

The RAL Seminar Series



NCAR

Towards a Climatology of Cloud Properties Derived from Line-shaped Contrails over the Northern Hemisphere

by

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Foothills Lab Building 2,
Room 1001, 11:00 a.m.**

One of the recommendations of the Federal Aviation Administration's (FAA) Aviation-Climate Change Research Initiative (ACCRI) is the development of a near-global climatology of linear contrail cloud properties detectable via satellite remote sensing methods. Such a contrail climatology is necessary for the validation of a new generation of atmospheric models that represent contrail formation explicitly.

We present results from a new automated contrail detection algorithm (CDA) that will be used to develop this climatology. The CDA is part of a contrail analysis system being developed at the NASA Langley Research Center that includes concurrent contrail microphysical and radiative properties such as contrail optical depth, effective particle size and solar and broadband longwave radiative forcing that are derived using the CERES (Clouds and Earth's Radiant Energy System) cloud detection and retrieval analyses. Results from a preliminary study over the contiguous United States (CONUS) will be presented.