

Author Responses

Surface circulation in the Gulf of Thailand from remotely sensed observations: seasonal and interannual timescales

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The author's comment is presented in the following sequence: (1) itemized comments from the editor in black, (2) author's response in red, (3) the revised text in red italic.

Thank to the editor for your comments.

Comments to the author:

Detailed comments

You use “high,” “higher” and “highly” too much in my opinion. Eg in Abstract line 2, better “much wind variability . . .”; line 5 “. . . the stronger influence . . .”; line 11, omit “highly” because “dominates” makes the point. Some other cases are below but you might like to look through yourself.

The author appreciates the suggestion to improve the text. The accordant changes have been made.

Line 32. Better “. . . suggests an overall cyclonic circulation . . .”

The text has been updated accordingly.

Line 41. Better “. . . 2008). Fine-spatial-resolution . . .”

The author thanks for the suggestion. The change has been made.

Line 52. “westward current to the south of the uGoT” is not clear in figure 1 where the “cyclonic circulation” only shows in the “southward current within 1° of the GoT western boundary”.

The schematic drawn to the south of 12.5° N in Figure 1 shows the results of this study to demonstrate how the circulation pattern to the south of 12.5° N connects to that in the uGoT. Although the study shows the presence of the “southward current within 1° of the GoT western boundary” consistent with that by Sojisuporn et al. (2010), the “westward current to the south of the uGoT” is not observed. Therefore, the “westward current to the south of the uGoT” is not presented in Figure 1. The author realizes that the original figure caption might not be clear, so it has been updated. Clarification is also added in the conclusions section. (L439)

Figure 1. Map of the Gulf of Thailand (GoT). (a) Schematic of the surface current to the south of ~12.5° N suggested by this study (thick line) and that to the north of ~12.5° N derived from previous studies (e.g., Yanagi et al., 2001; Buranapratheprat et al., 2006, 2008; Saramul and Ezer, 2014, thin line) during the southwest monsoon (orange) and the northeast monsoon (blue).

(L439) Although the anticyclonic geostrophic circulation at the rim of the GoT (Sojisuporn et al., 2010) is not distinct, the southward geostrophic flow along the western boundary is strong.

Lines 63-64. “dominance of an anticyclonic circulation at the rim of the GoT” is not clear in figure 1.

Similar to above, the “anticyclonic circulation” is not found in this study and thus it is not presented in Figure 1.

Line 88. “higher” → “finer”.

The text has been updated.

Line 102. “high” → “strong”.

The accordant change has been made.

Line 104. “lower” → “weaker”.

The text has been updated.

Line 106. “an increasing trend” → “a rise”. I don’t think you want to say that the trend is increasing (meaning changing), only that it is positive.

The author thanks the editor for pointing this out. The editor is correct; the trend is positive but not increasing. The accordant change has been implemented.

Equation (5). Please explain S.

A sentence is added to explain S.

(L135) S contains the magnitude of a linear transformation; it designates the intensity of each EOF mode.

Line 143. Please insert “,” after “phase” and after “real part”.

The author thanks the editor for the correction, and the text has been updated.

Line 161. “High” → “Large”

The accordant change has been made.

Line 170-171. These “explained” variances suggest that maybe even mode 2 may be “noise” rather than a meaningful pattern. It does not rise much about the trend set by mode 4 and 3 variances. Anyway, I agree that two modes are enough to study.

The author also had a difficult time associating patterns shown by mode 3 and mode 4 with physical forcings.

Line 183. Omit first “The”.

The text had been updated.

Lines 196-197. “(Figure 4c,d).”

The author thanks the editor for the correction; the text has been updated accordingly.

Line 245. “compared” → “compare”

The accordant change has been made.

Line 261. “Higher” → “Stronger”

The author thanks the editor for the word choice suggestion; the text has been updated.

Line 262. “highest” → “largest”

The text has been updated.

Line 267. Better “. . . Thus, non-zero phase relationships hint at significance of forcings . . .”?

The author thanks the editor for the suggestion; the text has been updated.

Line 339. “highly” → “strongly”

The accordant change has been made.

Line 343. “high” → “strong”

The text has been updated.

Line 361. “of up to” → “as large as” (twice)

The author appreciates the suggestion; the change has been implemented.

Line 373. “high” → “strong”

The text has been updated.

Line 379. “high” → “strong”

The text has been updated.

Line 422. “. . the observations reveal . .”

The author thanks the editor for the correction; the change has been made.

Lines 433-434. “reversing circulation pattern at the surface following the monsoon wind reversal that accounts for 28%”. If you mean that the . . . pattern accounts for 28% then you want “, . . . ,” or “(. . .)” around “following the monsoon wind reversal”. At present you are saying that the reversal accounts for 28% - not quite the same thing.

The author intended to say that the pattern accounts for 28% and so the sentence has been updated accordingly. The author thanks the editor for your help to clarify the sentence.

Lines 445-446. Similar to lines 433-434; at present you are saying that transitions show the presence of strong seasonal meridional flow. More precisely I think you want “. . GoT circulation during monsoon transitions; there is strong seasonal meridional flow . .”

The sentence has been updated.

Lines 447-448. Better “. . a strong northward flow along the western boundary is superimposed on the circulation pattern during the northeast monsoon (Figure 3-4). . .”?

The author thanks the editor for the suggestion. The sentence has been updated.

Figure 8 caption line 6. “high” → “much” or “large”

The text has been updated.