

Interactive comment on “Validation of GOME-2/MetOp-A total water vapour column using reference radiosonde data from GRUAN network” by M. Antón et al.

Anonymous Referee #2

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The main goal of this article is to validate the total water vapour column (TWVC) measured by the Global Ozone Monitoring Experiment-2 (GOME-2) satellite sensor and generated using the GOME Data Processor (GDP) retrieval algorithm developed by the German Aerospace Center using spatially and temporally collocated TWVC data from highly accurate sounding measurements for the period January 2009–May 2014 at six locations whose data are provided by GCOS Reference Upper-Air Network (GRUAN).

The authors have made a serious attempt with the writing of this paper however I remain unconvinced as to the results they have chosen to present. Since the main goal is to validate, the main side-goal is to provide with a clear numerical assessment of this

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validation, which is unfortunately not the case, as is seen from particular comments I have annotated the pdf with. The abstract is well-written and the text well-structured, but the conclusions need to be completely re-written. Also, a clear message should be given out: is the cloud treatment in GDP4.6/4.7 at fault or the SZA treatment in GDP4.6/4.7 at fault for the differences seen? Contrary to what one usually sees, the authors have concluded that the medium to low SZA-associated GOME-2 TWVCs are the worst. Maybe a consultation with the GDP4.6/4.7 algorithm people might shed some light into the reasons behind this effect.

I believe that this paper will greatly improve with the suggested corrections and I am willing to review it anew. The annotated text contains mostly important comments, with very few typographical issues.

Please also note the supplement to this comment:

<http://www.atmos-meas-tech-discuss.net/7/C3279/2014/amtd-7-C3279-2014-supplement.pdf>

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 9573, 2014.

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