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Jet trails make climate milder

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[NewScientist.com news service](#)
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Aeroplane vapour trails buffer the temperatures felt on Earth, according to a study made possible by the consequences of the terrorist attacks of September 11.

Scientists had suspected that the wispy condensation trails left by jumbo jets could behave like high altitude clouds and alter the climate. But constant air traffic had prevented them from testing the idea.

However, the three-day grounding of aeroplanes across North America after September 11, gave climatologist David Travis and his colleagues at the University of Wisconsin the jet-free skies they needed.

With the contrails absent, they found that daytime high temperatures were higher and night-time low temperatures were lower at 4000 weather stations across North America.

Hot and cold

The team analysed the average daily

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temperature range for the three-day periods before, during and after the aircraft grounding, and compared them with the same periods from 1971 to 2000.

The temperature range both before and after the grounding showed little difference from the average. But during the three day aircraft grounding the temperature range was 1.1 °C greater than average.

The loss of cloud cover is known to have this effect and therefore support team's argument that contrails behave as artificial cirrus clouds, insulating by reflecting sunlight from above and retaining heat from below.

The study noted that the regions that usually have the greatest number of such as the northeast, midwest and pacific northwest, showed the greater in temperature range during the aircraft grounding.

Local weather

However, John Mitchell from the UK's Met Office warns that this could sin to variations in local weather during the study period. "Whilst it's an intriguing I'm not sure how much one can deduce from it since the effect of contrails clearly separated from that of natural cloud coverage", he says.

"We are not saying the temperature changes were solely due to absent c Weather patterns across the country obviously contributed to our results," replies.

"But even so the range of temperatures measured during the aircraft grou the largest for at least 30 years, which suggests that contrails are in some enhancing the blanketing effect of clouds," he told **New Scientist**.

West Nile virus

The increased insulation from contrails may seem to be good news in terr heating and cooling bills, but according to Travis even small changes in c have widespread affects.

Insect populations, for example, are kept in check by extremes of tempera variable climates could potentially result in larger mosquito populations, w increased risks of malaria and West Nile virus. The latter is currently swee across the US.

Many plants are also affected by temperature extremes. For example, ma can only be tapped after nights when the temperature drops to —3 °C.

Journal reference: *Nature* (vol 418, p 601)

- [David Travis, University](#)
- [What is a contrail? NOA](#)
- [International Coalition fo Sustainable Aviation](#)
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