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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Analysis of global and regional CO burdens measured from space between 2000 and 2009 and validated by ground-based solar tracking spectrometers" *by* L. N. Yurganov et al.

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We are grateful to the Reviewer # 1 for a detailed analysis of our paper. His comments are very helpful for the improvement of the paper. We will reply in more detail after these improvements will be performed.

However, one issue appears to be critical and important for MOPITT users and algorithm developers: is the new MOPITT V4 better than V3? So, MOPITT V3, corrected using ground-based data as reported in our paper, corrected AIRS V5, and MOPITT

V4 as it is archived are compared for the same latitudinal belts (see figures). The best agreement between V3corr and V4 is found in the NH, where the ground truth data are most representative. SH data are in reasonable agreement as well. Tropical region, where ground truth is lacking, requires special attention and further validation.

An exclusion is the period before a failure of the cooler (2000-2001, May), when the disagreement between V3corr and V4 amounts to 15%.

A good general agreement between validated V3corr and V4 evidences in favor of a much better quality of this new version. Upward drift apparently is removed. However, a substantial difference between these two versions in 2000 - 2001 requires a special consideration and explanation.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 24875, 2009.

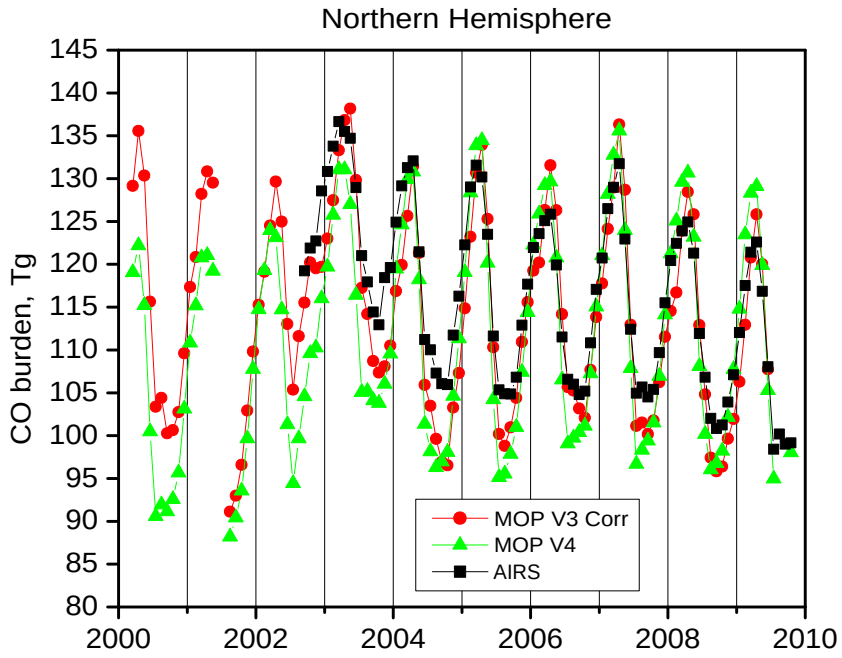

Fig. 1. MOPITT V3 corrected (this paper), MOPITT V4 and AIRS for Northern Hemisphere

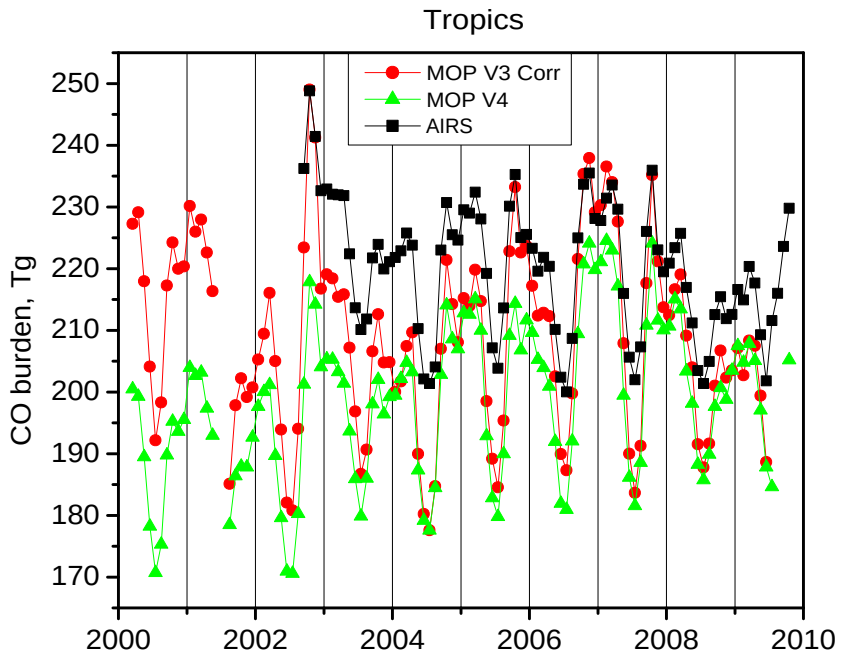

Fig. 2. The same as Fig. 1, but for tropics

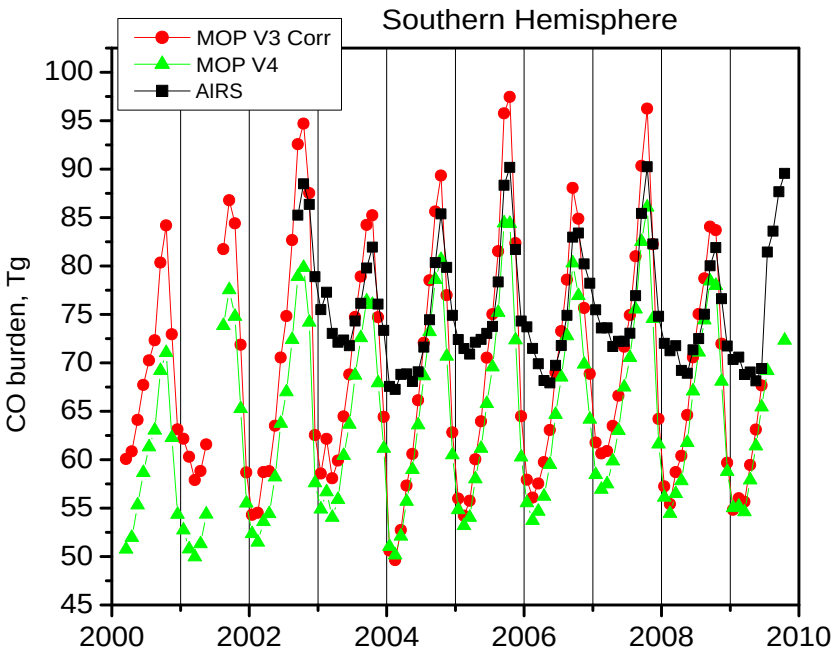

Fig. 3. The same as Fig. 1, but for Southern Hemisphere