



Magnetospheric Energy Input during Intense Geomagnetic Storms in SC23

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Geomagnetic storm connections to solar eruptive phenomena in solar cycle 23 (SC23) have been intensively studied and it is a subject of great importance because of their various effects in our day-to-day life.

We analyse the energy transfer from the solar wind into the magnetosphere during intense geomagnetic storms defined by $Dst \leq -150$ nT. There were 29 intense storms during SC23. We will use the Akasofu parameter (Akasofu, 1981) to compute the ϵ function and study its time profile. We compute the energy input efficiency during the main phase of the geomagnetic storm.

We compute the magnetospheric energy input using the formula introduced by Wang et al. (2014) and compare these results with the ϵ function for the geomagnetic storms of October 29-30, 2003.