

The Impact of Assimilating Retrieved Total Precipitable Water and Sounding Data from AIRS and MODIS on Severe Weather Simulations

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The primary objectives of this study are to advance our understanding of the characteristics of retrieved total precipitable water (TPW) and retrieved temperature and moisture sounding data from Moderate Resolution Image Spectroradiometer (MODIS) and the Atmospheric Infrared Sounder (AIRS) instruments on Aqua, and to assess the impact of assimilating these retrieved data on severe weather simulations using four different case studies. The cases included two hurricane cases (Emily 2005 and Isidore 2002) over the Atlantic Ocean and two typhoon cases (Longwang 2005 and Talim 2005) over the Pacific Ocean. Preliminary results for these case studies will be presented.