

## **Responses to the Comments and/or Suggestions from Referee**

### **#Topical Editor:**

Thank you for evaluating and incorporating the reviewers' comments in the text of the manuscript. I am pleased to note that after the second revision, only a small step is missing from the acceptance of your paper. Please consider the opponent's additional requirements and incorporate them into the manuscript. After this modification, I will recommend your article for publication.

***Reply: The authors thank Editor for considering the possible recommendation of this manuscript for publication in *Annales Geophysicae*. The authors also thank the additional minor corrections recommended by referee to improve the present manuscript. We have carried out a revision of the manuscript considering all the referee's comments.***

### **#Referee's Comments:**

The additional comments of the referee:

1.The migrating terdiurnal tide with zonal wavenumber 3 (TW3) in Es layer has been identified by Tang et al. (2022, JGR).

***Reply: Thanks for recommending this reference. We have added a sentence citing Tang et al. (2022) between lines 327-328 in Sect. 3.1, page 17.***

2.The label of Figure 5 is not clear.

***Reply: The caption of Figure 5 has been changed as recommended by the reviewer.***

### **The following reference has been added to the manuscript:**

Tang, Q., Zhou, C., Liu, H., Du, Z., Liu, Y., Zhao, J., Yu, Z., Zhao, Z., and Feng, X.: Global Structure and Seasonal Variations of the Tidal Amplitude in Sporadic-E Layer, *Journal of Geophysical Research: Space Physics*, 127, 1-14, <https://doi.org/10.1029/2022JA030711>, 2022.

*Finally, we would like to take this opportunity to thank the reviewer and topical editor for kindly evaluating our paper helping to greatly improve its quality.*