

## ***Interactive comment on “The influence of the Brazil and Malvinas Currents on the southwestern Atlantic shelf circulation” by R. P. Matano et al.***

**Anonymous Referee #1**

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This review article reviews the dynamical processes controlling the interaction between the southwestern Atlantic shelf and the deep-ocean. The article is clearly written and gives an up to date review of the existing knowledge that is added with new numerical simulations. It highlights the advances in the understanding, together with analysis of the remaining outstanding problems. I recommend publication of this article with some minor comments that I will outline below.

1. Section 3 starts with the results of a numerical simulation experiment. The comparison with observations is only discussed at the end of the paragraph. I would prefer that the quality of the simulations, with respect to the observations, is discussed first. For instance a comparison with SST from satellite or in-situ data.

2. EXP2 and EXP3 are used to support the ideas outlined in the paper: The importance  
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of the wind and tidal forcing for the SBB shelf circulation (EXP2) and the MC for the Patagonian shelf circulation (EXP3). Reading the article I was wondering what would be the results of EXP3 for the SBB and EXP2 for the Patagonian shelf. According to the theory outlined by the authors the differences with EXP1 should be less. A discussion of these results would strengthen the article.

3. The figure caption of Fig. 13 describes three panels, whereas only one panel is shown. The paragraph on the STSF is also the less informative. A more extensive analysis of the numerical experiments might be helpful.

Typo's: 1. The acronym SWAS should be introduced in line 19 page 838. 2. Line 7 page 846: ..... the MOC (EXP3) (Fig. 9) 3. Figure caption Fig. 9 (a): EXP2 should be EXP3.

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