

## ***Interactive comment on “On the Indonesian throughflow in the OCCAM 1/4 degree ocean model” by U. W. Humphries and D. J. Webb***

**U. W. Humphries and D. J. Webb**

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There has been a long delay with this paper while a second reviewer is organised - not our problem - but it really is time to respond to the first reviewer's comments.

An important sub-text of the review by 'Referee #3' is that the first part of the manuscript is descriptive and detailed (or in our words that it is worthy and boring) whereas the later stages become more interesting where we tried to understand the response of the model and explored possible control points in the different straits.

We agree that there is this contrast but feel it was forced on us because this is one of the first detailed studies of the region using a model which could resolve so many of the geographic features affecting the throughflow. As a result we really had to put in some basic descriptions - so that observationalists and later modellers could get a better feel

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for the region and have something to aim at. Hopefully as a result the experimentalists will have something to disagree with and the modellers will have something which their model can do better.

It was really only then that we could start our own analysis. The Godfrey relationship was the first choice, primarily because Pirani had already carried out a preliminary study (Pirani, 1999). Of the remaining areas of interest (problems) we identified, the anomalous density in the deep basins, the discrepancy in the flows through the Makassar and Lombok Straits and the unexpectedly large flows via the Halmahera Sea appeared to be the most important, so these are the ones we concentrated on.

There are of course many other oceanographic and model problems which could be studied but there is a limit of what we can do and there is a limit to what a reader can handle in a single paper. We will try and say a bit more about the bi-monthly signal (if this manuscript ever reaches the stage of a final published paper) but really we need other people to take many of the problems forward.

## References

Pirani, A.: Testing Godfrey's Island Rule using the OCCAM model for the calculation of the Indonesian Throughflow. MSc Thesis, University of Southampton, 1999.

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Interactive comment on Ocean Sci. Discuss., 4, 325, 2007.

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