

Intercomparison of Temperature, Water Vapor, and Clouds from AIRS and MERRA

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We examine an intercomparison of temperature, water vapor, and cloud data from the Atmospheric Infrared Sounder (AIRS) on the Aqua spacecraft and a corresponding Sun Synchronous Subset of data from the Modern Era Retrospective-Analysis for Research Applications (MERRA) produce by the Global Modeling and Assimilation Office (GMAO). We created monthly means over 9 complete years of observations (i.e., the AIRS epoch) and examine the sensitivity of both the AIRS and MERRA data sets to variations due to seasons and the El Nino Southern Oscillation. We also use the MERRA observations to estimate the magnitude of the sampling bias due to the quality control applied to the infrared satellite data.

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