

The authors have well addressed my concerns in the first round by clarifying the effect of Coriolis force and seasonal stratification, and explaining the meteorological inputs used in the model. I only have a few comments below.

- (1) L132: Corresponding to my previous comment (6), you can specify the time of weakly stratified and strongly stratified seasons here.
- (2) L247: “The remaining modes contain less than 5% of the total variance.” Over all the layers?
- (3) Figure 13 and section 5.4 well clarified the effect of thermocline depth.
- (4) In terms of the length of the article, 5.5 should be made more concise, and 5.6 can be left out or moved to the supporting information since it is separated from the main messages.
- (5) L579-584 can be left out or combined into Introduction.