

## ***Interactive comment on “A Multi-sensor Upper Tropospheric Ozone Product (MUTOP) based on TES ozone and GOES water vapor: validation with ozonesondes” by J. L. Moody et al.***

**Anonymous Referee #2**

Received and published: 27 March 2012

This paper is a nice validation of the Multi-sensor Upper Troposphere Ozone Product (MUTOP), statistically derived from TES ozone retrievals and GOES specific humidity, using modeled potential vorticity. The MUTOP dataset provides a layer-average for ozone at 300–500 hPa. Comparisons are made to ozonesonde profiles over the US and Canada during Spring 2006. The average results of the comparisons are given, as well as detailed analysis of several case studies. The results are presented clearly, and indicate the analysis has been performed with care. I think the results are valuable and the paper well worth publishing.

My most significant concern is just on terminology. Especially in the beginning of the

C16225

paper, MUTOP is frequently referred to as "imagery", but also more carefully described as "layer-average ozone mixing ratio" (both instances on p. 30491, lines 7–15). The term imagery implies to me a qualitative product, maybe only available as a JPEG. However, MUTOP is a quantitative data product that a user could plot in whatever manner they wanted. I recommend more use of "data set" or "data product", or just "MUTOP", instead of "imagery".

Other minor comments:

Fig. 4b: caption is opposite of x-axis label

The skew-T plots (Fig. 5c, 6b,c and 7b, etc.) are very hard to read – please redo with thicker lines and larger fonts.

It would be helpful to show the location of the radiosondes of Fig.6c in Fig.6a.

P.S. When I accepted reviewing this paper at the end of Feb, I had hoped to complete it much sooner than now, as I know the authors have been waiting for a second review for several months. My apologies for further holding up a paper essentially ready to be published.

---

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 30487, 2011.

C16226