

Interactive comment on “Satellite drag effects due to uplifted oxygen neutrals during super magnetic storms” by Gurbax S. Lakhina and Bruce T. Tsurutani

Anonymous Referee #3

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This paper addressed on uplifted oxygen neutrals due to the prompt penetrating electric fields in the dayside ionosphere, and discussed the drag force on a low Earth orbiting satellite during super magnetic storms, like the Carrington superstorm. The physical process of the uplifted oxygen ions and atoms was concisely documented, and the satellite drag force was reasonably estimated. However, I wonder if the ionospheric atmosphere in the night side may be depressed during the penetration of electric field, and then the drag force may be reduced in the night side. Therefore, the drag force averaging one orbiting cycle may be compensated in some sense.

Interactive comment on Nonlin. Processes Geophys. Discuss., <https://doi.org/10.5194/npg->

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