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Ocean Science
Discussions

Interactive comment on "Malvinas-slope water intrusions on the northern Patagonia continental shelf" *by* A. R. Piola et al.

Anonymous Referee #1

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General comments The paper presents an analysis of both in situ and satellite data characterizing intrusions of slope waters into the Patagonia continental shelf region near 41°S. The explanation for the localized intrusions is given in terms of the local field of potential vorticity but the processes originating the non seasonal variability of these intrusions are not explored. The text is clearly written and the results, although short in what concerns possible mechanisms for the observed time variability, are interesting and worth publishing. Only minor revision is needed.

Specific comments Page 2944: - Line 13: "are shown in Fig. 1a" - Line 20: "at the shelf break" Page 2945: - Clarify sentence: "Slope Waters. . .as mixtures. . .near the bottom (Fig. 2)" - Line 9: "about 2.5°C-34.1" Page 2946: - Line 11: 61±74 or 61±7.4? Page 2947: - Line 1: "due to a variety of processes" - Line 7: "over the region III

limited by. . ." Page 2948: - Lines 22-23: Clarify the sentence: "As expected for winter,.., this was actually a moderate event" Page 2949: - Line 3: "distributions in July 1996 (not shown),. . .to the surface pattern." - Line 11: "continental shelf, only. . ." - Line 13: "seasonal thermocline, salinity. . ." - Line 29: "region I (Fig. 8): first. . ." Page 2951: - Line 18: "westerly winds as predicted. . ." Page 2953: - Line 9: "The latter resembles. . ." Page 2954: - Line 9: "potential vorticity (f/H, where. . .) equal to. . . - Line 19: near 41°S (Fig. 10b), which. . ."

References There is a reference in the text (page 2955) which is missing from the list of references: - Spadone and Provost, 2009

Figure captions Fig. 1 – ". . .is higher than 0.018°C/km in (a) and . . .33.8-34 range in (b) Fig. 2 and 3 – According to UNESCO recommendations, the isopycnal values should be in terms of γt and not σt Fig. 3 – According to the text, station 34 is slope and station 32 is offshore Fig. 7 – It is difficult to distinguish the symbols for the station locations from the dots of the isobaths. Fig. 10 – It is difficult to see the grey lines for the drifter trajectories.

Interactive comment on Ocean Sci. Discuss., 6, 2939, 2009.