

## ***Interactive comment on “Mesoscale variability of water masses in the Arabian Sea as revealed by ARGO floats” by X. Carton and P. L’Hegaret***

**Anonymous Referee #2**

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The study documents the movements of the ARGO floats and relates it with the circulation and the mesoscale variability of the water masses in the Arabian sea. This kind of information about the water masses is lacking in the Arabian sea and the paper is publishable.

Scientific significance-1 Scientific quality- 2 Presentation quality-3

The major problem with the ms is the readability. It is difficult to relate the float movements with the surface circulation and the thermohaline structure with the present diagrams. Secondly, though the authors argue there are movements of the floats associated with the topography or water masses no definite mechanisms are given. Thirdly, a clear summary of the water mass mesoscale variability is lacking. Is it possible for the authors to elucidate the mesoscale pathways at least of the RSOW. Specific comments

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1) It is hard to understand the all the float movement from the present diagrams. For example, in line 7 of the float number 1900432, authors describe the float trajectory is initially east ward, but it is really hard to understand it that way. This problem is persistent in all the diagrams. Authors may use some markings for start and end points and arrows for the direction of motion of the floats.

2) It will be extremely useful to overlay the trajectories on to the SLA derived circulation.

3) It is difficult to understand how the deviations from the surface circulation is related to topography or changes in water mass composition. Is there any explanation to it?

Please also note the supplement to this comment:

<http://www.ocean-sci-discuss.net/8/C753/2011/osd-8-C753-2011-supplement.pdf>

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