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> Interactive Comment

Interactive comment on "Greenhouse gas relationships in the Indian summer monsoon plume measured by the CARIBIC passenger aircraft" by T. J. Schuck et al.

T. J. Schuck et al.

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We thank Referee 1 for the reviewing of our manuscript "Greenhouse gas relationships in the Indian summer monsoon plume measured by the CARIBIC II passenger aircraft".

In the process of revising the manuscript we will consider the referee's suggestion about the so-called Middle-East ozone maximum that is briefly mentioned in the section 4.3 (Latitudinal distributions of H2O and O3) of the text. The referee pointed out that while tropospheric ozone production in the monsoon outflow may play an important role, the influx of stratospheric ozone still remains an important process, especially in the specific situation of sampling in the UT/LS region.



Discussion Paper



However, the focus of our work is on the monsoon anticyclone itself and on greenhouse gases, and therefore a detailed discussion of the influence of the monsoon on the middle east O3 maximum is beyond the scope of the manuscript. Taking into account the referee's above remark, we intend to change the lines 11-14 on page 2046

Model simulations showed that the southern part of the O3 maximum is dominated by the easterly outflow of the Asian monsoon anticyclone, and it was proposed that the main contribution is from tropospheric O3 production (Li et al., 2001; Liu et al., 2009).

to:

It was proposed that besides inmixing of stratospheric air tropospheric O3, production from precursors carried by the easterly tropical jet may be a relevant process (Li et al., 2001; Liu et al., 2009).

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 2031, 2010.

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