

## ***Interactive comment on “The GEWEX Water Vapor Assessment archive of water vapour products from satellite observations and reanalyses” by Marc Schröder et al.***

### **Anonymous Referee #1**

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This well written paper introduces the archive of water vapor related data records that have been used within the phase 1 of the GEWEX Water vapor Assessment. All the data have been regridded on a common 2x2degrees grid allowing easy comparisons. A large number of products are considered (22 for TCWV). The products are quickly presented individually and the references to the original papers are given making the present paper a very useful resource for climate scientists.

I think this database is very unique in the sense that it simplifies the collection of a wide suite of individual products and facilitates their use through common gridding. I think the contextualisation (the sections 2 and 3), which is broader than the actual list of

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products of the archive, also contributes to making this paper an excellent entry point in the field. The illustrations given at the end of the paper are very relevant science-wise and clearly show the benefit of using this archive for further analysis.

I recommend publication of the paper but I have a couple of comments that could possibly help in making the paper even more clear, if accounted for.

1) mention of scientific results: I would propose to move the references from Schröder et al page 25 line 18 to the introduction of the paper to very quickly provide the readers with the information that the archive is part of a large project that is already producing refereed literatures.

2) some references are a bit dated. For instance : page 5 section 2.2 line 23 reference is Shi et al., 2008. Don't you have any more recent efforts on the intercalibration of the HIRS instruments to list here ? I suggest the authors try to update as much as they can their reference list.

3) Mixing between algorithms and products. Section 4.1 is listing the products that compose the database but for some of these it is indeed algorithms that are mentioned. While I fully understand there are not yet any formal way to report these information, I wish a better distinction between the algorithms and products is made in this section. Similarly I have hard time with the nicknames used. For instance "TMI". This is not an algorithm nor product but an instrument and the data record should be REMSS TMI only TCWV version 7. I think it will benefit the readers and the climate scientists to have a more homogeneous way of naming the products.

4) The future of the database. It is only alluded to in the conclusion, and I think it deserves more discussions. Do the authors plan to update the record (with the same regridding) ? Some records are stalled in 2008 that is already 10 years ago. Do the authors have a plan to update some of the active records ? What about new versions ? Changes of the algorithms ? Given the uniqueness of the database, I think it is important to better document its much expected evolution.

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Misc. page 7 line 23. "aata" should be "data"

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