

SKYWATCHER NEWSLETTER

LATEST NEWS

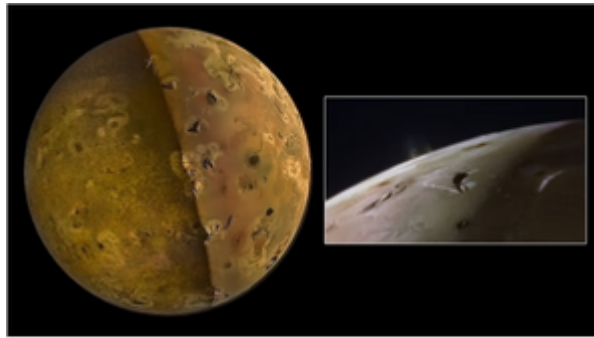
The new images of the solar system's most volcanic body were captured when Juno dipped closer to Io than any other spacecraft has in 20 years.

NASA's Juno spacecraft has made a second flyby of Jupiter's moon Io, capturing the solar system's most volcanic body in stunning detail. The spacecraft also allowed operators to glimpse a side of Io not seen in 35 years.

The images of Io were taken last week, made possible by the Feb. 3 flyby that saw Juno dip to within 930 miles (1,500 kilometers) of the surface of the Jovian moon.

One of the most impressive images captured by Juno was snapped on Feb. 4 at the tail end of the flyby and shows two plumes escaping from the volcanic moon. According to NASA, the plumes were seen as the spacecraft was at an altitude of 2393.5 miles (3,852 kilometers) over Io.

Until next month... SLK



NASA's Juno probe sees active volcanic eruptions on Jupiter's volcanic moon Io (images)

The new images of the solar system's most volcanic body were captured when Juno dipped closer to Io than any other spacecraft has in 20 years.

Space / Feb 8



Constant Companions: Circumpolar Constellations, Part I

By: Kat Troche

Winter in the northern hemisphere offers crisp, clear (and cold!) nights to stargazers, along with better views of several circumpolar constellations. What does circumpolar mean when referring to constellations? This word refers to constellations that surround the north and south celestial poles without ever falling below the horizon. Depending on your latitude, you will be able to see up to nine circumpolar constellations in the northern hemisphere. Today, we'll focus on three that have gems within: Auriga, Cassiopeia, and Ursa Minor. These objects can all be spotted with a pair of binoculars or a small to medium-sized telescope.

·The Pinwheel Cluster: Located near the edge of Auriga, this open star cluster is easy to spot with a pair of binoculars or small telescope. At just 25 million years old, it contains no red giant stars and looks similar to the Pleiades. To find this, draw a line between the stars Elnath in Taurus and Menkalinan in Auriga. You will also find the Starfish Cluster nearby.

·The Owl Cluster: Located in the 'W' or 'M' shaped constellation Cassiopeia, is the open star cluster known as the Owl Cluster. Sometimes referred to as the E.T. Cluster or Dragonfly Cluster, this group of stars never sets below the horizon and can be spotted with binoculars or a small telescope.



The counterclockwise circumpolar constellations Auriga, Cassiopeia, and Ursa Minor in the night sky, with four objects circled in yellow labeled: Pinwheel Cluster, Starfish Cluster, Owl Cluster, and Polaris.

Credit: Stellarium Web

·Polaris: Did you know that Polaris is a triple star system? Look for the North Star on the edge of Ursa Minor, and with a medium-sized telescope, you should be able to separate two of the three stars. This star is also known as a Cepheid variable star, meaning that it varies in brightness, temperature and diameter. It's the closest one of its kind to Earth, making it a great target for study and conceptual art.

Up next, catch the King of the Planets before its gone for the season with our upcoming mid-month article on the Night Sky Network page through NASA's website!

LOCAL EVENTS

Mar 5 - WAS - Professor Malcolm Coe – Tides in the Clouds – Star Birth & Death in our Nearest Galaxy

Mar 20 - CADAS - Tim Wetherell Astronomical Drawing followed by AGM

Feb 10, 19:00 - 21:00 Fordingbridge Astronomers - Part 2 stargazing for beginners

Feb 21, 19:30 - 22:00
FA Club Meeting

Mar 30, 18:00 - 06:00 - Fordingbridge Astronomers - Messier Challenge - 2024 Abbots Well Carpark

April 2 - WAS - Professor Dame Jocelyn Bell Burnell – "What is that?!" The Discovery of Pulsars: A Grad Student's Story

May 7 - WAS - Bud Martin – The Life and Times of Galileo

VISIT OUR WEBSITE FOR THE LATEST CLUB INFORMATION

SKYWATCHER NEWSLETTER



THE "MARTIAN SUNSPOT" IS FACING EARTH: 9 Feb 2024
spaceweather.com

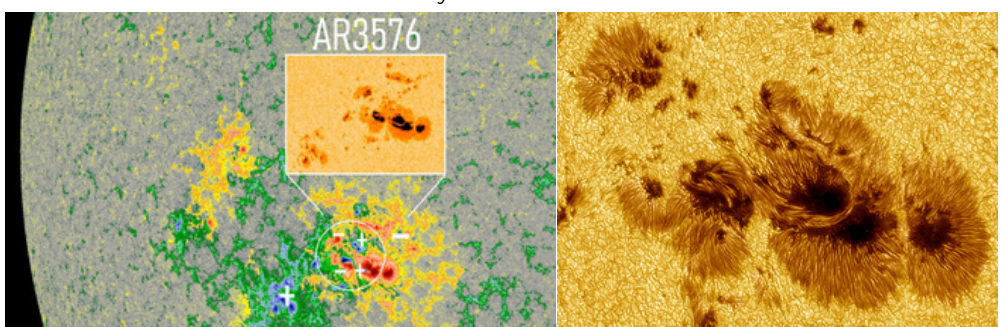
A sunspot big enough to see from Mars is now turning to face Earth. NASA's Perseverance rover on Mars first noticed the sprawling sunspot group last week, photographing it using the rover's MASTCAM. It was a behemoth then, and it has only grown bigger since. Here's how AR3576 looked Wednesday from Argentina:

"The view was fantastic," says Eduardo Schabberger Poupeau, who photographed the sunspot using a solar-filtered telescope in the town of Rafaela. "AR3576 appeared as a large archipelago containing a multitude of dark cores."

In fact, the sunspot is even bigger than the picture suggests. There's more of it visible in Poupeau's full frame image. From end to end, the sunspot group stretches more than 150,000 km with at least 4 dark cores larger than Earth. You can see it using ISO-approved eclipse glasses--no magnification required.

AR3576 is big, yes, but of even greater interest is the sunspot's magnetic complexity. This magnetic map from NASA's Solar Dynamics Observatory shows a mixture of polarities in the sunspot's core:

In the circled region, positive and negative magnetic polarities are so closely-packed, you may need to look at this unlabeled map to see them clearly. Opposite polarities bumping together can cause explosive magnetic reconnection. Indeed, NOAA forecasters say this sunspot poses a threat for strong X-class solar flares--and Earth is directly in the line of fire.

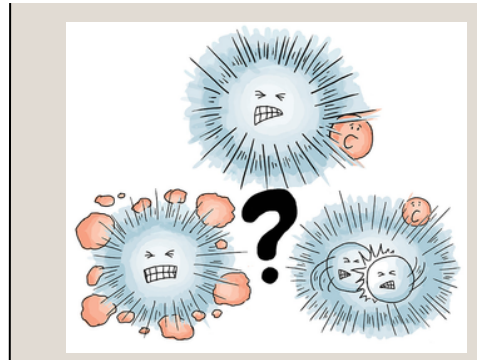
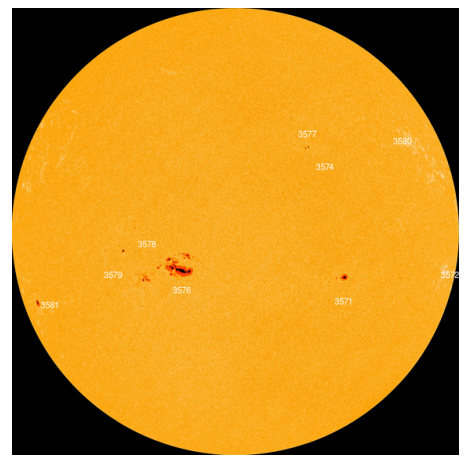
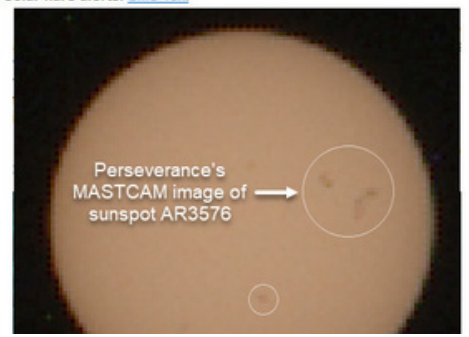


An asteroid may have exploded over Antarctica about 2.5 million years ago
Tiny spherules of rock found in Antarctic ice may point to the oldest known "airburst," or midair disintegration of an incoming asteroid.
Science News / Feb 5

Asteroid may have left rocks in Antarctica 2.5M years ago
Tiny bits of rock in Antarctica's ice likely came from an asteroid exploding above the continent about 2.5 million years ago, marking the oldest airburst in the geologic record, according to a chemical analysis in Earth and Planetary Science Letters. Olivine and spinel, major components of ordinary chondrite asteroids, dominate the 116 bits, which are about as wide as a human hair.

<https://www.sciencenews.org/article/asteroid-exploded-antarctica-millions-years-ago>

BIG SUNSPOTS VISIBLE FROM MARS: Yesterday, Mars rover Perseverance looked up at the sun and saw an impressive group of sunspots. [Take a look at this image.](#) At first glance, those fuzzy spots might not seem impressive. However, the camera Perseverance uses to look at the sun puts only 90 pixels across the solar disk; a sunspot group has to be big to register. This "Martian sunspot group" is not visible from Earth now, but it will turn toward us later this week. **Solar flare alerts:** [SMS Text](#)



WAC Upcoming Events

MAR 8 - FABIO SILVA - ASTRONOMY AT THE TIME OF STONEHENGE

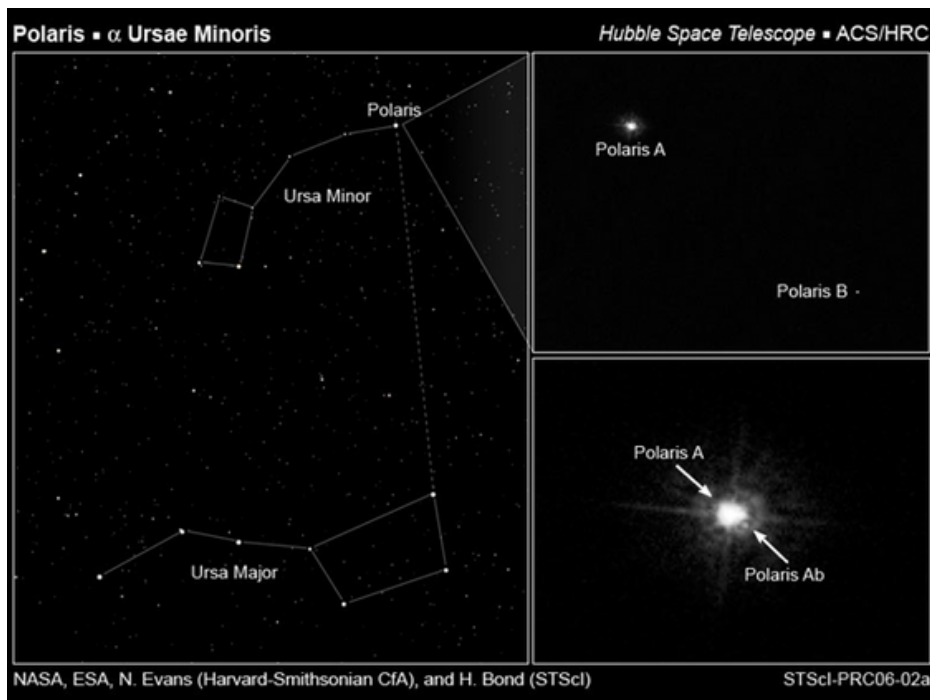
APRIL 12 - KEVIN QUINN: TBA (IN-PERSON ONLY)

MAY 10 - AGM FOLLOWED BY MARK RADICE: TBA (IN-PERSON ONLY)

JUNE 14 - STEVE TONKIN: ASTRONOMY THE BEGINNINGS: CHARLATANS AND FRAUDS (IN-PERSON AND ZOOM)

Continued from page 1:

A black and white image from the Hubble Telescope of the Polaris star system, showing three stars: Polaris A, Ab, and Polaris B. Credit: NASA, ESA, N. Evans (Harvard-Smithsonian CfA), and H. Bond (STScI)



Astronomy Picture of the Day

If you haven't come across APOD or perhaps haven't looked in some time, thought it might be nice to reintroduce the site to Members. APOD has been around since 1995 where it daily shows an amazing astronomical image and information. Like a Page-a-Day calendar for Astronomy! Its tagline is 'Discover the cosmos! Each day a different image or photograph of our fascinating universe is featured, along with a brief explanation written by a professional astronomer.'

A great site for escaping into the Cosmos while the wind and rains keep the 'scopes indoors!

<https://apod.nasa.gov/apod/astropix.html>



For something a little different... Crafts and Astronomy!



hand dyed yarn treat box — Cookston Crafts | Hand Dyed Yarn & Workshops -...

A curated box of treats including hand dyed yarn and small gifts from small independent businesses

 Cookston Crafts / £20

<https://www.cookstoncrafts.com/yarn-treat-box/p/treatbox-mar-24>

A local yarn dyer creates special dye lots based on nature photograph colours. The latest is based on the amazing Polar Stratospheric Clouds that appeared earlier this winter. The Colorful Type II polar stratospheric clouds (PSC) form when the temperature in the stratosphere drops to a staggeringly low -85C.

It will be amazing to see what colours the dyer captures in this unique one off batch. If you are interested, I can highly recommend the quality of the yarn and dyes.

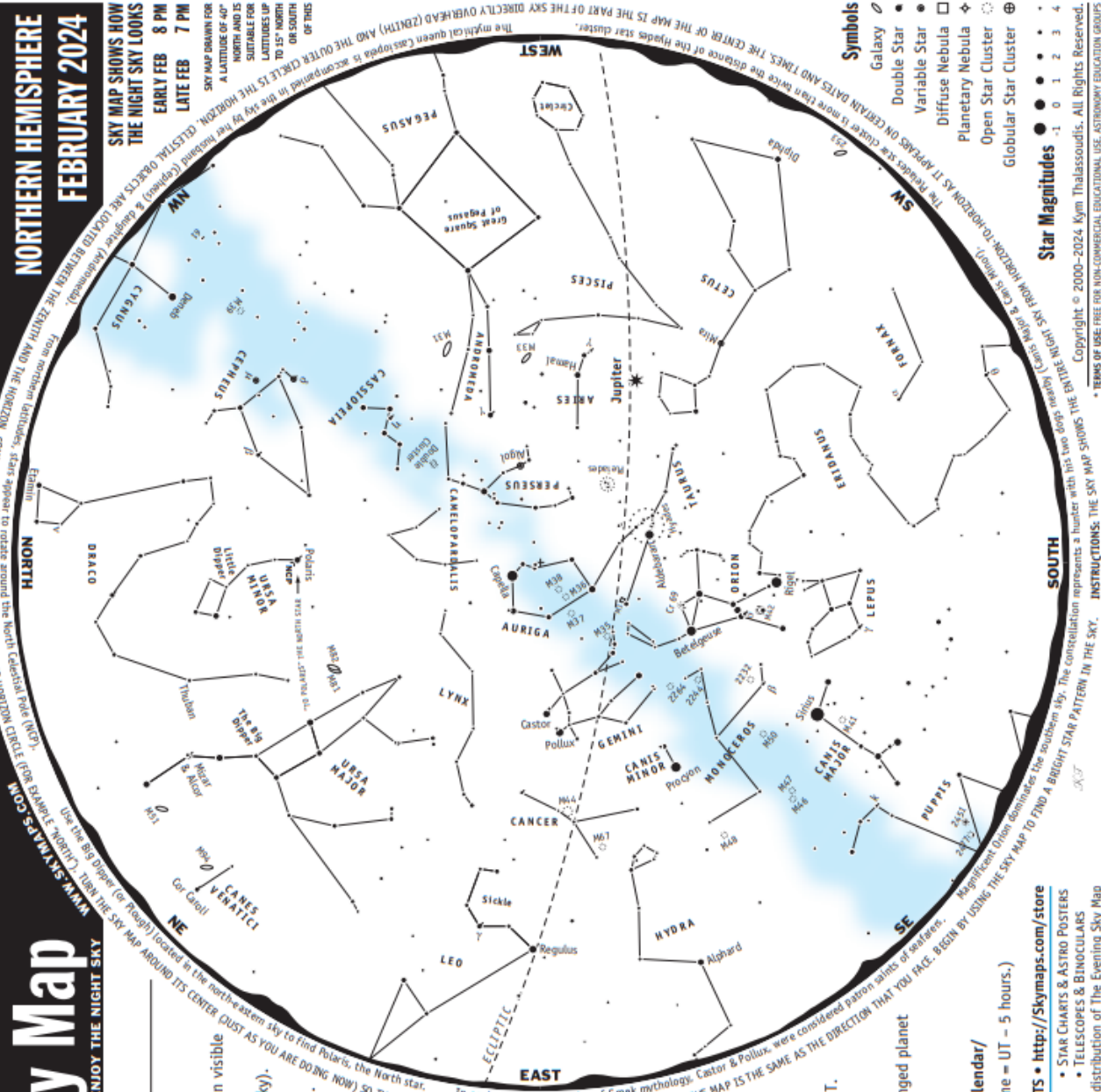
Skymaps.com—Feel free to download the full article directly each month.

NORTHERN HEMISPHERE FEBRUARY 2024

SKY MAP SHOWS HOW
THE NIGHT SKY LOOKS

EARLY FEB 8 PM
LATE FEB 7 PM

SKY MAP DRAWN FOR
A LATITUDE OF 40°
NORTH AND IS
SUITABLE FOR
LATITUDES UP
TO 15° NORTH
OR SOUTH
OF THIS



The Evening Sky Map

FREE! EACH MONTH FOR YOU TO EXPLORE, LEARN & ENJOY THE NIGHT SKY

Sky Calendar – February 2024

- 1 Moon near Spica at 10h UT (morning sky).
- 2 Last Quarter Moon at 23:19 UT.
- 5 Moon near Antares at 2h UT (morning sky). Occultation visible from central Asia.
- 7 Moon near Venus at 21h UT (29° from Sun, morning sky). Mag. -4.0.
- 8 Moon near Mars at 9h UT (23° from Sun, morning sky). Mag. 1.3.
- 9 Moon near Mercury at 0h UT (14° from Sun, morning sky). Mag. -0.5.
- 9 New Moon at 23:00 UT. Start of lunation 1251.
- 10 Moon at perigee (closest to Earth) at 18:52 UT (distance 358,088km; angular size 33.4').
- 11 Moon near Saturn at 3h UT (16° from Sun, evening sky). Mag. 1.0.
- 15 Moon near Jupiter at 7h UT (evening sky). Mag. -2.3.
- 16 First Quarter Moon at 15:01 UT.
- 16 Moon near the Pleiades at 21h UT (evening sky).
- 20 Moon near Castor at 20h UT (evening sky).
- 21 Moon near Pollux at 2h UT (evening sky).
- 22 Moon near Beehive cluster M44 at 6h UT (evening sky).
- 22 Venus 0.62° N of Mars at 10h UT (26° from Sun, morning sky). Mags -3.9 and 1.3.
- 24 Moon near Regulus at 3h UT (evening sky).
- 24 Full Moon at 12:30 UT.
- 25 Moon at apogee (farthest from Earth) at 15h UT (distance 406,312km; angular size 29.4').
- 28 Mercury at superior conjunction with the Sun at 8h UT. The innermost planet passes into the evening sky.
- 28 Moon near Spica at 16h UT (morning sky).
- 28 Saturn at conjunction with the Sun at 21h UT. The ringed planet (not visible) passes into the morning sky.
- 29 Leap Day.

More sky events and links at <http://Skymaps.com/skycalendar/>

All times in Universal Time (UT). (USA Eastern Standard Time = UT - 5 hours.)

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Sales support the production and free distribution of The Evening Sky Map

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WWW.WEYMOUTHASTRONOMY.CO.UK

Symbols
Galaxy
Double Star
Variable Star
Diffuse Nebula
Planetary Nebula
Open Star Cluster
Globular Star Cluster

Star Magnitudes
-1 0 1 2 3 4

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