

## SKYWATCHER NEWSLETTER



Johannes de Sacrobosco's 13th century text *De Sphaera Mundi* depicts an eclipse. Credit: New York Public Library, Public Domain



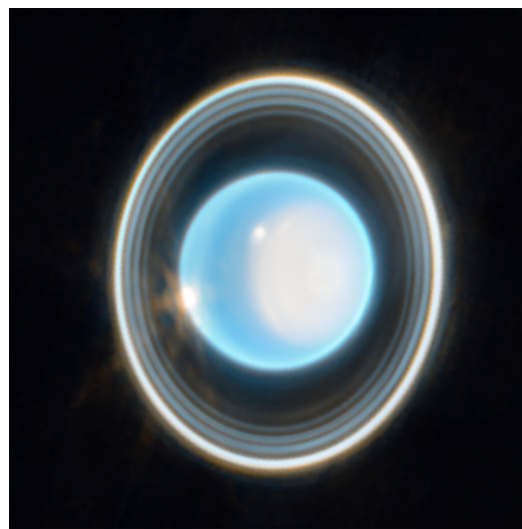
## Spy the Seventh Planet, Uranus

By: Liz Kruesi

You might be familiar with Saturn as the solar system's ringed planet, with its enormous amount of dust and ice bits circling the giant planet. But Uranus, the next planet out from the Sun, hosts an impressive ring system as well. The seventh planet was the first discovered telescopically instead of with unaided eyes, and it was astronomer extraordinaire William Herschel who discovered Uranus March 13, 1781. Nearly two centuries passed before an infrared telescope aboard a military cargo aircraft revealed the planet had rings in 1977.[1]

Since that discovery, multiple observatories have revealed more details of Uranus and its ring system. Most recently, the NASA-led JWST space observatory captured the planet and its rings in detail. This recent image combines just 12 minutes of exposure in two filters to reveal 11 of the planet's 13 rings. Even some of the planet's atmospheric features are visible in this image. Even with advanced imaging like that from JWST, much of Uranus remains a mystery, including why it orbits the Sun on its side. This is because only one spacecraft has ever visited this planet: NASA's Voyager 2, which flew by the distant planet in the mid-1980s.[2]

Planetary scientists are hoping to change that soon, though. Scientists recommended in a [report](#) released last year from the National Academies of Sciences, Engineering, and Medicine that Uranus be the focus of the next big planetary science spacecraft mission.



Left: Uranus hosts 13 faint rings, 11 of which are visible in this JWST image. The planet was 19.67 times the Earth-Sun distance from our planet (1.83 billion miles) when JWST captured exposures through two near-infrared filters on February 6, 2023. The white region in the right side of Uranus is one of the planet's polar caps. This icy world orbits the Sun differently from the rest of the solar system's planets – Uranus rolls along on its side.

[NASA, ESA, CSA, STScI; Image Processing: Joseph DePasquale (STScI)]

Such a large-scale mission would gain insight into this icy giant planet and the similar solar system planet, Neptune.

If you want to catch a view of Uranus with your own eyes, now is prime time to view it. This ice giant planet lies perfectly positioned in mid-November, at so-called "opposition," when its position in its orbit places it on the other side of the Sun from Earth. That location means our star's light reflects off Uranus' icy atmosphere, and the planet appears as its brightest.

To find it, look overhead just after midnight on November 13. Uranus will lie about halfway between the brilliant planet Jupiter and the diffuse glow of the Pleiades star cluster (M45). While Uranus may look like a bright blinking star in the night sky, its blue-green hue gives away its identity. Binoculars or a telescope will improve the view.

For more about this oddball planet, visit NASA's [Uranus page](#).

## LATEST NEWS

In a recent EOS article it reports that [Eclipse Records Pin Dates of 12th and 13th Century Eruptions](#) Ancient accounts of dark and blood-red moons help scientists peek at past eruptions and their effect on global climate.

The beauty of eclipses is that [we know exactly when they occurred](#). And crucially, the color of the Moon during totality turns out to be a good proxy for whether there's been a massive volcanic eruption lately.

Read the full article at:

<https://eos.org/articles/astronomers-may-have-spotted-the-birth-of-a-planet>

Until next month... SLK

## LOCAL EVENTS

Nov 15 - FAS - The Bible for Astronomers by Ken Pitts

Nov 21 - FAS - Beginners introduction to astronomy/stargazing

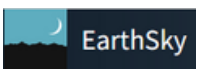
Dec 5 - WAS - Christmas Social and members' 10-min talks

Dec 20 - CADAS - Christmas Social and members' short talks

Jan 17 - FAS - Meteors and Meteor Hunting by Mark McIntyre

More to come in 2024!

VISIT OUR WEBSITE FOR THE LATEST CLUB INFORMATION



### Tool bag spacewalk snafu

Posted by [Eddie Irizarry](#) and [Deborah Byrd](#)  
Writer [Stephen Luntz](#)

A tool bag is orbiting Earth, and night sky observers might catch a glimpse of it. NASA astronauts [Jasmin Moghbeli](#) and [Loral O'Hara](#) were conducting a spacewalk from the International Space Station (ISS) on November 2, 2023, when Moghbeli somehow let a tool bag slip away.

The tool bag is now orbiting Earth just ahead of the International Space Station. It's surprisingly bright (for a tool bag), shining just below the limit of visibility to the unaided eye at around [magnitude +6](#). That means some sky observers should be able to [pick it up with binoculars](#). The bag has been picked by trackers of space junk under the code **58229/1998-067WC**.

NASA astronauts [Jasmin Moghbeli](#) (top) and [Loral O'Hara](#) (bottom) were spacewalking from the [International Space Station](#) on November 2 – working on the station's solar arrays – when Moghbeli inadvertently lost a tool bag. Image via [NASA TV](#). If you get an image, please [submit it to EarthSky Community Photos!](#)

The tool bag should remain in orbit around Earth for a few months, after which it'll disintegrate in Earth's atmosphere. Unlike the ISS, the tool bag will rapidly descend in orbit until, after a few months, it will reach about 70 miles (113 km) and disintegrate. Preliminary estimates indicate the tool bag should reenter the atmosphere around March 2024.

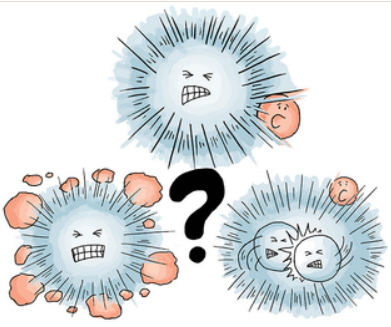
### Seeing it with binoculars

Meanwhile, observers that have a visible pass of the International Space Station can also try to spot the tool bag, which is a dim object (around visual [magnitude +6](#)), visible using binoculars. The strategy is to observe the trajectory of the ISS, and to scan the sky in the area just ahead of the space station.

As the small object gradually loses height, it should appear between two and four minutes ahead of the ISS during the next few days.

## SCIENCE NEWS - UPDATE NOV. 13, 2023 / 8:37 AM LOST IN SPACE: \$100,000 TOOL BAG FROM NASA SPACEWALK

THE TOOL BAG SHOULD MEET ITS FIERY FATE AROUND MARCH, ACCORDING TO EARTHSKY. IN THE MEANTIME, THE TOOL BAG [HAS BEEN OFFICIALLY CATALOGED](#) AS SPACE JUNK ID 58229 / 1998-067WC. IT WAS SEEN SUNDAY 12 NOVEMBER BY JAPANESE ASTRONAUT [SATOSHI FURUKAWA](#) FLOATING OVER MOUNT FUJI.



### WAC UPCOMING EVENTS

8TH DECEMBER  
BARRY FITZGERALD (FACE TO FACE AND ZOOM)

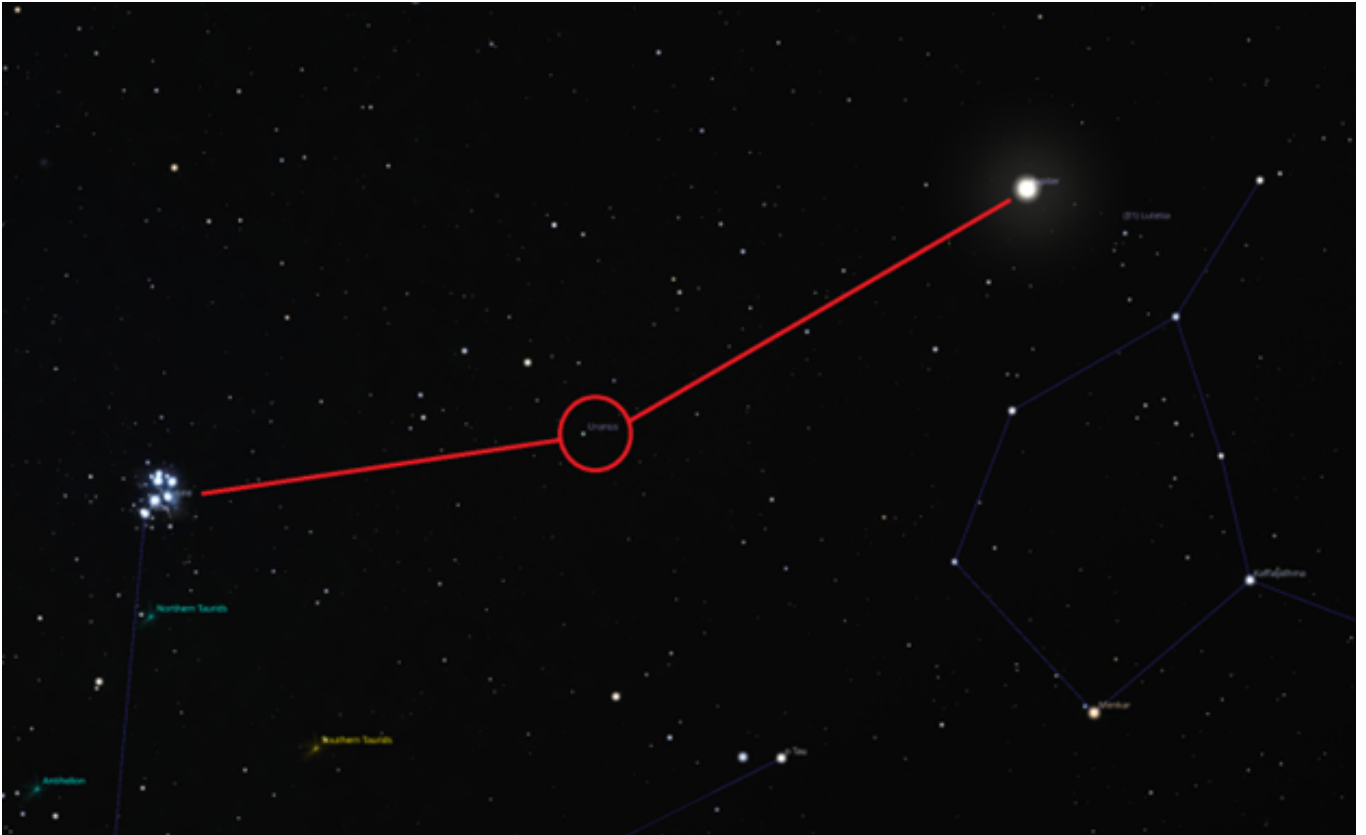
MORE TO COME IN 2024!!

# WEYMOUTH ASTRONOMY

Continued from page 1:

TOP: Sky map picturing M45, Uranus and Jupiter, Stellarium.

Lower: Sky map picturing M45 and Uranus, Stellarium



R 2023 JUPITER AND VENUS 0.5 DEGREES

