Atmospheric
Measurement
Techniques
Discussions

Interactive comment on "Tropospheric profiles of wet refractivity and humidity from the combination of remote sensing datasets and measurements on the ground" *by* F. Hurter and O. Maier

Anonymous Referee #1

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Major Issues:

- generally: the use of ppm for errors is rather difficult to interpret, thus suggest to add the % in brackets at relevant text/table entries. This makes all the different error discussions also more harmonic.

- p4911, l26: are you using rs in the processing and validation? This is no independent validation!

Minor Issues:

- p4897, l14: please add IR to list and also use radio occultation here, this is commonly

used in this way, I have never seen radiooccultation before

- p4898, l01: missing reference behind are? The link itself in pdf seems to work.

- p4899, last lines: maybe there is a better write way for K h Pa-1, it looks a bit like the h is for hours

- p4900, l20: what about directional data use, not just zenith mapping?

- p4901, l16: is there a reference for Niell?

- p4902, l13: can a radio sonde really reach the tropopause exactly at 00 or 12UTC? I assume you give the launch times, not the tropopause time.

- p4092, l23: when you say restricted to the area, is e.g. an occultation just outside not considered? Given that occultations sample along the ray easily 100km or more, this might be a bit too stringent. You could thus get more collocations.

- p4904, l04: is the derived bias correction constant over the whole time? Including the downtime period?

- p4904, l12: how does this least-squares collocation actually compares to optimal estimation/1DVar methods?

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