11th Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS)

P2.3

Use of SCAN observations for validation of soil moisture spatial distribution simulated by the land-surface model over the Lower Mississippi Delta region

Georgy Mostovoy, Mississippi State University, Mississippi State, MS; and V. Anantharaj, P. Houser, and C. D. Peters-Lidard

The NOAH land-surface model available from the LIS (Land Information System) has been used to simulate a spatial variability of the soil moisture content (the vertical profile of the volumetric water fraction) with 1-km resolution during year 2005. These simulations cover a part of the Lower Mississippi Delta region where the SCAN (Soil Climate Analysis Network) soil measurements network is rather dense (11 SCAN measurements points were used for validation the NOAH output). Before performing the one-year simulation (for 2005), the 8-year spin-up integration period of the NOAH model was used to generate realistic state and distribution of the soil moisture content over the region. Real-data meteorological forcing fields from the NLDAS archive has been used for this spin-up. Forcing fields from other sources/archives will be also used. These soil moisture fields simulated with the NOAH model for year 2005 can be considered and used further as reference/control sets for comparison purposes with results of experiments assimilating the point soil moisture observations during the land-surface model integration. Seasonal (on weekly/daily basis) and spatial patterns of basic statistics describing deviations of NOAH model simulations from SCAN point measurements will be described and analyzed in the conference paper. Also a performace of NOAH moisture fields will be statistically evaluated and reported during typical periods of wet and dry weather.

Extended Abstract (1.7M)

Poster Session 2, Observations
Wednesday, 17 January 2007, 2:30 PM-4:00 PM, 212B

Previous paper **Next paper**

Browse or search entire meeting

AMS Home Page