



## **Taiwan/TriG Radio Occultation Process System (TROPS): A Brief Introduction of Atmospheric Productions**

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Global Positioning System (GPS) Radio Occultation (RO) technique has been used to investigate the Earth's atmosphere since 1990s. In 2006, Taiwan has launched six low Earth orbit (LEO) satellites as a RO constellation mission, named FORMOSAT-3 /COSMIC (F-3/C). F-3/C mission can release 1500-2500 data sets per day for both neutral atmosphere and ionosphere. With the advent of Global Navigation Satellite System (GNSS) in ten years and FORMOSAT-7/COSMIC-2 (F-7/C-2) mission, 12 LEO satellites are planned to be launched and deployed in two clusters of 6-satellites into the designated low and high inclination orbits in 2017 and 2020(TBD), respectively. The amount of RO data set will increase to about 8000 set per day with the using of GNSS TriG (GPS, Glonass, Galileo) receivers. The first phase of FS-7 mission is designed to low inclination (24 deg) orbit to improve the ability of server weather forecasting, like typhoon and monsoon rainfall around tropical region. The second is high inclination (72 deg) for global distribution. In order to observe better water vapor profiles, the 4x3 antennas arrays will be on board to receive weak signals which pass through low troposphere around earth surface. This report will introduce the status of F-7/C-2 mission and atmospheric part of occultation data process software TROPS.