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SCIENCE

Lyrid Meteor Shower 2023: How to Watch the Shooting Stars

NASA calls it one of the oldest known meteor showers

By Aylin Woodward Follow

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Meteors are fast-moving bits of ice, dust and rock that strike Earth's atmosphere. Photo: Patrick Pleul/Associated Press

Sky watchers can glimpse one of the oldest known annual meteor showers this weekend.

The Lyrid meteor shower, which astronomers have observed for nearly three millennia, will peak late Saturday night into early Sunday morning. Late Friday evening is also an opportune time to glimpse meteors, according to Bill Cooke, lead astronomer for the Meteoroid Environment Office at the National Aeronautics and Space Administration's Marshall Space Flight Center in Huntsville, Ala.

Weather permitting, people will likely glimpse around 15 meteors an hour during the peak this year. The Lyrids will appear about as bright as Mars or Jupiter in the sky, Dr. Cooke said.

"This is a good Lyrids viewing year," he added. "The moon won't spoil the show."

Moonlight can wash out fainter meteors, but this year the Lyrids peak will occur during a waxing crescent moon, which will be less than 10% full on Friday and Saturday nights.

When can I see the Lyrids?

The Lyrids are expected to reach peak rates around 9 p.m. Eastern Standard Time on Saturday, according to the American Meteor Society.

Meteors will start becoming visible in the northeastern sky around 10 p.m. to 10:30 p.m. local time in the Northern Hemisphere, and rates will increase throughout the night, said Robert Lunsford, a society volunteer who helps coordinate reports of bright meteors known as fireballs.

The Lyrids' apparent point of origin in the sky, known as the radiant, is near the brightest star in the constellation Lyra.

This constellation will rise higher in the sky as the night progresses, Mr. Lunsford said. So, he added, the later you head out to spot the Lyrids, the better the viewing will be.

Where can I see the Lyrids? What's the best possible place to see meteors?

It is important not to limit your gaze to just Lyra, as the constellation represents a small area in the sky, according to Peter Vereš, an astronomer at the Harvard-Smithsonian Center for Astrophysics. A better place to look, he said, is away from Lyra—meteors that appear farther from the radiant will appear longer in length.

For the best Lyrids viewing, find a dark place away from city lights and lie on your back.

Wait about 30 minutes for your eyes to adjust to the darkness. Leave your cellphone in your pocket, as its light will impede that adjustment. There is no need for binoculars or telescopes, Dr. Vereš said, as they will limit your view to only a small portion of the sky at a time.

"You don't need to have any instrument to observe them. That is the beauty of meteor showers," he added.

During the peak, the Lyrids should be visible from any location in the Northern Hemisphere, provided the skies are cloudless and dark enough.

"Light pollution messes meteors up," Dr. Cooke said.

Though the meteor shower is best viewed from this part of the world, people in the Southern Hemisphere can see some Lyrids—they will just see fewer meteors, which will be visible beginning later in the evening, according to Dr. Cooke.

A dark place away from city lights will offer the best viewing of the Lyrid meteor shower. Photo: Thomas Kronsteiner/Getty Images

If I miss the peak, can I still see the Lyrids?

While the Lyrids last from April 15 to April 29 this year, the peak is really the only time you can see a decent number of meteors, Dr. Cooke said.

If you head out the night after the peak, he added, the expected rate of 15 meteors or so per hour will fall by more than half.

Yet, the annual Eta Aquarid meteor shower will peak in about two weeks, according to NASA. These meteors, which come from Halley's comet, travel much faster than the Lyrids do and can leave long-lasting afterglows in their wakes. Dr. Cooke said he expects the Eta Aquarid's peak rate to be around 120 to 130 meteors an hour this year.

What causes these meteor showers?

Though they are sometimes called shooting stars, meteors are actually fast-moving bits of ice, dust and rock that strike Earth's atmosphere when our planet's path around the sun takes us through the debris trail of a comet or asteroid.

In the case of the Lyrids, Earth is moving through debris from a comet named Thatcher, which was discovered in 1861. When the dust and debris from Thatcher hit the atmosphere at speeds

of around 104,000 miles an hour, the bits burn up, superheating the air around them and streaking through the sky.

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