

To further improve the manuscript presentation, this reviewer gives the following suggestions.

1. Change the title to “Statistical features of spatiotemporal distributions of internal waves in the northern South China Sea derived from MODIS imagery by deep learning approach”.
2. Change the title of Section 3 to “Signature extraction and validation”.
3. Change the title of Section 4 to “Statistical analysis”.
4. Change the title of Sub-section 4.3 to “IW silence regions”. It is not “new IW findings”. See Figure 13a in Zhang et al., 2023, IEEE TGRS.
5. Change the caption of Figure 5 to “Statistical histograms of IW pixel number vs the water depth for (a) the whole northern SCS (orange) and (b-e) four regions as shown in Figure 4 (blue)”.
6. Change the caption of Figure 6 to “Statistical histograms of monthly distributions of IW days for (a) the whole northern SCS (orange) and (b-e) four regions (blue)”.
7. Change the caption of Figure 7 to “Statistical histograms of IW pixel number vs the lunar day for (a) the whole northern SCS (orange) and (b-e) four regions (blue)”.
8. Change the caption of Figure 8 to “IW silence regions (black arrows) in (a) Region 2 and Region 1 derived from superimposed IW location”.
9. Wording and writing need further improvement. Take a sentence from L189 to L191 as an example.

As shown in Figure 4, We classified we divided the detected IW locations into four regions 1 - 4, according to the spatial locations. Region 1 includes which covers the area between- from  $112.5^{\circ}\text{E}$  to  $-114.2^{\circ}\text{E}$  and from  $18.5^{\circ}\text{N}$  to  $-20.9^{\circ}\text{N}$ ; Region 2 includes the area between from  $114.2^{\circ}\text{E}$  to  $-118.1^{\circ}\text{E}$  and from  $19.5^{\circ}\text{N}$  to  $-22.2^{\circ}\text{N}$ ; Region 3 includes the area between from  $118.1^{\circ}\text{E}$  to  $-120.0^{\circ}\text{E}$  and from  $22.0^{\circ}\text{N}$  to  $-223.80^{\circ}\text{N}$ ; Region 4 includes the area between and from  $118.1^{\circ}\text{E}$  to  $-120.5^{\circ}\text{E}$  and from  $19.5^{\circ}\text{N}$  to  $-22.0^{\circ}\text{N}$ , respectively.