Atmos. Chem. Phys. Discuss., 14, C2798–C2799, 2014 www.atmos-chem-phys-discuss.net/14/C2798/2014/

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14, C2798-C2799, 2014

Interactive Comment

Interactive comment on "Trends in stratospheric ozone derived from merged SAGE II and Odin-OSIRIS satellite observations" by A. E. Bourassa et al.

A. E. Bourassa et al.

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Received and published: 27 May 2014

Thank you for the positive comments. As suggested, we have added the following paragraph in the Summary and Discussion section comparing to the trends reported for SCIAMACHY and MIPAS, and included the corresponding references:

"Other recent studies of long term satellite measurements have reported stratospheric ozone trends by similar analyses, though not by merging with the SAGE II measurements. Gebhardt et al., 2014, derived trends using SCIAMACHY measurements alone from 2002 to 2012. The broad pattern of recovery in the upper stratosphere is con-

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sistent with our results, including the hemispheric asymmetry that shows stronger recovery in the southern hemisphere. However, the SCIAMACHY results show strong, significant, negative trends of up to -20% per decade in the tropics between 30-35 km, and up to -10% per decade in the northern hemisphere middle latitudes between 25-35 km that are not in agreement with our results. Additionally, the SCIAMACHY analysis does not show the decreasing trend in the lower stratosphere. Eckert et al., 2014, also performed similar analyses using the MIPAS measurements alone from 2002 to 2012. These results show recovery in the mid-latitude upper stratosphere and a small region of significant negative trend in the tropical stratosphere near 30 km, though with smaller magnitude than that found with SCIAMACHY, and no significant trend below 20 km."

We have also implemented all of the minor suggested changes.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 7113, 2014.

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