Dear Editor,

We are very pleased to receive your comments. In fact, we agree with the items you have kindly indicated that the rush in the review process may not have given the necessary attention. Based on the comments, we made amends in the text and figures.

Regarding Line 316, you wrote:

"In your response (and manuscript change) to the referee comment "Line 316: the variability depends on the dynamics ..." 1. you do not present citations as requested, and 2. you allude to "the following chapter". On 1, can you please provide suitable citations as your manuscript change introduces statements that require some support (... even if that support is provided later)? On 2, do you just mean "the following section"? If so, amend appropriately (and possibly specifically, e.g. "in section 4.X"). Chapters are for books and theses, not papers, so may be confusing to reader."

It was a mistake to avoid changes in the text and reply to the comment with this description without references. We apologize for not providing a more careful answer. We choose to correct the text from:

"*The BMC variability depends on mesoscale variability and eddy propagation, often diagnosed by the standard deviation of the SSH. In Figure 6 the model patterns are consistent with those analyzed by Oliveira et al. (2009), using observed data from drifting buoys interpolated onto a 0.5°x0.5° grid.*" (previous line 316)

to

"*The high variability in the BMC occurs due to the physical processes related to the confluence of the BC and MC, which, near the Patagonian shelf, promote eddy formation due to the continental slope (Oliveira et al., 2009). Mesoscale variability and eddy propagation are often diagnosed from the SSH standard deviation (Figure 6). The model patterns show consistency with those analyzed by Oliveira et al. (2009), using observed data from drifting buoys interpolated onto a 0.5°x0.5° grid.*" (lines 337-340)

This way, the readers can access the information without having to go forward into the sections.

Regarding Figures 6 and 7, we made edits in the color scale. We tried to avoid blank regions and hope this choice improves the visualization of the strength of the main currents.

We also fixed the CO2 and some units m2/s2 to m^2s^{-2}.

We thank you for your time and patience! Hope these amendments address your concerns, but we are always available if you or the reviewers have any additional important comments.

Best regards,
The authors.

In response to “Fig. 6: maybe will be a good idea to show in the figures again the main currents and play a bit more with colors to enhance the MC and BC”, you have revised both the colour scale and limits of Figure 6a. However, in my opinion you’ve gone a bit too far as you’ve both introduced a cut-off in the colour scale that omits everything below 0.250 m/s, and used a very bright colour map that tends to obscure all detail with the exception of the very strongest currents. Can you please revisit this figure to avoid obscuring detail in low velocity areas (which make up the majority of the figure) and improve clarity of the colour scale. I appreciate this is something of a qualitative, personal preference point, but I would argue that the revised figure is less useful to the manuscript than the original.

On the same point, Figure 7d does not make good use of its colour scale limits. Setting these to those of its sister plot, Figure 7b, would make better use of this. Or, for instance, setting both to have limits of 0 to 0.35?

Finally, “CO2” is used throughout – please amend this to the correct subscripted form.

Thank you in advance for considering these mostly stylistic points. I do not anticipate any of these suggested changes as being significant, but do please feel free to get in contact with me should you have any queries.

With best regards,

Andrew Yool.