

High temporal resolution tropospheric wind profile observations at NASA Kennedy Space Center during Hurricane Irma

The NASA Kennedy Space Center (KSC) operates a 48-MHz Tropospheric/Stratospheric Doppler Radar Wind Profiler (TDRWP) on a continual basis generating wind profiles between 2-19 km in the support of space launch vehicle operations. A benefit of the continual operability of the system is the ability to provide unique observations of severe weather events such as hurricanes. On the evening of 10 September 2017, Hurricane Irma passed within 100 miles to the west of KSC through the middle of the Florida peninsula. The hurricane was responsible for power outages to approximately 2/3 of Florida's population. This paper will describe the characteristics of the tropospheric wind observations from the TDRWP during Irma, provide a comparison to previous TDRWP observations from Hurricane Matthew in 2016, and discuss lessons learned regarding dissemination of TDRWP data during the event.