

Interactive comment on “Water vapor transport in the lower mesosphere of the subtropics: a trajectory analysis” by T. Flury et al.

Anonymous Referee #1

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General Comments

This paper presents an analysis of water vapor measurements made by an airborne microwave radiometer on the outward and return flights from Switzerland to Australia for the SCOUT-O3 campaign in November 2005. The authors use a trajectory model and global H₂O data from the Aura MLS instrument to interpret the observations of their lower mesospheric measurements.

Specific Comments

p.13781 line 1 states that the MLS H₂O map for 11 November is shown in Fig.11 whereas the figure caption states an incorrect date (8 November). I checked with the available maps from the MLS website and confirmed that the map is for 11 November.

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Interactive Discussion

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I agree with the other posted comments that the Aura MLS H₂O maps should be shown for the appropriate altitudes corresponding to the trajectory calculations. What is the justification for Figs 10,11 (4 and 11 November) which show maps at 50km, compared to maps at 60km which are shown in Figs 14,15 (1, 13 November). Furthermore, on examining the maps available from the the Aura MLS website it can be seen that two data versions are available to download. I have verified that the Aura MLS H₂O data in Figs 10,11 are from the MLS version 1.5, whereas the MLS version 2.2 data are shown in Figs 14,15. No reference is given for the validation of the Aura MLS H₂O data.

Technical Corrections

p.13777 line 1: '... is difficult to achieve ...'

p.13777 line 5: AMSOS acronym is used before it is defined on the following page
Please change 'Arabic Sea' to 'Arabian Sea' throughout the text and figure captions.

p13782 line 17: 'Presently not much is known ...'

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 13775, 2008.

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