

# 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