Abstract

The Impact of AMSR-E Soil Moisture Assimilation on Evapotranspiration Estimation

CONTROL ID: 1258875
PRESENTATION TYPE: Assigned by Committee
CURRENT CATEGORY: Modeling and Data Assimilation
AUTHORS (FIRST NAME, LAST NAME): Christa D Peters-Lidard1, Sujay Kumar2, 1, David Mocko2, 1,Yudong Tian3, 1
INSTITUTIONS (ALL): 1. Hydrological Sciences Laboratory, NASA/GSFC Code 617, Greenbelt, MD, United States.
2. SAIC, Beltsville, MD, United States.
3. ESSIC, University of Maryland, College Park, MD, United States.

ABSTRACT BODY: An assessment of ET estimates for current LDAS systems is provided along with current research that demonstrates improvement in LSM ET estimates due to assimilating satellite-based soil moisture products. Using the Ensemble Kalman Filter in the Land Information System, we assimilate both NASA and Land Parameter Retrieval Model (LPRM) soil moisture products into the Noah LSM Version 3.2 with the North American LDAS phase 2 (NLDAS-2) forcing to mimic the NLDAS-2 configuration. Through comparisons with two global reference ET products, one based on interpolated flux tower data and one from a new satellite ET algorithm, over the NLDAS2 domain, we demonstrate improvement in ET estimates only when assimilating the LPRM soil moisture product.

http://lis.gsfc.nasa.gov