

Interactive comment on “A JavaScript API for the Ice Sheet System Model: towards an online interactive model for the Cryosphere Community” by Eric Larour et al.

Anonymous Referee #2

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General comments

The paper presents the development of a Javascript Interface for the Ice Sheet System Model, aimed at simplifying the interaction and running of the model for less specialist users. Making modelling and the results of modelling more accessible is key to aiding wider understanding of the research. The paper is largely well written, therefore, I recommend it for publication, however, there are a few things that could be clarified.

The main thing that isn't clear to me is who the API is targeted at – on page 4 it reads as if the ISSM experts will still be setting up the model runs, and the API is mainly a tool for communicating the results of the modelling to the wider community and possibly the public. In the examples you have in the VESL, these are relatively simple (I realise they

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are demonstrators) and all the scenarios (e.g. SMB change) could be pre-run and the API is then just a tool to allow the user to engage with the results, it doesn't need the model to be re-run by every user, this seems to be a waste of computational resource. Even in more complex scenarios, it still seems like pre-running the simulations and making just the results available for interrogation would be more efficient. But - is this what is happening – is this what is meant on line 223? Are the results on the VESL all pre-run? This really isn't clear to me.

So how accessible is this API for a non-specialist to use to set up their own domain, and to set up the web server, for example on the Amazon EC2 infrastructure? And what is the cost? This is not clear to me from the paper as it is written, and leaves me in doubt as to whether the API would simplify things for a less experienced user to set up their own domain, and even whether this is one of the intentions for the API.

I think what I would like to see is a clearer statement of the purpose and advantages for different users, perhaps the information is there, but I got to the end of the paper not entirely the wiser.

Specific comments

Lines 75-85: This numbered list is hard to follow because some of your points are long and contain full stops, I forgot what the list was about by the time I hit point 2). I suggest adding line breaks before each point, making them more like a bullet pointed list.

Line 79: Nothing should be considered as obvious, please remove the statement, or elaborate on the reasons!

Lines 132 onwards: as with reviewer 1, I got a bit confused in this bit as to what was written in Matlab and what was in C++, please clarify

Line 215: If the user wants to present the results in a different way, is it possible for them to extract the data from the API, or do they have to use the inbuilt visualisation options?

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Line 239: remove the “is” after webpage

Interactive comment on Geosci. Model Dev. Discuss., doi:10.5194/gmd-2016-179, 2016.