

Here follow my comments to the response to my review of the manuscript “Characteristics of the electrojet during intense magnetic disturbances” by Gromova et al. All line number refer to the tracked changes version of the revised manuscript unless other is specified.

Abstract:

Line 47: “Substorms occurring during daytime before the storm main phase (...)”: The substorm is mainly a nightside phenomena. Not sure what is meant here. Suggest to delete “during daytime”.

Introduction:

Line 222: Add: “They found the intensity ...” at the beginning of the sentence

Data:

Line 277-278: Here, the revised manuscript state that the indices has been averaged over the overflight intervals. However, in the response letter, a one minute resolution is stated in the response to my comment regarding this. I suspect that the revised manuscript is correct and the response letter is wrong. Please clarify.

Method:

Line 299: “The hall current at high latitudes (...)” (delete flowing)

Section 4:

The response letter claim to have added the sentence “The correlations with the ground based AL index are similar to the ASYM/H behavior.” However, this referee cannot find this sentence in the revised manuscript. Have the authors forgotten to place this sentence in the revised manuscript?

Regarding the next comment in my initial response, referring to line 380-381 in the initial submission: A reference to the relevant Table is not included in the revised manuscript at this specific location, lines 475-476. As the reader can hardly see this trend from Figures 1 and 2 alone, this conclusion should either follow the subsequent analysis shown, or it should be stated here that further analysis shows this trend (the correlation with AsymH). Otherwise, this conclusion will not be sufficiently supported at this point.

Discussion:

Table 2 caption: It should be stated here that these results are for the PE current system.

Regarding the new material on the correlation between IMF By and AsymH, lines 601-619: I have a hard time understanding any direct link between the PRC and the PE currents. On the dayside, the PE are mainly on open field-lines, close to the OCB, at 75-80 degrees MLAT as Figure 3 shows. This is different from the EE location (Figures 4-5). The PRC is in the inner magnetosphere, on closed field-lines, and is traditionally believed to closed somewhere in the dusk sector in the region of EE (as mentioned in the previous version of the manuscript). I would encourage the authors to relax the language when suggesting this as a possible link, as this has not been established earlier. It need to be specified that this is a speculation and that the observed correlation also can have other explanations, rather than stating that this is *the* explanation.

Line 747-748: The authors has not provided any relevant response this point (last point from the discussion section in my first review). I still think the AL vs WE comparison still deserve some attention in the manuscript.

Conclusions:

Line 782: Should “displaces” be “is located”?

From the list of minor comments from my first review, I was not able to find the response to the following: Lines 120-122: What level of confidence does this refer to? Could a reference or a name of the formula be provided?