

In this manuscript, the authors used the DIX to evaluate the ionospheric responses to EPB events from 2013 to 2020 over the Brazilian equatorial and low latitudes. Their results show that DIX is able to detect EPB-related TEC disturbances. However, the following points should be considered and improved:

1. For ROTI in this work, authors should show detailed calculation method.
2. For airglow picture in this work, in order to better compare TEC observation, the authors should map them into the geographical coordinate.
3. In the PBCG of Figure 2, the DIX shows a large value 5 at ~ 2 UT. However, the ROTI shows a small value 0.2. Similarly, the DIX of PBJB shows a large value 4 at ~ 3 UT but its ROTI shows a small value 0.1 at the same time. Same result also appears in the PEAf about 3 UT. It shows some inconsistent results between DIX and ROTI in these points. Why? The authors should explain it.
4. In Figure 3, some results are similarly to the results of Figure 2. ROTI is a small value while the DIX shows a large value at some points, such as the value of MGv at ~ 5 UT. The authors should explain it.
5. In Figure 4, it is difficult for me to distinguish between the yellow and the orange on my computer screen. I suggest that authors use contrasting colors to replace them.
6. In Figure 4 and 5, the authors showed only one picture (airglow and ionogram) in every event. As reader, based on only one airglow and ionogram, I have difficulty understand the texts of manuscript corresponding to these Figures. I suggest the authors to show more detailed airglow and ionogram pictures in each subgraph.
7. In Table 3 and Figure 6, the authors did not explain the reason why they used the maximum DIX values to compare the yearly mean total sunspot number. The yearly mean total sunspot number shows the average of solar activity in one year. However, the maximum DIX may be from only one EPB event. There is a large randomness in one EPB event. For example, the maximum DIX just appeared in one EPB event in one year and it may be caused by strong storm or others. If authors use only the maximum DIX to compare the yearly mean total sunspot number, they may get an unreal result.

8. In Figure 6, 2013 is a higher solar activity year. The mean total sunspot number of 2013 is significantly higher than 2017, 2018 and 2019. However, the DIX of 2013 is significantly lower or equal to that of 2017, 2018 and 2019 at Equatorial stations. Meanwhile, the DIX of 2013 also equals to the value of 2018 at low stations. These results disagree with the year varieties of solar activity. Why? It leads readers into confusion. The authors should explain it in detail.