

General Comments

In this article the authors report a freshening of the Antarctic Intermediate Waters (AAIW) in the South Atlantic in the past decade. The authors showed this change using a monthly climatological field based on Argo data and two WOCE hydrographic sections.

I still have problems with salinity trends using only one decade of monthly mean fields based on Argo data, Fig. 3. Are the biennial changes significant? The Argo climatology was based on floats distribution. Specifically in the South Atlantic, the number of Argo floats is not very expressive and irregularly distributed in space and time. How would that affect the biennial mean estimation? I really urge the necessity of addressing the errors associated with the biennial means, otherwise I don't think that the differences are significant. Also, are the differences in salinity between the two WOCE sections significant? From the TS diagram, Fig. 5a, the changes in the temperature seems even more prominent. The manuscript improved considerably but still there are several mistakes and typos.

The manuscript still needs some improvements to close all the weak or uncertain points. In the present form, it is my opinion that the manuscript is not ready to be published. Below are some more specific comments.

Specific Comments

- line 32: and the period between 1985 and 1994
- line 39: evaporation ($P > E$) dominance
- line 43: remove “and is”
- Line 44: ... surface) range of
- Line 65: ... the Indian Ocean transported by the Agulhas ..
- Lines 76: Argo is not an acronym. Remove (Array for ...Oceanography). Mention as Argo profiling floats program.
- line 82: (2005–2014) using a monthly climatology data based on Argo data.
- line 82: What is exactly “enhanced hydrological cycle”? Significant changes in the E-P signal?
- line 77: the period between 2005 and 2014 are ...
- lines 89: Remove “,” after resolution. You should also include a reference for this dataset.
- line 91–94: Interpolating the T and S profiles using spline will not necessarily solve your problem of low resolution. For instance, interpolating T and S near the thermocline depth will “create” data that not necessarily fit the TS relationship in the region of study. In that sense, doing the linear interpolation sometimes is better because it will not add any new value.
- Line 92: : Replace “are” by “were”.
- Line 93: : Replace “are” by “were”.

- Line 97: : Replace “are” by “were”.
- Line 107: Don’t need to repeat the same URL. Just mentioned that both are obtained in the same address.
- line 109: November and October respectively. Remove “investigation”.
- line 111: Replace “data” by “covered period”. Replace “confirm” by “validate”.
- line 112: You shouldn’t change the dynamics of the ocean. Replace “reduce the effect of dynamic processes in the ocean” by “to smooth out some of the higher frequency variability”.
- Line 114: Remove G from G McCarthy et al.
- line 119: Replace “are” by “were”. Replace “display” by “investigate”.
- line 121: Acronym should come the name.
- Please, examine the verb tense in the whole text. You are describing things that you have already done. The tense should be the past tense.
- line 130-132: One sentence in one paragraph? Join this paragraph with the previous one.
- line 133: Remove “up-to-date”. Also, the acronym SODA should come after its meaning. Change this order in the whole manuscript.
- line 154: “have” instead of “has”.
- Line 164: “was found” instead of “found”.
- line 167: How much is “somewhat”. Put a specific value.
- Line 168–170: Explain clearly how did you came up with a 15 mm/y, a one dimensional estimate for the whole ocean.
- line 179–185: First of all, the P-E change in 2005 seems to be about 0.01 mm/d and not 0.2 mm/d.
- line 189: The θ S diagram could also imply that the temperature incresed from 2003 to 2011.
- line 209: “give” instead of “giver”.
- lines 215–223: The authors didn’t show that all the changes in the AAIW is solely due to the Agulhas contribution. The difference in salinity (fig 5b) comes from a wide range of density and could come from other sources. That discussion is just a speculation.