

Global measurements of stratospheric aerosol parameters from OSIRIS

A.E. Bourassa, D.A. Degenstein, and E.J. Llewellyn

Institute of Space and Atmospheric Science, University of Saskatchewan, Canada
(adam.bourassa@usask.ca / Fax: 1 306 966 6428 / Phone: 1 306 966 6456)

The UV-visible spectrograph subsection of the OSIRIS instrument on the polar-orbiting Odin satellite measures altitude profiles of the limb radiance of the Earth's atmosphere. A retrieval of height profiles of stratospheric aerosol extinction is possible with these measurements using a spherical multiple scattering radiative transfer code. Details of the retrieval technique and the sensitivity of the retrieval to radiative transfer parameters such as orders of scattering, spatial resolution, albedo and neutral density will be discussed. Also, the utility of the dataset for studies of dynamical atmospheric phenomena such as stratosphere-troposphere exchange and polar vortex evolution will be demonstrated.