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SCIAMACHY on ENVISAT: Some Recent Results

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SCIAMACHY (Scanning Imaging Absorption spectroMeter for Atmospheric ChartographY) is a passive atmospheric remote sounding instrument aboard ENVISAT. The SCIAMACHY instrument comprises scan mirror telescope light collection optics, a spectrometer, and electrical and thermal sub systems. The spectrometer measures electromagnetic radiation, back scattered reflected and emitted from the atmosphere in the spectral region between 220 and 2380 nm. SCIAMACHY observes the atmosphere in alternate limb and nadir viewing geometry and by soar and lunar occultation. In addition it makes measurements of the solar and lunar discs above the atmosphere for calibration purposes.

Inversion of the SCIAMACHY data yields information on the distribution of trace gases, clouds and aerosols in the atmosphere. In this talk selected results from SCIAMACHY, obtained from its first three years in orbit, will be discussed. SCIAMACHY has demonstrated that it makes exciting measurements of relevance to the mesosphere, stratosphere and troposphere.