

# Space traffic may be cause of increase in polar mesospheric clouds

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A recent increase in polar mesospheric clouds could be due to a recent increase in space traffic, a new study suggests. Polar mesospheric clouds are diffuse collections of water ice crystals in the mesosphere near the poles at altitudes of about 80 kilometers (50 miles). The number and brightness of polar mesospheric ice clouds is expected to decrease when the incoming flux of solar ultraviolet radiation increases. Increases in solar radiation both heat and dry out the atmosphere slightly, leading to a decrease in ice cloud formation.

In the past 2 years, the solar ultraviolet flux has increased, but the occurrence of [polar mesospheric clouds](#) has actually increased, rather than decreasing as expected.

Siskind et al. used observations from NASA's Aeronomy of Ice in the Mesosphere (AIM) satellite to quantify this recent increase in the number and brightness of polar mesospheric clouds.

They suggest that water from spacecraft exhaust could contribute to formation of polar mesospheric clouds.

They also note that an increase in the amount of space traffic in the past 2 years coincides with the unusual increase in polar mesospheric clouds.

Their preliminary estimate of the amount of water released from this space traffic is consistent with the hypothesis that the increase in these clouds is due to [space traffic](#).

**More information:** Recent observations of high mass density polar mesospheric clouds: A link to space traffic? *Geophysical Research Letters*, [doi:10.1002/grl.50540](https://doi.org/10.1002/grl.50540), 2013 [onlinelibrary.wiley.com/doi/10 ... 2/grl.50540/abstract](https://onlinelibrary.wiley.com/doi/10.1002/grl.50540/abstract)

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