

## Thermal and suprathermal components observed in the electron energy distribution in the lower ionosphere

# Manabu Shimoyama[1]; Takumi Abe[1]

[1] ISAS/JAXA

In order to investigate the energy budget in the ionosphere it is indispensable to understand the process of energy transfer from photoelectron to thermal electron, which is closely related to plasma heating, atmospheric airglow and so on. However there is no observation of the electron energy distribution function in the energy transition region (2-5 eV) especially in the lower ionosphere, which is mainly attributable to the difficulties in developing the instruments. On that account we have developed the Suprathermal Plasma Analyzer (SPA) to measure the electron energy distribution function for suprathermal electrons. The SPA was installed in the sounding rocket S-310-37 and the electron energy distribution were measured at the height from 100 km to 138 km. In this presentation, we focus on the suprathermal components of electron energy distribution.