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Atmospheric Chemistry and Physics Discussions

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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We thank for the interesting suggestion and we have added another short paragraph to address this point. Indeed, low water vapor mixing ratios at high southern latitudes may not always be sufficient to distinguish between stratospheric and tropospheric air masses. However, our classification is not based alone on the water vapor mixing ratios, but on the relation between water vapor mixing ratios and temperature, as described in the paper (see figure 1). In addition, we have information about tropopause height from the Goddard automailer, which is shown in table 1. From these data it can

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also be seen that the flights in October penetrated deeper into the stratosphere than the ones in August. As noted by Adrian Tuck, the tropopause level was indeed higher during the August flights.

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