

Interactive comment on "Upper ocean response to two collocated typhoons" *by* D. B. Baranowski et al.

Anonymous Referee #1

Received and published: 21 January 2014

Review of OS-2013-63: Upper ocean response to two collocated typhoons by Baranowski et al.

General comments: This paper examined the upper ocean response to the passage of two similarly located typhoons passing over the same region within a short time of each other. It took advantage of an Argo float that happened to be in their area of interest that was fortuitously set to sample once per day rather than the standard once every ten days. This was used to validate the high horizontal and vertical resolution numerical ocean model and show it was suitable for the proposed research. While the model does not account for all processes (fresh water flux due to precipitation, shortwave radiation and inertial ocean motions), this research does provide useful insight into such events and as such is a valuable contribution to the very limited research on this specific topic.

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Specific comments: p. 2264, line 22: There are many definitions for mixed layer. How is it defined in this paper? p. 2265, line 1: T and S plotted at a depth of 4 m. Is this the shallowest reported depth by the Argo float? Figure 2: For the September 2008 curves, how many observations went into the curves? And were those observations taken before or aft er the passage of Hagupit?

Technical comments: p. 2259, line 6: WPAC has already been defined

p. 2261, line 19: There is a reference to Figure 5 before Figures 3 and 4 are mentioned. Why not just make Figure 5 be Figure 3 and renumber accordingly?

- p. 2262, line 10: In addition to THE original...to introduce AN additional term...
- p. 2262, line 24: ...to establish THE model's three...
- p. 2267, line 27: ...the next SECTION.
- p. 2268, line 8: HAVE on the oceanic response...
- p. 2269, line 17-18: BENEATH the surface, there is an ALTERNATING positive and ...
- p. 2270, line 3: ...is stronger THAN THE effect of typhoon Jangmi...
- p. 2270, line 16: ...we performed A number of model...
- p. 2270, line 17: ...show that THE spatial distribution...
- p. 2272, line 15: This, in TURN, may ...

Figure 1: Why are there no SST data in the marginal seas? What is the source of the climatology?

Figure 3-5: Put the year (2008) in the caption, just for completeness.

Figure 6: Either change the caption to agree with the order of the panels, or vice versa. Figure 10-11: ...Argo profile TEMPERATURE observations (deg C) (circles)... Figure 12-13: Include the units.

Interactive comment on Ocean Sci. Discuss., 10, 2255, 2013.

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