

## ***Interactive comment on “MIPAS Observations of Ozone in the Middle Atmosphere” by Manuel López-Puertas et al.***

### **Anonymous Referee #1**

Received and published: 16 January 2018

This manuscript describes a version 5 MIPAS ozone dataset for 2005-2012, as based on its optimized spectral resolution measurements. It is a comprehensive and very well written document. I recommend one addition. Please show one or more (daily or monthly), zonal-average pressure/latitude cross sections of day minus night (or vice versa) ozone (in %) for the stratosphere through lower mesosphere (your LTE region). I have not seen this kind of diagnostic in any previous publication about the MIPAS ozone dataset. Such a plot can be an important internal check about the registration of the radiance profiles and of the retrieved ozone and temperature profiles from this particular infrared, limb-emission experiment. If such diagnostic plots also look good, they would signal to me that your LTE ozone and temperature profile dataset must be of good quality. Of course, there will be more uncertainty for ozone in the upper

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mesosphere, where NLTE processes are important and where you must make use of unmeasured [O] and [H] distributions in your retrieval algorithms.

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Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2017-467, 2018.

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