Sky this Month

June 2025

By David Mills

MOON

NEW MOON

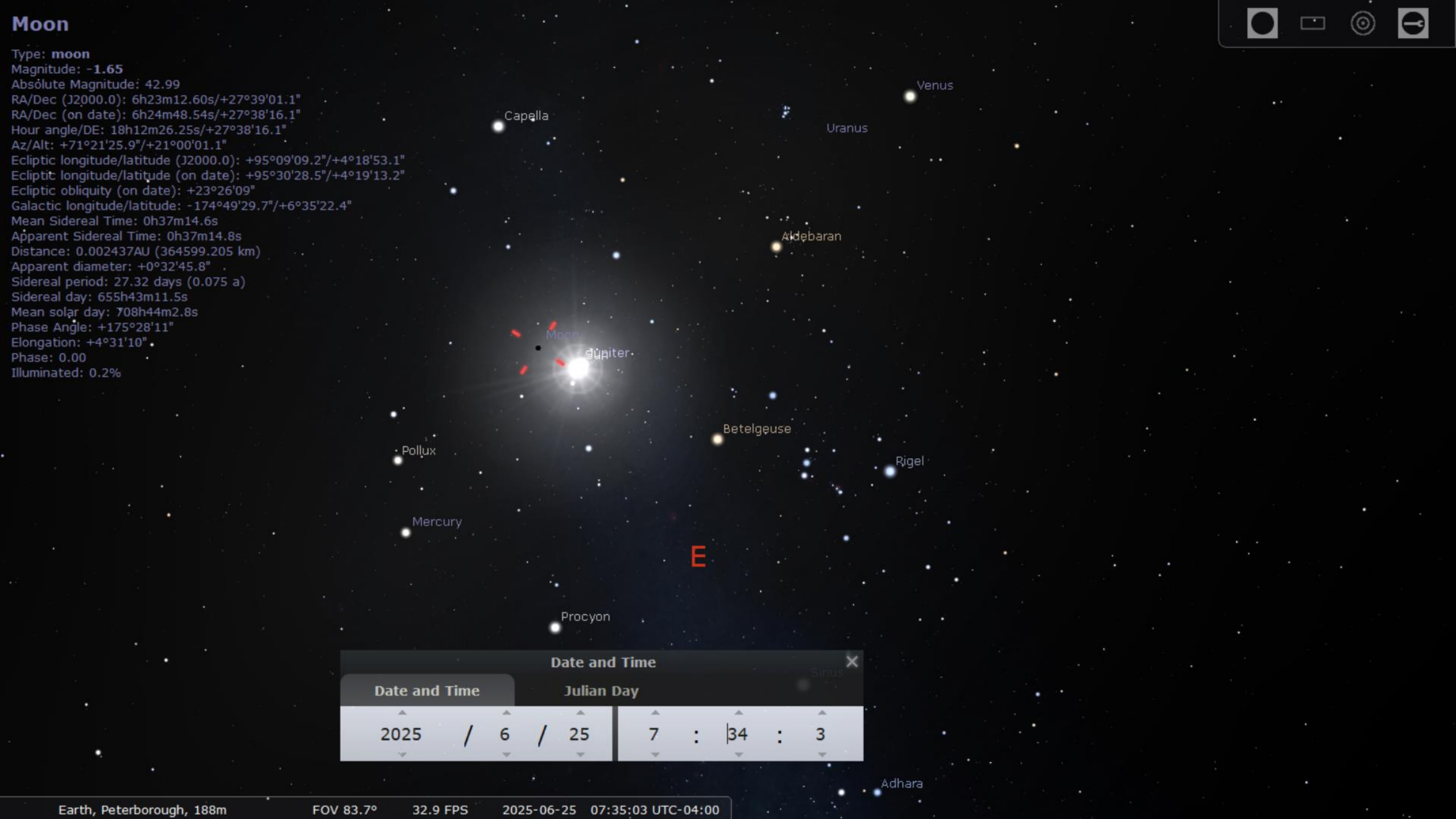
Moon

- The New Moon is on June 25th, at 7:31 a.m.
- June's new Moon is the New Buck Moon.
- The Moon is northeast of the sun


Moon
Type: moon
Magnitude: -1.64
Absolute Magnitude: 43.00
RA/Dec (J2000.0): 6h23m6.42s/+27°38'54.2"
RA/Dec (on date): 6h24m42.35s/+27°38'09.4"
Hour angle/DE: 18h10m14.31s/+27°38'09.4"
Az/Alt: +71°01'22.7"/+20°37'36.0"
Ecliptic longitude/latitude (J2000.0): +95°07'47.2"/+4°18'42.9"
Ecliptic longitude/latitude (on date): +95°29'06.5"/+4°19'03.0"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -174°50'01.4"/+6°34'06.2"
Mean Sidereal Time: 0h34m56.5s
Apparent Sidereal Time: 0h34m56.7s
Distance: 0.002437AU (364632.586 km)
Apparent diameter: +0°32'45.6"
Sidereal period: 27.32 days (0.075 a)
Sidereal day: 655h43m11.5s
Mean solar day: 708h44m2.8s
Phase Angle: +175°28'43"
Elongation: +4°30'38"
Phase: 0.00
Illuminated: 0.2%
Moon
Jupiter
Sun
Betelgeuse
Pollux
Mercury
Date and Time
Date and Time
Julian Day
2025 / 6 / 25
7 : 32 : 45
E
Earth, Peterborough, 188m
FOV 30.8°
54 FPS
2025-06-25 07:32:45 UTC-04:00

Moon

- The New Moon is on June 25th, at 7:31 a.m.
- Mercury is southeast of the sun now rising in the evening twilight sky.
- Venus is well northwest of the sun now rising in the morning sky.


Moon
Type: moon
Magnitude: -1.65
Absolute Magnitude: 42.99
RA/Dec (J2000.0): 6h23m12.60s/+27°39'01.1"
RA/Dec (on date): 6h24m48.54s/+27°38'16.1"
Hour angle/DE: 18h12m26.25s/+27°38'16.1"
Az/Alt: +71°21'25.9"/+21°00'01.1"
Ecliptic longitude/latitude (J2000.0): +95°09'09.2"/+4°18'53.1"
Ecliptic longitude/latitude (on date): +95°30'28.5"/+4°19'13.2"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -174°49'29.7"/+6°35'22.4"
Mean Sidereal Time: 0h37m14.6s
Apparent Sidereal Time: 0h37m14.8s
Distance: 0.002437AU (364599.205 km)
Apparent diameter: +0°32'45.8"
Sidereal period: 27.32 days (0.075 a)
Sidereal day: 655h43m11.5s
Mean solar day: 708h44m2.8s
Phase Angle: +175°28'11"
Elongation: +4°31'10"
Phase: 0.00
Illuminated: 0.2%
Venus
Capella
Uranus
Aldebaran
Moon
Jupiter
Betelgeuse
Pollux
Rigel
Mercury
E
Procyon
Sirius
Adhara
Date and Time
Date and Time
Julian Day
2025 / 6 / 25
7 : 34 : 3
Earth, Peterborough, 188m
FOV 83.7°
32.9 FPS
2025-06-25 07:35:03 UTC-04:00

FULL MOON

Moon

- The full Moon is on June 11th, at 3:43 a.m.
- This month Full Moon is the Strawberry Moon
- On June 10th, the Moon rises at 8:59 p.m. 7 hours before the full moon.

Moon

Type: **moon**
Magnitude: **-12.13** (extincted to: **-7.83**)
Absolute Magnitude: 32.30
RA/Dec (J2000.0): 17h03m26.95s/-28°27'48.1"
RA/Dec (on date): 17h05m2.91s/-28°29'59.0"
Hour angle/DE: 20h08m24.71s/-28°06'25.4" (apparent)
Az/Alt: +131°39'02.2"/+0°22'11.5" (apparent)
Ecliptic longitude/latitude (J2000.0): +257°32'21.3"/-5°38'00.9"
Ecliptic longitude/latitude (on date): +257°53'39.1"/-5°38'21.0"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -4°48'03.1"/+7°55'24.7"
Mean Sidereal Time: 13h12m5.7s
Apparent Sidereal Time: 13h12m5.8s
Distance: 0.002677AU (400413.004 km)
Apparent diameter: +0°29'50.0"
Sidereal period: 27.32 days (0.075 a)
Sidereal day: 655h43m11.5s
Mean solar day: 708h44m2.8s
Phase Angle: +6°08'55"
Elongation: +173°50'07"
Phase: 1.00
Illuminated: 99.7%

Date and Time

Date and Time | Julian Day

2025 / 6 / 10 21 : 6 : 49

Earth, Peterborough, 188m FOV 9.59° 59.5 FPS 2025-06-10 21:06:49 UTC-04:00

MERCURY

Mercury

- On June 1st, Mercury reappears in the western sky. The planet is right at the horizon and impossible to see in the solar glare.

- On June 7th, Mercury and Jupiter share a wide conjunction in the western twilight sky at sunset. Both planets are low on the western horizon.

Mercury

Type: **planet**
Magnitude: **-0.42** (extincted to: **1.31**)
Absolute Magnitude: 30.65
RA/Dec (J2000.0): 5h50m22.89s/+25°09'22.3"
RA/Dec (on date): 5h51m56.95s/+25°09'50.5"
Hour angle/DE: 7h25m24.61s/+25°19'06.3" (apparent)
Az/Alt: +302°28'48.2"/+3°37'08.2" (apparent)
Ecliptic longitude/latitude (J2000.0): +87°49'21.1"/+1°44'06.3"
Ecliptic longitude/latitude (on date): +88°10'39.1"/+1°44'26.8"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -176°12'57.2"/-1°02'44.6"
Mean Sidereal Time: 13h17m58.2s
Apparent Sidereal Time: 13h17m58.3s
Distance: 1.260AU (188.494 Mio km)
Apparent diameter: +0°00'05.3"
Sidereal period: 87.97 days (0.241 a)
Sidereal day: 1407h30m33.8s
Mean solar day: 4222h27m52.5s
Phase Angle: +35°49'44"
Elongation: +10°47'01"
Phase: 0.91
Illuminated: 90.5%

Date and Time

Date and Time | Julian Day

2025 / 6 / 7 21 : 24 : 28

Mercury

- On June 24th, Mercury reaches its greatest elongation east of the sun.

- The planet is visible after 10 p.m. in the western sky.

Mercury

Type: **planet**
Magnitude: **0.88** (extincted to: **2.46**)
Absolute Magnitude: 32.48
RA/Dec (J2000.0): 7h58m49.43s/+22°04'38.0"
RA/Dec (on date): 8h00m19.68s/+22°00'31.2"
Hour angle/DE: 7h07m25.12s/+22°08'49.5" (apparent)
Az/Alt: +297°17'31.5"/+4°04'36.3" (apparent)
Ecliptic longitude/latitude (J2000.0): +117°20'43.5"/+1°24'49.6"
Ecliptic longitude/latitude (on date): +117°42'02.9"/+1°25'07.1"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -160°30'51.7"/+24°13'47.4"
Mean Sidereal Time: 15h8m18.5s
Apparent Sidereal Time: 15h8m18.6s
Distance: 0.984AU (147.262 Mio km)
Apparent diameter: +0°00'06.8"
Sidereal period: 87.97 days (0.241 a)
Sidereal day: 1407h30m33.8s
Mean solar day: 4222h27m52.5s
Phase Angle: +82°21'06"
Elongation: +23°56'32"
Phase: 0.57
Illuminated: 56.7%

Date and Time

Date and Time | Julian Day

2025 / 6 / 24 22 : 7 : 40

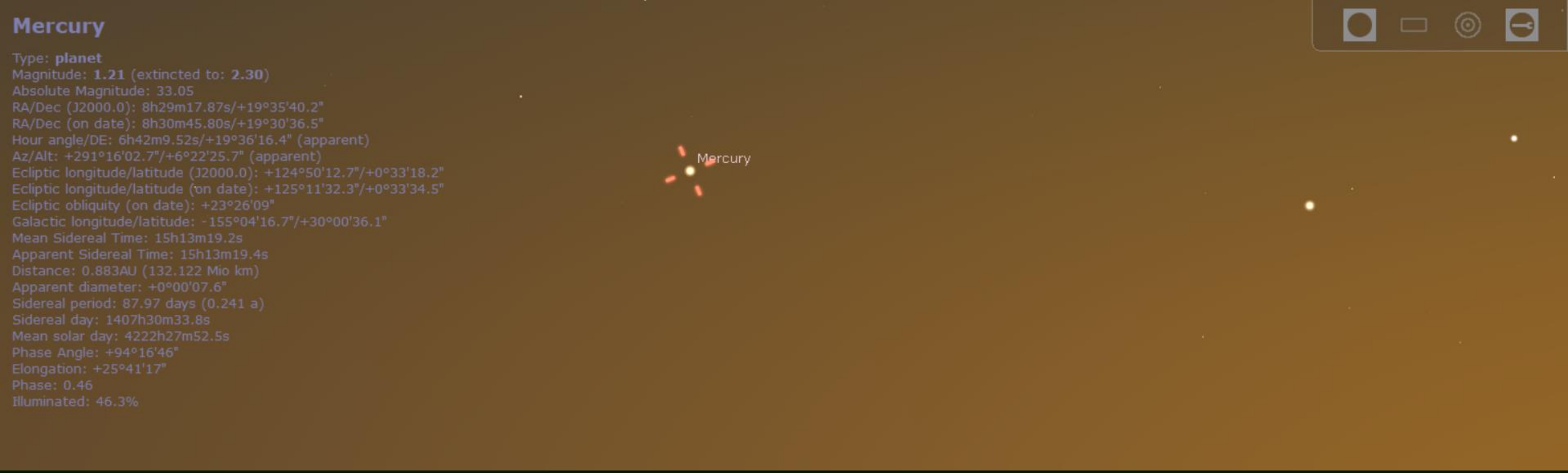
Earth, Peterborough, 188m FOV 13.4° 15.7 FPS 2025-06-24 22:07:40 UTC-04:00

Mercury

- On June 30th, Mercury is low in the western sky at sunset.

Mercury

Type: **planet**
Magnitude: **1.21** (extincted to: **2.30**)
Absolute Magnitude: 33.05
RA/Dec (J2000.0): 8h29m17.87s/+19°35'40.2"
RA/Dec (on date): 8h30m45.80s/+19°30'36.5"
Hour angle/DE: 6h42m9.52s/+19°36'16.4" (apparent)
Az/Alt: +291°16'02.7"/+6°22'25.7" (apparent)
Ecliptic longitude/latitude (J2000.0): +124°50'12.7"/+0°33'18.2"
Ecliptic longitude/latitude (on date): +125°11'32.3"/+0°33'34.5"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -155°04'16.7"/+30°00'36.1"
Mean Sidereal Time: 15h13m19.2s
Apparent Sidereal Time: 15h13m19.4s
Distance: 0.883AU (132.122 Mio km)
Apparent diameter: +0°00'07.6"
Sidereal period: 87.97 days (0.241 a)
Sidereal day: 1407h30m33.8s
Mean solar day: 4222h27m52.5s
Phase Angle: +94°16'46"
Elongation: +25°41'17"
Phase: 0.46
Illuminated: 46.3%



Date and Time

Date and Time | Julian Day

2025 / 6 / 30 21 : 49 : 4

Mercury

- On June 30th, Mercury sets at 10:29 p.m. in the western sky.

Mercury

Type: **planet**
Magnitude: **1.21** (extincted to: **5.95**)
Absolute Magnitude: 33.05
RA/Dec (J2000.0): 8h29m25.41s/+19°34'55.4"
RA/Dec (on date): 8h30m53.33s/+19°29'51.5"
Hour angle/DE: 7h21m57.82s/+19°53'55.3" (apparent)
Az/Alt: +298°15'38.0"/+0°07'20.6" (apparent)
Ecliptic longitude/latitude (J2000.0): +124°52'06.9"/+0°33'00.5"
Ecliptic longitude/latitude (on date): +125°13'26.5"/+0°33'16.7"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -155°02'44.8"/+30°02'00.0"
Mean Sidereal Time: 15h54m23.1s
Apparent Sidereal Time: 15h54m23.3s
Distance: 0.883AU (132.053 Mio km)
Apparent diameter: +0°00'07.6"
Sidereal period: 87.97 days (0.241 a)
Sidereal day: 1407h30m33.8s
Mean solar day: 4222h27m52.5s
Phase Angle: +94°20'05"
Elongation: +25°41'32"
Phase: 0.46
Illuminated: 46.2%

Date and Time

Date and Time | Julian Day

2025 / 6 / 30 22 : 29 : 1

Earth, Peterborough, 188m | FOV 9.59° | 33.6 FPS | 2025-06-30 22:30:01 UTC-04:00

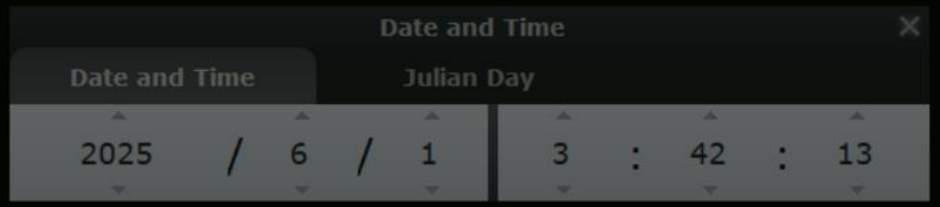
VENUS

Venus

- On June 1st, Venus rises at 3:45 p.m. in the eastern pre-dawn sky.

- Venus now in Retrograde or Eastern Motion across the sky.


Venus
Type: planet
Magnitude: -4.31 (extincted to: -0.79)
Absolute Magnitude: 28.04
RA/Dec (J2000.0): 1h35m25.50s/+7°36'52.9"
RA/Dec (on date): 1h36m45.37s/+7°44'41.1"
Hour angle/DE: 17h33m34.60s/+8°01'57.8" (apparent)
Az/Alt: +79°39'15.0"/+0°55'15.2" (apparent)
Ecliptic longitude/latitude (J2000.0): +24°53'08.4"/-2°10'15.9"
Ecliptic longitude/latitude (on date): +25°14'25.9"/-2°10'06.3"
Ecliptic obliquity (on date): +23°26'10"
Galactic longitude/latitude: +141°32'19.1"/-53°39'37.5"
Mean Sidereal Time: -4h50m50.6s
Apparent Sidereal Time: -4h50m50.5s
Distance: 0.701AU (104.921 Mio km)
Apparent diameter: +0°00'23.8"
Sidereal period: 224.70 days (0.615 a)
Sidereal day: 5832h28m47.1s
Mean solar day: 2802h0m52.2s
Phase Angle: +90°21'23"
Elongation: +45°53'02"
Phase: 0.50
Illuminated: 49.7%
Saturn
Venus
E


Date and Time
Date and Time
Julian Day
2025 / 6 / 1
3 : 42 : 13

Venus

- On June 22nd, Venus, a waning crescent Moon and M45 rise together in a wide triple conjunction at 3:15 a.m. in the eastern pre-dawn sky before sunrise.

Venus

Type: **planet**
Magnitude: **-4.17** (extincted to: **-2.98**)
Absolute Magnitude: 27.71
RA/Dec (J2000.0): 2h58m28.09s/+14°07'30.6"
RA/Dec (on date): 2h59m52.26s/+14°13'38.3"
Hour angle/DE: 17h36m20.51s/+14°19'41.0" (apparent)
Az/Alt: +75°38'00.7"/+5°49'08.1" (apparent)
Ecliptic longitude/latitude (J2000.0): +46°17'09.2"/-2°41'45.0"
Ecliptic longitude/latitude (on date): +46°38'29.1"/-2°41'29.5"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +163°38'33.2"/-38°30'17.9"
Mean Sidereal Time: -3h24m12.9s
Apparent Sidereal Time: -3h24m12.8s
Distance: 0.869AU (130.011 Mio km)
Apparent diameter: +0°00'19.2"
Sidereal period: 224.70 days (0.615 a)
Sidereal day: 5832h28m47.1s
Mean solar day: 2802h0m52.2s
Phase Angle: +78°29'31"
Elongation: +44°35'04"
Phase: 0.60
Illuminated: 60.0%

Moon
Venus
Uranus
E

Date and Time

Date and Time | Julian Day

2025 / 6 / 22 3 : 46 : 2

Earth, Peterborough, 188m | FOV 36.4° | 53.7 FPS | 2025-06-22 03:46:03 UTC-04:00

Venus

- On June 30th, Venus rises at 3:07 a.m. in the eastern pre-dawn sky.

- Venus is also moving towards the Pleiades – M45

Venus

Type: **planet**
Magnitude: **-4.12** (extincted to: **-0.78**)
Absolute Magnitude: 27.61
RA/Dec (J2000.0): 3h32m47.44s/+16°25'28.0"
RA/Dec (on date): 3h34m13.63s/+16°30'39.0"
Hour angle/DE: 16h57m59.85s/+16°47'36.7" (apparent)
Az/Alt: +67°19'22.2"/+1°04'12.9" (apparent)
Ecliptic longitude/latitude (J2000.0): +54°53'05.3"/-2°38'29.5"
Ecliptic longitude/latitude (on date): +55°14'25.1"/-2°38'12.1"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +169°38'05.7"/-31°27'03.8"
Mean Sidereal Time: -3h28m54.1s
Apparent Sidereal Time: -3h28m53.9s
Distance: 0.931AU (139.311 Mio km)
Apparent diameter: +0°00'17.9"
Sidereal period: 224.70 days (0.615 a)
Sidereal day: 5832h28m47.1s
Mean solar day: 2802h0m52.2s
Phase Angle: +74°27'30"
Elongation: +43°35'40"
Phase: 0.63
Illuminated: 63.4%

Uranus
Venus
E

Date and Time

Date and Time | Julian Day

2025 / 6 / 30 3 : 9 : 55

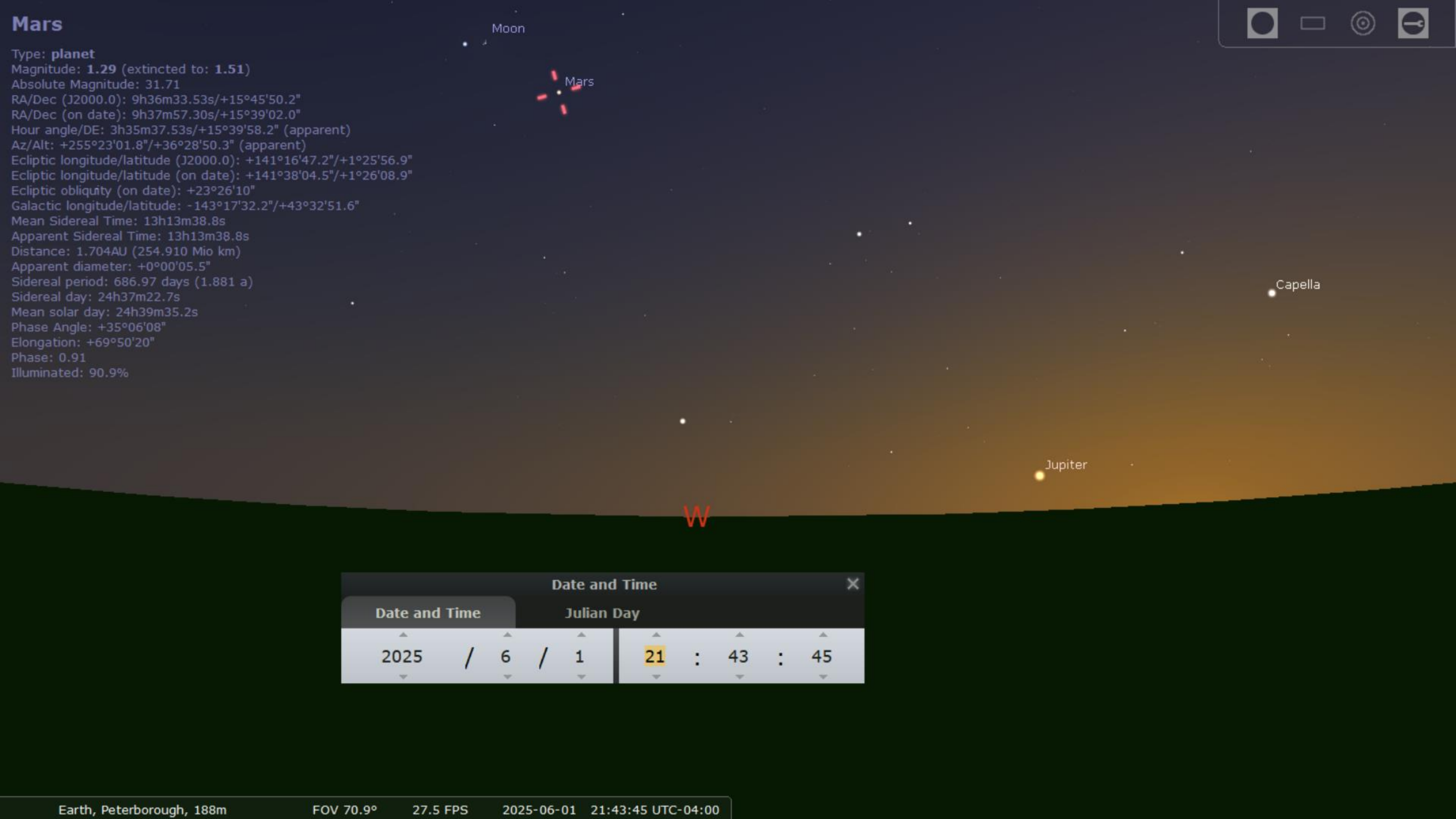
Earth, Peterborough, 188m | FOV 36.4° | 17.8 FPS | 2025-06-30 03:09:55 UTC-04:00

MARS

Mars

- On June 1st, Mars is high in the western sky at sunset.

- Mars and a young Moon share a wide conjunction at sunset.


Mars
Type: planet
Magnitude: 1.29 (extincted to: 1.51)
Absolute Magnitude: 31.71
RA/Dec (J2000.0): 9h36m33.53s/+15°45'50.2"
RA/Dec (on date): 9h37m57.30s/+15°39'02.0"
Hour angle/DE: 3h35m37.53s/+15°39'58.2" (apparent)
Az/Alt: +255°23'01.8"/+36°28'50.3" (apparent)
Ecliptic longitude/latitude (J2000.0): +141°16'47.2"/+1°25'56.9"
Ecliptic longitude/latitude (on date): +141°38'04.5"/+1°26'08.9"
Ecliptic obliquity (on date): +23°26'10"
Galactic longitude/latitude: -143°17'32.2"/+43°32'51.6"
Mean Sidereal Time: 13h13m38.8s
Apparent Sidereal Time: 13h13m38.8s
Distance: 1.704AU (254.910 Mio km)
Apparent diameter: +0°00'05.5"
Sidereal period: 686.97 days (1.881 a)
Sidereal day: 24h37m22.7s
Mean solar day: 24h39m35.2s
Phase Angle: +35°06'08"
Elongation: +69°50'20"
Phase: 0.91
Illuminated: 90.9%
Moon
Mars
Capella
Jupiter
W
Date and Time
Date and Time
Julian Day
2025 / 6 / 1
21 : 43 : 45
Earth, Peterborough, 188m
FOV 70.9°
27.5 FPS
2025-06-01 21:43:45 UTC-04:00

Mars

- On June 1st, Mars and a young Moon set together 1:10 a.m. in the northwestern sky.

Date and Time

Date and Time | Julian Day

2025 / 6 / 1 1 : 10 : 6

Earth, Peterborough, 188m FOV 36.4° 15.5 FPS 2025-06-01 01:10:06 UTC-04:00

Mars

- On June 29th, Mars and a First Quarter Moon share a tight conjunction in the early evening western sky at sunset.

- Both objects have less than 1 degree of separation between them.

Mars

Type: **planet**
Magnitude: **1.48** (extincted to: **1.92**)
Absolute Magnitude: 31.64
RA/Dec (J2000.0): 10h36m2.06s/+9°55'52.9"
RA/Dec (on date): 10h37m22.47s/+9°47'59.5"
Hour angle/DE: 5h03m7.34s/+9°50'11.8" (apparent)
Az/Alt: +267°11'48.4"/+17°00'34.7" (apparent)
Ecliptic longitude/latitude (J2000.0): +156°53'43.7"/+1°01'27.5"
Ecliptic longitude/latitude (on date): +157°15'03.3"/+1°01'34.6"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -125°15'45.2"/+53°46'26.6"
Mean Sidereal Time: 15h40m39.1s
Apparent Sidereal Time: 15h40m39.2s
Distance: 1.919AU (287.036 Mio km)
Apparent diameter: +0°00'04.9"
Sidereal period: 686.97 days (1.881 a)
Sidereal day: 24h37m22.7s
Mean solar day: 24h39m35.2s
Phase Angle: +31°59'33"
Elongation: +58°40'46"
Phase: 0.92
Illuminated: 92.4%

Date and Time

Date and Time | Julian Day

2025 / 6 / 29 22 : 20 : 16

Earth, Peterborough, 188m | FOV 36.4° | 25.8 FPS | 2025-06-29 22:20:16 UTC-04:00

Mars

- On June 30th, Mars is 25 degrees above the western horizon at sunset.

Mars

Type: **planet**
Magnitude: **1.48** (extincted to: **1.85**)
Absolute Magnitude: 31.63
RA/Dec (J2000.0): 10h38m9.56s/+9°42'25.5"
RA/Dec (on date): 10h39m29.89s/+9°34'30.3"
Hour angle/DE: 4h42m30.03s/+9°36'19.9" (apparent)
Az/Alt: +263°18'52.4"/+20°31'35.5" (apparent)
Ecliptic longitude/latitude (J2000.0): +157°27'53.6"/+1°00'39.4"
Ecliptic longitude/latitude (on date): +157°49'13.4"/+1°00'46.2"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -124°27'23.1"/+54°05'19.7"
Mean Sidereal Time: 15h22m7.4s
Apparent Sidereal Time: 15h22m7.6s
Distance: 1.926AU (288.068 Mio km)
Apparent diameter: +0°00'04.9"
Sidereal period: 686.97 days (1.881 a)
Sidereal day: 24h37m22.7s
Mean solar day: 24h39m35.2s
Phase Angle: +31°52'01"
Elongation: +58°18'36"
Phase: 0.92
Illuminated: 92.5%

Moon

Mars

Mercury

W

Date and Time

Date and Time | Julian Day

2025 / 6 / 30 21 : 57 : 51

Earth, Peterborough, 188m | FOV 43° | 20.8 FPS | 2025-06-30 21:57:51 UTC-04:00

Mars

- On June 30th, Mars sets at 11:51 p.m. in the western midnight sky.

Mars

Type: **planet**
Magnitude: **1.49** (extincted to: **5.25**)
Absolute Magnitude: 31.63
RA/Dec (J2000.0): 10h38m19.76s/+9°41'20.5"
RA/Dec (on date): 10h39m40.08s/+9°33'25.1"
Hour angle/DE: 6h34m55.96s/+9°51'58.2" (apparent)
Az/Alt: +283°07'40.1"/+0°43'21.8" (apparent)
Ecliptic longitude/latitude (J2000.0): +157°30'37.8"/+1°00'35.2"
Ecliptic longitude/latitude (on date): +157°51'57.6"/+1°00'42.1"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -124°23'28.5"/+54°06'49.4"
Mean Sidereal Time: 17h15m51.1s
Apparent Sidereal Time: 17h15m51.3s
Distance: 1.926AU (288.152 Mio km)
Apparent diameter: +0°00'04.9"
Sidereal period: 686.97 days (1.881 a)
Sidereal day: 24h37m22.7s
Mean solar day: 24h39m35.2s
Phase Angle: +31°51'25"
Elongation: +58°16'47"
Phase: 0.92
Illuminated: 92.5%

Moon

Mars

W

Date and Time

Date and Time | Julian Day

2025 / 6 / 30 23 : 51 : 16

Earth, Peterborough, 188m | FOV 22.1° | 16 FPS | 2025-06-30 23:51:16 UTC-04:00

JUPITER

Jupiter

- On June 1st, Jupiter is low on the western horizon at sunset.

Jupiter

Type: **planet**
Magnitude: **-1.90** (extincted to: **-0.80**)
Absolute Magnitude: 25.74
RA/Dec (J2000.0): 5h50m48.43s/+23°14'31.0"
RA/Dec (on date): 5h52m21.06s/+23°14'58.3"
Hour angle/DE: 6h58m58.34s/+23°20'47.6" (apparent)
Az/Alt: +296°42'44.6"/+6°17'23.1" (apparent)
Ecliptic longitude/latitude (J2000.0): +87°53'18.1"/-0°10'49.8"
Ecliptic longitude/latitude (on date): +88°14'35.0"/-0°10'29.3"
Ecliptic obliquity (on date): +23°26'10"
Galactic longitude/latitude: -174°31'15.8"/-1°56'31.2"
Mean Sidereal Time: 12h51m43.9s
Apparent Sidereal Time: 12h51m44.0s
Distance: 6.099AU (912.438 Mio km)
Apparent diameter: +0°00'32.3"
Sidereal period: 4331.87 days (11.860 a)
Sidereal day: 9h55m29.7s
Mean solar day: 9h55m33.1s
Phase Angle: +3°12'27"
Elongation: +16°27'23"
Phase: 1.00
Illuminated: 99.9%

Date and Time

Date and Time | Julian Day

2025 / 6 / 1 21 : 21 : 53

Earth, Peterborough, 188m FOV 15.8° 48 FPS 2025-06-01 21:21:54 UTC-04:00

Jupiter

- On June 1st, Jupiter sets at 10:03 p.m. in the western sky.

- Jupiter is now visible for 45 minutes after sunset.

Jupiter

Type: **planet**
Magnitude: **-1.90** (extincted to: **2.75**)
Absolute Magnitude: 25.74
RA/Dec (J2000.0): 5h50m50.15s/+23°14'31.4"
RA/Dec (on date): 5h52m22.78s/+23°14'58.7"
Hour angle/DE: 7h40m5.35s/+23°39'15.9" (apparent)
Az/Alt: +303°53'59.0"/+0°10'05.5" (apparent)
Ecliptic longitude/latitude (J2000.0): +87°53'41.8"/-0°10'49.7"
Ecliptic longitude/latitude (on date): +88°14'58.7"/-0°10'29.1"
Ecliptic obliquity (on date): +23°26'10"
Galactic longitude/latitude: -174°31'04.1"/-1°56'10.6"
Mean Sidereal Time: 13h33m58.0s
Apparent Sidereal Time: 13h33m58.1s
Distance: 6.099AU (912.461 Mio km)
Apparent diameter: +0°00'32.3"
Sidereal period: 4331.87 days (11.860 a)
Sidereal day: 9h55m29.7s
Mean solar day: 9h55m33.1s
Phase Angle: +3°12'12"
Elongation: +16°26'05"
Phase: 1.00
Illuminated: 99.9%

Date and Time

Date and Time | Julian Day

2025 / 6 / 1 22 : 3 : 1

Earth, Peterborough, 188m FOV 5.82° 48.6 FPS 2025-06-01 22:04:01 UTC-04:00

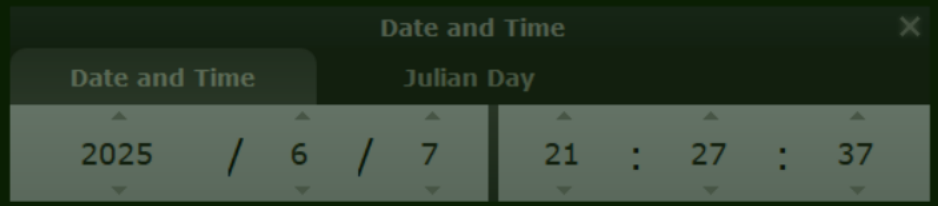
Jupiter

- On June 7th, Jupiter and Mercury share a close conjunction low on the western horizon at sunset.

- Mercury is north of Jupiter on the same latitude.

Jupiter

Type: **planet**
Magnitude: -**1.90** (extincted to: **0.20**)
Absolute Magnitude: 25.74
RA/Dec (J2000.0): 5h56m41.69s/+23°16'00.7"
RA/Dec (on date): 5h58m14.43s/+23°16'14.9"
Hour angle/DE: 7h22m10.00s/+23°27'22.2" (apparent)
Az/Alt: +300°40'55.2"/+2°43'47.6" (apparent)
Ecliptic longitude/latitude (J2000.0): +89°14'27.2"/-0°10'12.9"
Ecliptic longitude/latitude (on date): +89°35'45.2"/-0°09'52.4"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -173°51'26.1"/-0°45'48.4"
Mean Sidereal Time: 13h21m8.1s
Apparent Sidereal Time: 13h21m8.2s
Distance: 6.125AU (916.288 Mio km)
Apparent diameter: +0°00'32.2"
Sidereal period: 4331.87 days (11.860 a)
Sidereal day: 9h55m29.7s
Mean solar day: 9h55m33.1s
Phase Angle: +2°21'58"
Elongation: +12°03'41"
Phase: 1.00
Illuminated: 100.0%



Jupiter

- On June 12th, Jupiter is just above the western horizon at sunset.

- No longer visible this month.

Jupiter

Type: **planet**
Magnitude: -**1.90** (extincted to: **2.47**)
Absolute Magnitude: 25.73
RA/Dec (J2000.0): 6h01m38.09s/+23°16'36.8"
RA/Dec (on date): 6h03m10.85s/+23°16'39.8"
Hour angle/DE: 7h39m3.08s/+23°39'34.7" (apparent)
Az/Alt: +303°43'20.5"/+0°19'35.2" (apparent)
Ecliptic longitude/latitude (J2000.0): +90°22'31.5"/-0°09'42.7"
Ecliptic longitude/latitude (on date): +90°43'49.6"/-0°09'22.4"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: -173°18'01.7"/+0°13'30.4"
Mean Sidereal Time: 13h43m39.0s
Apparent Sidereal Time: 13h43m39.1s
Distance: 6.141AU (918.689 Mio km)
Apparent diameter: +0°00'32.1"
Sidereal period: 4331.87 days (11.860 a)
Sidereal day: 9h55m29.7s
Mean solar day: 9h55m33.1s
Phase Angle: +1°39'26"
Elongation: +8°24'55"
Phase: 1.00
Illuminated: 100.0%

Date and Time

Date and Time | Julian Day

2025 / 6 / 12 21 : 30 : 25

Earth, Peterborough, 188m FOV 5.82° 59.6 FPS 2025-06-12 21:30:25 UTC-04:00

SATURN

Saturn

- On June 1st, Saturn rises at 2:44 a.m. in the early morning eastern sky.

Saturn

Type: **planet**
Magnitude: **1.12** (extincted to: **5.48**)
Absolute Magnitude: 27.72
RA/Dec (J2000.0): 0h03m55.02s/+1°52'25.9"
RA/Dec (on date): 0h05m13.08s/-1°43'57.1"
Hour angle/DE: 18h07m14.55s/-1°22'56.0" (apparent)
Az/Alt: +92°15'13.5"/+0°19'47.9" (apparent)
Ecliptic longitude/latitude (J2000.0): +0°09'09.9"/-2°06'31.3"
Ecliptic longitude/latitude (on date): +0°30'27.4"/-2°06'30.1"
Ecliptic obliquity (on date): +23°26'10"
Galactic longitude/latitude: +96°39'44.6"/-62°17'49.1"
Mean Sidereal Time: 18h11m1.4s
Apparent Sidereal Time: 18h11m1.5s
Distance: 9.874AU (1477.156 Mio km)
Apparent diameter: +0°00'16.8", with rings: +0°00'39.2"
Sidereal period: 10760.00 days (29.459 a)
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Phase Angle: +5°43'32"
Elongation: +70°33'06"
Phase: 1.00
Illuminated: 99.8%

Neptune
Saturn
E

Date and Time

Date and Time | Julian Day

2025 / 6 / 1 2 : 44 : 15

Earth, Peterborough, 188m FOV 13.4° 57.5 FPS 2025-06-01 02:44:15 UTC-04:00

Saturn

- On June 19th, Saturn and a waning Last Quarter Moon share a close conjunction in the early morning eastern sky.
- The planet Neptune is less than 1 degree northeast of Saturn.
- All 3 objects rise together at 1:40 a.m.

Saturn

Type: **planet**
Magnitude: **1.05** (extincted to: **1.64**)
Absolute Magnitude: 27.72
RA/Dec (J2000.0): 0h07m31.73s/-1°33'53.5"
RA/Dec (on date): 0h08m49.90s/-1°25'24.0"
Hour angle/DE: 19h16m53.46s/-1°22'17.7" (apparent)
Az/Alt: +104°39'50.2"/+12°38'29.3" (apparent)
Ecliptic longitude/latitude (J2000.0): +1°06'15.8"/-2°11'03.7"
Ecliptic longitude/latitude (on date): +1°27'35.4"/-2°11'02.2"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +98°42'46.2"/-62°21'13.9"
Mean Sidereal Time: -4h34m28.7s
Apparent Sidereal Time: -4h34m28.6s
Distance: 9.582AU (1433.398 Mio km)
Apparent diameter: +0°00'17.4", with rings: +0°00'40.4"
Sidereal period: 10760.00 days (29.459 a)
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Phase Angle: +6°04'47"
Elongation: +86°48'05"
Phase: 1.00
Illuminated: 99.7%

Date and Time

Date and Time | Julian Day

2025 / 6 / 19 2 : 47 : 46

Earth, Peterborough, 188m FOV 30.8° 34.4 FPS 2025-06-19 02:47:46 UTC-04:00

Saturn

- On June 30th, Saturn rises at 12:52 a.m. in the eastern midnight sky.

Saturn

Type: **planet**
Magnitude: **1.01** (extincted to: **5.51**)
Absolute Magnitude: 27.71
RA/Dec (J2000.0): 0h08m49.75s/-1°28'38.5"
RA/Dec (on date): 0h10m7.96s/-1°20'08.8"
Hour angle/DE: 18h05m10.97s/-0°58'29.8" (apparent)
Az/Alt: +91°36'09.6"/+0°14'46.4" (apparent)
Ecliptic longitude/latitude (J2000.0): +1°26'15.4"/-2°14'00.1"
Ecliptic longitude/latitude (on date): +1°47'35.5"/-2°13'58.5"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +99°26'04.5"/-62°23'21.3"
Mean Sidereal Time: 18h13m50.0s
Apparent Sidereal Time: 18h13m50.2s
Distance: 9.400AU (1406.274 Mio km)
Apparent diameter: +0°00'17.7", with rings: +0°00'41.2"
Sidereal period: 10760.00 days (29.459 a)
Sidereal day: 10h39m22.4s
Mean solar day: 10h39m24.0s
Phase Angle: +6°03'02"
Elongation: +96°52'51"
Phase: 1.00
Illuminated: 99.7%

Neptune

Saturn

E

Date and Time

Date and Time | Julian Day

2025 / 6 / 30 0 : 52 : 1

Earth, Peterborough, 188m FOV 13.4° 53.6 FPS 2025-06-30 00:53:01 UTC-04:00

URANUS

Uranus

- On June 10th, Uranus is low on the eastern horizon at morning twilight. Still difficult to see.

Uranus

Type: **planet**
Magnitude: **5.82** (extincted to: **10.21**)
Absolute Magnitude: 30.84
RA/Dec (J2000.0): 3h44m21.31s/+19°34'12.9"
RA/Dec (on date): 3h45m49.41s/+19°39'02.7"
Hour angle/DE: 16h38m38.22s/+20°01'31.1" (apparent)
Az/Alt: +61°45'32.9"/+0°18'39.3" (apparent)
Ecliptic longitude/latitude (J2000.0): +58°17'09.0"/-0°12'48.2"
Ecliptic longitude/latitude (on date): +58°38'27.2"/-0°12'30.3"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +169°29'26.9"/-27°16'30.5"
Mean Sidereal Time: -3h36m58.8s
Apparent Sidereal Time: -3h36m58.7s
Distance: 20.470AU (3062.225 Mio km)
Apparent diameter: +0°00'03.4", with rings: +0°00'13.2"
Sidereal period: 30685.00 days (84.011 a)
Sidereal day: 17h14m24.0s
Mean solar day: 17h14m22.5s
Phase Angle: +1°04'18"
Elongation: +21°05'06"
Phase: 1.00
Illuminated: 100.0%

Date and Time

Date and Time | Julian Day

2025 / 6 / 10 4 : 20 : 30

Earth, Peterborough, 188m FOV 8.12° 15.9 FPS 2025-06-10 04:20:30 UTC-04:00

Uranus

- On June 20th, Uranus rises at 3:40 a.m. the start of astronomical twilight.

Uranus

Type: **planet**
Magnitude: **5.81** (extincted to: **10.49**)
Absolute Magnitude: 30.84
RA/Dec (J2000.0): 3h46m34.47s/+19°41'20.3"
RA/Dec (on date): 3h48m2.76s/+19°46'06.3"
Hour angle/DE: 16h36m59.24s/+20°09'55.1" (apparent)
Az/Alt: +61°22'40.3"/+0°09'19.0" (apparent)
Ecliptic longitude/latitude (J2000.0): +58°49'18.2"/-0°12'45.8"
Ecliptic longitude/latitude (on date): +59°10'37.2"/-0°12'27.7"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +169°49'29.8"/-26°49'46.1"
Mean Sidereal Time: -3h36m29.2s
Apparent Sidereal Time: -3h36m29.1s
Distance: 20.397AU (3051.334 Mio km)
Apparent diameter: +0°00'03.5", with rings: +0°00'13.2"
Sidereal period: 30685.00 days (84.011 a)
Sidereal day: 17h14m24.0s
Mean solar day: 17h14m22.5s
Phase Angle: +1°29'40"
Elongation: +30°04'23"
Phase: 1.00
Illuminated: 100.0%

Date and Time

Date and Time | Julian Day

2025 / 6 / 20 3 : 41 : 40

Earth, Peterborough, 188m FOV 1.53° 19.8 FPS 2025-06-20 03:41:40 UTC-04:00

Uranus

- On June 30th, Uranus rises at 3:02 a.m. in the late morning eastern sky.

Uranus

Type: **planet**
Magnitude: **5.80** (extincted to: **10.46**)
Absolute Magnitude: 30.83
RA/Dec (J2000.0): 3h48m38.98s/+19°47'53.0"
RA/Dec (on date): 3h50m7.42s/+19°52'35.3"
Hour angle/DE: 16h36m32.89s/+20°16'19.6" (apparent)
Az/Alt: +61°13'47.4"/+0°09'56.7" (apparent)
Ecliptic longitude/latitude (J2000.0): +59°19'19.5"/-0°12'44.2"
Ecliptic longitude/latitude (on date): +59°40'38.9"/-0°12'26.1"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +170°08'05.1"/-26°24'46.0"
Mean Sidereal Time: -3h34m50.6s
Apparent Sidereal Time: -3h34m50.4s
Distance: 20.301AU (3036.986 Mio km)
Apparent diameter: +0°00'03.5", with rings: +0°00'13.3"
Sidereal period: 30685.00 days (84.011 a)
Sidereal day: 17h14m24.0s
Mean solar day: 17h14m22.5s
Phase Angle: +1°52'54"
Elongation: +39°05'24"
Phase: 1.00
Illuminated: 100.0%

Date and Time

Date and Time | Julian Day

2025 / 6 / 30 3 : 3 : 59

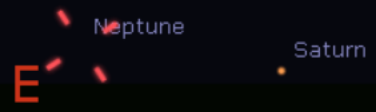
NEPTUNE

Neptune

- On June 1st, Neptune rises at 2:42 a.m. in the eastern morning sky.

Neptune

Type: **planet**
Magnitude: **7.91** (extincted to: **12.33**)
Absolute Magnitude: 32.08
RA/Dec (J2000.0): 0h07m38.38s/-0°35'16.6"
RA/Dec (on date): 0h08m56.44s/-0°26'47.9"
Hour angle/DE: 18h02m1.91s/-0°05'33.3" (apparent)
Az/Alt: +90°25'15.7"/+0°17'55.9" (apparent)
Ecliptic longitude/latitude (J2000.0): +1°31'06.9"/-1°17'56.7"
Ecliptic longitude/latitude (on date): +1°52'24.1"/-1°17'55.0"
Ecliptic obliquity (on date): +23°26'10"
Galactic longitude/latitude: +99°30'48.3"/-61°27'07.9"
Mean Sidereal Time: 18h9m31.2s
Apparent Sidereal Time: 18h9m31.3s
Distance: 30.236AU (4523.197 Mio km)
Apparent diameter: +0°00'02.3", with rings: +0°00'05.7"
Sidereal period: 60189.00 days (164.789 a)
Sidereal day: 16h6m36.0s
Mean solar day: 16h6m36.6s
Phase Angle: +1°49'02"
Elongation: +69°10'37"
Phase: 1.00
Illuminated: 100.0%



Date and Time

Date and Time | Julian Day

2025 / 6 / 1 2 : 42 : 45

Earth, Peterborough, 188m FOV 11.3° 36.6 FPS 2025-06-01 02:42:45 UTC-04:00

Neptune

- On June 30th, Neptune rises at 12:49 a.m. in the eastern midnight sky.

Neptune

Type: **planet**
Magnitude: **7.88** (extincted to: **12.37**)
Absolute Magnitude: 32.08
RA/Dec (J2000.0): 0h08m45.62s/-0°29'35.7"
RA/Dec (on date): 0h10m3.84s/-0°21'05.9"
Hour angle/DE: 18h01m23.46s/+0°00'29.0" (apparent)
Az/Alt: +90°14'13.6"/+0°15'16.2" (apparent)
Ecliptic longitude/latitude (J2000.0): +1°48'48.2"/-1°19'24.8"
Ecliptic longitude/latitude (on date): +2°10'08.0"/-1°19'23.1"
Ecliptic obliquity (on date): +23°26'09"
Galactic longitude/latitude: +100°07'55.6"/-61°27'40.7"
Mean Sidereal Time: 18h9m58.7s
Apparent Sidereal Time: 18h9m58.8s
Distance: 29.757AU (4451.621 Mio km)
Apparent diameter: +0°00'02.3", with rings: +0°00'05.8"
Sidereal period: 60189.00 days (164.789 a)
Sidereal day: 16h6m36.0s
Mean solar day: 16h6m36.6s
Phase Angle: +1°56'12"
Elongation: +96°30'22"
Phase: 1.00
Illuminated: 100.0%

Date and Time

Date and Time | Julian Day

2025 / 6 / 30 0 : 49 : 11

Earth, Peterborough, 188m FOV 8.12° 17.9 FPS 2025-06-30 00:49:11 UTC-04:00

DEEP SKY

ANDROMEDA

PLANETARY NEBULA

BLUE SNOWBALL NEBULA

CALDWELL 22


C22
Pegasus
Cassiopeia
Andromeda
Perseus
Fomalhaut

Date and Time

Date and Time | Julian Day

2025 / 6 / 1 23 : 43 : 39

Earth, Peterborough, 188m | FOV 37.6° | 59.1 FPS | 2025-06-01 23:43:39 UTC-04:00

C 22 – THE BLUE SNOWBALL NEBULA

- Object: C22 – The Blue Snowball Nebula, NGC 7662
- Other Designation: PK 106-17 1, GCRV 14695, PN ARO 20
- Class: Emission Nebula – Type: Planetary Nebula
- Constellation: Andromeda
- Age: 3,080 years old Distance: 2,500 light years from Earth.
- Star: White Sub-Dwarf – 100,000 K degrees Mass: 0.60 Solar Mass
- Diameter: 0.35 to 0.70 light years across.
- Size: 32 x 28 arc seconds across
- Magnitude: +8.3. Following photo by the HST in 2000.

C 22 – THE BLUE SNOWBALL NEBULA

- The Blue Snowball nebula is still forming and expanding.
- The core star is a sub dwarf, O Type star with a surface temperature of 100,000 kelvin degrees. The star's luminosity is 5,250 times brighter than our sun.
- The power of the star's solar wind pushes hot fast-moving gas into the slower moving material of the outer layers of the nebula. This creates Cometary Knots or Twists in the receding gas as the two mediums collide with each other.
- As the stellar material and the hot gases collide, X-ray radiation is emitted and can be measured from Earth.

C 22 – THE BLUE SNOWBALL NEBULA

- The colour blue comes from Ionized Helium gas from within the collapsing star. The red is Ionized Nitrogen in the outer layers.
- The young age of the planetary Nebula allows astronomers to study the dynamics of the dying star to better understand our sun's future when its fuel runs out.
- The following photo was taken by the ESA. European Southern observatory. High definition of the inner core. Stellar material being ejected from the surface of the dwarf star.

That is the Sky this Month

By David Mills