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Atmospheric Measurement Techniques Discussions

Interactive comment on "A review of the ozone hole from 2008 to 2010 as observed by IASI" *by* C. Scannell et al.

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I have some comments to this interesting paper:

(1) The statement on page 4728, line 25 "The GOME-2 total ozone column is calculated as a vertically integrated ozone proïňĄle based on the vertical ozone proïňĄle retrieval algoritm OPERA developed and run operationally in near real time by KNMI in the framework of the EUMETSAT O3MSAF" is misleading. The official GOME-2 total ozone column product is calculated using the GDP 4.4 retrieval algorithm (Loyola et al., 2011) developed and run operationally by DLR in the framework of the EUMETSAT O3M-SAF.

It would be very interesting to include in this paper a comparison with the official GOME-2 total ozone product from GDP besides the integrated profiles from OPERA. To facilitate this work, DLR is willing to provide GOME-2 daily maps averaged to a 1×1 deg. grid as used in the current comparisons. Just send me an email in case of interest.

(2) The ozone profile information is not fully exploited in this paper, the satellite to satellite comparisons and the ozone hole analysis are restricted to total columns. I suggest to compare GOME-2 ozone profile information provided by KNMI with IASI profiles and to analyze the evolution of the ozone vertical structures as done for example in Peet et al., 2009.

(3) The limitations of UV/VIS instruments for measuring ozone are listed on pages 4720-4721. On the other side the limitations of TIR sounders for measuring ozone (e.g. cloud contamination, larger error for bright surfaces, etc.) are missing and should be included.

References:

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Peet, J.C.A. van, R.J. van der A, A.T.J. de Laat, O.N.E. Tuinder, G. Koenig-Langlo and J. Wittig, Height resolved ozone hole structure as observed by the Global Ozone Monitoring Experiment–2, Geophys. Res. Lett., vol. 36, 2009.

Interactive comment on Atmos. Meas. Tech. Discuss., 4, 4717, 2011.