

We are grateful to reviewer #2 for the critical comments and useful suggestions that have helped us to improve our paper. As indicated in the responses that follow, we have taken all these comments and suggestions into account in the revised version of our paper.

As for comments (i.e. Nos. 1~16, 18,20, 22, 23,26~33, 36~59, 61~63, 65~67, 69~73), we will consider to revise as suggested by the reviewer.

17. Page 8, line 127, “2.1.1 phase 1” “2.1.1 the 1st expedition” and apply it to corresponding word through all text.

19. Page 9, line 140, 2.1.2. “Phase 2 ---“The 2nd expedition---“ and apply it to corresponding word through all text.

As for expedition, this word seems to have different meanings as we consider, so we use “phase” in the text.

21. Page 9, line 143, “---were taken from 2, 3, or 4 depths” “--- were collected at 2 m, 3 m or 4 m depths----“.

The phrase “---were taken from 2, 3, or 4 depths” means the number of sampling layers (surface, 50 m depth or 100 m depth or bottom depth) at each station.

24. Page 10, line 159-160, “For practical reasons,----the circumstances” I don’t understand what the sentence means.

We will delete it.

25. page 10, line 162 – 163, delete “with -----carrier”

We will delete it.

35. In page 12, line 190 the author said Ca was completely removed using a cation exchange resin. However, there is a lot of interfering elements in seawater like Ca and Mg. So actually calcium can’t be removed 100% with a cation exchange resin. How did you check the chemical recovery of Sr??

Prior to perform a cation exchange purification for Sr, we confirmed an elution curve of Mg, Ca, Bi, Pb, Ba and Sr, and calculated quantity (volume) of a suitable concentration of eluate. In addition, we also checked the cation exchange resin column (50W-X8) performance for separation of Sr by using blank solution containing different amount of Ca (up to 5g Ca). Therefore the cation exchange separation method could completely

remove Ca and we calculated an Sr chemical recovery from weight of formed strontium carbonate (SrCO_3) precipitation ($\text{Sr}/\text{SrCO}_3=0.594$) without formation of calcium carbonate precipitation.

60. page 17, line 276, there is no sampling stations with names of B1-3 to E1-3 on Fig.1.

B1-3 and E1-3 mean B1, B2 and B3, and E1, E2 and E3.

64. page 17, line 283, there is no sampling stations with names of I1-3 to L1-3 on Fig.1.

I1-3 and L1-3 mean I1, I2 and I3, and L1, L2 and L3.

68. In fig 4, it is really hard to distinguish series of sampling stations. Please put at least series name on the map of fig.4.

We put a map with series name in the Fig. 4.

Time series 

