



THE ATMOSPHERIC RESERVOIR

Examining the Atmosphere and Atmospheric Resource Management

WINTER METEOR SHOWERS

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On crisp, clear nights this winter there will be many opportunities to observe "shooting stars" or meteors. *Meteoroids*, *meteors*, and *meteorites* are sometimes used interchangeably; however, they have slightly different meanings. NASA defines *meteoroids* as rocks still in space, *meteors* as *meteoroids* that enter Earth's atmosphere and burn up, and *meteorites* as *meteoroids* that survive the fall through Earth's atmosphere and hit the ground. It makes more sense that meteorologists get their name because they study hydrometeors such as rain and snow falling from clouds.

You may have wondered how astronomers are able to predict meteor showers with accuracy on an annual or regular basis. When Earth's orbit passes through debris fields of dust and ice left by comets, these meteoroids burn up as they enter the atmosphere. The orbits of these comets are predictable and unless they pass too close to the sun or collide with something in space, we

can continually observe them when they pass by Earth. As for the names of meteor showers, they take the name of the nearest constellation in the sky. For example, the upcoming Geminids meteor shower occurs nearest the constellation Gemini and will be active until around the winter solstice on December 21. The Geminids are usually the most spectacular meteor shower of the year due to their brightness and colors. Next there is the Ursids meteor shower that begins around the winter solstice and ends right after Christmas. Finally, the Quadrantids meteor shower begins just after Christmas and lasts until mid-January.

It's beneficial to watch meteor showers outside of cities where light pollution isn't such a factor; however, larger meteors can be seen even from city backyards. If you get cabin fever this season and need to get outside, just remember to bundle up and look up to see the "stellar" sights.

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