



Solar and Interplanetary Causes of Extremely Intense Substorms During Superstorms

Bruce Tsurutani (1), Rajkumar Hajra (2), Ezequiel Echer (2), and Jesper Gjerloev (3)

(1) California Institute of Technology, Jet Propulsion Laboratory MS169-506, Space Plasma Processes, Pasadena, United States (bruce.tsurutani@jpl.nasa.gov), (2) INPE, Sao Jose dos Campos, SP, Brazil, (3) Johns Hopkins Applied Physics Laboratory, Laurel MD, USA

We have begun a study of particularly intense substorms that occur during superstorms. We will relate the solar cycle dependences of events, whether they are externally or internally triggered, and their relationship to other factors such as magnetospheric preconditioning. If time permits, we will explore the details of the events and whether they are similar to regular (Akasofu, 1964) substorms or not.

These intense substorms are an important feature of space weather since they may be responsible for power outages.