

***Interactive comment on “Importance of vertical mixing and barrier layer variation on seasonal mixed layer heat balance in the Bay of Bengal” by Ullala Pathirana Gayan Pathirana et al.***

**Anonymous Referee #1**

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This is a very interesting work to assess the mixed layer temperature variations in the Bay of Bengal, emphasizing the role of the barrier layer. I have some minor comments for the authors to consider in revising the manuscript.

It is useful to state clearly what's new in the study and what has been concluded from the previous study in both the Abstract and Summary. I would suggest separating the “Summary and conclusion” section into “Summary” and “Discussion”, which will make the reader easy to follow the new findings.

Figure 3: It is useful to show the monthly wind speed in Figure 3 at the selected sites in order to make the statement that the wind speed is the main driver of the barrier layer

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thickness variations in line 192, or make the statement to the discussion.

The paragraph starting from line 180: it is not clear how the error bars are calculated.

Figure 6 is cited in line 189 before figures 4 and 5 appear in the text.

Lines 239-241 need rewording.

Section 3.3 is more like a discussion.

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