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Interactive comment on "Wavelet analysis of the magnetotail response to solar wind fluctuations during HILDCCA events" *by* Adriane Marques de Souza Franco

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Thank you for the corrections and suggestions. Typo, language correction and simple suggestions were implemented in the paper file in blue color. Other main comments are answered bellow.

Main comment

1-Why only Bx component was used for your study?

Bx component corresponds to the Sun-Earth line. This component is an indicative when the Cluster spacecraft crosses the magnetic equator in the tail and also is an

C1

indicator for the stretching or depolarization of the tail field.

2- is it meaning energy transfer from auroral region to the magnetotail?

As it is observed in geomagnetic substorms, during HILDCAA events the energy storage in the tail may can be transfer to the auroral regions, and our analysis is looking for the periods that this energy transfer is more efficient.

3- I suggest using higher grid times, e.g., 30 min.

We used a grid of 30 min would result in 24 intervals (considering periods between 0 and 12 hours), which for some cases, would be more than the number of most energetic periods identified since we are using only 9 events.

Please also note the supplement to this comment:
https://www.ann-geophys-discuss.net/angeo-2019-70/angeo-2019-70-AC1-supplement.pdf

Interactive comment on Ann. Geophys. Discuss., https://doi.org/10.5194/angeo-2019-70, 2019.