

# ***Interactive comment on “Evidence of vertical coupling: Meteorological storm Fabienne on 23 September 2018 and its related effects observed up to the ionosphere” by Petra Koucká Knížová et al.***

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The authors would like to thank the reviewer for her/his constructive comments. 1. We agree with the reviewer comment that interesting results have been found based on the GPS-GLONASS monitoring. Very relevant papers have been published by Afraimovich et al. (2013), Ke et al. (2019), Yang and Liu (2016) and others dealing with tropical meteorological phenomena. Most of the papers address low latitude events, but we agree with the reviewer that these papers definitely have to be quoted in the review part of the paper. 2. In the revised version of the paper we provide better explanation

of the MERRA reanalyses results and improve results graphic representation (Figures 6 and 7) of the situation that capture time development of the situation before and after the storm passage over Europe. 3. In the revised version we provide suggested corrections on Figure 8. 4. On Figure 9 we show sequence of directograms as measured by Digisonde. The receiving antenna system of digisonde is able to identify the direction of the electromagnetic wave arrival. The directograms are constructed from the raw ionograms. Each color correspond to particular antenna beam, hence the direction of the arrival of oblique echo from large scale irregularities. The explaining text is added into the corrected version. 5. Due to length of the paper we have decided to show the plot of Kp index as it is available parameter from data center. According to reviewer suggestion, we add the plot into the revised version of the paper. We agree that it improves the paper. 6. Figure 13 corrected 7. Figure 14 corrected according to suggestions 8. Reference – corrected in the text and reference list. The reference Laštovička et al., 2012 and Laštovička, 2012, we have not corrected due to the fact that the first reference refers to paper written by team Laštovička Solomon and Qian, while the second one to the paper written by Laštovička only. We appreciate all the reviewer's comments and suggestion that help us to improve quality of the paper.

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Discussion paper

