

Sounder Echoes Observed in the Low Altitude Inosphere by using the S310-28 Rocket

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The sounder experiment (SDR) was carried out onboard the S310-28 rocket which was launched on February 2, 10:30 (JST) for the main purpose of the function test of LRS to be installed on the SELENE satellite. The results of altimeter mode observation with 10MHz sounder frequency show significantly longer delay time (more than 50 micro sec) than it was expected for vertical incident ray path of the sounder RF pulses. The results of the plasma sounder mode observation at the altitude of about 125 km showed strong multi-hop echoes from the bottom side of E-region ionosphere, however, there are no signal from the sea surface. It can be interpreted by assuming strong field aligned irregularity of ionospheric plasma as a guide for the RF plasma wave propagation.