

Interactive comment on “High frequency fluctuations in the heat content of an ocean general circulation model” by A. M. Huerta-Casas and D. J. Webb

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Authors' Response

We would like to thank the reviewers for their detailed reading of the paper and for their comments. We know that this is often a time consuming and thankless task but we hope that they both found the paper useful.

Ocean Science requires us to respond in detail to each of the reviews - which we do so below.

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Reviewer No. 1

1.1 "... include the resolution of the model, ..."

This is an oversight. We will include the information in section 3.

1.2 "... quantitative assessment of TIW representation ..."

Unfortunately the original 5-day data sets are no longer available. However the monthly archive datasets are still available and will be used to investigate the EKE.

1.3 ". . reflect on the quality of the observed heat budgets .."

We will study the papers suggested and, where we can make sensible constructive comments, will add these to the discussion.

Reviewer No. 2

2.1 "... what fields are archived ..."

The model did not archive any nonlinear fields. We will make this clear in the revised paper.

2.2 "... more statistics about the difference ..."

The differences first arose at the time that the Tropical Instability Waves first developed. We will make this point clearer in the text. When it comes to additional statistics, we are limited by the loss of the original 5-day datasets so this may have to be done in another paper. However we will see what can be done with the monthly datasets.

2.3 "... divergences of the fluxes ..."

We will investigate the divergences and, if we can make some sensible estimates and show that the error bounds are small, will include the results in the revised paper.

2.4 "... strength of processes with a period of shorter than 5 days."

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This would require rerunning the model over the analysis period, and this is not possible at this stage. However the suggestion will be used if and when this study is developed further.

Interactive comment on Ocean Sci. Discuss., 9, 25, 2012.