

Interactive comment on “Climatology and comparison of ozone from ENVISAT/GOMOS and SHADOZ/balloon-sonde observations in the southern tropics” by N. Mze et al.

Anonymous Referee #1

Received and published: 16 March 2010

This study is a well written evaluation of ENVISAT/GOMOS using SHADOZ ozonesondes.

The coarse spatial sampling of GOMOS RATHER than any instrumental errors associated with the ozonesonde would explain the large differences between GOMOS and the sondes. It is remiss of the authors not consider GOMOS coarse sampling (5×10^{11}) as a source of error. You already quoted the Thompson et al. and Johnson et al. studies which show a ~5% precision error. Ergo, difference > 5% seen above 21 km are not due to the sondes. I do not accept the speculation that the sonde altitude registry is the only error to consider in the summary. The authors should expand their discussion to

C639

include GOMOS instrument errors which I feel has not been well explained, particularly since the authors take the view of ozonesonde measurements as 'truth'.

Meteorology is also not taken account. Sampling of different air masses far from the location of the sonde launch locations is also another source of the differences. One cannot expect the sondes to ascend in a straight line to 30km. Unfortunately, without GPS sondes a true comparison cannot be made.

Technical errors

line 3: March (capitalize) line 23: Additional

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 1457, 2010.