Geoscientific
Model Development
Discussions

Interactive comment on "NEMOTAM: tangent and adjoint models for the ocean modelling platform NEMO" *by* A. Vidard et al.

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Dear Jemma Shipton,

Thank you for your valuable comments, we tried to address them all in the revised version of the paper. Some specific answers are listed below:

- *"In particular, the readability of the manuscript would be improved by checking for language errors, some of which I have indicated below, and by using fewer acronyms.":* Agreed, I tried to limit the number of acronyms to the strict minimum and corrected a significant number of language errors.

- "However, more information on how to obtain and run the code would be valu-

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able.": we added a section about code availability at the end of the paper.

- *""Automatic tools are now mature enough [...]" I thought this was a slightly strange way to start the discussion of the relative merits of automatic and hand coded TAM given that you go on to say that automatic tools not yet good enough.":* well, actually autodiff tools ARE mature enough, they are just not adapted to the particular needs that originally motivated the nemotam development (multi-resolution incremental 4D-Var), I tried to rephrase this paragraph for a clearer message.

- *"You give an example of forward and backward singular vectors in figure 3. I understand they're an illustration of the capability of the TAM code rather than to answer any particular question about the flow or the model, but could you give a brief comment on what this example shows, in addition to your general comments on the usefulness of such vectors?"* Indeed, this section was rather insubstantial as also pointed out by reviewer 2. Without going too much into detail, we added some comments about what the figure shows and another figure with the amplification factors related to resolution and time window length.

The other comments, although relevant do not require a detailed answer. We accounted for all of them, apart "Pg 6715, line 7: is this really a strict equals sign?" since there is no equation in line 7. Anyway, equations in this part of the paper were not quite right (unfortunate cut and paste, I guess), so maybe this question is no longer valid (maybe it still is).

Interactive comment on Geosci. Model Dev. Discuss., 7, 6705, 2014.