

Interactive comment on “Regional atmospheric composition modeling with CHIMERE” by L. Menut et al.

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Dear reviewer,
thank you for your thorough review. As Editor I think I have to comment on your general remarks, which are given in bold italics below:

This paper is partly a description of the CHIMERE-CTM, but largely a review of the CHIMERE-CTM research already published. As far as I can tell, it does not contain any new research. The manuscript bears the impression that it was not fully read through before submission, even containing a paragraph or two that clearly should have been deleted.

This implies a different view of the aims of an access review performed by the topical editor as is given in the guidelines of GMD, see

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http://www.geoscientific-model-development.net/review/review_process_and_interactive_public_discussion.html

There you read:

“2) The Topical Editor is asked to evaluate whether the manuscript is within the scope of the journal and whether it meets a basic scientific quality. The Topical Editor can suggest technical corrections (typing errors, clarification of figures, etc.) before publication in GMDD. Further requests for revision of the scientific contents are not allowed at this stage of the review process but shall be expressed in the interactive discussion following publication in GMDD.”

Therefore, I decided that the paper meets in general the scope of GMD and it is technically in a shape to be released for the public discussion. It is not my duty to ask for the deletion of section etc at this stage. This is the task of the reviewer. The paper does not need to include new scientific contents, so I agree with you, that the technical model description should be intensified, while the description of the already performed science could be shortened.

The abstract does not indicate the purpose of the paper. Is it a description of the CHIMERE-CTM, or is it a review of existing research using it? The title indicates the latter, for which I think GMD is the wrong place.

As I see it, the paper as model description paper, I agree with you, that the abstract does not really contain a description of the contents of the article. A slight change of the title may lead to a better indication of the contents, for example: “CHIMERE: a model for regional atmospheric composition modelling”

There is no conclusion in the conclusions section.

I agree, if the section is kept, it should be labeled differently.

A thorough model description is useful and should be suitable for GMD, but at this stage I think the paper lacks substance and details: Several equations in

the describing/technical sections lack references, which needs to be sorted out. Other equations are given along with references, so it would be good to comment on why equations are repeated. I agree that repeating would be suitable for a proper manual or technical document, if that is what the authors aim at.

In principle I agree, but it would have been very helpful to be more precise about the equations/references. So we all have to guess which ones you meant.

The last sections (11-12) do not really describe much, other than listing earlier research and that the model can assimilate observations and be run in forecast. I find the review of existing research too long and uninteresting, mainly listing results from previous studies. That said, although a model description paper should have some model evaluations included, it may be that it can be enough to refer to other publications instead of repeating it.

Basically I agree, but I would say that the content of sections 10-13 should be condensed, however a pure list of references would be too short from my point of view. I am very interested in the views of the other reviewers especially concerning this point.

That said, although a model description paper should have some model evaluations included, it may be that it can be enough to refer to other publications instead of repeating it. But I struggle to find the news in this paper, and also to see the aim of it. I think that for GMD the paper should be more technical than it is, really describing the model. However, I wonder, with the large amount of publications referred to, aren't the parts of the model description already included in those papers? Or is the aim of this paper to collect all the bits and pieces to one reference and in that sense to produce a CHIMERE review?

As GMD was established in order to provide the opportunity to publish the developments and technical whereabouts of a model in reviewed literature, I think it is ok to aggregate all bits of technical description of a model in one GMD paper to have a citable basis (similar to a technical report in grey literature prior to the existence of GMD). It should not be a review paper of the scientific research performed with this

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model. Nevertheless, a short overview of the research performed with the model so far, is an interesting information from my point of view.

Interactive comment on Geosci. Model Dev. Discuss., 6, 203, 2013.

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