



Validation of soil moisture in Brazil using SMEX03 data

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The goal of this work was to validate surface soil moisture products as derived from Advanced Microwave Scanning Radiometer - AMSR-E (C and X bands) sensor observations for cerrado region in Brazil, using Soil Moisture Experiment 2003 (SMEX03) data. These data were collected in Barreiras city, Bahia state, during the first two weeks of December 2003. The soil moisture derived from AMSR-E sensor was retrieved from the Land Parameter Retrieval Model (LPRM), which was developed by researchers from NASA and the Vrije University Amsterdam. The comparison of time series of the soil moisture showed that the AMSR-E C band and observational data set both give a similar seasonal pattern for cerrado region, presenting a high coefficient of determination (R) for C and X bands. From the results we concluded that the region with cerrado vegetation has a strong potential to retrieve reliable surface soil moisture.