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Comment

Interactive comment on “ENSO components of the Atlantic multidecadal oscillation and their relation to North Atlantic interannual coastal sea level anomalies” by J. Park and G. Dusek

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Please consider the following responses to the review comments posted by Reviewer #1.

1) Page 3678, lines 16 onwards: definition of AMOI(ENSO) should go before referring to it in the previous page.

This section (ENSO Modes in the AMOI) has been reorganized to completely define AMOI(ENSO) before it is used elsewhere. The original idea was to present the index data and EOF reconstructed timeseries (figure 1) with a discussion of their relevant similarities, followed by definition of the AMOI(ENSO) modes. This required a deferred

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definition of the AMOI(ENSO) modes. The reorganized version is now logically consistent and gives a more natural description of the three panels in figure 1.

2) Page 3684, lines 19-23: I think that this result is inconclusive. There is no explanation why two nearby stations should give different coupling, especially those highly correlated (e.g. Key West and Charleston). Others, such as Boston and Portland, have clearly different responses at 3.2 yr band. At Boston, this signal is almost at the noise level.

We agree that the result is inconclusive in terms of identification of geophysical forcings at individual stations. We have quantified coherent coupling between AMOI, ENSO expressed in the AMOI and coastal sea level anomalies, which we believe is a useful contribution, but do not engage in speculation on the differing nature of these couplings at different stations. Regarding this, we note on page 3685, lines 21-29, that the analysis of index data at few geospatial locations makes such speculation problematic. We hope that identification of these (unexplained) couplings will motivate others with tools and expertise in coupled ocean-atmosphere models to further examine the forcings.

3) Page 3685, line 18: where is this statement justified?

Please refer to pages 3674, 3675 lines 25-26 and 1- 3. This is also mentioned on page 3682 lines 17-21. We have added the Sweet and Zervas (2011) reference to page 3685, line 18 in order to explicitly reference a justification for this statement.

Interactive comment on Ocean Sci. Discuss., 9, 3673, 2012.

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