

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



MIS026-08

Room:201B

Time:May 24 10:15-10:30

TGF producing lightning properties deduced from ELF transient

Yuta Fujiki^{1*}, Yasuhide Hobara¹, Robert Holzworth², Masashi Hayakawa¹

¹The Univ. of Electro-Comms., Japan., ²University of Washington, USA.

Recent finding of terrestrial gamma ray flashes (TGF) suggests the generation of the strong electric field from thunderstorm activity, leading to the energization of electrons till 20MeV range. However characteristics of the causative lightning of TGF have not been well understood yet. In this paper, the electrical properties such as a polarity, peak amplitude and charge moment change of TGF producing lightning are studied by using ELF transients observed in Moshiri, Hokkaido, Japan. Lightning properties associated with TGF are compared with other lightning that do not accompany TGF identified by World Wide Lightning Network (WWLLN).

Keywords: Terrestrial gamma ray flashes, ELF transient, Charge moment change, Current moment, RHESSI