

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

**A. Tuck**

adrian.f.tuck@noaa.gov

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This is an interesting paper. There is evidence from past work of water elevated above normal stratospheric mixing ratios that not only supports the authors' analysis, but extends it to higher altitudes and potential temperatures. See for example: Q J R Meteorol Soc 110, 313-319 [1984]; figure 1 of Geophys Res Lett 17, 453-456 which shows 5-8 ppmv with 300 ppbv of ozone; Q J R Meteorol Soc 123, 1-69 [1997]; figure 4 of J Geophys Res 105, 12169-12180 [2000]; J Geophys Res 108(D5), Art. No. 8320 [2002] and figures 8-10 and 12(especially) of J Geophys Res 108(D23), Art. No. 4734 [2003]. In the last paper, the elevated stratospheric water above the tropopause and

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below the base of the vortex proper at 420 K is correlated with the onset of sudden warmings, in both 1962 and 1989.

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