Convective System Monitoring – A Case Study

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Abstract

January 2004 was one of the rainiest in the last 30 years, mainly in Northeast Region of Brazil, with rainfall anomalies of more than 300% in some places. A complex interaction of meteorological systems such as Intertropical Convergence Zone (ITCZ), Upper Level Cyclonic Vortex (ULCV) and South Atlantic Convergence Zone (SACZ) guaranteed almost 10 days of continuous rain, with severe convective events that caused dramatic floods. In this work we test the ability of GOES satellite derived tools generated at CPTEC/INPE, such as high-level divergence fields, cloud cluster area expansion and cloud tracking system to identify and follow these convective events. DCP and rain gage data are used to verify the observed rain. Also it is showed a comparison between these fields and METEOSAT winds made at FUNCEME, and presented the statistics of the satellite winds quality calculated operationally at CPTEC for GOES data.