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RETRIEVING SURFACE SOIL MOISTURE FROM MODIS AND STUDY IN TAIWAN

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Abstract. Soil moisture is a key factor that controls the exchange of water between transpiration. Information on surface soil moisture variations in both time and spatia applications, especially agricultural and environmental monitoring. This study aimed from daily MODIS and AMSR-E (Advanced Microwave Scanning Radiometer – Earth Ol was conducted in Taiwan for 2009. Data were processed using the Temperature Veg index is developed based on an empirical analysis of the relationship between lan normalized difference vegetation index (NDVI) data. The comparison between the TVI data collected from meteorological stations throughout the study area indicated th between the two datasets. The TDVI results (values range from 0 to 1) were conver E soil moisture data (i.e., g cm^{-3}) by linear regression analysis between these two da analysis were soil moisture maps that had a better spatial resolution (1 km × 1 km) (25 km × 25 km). The soil moisture achieved by TVDI – AMSR-E regression analys patterns with those from the AMSR-E soil moisture data. A quantitative analysis be from TVDI-AMSR-E analysis) and the AMSR-E soil moisture data also reaffirmed signi datasets. This study has demonstrated a method of surface soil moisture retriev

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