R006-41
A 会場 ：9/27　PM1 （13:45-15:30）
14:00〜14:15

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Evolution of electron temperature anisotropy associated with injections and its relation to chorus wave excitation

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Recent explorations of the inner magnetosphere reveal that whistler chorus waves play an essential role in accelerating and losing high-energy electrons. It is believed that electron temperature anisotropy is the free energy of chorus wave excitation and is provided by injections from the magnetotail. However, since there are fewer plasma observations in the inner magnetospheric region, the reality of the distribution of the electron temperature anisotropy is not well understood. Based on a statistical analysis of electron temperature anisotropy in the inner magnetospheric region using data obtained from low-energy and medium-energy electron instruments (LEP-e and MEP-e) onboard Arase (ERG), we confirmed that the boundary of the temperature anisotropy distribution is consistent with the marginal condition of the temperature anisotropy instability. Further, we also examined the contribution of injections to temperature anisotropy by focusing on data obtained during injection events. Our preliminary result does not show that electron injections distribute around the marginal condition of the instability. The result is partly because we evaluated the temperature anisotropy of electron injections using the average value of 10 minutes time scale, and temperature anisotropy associated with injections might be smeared out. This presentation will discuss the time and spatial evolution of temperature anisotropy associated with electron injections and its relation to instability conditions.