

***Interactive comment on “Direct observation of
¹³⁴Cs and ¹³⁷Cs in surface seawater in the western
and central North Pacific after the Fukushima
Dai-ichi nuclear power plant accident” by
H. Kaeriyama et al.***

Anonymous Referee #1

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General Comments

The manuscript contains results that can make a positive contribution to science. It is basically OK, but I have some comments as follows:

Specific Comments

Page 1999, Line 4-7

I cannot find the ‘two dense area’ in Fig.2b. The authors should use multi-color particles classified by the particle density or enclose ‘two dense area’ with thin lines in Fig.2b.

C51

Page 1999, Line 25-26

As stated in the Introduction by the authors, ‘the information of radioactive contamination covering the broad area in the North Pacific is still quite limited’. It is true that the less concentration of radioactive Cs in south of KE was reported based on direct observations of seawater by several authors. However, the discussions by the authors seem insufficient. Kawamura et al. (2011) showed the atmospheric deposition of I-131 at the south of KE near the east coast of Japan by the numerical simulation (Fig.7 of Kawamura et al. (2011)). The authors should mention about the possibility of atmospheric deposition at the south of KE.

Page 2001, Line 5-10

I am confused about the relationship between ‘surface’ radioactive Cs migration processes by KE and formation of the ‘circum-seamount circulations northward and southward around the Emperor Sea Mounts’. The logic of this is not so clear and remains unconvincing. Some extra-details would be helpful for the reader. For example, (1) add the bottom topography in Fig.1 to show circum-seamount circulations northward and southward around the Emperor Sea Mounts, or (2) refer the explanations about the formation of ‘surface’ circum-seamount circulations around the Emperor Sea Mounts from Wagawa et al. (2012) in detail.

Interactive comment on Biogeosciences Discuss., 10, 1993, 2013.