

**CORRELATION ANALYSIS OF SOLAR WIND EVENTS AT
DIFFERENCE HEMISPHERIC SYMMETRY BASED ON
GEOMAGNETIC PARAMETERS**

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ABSTRACT

The sun, the earth, and the space in-between are all connected. It creates many of space activities such as solar wind. Solar wind is responsible for such phenomena as geomagnetic storm, sub storm and aurora. Geomagnetic storm disturbances have been affecting electrical systems on the ground such as pipelines corrosion, power systems blackouts, railway tracks problems and disrupt cell phone communication systems. This paper presents the analysis of magnetic data by using raw data taken from Magnetic Data Acquisition System (MAGDAS) station at difference hemispheric which is at Onagawa, Japan station for Northern region and Manado, Indonesia station for equatorial region. Three components were used to analyze this variation which is H, D, and Z component. There are three events due to solar wind that are chosen to be analyzed by using MATLAB program. The events are on 9th April 2006, 14th April 2006, and 19th August 2006. The change in magnetic field ΔH was calculated to show the variation in H parameter. The events are then compared with Disturbance storm-time (Dst) that are taken from Kyoto University, Japan. The MAGDAS data are in .MGD file format. The results are useful to a significant contribution of knowledge in earth's magnetic field that related to the space activities.

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