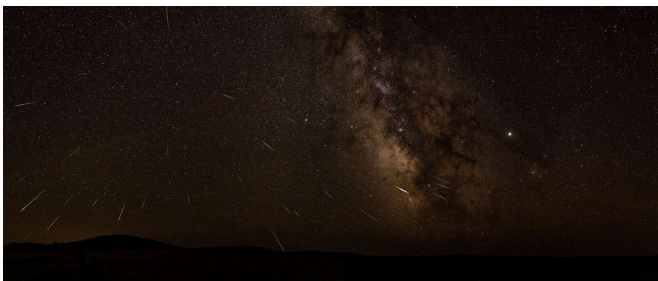
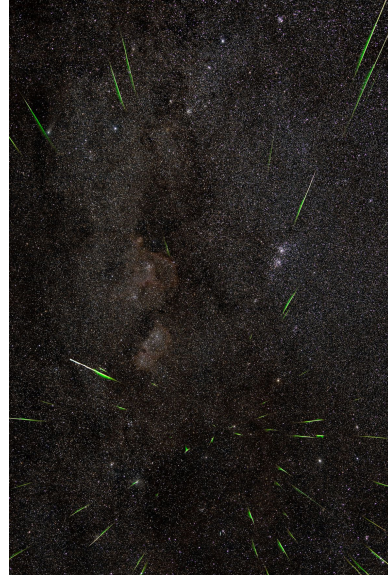


Photos / Look Up! Meteor showers may light up Halloween sky

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You might soon see your neighbor laying down outside and looking up at the night sky.

Astronomers say that is one way to get a good view of meteor showers flying overhead.

“The Southern Taurid meteor showers are just getting started,” American Meteor Society spokesman Robert Lunsford told The Pilot from his home in San Diego.

“The Southern Taurids are unusual in that they have three shallow peaks that occur near Oct. 10, Oct 31 and Nov. 15. The peak, near Oct. 31, will not have any interfering moonlight and will be the best of all three this year.”

Lunsford said that under perfect conditions you might see five to 10 Taurids per hour. Under moonlight conditions, it will be fewer than five.

“These meteors are notable because they tend to be bright and often fragment during flight,” he said. “While most meteors tend to last less than one second, the Taurids are slower and often last several seconds in flight.”

According to Lunsford, the Southern Taurids can be seen all night, but the radiant - the area where these meteors shoot from - is best placed highest in the sky near 2 a.m. no matter what the time zone.

Besides lying down to view the meteor showers, Lunsford said the best area to view them is at higher altitudes where the sky is more transparent. “The more stars one can see, the more meteors will also be seen,” he said. “This is also true when the moon is out.

“Getting away from city lights also helps one see fainter meteors.”

Meteor showers are caused by comets and asteroids that happen to cross or pass very near the Earth’s orbit. They leave behind tiny fragments of ice and rock that we see as meteors when the Earth intersects these fragments.

Lunsford said as the Earth orbits the sun, it encounters the comet and asteroid streams, called meteor showers. “In reality, though, most of these streams are very empty and only produce a few meteors per hour,” he said.

“There are only about 10 streams that are dense enough to produce 10 or more meteors per hour at maximum activity. We encounter these streams very close to the same time every year.”

Lunsford said most meteor showers last a week or more, as debris fields often take one to two weeks for the Earth to cross. In the middle of this period is the maximum number when the Earth passes closest to the core of the debris field. This is the best time to view meteors from each shower, he said.

Lunsford said seeing the meteorites actually hitting Earth is rare, because most meteors are fragments from comets and the fragments are too fragile to survive the plunge through the atmosphere.

“Fragments from asteroids are more solid and hold together better, but still 99.9% of them disintegrate while still high in the atmosphere,” he said. “Rarely, a large piece of asteroid will produce small fragments that will survive all the way to the surface.”

The fragments are rarely found, Lunsford said. Most fall into the ocean or in desolate land areas where they are never found. “This is why meteorites, meteors that have reached the ground, are so valuable,” he said.

The Northern Taurids meteor showers will peak near Nov. 3 under good conditions and produce similar rates to the Southern Taurids. Lunsford said the only major shower of November, the Leonids, are spoiled by moonlight this year.

The Geminids will peak on the nights of Dec. 13 and 14, and should produce around 20 meteors per hour near midnight despite a full moon. “This is a very strong shower than can produce over 100 meteors per hour under good conditions,” Lunsford said.

“The Ursids come from the Little Dipper, but only produce about 10 meteors per hour on the morning of Dec. 22.”

Lunsford said the Quadrantids will peak on the morning of Jan. 4, under good conditions. This is another strong shower capable of producing 100 meteors per hour.

There are no other major showers until next spring, when the Lyrids peak on April 22.