

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

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COSMIC-2: AN INTERNATIONAL COLLABORATION TO ADVANCE TERRESTRIAL AND SPACE
WEATHER REMOTE SENSING

Abstract

The Constellation Observing System for Meteorology, Ionosphere and Climate (COSMIC-2) is a joint US-Taiwan mission focused on advancing terrestrial and space weather remote sensing using radio occultation (RO) technology. The primary payload on each of the 6 COSMIC-2 satellites is the Tri-GNSS Radio occultation Sensor (TGRS), developed by the Jet Propulsion Laboratory (JPL), that represents the state of the art RO sensor that can provide data for operational numerical weather prediction and ionospheric models through measurements of upper atmospheric refractivity and total electron content (TEC) across the earth's limb. Two secondary sensors, the Ion Velocity Meter and the RF Beacon, will provide additional ionospheric data. COSMIC-2 is currently scheduled for launch in the second quarter of 2019. This presentation will provide an overview of the COSMIC-2 mission and its sensors, the contributions of the international partnership behind it, plans for Calibration and Validation of the sensor data, and a review of early data from the mission.