What's Up? January 1-31, 2023

Made with the RASC Observer's Handbook, 2023 Night Sky Almanac, Sky Safari®, and Stellarium®

photo: David Hoskin

The Sun This Month Solar Activity



The Moon This Month

Date	Phase	English	Mi'kmaq
Jan 1	Moon near Uranus		
Jan 3	Moon near Mars		
Jan 6	Full Moon	Tom Cod Spawning	Punamujuiku's
Jan 15	Last Quarter		
Jan 18	Moon near Antares		
Jan 21	New Moon	Snow-Blinding	<u>Apuknajit</u>
Jan 25	Moon near Jupiter		
Jan 28	First Quarter		
Jan 28	Moon near Uranus		
Jan 30	Moon near Mars		



Jan 18

- Crescent Moon near Antares

- around 6 a.m. in low SE



Jan 28

- Moon and Uranus
- around 7:15 p.m. in SSW
- 15x70 binoculars (4.4° FOV)

Jan 30

- Moon and Mars
- around 7:00 p.m. in S
- 15x70 binoculars (4.4° FOV)



MARE MC: Mare Crisium MFe: Mare Fecunditatis MFr: Mare Frigoris MH: Mare Humorum SI: Sinus Iridum MI: Mare Imbrium MNe: Mare Nectaris MNu: Mare Nubium MS: Mare Serenitatis MT: Mare Tranquillitatis MV: Mare Vaporum **OP: Oceanus Procellarum**

The Moon in Explore the Universe observe 3 of each in binos

challenge

First Quarter: Jan 28



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Lunar X and Lunar V



-look at 8:37 p.m. on Jan 28

The Planets in January

Mercury -begins Jan in western evening sky (mag. 1.7) but quickly fades -re-appears in morning sky mid-month -greatest western elongation (25°) on Jan 30 (mag. 0.0)

- Venus -low in SW in the evening sky at the start of Jan (mag. -3.9)
 -climbs to 24^o elongation by the end of the month
 -close conjunction with Saturn on Jan 22
- Mars -bright and high in the evening sky at the start of Jan (mag. -1.2) -between Pleiades and Hyades on Jan 12 (photo-op) -fades to mag. -0.3 by the end of Jan
- Jupiter -in the SSW evening twilight sky on Jan 1 (mag. -2.4) -close to the crescent Moon on Jan 25
- Saturn -low in early evening sky (mag. 0.8) and fades into twilight by Jan 31 -close conjunction with Venus on Jan 22

Uranus -high in evening sky in Aries at mag. 5.7 (unaided eye from dark site)

Neptune - in extreme NE Aquarius at mag. 7.9 (binocular/telescope target)



Jan 22 around 5:50 p.m.

- Saturn and Venus conjunction with slim crescent Moon



Jan 30 around 7:20 p.m.

- Mars, Moon and Pleiades
- widefield photo-op

The Quadrantid Meteor Shower

-Quadrantid radiant is in Bootes so the best time to view is after midnight -peaks on the nights of Jan 3 to Jan 4

-expect up to 120 meteors per hour at the peak

-a nearly fully illuminated Moon means that only brighter meteors will be visible (look for fireballs that are often seen in this meteor shower)



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Comet ZTF (C/2022 E3)



Feb 2, 2023 closest approach to Earth (0.284073 AU Feb 3, 2023 estimated mag. 7.3





Explore the Universe: Winter Constellations Auriga Gemini Taurus Orion Canis Major Canis Minor

Explore the Universe

An Introduction to The Royal Astronomical Society of Canada's EtU Observing Program

P p kenda daar



Explore the Universe: Winter Stars Ranking: #1 Sirius (N) #6 Capella (N) #7 Rigel (N) #8 Procyon (N) #10 Betelgeuse (N) #13 Aldebaran (N) #16 Pollux (N) #45 Castor Gomiesa N = Navigation all good for Syn Scan alignment



Explore the Universe: Winter Deep-Sky Objects

challenge photo: David Hoskin



21 January 2023 @7:30 pm



Explore the Universe: Winter Double Stars Delta Cephei (3.5-4.4, 7.5, 41") Cepheid variable star prototype Period is 5.366 days Delta Cep A (white-yellow) Delta Cep C (blue)







Artist conception of the eclipsing binary Algol. Gas funnels from the companion to the smaller but more massive star, Algol A. Not to scale. Bob King



Algol (β Persei - The Demon Star) Jan 24 maxima (mag. 2.2) at 6:38 pm Jan 24 minima (mag. 3.2) at 10:08 pm Jan 25 maxima (mag. 2.2) at 1:38 am

Hind's Crimson Star (R Leporis), a "carbon star", is a longperiod Mira variable star that varies in brightness from mag. 5.5 to mag. 11.7



Questions? observing@halifax.rasc.ca

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