 # Reviewer 1:

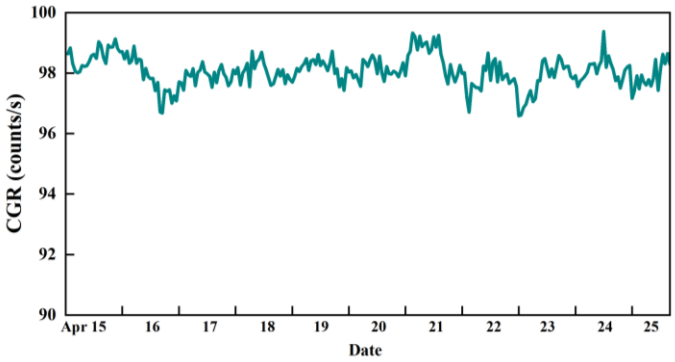
The work is of a high scientific standard. One can make several wishes regarding the text.

1. Fig. 3. What is the reason for choosing the time interval shown in the figure? As a result, the most interesting interval, related to the geomagnetic storm of April 24, is represented by a very narrow section of the figure. Perhaps it makes sense to reduce the time interval shown or make the figure itself wider.

Response: [Thank you for your insightful comment. The reason we chose the current time interval is because the solar activity parameters, such as the Dst index, Ey electric field, and solar wind velocity, are recorded at hourly intervals. If we were to reduce the time interval shown in the figure, the overall trends in these parameters would become less apparent. By maintaining the broader time interval, we are able to illustrate the gradual changes and full context of the storm's development, which would be harder to discern over a shorter timeframe. We have aimed to balance showing the storm's key features while preserving the clarity of the larger trends in the solar activity parameters.]

2. It would be useful to add to Fig. 3 a graph of galactic cosmic ray intensity to estimate the magnitude of the Forbush effect during this storm, since this factor is important for the electric field.

Response: [Thank you for your suggestion. We have considered the changes in galactic cosmic ray (GCR) intensity during the period from April 15 to April 25, 2023. As shown in the graph below, there was no significant variation in GCR intensity during this time frame. Thus, we have concluded that the Forbush effect did not play a major role in this particular storm's impact on Ez. We have also updated the manuscript to include a description of these findings, which explains that GCR intensity remained relatively stable during the event.]



3. It is desirable to add a small section about the limitations of this study at the end of the manuscript.

Response: [Thank you for your suggestion. In the revised manuscript, we have added a brief section outlining the limitations of this study. This section acknowledges that the study is based on a single geomagnetic storm event and that the geographic coverage of observation stations is limited.]

4. There is a typo in the caption under Fig. 3: interplanetary magnetic field magnitude IMF (panel (a), nT).

Response: [Thank you for your careful observation. We apologize for this oversight. The typo has been corrected in the revised manuscript. We appreciate your attention to detail, and we have ensured the figure caption now accurately reflects the correct panel designation.]