



New SCIAMACHY Solar Reference Spectrum

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The Scanning Imaging Absorption spectroMeter for Atmospheric CHartographY (SCIAMACHY) aboard ESA's ENVISAT satellite platform was operating from 2002 until 2012. It was designed to measure the radiance backscattered from the Earth and hence determine total columns and vertical profiles of atmospheric trace gas species.

Furthermore SCIAMACHY performed daily sun observations via a diffuser. Solar spectra in the wavelength range from 212 nm to 1760 nm and two narrow bands from 1930 to 2040 nm and 2260 to 2380 nm are measured with a spectral resolution of 0,2 to 1,5 nm in the different channels.

Recent developments in the SCIAMACHY calibration (e.g. a physical model of the scanner unit including degradation effects, and an on-ground to in-flight correction using the on-board white light source (WLS)) are used for the generation of a new SCIAMACHY solar reference spectrum as a first step towards a 10 years time series of solar spectral irradiance (SSI) data. For validation comparisons with other solar reference spectra are performed.