



## **Retrieval of total column water vapour over land- and ocean surfaces for MERIS and OLCI**

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The remote sensing of total column water vapour (TCWV) in the near-infrared provides data in a high spatial and temporal resolution and offers various applications such as determining global and local TCWV trends, sources and sinks of water vapour, and a better understanding of local effects. Additionally it benefits the atmospheric correction for other retrieved properties such as ocean color and water constituents.

Consequently, the continuous remote sensing of total column water vapour over cloud-free land- and ocean surfaces with OLCI (Ocean and Land Color Instrument) on Sentinel-3 will be essential in the future.

Unfortunately, due to the loss of control over ENVISAT (ENVironmental SATellite) in April 2012, a continuous observation of TCWV was interrupted.

Nevertheless, an adaption of the MERIS (MEdium Resolution Imaging Spectrometer) fast-forward-model (Lindstrot et al., 2012) for deriving TCWV over cloud-free ocean surfaces will widen the TCWV data base. The upgraded processor retrieves TCWV values for all cloud-free pixels over the whole swath and is no longer limited to regions with high surface reflectances.

Hereafter, this water vapour retrieval is modified for the OLCI channel setting. A validation of the MERIS derived TCWV values over ocean surfaces will be shown.