

8.3: Observing a Meteor Shower

Observing a Meteor Shower

Perhaps one of the easiest and most-exciting astronomy activities is observing a meteor shower. All you need is a lawn chair and your eyes. However, your conditions need to be just right: little street lighting, a clear view of the sky (from trees, buildings, and clouds), and a moonless night. Moonlight can quickly extinguish your view of fainter meteors.

Meteor showers are named after the constellation they appear to come from, called the radiant. For example, the famous August Perseids appear to radiate from the constellation Perseus. There are a couple of showers that do not follow this rule; for example, the Quadrantids are an older constellation that is no longer recognized, yet the shower name is still used.

Major Northern Hemisphere Meteor Showers

Each Meteor Shower Constellation for Date Range, Zenithal Hourly Rate, and Parent Body.

Quadrantids: Boötes the Bear Driver

Date Range : 12/28 — 1/12

Zenithal Hourly Rate (ZHR) : 120

Parent Body : Asteroid 2003 EH1 and/or Comet C/1490 Y1

Shower appears to come from the constellation Boötes, short shower maximum and usually difficult to observe

Lyrids: Lyra the Harp

Date Range : 4/16 — 4/25

Zenithal Hourly Rate (ZHR) : 18 — 20

Parent Body : Comet Thatcher

Relatively bright meteors

Eta Aquarids: Aquarius

Date Range : 4/19 — 5/28

Zenithal Hourly Rate (ZHR) : 50

Parent Body : Comet Halley

Fast, bright meteors; famous as the source of this shower is Halley's Comet

Southern Delta Aquarids: Aquarius

Date Range : 7/12 — 8/23

Zenithal Hourly Rate (ZHR) : 25

Parent Body : N/A

Relatively bright meteors

Perseids: Perseus

Date Range : 7/17 — 8/24

Zenithal Hourly Rate (ZHR) : 150

Parent Body : Comet Swift-Tuttle

One of the most-famous showers; can produce a bright and magnificent display around the shower's maximum, usually around August 12

Orionids: Orion the Hunter

Date Range : 10/2 — 11/7

Zenithal Hourly Rate (ZHR) : 15

Parent Body : Comet Halley

Not a large number per hour yet very bright and fast meteors. Another shower which is due to Halley's Comet.

Leonids: Leo the Lion

Date Range : 11/6 — 11/30

Zenithal Hourly Rate (ZHR) : 15

Parent Body : Comet Temple-Tuttle

Perhaps one of the fastest of the regular showers; very bright meteors. The Leonids have produced strong storms in the past, with rates up to an incredible 100,000 an hour.

Geminids: Gemini the Twins

Date Range : 12/4 — 12/17

Zenithal Hourly Rate (ZHR) : 120

Parent Body : Asteroid 3200 Phaethon

This shower produces relatively-slow meteors; it's source is unusual in that it is an asteroid, rather than a comet

Ursids: Ursa Major

Date Range : 12/17 — 12/26

Zenithal Hourly Rate (ZHR) : 10

Parent Body : Comet Tuttle

Slow and medium brightness meteors; included because you might see some of these meteors when watching for the Geminids

The **date** range of the showers are when members of the shower can be seen. The maximum usually occurs on a specific date and time. The **ZHR**, or Zenithal Hourly Rate, is the expected number of meteors at maximum if the radiant is overhead or at the zenith; if it is towards the horizon, expect to see fewer meteors. And, the Parent Body is the source of the meteor shower; most are comets but at least the Geminids are attributed to Asteroid 3200 Phaethon.

Occasionally, you will see a random meteor, called a sporadic. These are usually not associated with any shower. Sometimes that meteor will be very bright, called a fireball. And, occasionally, these fireballs will break up, called a bolide.

This page titled [8.3: Observing a Meteor Shower](#) is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by [Lumen Learning](#).