

## Ionospheric current identified by propagation characteristics of Pc5 and DP2

Hiroki Matsushita<sup>1\*</sup>, Akimasa Yoshikawa<sup>1</sup>, Teiji Uozumi<sup>2</sup>, Akihiro Ikeda<sup>3</sup>

<sup>1</sup>Graduate School of Sciences, Kyushu University, <sup>2</sup>International Center for Space Weather Science and Education, <sup>3</sup>Kagoshima National College of Technology

It is well known that DP2 variation observed at the equator is a result of constructing of ionospheric current between polar regions and equator [Kikuchi et al., 1996]. Furthermore, Motoba et al., [2002] mentioned that global Pc5 can be caused by current systems similar to DP2 current system in Ionosphere. However, mechanism and propagation path of such global current especially between polar regions and equatorial ionosphere are not well known.

To clarify connection path of ionospheric current system between polar and equatorial ionosphere, we analyzed global distribution of ULF pulsations using MAGDAS/CPMN network [K. Yumoto et al., 2006 and 2007]. In this study, we especially focus on polarization, amplitude and LT dependence of ULF pulsations. The electric field data observed by HF radars are used for identification of Cowling effect at the dip-equator and dawn-dusk terminator.