

# Observation of Electron temperature and density by Fast Langmuir Probe onboard S-310-33

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The sounding rocket, S-310-33 was launched from Uchinoura Space Center in January 18, 2004, which is supposed to play a major role in WAVE 2004 campaign, which was coordinated to investigate a generation mechanism of wavy structure of the airglow in the lower thermosphere. Fast Langmuir probe (FLP) was installed as one of the science instruments on the rocket, and it can provide the temperature and density of thermal electrons by using a standard technique to analyze what-is-called Voltage-Current characteristics. It is confirmed that the FLP started detecting thermal electrons and ions after being deployed from the payload section. It is found from the preliminary analysis of the FLP data that the electron density has an abrupt increase at about 90 km and wave-like structures above 100 km. We present a result of the further analysis on such a characteristic structure of the electron density as well as the corresponding variation of the electron temperature.