ASSIMILATION AND VALIDATION OF SCIAMACHY OZONE DATA

Henk Eskes, Jan Fokke Meirink, Ankie Piter, Arjo Segers, Gijs van Soest and Hennie Kelder
Royal Netherlands Meteorological Institute (KNMI), P.O.Box 201, 3730 AE De Bilt, the Netherlands (eskes@knmi.nl)

During the past 5 years a data assimilation approach has been developed at the KNMI to analyse GOME near-real-time total ozone observations. Ozone analyses and daily ozone forecasts are produced on an operational basis, and are publicly available on the KNMI web site (www.knmi.nl/gome_fd).

The statistics on the differences between observations and the model (short-range) forecast provides detailed information on the observations used. The assimilation scheme is used for validation studies of SCIAMACHY ozone column data that has become available in 2002 and that will become available in the long term. Starting 2003, ozone data from SCIAMACHY will be assimilated, including total column, nadir profiles and limb profiles. A direct assimilation of radiances is under investigation.

In our presentation we discuss the performance of our assimilation scheme, the results obtained with the SCIAMACHY ozone validation studies and our future SCIAMACHY ozone assimilation plans.