

A comparison of interplanetary parameters and geomagnetic indices during intense and very intense magnetic storms

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Geomagnetic storms are great disturbances on the Earth's magnetic field, which are conventionally measured by the Dst geomagnetic index. Of great importance to space weather environment is the development of intense ($-250 < Dst < -100$ nT) and very intense magnetic storms ($Dst < -250$ nT). One point of current research is the study of the interplanetary causes and consequent magnetospheric response during these two classes of storm. For each storm class, we have determined the interplanetary parameters such as E_y , B_z , and the coupling function ε , and geomagnetic indices, Dst/Sym , Asy , AE , and K_p . The main goal of this study is to distinguish the interplanetary causes and the magnetospheric responses of intense and very intense magnetic storms. We discuss here the criteria which characterize the space weather phenomena during different disturbed levels.