

## ***Interactive comment on “Middle atmosphere water vapour and dynamical features in aircraft measurements and ECMWF analyses” by D. G. Feist et al.***

**D. G. Feist et al.**

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Thank you for pointing me to the collection of articles that support our analysis. Unfortunately our library is not so well-stocked so I was only able to read the later ones (after 2000). I'd still be happy to add them to my reference list in a revised version of the article.

I could not really find references that would extend our results to higher altitudes and potential temperatures. Since our retrievals go up to roughly 60 km this would certainly be difficult. But this might have been in the articles that I had no access to.

However, the later articles show evidence of elevated water vapor in the lower stratosphere inside the polar vortex. This corresponds nicely with what we have typically

seen. Since our vertical resolution is limited we would not be able to see if this water vapor has been transported upward into the stratosphere as some of the ER-2 and other measurements seem to suggest. Our results seem to suggest that the water vapor layer that we find inside the polar vortex in the lower stratosphere has been transported downward. The increase in water vapor may be due to the old age of air and corresponding long time for methane oxidation. Unfortunately, since we are not able to measure methane at all, we cannot verify this.

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Interactive comment on Atmos. Chem. Phys. Discuss., 7, 247, 2007.

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Interactive Discussion

Discussion Paper