



Aviation Safety

Detecting turbulence

Each year, millions of Americans fly across the US commercially. Dangerous turbulence is an ever-present risk to passengers and crews. AI-driven tools developed by NOAA's Cooperative Institute for Meteorological Satellite Studies are helping aviation forecasters to fill missing gaps about real-time conditions and provide pilots with crucial information needed to avoid turbulence.

Turbulence

Improving air safety



The CIMSS Turbulence Product is a tool developed by NOAA's Cooperative Institute for Meteorological Satellite Studies that uses satellite data and AI to identify turbulence at commercial aircraft cruising altitudes. This tool helps inform forecasters and air traffic control about dangerous turbulence.

- A real-time tool used by forecasters at the Aviation Weather Center, the Alaska Aviation Weather Unit, the Honolulu Forecast Office aviation weather desk, and the Central Weather Services Units of the NWS.
- Provides situational awareness of turbulence flight hazards, especially over oceans where other measurements may not be available.
- The CIMSS Turbulence Product is being transitioned into operations at NOAA/NESDIS.

Innovative research and development at the Cooperative Institute for Meteorological Satellite Studies supports NOAA's mission to save lives and protect property