The energy-balance aspects of magnetospheric substorms

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Magnetospheric substorm is the manifestations of the changes of the plasma environment and the electric current systems that are caused by the increase of solar wind Maxwell stresses and occur over the wide region of the Magnetosphere with a time scale of an order of hour. This study is devoted to the investigation of the energy of substorm. We examined the MHD total energy density W of the magnetospheric plasma and its time derivative. We have determined substorm-associated characteristics in the dayside,dawn and dusk franks, and the night side magnetosphere by the Geotail data.

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