26th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
Constellations and Distributed Systems (7)

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CYGNSS, AN 8-MICRO SATELLITE CONSTELLATION, ENTERS EXTENDED MISSION

Abstract

The NASA EV-2 Cyclone Global Navigation Satellite System (CYGNSS) measures the ocean surface wind field with unprecedented temporal resolution and spatial coverage, under all precipitating conditions, and over the full dynamic range of wind speeds experienced in a Tropical Cyclone (TC). It does so by combining the all-weather performance of GNSS bistatic ocean surface scatterometry with the sampling properties of a satellite constellation. Late during CYGNSS' prime mission, science investigations related to general oceanography, soil moisture, wetlands, and snow were begun. As CYGNSS enters its extended mission, the operations team needs to adapt to the needs of the science team. The adaptations relate to increased science data rate (increasing downlink needs), updated telemetry, and changes to the general science commanding. Also during extended mission, the operations team will enhance their Fault Detection System (FDS) to lessen the likelihood of safing during an anomaly.