

GLOBAL OCEAN FRESHWATER FLUX COMPONENTS FROM THE HOAPS-3 SATELLITE CLIMATOLOGY

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ABSTRACT

For the understanding and modeling of climate processes attaining a proper knowledge of global water cycle components is essential. With the possibility to derive ocean latent heat flux and precipitation from satellite data, a climatological assessment of global ocean surface fluxes has become possible.

The HOAPS-3 climatology (Hamburg Ocean Atmosphere Parameters and Fluxes from Satellite Data) contains fields of precipitation, surface fluxes and atmospheric parameters over the global ice-free ocean between 1987 and 2005. Except for the NODC/RSMAS Pathfinder SST, all basic state variables needed for the derivation of the fluxes are calculated from SSM/I passive microwave radiometer measurements.

A sophisticated processing chain, including multi-satellite averages, inter-sensor calibration, an efficient sea ice detection procedure, and well validated retrieval algorithms make HOAPS a suitable data set for climatological applications as well as for case studies. Gridded 0.5 degree monthly, pentad and twice daily data products are freely available from www.hoaps.org. Currently the routine operation of HOAPS is transferred to the EUMETSAT CM-SAF.

The presentation will cover the current status and plans for future development of the HOAPS data set and intercomparisons with other model and remote sensing data sets. A second focus will be put on the evaluation of HOAPS-3 ocean surface freshwater fluxes and their interaction with the NAO.