Sky this Month

February 2024

MOON

FULL MOON

Moon

• The full Moon is on February 24th, at 7:30 a.m. looking east.

• The Moon rises at 6:10 p.m.

• This month's Full Moon is called the Snow Moon.

Moon

Type: moon

Magnitude: -12.15 (extincted to: -7.40)

Absolute Magnitude: 32.25

RA/Dec (J2000.0): 10h54m30.39s/+9°50'11.5" RA/Dec (on date): 10h55m46.56s/+9°42'27.8"

Hour angle/DE: 17h20m38.13s/+10°05'31.9" (apparent)

Az/Alt: +75°56'24.2"/+0°06'43.1" (apparent)

Ecliptic longitude/latitude (J2000.0): +161°08'50.9"/+2°39'04.7"
Ecliptic longitude/latitude (on date): +161°29'10.4"/+2°39'10.3"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: -120°33'27.5"/+57°28'17.0"

Mean Sidereal Time: 4h14m51.9s Apparent Sidereal Time: 4h14m51.6s Distance: 0.002715AU (406167.509 km) Apparent diameter: +0°29'24.6"

Sidereal period: 27.32 days (0.075 a) Sidereal day: 655h43m11.5s

Mean solar day: 708h44m2.8s Phase Angle: +6°13'16" Elongation: +173°45'43"

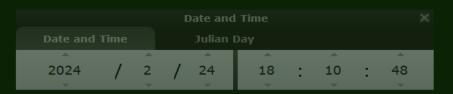
Phase: 1.00 Illuminated: 99.7%











Full-screen mode [F11]

Earth, Peterborough, 188m FOV 11.3° 59.4 FPS 2024-02-24 18:10:48 UTC-05:00

NEW MOON

Moon

• The New Moon is on February 9th, at 5:59 p.m.

Moon is southeast of the sun.

Saturn is northeast of the sun.

Mercury, Mars and Venus are all lined up southwest of the sun.

Moon

Type: moon Magnitude: -1.91

Absolute Magnitude: 42.76

RA/Dec (J2000.0): 21h33m39.66s/-19°25'15.8" RA/Dec (on date): 21h35m0.94s/-19°18'50.9"

Az/Alt: +250°59'59.2"/-8°14'38.7"

Ecliptic longitude/latitude (J2000.0): +319°26'51.9"/-4°40'25.0" Ecliptic longitude/latitude (on date): +319°47'09.5"/-4°40'37.3"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +31°37'37.2"/-44°12'53.7"

Mean Sidereal Time: 3h5m12.5s Apparent Sidereal Time: 3h5m12.2s Sidereal period: 27.32 days (0.075 a)

Phase Angle: +175°13'40" Elongation: +4°45'38"

Phase: 0.00 Illuminated: 0.2% Saturn

2024 19

Mars

Full-screen mode [F11]

Earth, Peterborough, 188m

FOV 50.8°

57.8 FPS

Fomalhaut





MERCURY

Mercury

Not visible this month

VENUS

• On February 7th, Venus rises at 6:00 a.m. in the Eastern sky.

Venus is now in retrograde or eastward motion. The planet rises 30 minutes before morning twilight.

Type: planet

Magnitude: -3.96 (extincted to: -0.62)

Absolute Magnitude: 26.89

RA/Dec (on date): 19h20m29.80s/-21°49'50.6" Hour angle/DE: 19h37m39.30s/-21°32'08.2" (apparent)

Ecliptic obliquity (on date): +23°26'10"

Mean Sidereal Time: 14h57m3.7s Apparent Sidereal Time: 14h57m3.5s

Sidereal day: 5832h28m47.1s Phase Angle: +42°05'32" Elongation: +29°32'10"

Phase: 0.87 Illuminated: 87.1%



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Date and	Time		Julian Day							
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Full-screen mode [F11]

Earth, Peterborough, 188m FOV 30.8° 59.5 FPS 2024-02-07 06:02:01 UTC-05:00











• On February 7th, Venus rises in a triangle with Mars and a very old moon.

• All 3 celestial objects are visible at 6:30 a.m.

Magnitude: -3.96 (extincted to: -2.79)

Venus

2024 36 50

Full-screen mode [F11] Earth, Peterborough, 188m

FOV 22.1°

49 FPS

2024-02-07 06:36:50 UTC-05:00



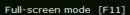




 On February 22nd, Venus and Mars rise together in a close conjunction.

• Both planets are visible in eastern twilight sky at 6:10 a.m.

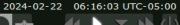




Earth, Peterborough, 188m

FOV 11.3°

59.7 FPS















• On February 29th, Venus rises at 5:59 a.m. in the eastern morning twilight sky shortly before sunrise.







Mars

Venus

2024 29 58 : 59

Full-screen mode [F11]

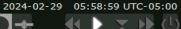
Earth, Peterborough, 188m

FOV 9.59°

59.3 FPS







MARS

• On February 8th, Mars is just above the eastern horizon at sunrise.

Type: planet

Magnitude: **1.31** (extincted to: **4.50**)

Absolute Magnitude: 31.08

/Dec (J2000.0): 19h52m45.85s/-21°49'45.4" /Dec (on date): 19h54m11.70s/-21°46'02.7" our angle/DE: 19h38m19.24s/-21°29'04.6" (appar

z/Alt: +122°10'46.3"/+1°12'57.6" (apparent)

:cliptic longitude/latitude (J2000.0): +296°00'50.9"/-0°53'59.6" :cliptic longitude/latitude (on date): +296°21'07.3"/-0°54'17.1"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +19°11'06.4"/-22°49'47.8"

Mean Sidereal Time: 15h31m28.5s Apparent Sidereal Time: 15h31m28.2s Distance: 2.292AU (342.820 Mio km) Apparent diameter: +0°00'04.1" Sidereal period: 686.97 days (1.881 a

Sidereal day: 24h37m22.7s Mean solar day: 24h39m35.2s Phase Angle: +15°29'26" Elongation: +22°51'36"

Phase: 0.98 Illuminated: 98.2%



Date and Time										
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Full-screen mode [F11]

Earth, Peterborough, 188m FOV 8.12° 59.2 FPS 2024-02-08 06:32:24 UTC-05:00









• On February 22nd, Mars and Venus rise together in a close conjunction.

Both planets are low in the eastern sky at sunrise.

Type: planet

Magnitude: 1.28 (extincted to: 2.65)

Absolute Magnitude: 31.10

RA/Dec (J2000.0): 20h37m46.19s/-19°33'16.5" RA/Dec (on date): 20h39m9.64s/-19°28'13.9" Hour angle/DE: 19h51m34.99s/-19°20'30.3" (apparent)

Az/Alt: +123°11'01.0"/+4°51'17.3" (apparent)

Ecliptic longitude/latitude (J2000.0): +306°46'50.4"/-1°00'33.5" Ecliptic longitude/latitude (on date): +307°07'08.7"/-1°00'49.1"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +25°47'21.2"/-31°51'52.4"

Mean Sidereal Time: 16h30m17.9s Apparent Sidereal Time: 16h30m17.7s Distance: 2.239AU (334.898 Mio km) Apparent diameter: +0°00'04.2" Sidereal period: 686.97 days (1.881 a)

Sidereal day: 24h37m22.7s
Mean solar day: 24h39m35.2s
Phase Angle: +17°55'51"
Elongation: +26°14'29"

Phase: 0.98 Illuminated: 97.6%





Full-screen mode [F11]

Earth, Peterborough, 188m FOV 15.8° 26.7 FPS 2024-02-22 06:36:01 UTC-05:00



• On February 29th, Mars rises at 5:56 a.m. in the eastern morning sky an hour before sunrise.

Type: **planet**

Magnitude: 1.26 (extincted to: 5.00)

Absolute Magnitude: 31.11

RA/Dec (J2000.0): 20h59m46.41s/-18°09'45.6* RA/Dec (on date): 21h01m8.62s/-18°04'07.7"

A=/Alt. | 116001|33 0"/|0044|53 0" (apparent)

z/Ait: +116°01'22.9"/+0°44'52.9" (apparent)

Ecliptic longitude/latitude (J2000.0): +312°10'10.1"/-1°03'30.6" Ecliptic longitude/latitude (on date): +312°30'30.1"/-1°03'45.0"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +29°34'12.5"/-36°15'00.2"

Mean Sidereal Time: 16h17m21.6s Apparent Sidereal Time: 16h17m21.3s Distance: 2.212AU (330.904 Mio km) Apparent diameter: +0°00'04.2" Sidereal period: 686.97 days (1.881 a

5idereal day: 24h37m22.7s Mean solar day: 24h39m35.2s Phase Angle: +19°06'46" Elongation: +27°51'44"

Phase: 0.97 Illuminated: 97.29



Date and Time										
Date and	Time		Julian Day							
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Full-screen mode [F11]

Earth, Peterborough, 188m FOV 15.8° 26.8 FPS 2024-02-29 05:55:36 UTC-05:00







JUPITER

• On February 8th, Jupiter remains well places southern sky at sunset.

Type: planet

Magnitude: -2.32 (extincted to: -2.17) Betelgeuse

Absolute Magnitude: 25.72

RA/Dec (J2000.0): 2h22m49.86s/+13°08'22.2" RA/Dec (on date): 2h24m8.56s/+13°15'00.0"

z/Alt: +210°50'23.0"/+55°37'03.3" (apparent)

Ecliptic longitude/latitude (J2000.0): +3/°44'00.0"/-1°00'14.0"
Ecliptic longitude/latitude (on date): +38°04'16.5"/-1°00'01.0"
Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +154°39'43.3"/-44°01'46.3"

Mean Sidereal Time: 3h33m22.6s Apparent Sidereal Time: 3h33m22.3s Distance: 5.079AU (759.830 Mio km) Apparent diameter: +0°00'38.8"

Sidereal period: 4331.87 days (11.860 a) •

Sidereal day: 9h55m29.7s Mean solar day: 9h55m33.1s Phase Angle: +11°11'49" Elongation: +79°23'05"

Phase: 0.99 Illuminated: 99.0%

Siri



Saturn

•

Date and Time X

Date and Time Julian Day

2024 / 2 / 7 18 : 36 : 16

Full-screen mode [F11]

Earth, Peterborough, 188m FOV 98.9° 59.7 FPS 2024-02-07 18:36:16 UTC-05:00

Rigel







• On February 14th, Jupiter and young crescent Moon share a close conjunction at sunset looking southwest.

Jupiter :

Type: planet
Magnitude: -2.28 (extincted to: -2.11)
Absolute Magnitude: 25.72

RA/Dec (on date): 2h27m40.17s/+13°34'15.2" Hour angle/DE: 1h41m54.15s/+13°34'55.2" (apparent)

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +155°28'50.5"/-43°19'52.8"

Mean Sidereal Time: 4h9m36.2s Apparent Sidereal Time: 4h9m35.9s

Sidereal period: 4331.87 days (11.860 a)

Sidereal day: 9h55m29.7s Phase Angle: +10°54'48" Elongation: +73°12'35"

Phase: 0.99 Illuminated: 99.1%

Jupiter





18

52

2024

Full-screen mode [F11]

Earth, Peterborough, 188m FOV 70.9° 59.8 FPS 2024-02-14 18:44:52 UTC-05:00

• On February 29th, Jupiter remains high in the western sky at sunset.

Type: planet

Absolute Magnitude: 25.72

RA/Dec (on date): 2h36m43.77s/+14°21'23.5"

Ecliptic obliquity (on date): +23°26'10"

Distance: 5.411AU (809.500 Mio km) Apparent diameter: +0°00'36.4"

Sidereal period: 4331.87 days (11.860 a)

Sidereal day: 9h55m29.7s Elongation: +60°26'13"



Full-screen mode [F11]

Earth, Peterborough, 188m FOV 70.9° 16.5 FPS 2024-02-29 18:48:28 UTC-05:00









• On February 29th, Jupiter now set around 11:00 p.m. in western sky.

Aldebaran .

Type: planet

Magnitude: -2.19 (extincted to: 1.13)

Absolute Magnitude: 25.72

RA/Dec (on date): 2h36m50.90s/+14°21'59.3" Hour angle/DE: 6h52m35.22s/+14°38'39.7" (apparent) ·

Az/Alt: +289°33'13.8"/+1°05'35.8" (apparent)

Ecliptic longitude/latitude (J2000.0): +41°00'43.2"/-0°54'58.7"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +157°31'49.7"/-41°30'53.5"

Mean Sidereal Time: 9h30m33.3s Apparent Sidereal Time: 9h30m33.0s Distance: 5.414AU (809.881 Mio km)

Sidereal period: 4331.87 days (11.860 a)

Sidereal day: 9h55m29.7s Phase Angle: +9°55'01" Elongation: +60°17'13"

Phase: 0.99 Illuminated: 99.3%

Date and Time 2024 58

Full-screen mode [F11]

Earth, Peterborough, 188m FOV 36.4° 15.5 FPS 2024-02-29 23:05:58 UTC-05:00









SATURN

• On February 10th, Saturn and a day-old Moon share a close conjunction low in the western sky at sunset.

Ecliptic longitude/latitude (J2000.0): +337°16'45.8"/-1°36'38.6"

2024 10 29 31 18

Full-screen mode [F11]

Earth, Peterborough, 188m FOV 5.82° 44.6 FPS 2024-02-10 18:29:31 UTC-05:00









• On February 17th, Saturn is just above the western horizon at sunset.

The planet gets lost in solar glare at sunset as days get longer.











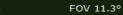




Date and Time 2024 18 31 50 16

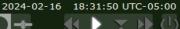
Full-screen mode [F11]

Earth, Peterborough, 188m











URANUS

• On February 1^{st,}, Uranus is near over head at sunset. The planet is just northeast of Jupiter.

Visible most of the night.

Uranus_{igeuse}

Type: planet

Magnitude: 5.72 (extincted to: 5.87)

Absolute Magnitude: 30.84

RA/Dec (on date): 3h06m56.49s/+17°12'56:2" Hour angle/DE: 23h55m3.07s/+17°13'27.0" (apparent)

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +163°06'40.0"/-35°04'48.3"

Mean Sidereal Time: 3h1m59.7s Apparent Sidereal Time: 3h1m59.5s

Apparent diameter: +0°00'03.6", with rings: +0°00'13.8"

Sidereal period: 30685.00 days (84.011 a)

Sidereal day: 17h14m24.03 Phase Angle: +2°51'43" Elongation: +96°30'28"

Phase: 1.00

Illuminated: 99.9%

Jupiter

Saturn

Date and Time 2024 34 28

Full-screen mode [F11]

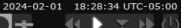
Earth, Peterborough, 188m

FOV 83.7°

46.7 FPS









• On February 29th, Uranus is well placed in the western sky at sunset.

Type: planet

RA/Dec (on date): 3h08m51.68s/+17°21'22.5" Az/Alt: +234°35'55.3"/+52°15'20.9" (apparent)

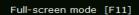
Mean Sidereal Time: 5h14m58.7s Apparent Sidereal Time: 5h14m58.4s

Apparent diameter: +0°00'03.5", with rings: +0°00'13.5"

Sidereal period: 30685.00 days (84.011 a)

Sidereal day: 17h14m24.0s

Date and Time										
Date and	Julian Day									
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2024	/	2	/	29	18	:	51	:	6	
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Earth, Peterborough, 188m FOV 83.7° 16.2 FPS 2024-02-29 18:51:06 UTC-05:00







• On February 29th, Uranus now sets just before midnight in the western sky.

Type: planet

Magnitude: 5.77 (extincted to: 8.68)

Absolute Magnitude: 30.84

RA/Dec (J2000.0): 3h07m31.24s/+17°15'50.5" RA/Dec (on date): 3h08m53.10s/+17°21'28.4" Hour angle/DE: 7h02m52.41s/+17°36'18.5" (apparent)

z/Alt: +293°23'15.3"/+1°30'53.1" (apparent)

Ecliptic longitude/latitude (J2000.0): +49°15'05.4"/-0°17'07.3" Ecliptic longitude/latitude (on date): +49°35'25.3"/-0°16'51.2"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +163°27'21.7"/-34°41'14.0"

Mean Sidereal Time: 10h12m44.9s Apparent Sidereal Time: 10h12m44.6s Distance: 19.945AU (2983.789 Mio km)

Apparent diameter: $+0^{\circ}00'03.5"$, with rings: $+0^{\circ}00'13.5"$

Sidereal period: 30685.00 days (84.011 a)

Sidereal day: 17h14m24.0s Mean solar day: 17h14m22.5s Phase Angle: +2°41'44" Elongation: +68°29'34"

Phase: 1.00 Illuminated: 99.9% Betelgeuse

Aldebaran

Uranus

Dinol

147

Date and Time X

Date and Time Julian Day

2024 / 2 / 29 23 : 48 : 3

Full-screen mode [F11]

Earth, Peterborough, 188m FOV 50.8° 58.4 FPS 2024-02-29 23:48:03 UTC-05:00

NEPTUNE

• On February 7th, Neptune is low in west at sunset only 18 degrees above the horizon.

Type: planet

Magnitude: 7.94 (extincted to: 8.28)

Absolute Magnitude: 32.08

RA/Dec (J2000.0): 23h45m58.35s/-2°50'55.6" RA/Dec (on date): 23h47m12.83s/-2°42'52.3" Hour angle/DE: 3h37m19.73s/-2°41'01.4" (apparent Az/Alt: +241°31'02.7"/+22°35'27.4" (apparent)

Ecliptic longitude/latitude (J2000.0): +355°39'02.1"/-1°13'13.3" Ecliptic longitude/latitude (on date): +355°59'18.8"/-1°13'13.7"

Ecliptic obliquity (on date): +23°26'10"

Galactic longitude/latitude: +87°18'24.4"/-61°06'29.0"

Mean Sidereal Time: 3h24m38.8s Apparent Sidereal Time: 3h24m38.6s Distance: 30.681AU (4589.828 Mio km)

Apparent diameter: +0°00'02.2", 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°08'45" Elongation: +37°19'25"

Phäse: 1.00

Illuminated: 100.0

Saturn

Date and Time

Date and Time

Julian Day

2024 / 2 / 7 18 : 27 : 34

Full-screen mode [F11]

Earth, Peterborough, 188m FOV 36.4° 16.1 FPS 2024-02-07 18:27:34 UTC-05:00







• On February 29th, Neptune is just above the western horizon at sunset.

The planet is now difficult to observe.

Type: planet

Magnitude: 7.96 (extincted to: 10.43)

Absolute Magnitude: 32.08

RA/Dec (on date): 23h50m0.32s/-2°24'29.7"

Ecliptic obliquity (on date): +23°26'10"

Mean Sidereal Time: 5h30m37.8s Apparent Sidereal Time: 5h30m37.5s Distance: 30.854AU (4615.677 Mio km)

Apparent diameter: +0°00'02.2", with rings: +0°00'05.6"

Sidereal period: 60189.00 days (164.789 a)

Sidereal day: 16h6m36.0s Phase Angle: +0°31'12" Elongation: +15°53'43"



Date and Time 2024 29 42

Full-screen mode [F11]

Earth, Peterborough, 188m FOV 18.7° 16.5 FPS 2024-02-29 19:06:42 UTC-05:00



























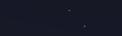








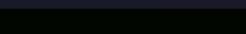














That is the Sky this Month

By David Mills