

Interactive
Comment

Interactive comment on “Nitrogen compounds and ozone in the stratosphere: comparison of MIPAS satellite data with the Chemistry Climate Model ECHAM5/MESSy1” by C. Brühl et al.

Anonymous Referee #2

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General comment: This manuscript by Bruehl et al. describes the level of good agreement for the partitioning of the NO_y species and their effects on ozone in the stratosphere in terms of comparisons with their CCM.

Specific comments: Section 2–You need to provide a reference for the quality of the retrieved NO from MIPAS and its uncertainties.

Section 4.1–It would be helpful if the bottom panels of Figure 1, model minus MIPAS, could be given in percent rather than in ppbv (or ppmv). Then one could compare their differences with the percentage estimates of systematic errors for the retrieved parameters.

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Near the end of Section 4.2–The loss reaction for NO_x in Butkovskaya et al. is different from the traditional 3-body reaction that is primary for most models. Although you have quantified the change that you find with its inclusion, more discussion would be helpful so that other modelers can gauge its realism and whether they should include it in their models, too.

Section 4.3, Figure 6–Just based on your scatter plot for NO in Figure 6, I do not understand how you obtain an R-value of 0.93. The points indicate little to no correlation (e.g., as in the scatter plot for HNO₃).

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 9899, 2007.

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