

Comment #1: WAVAS II is an updated evaluation of the quality of available water vapor data sets for the middle atmosphere. I contributed the historic Nimbus 7 LIMS Version 5 data set to the first SPARC WAVAS report of 2000. After that time, a LIMS Version 6 data set was created and evaluated and made available for use by the research community, and this newer version has some subtle, but important improvements for the overall distributions of its stratospheric water vapor. Those improvements are reported in Remsberg et al. (2009), in addition to the initial findings from LIMS version 5 that you cite (Remsberg et al., 1984). Although you do not consider the LIMS data set for your current WAVAS II assessment, I respectfully request that you include the citation to Remsberg et al. (2009) on page 3, line 26 of your WAVAS II manuscript in place of Remsberg et al. (1984).

Remsberg, E. E., M. Natarajan, G. S. Lingenfelser, R. E. Thompson, B. T. Marshall, and L. L. Gordley, On the quality of the Nimbus 7 LIMS version 6 water vapor profiles and distributions, *Atmos. Chem. Phys.*, 9, 9155-9167, doi:10.5194/acp-9-9155-2009, 2009.

Response #1:

Dear Ellis!

The citation of Remsberg et al. (1984) on page 3 was meant in a historical context, not in terms of data quality. To our knowledge this is the first publication showing aspects of the seasonal variation in the entire stratosphere. This refers to Fig.1 and 4 showing the latitude-altitude distribution for May and December. Thus we are hesitant to replace the initial reference. As a compromise we now refer both to Remsberg et al. (1984) and Remsberg et al. (2009) in the appropriate order, acknowledging the new information on the seasonal variation provided in the latter publication.