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## 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

## **Anonymous Referee #1**

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The authors assess the the impact of sub-sampling on the equatorial heat budget. This is an important study, but to be meaningful their study has to include the resolution of their model, and a quantitative assessment of their TIW representation. Presumably, if their TIWs are too weak, the paper will underestimate the result of the undersampling. To assess the TIW quality I recommend the 20 year EKE available through the TAO data site. Modellers mostly don't deal much with undersampling issues anymore, but I think the value of the study would be much enhanced if the authors could reflect on the quality of the observed heat budgets, e.g. Hansen & Paul 1984, Baturin et al. 1997, or Jochum et al. 2007.

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