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Comment

## ***Interactive comment on “Evaluation of Release-05 GRACE time-variable gravity coefficients over the Ocean” by D. P. Chambers and J. A. Bonin***

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### General Comments:

This is a timely and well written paper on an important new dataset. The authors provide an excellent review of the GRACE processing techniques and issues over the oceans and present significant results showing the improvements from release 04 to release 05. I have no dispute with the methods and results of this paper, the specific comments I have below go to clarity.

### Specific Comments:

Page 2188, Line 7: "...are more consistent than the previous RL04 data." Please clarify that the three processing centers are more consistent with each other rather than with

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respect to the ocean models (unless you meant that).

In the 2nd to last paragraph of the introduction where RL05 is first discussed it would be helpful to have a couple of sentences and/or references on the major differences between RL04 and RL05.

Paragraph starting Page 2192, Line 27: which version/iteration of JPL\_ECCO are you using?

Page 2194, Line 19: Please clarify how this variance reduction is calculated. Is it relative to JPL\_ECCO? The figure caption for Fig 4 is also confusing.

Page 2195, Line 6 and Figure 6: Why aren't the time series for RL04 shown? It would be useful to visually compare with RL05.

Figure 1 caption: clarify which data center and release used.

Figures 3,4,5,12 captions: clarify smoothing level used (300km Gaussian?)

Figures 3,4,5,7,8,9,10,12: Why is the extended land mask being used? It be more useful to see the entire ocean (e.g. Figures 1 and 2) to understand the effects of land leakage.

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Interactive comment on Ocean Sci. Discuss., 9, 2187, 2012.

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