R006-34
A 会場 ：9/27　AM2 （10:45-12:30）
10:45〜11:00

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Pressure and temperature distribution of ions/electrons in inner magnetosphere during CIR/CME driven storms using Arase satellite

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Geomagnetic storms are caused by corotating interaction regions (CIRs) associated with high-speed solar wind streamers (HSSs), and coronal mass ejections (CMEs). Due to the large-scale solar wind structures, there are significant differences of the storm evolutions between these two storm drivers. These differences involve the dynamics of radiation belts, the ring current, the Earth's plasma sheet, magnetospheric convection, and the saturation of the polar cap potential etc. It has been shown that ion and electron distributions of CME/CIR-driven storms are different, especially for recovery phase [Miyoshi and Kataoka, 2005]. The plasma temperature and rate of ion heating in the plasma sheet are important elements of understanding how the dynamics of the ring current and the magnetosphere vary between these two types of storms. We will examine statistically the spatial and temporal distribution of electrons and ions pressure/temperature during main phase, early recovery and late recovery phases for the selected CIR and CME storms using in situ plasma/particle data obtained by Arase during 2017-2022.