

## ***Interactive comment on* “Description of algorithms for co-locating and comparing gridded model data with remote-sensing observations” by B. Langerock et al.**

### **Anonymous Referee #1**

Received and published: 10 December 2014

General: This paper presents a clear, comprehensive algorithm set for the NORS validation server and provides a useful description of methods that could apply more generally for model validation. I recommend publication after minor revisions.

Specific comments: The abstract should summarize algorithm features.

Many acronyms, although likely familiar to the reader, are not defined – e.g., NORS, NRT, TM-5, MOZART, ECMWF, etc.

Sec. 2.4 p. 8159 (line 14) & Sec. 3.1 p. 8160 (line 4) “To fix thoughts” is not a familiar expression – maybe use “As an example”

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Sec. 3.1 p. 8161 (line 6) – this sentence was confusing when I first read it – it sounded like NaN values would be substituted with something else. Maybe say: “A final step in the re-gridding process is to set profile values to void (or NaN) for layers of the external grid that are not or only partly covered by the source grid.”

Sec. 3.3.3 p. 8162 (line 21) Not sure what is meant by “gluing”.

Sec. 3.4 p. 8164 (line 5) “brought to the units” should be “converted to the units”

Sec. 3.4: Figures with representative NDACC AVKs, O3 profiles and comparisons with model profiles (before & after smoothing) would be useful to the reader in visualizing these algorithm steps.

Sec. 3.4 p. 8165 – Please provide more details about the algorithm for applying a column AVK, i.e., is this applied to a model profile or does it require computing the model total column first. Also, are there many cases where the “measurement grid outranges the model grid”?

Sec. 4.1 p 8166 (lines 9,10) “in VMR unit toward partial column units” should be “in VMR units to partial column units” and fix “partia l”

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Interactive comment on Geosci. Model Dev. Discuss., 7, 8151, 2014.

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