Meteor Information Sheet

What is a "Shooting Star"? Answer: A Meteor!!

Commonly called "Falling Stars" or "Shooting Stars," meteors really have nothing to do with stars. They are not even pieces of stars. They are simply "rocks" that are burning due to friction as they fall through Earth's upper atmosphere. 99.9% of all meteors seen are very small rocks no larger than single grains of sand or even specks of dust. The small particles are often the remains of dust and pebbles released from comets. The 0.1% remaining meteors are often larger and burn much brighter when falling to Earth. They are believed to be small pieces of asteroids.

1. **Meteoroid** A small rocky object in space. Sizes may range from dust-sized to 1 km (.62 miles).

2. **Meteor** The light we see streaking through the sky and then quickly disappearing. It is caused when a meteoroid enters Earth's upper atmosphere and ignites due to friction with the air. The light is actually the rock and the air burning together. They are usually 80-160 km (50-100 miles) high in the atmosphere.

3. **Meteorite** The rock that makes it to the Earth's surface after surviving the journey through the Earth's atmosphere. Two basic types of meteorites are found: Stony and Iron/Nickel.

Meteor Showers occur when Earth, during its journey around the Sun, crosses the path of a comet and picks up the dust and pebbles left behind by the slowly disintegrating comet. Each speck of material that collides with Earth burns up as a meteor; therefore, we see a greater number of meteors in a short period of time. And because Earth will always cross the same region of space each year at the same time, every year we will have a meteor shower on the same dates.

Meteors from a shower all seem to radiate out of one spot in the heavens. This spot is called the ***radiant*** and the shower is named for the constellation that the radiant is in. This effect is actually an illusion caused by the meteors falling parallel to each other, yet on all sides of us on Earth. Like two railroad tracks that seem to touch at the horizon when you stand between them, the meteors seem to all come from a point overhead.

Meteor Showers

Shower	Peak Date	Radiant Constellations	Meteors per hour	Parent Comet
Quadrantids *	Jan 2-3	Bootes	20-80 Max 120	Asteroid 2003EH
April Lyrids	Apr 21-22	Lyra-Hercules	5 Max 18	Thatcher
Eta Aquarids	May 4-5	Aquarius	20 Max 60	Halley
Southern Delta Aquarids	Jul 28-30	Aquarius	15 Max 20	Machholz ?
Perseids *	Aug 11-12	Perseus-Cassiopeia	70 Max 100-120	Swift-Tuttle
Orionids	Oct 20-21	Orion	20 Max 23	Halley
Taurids	Oct 29-30 Nov 11-12	Taurus	4-5 Max 5	Encke
Leonids *	Nov 16-17	Leo	10-100 33 year Max >1000	Tempel-Tuttle
Geminids *	Dec 13-14	Gemini	60 Max 120	Asteroid 3200 Phaethon
Ursids	Dec. 21-22	Ursa Minor	5-10 Max 10	8P/Tuttle

**Denotes the most outstanding meteor showers each year.*