

Interactive comment on “Seasonality of intermediate waters hydrography west of the Iberian Peninsula from a 8-yr semiannual timeseries of an oceanographic section” by E. Prieto et al.

Anonymous Referee #1

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This paper is interesting and brings new and useful information to the community. Its present problem is that its first part is clearly a thematic paper while the discussion is much closer to a review paper.

The first part shows and analyses new hydrological data with appropriate and accurate methods.

The only remark that I wish to make on this part concerns figure 4. The analysis of this figure (in the text) indicates that there are two regions (the coastal one and the

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offshore one) which have different evolutions. By inspection of figure 4a,b and even 4e, it looks rather like there are 4 regions, one on the slope, one in the channel between the continent and the Galicia Bank, one east of the Bank and one west of it. These 4 regions have alternate behaviors. This should be described and analysed in more detail in the text.

The second part wishes to bring support and explanation to the observations of the first part, but, unfortunately, it mostly reviews previous work and states that there is similarity between the findings of these previous papers, and the observations in the present one. The various hypotheses and explanations are examined and a choice of maximum likeliness is performed. For the moment, this part looks more like one in a review article.

This comparison should be rendered more quantitative. Two solutions are offered:

- 1) compare values of temperature, salinity anomalies, currents, advective and diffusive times, between the reviewed work and the present work
- 2) use available ARGO float data to extend geographically the findings of the hydrological section or to support one hypothesis or the other.

This does not require much work, but, once done, will add substantial value and interest (and generality) to the paper.

Concerning the presentation:

- 1) the paper is globally well written except for a few typos or mistakes at the beginning and near the end
- 2) there is space for more figures, especially associated with part 5 (discussion)
- 3) the typos and mistakes are the following:

abstract

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All water masses down TO THE permanent thermocline... signature in their THERMOHALINE properties

... and changes due to vertical displacements HELP ANALYSE the physical processes

page 3395 line 23 ...hydrographic

page 3410 line 15 ...Bord EST 3 cruise

page 3410 line 27 ...data WERE analysed

page 3411 line 2 ...but THAT 10 Sv recirculate anticyclonically

page 3412 title RESULTS from circulation models

page 3412 line 12 ...MW spreading used by Filyushkin

page 3413 line 17 ...The magnitude of seasonality is ROUGHLY 20%

page 3413 line 22 ...and the outer ocean. The most remarkable and novel finding IS the behaviour of the Mediterranean Water...

page 3414 lines 5-8 ... that key features, reproduced... on the slope, are consistent... (commas are necessary)

... of in-situ data provided here become A valuable tool... seasonality IN the area...

Acknowledgements

thanks ALL the technicians, and THE crew... thank THE NOCS... wind data WERE retrieved.

When this is corrected, which does not require further review, the paper will be a useful contribution to the field

Interactive comment on Ocean Sci. Discuss., 9, 3393, 2012.

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