

## Response to editor comments

*Dear Mario Hoppema,*

*Thank you very much for your careful reading of the revised manuscript and considerate additional remarks.*

Since Antarctica Insync is mentioned a couple of times and the results seem to be collected for Ant. Insync as one of the main stakeholders, a few sentences about what Ant. Insync represents should be added.

*This is a very good suggestion and we included a small paragraph on InSync and IPY5 at the beginning.*

*All of the following suggestions have been implemented in the revised manuscript.*

Please note that Ocean Science guidelines say that data is considered a countable noun, that is: “data are ...” (plural). Please adapt all through the manuscript.

L48 define IPY here as it is first used in the main body of the paper (it is defined in the abstract, but that is independent)

L48 I suggest: ... which is logical, considering the ... (comma is needed for readability)

L52 ... shorter time scale, though. (comma after scale)

L128 I suggest: ... this may, however, reflect the dominant area of expertise of the participants.

L130 high-resolution

L146 I would add: most, i.e., ... most Antarctic Bottom Water ... (as some AABW may still be formed in the open ocean)

L146-147 Antarctic Bottom Water (capitals)

L149 Antarctic Intermediate Water (capitals)

L159 It has been ... (delete And)

L168 (caption Fig 2): What are in your view ... (are instead of: is)

*Good catch, this was meant to be singular (“topic”), thank you.*

L168-172 Caption Fig. 2: First it is mentioned that air-sea exchange is pre-defined. Then examples of free text input are given, and again air-sea exchange is mentioned. One of these two mentionings must be wrong.

L182 computing power

L226 delete though

L242 I suggest: ... strengthened. Additionally, educational programs ... (as the first and second part of the sentence do not seem to fit together well)

L259 ... and should take ... (add: should)(for increasing the readability)

L260 I suggest: This would in the end ensure multiple use of the data collected. (move: in the end)

L271 I think “Moreover” is not a correct word for starting a new paragraph.

L272 data, (insert comma)

L288 delete: this

L289-290 ... budgets, especially with a focus on ice-ocean interaction, will be instrumental ... (insert commas for better readability)

L294 Warm Deep Water

L304 meta-information

L316 I think the use of terms like biogeochemistry in discussions like these should be avoided. Biogeochemistry is the name of the entire field of research. Better to use here is “biogeochemical processes”