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Journal of The Remote Sensing Society of Japan

Vol. 29 (2009) , No. 1 p.271-281

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Validation of Soil Moisture Estimation by AMSR-E in the Plateau

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(Received June 30, 2008)

(Accepted November 19, 2008)

Abstract

During the summer of 2000, the monitoring of the water cycle using long-term monitoring data began to be used as ground truth for ADEOS (Advanced Earth Observing Satellite-II) /AQUA validation in the study area (160 km² in the Mongolian Plateau). Since 2002, the AMSR-E (Advanced Microwave Scanning Radiometer for EOS) has successfully monitored the surface soil moisture. In this study, we have attempted to validate the AMSR-E standard product using the JAXA standard product data (Ver. 5.0) of the AMSR-E and ground-based long-term monitoring data in the study area from 2000 to 2008. Although the standard product slightly overestimated the soil moisture, a good matching was found between the AMSR-E soil moisture product and the ground-based data in Mongolia, and a reasonable matching of the change and distribution between them was found. The results suggest that the quality of the AMSR-E is good and basically useful for surface soil moisture monitoring of the steppe.

Keywords: [soil moisture](#), [AMSR-E](#), [validation](#), [water cycle](#), [Mongolia](#)

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Ichiro KAIHOTSU, Toshio KOIKE, Tsutomu YAMANAKA, Ichiro OHTA, Katsunori TAMAGAWA, Dambaravjaa OYUNBAATAR. Validation of Soil Moisture Estimation by AMSR-E in the Mongolian Plateau. *Remote Sensing Society of Japan*, **29**, **1**, pp.271-281, 2009 .