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[Noctilucent \("night-shining"\) clouds](#) hover at the edge of Earth's atmosphere, at altitudes of 76 to 85 km. They're so high up that they reflect the sun even at night, producing an electric-blue glow. Now some scientists say these [high-flying clouds may come with a metal lining](#) – not made of silver, but of sodium and iron.

For the last two years, the [Aeronomy of Ice in the Mesosphere \(AIM\)](#) satellite mission has been studying noctilucent clouds, also known as polar mesospheric clouds. A curious property of these clouds is that they reflect radar, which scientists thought might be due to charged particles in the clouds. But new mathematical calculations published in the *Journal of Geophysical Research-Atmospheres* by [Paul Bellan](#), a physicist at Caltech, suggests the reflections could be due to a thin layer of metal coating the clouds.

Bellan thinks the metal film is composed of sodium and iron because atmospheric levels of these metals drop 80 percent when noctilucent clouds appear. Sodium and iron at such high altitudes come from [meteors](#) exploding as they enter Earth's atmosphere.

Noctilucent clouds form over the polar regions during their respective summer months. But recently they've been showing up at lower latitudes and have been spotted in Utah and Colorado. Scientists suspect this could be a result of [global warming](#) causing colder temperatures (yes, colder temperatures) at high altitudes and allowing more ice to form. [NASA says](#) that while increasing greenhouse gases trap radiation and increase temperatures in the lower atmosphere, the mesosphere gets a smaller share of radiation and actually gets colder.

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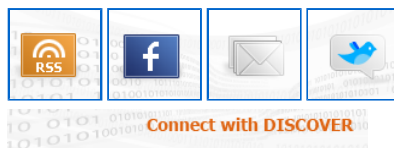
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