

JPSS PROVING GROUND SEMINAR

TITLE	Joint JPSS-GOES-R Tropical Cyclone Satellite Data Assimilation Discussion
SPEAKER	Mark DeMaria, Chief, Regional and Mesoscale Meteorology Branch NOAA/NESDIS/STAR, Fort Collins, CO Fuzhong Weng, Chief, Satellite Calibration and Data Assimilation Branch NOAA/NESDIS/STAR, College Park, MD Jun Li and Christopher Velden, Senior Scientists UW/CIMSS, Madison, WI Tomislava Vukicevic, Research Meteorologist NOAA/OAR/AOML, Miami, FL
DATE & TIME	Monday, November 18, 2013 12-1pm Eastern Time
LOCATION	Aerospace Building 8 th Floor Conference Room 10210 Greenbelt Rd Lanham, MD 20706
ABSTRACT	<p>Improving forecasts of tropical cyclone (TC) track and intensity remains a challenge in numerical weather prediction. This is partially due to the difficulty in prescribing accurate initial conditions of the TC structure and its surrounding environment. Since a TC spends most of its lifetime over the ocean, initial conditions are crucially dependent on the accurate assimilation of data from satellites. Given the increasing space and time resolution of satellite data becoming available, it is necessary to seek optimal methods to exploit the use of these datasets in data assimilation systems.</p> <p>Results from three projects to improve TC model forecasts through the utilization of satellite observations will be presented. These projects use operational and research versions of the Weather Research and Forecast (WRF) model, coupled with advanced data assimilation systems. The impact of direct radiance assimilation of microwave observations from a number of Low Earth Orbiting (LEO) satellites will be described, as well as results from assimilating Atmospheric Motion Vectors (AMVs) derived from geostationary satellites. The improvements in the AMVs from the higher sampling rates expected from GOES-R are being evaluated</p>

	using rapid scan imagery from the current GOES. The effect of the satellite data in combination with aircraft observations will also be presented, as well as Observing System Simulation Experiments (OSSE) to estimate the impact of future in situ and satellite data.
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FILES	Available upon request