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Poster
Geomagnetic Storms are the major disturbances in earth's magnetosphere produced due to transfer of massive amount of energy from solar wind to space environment around the Earth. The interaction between solar wind and magnetic field of earth increase the plasma level in earth. This results in increases the movement of electric current in the earth outer atmosphere. In case of classical magnetic storm, horizontal component of magnetic field shows abrupt change in with respect to storm sudden commencement and decrease rapidly with ring current intensity, which is recognized as main phase. To analyze the impact of major geomagnetic on space environment around the sun we have analyze the Interplanetary magnetic field (IMF), solar wind plasma and Dst index parameter during during solar cycle 24 with statistical methods. The interrelationship between these parameters should be analyzed using scattered plot and cross correlation techniques. Result of our analysis shows that Bz component of interplanetary magnetic field correlated well with geomagnetic Dst index, but solar wind plasma velocity shows comparably less correlation with Dst index. We do not found any direct relation between By component of interplanetary magnetic field and Solar wind density and velocity data.

Keywords: Interplanetary magnetic field, Disturbance storm time index, plasma parameters, solar cycle
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