets at 2:30 a.m. in the northwestern sky.

Uranus



Type: **planet**
Magnitude: **5.72** (reduced to **10.37** by **36.89** Airmasses)
Absolute Magnitude: **-7.19**
Mean Opposition Magnitude: **5.52**
Color Index (B-V): **0.74**
RA/Dec (J2000.0): **3h39m24.99s/+19°19'24.8"**
RA/Dec (on date): **3h40m55.64s/+19°24'33.0"**
HA/Dec: **7h21m14.65s/+19°48'13.3"** (apparent)
Az./Alt.: **+298°04'17.0"/+0°09'55.4"** (apparent)
Gal. long./lat.: **+168°43'01.5"/-28°14'54.7"**
Supergal. long./lat.: **+330°49'40.9"/-30°30'10.1"**
Ecl. long./lat. (J2000.0): **+57°05'45.6"/-0°11'28.4"**
Ecl. long./lat. (on date): **+57°27'44.8"/-0°11'10.4"**
Ecliptic obliquity (on date): **+23°26'09.2"**
Mean Sidereal Time: **11h03m40.7s**
Apparent Sidereal Time: **11h03m41.1s**
Rise: **11h43m**
Transit: **19h05m**
Set: **2h32m**
Parallactic Angle: **+42°09'33.4"**
IAU Constellation: **Tau**
Zodiac: **♈ 25°13'**
Hourly motion: **+0°00'00" towards 259.9°**
Hourly motion: **da=-0°00'00" dδ=-0°00'00"**
Elongation: **105°0'49.2"**
Elong. in Ecl.Long.: **E105°0'049"**
Phase angle: **+2°47'59.1"**
Illuminated: **99.9%**
Distance from Sun: **19.485 AU (2914.858 M km)**
Distance: **19.206 AU (2873.193 M km)**
Light time: **2h39m43.9s**
Orbital velocity: **6.712 km/s**
Sidereal period: **30685.00 days (84.011 a)**
Synodic period: **369.66 days (1.012 a)**
Apparent diameter: **+0°00'03.67", with rings: +0°00'14.03"**
Equatorial diameter: **51118.0 km**
Sidereal day: **17h14m24.0s**
Mean solar day: **17h14m22.5s**
Equatorial rotation velocity: **2587.521 m/s**
Position Angle of axis: **+277°33'55"**
Center point: **L_e=+270°27'22" φ_e: +68°11'03"**
Subsolar point: **L_s=+273°27'49" φ_s: +70°46'38"**
Albedo: **0.66**
Discovered: **17 March 1781 (W. Herschel)**
Solar Az./Alt.: **+53°40'09"/-52°18'57"**
Lunar Az./Alt.: **+247°31'13"/+50°49'11"**

Uranus



Uranus

- On January 1st, Uranus is high in the southeastern sky at sunset.
- Uranus is less than 3 degrees southwest of M45

Uranus



Type: planet
Magnitude: 5.72 (reduced to 5.86 by 1.12 Airmasses)

Absolute Magnitude: -7.19

Mean Opposition Magnitude: 5.52

Color Index (B-V): 0.74

RA/Dec (J2000.0): 3h39m24.67s/+19°19'24.5"

RA/Dec (on date): 3h40m55.32s/+19°24'32.8"

HA/Dec: 23h07m05.09s/+19°25'01.7" (apparent)

Az./Alt.: +151°50'45.5"/+62°46'48.4" (apparent)

Gal. long./lat.: +168°42'57.9"/-28°14'57.9"

Supergal. long./lat.: +330°49'37.8"/-30°30'06.4"

Ecl. long./lat. (J2000.0): +57°05'41.1"/-0°11'27.6"

Ecl. long./lat. (on date): +57°27'40.4"/-0°11'09.6"

Ecliptic obliquity (on date): +23°26'09.2"

Mean Sidereal Time: 2h47m59.2s

Apparent Sidereal Time: 2h47m59.6s

Rise: 11h43m

Transit: 19h05m

Set: 2h32m

Parallactic Angle: -20°58'51.8"

IAU Constellation: Tau

Zodiac: Τ 25°13'

Hourly motion: +0°00'00" towards 268.7°

Hourly motion: da=-0°00'00" dδ=-0°00'00"

Elongation: 104°21'06.2"

Elong. in Ecl.Long.: E104°21'06"

Phase angle: +2°48'30.4"

Iluminated: 99.9%

Distance from Sun: 19.485 AU (2914.841 M km)

Distance: 19.217 AU (2874.799 M km)

Light time: 2h39m49.3s

Orbital velocity: 6.712 km/s

Sidereal period: 30685.00 days (84.011 a)

Synodic period: 369.66 days (1.012 a)

Apparent diameter: +0°00'03.67", with rings: +0°00'14.02"

Equatorial diameter: 51118.0 km

Sidereal day: 17h14m24.0s

Mean solar day: 17h14m22.5s

Equatorial rotation velocity: 2587.521 m/s

Position Angle of axis: +27°33'50"

Center point: L_e=+238°12'13" φ_e: +68°10'58"

Subsolar point: L_s=+241°13'17" φ_s: +70°47'03"

Albedo: 0.66

Discovered: 17 March 1781 (W. Herschel)

Solar Az./Alt.: +255°21'26"/-9°12'45"

Lunar Az./Alt.: +73°03'51"/+8°50'54"



Uranus

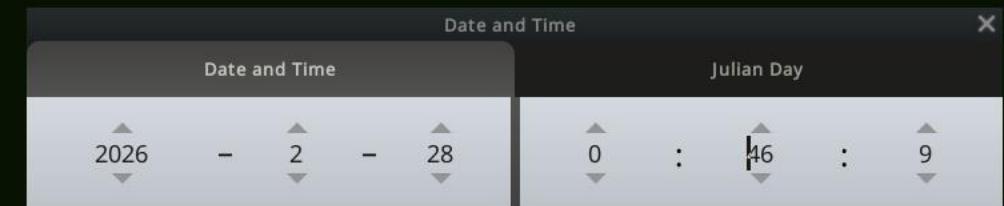
- **On February 28th , Uranus sets at 12:46 a.m. in the northwestern sky.**

Uranus



Type: planet
Magnitude: 5.77 (reduced to 10.45 by 37.18 Airmasses)
Absolute Magnitude: -7.19
Mean Opposition Magnitude: 5.52
Color Index (B-V): 0.74
RA/Dec (J2000.0): 3h40m27.57s/+19°23'23.4"
RA/Dec (on date): 3h41m58.53s/+19°28'30.7"
HA/Dec: 7h21m40.21s/+19°52'20.2" (apparent)
Az./Alt.: +298°11'30.1"/+0°08'56.5" (apparent)
Gal. long./lat.: +168°52'17.5"/-28°01'59.5"
Supergal. long./lat.: +331°02'50.5"/-30°40'25.8"
Ecl. long./lat. (J2000.0): +57°21'02.3"/-0°10'58.3"
Ecl. long./lat. (on date): +57°43'05.1"/-0°10'39.9"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 11h05m09.6s
Apparent Sidereal Time: 11h05m10.1s
Rise: 9h57m
Transit: 17h20m
Set: 0h47m
Parallactic Angle: +42°07'24.4"
IAU Constellation: Tau
Zodiac: ♏ 25°29'
Hourly motion: +0°00'03" towards 77.5°
Hourly motion: dα=+0°00'03" dδ=+0°00'01"
Elongation: 78°04'09.8"
Elong. in Ecl.Long.: E78°04'09"
Phase angle: +2°51'06.4"
Illuminated: 99.9%
Distance from Sun: 19.480 AU (2914.143 M km)
Distance: 19.660 AU (2941.169 M km)
Light time: 2h43m30.7s
Orbital velocity: 6.713 km/s
Sidereal period: 30685.00 days (84.011 a)
Synodic period: 369.66 days (1.012 a)
Apparent diameter: +0°00'03.58", with rings: +0°00'13.70"
Equatorial diameter: 51118.0 km
Sidereal day: 17h14m24.0s
Mean solar day: 17h14m22.5s
Equatorial rotation velocity: 2587.521 m/s
Position Angle of axis: +27°53'57"
Center point: L_e=+85°36'44" φ_e:+68°25'09"
Subsolar point: L_s=+88°44'31" φ_s:+71°03'23"
Albedo: 0.66
Discovered: 17 March 1781 (W. Herschel)
Solar Az./Alt.: +8°27'54"/-53°23'00"
Lunar Az./Alt.: +255°45'38"/+47°35'56"

Uranus



Uranus

- **On February 28th, Uranus is high overhead in the southwestern sky at sunset.**

Uranus

Type: planet
Magnitude: 5.77 (reduced to 5.92 by 1.16 Airmasses)
Absolute Magnitude: -7.19
Mean Opposition Magnitude: 5.52
Color Index (B-V): 0.74
RA/Dec (J2000.0): 3h40m31.54s/+19°23'37.4"
RA/Dec (on date): 3h42m02.51s/+19°28'44.7"
HA/Dec: 1h27m36.14s/+19°29'15.3" (apparent)
Az./Alt.: +223°22'37.9"/+59°12'14.1" (apparent)
Gal. long./lat.: +168°52'53.5"/-28°01'11.1"
Supergal. long./lat.: +331°03'39.7"/-30°41'05.4"
Ecl. long./lat. (J2000.0): +57°22'00.2"/-0°10'57.4"
Ecl. long./lat. (on date): +57°44'03.2"/-0°10'38.9"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h09m39.5s
Apparent Sidereal Time: 5h09m40.0s
Rise: 9h57m
Transit: 17h20m
Set: 0h47m
Parallactic Angle: +31°25'35.5"
IAU Constellation: Tau
Zodiac: ♏ 25°30'
Hourly motion: +0°00'03" towards 76.8"
Hourly motion: da=+0°00'03" dδ=+0°00'01"
Elongation: 77°20'00.2"
Elong. in Ecl.Long: E77°20'00"
Phase angle: +2°50'39.3"
Illuminated: 99.9% 
Distance from Sun: 19.480 AU (2914.124 M km) 
Distance: 19.673 AU (2943.033 M km) 
Light time: 2h43m36.9s
Orbital velocity: 6.713 km/s
Sidereal period: 30685.00 days (84.011 a)
Synodic period: 369.66 days (1.012 a)
Apparent diameter: +0°00'03.58", with rings: +0°00'13.69"
Equatorial diameter: 51118.0 km
Sidereal day: 17h14m24.0s
Mean solar day: 17h14m22.5s
Equatorial rotation velocity: 2587.521 m/s
Position Angle of axis: +277°55'11"
Center point: $L_e=+102^\circ02'01'' \phi_e=+68^\circ26'02''$
Subsolar point: $L_s=+105^\circ09'29'' \phi_s=+71^\circ03'51''$
Albedo: 0.66
Discovered: 17 March 1781 (W. Herschel)
Solar Az./Alt.: +268°18'45"/-9°16'51"
Lunar Az./Alt.: +99°21'21"/+38°27'02"

Procyon



Date and Time

Date and Time

2026 - 2 - 28

Julian Day

18 : 47 : 42

NEPTUNE

Neptune

- On February 1st, Neptune is getting low in the western sky at sunset.
- The planet Saturn is less than 3 degrees directly below Neptune and can be used as a guidepost to find the planet.

Neptune

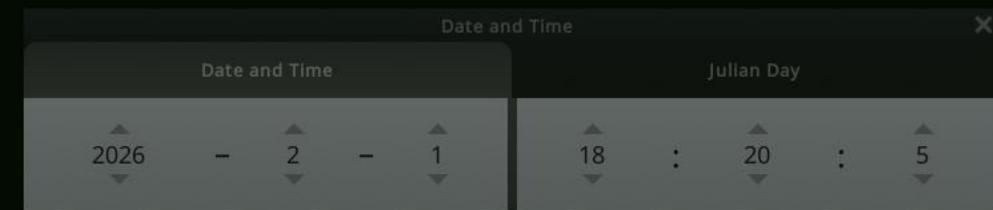


Type: planet
Magnitude: 7.81 (reduced to 8.07 by 1.97 Airmasses)
Absolute Magnitude: -6.87
Mean Opposition Magnitude: 7.84
RA/Dec (J2000.0): 0h01m22.78s/-1°17'01.8"
RA/Dec (on date): 0h02m43.45s/-1°08'16.0"
HA/Dec: 2h52m44.64s/1°06'52.7" (apparent)
Az./Alt.: +23°36'14.0"/-30°32'26.8" (apparent)
Gal. long./lat.: +95°55'41.3"/-61°30'10.4"
Supergal. long./lat.: +291°29'37.3"/+12°32'23.7"
Ecl. long./lat. (J2000.0): +359°48'20.4"/-1°18'54.3"
Ecl. long./lat. (on date): +0°10'20.2"/-1°18'53.2"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 2h55m31.5s
Apparent Sidereal Time: 2h55m31.9s
Rise: 9h30m
Transit: 15h28m
Set: 21h26m
Parallactic Angle: +34°39'32.8"
IAU Constellation: Psc
Zodiac: ♏ 0°40'
Hourly motion: +0°00'04" towards 65.4"
Hourly motion: $d\alpha=+0^{\circ}00'04"$ $d\delta=+0^{\circ}00'02"$
Elongation: 47°04'17.4"
Elong. in Ecl.Long.: E47°03'27"
Phase angle: +1°23'00.7"
Illuminated: 100.0%
Distance from Sun: 29.884 AU (4470.573 M km)
Distance: 30.546 AU (4569.675 M km)
Light time: 4h14m02.8s
Orbital velocity: 5.469 km/s
Sidereal period: 60189.00 days (164.789 a)
Synodic period: 367.49 days (1.006 a)
Apparent diameter: +0°00'02.24", with rings: +0°00'05.68"
Equatorial diameter: 49528.0 km
Sidereal day: 16h06m36.0s
Mean solar day: 16h06m36.6s
Equatorial rotation velocity: 2.683 km/s
Position Angle of axis: +317°10'01"
Center point: $L_s=+137^{\circ}22'38"$ $\phi_s=-19^{\circ}57'12"$
Subsolar point: $L_s=+136^{\circ}00'15"$ $\phi_s=-19^{\circ}27'38"$
Albedo: 0.62
Discovered: 23 September 1846 (J.G. Galle)
Solar Az./Alt.: +256°36'51"/-10°30'59"
Lunar Az./Alt.: +74°17'00"/+10°03'60"



SW

W



Neptune

- On February 1st, Neptune sets at 9:24 p.m. in the western sky.
- Neptune is just east of Saturn you can use the planet as a guidepost.

Neptune



Type: planet
Magnitude: 7.81 (reduced to 12.65 by 38.56 Airmasses)
Absolute Magnitude: -6.87
Mean Opposition Magnitude: 7.84
RA/Dec (J2000.0): 0h01m23.56s/-1°16'56.5"
RA/Dec (on date): 0h02m44.24s/-1°08'10.7"
HA/Dec: 5h56m39.13s/-0°45'09.1" (apparent)
Az./Alt.: +268°52'36.8"/+0°04'24.2" (apparent)
Gal. long./lat.: +95°56'08.3"/-61°30'10.2"
Supergal. long./lat.: +291°29'45.9"/+12°32'14.0"
Ecl. long./lat. (J2000.0): +359°48'33.3"/-1°18'54.0"
Ecl. long./lat. (on date): +0°10'33.1"/-1°18'53.0"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 6h00m57.3s
Apparent Sidereal Time: 6h00m57.8s
Rise: 9h30m
Transit: 15h28m
Set: 21h26m
Parallactic Angle: +45°41'37.2"
IAU Constellation: Psc
Zodiac: ♏ 0°41'
Hourly motion: +0°00'04" towards 65.7°
Hourly motion: $da=+0^{\circ}00'04"$ $d\delta=+0^{\circ}00'02"$
Elongation: 46°56'39.5"
Elong. in Ecl.Long.: E46°55'48"
Phase angle: +1°22'50.6"
Illuminated: 100.0%
Distance from Sun: 29.884 AU (4470.572 M km)
Distance: 30.548 AU (4569.923 M km)
Light time: 4h14m03.6s
Orbital velocity: 5.469 km/s
Sidereal period: 60189.00 days (164.789 a)
Synodic period: 367.49 days (1.006 a)
Apparent diameter: +0°00'02.24", with rings: +0°00'05.68"
Equatorial diameter: 49528.0 km
Sidereal day: 16h06m36.0s
Mean solar day: 16h06m36.6s
Equatorial rotation velocity: 2.683 km/s
Position Angle of axis: +317°09'56"
Center point: $L_e=+206^{\circ}14'48"$ $\phi_e=-19^{\circ}57'07"$
Subsolar point: $L_s=+204^{\circ}52'35"$ $\phi_s=-19^{\circ}27'37"$
Albedo: 0.62
Discovered: 23 September 1846 (J.G. Galle)
Solar Az./Alt.: +290°57'43"/-43°03'27"
Lunar Az./Alt.: +106°59'07"/+41°15'48"



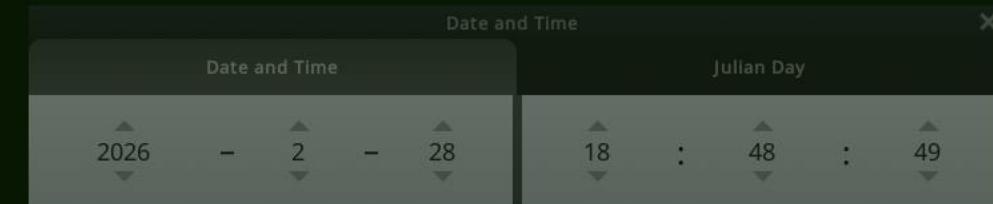
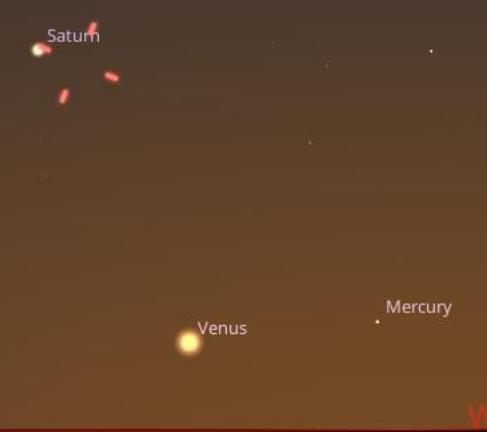
Neptune

- On Feb 28th, Neptune is 15 degrees above the western horizon at sunset.

Neptune



Type: planet
Magnitude: 7.83 (reduced to 8.60 by 5.99 Airmasses)
Absolute Magnitude: -6.87
Mean Opposition Magnitude: 7.84
RA/Dec (J2000.0): 0h04m35.15s/-0°55'39.5"
RA/Dec (on date): 0h05m56.04s/-0°46'52.2"
HA/Dec: 5h04m35.21s/-0°42'48.8" (apparent)
Az./Alt.: +25°43'02.6"/-9°21'39.0" (apparent)
Gal. long./lat.: +97°45'56.3"/-61°29'19.5"
Supergal. long./lat.: +292°04'26.5"/+11°52'15.8"
Ecl. long./lat. (J2000.0): +0°40'58.3"/-1°18'25.5"
Ecl. long./lat. (on date): +1°03'01.7"/-1°18'24.2"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 5h10m46.9s
Apparent Sidereal Time: 5h10m47.3s
Rise: 7h46m
Transit: 13h45m
Set: 19h44m
Parallactic Angle: +44°46'08.7"
IAU Constellation: Psc
Zodiac: ♈ 1°29'
Hourly motion: +0°00'05" towards 66.3°
Hourly motion: da=+0°00'05" dδ=+0°00'02"
Elongation: 20°41'17.5"
Elong. in Ecl.Long.: E20°38'55"
Phase angle: +0°40'15.8"
Illuminated: 100.0%
Distance from Sun: 29.883 AU (4470.471 M km)
Distance: 30.808 AU (4608.816 M km)
Light time: 4h16m13.4s
Orbital velocity: 5.469 km/s
Sidereal period: 60189.00 days (164.789 a)
Synodic period: 367.49 days (1.006 a)
Apparent diameter: +0°00'02.22", with rings: +0°00'05.63"
Equatorial diameter: 49528.0 km
Sidereal day: 16h06m36.0s
Mean solar day: 16h06m36.6s
Equatorial rotation velocity: 2.683 km/s
Position Angle of axis: +316°51'18"
Center point: $L_e=+227^\circ38'34'' \phi_e=-19^\circ40'03''$
Subsolar point: $L_e=+226^\circ59'20'' \phi_e=-19^\circ24'08''$
Albedo: 0.62
Discovered: 23 September 1846 (J.G. Galle)
Solar Az./Alt.: +268°30'26"/-9°28'51"
Lunar Az./Alt.: +99°34'27"/+38°38'26"



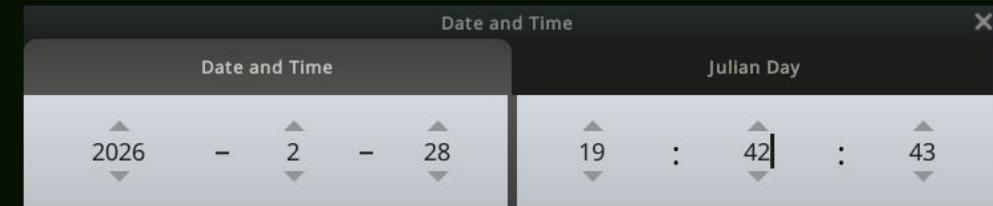
Neptune

- On February 28th, Neptune sets at 7:41 p.m. in the western sky.

Neptune



Type: planet
Magnitude: 7.83 (reduced to 12.46 by 36.66 Airmasses)
Absolute Magnitude: -6.87
Mean Opposition Magnitude: 7.84
RA/Dec (J2000.0): 0h04m35.44s/-0°55'37.5"
RA/Dec (on date): 0h05m56.33s/-0°46'50.3"
HA/Dec: 5h57m23.71s/-0°24'39.8" (apparent)
Az./Alt.: +269°15'03.6"/+0°10'44.2" (apparent)
Gal. long./lat.: +97°46'06.5"/-61°29'19.4"
Supergal. long./lat.: +292°04'29.7"/+11°52'12.1"
Ecl. long./lat. (J2000.0): +0°41'03.1"/-1°18'25.5"
Ecl. long./lat. (on date): +1°03'06.6"/-1°18'24.1"
Ecliptic obliquity (on date): +23°26'09.2"
Mean Sidereal Time: 6h04m50.5s
Apparent Sidereal Time: 6h04m50.9s
Rise: 7h46m
Transit: 13h45m
Set: 19h44m
Parallactic Angle: +45°41'46.9"
IAU Constellation: Psc
Zodiac: ♏ 1°29'
Hourly motion: +0°00'05" towards 66.3°
Hourly motion: da=+0°00'05" dδ=+0°00'02"
Elongation: 20°39'07.0"
Elong. in Ecl.Long.: E20°36'44"
Phase angle: +0°40'11.9"
Illuminated: 100.0%
Distance from Sun: 29.883 AU (4470.470 M km)
Distance: 30.808 AU (4608.853 M km)
Light time: 4h16m13.5s
Orbital velocity: 5.469 km/s
Sidereal period: 60189.00 days (164.789 a)
Synodic period: 367.49 days (1.006 a)
Apparent diameter: +0°00'02.22", with rings: +0°00'05.63"
Equatorial diameter: 49528.0 km
Sidereal day: 16h06m36.0s
Mean solar day: 16h06m36.6s
Equatorial rotation velocity: 2.683 km/s
Position Angle of axis: +316°51'17"
Center point: L_e=+247°43'14" φ_e=-19°40'01"
Subsolar point: L_s=+247°04'03" φ_s=-19°24'07"
Albedo: 0.62
Discovered: 23 September 1846 (J.G. Galle)
Solar Az./Alt.: +278°05'47"/-19°05'30"
Lunar Az./Alt.: +111°13'23"/+47°34'38"



That is the Sky this Month

By David Mills