

Luxuriate in Lyrids

IF YOU'VE YET to experience the Lyrid meteor shower in its humble glory, this is a fantastic year to address that deficit. The Lyrids are modest as showers go, with a maximum of 15 to 20 per hour visible from a dark, moonless site with the radiant positioned high in the sky. The International Meteor Organization (IMO) predicts a shower peak around 20^h Universal Time (4 p.m. Eastern Daylight Time) on April 22nd. Given the midday timing, North American observers should see maximum the morning of April 22nd followed by a second good opportunity to catch the show that

night. The Moon, a waxing crescent, will have little effect on meteor rates.

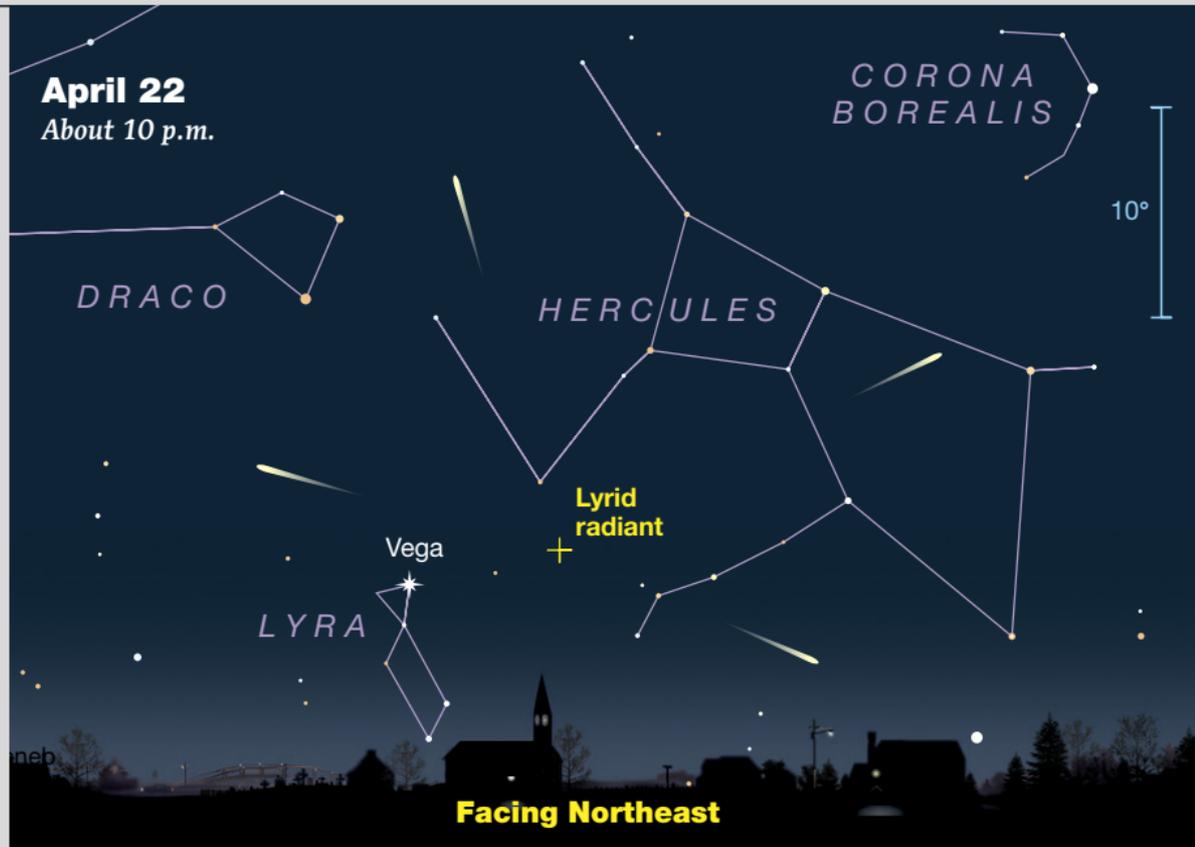
The shower's streaming point, its *radiant*, lies in western Hercules about 8½° southwest of brilliant Vega. (Back in 1930, when the International Astronomical Union established the current constellation boundaries, this shower's radiant — long associated with Vega in Lyra — ended up in Hercules.)

Although this part of the sky culminates at the start of dawn, you can begin your Lyrid watch as early as 10:30 p.m. local time. After-midnight observation usually produces higher rates because when the radiant is high up, fewer meteors are hidden by the horizon. Also at that time, Earth's leading hemisphere is turned toward the direction of incoming

meteors, which increases the particles' impact velocities and subsequently their number and brightness. My happy Lyrid time slot is 2 a.m. to 4 a.m.

Dress warmly, and relax comfortably in an outdoor reclining chair. When I watch this shower, there are often gaps of five minutes or more between sightings, so you'll need a degree of patience that at times can feel like an eternity. Speaking of which, the parent body of the Lyrids, Comet Thatcher (C/1861 G1), has an orbital period of about 415 years and won't return until around 2283. Knowing that may help put you in the proper stoic frame of mind.

Every year during the last two weeks of April, Earth plows through the comet's path and the bits of dust and rock



pepper the atmosphere at 49 kilometers per second (108,000 mph). As a particle compresses and heats the air along its flight path, its temperature can reach more than 1,650°C (3,000°F), hot enough to vaporize into a superheated gas, which combines with oxygen to form metallic oxides or “meteoric smoke.” These minute particles can act as condensation nuclei in the formation of blue-hued noctilucent clouds that appear in summer twilights.

Although unrelated, another noteworthy sky event occurs around the same time as the shower. On the evening of April 23rd, Venus passes just $\frac{3}{4}^\circ$ north of Uranus low in the northwestern sky at dusk just a few degrees south of the Pleiades.