

## ***Interactive comment on “2-D reconstruction of past sea level (1950–2003) using tide gauge records and spatial patterns from a general ocean circulation model” by W. Llovel et al.***

**W. Llovel et al.**

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- Comment 1: we now use only the term 'sea level' - Comment 2: text modified -  
Comment 3: we added a sentence to indicate that other processes may give rise to regional variability; However, the largest signal definitely comes from thermal expansion.  
- Comment 4 : as explained in the responses to Reviewer 2, we have carefully checked that the model EOFs (used for the reconstruction) do not contain any global mean trend. This is clearly stated in the text. - Comment 5 : as explained to Reviewers 1 and 2, in fact we discovered that the figure 6b included in the submitted version was not the right one. This is our mistake. We apologize for this inconvenient. In the

C164

revised version we have put the correct figure. As can be seen, the reconstructed trend map over 1993-2003 agrees reasonably well with the observed (altimetry-based) trend map (uniform global mean trend removed) in most regions, except in the North Atlantic around Greenland. The reviewer's comment about the poor agreement in the Indian Ocean and South Atlantic no more stands since it was based on a wrong map. Minor comments : accounted for.

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C165