

S001-25

A 会場 : 11/5 AM2 (10:45-12:30)

11:50~12:05

#中村 紗都子¹⁾, 三好 由純²⁾, 小路 真史²⁾, 北原 理弘²⁾

⁽¹⁾IAR&ISEE, ⁽²⁾名大 ISEE

Roles of ion hole and hill in a triggering process of EMIC rising-tone emissions

#Satoko Nakamura¹⁾, Yoshizumi Miyoshi²⁾, Masafumi Shoji²⁾, Masahiro Kitahara²⁾

⁽¹⁾IAR&ISEE, ⁽²⁾ISEE, Nagoya Univ.

Since the first report by Pickett et al., 2010, it has been recognized for the important role of EMIC rising-tone in the magnetospheric dynamics. We have investigated by in-situ observations and simulations, and roughly understood the generation mechanism of its rising-frequency spectrum based on the nonlinear wave growth theory. However, it has still been unclear what causes repetition of rising tones and its fine-structure such as sub-packets. We show EMIC rising tones detected by THEMIS, RBSP, and ARASE, and summarize the feature of its fine structure. We find some patterns in the time evolution of the starting frequency and the repetition period in a series of EMIC rising tones, and the starting frequency of EMIC rising tones gradually decreases below the initial frequency of the triggering wave. We discuss the possible mechanism on the pattern which may be caused by a simultaneous generation of the ion hill and hole. This study may contribute to the further understanding of the nonlinear wave-particle interaction in space plasma.