DEVELOPMENT OF A MULTI-ANGLE LIGHT-SCATTERING SPECTROMETER FOR AIRCRAFT USE

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Application

Provide direct measurements of key properties needed for inversion of data from satellite-borne remote sensors and ground-based LIDAR systems for aerosol characterization over a large geographical area.

Intersection of the aircraft flight path with the satellite path at the same point in time allows direct correlation of MLS data and remote-sensing data.
Role in Radiative Effects Modeling*

- Optical Depth
- Single Scattering Albedo
- Asymmetry Parameter

- Optical Depth
- Single Scattering Albedo
- Scattering Phase Function

- Particle Size Distribution
- Optical Constants
- Particle Shape

- Hemispherical Flux

Radiative Transfer Codes

Climate Modeling

Remote Sensing Retrieval

Airborne MLS Spectrometer Layout