

Preliminary result of Fast Langmuir probe measurement in the lower ionosphere by the sounding rocket S-310-38

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The sounding rocket S-310-38 experiment was carried out in order to probe the three-dimensional structure of lower ionosphere by using radio waves, plasma probes and optical measurement. The rocket was launched from Uchinoura Space Center in Japan on February 6th in 2008, after confirming the appearance of sporadic E layer by ionogram. A glass-sealed langmuir probe was installed on the rocket and successfully measured the i-v characteristics at the height from 90 km to 157 km. The obtained data show the existence of high plasma density region at the height about 100 km during both upleg and downleg of the rocket. In this presentation, we will discuss the energetics of sporadic E layer by using the calculated electron temperature and density.