Atmos. Chem. Phys. Discuss.,
https://doi.org/10.5194/acp-2017-578-RC1, 2017

Atmospheric Chemistry and Physics Discussions

Interactive comment on "The SPARC water vapor assessment II: intercomparison of satellite and ground-based microwave measurements" *by* Gerald E. Nedoluha et al.

H. C. Pumphrey (Referee)

hugh.pumphrey@ed.ac.uk

Received and published: 8 August 2017

1 General comments

This paper is well written, adequately illustrated, and forms a clear and useful summary of the material covered. The analysis appears to have been done carefully and diligently. It should therefore be published subject to minor corrections, most of which are technical.

Printer-friendly version

Discussion paper

2 Specific comments

- Page 6 Line 22: It is not clear why the authors felt it necessary to show two different versions of the ACE-FTS data and only one version of the MLS data. I have no reason to suggest that they change this, but I think they should give reasons for their choice.
- The political point made by the authors on page 18 line 22 is very pertinent. It would be nice (but perhaps inappropriate) if they were to be more explicit about the fact that both ACE-FTS and MLS are near the end of their lives and that there are no missions any further on than a drawing board which might continue the time series.

3 Technical corrections

- All figures except figure 2: The scheme of colours and symbols set out in figure 1 has a number of unsatisfactory features. In particular, there are too many red/magenta colours which are not easy to distinguish. This makes all the figures (but especially figure 5) rather hard to interpret.
- Figure 2: The reader has no way to tell which curve is for the sensitivity at which pressure level. The curves should really use different line-styles or colours, with a legend to show which curve is for which level.
- Figure 5: the many dotted horizontal lines are a distraction. The authors should consider removing all apart from -1, 0 and 1, and making the line at 0 dashed rather than dotted.
- Page 15 line 18 and page 17 line 16: A_1 should be A_1, i.e. the “A” should be in italic.

- Page 16 line 1: $C_{instrument}$ should be C_{inst} for consistency with Eq. 1.

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2017-578, 2017.