Geophysical Research Abstracts, Vol. 7, 07875, 2005
SRef-ID: 1607-7962/gra/EGU05-A-07875

New ozone and aerosol retrievals from Odin/OSIRIS

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The Optical Spectrograph subsection of the OSIRIS instrument measures the limb scattered radiance from 280 nm to 800 nm with approximately 1 nm resolution. These measurements are ideal for the simultaneous retrieval of vertical number density profiles of both ozone and stratospheric sulphate aerosols. A new technique has been developed that merges information from both the Hartley and Chappuis ozone absorption bands to provide an accurate retrieval of the ozone profile from the troposphere into the lower mesosphere. This work presents the details of the retrieval algorithm together with comparative studies done with SAGE, POAM, ACE and other Odin data sets. It is shown that a simultaneous retrieval of Chappuis ozone, Hartley ozone and sulphate aerosols enhances the quality of the retrieved results.