



# Atom provides a new perspective on tropospheric formaldehyde



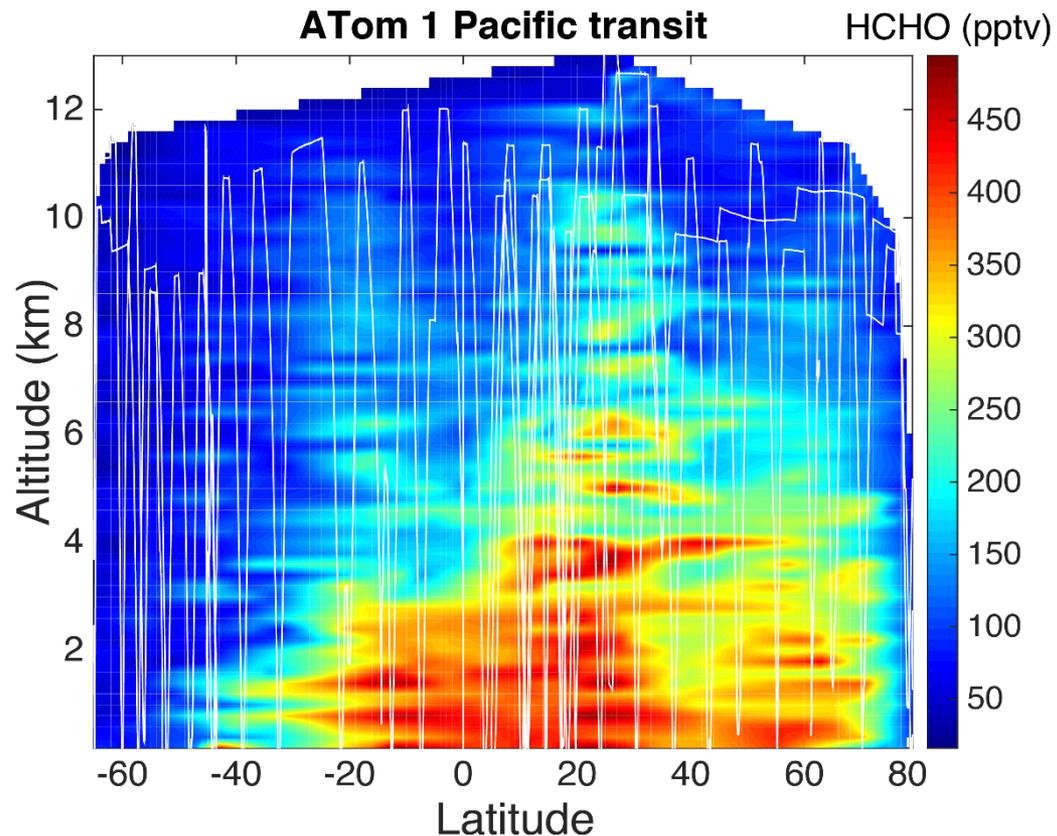
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**Science Question:** How do man-made emissions impact atmospheric chemical reactivity on a global scale?

**Finding:** Formaldehyde (HCHO) data were collected by the GSFC In Situ Airborne Formaldehyde Instrument (ISAF) aboard the NASA DC-8 during the Atmospheric Tomography (ATom) mission, an Earth Venture suborbital campaign. The distribution of HCHO in the Figure shows how sources of HCHO - biogenic volatile organic compounds (VOCs) - are distributed between the poles. The surprisingly high abundance of HCHO in even the most remote locations indicates relatively large sources of VOCs in these regions.

**Impact:** The HCHO observations from ISAF cover an unprecedented range of altitudes and latitudes over the remote oceans providing new insights into the chemistry of the remote troposphere.

**Why It Matters:** HCHO produces OH, the primary tropospheric sink of methane, CH<sub>4</sub>. Measurements like these provide an important source for constraining the chemistry-climate models that are used to predict the climate impact of CH<sub>4</sub>.



**Concentration of HCHO measured in situ with the ISAF instrument plotted versus latitude and altitude.**