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STATUS UPDATE FOR GNSS-RO/R CONSTELLATION MISSION IN TAIWAN

Abstract

A Taiwanese global navigation satellite system reflectometry (GNSS-R) mission satellite, Triton, was launched in October 2023 to collect reflected/scattered GNSS signals. In the GNSS-R mission, the reflected signals can be processed to form delay Doppler maps (DDMs) so that the various geophysical parameters of Earth's surface, such as roughness, ocean wind speed, and soil moisture can be retrieved. Meanwhile, the operational Taiwan and the U.S. collaborative FORMOSAT-7 (FS-7) GNSS radio occultation (GNSS-RO) mission is exploited to profile the ionosphere and atmosphere to better understand space weather and weather prediction. Therefore, the GNSS-RO/R mission is the next step of the GNSS remote sensing mission in Taiwan as expected. The status of GNSS-RO/R mission design will be updated. In addition, the paper will show preliminary results of the Triton GNSS-R mission, which could facilitate the development of the GNSS-RO/R mission payload.