Quadrantids 2027: a cold January peak explained for kids

Peabody blog · Science · updated 2026-10-30

The Quadrantids peak the night of 3–4 January 2027 with only a 12% Moon. Our verdict is great, but the peak is short and best before dawn. How to try.

The Quadrantid meteor shower peaks on the night of Sunday 3 into Monday 4 January 2027, by the American Meteor Society's calendar, which gives it a rate of up to about 120 an hour from a perfect dark sky. The Moon is a thin waning crescent, about 12% lit, that doesn't rise until the last hour or two before dawn. Peabody's verdict is "great". The catch: the peak lasts only a few hours, the best of it is before dawn, and early January is cold. The Quadrantids page has the countdown, and Sky Tonight gives your own dark-enough time from a ZIP that never leaves your phone.

Why "great" this year

Peabody's verdict weighs the shower's rate against the Moon on its peak night. A 120-an-hour shower with a 12% crescent that comes up only before dawn loses very little to moonlight, so it scores near the top. In Denver, Peabody's sky table has the Moon rising at about 4:44 am on the morning of the 4th. Until then the sky is as dark as your neighbourhood allows.

That doesn't mean a back yard sees 120 an hour. The rate is for a perfect sky with the radiant overhead. From a town, a family might count a fraction of that, and that is still a good night.

Why the peak is so short

Most showers build and fade over several nights. The Quadrantids' stream is narrow, so the strong part lasts about six hours. Whether your part of the world is facing the right way during those hours changes from year to year. The AMS calendar gives the predicted time; if it falls in the American daytime, the night before or after still shows some, just fewer.

Where to look

The streaks point back to a spot in the constellation Boötes, just below the handle of the Big Dipper, in the north-east. In the evening that spot is low in the north, so only a few meteors show. It climbs after midnight and is highest before dawn. You don't need to stare at it: shooting stars appear anywhere, and their trails just point back toward it. Lie flat and take in as much sky as you can.

Our guide to finding the Big Dipper helps here: find the handle, look below it, and you know which way is "up" for the shower.

What a child will see

Quick white streaks, about 41 kilometers a second, from grains of dust shed by a small rocky object called 2003 EH1. The Quadrantids are known for bright fireballs, so now and then one lights up the ground for a moment. The name comes from a constellation that is no longer on the official list: Quadrans Muralis, which was folded into Boötes.

The cold is the real problem

Early January before dawn is the coldest stretch of a winter night. Twenty minutes lying still feels longer than it is.

1. Dress for an hour of not moving, then add a layer: hat, gloves, snow pants if you have them, a blanket underneath and on top.
2. Keep it short. Twenty minutes counts. Agree a time to go in before you go out.
3. Something warm to hold afterwards, and a sheet to fill in: the shower night kit prints a box for every ten minutes.
4. Phones away. Eyes take about twenty minutes to get used to the dark, and one bright screen starts the clock again.

A bonus before breakfast

On those January mornings, Peabody's table has Jupiter and Mars high in the south-west, about five or six fists up, and Venus low in the south-east, the brightest point in the sky. A child who comes out for meteors gets three planets as well.

Three questions grown-ups ask

Is an evening look worth it? A short one, yes, but expect only a few. The radiant is low in the north until after midnight.

Is it worth waking a child before school? 4 January 2027 is a Monday. For many families, the honest compromise is the hour before a normal wake-up, with a hot drink waiting.

What if it's cloudy? The Quadrantids are active from about 26 December to 16 January, but the strong part is short. Try the mornings either side; they'll be thinner.

Peabody (peabody.kids) is free through the end of 2026, with no ads and no sign-up, and nothing your child taps on the space pages is sent anywhere. Back inside, the library has stories at your child's reading level.

Sources

- American Meteor Society, meteor shower calendar 2026–2027: the peak night, the rate and the speed.
- The Moon, its rising time and the morning planets come from Peabody's own sky table,

worked out with astronomy-engine (MIT license) for Denver; times move a little elsewhere.
• NASA, meteors and meteorites.

Free at peabody.kids/blog/quadrantids-2027