



## Turbulent development at 80 km altitude

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We present a novel analysis that seeks to study the turbulent behavior of the atmosphere at high altitudes. Sounding rocket measurements, carried out at Poker Flat, Alaska, allow detection of atmospheric turbulence at 80 km through analysis of the tri-methyl aluminium (TMA) reinjection bag. This bag, detected by ground-based cameras, develops when TMA rapidly evaporates off the rocket body upon entering a large temperature gradient. We find that the atmospheric turbulence develops soon after the cloud forms, and proceeds from Navier-Stokes through Kraichnan turbulence in the most diffuse observations towards the end of the observations.