

SHORT-TERM PREDICTION RESEARCH AND TRANSITION (SPORT) PROJECT PROVIDES DATA PRODUCTS IN SUPPORT SOUTH CAROLINA FLOODS (email to:

michael.goodman@nasa.gov/256-961-7890): Jonathan Case (ZP11/ENSCO, Inc.), Bradley Zavodsky (ZP11), Andrew Molthan (ZP11), Kevin McGrath (ZP11/Jacobs), and Jordan Bell (ZP11/UAH), all members of the NASA Short-term Prediction Research and Transition (SPoRT) Center, provided near real-time simulations of soil moisture from the NASA Land Information System (LIS) and Noah land surface model, including coverage of the central and eastern United States at 3-km grid spacing. The near real-time LIS model provides National Weather Service (NWS) forecast offices with experimental land surface fields that can aid short-term forecasting and situational awareness. The LIS product outputs are driven by inputs from radar-estimated precipitation and other atmospheric forcing fields, with work underway to integrate NASA's Global Precipitation Measurement Mission precipitation and Soil Moisture Active Passive satellite instrument improvements, as part of NASA Applied Science Early Adopter activities for both missions. For the recent South Carolina flood event, NWS forecasters across the southeast were provided with the relative soil moisture maximums. During the record setting rainfall event, soil moisture across the South Carolina reached the 75-100% relative capacity. The higher relative soil moisture maximums are indicative of soil that is saturated and has little capacity to absorb additional rainfall. Therefore, most of this water will run off into streams and rivers leading to the catastrophic flooding in South Carolina. These products were provided to the US Geological Survey's Hazards Data Distribution System to be used by state and federal partners in support of flood response efforts.

HIRAD MEASURES HURRICANE JOAQUIN NEAR BAHAMAS AND BERMUDA

(email to: daniel.j.cecil@nasa.gov/256-961-7549): A NASA WB-57 aircraft carrying NASA MSFC's Hurricane Imaging Radiometer (HIRAD) and Yankee Environmental Systems' High Density Dropsonde System (HDSS) conducted four science flights over Hurricane Joaquin from October 2-5. Joaquin was a borderline Category 3-4 hurricane near the Bahamas on Oct. 2, a high-end Category 4 on Oct. 3, a weakening Category 2 hurricane near Bermuda on Oct. 4, and levelled off at Category 1 intensity Oct. 5 north of Bermuda. These flights were conducted for the Office of Naval Research's Tropical Cyclone Intensity (TCI) experiment.

SPoRT BRIEFING TO ASSOCIATE ADMINISTRATOR GRUNSFELD (email to:

brad.zavodsky@nasa.gov/256-961-7914; andrew.molthan@nasa.gov/256-961-7474; jason.e.burks@nasa.gov/256-961-7661; or gary.jedlovec@nasa.gov/256-961-7966): During his visit to MSFC, the Short-term Prediction Research and Transition (SPoRT) project provided Associate Administrator for the Science Mission Directorate, Dr. John Grunsfeld, with an overview of the SPoRT Project. Dr. Grunsfeld was briefed on SPoRT's unique Earth Science research and transition to operations capabilities in remote sensing, lightning, modeling and data assimilation, and disaster response as well as recent project accomplishments working with that latest NASA Earth Science data from the Soil Moisture Active Passive (SMAP) and Global Precipitation Measurement (GPM) missions. Dr. Grunsfeld expressed enthusiasm at the societal benefits that SPoRT generates for NASA through transition of data and capabilities to partners at the National Weather Service and was especially interested in applications of real-time Geostationary Lightning Mapper on GOES-R that add value to the operational forecast process of severe weather monitoring when used in conjunction with existing radar data.