

EARTH OBSERVATION SYMPOSIUM (B1)
International Cooperation in Earth Observation Missions (1)

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INTRODUCTION TO FORMOSAT-7 MISSION

Abstract

FORMOSAT-7/COSMIC-2 is a joint program between Taiwan and US to serve as the follow-on program of FORMOSAT-3/COSMIC. This mission aims to collect atmospheric/ionospheric soundings globally through a constellation system of 12 satellite. Although FORMOSAT-3/COSMIC was not expected to be an operational mission, its data have been well recognized and injected into various numerical weather prediction models by several major weather forecasting centers. Hence, FORMOSAT-7/COSMIC-2 is further defined as an operational constellation system to continue the provision of Global Navigation Satellite System (GNSS) Radio Occultation (RO) data to the global users. In this paper, the framework and mission architecture of the FORMOSAT-7 /COSMIC-2 joint program are introduced. The role and responsibility of the joint team to be implemented by National Space Organization (NSPO) in Taiwan and National Oceanic and Atmospheric Administration (NOAA) in US are also elaborated. The mission baseline and the top-level system requirements have been established to fulfill two essential requirements: (1) globally homogeneous data distribution; and (2) low data latency. System architecture and mission design will be addressed as well. Finally, the design concept for a NSPO-built satellite that NSPO plans to develop indigenously in parallel to this joint mission is briefly introduced.