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# *Interactive comment on* "Magnetic dipolarizations inside geosynchronous orbit with tailward ions flow" *by* Xiaoying Sun et al.

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Comments: This paper reports the observations of two dipolarizations linked to a substorm registered by the two THEMIS spacecraft E and D located one inside the geosynchronous orbit and the other tailward. The paper is well written. Essentially I agree with the other referee that some more check should be done to prove the double dipolarization occurrence. Also there is some confusion with the Electric field directions and flow velocity directions. I will recommend it for publication after these revisions.

Responses: We thank you for your comments that help improving the manuscript. In light of your comments, we have revised the manuscript accordingly.

Comments: Minor comments line 33 NESP should be NEPS line 69: the z coordinates



of the two s/c here are probably wrong, since both are in the plasma sheet, in fact in the figures 3 and 4 there are different values. there are many typos and missing spaces within the manuscript.

Responses: Thank you for these comments. According to your suggestion we have revised the spacecraft orbit data shown line 69 as "locations of these two spacecraft in SM coordinates are (-6.10, -0.06, 0.43) R_E for TH-D, and (-8.26, -2.28, 0.99) R_E for TH-E, respectively". During this intense geomagnetic activity, the magnetic equator plane tilt towards southward, the small Z coordinate of TH-E does not mean it is located in the plasma sheet based on the plasma density, temperature and beta value as in Figure 4 in our paper. We have checked space between the words throughout the text.

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