

Interactive comment on “Geophysical validation of MIPAS-ENVISAT operational ozone data” by U. Cortesi et al.

Anonymous Referee #1

Received and published: 31 May 2007

1. General comments

Ozone profiles measured with MIPAS-E were comprehensively validated by a lot of co-located data. The authors concluded that the operational ozone data are ready for use in quantitative analysis in the stratosphere. Since the policy of this journal does not have paper length restrictions, I do not suggest to shorten the length of this paper. Rather, I suggest to include some additional results.

The authors made one by one sensor comparisons, but do not made multiple sensor comparisons in a coincident airmass. The authors speculated that some discrepancies between MIPAS and others found in the lower to lowermost stratosphere are due to inhomogeneities in horizontal distribution of ozone. If so, the ozone variation can

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be expected from a result of comparison among MIPAS-E and several sensors in a coincident airmass in such an altitude range.

Further, is there any correlation between retrieved profiles and a priori profiles for MIPAS-E in the lower to lowermost stratosphere? Are the discrepancies found in those altitude regions related to constraints of a priori profiles?

2. Minor comments (including typo)

p.5810 L13: Von del Gathen → von der Gathen

p.5815 L6: Von → von? It appears several places hereafter.

p.5816 L7: Electrochemical cell → Electrochemical concentration cell

p.5816 L8: board of small → board small

p.5821 L15-16: LS and HS are abbreviated, but inefficiently utilized hereafter.

p.5823 L1: A corresponding figure (comp. w/ Hawaii sondes) is missing.

p.5827 L18: Delete ")" after 1995.

p.5835 L4: A period is missing after bin.

p.5840 L16: Make Potential Temperature (PT). Then it will be efficiently utilized hereafter.

p.5849 L22: Define pvu.

p.5859 L1: Define a measurement response.

p.5860 L9: mm → μm

p.5862 L13: 30 deg. SN → 30 deg. N

p.5870 L20: 100 does not equal to 10^{-10} .

p.5878 L6: Delete ")" after hPa.

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Figs. 2 and 3: Delete (a) Ozone sondes and (b) Lidar.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 5805, 2007.

ACPD

7, S2170–S2172, 2007

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