The Role of Airborne Spectrometers

Airborne imaging spectrometers play a critical role in a multi-sensor greenhouse gas observing system. For example, the differing spatial resolution and instrument sensitivity of the EMIT ...

Aerosol mass spectrometers (AMS) are critical tools in environmental science, atmospheric chemistry, and air quality research. These instruments are designed to measure the ...

In the past 40 years, our research group at the Air Force Research Laboratory has flown quadrupole mass spectrometers of many designs on nearly 100 sounding rockets, nine satellites, three Space ...

Single Particle Mass Spectrometers (SPMSs) have proven to be well suited for in-situ and real-time atmospheric aerosol measurements. The data produced by these instruments are a mix of ...

Commissioned by the Swiss Airborne Research Facility for the Earth System (ARES) research consortium, AVIRIS-4 is geared toward delivering cutting-edge imaging spectroscopy data ...

It is intended to simulate existing satellite imager products (MODIS/VIIRS,) and to validate radiances and geophysical retrievals, with an emphasis on cloud and aerosol science. It will ...

CAR is a multi-wavelength scanning radiometer for determining albedo of clouds in the visible and near-infrared and measuring the angular distribution of scattered radiation and ...

We describe the instrument design and present the results of laboratory characterization and calibration of the system"s second generation, AVIS-2, which is currently being operated. The ...

In this study, we assess the capability of an airborne monitoring system with temporally sparse observations to constrain annual emissions at both facility and regional scales.

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