Persistent contrails and how much they may affect the climate in the future.

Contrails are clouds formed when water vapor condenses and freezes around small particles (aerosols) that exist in aircraft exhaust. Some of that water vapor comes from the ground around the plane, and some is added by the exhaust of the aircraft. Clouds are the largest variable controlling Earth’s atmospheric circulation and climate.

Any changes in global cloud cover may contribute to long-term changes in Earth’s climate. Contrails, especially persistent contrails, represent a human-caused increase in the Earth’s cloudiness and are key to understanding climate and ultimately our natural resources. Scientists today are trying to learn more about the longevity of contrails and how much they may affect the climate in the future.

Contrails can grow to resemble natural cirrus clouds. They are wider than 1 nautical mile thick. These contrails are not much wider than the short-lived contrails and can be thinner than 1 nautical mile thick. As the plane has disappeared, a thin contrail haze remains in the sky and is very thin. Large fraction of the Sky generally may be very short, or it may spread as the plane moves along. Although some contrails disappear a contrail haze forms and disappears.

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