



Interactive comment on “Enhancing reproducibility of numerical simulation result on the C-Coupler platform” by L. Liu et al.

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We thank the reviewer a lot for the comments and suggestions. We'd like to reply several of them as follows.

1. From my point of view, this is one important step in the development of a model/platform, related to quality control and this has to be included in a more general technical report: coding rules and quality evaluation of C-Coupler platform.

Response: Thanks for this suggestion. We will take consideration of such a technical report in near future.

2. I suggest to link the point with CV initiative : Moine et al <http://www.geosci-model-dev.net/7/479/2014/gmd-7-479-2014.html>

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Response: We will discuss about this paper when revising the manuscript.

3. Length and detail of experiment done are missing. They said that access to C Coupler is possible but I couldn't find any practical information. No detail in the C Coupler user guide found on the web.

Response: We will show more details about the experiments. In the reply to Executive editor Dr. Dan Lunt, we gave a similar simulation that can be downloaded and bit-identically reproduced. The user guide can be searched by google using the keyword "Community Coupler C-Coupler1 User's Guide". We also attach it as a supplementary of this reply. In fact, we provided a correct URL in the reference (Liu et al, 2014a) when submitting the manuscript. It has been changed to the current when typesetting. We will correct it when revising the manuscript.

4. Experiments show bit-reproducibility for 3 versions of Intel compilers on 3 different platforms. These platforms are all based on Xeon processor. Good point for the C-Coupler. It should be useful to test on a larger set of different architecture. I'm sure they will find differences. The question will change into : how to be sure to simulate the same climate on different platforms. See also this article : <http://journals.ametsoc.org/doi/pdf/10.1175/MWR-D-12-00352.1>

Response: We know that different set of processors can produce different results. That's why we define bit-identical compiler version set and bit-identical processor version set. We will reference this paper when revising the manuscript.

Please also note the supplement to this comment:

<http://www.geosci-model-dev-discuss.net/7/C1506/2014/gmdd-7-C1506-2014-supplement.pdf>

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