

Applicability of the Satellite Based Soil Moisture Data Assimilated into the Land Surface Model in Korean Peninsula

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The objective of this study is to assess the applicability of the satellite based soil moisture data assimilated into the land surface model (LSM). The AMSR-2 soil moisture data was assimilated into the land surface model developed for the Soyang river basin located in Korean Peninsula using the ensemble Kalman filter (EnKF) method. The satellite soil moisture data was assimilated every seven days of the modeling period. The result indicates that the LSM that incorporates the satellite-soil moisture data using the EnKF method produces the hydrograph more similar to the observed hydrograph compared to the one that does not incorporate the satellite data. The merit of the LSM-EnKF method over the simple LSM was more pronounced for the rainy season with greater runoff.