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Interactive comment on "The increase of curvature radius of geomagnetic field lines preceding a classical dipolarization" *by* Osuke Saka

Anonymous Referee #1

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The author proposes a new idea on the cause of magnetospheric substorms. He proposes that the fast plasma flows from the magnetotail changes the curvature of magnetic field lines at the geosynchronous distance. This produces an electric field which can generate Bostrom's current system. I did not follow every detail of his mathematical analysis, but it seems reasonable.

If the author has a chance to revise the paper, he might discuss the relationship between the fast plasma flows and the occurrence of magnetospheric substorms.

Interactive comment on Ann. Geophys. Discuss., https://doi.org/10.5194/angeo-2019-119, 2019.

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Discussion paper