

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 #2

Received and published: 26 November 2012

General comments:

The paper presents an analysis of CTD data collected during the period 2003-2010 along a zonal section off Finisterre (Galicia coast), with the objective of detecting the existence of a seasonal signal and characterizing it. The theme of the paper is interesting and relevant since there are not many published contributions to the understanding of the seasonality of the intermediate waters in the NE Atlantic. In general, the text is clear and the results are worth publishing although some revision is needed. There should be a deepening of the discussion (maybe in Section 4) on the comparison be-

C1298

tween the presented results and the previously published (observational and modeling) work.

Specific comments:

P. 3397, L. 4: There should be some caution in generalizing the merging of the two MW veins into a “single one with the core at 1000 m”. This might happen with the MW flowing northwards but not with the other branches going west and south. But even in the northward branch, this happens at latitudes beyond 43°N; L. 13: ENADW should be Eastern North Atlantic Deep Water rather than Northeast Atlantic Deep Water. P. 3402: Before the discussion of Fig. 4 and Table 3 and subsequent ones, it would help the reader reminding, in a more systematic way, what negative (or positive) signal means in terms of summer versus winter conditions. P. 3404, L. 3 and L. 6: By looking at Fig. 5, the maximum values for the cooling/freshening or warming/salting seem higher than those quoted in the text and in Table 3. P. 3405, L. 24-25: Clarify the sentence “...estimated with respect...20%”. P. 3421, Table 2: The unit PSU for salinity is no longer used.

Technical corrections:

P. 3394, L. 3: WATER masses. P. 3397, L. 4: that flowS; L.24: column WERE sampled. P. 3398, L. 3: sensors (OXIMETER,...); L. 10: coast OF Galicia; L. 15: two stations, one well in the basin...; L. 26: NORTHEAST Atlantic (von Aken, ...). P. 3399 and following: It is convenient to use the same notation for the neutral density along the whole text and in the figures and tables (there is both n as subscript and superscript). P. 3399, L. 4: potential DENSITY; L. 5: in Table 2 we have average pressures and not pressure ranges; L. 9: EMERGES; L. 10: into two subsections (see Fig. 1b) with the aim...; L. 16 and L. 28: water MASS changes; L. 26: their TRANSFORMATION CONTRIBUTE to... P. 3400, L. 10: may bE written. P. 3401, L. 26: get A statistical. P. 3404, L. 14: MW exhibitS. P. 3406, L. 16: that CAUSE. P. 3407, L. 28: SEA SURFACE HEIGHT (SSH). P. 3408, L. 23: The IPC is thought to be a permanent feature although

C1299

IT REACHES A MAXIMUM DEVELOPMENT IN WINTERTIME after...; L. 27: it is thought to. P. 3409, L. 7: IPC POINTED; L. 16: RESPECTIVELY FROM XBT LINES AND YEAR-LONG CURRENT METER MOORINGS; L. 25: CONNECT. P. 3410, L. 14: necessariLY; L. 15: Bord-EST; L. 20: shoaling of ISOPYCNALS around; L. 27: WERE analyzed by. P. 3411, L. 2: anticycloniCALLY; L. 27: LAFUENTE et al., 2007. P. 3413, L. 13: HYdrographical. P. 3414, L. 1: as a response TO THE seasonal; L. 7: becomes A valuable. P. 3416, L. 12: The reference should be Lafuente, J., and so it should not be here but near the other Lafuente reference (page 3417). P. 3421, Table 2 caption: POTENTIAL density layers... P. 3422, Table 3 caption: The meaning of positive or negative signal for the values should be indicated in the caption. P. 3423, Fig. 1 caption: Gyres bounding NORTH ATLANTIC Current (NAC) P. 3426, Fig. 4: Can the colours be enhanced to make the figure clearer?

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

C1300