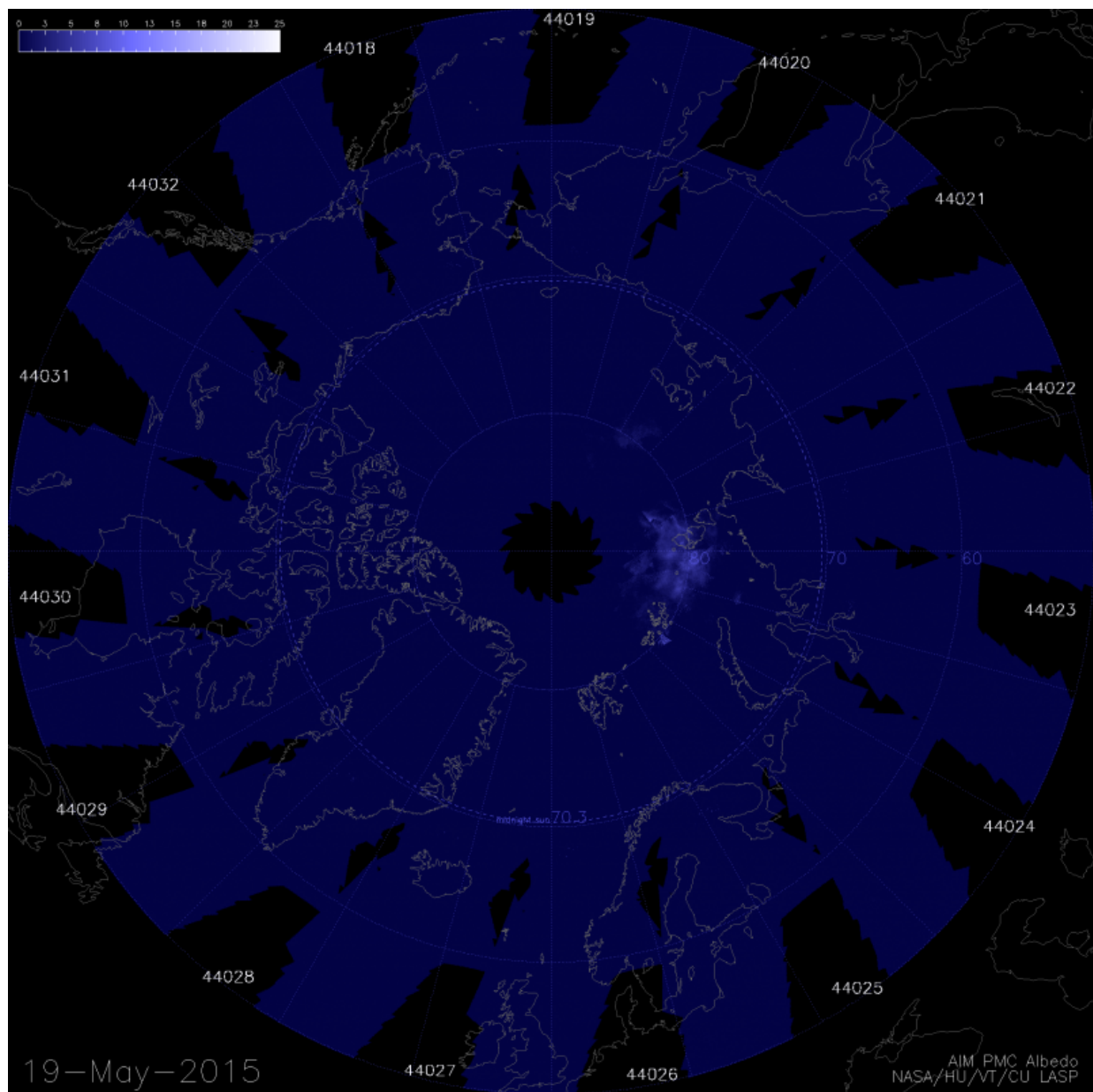


First night-shining clouds of 2015 arctic season

June 3 2015



Credit: NASA/AIM/LASP/University of Colorado

NASA's Aeronomy of Ice in the Mesosphere, or AIM, spacecraft has spotted a luminous patch of electric-blue drifting across the Arctic Circle. The sighting marks the beginning of the 2015 season for noctilucent clouds (NLCs).

The first clouds appeared on May 19, 2015, a bit earlier than researchers expected. NLCs are Earth's highest clouds. Seeded by meteoroids, they float at the edge of space more than 80 km above Earth's surface. The clouds are very cold and filled with tiny ice crystals. When sunbeams hit those crystals, they glow electric-blue.

Noctilucent clouds are a mystery dating back to the late 19th century. Northern sky watchers first noticed them in 1885 about two years after the eruption of Krakatoa. Ash from the Indonesian volcano caused such splendid sunsets that evening sky watching became a worldwide pastime. Scientists of the day guessed they were some manifestation of [volcanic dust](#).

Eventually Krakatoa's ash settled and the sunsets faded, but strangely the [noctilucent clouds](#) didn't go away. They're still present today, stronger than ever. Researchers aren't sure what role Krakatoa's ash played in those early sightings.

One thing is clear, the dust behind the clouds we see now is [space dust](#). In the past, NLCs were a polar phenomenon confined mainly to the Arctic. In recent years they have intensified and spread with sightings as far south as Utah and Colorado. This could be a sign of increasing greenhouse gases in Earth's atmosphere.

Data from AIM show that NLCs are like a great "geophysical light bulb." They turn on every year in late spring, reaching almost full intensity over a period of no more than 5 to 10 days.

More information: www.nasa.gov/mission_pages/aim/index.html

Provided by NASA

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