

Intercomparison between passive microwave precipitation estimates and ground-based radar over Brazil using SOS-CHUVA campaign dataset.

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The accurate measurement of precipitation is important to understand some meteorological systems. Weather systems are complex and evolve rapidly and to measure rain, snow and other types of precipitation on the ground is challenging. However, satellite sensors can provide observations from which precipitation estimates can be generated. In this work, the level 2 instantaneous swath based precipitation products generated by the Goddard Profiling algorithm GPROF2014 scheme are evaluated using standard descriptive and statistical scores against SOS-CHUVA surface radar dataset, over the southeast of Brazil. It was used the passive microwave sensors such as Special Sensor Microwave Imager/Sounder (SSMIS), Microwave Humidity Sounder (MHS), Advanced Technology Microwave Sounder (ATMS), Global Microwave Imager (GMI), Advanced Scanning Microwave Radiometer (AMSR2) which are products of satellites F16, F17, F18, NOAA18, METOPA, METOPB, NPP, GPM, GCOMW, respectively. Preliminary results show that the current GPROF retrieval technique tends to overestimate the occurrence of light precipitation, leading to an overestimation of the volumetric contribution by light precipitation intensities, while it underestimates moderate to heavy precipitation.