

Interactive comment on “Total column water vapour measurements from GOME-2 MetOp-A and MetOp-B” by M. Grossi et al.

Anonymous Referee #2

Received and published: 9 June 2014

This paper describes the operational total water vapour column retrieval algorithm for GOME-2, including various corrections applied to new algorithm version (GDP 4.7). Retrievals from GOME-2 instruments aboard Metop-A and -B satellites are compared for 8 month overlapping months. Finally, GOME-2A retrievals are validated globally (for period of January 2006 - August 2013) against ECMWF model outputs and SSMIS and SSM/I + MERIS satellite data sets.

Topic is well suited for publication in AMT. Methods and results are presented well and in logical order, although the paper needs further proof reading, as well as some clarifications to figures. Some suggested improvements on the figures are listed below. Beyond these clarifications, there are no major problems with the paper.

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Detailed comments:

FIGURES: Clarity of the figures would be greatly improved by different colour scale, especially for figures 3 and 9-11, where difference between observations is shown. Rainbow colour scale makes it very hard to see differences and areas with zero bias are not clearly distinguished from small negative biases. I would suggest a divergent colour scale in these figures for clarity.

Size of some figures (At least figs 2, 3 and 8) should be increased.

Figure 2 should include a subplot showing the difference between observations with SAD correction and without. Differences are hard to spot from two very similar maps.

In figure 5, the length of the x-axis should probably be shortened to better show any skewness in the histogram.

Figure 7 should have a clear line at zero difference. Bias, or any possible drift is hard to see in the figure.

LANGUAGE: Please improve the English throughout the manuscript, possibly have a native speaker to read the text. Mostly the errors are relatively small (singular/plural confusion or similar), but in some cases they also make the manuscript hard to follow, especially p.3024 L29-31: Sentence very unclear, not sure what was meant. Please clarify.

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 3021, 2014.

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