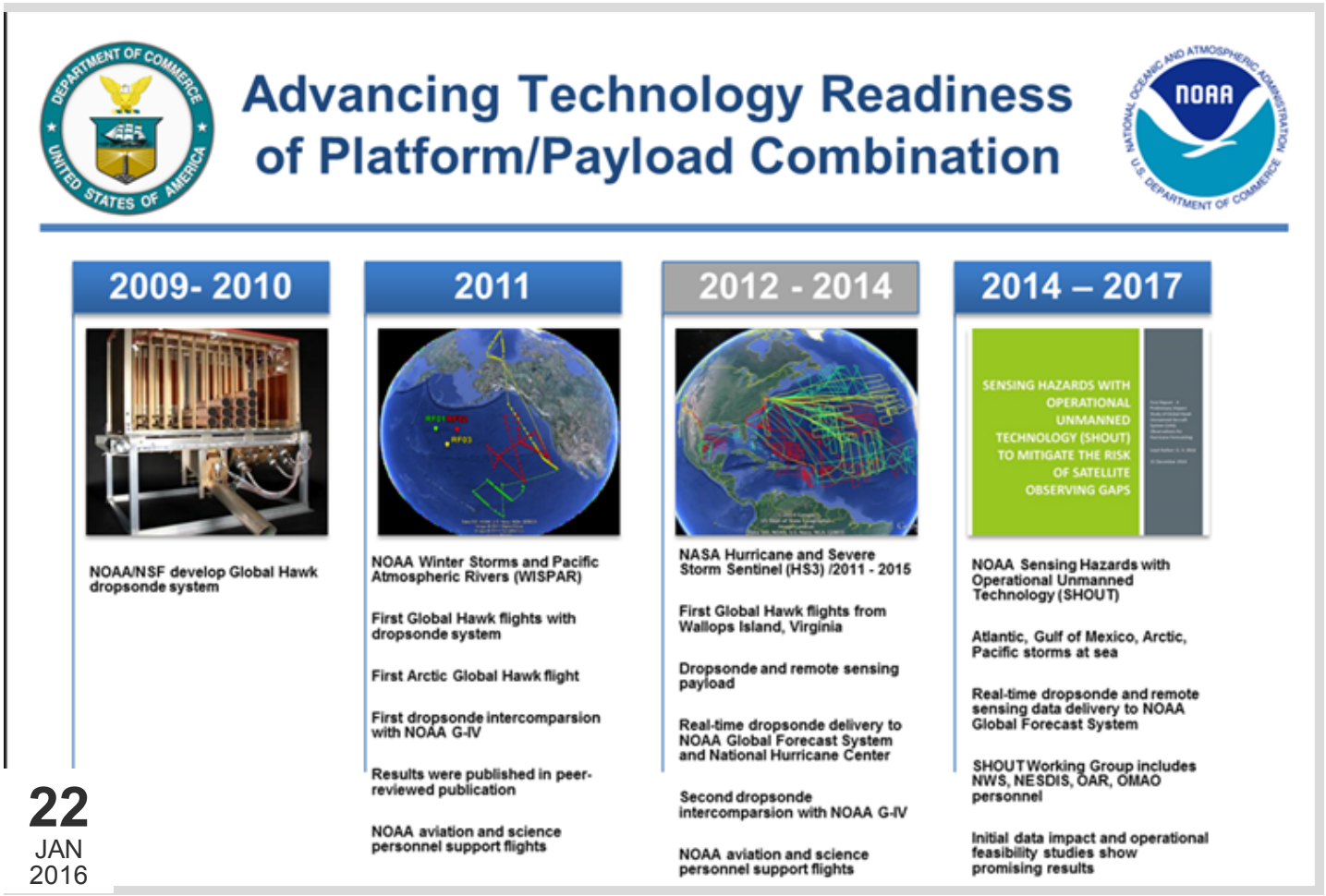

NOAA UAS Program Briefs at the American Meteorological Society 2016 Conference

UAS Program Director, Robbie Hood, presents SHOUT, Global Hawk's El Nino Rapid Response and UAS R2O

The American Meteorological Society (AMS) Annual Meeting is the world's largest yearly gathering for the weather, water and climate community. It brings together international expertise from a diverse set of scientific disciplines in the atmospheric sciences. This year's "Earth System Science" theme emphasized the growing knowledge of the academic and research communities about our Earth system bringing together the physical, chemical, and biological study of the Earth. This year's meeting was held in January 10-14 in New Orleans.

Robbie Hood, the NOAA Unmanned Aircraft System (UAS) Program Director, briefed the AMS on the ongoing assessments of the feasibility of civilian applications of UAS to address critical gaps in the broad NOAA observing system. A key focus area of the NOAA UAS Program has been evaluating how unmanned aircraft observing technologies may augment observations needed by the National Weather Service (NWS) to improve prediction and warning of high impact weather events. The NOAA UAS Program continues to orchestrate field demonstrations of UAS concept of operations, data impact studies including observing system simulation experiments, and cost and operational feasibility studies to conduct comprehensive evaluations of UAS weather observing strategies. Development of a transition roadmaps to mature viable UAS observing strategies for transition into operations has been a key goal of the UAS Program since its inception.

A high altitude, long endurance UAS observing strategy using a Global Hawk is making significant progress thanks to partnerships with NOAA's operational stakeholders, other Federal agencies, academia, and private industry. This effort is a component of the Sensing Hazards with Operational Unmanned Technology (SHOUT) project that was initially funded by the Disaster Relief Appropriations Act of 2013 with subsequent funding provided by the NOAA UAS Program. The Global Hawk component of SHOUT will evaluate data impact, cost effectiveness, and operational efficiency of vertical atmospheric profiles of temperature, moisture, wind speed, and wind direction to assist with high impact weather forecasting of storms at sea in the event of a satellite observing gap.

Another component of SHOUT is an examination of the feasibility of low altitude UAS to provide land use / land cover information of river regions for pre-flood analysis and to provide damage assessment information during post-flood events. This project component has begun with a pilot study conducted near the lower Pearl River region by the Northern Gulf Institute, which is a NOAA Cooperative Institute, and the NWS Lower Mississippi River Forecast Center.

The newest component of SHOUT, currently in the brainstorming phase, is how to use small vertical takeoff and landing UAS along with low altitude fixed wing UAS as a network for Targeted Autonomous In situ Sensing and Rapid Response (TAISRR) observations for the planetary boundary layer. The NOAA UAS Program will be working with NOAA laboratories and field forecast offices, academia, and private industry to examine the viability of an autonomous TAISRR network to provide high resolution meteorological and air quality information useful to short-term regional forecasts of high impact weather events.

All AMS presentations are attached below.

Is this is an issue of potential concern?	
This item has high visibility	
Geographic Location (Relevant region, city location)	New Orleans, LA
Partnering offices	OAR, NOAA UAS Program, OMAO, AOC
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