

Curiosity spies stunning clouds at twilight on Mars

In the mid- and upper-latitudes on Earth, during the early evening hours, thin and wispy clouds can sometimes be observed in the upper atmosphere.

These clouds have an ethereal feel and consist of ice crystals in very high clouds at the edge of space, typically about 75 to 85 km above the surface. The clouds are still in sunlight while the ground is darkening after the Sun sets. Meteorologists call these noctilucent clouds, which essentially translates to “night-shining” clouds.

There is no reason why these clouds could not also exist on Mars, which has a thin atmosphere. And about two decades ago, the European Space Agency’s Mars Express orbiter observed noctilucent clouds on Mars and went on to make a systematic study.

Among the many tasks NASA’s *Curiosity* rover does on the surface of Mars since landing in 2012 is occasionally looking up. A couple of weeks ago, the rover’s Mastcam instrument captured a truly stunning view of noctilucent clouds in the skies above. The clouds are mostly white, but there is an intriguing tinge of red as well in the time-lapse below, which consists of 16 minutes of observations.

<https://arstechnica.com/space/2025/02/curiosity-spies-stunning-clouds-at-twilight-on-mars/>