Ocean Science Discussions, 2, S115–S116, 2005
www.ocean-science.net/osd/2/S115/
European Geosciences Union

Ocean Science Discussions

Interactive comment on "Formulation of an ocean model for global climate simulations" *by* S. M. Griffies et al.

S. M. Griffies et al.

Received and published: 2 August 2005

We thank Reviewer 2 (David Webb), for his insightful and critical comments on our manuscript. By responding to these comments, we have clarified many points in the paper, and thus hopefully enhanced its readability.

Before presenting detailed responses to the reviewer's comments, we wish to reiterate a point raised when responding to this reviewer's comments about judging the GFDL climate model. As stated there, it is well beyond the scope of a single paper to evaluate all elements of a global climate model. Therefore, any one paper discussing the model must rely on other allied papers to fully document its characeteristics. The reader aiming to thoroughly evaluate the scientific relevance of a model will therefore need to investigate more than a single paper. This situation is indicative of the present state of climate modelling, where it takes teams of scientists and engineers years of focused effort to develop a high end model, with a similar level of effort to fully assess the

success of the model.

Thus, in response to many of this reviewer's detailed comments below, we are placed in the uncomfortable position of saying "please see paper XXX for detailed analysis." We recognize the reviewer's frustration with having to access these papers. Additionally, many of these papers are also undergoing review with journals, and likewise stating "please see paper YYY for detailed analysis". Nonetheless, as authors sincerely trying to contribute to the process of documenting a global climate model in a peer reviewed manner, we ask for patience and understanding from the reviewers and editors of journals. In the end, once these papers are successfully published, the scientific community will have a broad level of documentation from which to more fully judge the model.

In conclusion, we hope that the editors of Ocean Science do not hold this paper responsible for describing all aspects of the ocean climate model. Our aims are stated clearly: to focus on the model fundamentals. Simulation characteristics are dealt with elsewhere. That a description of model fundamentals warrants a full paper, if not more than one paper, is a result of the many physical parameterizations and numerical methods that have been incorporated into this model.

Interactive comment on Ocean Science Discussions, 2, 165, 2005.