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.

We would like to thank the reviewer for his/her favourable review. Detailed comments below in green. The page and line references refer to the updated manuscript.

- Are there some specific reasons for limiting this study to 2008 and mid latitude only? Please comment.
We use the same location and time period as was chosen by Dufour et al. (2012) in their IASI intercomparison paper in order to facilitate comparison with other available IASI ozone products. We amended the text accordingly (p. 4, l. 5-6): *This study concentrates on mid-latitudes in 2008 in order to facilitate comparison of our results to other IASI ozone retrievals as presented in the study by Dufour et al. (2012).*

- Why focusing the results in the abstract on the UTLS? Please comment.
We changed the sentence about the bias in the UTLS region to: *In the sonde comparisons, we find a negative bias (1 – 10 %) in the IASI profiles in the lower- to mid-troposphere and a positive bias (up to 14 %) in the UTLS region.*

- Are there specific reasons for selecting the FORLI data (among other) for comparing the results from TOE? Please comment.
We compare our results to FORLI since FORLI is going to be the future operational product for IASI ozone (see section 3).

- What are the reasons for using the 7h-110 km selection criteria when comparing ozone sonde with IASI data?
This was chosen as in Dufour et al. (2012) to facilitate comparison with the results of this study (s. a.). This was stated in the text: p. 11, l. 14-15.

- % should be placed directly after the number without a white space between;
AMT/Copernicus journal convention is to have a space there.

- P7019 L13-15: redundant text (already on P7018 L24-26);
We removed the first incidence.

- P7021 EQ6: In fact also a residual error term should be added, uncertainties associated with errors not included are considered;
We added that term and the following text: *The residual term* res *includes all uncertainties not considered or unknown.*

- 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”.
We actually use a different approach than what is done for TES. We tried to clarify that by adding: *This is different from the approach applied for the operational TES products where cloud parameters are retrieved and then included in the radiative transfer simulations for the trace gas retrievals.*

- P7024 L20: What do the authors mean with “unphysical results”? Where is the ghi2 > 1.3 coming from?
We changed the sentence to: *In order to remove unphysical results, such as oscillations in the profile, we remove […].*
The χ^2 limit was chosen somewhat arbitrarily based on the visual inspection of the retrieved ozone profiles.

- 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.
We changed this paragraph to:
Figure 1 shows examples of IASI-TOE theoretical ozone retrieval errors and averaging kernels. These are examples for single ozone retrievals and not averages. The individual errors are calculated with the different terms of Eq. (6), smoothing *and* noise *as labelled and* water *with the* cross-state *term. The temperature error in Fig. 1 is calculated somewhat differently: we estimate how the temperature error propagates into the ozone profile with a temperature error covariance matrix derived from an ensemble of EUMETSAT Level 2 temperature profiles of quasi-coincident IASI scenes for these individual cases (Eq. (6),* systematic *term). See also Sect. 5.2 and Sect. 6.4. The sample size used for the calculation of the covariance is given in the label as* n.

- Fig. 1,5,8: It would be helpful for the reader to increase the size of the figures;
We enlarged these figures and also increased the resolution.

- Fig. 4: Use superscript for 25th and 75th;
done