Geophysical Research Abstracts, Vol. 9, 06072, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-06072

Towards assimilation of METOP-ASCAT derived superficial Soil Moisture into a MSG-SEVIRI driven land surface model: a first LSA-SAF - H-SAF activity.

F. Gellens-Meulenberghs (1), W. Wagner (2), A. Arboleda (1), N. Ghilain (1), C. Kuenzer (2), S. Hasenauer (2)

(1) Royal Meteorological Institute of Belgium, Avenue Circulaire 3, B-1180 Brussels, Belgium [Email: F.Meulenberghs@oma.be; fax: +322-375.12.59]; (2) Vienna University of Technology, Gusshausstr., 27-29, A-1090 Wien, Austria.

In the framework of the EUMETSAT's Satellite Application Facility on Land Surface Analysis (LSA-SAF), models of surface characterization have been implemented in view to increase the benefits from MSG and EPS Satellites. Activities performed within the LSA-SAF involve the development of new techniques and products that are relevant in the different fields of application related to land, land-atmosphere interactions and biophysical applications. Among these products we have: the surface albedo, short-and long-wave radiation surface fluxes, evapotranspiration (ET) and vegetation parameters (Leaf Area Index, LAI, and Fraction of Vegetation Cover, FVC.

In this contribution we present an overview of the methodology to produce LSA-SAF ET and planned developments. One of the most relevant activities in the current phase of the project is an inter-SAF activity between the Hydrology SAF (H-SAF) and the LSA-SAF. The aim of this activity is to develop a coherent methodology to assimilate in the LSA-SAF ET model, the superficial H-SAF soil moisture (SM) index derived from the microwave sensor METOP-ASCAT. The main objective is to increase LSA-SAF ET accuracy over water-stressed regions.

An overview of this challenging project will be given in this contribution, including planned developments for the first activity and preliminary results provided by a new version of the LSA-SAF surface model.