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Water Vapour Retrieval from SCIAMACHY Nadir Data

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Measurements of the SCanning Imaging Absorption spectroMeter for Atmospheric CHartographY (SCIAMACHY) on-board the European environmental satellite EN-VISAT have been used to derive water vapour total column amounts on the global scale.

For this purpose, the Air Mass Corrected Differential Absorption Spectroscopy (AMC-DOAS) approach has been applied to SCIAMACHY's nadir measurements in the spectral region around 700 nm.

Previous investigations already showed a good agreement of the water vapour columns derived from SCIAMACHY with correlative data from e.g. the Special Sensor Microwave Imager (SSM/I) and from the European Centre for Medium-Range Weather Forecasts (ECMWF).

However, these investigations were based on a limited set of SCIAMACHY data. Meanwhile, the AMC-DOAS retrieval method has been applied to a larger amount of data. This presentation will show results of an extended comparison between SCIA-MACHY water vapour columns and other satellite and model data.