

## 講演情報

[EE] Eveningポスター発表

セッション記号 P (宇宙惑星科学) » P-EM 太陽地球系科学・宇宙電磁気学・宇宙環境

### [P-EM16] [EE] Physics of Inner Magnetosphere Coupling

2017年5月24日(水) 17:15 ~ 18:30 ポスター会場 (国際展示場 7ホール)

Earth's inner magnetosphere, which includes in particular the ring current, plasmasphere and radiation belts, is a complex dynamical region of geospace comprising various coupled plasma populations. Charged particle behavior is governed by large-scale magnetic and electric fields, and a wide variety of electromagnetic waves. This session invites observational, modeling, and theoretical studies of all aspects of inner magnetosphere physics. Studies related to auroral and sub-auroral physics are also invited. Results from the ERG project including ground-based observations and modeling are eagerly anticipated. Investigations related to observations from the NASA Van Allen Probes, now in their 5th year of traversing the Earth's radiation belts, are also particularly welcome. Research topics of interest include, but are not restricted to, electron and ion dynamics, particle transport, wave-particle interactions, global simulations, and cross-coupling of plasma populations. Studies of geomagnetic storm and substorm effects on the inner magnetosphere are welcome. Observations from MMS, THEMIS, Cluster, and ground-based instruments are also invited.

### [PEM16-P20] Polarization characteristics of Pc1 pearl structure observed at Kawatabi, Osaki, Miyagi prefecture

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キーワード : Pc1, pearl, pulsation, ELF, magnetic variation, polarization

Pc1 geomagnetic pulsations are often found in the ELF magnetic field data obtained by two sets of induction magnetometers EL-12 constructed by Tierra Technica Co. Ltd, placed in North-South and East-West directions at Kawatabi, Osaki, Miyagi prefecture Japan. The magnetic latitude of the observation site is N30 and the L value is about 1.3.

Although the data coverage was not very good, we have found 7 examples of pearl structures, within the frequency range of 1 to 5 Hz. They showed temporal variation of bandwidth such as 0.3 to 1.2 Hz, or 0.9 to 1.8 Hz, forming pearl structures in dynamic spectra. The frequency itself also varied with time: they rose in 3 cases found in pre-midnight, and fall in 4 cases in the pre-midnight region.

Polarization of the magnetic variation was examined by using Fourier components of N-S and E-W magnetic field components. We have 4 events for which E-W and N-S observations were available. The polarization was steady and right-handed for one event, but for the rest, it was variable. One event showed left-handed polarization at higher frequency and right-handed in the lower. Other two events showed alternative polarizations pearl to pearl.