

P04

**The Cyclone Global Navigation Satellite System (CYGNSS) – Mission Overview and
Wind Product Assessment**

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The Cyclone Global Navigation Satellite System (CYGNSS) is a new NASA Earth science mission scheduled to be launched in 2016 that focuses on tropical cyclones (TC) and tropical convection. The mission's two primary objectives are the measurement of ocean surface wind speed with sufficient temporal resolution to resolve short time scale processes such as the rapid intensification phase of TC development, and the ability of its surface observations to penetrate through the extremely high precipitation rates typically encountered in the TC inner core. The mission's goal is to support significant improvements in our ability to forecast TC track, intensity and storm surge through better observations and, ultimately, better understanding of inner core processes. CYGNSS meets its temporal sampling objective by deploying a constellation of eight satellites. Its ability to see through heavy precipitation is enabled by its operation as a bistatic radar using low frequency GPS signals. The mission will deploy an eight spacecraft constellation in a low inclination (35°) circular orbit to maximize coverage and sampling in the tropics.

Sensitivities of reflected GPS signals to ocean wind based on TechDemoSat-1 GNSS receiver as it applies to CYGNSS mission will be discussed and presented.