

## Observing “Shooting Stars” by Andrew Fraknoi

### What are Shooting Stars?

As unromantic as it sounds, a shooting star is not a star at all, but the demise of a small piece of dirt (from dust-sized to pea-sized, for the most part) that hits the Earth’s atmosphere at enormous speed and burns up from friction with the air, producing a brief bright flash of light. Astronomers call them *meteors*.

### When is the Best Time to See the Shooting Stars?

A random shooting star can be seen on any night, but at certain times the Earth encounters a stream of dusty particles left over from the evaporation of [comets](#) (larger bodies of dirty ice) that leave a dirty wake. During these meteor “showers,” a single observer may see thirty or more meteors per hour. A list of annual meteor showers appears at the bottom of this page.

### What is the Best Way to Observe Shooting Stars?

Meteor showers are nicely egalitarian: The meteors can happen anywhere in the sky, and require no equipment to see. The biggest obstacles to seeing faint meteors are city lights, clouds, and moonlight. So try to see them in as dark a place as possible, with a good view of the full sky. Give your eyes 20 minutes to adapt to the dark. Sit or lie back comfortably, and be patient—the flashes are quick, subtle, and unpredictable, but over the course of time, you will see a number of them.

The later you stay up, the better. The dawn side of Earth is like the windshield of a car—it’s the direction the earth moves in its orbit—so more meteors tend to be swept up past midnight.

### Some Good Annual Meteor Showers

| <u>Name</u>    | <u>Duration</u>   | <u>Best Dates</u> | <u>Comet It Came From</u> |
|----------------|-------------------|-------------------|---------------------------|
| Quadrantids    | Jan. 1-6          | Jan. 3-4          | Unknown                   |
| Lyrids         | Apr. 19-25        | Apr. 21-22        | Thatcher                  |
| Eta Aquarids   | Apr. 24- May 20   | May 4-5           | Halley                    |
| Delta Aquarids | July 15-Aug. 20   | July 28-30        | Unknown                   |
| Perseids       | July 23 - Aug. 20 | Aug. 11-13        | Swift–Tuttle              |
| Orionids       | Oct. 16-27        | Oct. 20-22        | Halley                    |
| Leonids        | Nov. 15-20        | Nov. 16-17        | Tempel–Tuttle             |
| Geminids       | Dec. 7-16         | Dec. 13           | Phaethon (an asteroid)    |