

Early Transition and Use of VIIRS and GOES-R Products by NWS Forecast Offices

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The Visible Infrared Imaging Radiometer Suite (VIIRS) on the NPOESS Preparatory Project (NPP) satellite, part of the Joint Polar Satellite System (JPSS), and the ABI and GLM sensors scheduled for the GOES-R geostationary satellite will bring advanced observing capabilities to the operational weather community. The NASA Short-term Prediction Research and Transition (SPoRT) project at Marshall Space Flight Center has been facilitating the use of real-time experimental and research satellite data by NWS Weather Forecast Offices (WFOs) for a number of years to demonstrate the planned capabilities of future sensors to address particular forecast challenges through improve situational awareness and short-term weather forecasts. For the NOAA GOES-R Proving Ground (PG) activity, SPoRT is developing and disseminating selected GOES-R proxy products to collaborating WFOs and National Centers. SPoRT developed the a pseudo-Geostationary Lightning Mapper product and helped in the transition of the Algorithm Working Group (AWG) Convective Initiation (CI) proxy product for the Hazardous Weather Testbed (HWT) Spring Experiment,. Along with its partner WFOs, SPoRT is evaluating MODIS/GOES Hybrid products, which brings ABI-like data sets from existing NASA instrumentation in front of the forecaster for everyday use. The Hybrid uses near real-time MODIS imagery to demonstrate future ABI capabilities, while utilizing standard GOES imagery to provide the temporal frequency of geostationary imagery expected by operational forecasters. In addition, SPoRT is collaborating with the GOES-R hydrology AWG to transition a baseline proxy product for rainfall rate / quantitative precipitation estimate (QPE) to the OCONUS regions. For VIIRS, SPoRT is demonstrating multispectral observing capabilities and the utility of low-light channels not previously available on operational weather satellites to address a variety of weather forecast challenges. This presentation will discuss the results of transitioning these products to collaborating WFOs throughout the country.