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S-310-40号機による電離圏下部領域の電波伝搬特性観測

Measurement of radio waves propagation characteristics in the lowest ionosphere by S-310-40 sounding rocket

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S-310-40 sounding rocket experiments will be carried out at Uchinoura Space Center (USC) in 20 10. The purpose of this experiment is the investigation of characteristics of radio wave propagation in the lowest ionospheric region. The LF/MF band radio receiver is installed on S-310 -40 sounding rocket. This receiver measures the intensities of four radio waves transmitted from NHK Kumamoto broadcasting station (873 kHz), two navigation stations (405 kHz and 238 kHz) and JJY signal from Haganeyama radio station (60 kHz). Furthermore impedance probe and Langmuir probe are installed on the rocket, too. The approximate electron density profile can be determined from the comparison between the propagation characteristics of radio waves measured by the sounding rocket and those calculated by the full wave method. We investigate the structure of the lowest ionospheric region using the propagation characteristic of radio waves.

キーワード:電波伝搬特性,電離圏下部領域,ロケット観測

Keywords: radio wave propagation characteristic, the lowest region of ionosphere, sounding rocket measurement