

## ***Interactive comment on “Cosmic noise absorption signature of particle precipitation during ICME sheaths and ejecta” by Emilia Kilpua et al.***

### **Anonymous Referee #2**

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This paper presents the statistical results of enhanced CNA corresponding to the sheath and ejecta structures of ICMEs using data from the Finnish riometer chain. The results showed that sheaths and ejecta are equally effective in inducing enhanced CNA. However, the occurrence frequency and the magnitude of enhanced CNA have different MLT distributions during sheaths and ejecta, which may reflect different MLT distribution of waves responsible for the energetic particle precipitation. The study is well-conceived and is appropriate for publication in this journal after considering the following comments.

Page 2 Line 6: “geostatationary” -> “geostationary”

Page 3 Line 20: “sheath” -> “sheaths” Please check all the “sheath” through the manuscript. “sheath” is a countable noun. So either use “sheathes” or “the/a sheath”.

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Page 3 Line 23: “at wide range of . . .” -> “at a wide range of . . .”

Page 3 Line 35: “substructres” -> “substructures”

Page 5 Line 11: “solar wind dynamics pressure” -> “solar wind dynamic pressure”

Page 8 Table 2: I would suggest using histograms instead to present the information presented in Table 2 so it would be easier for readers to get the latitudinal trend for each value.

Page 8 Line 5: It would be better to give a brief description of the “superposed epoch analysis” and explain more detailedly on how exactly you implement the method.

Page 22 Figure 2: “solar wind dynamics pressure” -> “solar wind dynamic pressure”

Page 25 Figure 5: “fice stations” -> “five stations”

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Interactive comment on Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2019-151>, 2019.