

Dear Reviewer:

Thanks very much for your comments. These comments were all valuable and very helpful for revising and improving our paper. In the revised manuscript, we have carefully revised it. The following is a point-to-point response to the comments

Thank you very much!

This paper proposes the grid TEC difference to analyze TEC variation characteristics within the grid. This work is very interesting in my opinion. It can be accepted after appropriate revisions

Minor comments.

1. Some tables in the manuscript have obvious mistakes, such as Chinese words should be replaced with English words

Response:

We have made corrections in the revised manuscript.

2. There are errors in the reference of the figure in the analysis section., as like line 141-165. Please carefully check.

Response:

We have revised it in the revised manuscript.

3. The format of the table needs to be adjusted to better display relevant data.

Response:

We have made corrections in the revised manuscript.

4. Some Figures is not clear, it is difficult to distinguish what each picture represents. Please check the manuscript carefully.

Response:

We have made corrections in the revised manuscript.

5. In line 152, you mention "F10.7 in 2014 in Figure 1.". You probably mean " This trend is the same as the trend of F10.7 in 2014 in Figure 3." Please check.

Response:

We have revised it in the revised manuscript.

We appreciate for your warm work earnestly, and hope that the correction will meet with approval. Once again, thank you very much for your comments and suggestions.