

Interactive comment on “High-precision isotope measurements of $H_2^{16}O$, $H_2^{17}O$, $H_2^{18}O$, and the -anomaly of water vapor in the southern lowermost stratosphere” by P. Franz and T. Röckmann

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This is interesting work; the value of such observations at high southern latitudes is high. The authors may find Kelly et al., 'Wintertime asymmetry of upper tropospheric water between the Northern and Southern Hemispheres', NATURE, 353, 244-247 (1991), of interest. Both the upper troposphere and lower stratosphere over Antarctica are connected adiabatically to the subtropical/midlatitude boundary layer in winter, when the Antarctic tropopause is at pressures of 200 hPa or lower; it is, unlike the

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Arctic, the time of year when the tropopause is highest. Since frostpoints in the winter Antarctic UT can reach mixing ratios as low as 2 ppmv, the question arises as to whether the C-17 was really in the stratosphere.

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 5373, 2005.

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