SHOUT Cost Study/Operational Assessment

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SHOUT Objectives

- **Objective 1** - Quantify significance of unmanned observations to high impact weather prediction through Observing System Experiments (OSE) Observing System Simulation Experiments (OSSE).

- **Objective 2** - Quantify the cost and operational benefit of unmanned observing technology for high impact weather prediction through detailed analysis of life-cycle operational costs and constraints versus scientific benefit.
SHOUT 2016 Hurricane Rapid Response

Efficiency Goals to Reduce Cost of Operations
• Optimize Tropical Cyclone targeting in 2016
• Mitigate the risks associated with a short campaign
• Develop approach to staffing and operations not previously used during Global Hawk missions
  – reduced staffing during operations for mission science and instrument teams
  – release staff during no fly days when feasible
  – do not deploy until target identified
• Demonstrate Platform Flexibility
• Advance transition to operations
Operations

• Aug 1- Sept 30 2016 Mission Ready
  • Rapid Response Standby (2x period of operations over SHOUT 2015)

• On call at AFRC until target identified
  • Option to fly targets in Gulf of Mexico, western Caribbean, and western North Atlantic from AFRC until deployment to WFF

• No deployment to WFF until target identified
  • Cost savings for travel, personnel
  • Increase productivity
Cost Analysis/Operational Assessment

• 2015 SHOUT Cost Report examines both startup and annual costs
• 2016 Shout Cost Report revised operating cost for project planning and execution based on longer term costing information
  – Based on recommended NASA/NOAA partnership
• Improved platform performance/reliability since HS3
• Staffing efficiencies reduced costs (Per-diem/salaries)
Cost Analysis/Operational Assessment

• Demonstrate future operational model for Global Hawk deployment (as opposed to research campaigns)

• Operational model adopted during the HRR campaign
  – employ a very different operating model from past experiments
  – maximize the opportunity of capturing suitable scientific targets
  – reduce costs
  – improve efficiencies
Next Steps

• The final evaluation report combining the data impact and cost and operational feasibility studies will be delivered by 30 June 2017

• Results of this project will be used by NOAA to determine whether or not development of a high altitude UAS observing strategy should continue as a satellite data gap mitigation tool