Atmos. Meas. Tech. Discuss., 6, C1479–C1480, 2013 www.atmos-meas-tech-discuss.net/6/C1479/2013/

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# **AMTD**

6, C1479-C1480, 2013

Interactive Comment

# 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**

Received and published: 3 July 2013

# 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, I14: please add IR to list and also use radio occultation here, this is commonly C1479

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Interactive Discussion

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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, I16: is there a reference for Niell?
- p4902, I13: 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, I23: 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, I12: how does this least-squares collocation actually compares to optimal estimation/1DVar methods?

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 4895, 2013.

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