

## Characteristics of SFEs observed at the dip-equator CPMN stations

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Many scientists demonstrated that geomagnetic fields observed at ground stations during a solar flare (it is called "geomagnetic solar flare effects" or "SFEs") were similar in direction to the Sq field [e.g. Nagata, 1952]. Radiations from the solar flares are believed to enhance the ionospheric conductivity while keeping its latitudinal and longitudinal pattern, and to lead to the Sq pattern with larger magnitudes. SFEs at equatorial stations show typically positive (negative) H-component variations at local times where the normal (counter) electrojet is usually observed [e.g. Rastogi et al, 1999].

In the present paper, 113 events of SFEs were identified by using data from the dip equator stations of Circum-pan Pacific Magnetometer Network (CPMN) [Yumoto et al, 2001] during the period of 1998-2006, and their characteristics are clarified in details. In the examination, we found two events in which the H components of SFEs showed negative variations around noon. This result indicates that the SFE events cannot be explained by the above-stated simple model of normal and counter electrojets. We need a new model to understand the negative SFEs observed at the equatorial stations.