Biogeosciences Discuss., 12, C4982–C4983, 2015
www.biogeosciences-discuss.net/12/C4982/2015/

Biogeosciences Discussions
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Interactive comment on "Ocean dynamic processes causing spatially heterogeneous distribution of sedimentary caesium-137 massively released from the Fukushima Dai-ichi Nuclear Power Plant" *by* H. Higashi et al.

Anonymous Referee #2

Received and published: 7 September 2015

This manuscript provides an important contribution to the spatiotemporal distribution of Cs-137 in seabed sediment following the Fukushima NPP accident.

The model description is sound and presented well and the discussions of the results are conclusive. I have annotated the manuscript with a specific comment and a technical correction, which I believe will improve the readability of the paper.

P.12729, L.25 - P.12730, L.6 You cannot really say that your results are "largely consistent with the earlier simulations". The simulation result from the end of March to the beginning of April of Fig. 4(a) seems 0.1 times of the observation. This tendency

of underestimation is stronger than 0.5 times of Fig. 10(a) of Miyazawa et al. (2013). Quite large amount of Cs-137 measured around 1FNPP during the period from March 26 to April 9. The initial bottom sediment contamination was strongly affected by the surface Cs-137 concentration of this period. Examining the results from March 26 to April 9 of Fig. 4(a), in spite of using direct discharge from 1FNPP like Miyazawa et al. (2013) and extremely huge amount of atmospheric deposition, I believe this outcome is not supported clearly enough.

P. 12725, L. 16 Perhaps instead of " in spited of", " in spite of" will fit better.

Interactive comment on Biogeosciences Discuss., 12, 12713, 2015.