

Interactive comment on “Extending the satellite data record of tropospheric ozone profiles from Aura-TES to MetOp-IASI” by H. Oetjen et al.

Anonymous Referee #1

Received and published: 9 August 2014

Overall an interesting and relevant paper on a study to extend TES time series with IASI data. Consequently, this is a step stone towards longer time series of tropospheric ozone from remote sensing observations. The data are well presented, the measuring and analysis methods are sound, the figures are in general of good quality and informative. The text is well written, concise with a nice overview of the gained results in the last section. Some questions/suggestions/clarifications are to be dealt with.

- Are there some specific reasons for limiting this study to 2008 and mid latitude only? Please comment.
- Why focusing the results in the abstract on the UTLS? Please comment.
- Are there specific reasons for selecting the FORLI data (among other) for comparing C2079

the results from TOE? Please comment.

- What are the reasons for using the 7h-110 km selection criteria when comparing ozone sonde with IASI data?
- % should be placed directly after the number without a white space between;
- P7019 L13-15: redundant text (already on P7018 L24-26);
- P7021 EQ6: In fact also a residual error term should be added, uncertainties associated with errors not included are considered;
- P7023 L23-24: In the sentence “However, in this study we have chosen to screen for clouds.” I suggest to rephrase it to “In this study we have chosen to screen for clouds using the TES approach”.
- P7024 L20: What do the authors mean with “unphysical results”? Where is the ghi2 > 1.3 coming from?
- P7030 L6-7: What do the authors mean with “All the other errors are based on one retrieval and not averages”? Did they pick just one retrieval for one specific location? Please clarify.
- Fig. 1,5,8: It would be helpful for the reader to increase the size of the figures;
- Fig. 4: Use superscript for 25th and 75th;

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 7013, 2014.