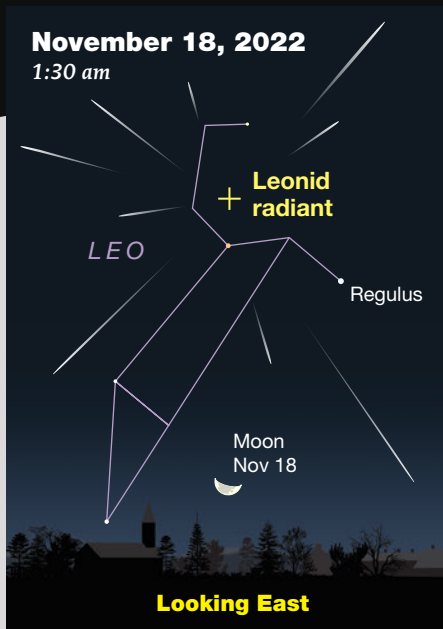


A Triple Leonid Outburst?

THE LEONID METEOR SHOWER is normally a modest affair with 10 to 15 swift meteors per hour visible on **the night of November 17-18**. But this year's display may be spiced up with multiple outbursts. According to the International Meteor Organization, Earth will cross dust trails laid down by the shower's parent comet, 55P/Tempel-Tuttle, in 1600, 1733, and 1800. The first surge, originating from the 1600 trail, is expected around 7:00 UT (2 a.m. EST) on November 18th, with 5 additional meteors per hour expected.

Anticipation rises when Earth dashes through the wake of cometary particles ejected in 1733. While forecasting shower rates is an inexact science, meteor dynamicist Mikhail Maslov believes a strong outburst from this trail is possible. He predicts a zenithal hourly



rate (ZHR) that could reach 250 to 300 with many brighter-than-usual meteors, starting at 6:00 UT on the 19th. That's excellent timing for viewers in eastern North America. The 1800 debris trail provides the final fireworks, with an enhancement of 5 to 10 meteors per hour, expected around 15:00 UT on the 21st. That timing favors Pacific Ocean locations (including Hawai'i) and the Eastern Hemisphere.

Whichever version(s) of the Leonids we end up with, all you need to enjoy the display are warm clothes and a comfortable reclining chair. ***