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6, S4780-S4781, 2006

Interactive Comment

Interactive comment on "Evaluation of ozonesondes, HALOE, SAGE II and III, Odin-OSIRIS and SMR, and ENVISAT-GOMOS, -SCIAMACHY and -MIPAS ozone profiles in the tropics from SAOZ long duration balloon measurements in 2003 and 2004" by F. Borchi and J.-P. Pommereau

Anonymous Referee #2

Received and published: 22 November 2006

Summary: The authors perform a thorough comparison of all available tropical ozone observations with measurements taken during two SAOZ long-duration balloon flights. Employing statitical regression methods and taking into account explained sources of error, like slow response times of ECC ozone cells, they quantify systematic and random errors associated with various satellite data sets. I think this is a highly useful



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exercise, of great help to the users of satellite data in the field. For these users, it is often impractical to determine exactly how their data compare to other data sets; a paper such as the one presented here then fulfills an important function. The flip side of the coin is of course that a large number of different observational platforms need to be discussed, making for a somewhat lengthy paper. Most readers perhaps will not read the entire lot but focus on their particular data set, which with this paper is quite possible. I think the paper represents an important contribution to the field and deserves publication in ACP.

Details:

Section 2.2: A little more explanation why the two proxies were used for horizontal and vertical transport could be useful here. Especially the vertical motion diagnostic is somewhat questionable. The altitude difference between the 370K and 340K surfaces is a 2-D field, yet you need 3-D information for the ozone data. Is the same 2-D proxy field used at all altitudes? Does that not imply assumption of uniform sinking? How about sheared flow and mixing in this respect?

Figure 2: It seems in the UTLS region there is a lot less zonal variability of ozone in 2003 than in 2004 and 2001. Do you have any explanation for that?

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Interactive Comment

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