

## Review

Once again we would like to thank the reviewers for their time in reviewing this manuscript and for the valuable comments and suggestions. We have no doubts that thier constructive comments has improved the quality of this manuscript. We have tried to implement all suggested corrections that are shown in blue text.

There are a couple minor edits that caught my eye, which I am noting here so that the authors may choose to modify it.

Page 4, Lines 102-103 and 120-121 are repetitive. Perhaps one of them can be removed. --> "The MPB index is used because it is insensitive to the localized fine structure of the electrojet and can well capture the global substorm current wedge"

We thank the reviewer for pointing this out. We have now removed the sentence on lines 102-103.

Page 19, Figure 5 caption: "The green circles mark thee area of discussion" change to -> ".. the area..."

Corrected

We would like to thank the reviewer for all the above comments and corrections.