

We thank editor for the careful and useful suggestions for improvement. We have responded to all of the changes suggested.

1. *In this paper new measured data from DIN, dissolved oxygen and chlorophyll a are presented besides the iodocarbons. For these measurements the reader is referred to Burt et al. (2013). However, the data from Burt et al were collected before the data from the present study. I think it would be useful and necessary to present the additional measurements briefly including their precision/accuracy.*

Answerer: We have added the additional introduction of measurements including their precision in P5L22.

2. *P7, L13 psu is not a unit. I would advise not to use it.*

Answerer: We have deleted psu from text and also corrected this in Fig. 3.

3. *P14, L12 “is shown in F.” There appears to be something missing here.*

Answerer: We have corrected “is shown to F” to “is shown in Fig.7” in text P14L19.

4. *P17, L16 Please define DOM here as this has not been done before.*

Answerer: We corrected DOM to dissolved organic matter (DOM)” in text P18L1.

5. *P26-27, L23-1 delete “although both factors,”*

Answerer: We deleted these words from text.

6. *References:*

P30, L22 224Ra with 224 superscript

P33, L3 CH₂I₂, CH₂ICl, and CH₂I₂Br please use subscripts

P33, L5 CH₃I, C₂H₅I, 1-C₃H₇I, and 2-C₃H₇I please use subscripts

P34, L22 Please add doi for completion of reference.

P35, L19 CH₂Br₂, CH₂I₂ and CH₂BrI please use subscripts, and check format

P36, L6 delete: [online] Available from:

P36, L13 (CH₃I) please use subscripts

P36, L14 Correct author names: Rattigan, O.V., Shallcross, D.E., and R. Anthony Cox, R.A.:

P36, L15 CF₃I, CH₃I, C₂H₅I and CH₂ICl please use subscripts, and check format

P37, L21 delete: (BG)

P38, L1 delete: (BG)

P38, L11 This reference format needs a doi

P38, L14 This reference format needs a doi

Answerer: We have corrected the formation all mentioned references.

We thank the reviewer again to improve the manuscript. Please see our responses to the specific comments below.

1. *Page2 line8: Does 'VSLs' mean 'very short-lived source gass' ? WMO report (ozone depletion) refers 'VSLs' as 'very short-lived halogenated substances'.*

Answerer: We have corrected VSLs to very short-lived halogenated substances in P2L8.

2. *Page7, line13: Unit of salinity should be unified through the manuscript and figures. i.e. 'psu' or 'non-unit'.*

Answerer: We have deleted psu from text and also corrected this in Fig. 3.

3. *Page9, line23: strongest correlation ($R = 0.7$), please add ' $R =$ '.*

Answerer: We have added “ $R=0.7$ ” in the text P10L9.

4. *Page24, line10-15, and line16-: Authors say that event 7 is "switch" in line10-15, and say that event 7 is reflected intrusion of saltier water. Is event 7 a mixture of "switch" and "intrusion of saltier water" ? Please explain clearly.*

Answerer: Event 7 is “switch”, at the same time a intrusion had happed in the mid-layer water (30m deep). It cannot be ruled out that mixing with this intrusion contributed in some way to the near-bottom increase of CH_2I_2 . We have rewritten this paragraph (P25L1-P25L15) for clarity.

5. *Page22, line1-2: Please check parenthesis. (e.g. Moore ---Yamamoto et al., 2001) is correct.*

Answerer: We have corrected the brackets in P22L9.

6. *Page21, line 16: Is 'between' OK? Please check 'between' or 'among'.*

Answerer: This is a tricky grammatical distinction that made us think and do some research, however we have decided that “between” is correct. There is quite a good treatment here:

<https://blog.oxforddictionaries.com/2015/06/29/grammar-myths-among-or-between/>

where it is noted that the common advice to use “between” for two things and “among” for more than two is:

“now regarded as outdated and out of step with current usage. In fact, as the Oxford English Dictionary (OED) states, ‘In all senses, between has been, from its earliest appearance, extended to more than two’: there’s an example of this from the year 971 (yes, not 1971!). Contemporary authorities (such as Pocket Fowler’s Modern English Usage) advise that it’s perfectly acceptable to use between or among in certain contexts when referring to more than two participants:

He divided his fortune between his four children.

He divided his fortune among his four children.”

Later on it is stated:

“*Between* is preferred when we talk about a relationship of difference, no matter how many people or things are involved:

The difference between those results is not statistically significant.

X The difference among those results is not statistically significant.”

In our situation we are actually referring to a difference (or lack thereof) between three depths, so I think it is correct to use “between”.

7. Page27: *Why is the production rate of CH₃I in the Kiel Fjord by monthly average expected to be smaller? Why is weekly incubation experiment expected to be closed to the value of this study? Are these associated to microbial degradation of CH₃I? Authors should explain clearly.*

Answerer: The maximum production rates from the Kiel Fjord study were smaller as they were based on monthly average (and therefore “smoothed”) concentrations. Shi et al. (2014a) also conducted weekly incubation experiments which gave *in vitro* values of P_{net} which were closely comparable with the field-based estimates in Kiel Fjord. Evidence for a poorly characterized loss process, possibly microbial degradation, was in fact observed in the Kiel Fjord incubation experiments (Shi et al., 2014a). We have clarified them in section 4.7 (P27).