



Is there a joint response in the magnetosphere, as seen by different geomagnetic indices, during a geomagnetic storm?

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It has been pointed out that the currents generated by solar wind-magnetosphere dynamo evolve linked after an entry of energy from the solar wind. However, besides the wide use of indices of geomagnetic activity in the study of the solar-terrestrial relationship, only a few studies on their interrelationships have been published. The purpose of this presentation is to show the results of a study undertaken to better understand the relationships between the magnetospheric currents developed during intense storms. For that we compare the behavior of several geomagnetic indices with the purpose of relating the magnetospheric response at different regions of which they are representative. Then we have analyzed the AE and PCn indices for the auroral region, the SYM-H and ASY-H indices for the low latitudes, and the am index as representative of the global state of the perturbed magnetosphere.