



Radiometric Measurements of Tropospheric Water Properties in the Tropics

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To understand the processes leading to climate change observations of tropical water vapour are of primal importance due to its dominant abundance as a greenhouse gas and its high variability. This applies particularly to the tropospheric region near the equator where only few measurements exist.

The portable TRARA radiometer (on loan from the IAP Bern) is operated at the Anton de Kom University of Suriname in Paramaribo and measures continuously since mid of December 2006. The sensor consists of two channels at frequencies of 21 and 35 GHz to observe the integrated water vapour content of the troposphere. The tropospheric opacity is derived from hot/cold and tipping curve calibrations.

The results of two years of microwave data using new statistical retrieval algorithms based on local sonde profiles (SHADOZ) which are available every other week at Paramaribo will be presented. In addition, the two-channel radiometer allows for studying the integrated liquid water path.