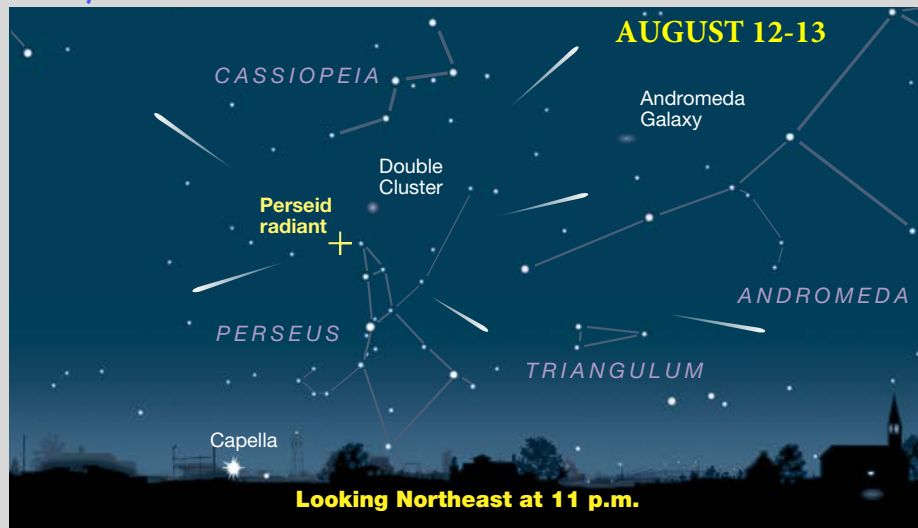


# Perseids Versus the Moon

The year's best meteor shower toughs it out against a luminous rival.

**T**he Perseids are the people's meteor shower — a rich display that coincides with some of the year's finest weather. You really can't do better than August nights when temperatures are pleasant and clear skies are common. And under the right conditions the display produces 50 to 100 meteors per hour, practically guaranteeing that even a casual observer will see something.

Perseid meteoroids start their lives as debris sloughed from Comet 109P/



▲ The Perseid meteor shower is active from mid-July though the third week of August, allowing for numerous opportunities to catch Perseids here and there despite bright moonlight on **the peak night of August 12–13.**

Swift-Tuttle. Every 133 years the 26-kilometer-wide (16-mile-wide) comet swings by the Sun, shedding fragments destined to delight skywatchers each summer. As Earth plows headlong

through the comet's dust-strewn orbit, it intercepts the material at more than 214,000 kilometers per hour. When a Perseid strikes the atmosphere, it rapidly compresses the air along its path,

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heating the particle and birthing a *meteor* — a bright, short-lived streak of ionized atoms and molecules. Like all meteor showers, the Perseids play cat-and-mouse with the Moon. When it's a thin crescent or new, we get dark night skies conducive to seeing many meteors. This time around, however, an 84%-illuminated, waning gibbous Moon brightens the sky from the end of twilight until dawn on the night of August 12–13, when the shower is expected to peak. Lunar glare erases the fainter shower members, meaning that meteors brighter than 2<sup>nd</sup> magnitude will comprise most of what we'll see. This greatly reduces the Perseid count from better than one-per-minute to one every few minutes, or about 20 to 25 per hour. Despite the bright Moon, I find the Perseids hard to resist. One approach is to observe early — from late evening twilight through to about 11 p.m. local time on the 12th before moonlight becomes too strong. The radiant is low in the northeastern sky, but this is the best time to see *earthgrazers* — comet scraps arriving nearly tangentially to the atmosphere, often producing long, sky spanning trails. Another strategy is to delay your Perseid session until later, when the radiant is highest. Set your alarm to wake you in the early morning so you can watch from about 2 a.m. to 5 a.m. By facing north and keeping the Moon at your back, you'll optimize your dark adaptation and enjoy a modest show, perhaps punctuated with an occasional fireball. As a bonus, you can catch a wonderful coda in the northeastern sky at dawn. That's when you can see Venus and Jupiter beaming less than 1½° apart in the east-northeast.\*\*\*