

PEM036-P02

Room: Convention Hall

Time: May 25 17:15-18:45

## Ionospheric currents and micropulsations caused by the lower atmospheric disturbances

Toshihiko Iyemori<sup>1\*</sup>, Kent Taira<sup>1</sup>, Mitsuru Matsumura<sup>1</sup>

<sup>1</sup>Graduate School of Science, Kyoto Univ.

It has been assumed that the short period magnetic variations such as micro-pulsations observed on the ground or in the upper atmosphere are caused by the solar wind or magnetospheric plasmas. However, a low frequency geomagnetic pulsation observed in Thailand just after the great Sumatra earthquake in 2004 was interpreted as the effect of the ionospheric current generated by the acoustic wave caused by the earthquake (Iyemori et al., 2005). Our research also revealed that not only the Mt. Pinatubo eruption in 1991, typhoons, and total eclipses but also the ordinary lower atmospheric disturbances generated small amplitude magnetic variations having the frequency of the vertical acoustic resonance between the ground and the thermosphere. In this paper, we show these results of ground observation and the results of satellite data analysis.

Keywords: lower atmospheric disturbance, ionospheric current, acoustic resonance, magnetic variation