Retrieval, Inter-comparison, and Validation of Above-cloud Aerosol Optical Depth from A-train Sensors

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Validation of Above-cloud AOD

The A-train Satellite Team (A-train) is a coordinated group of satellites that fly in a Marsh's trapezoid formation. These satellites are designed to measure cloud properties, aerosol properties, and precipitation properties simultaneously. The A-train team consists of several satellites, including Terra, Aqua, and Aura, which fly in close proximity to each other. The goal of the A-train team is to obtain accurate measurements of the Earth's atmosphere and to provide reliable information that can be used for climate research and monitoring.

The A-train team has developed a suite of instruments that are specifically designed to measure the properties of clouds and aerosols. These instruments include the Moderate Resolution Imaging Spectroradiometer (MODIS), the Multi-angle Imaging SpectroRadiometer (MISR), and the Ozone Monitoring Instrument (OMI), among others. The instruments on these satellites are able to measure the properties of clouds and aerosols from space, providing valuable information about the state of the Earth's atmosphere.

The team uses a variety of methods to validate the measurements made by the A-train instruments. These methods include inter-comparison with ground-based measurements, validation against other satellite instruments, and validation against in-situ measurements from aircraft campaigns. The team is continually working to improve the accuracy and reliability of the measurements made by the A-train instruments, and to provide the scientific community with the most accurate and reliable information possible.

References


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