



Examination of the tropical cyclone environment through comparison of COSMIC with other satellite data

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Measurements of refractivity collected by Constellation Observing System for Meteorology, Ionosphere, and Climate (COSMIC) satellites are used to examine vertical profiles of the temperature and humidity in the vicinity of tropical cyclones. As GPS radio signals can pass through thick cloud cover and precipitation, the COSMIC data can be beneficial to the analysis of remote tropical cyclones. The COSMIC data are compared against the split-band (12.0 micron minus 10.8 micron) product of the METEOSAT, and the aerosol profiles of the NASA CALIPSO satellite, to identify regions affected by a Saharan Air Layer (SAL), which typically consists of a high concentration of desert dust aerosols dispersed within a deep layer of dry air over the Atlantic Basin. Validation results for 2006, 2007, and 2008 tropical cyclones will be presented.