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Biogeosciences
Discussions

Interactive comment on "Fukushima-derived radiocesium in western North Pacific sediment traps" *by* M. C. Honda et al.

Anonymous Referee #2

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General comments This manuscript presents results obtained from the sediment trap experiment that carried out from Nov. 2010 to July 2011 in the western North Pacific. The data clearly indicate impact of the FDNPP accident showed up even in the interior of the ocean in relatively short period. The data set is very interesting and will be indispensable in the study of the fate of Cs isotopes from the FDNPP. It should be published.

Specific comments P2459, L25: The terminology used for the unit of radioactivity in the manuscript is not appropriate. Strictly "Specific activity" should not be used for the concentration of radioisotopes in environmental samples. For example, "concentration of 137Cs in particulate matter" is just OK. P2460, L13: Show the month, not season. P2461, L18: activity ratio. P2462, L14: It seems that two kinds of averages were cal-

culated in this manuscript: one is an average of 137Cs concentration and the other is calculated considering both the concentration and flux. See also P2464, L20. Differentiate them clearly. P2462, L20: increase with depth or time? P2462, L24: "April or" should be "April and". P2463, L7: See the comment for P2462, L14. P2463, L16: "radiologically" This is an inappropriate term. Consider using other term. P2464, L1: 26 March ->25 March (?). P2464, L9: Can you give any thought to slower sinking velocity in the shallower depth? P2464 – 2465: Discussion in these pages needs to be more quantitative. The CNPP accident is different from the FDNPP accident in some aspects. Factors such as proximity from the sites of the accident, amount of 137Cs emitted to the atmosphere, elapse of the time after the accident should be taken into account when comparison is made between two accidents. P2464, L25: The higher activity observed in the particles after the CNPP should not be ascribed to greater amount of Cs emitted from the CNPP, but to the higher flux to the areas of observations and subsequent elevated concentration in the water. P2465, L23-25: Can you elaborate on this part? How can you relate the "not steady state value " to "more refractory than in . . ."? It was very difficult for me to follow the argument concluding that radiocesium was more refractory. P2466, L12: Please show the results of computation of correlations. P2466, L15-17: This part is inconsistent with P2465 L24-25. P2466, L18: What is the relationship between sulfate aerosol and settling particles? P2467, L2: "input" must be deleted. P2467, L5: It is totally impossible to assume that the 137Cs fluxes remained constant for a year. Any supporting evidence?

Table and Figure captions: Difference between BDL and (BDL) is not clear. What are criteria used to distinguish one from the other? Is it necessary to show both BDL and (BDL)?

Interactive comment on Biogeosciences Discuss., 10, 2455, 2013.