



Tropical Cyclone Studies at NSF

NSF sponsored research

basic research, process studies, discovery-driven science

- Intellectual merit
- Broader impacts

Hurricane Related Core Science Programs

- Physical and Dynamic Meteorology (PDM)
- Climate and Large-scale Dynamics (CLD)

Field programs

- Science (PDM, CLD)
- Facilities (LAOF)
- Execution (NCAR, other NSF facility centers)



Centralized solicitations

Prediction and Resilience to Extreme Events (PREEVENT)

PREEVENTS is the Geosciences version of the overall NSF Risk & Resilience Research Initiative

Risk and Resilience Funding by Directorate

(Dollars in Millions)

	FY 2015 Actual	FY 2016 Estimate	FY 2017 Request	
CISE	\$5.50	\$6.00	\$6.00	CRISP
ENG	12.00	12.00	14.00	CRISP
GEO	-	17.75	17.75	PREEVENTS
MPS	-	0.50	0.50	CRISP
SBE	1.84	4.90	4.90	CRISP
Total	\$19.34	\$41.15	\$43.15	

Totals may not add due to rounding.



FY17: 55 proposals in TC related, Lv-1 panel conducted, now in Lv-2 panel

New facilities and development projects (1)

A-10 Storm Penetrating Aircraft



- Endurance: 4 hours
- Range: 1300 km
- Ceiling: 35-40,000ft
- Payload: 400 Lb

Possible NSF MREFC (Major Research Equipment and Facilities Construction) proposal

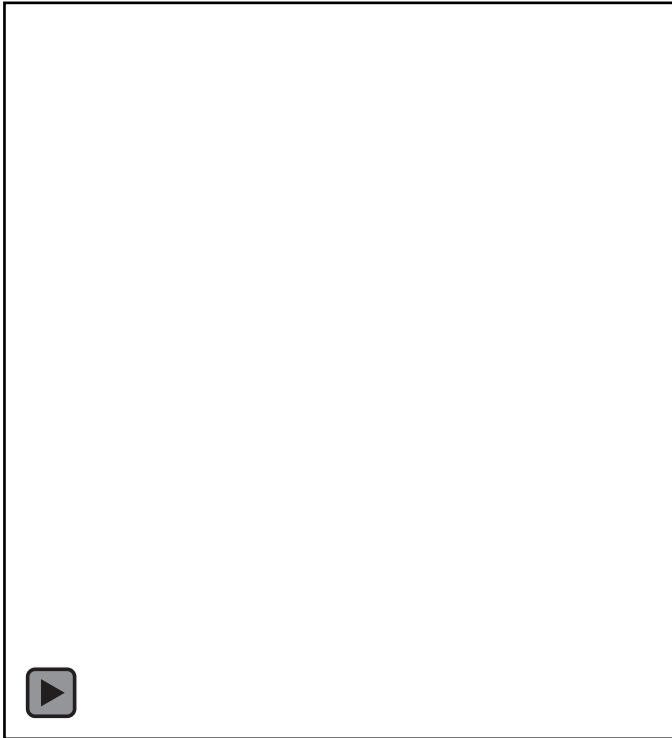
AMS annual meeting side panel

NSF/NCAR Workshop (May 22-24, 2017)



New facilities and development projects (2)

Airborne Phased Array Radar (APAR)



- 4-panels
- C-band
- Dual-polarization
- Combined reflectivity and velocity

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Executive Order



National Strategic Computing Initiative

Lead agencies: DoD, DoE, NSF

Development agencies: NASA, NOAA, DHS, FBI, NIH



- Data assimilation workshop (April 6-7, NSF)
- Cloud modeling workshop (May 31-June 2, at UCAR)

Strategic Objectives

- Accelerate delivery of capable exascale computing
- Increase technology coherence between modeling and data
- Extend beyond limits of current semiconductor technology
- Establish a sustained high-performance computing ecosystem
- Support public-private partnerships