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WHERE DISCOVERIES BEGIN

## Atmospheric Sciences and TC-related R2O





## Atmospheric Sciences and TC-related R2O

### Activities Related to Tropical Cyclone Research

#### Basic Science Programs:

- Physical and Dynamic Meteorology
- Climate and Large-Scale Dynamics

#### Field Programs:

- Science
- Facilities
- Operations

#### Rapids:

- Rapid Response Science
- Rapid Response Facilities







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## Atmospheric Sciences and TC-related R20

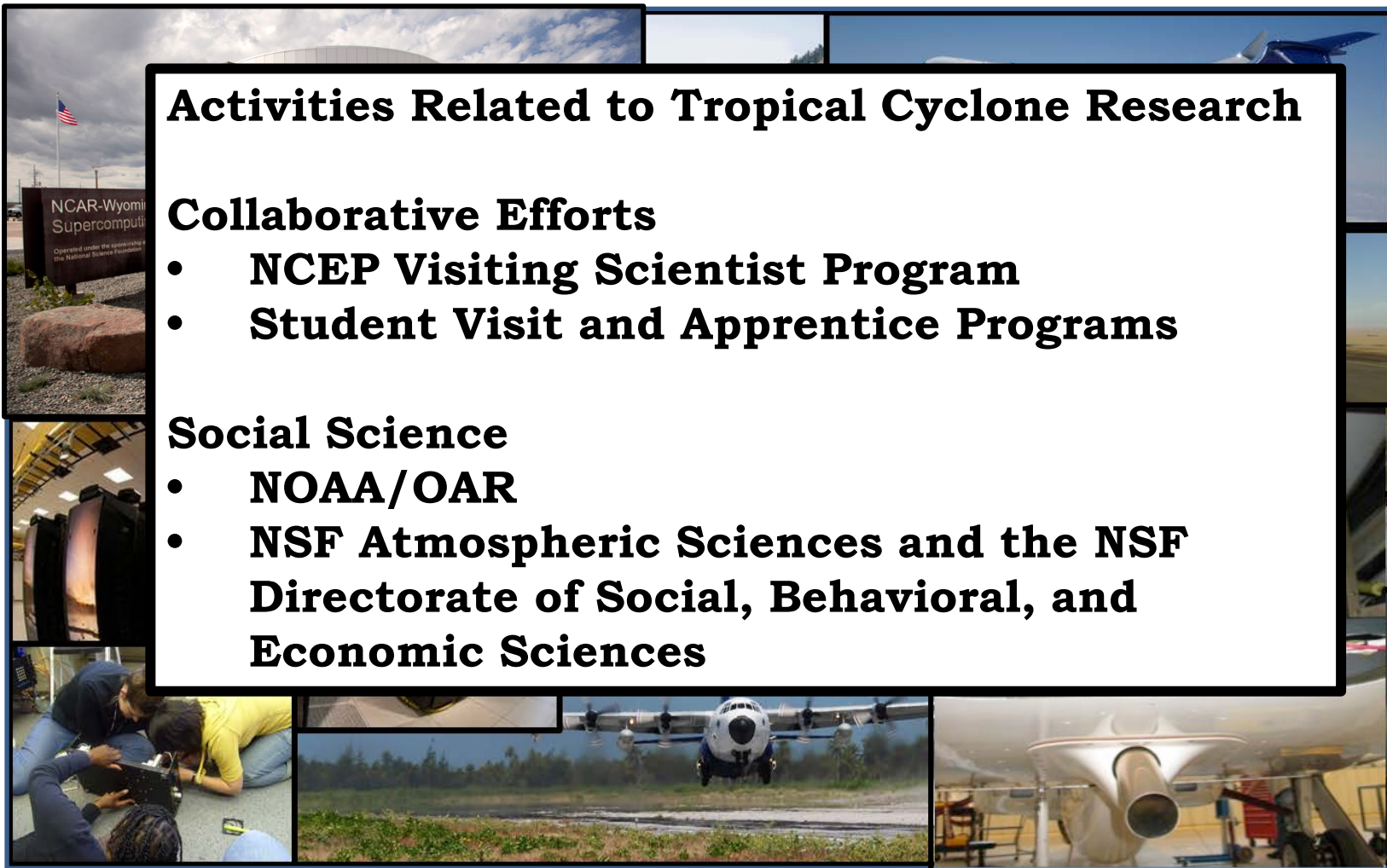
### Activities Related to Tropical Cyclone Research

#### Collaborative Efforts

- NCEP Visiting Scientist Program
- Student Visit and Apprentice Programs

#### Social Science

- NOAA/OAR
- NSF Atmospheric Sciences and the NSF Directorate of Social, Behavioral, and Economic Sciences





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## Atmospheric Sciences and TC-related R20

### Activities Related to Tropical Cyclone Research

#### New Facilities:

#### A-10 Storm Penetrating Aircraft



**Endurance: 4 hours**

**Range: 700 nm/1300 km**

**Ceiling: 35 - 40,000 ft**

**Multiple wind hardpoints, nose boom,  
400 lb payload in gun bay**





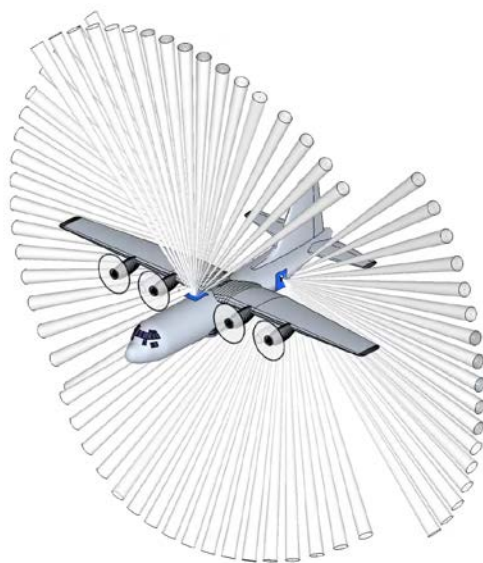
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### Activities Related to Tropical Cyclone Research

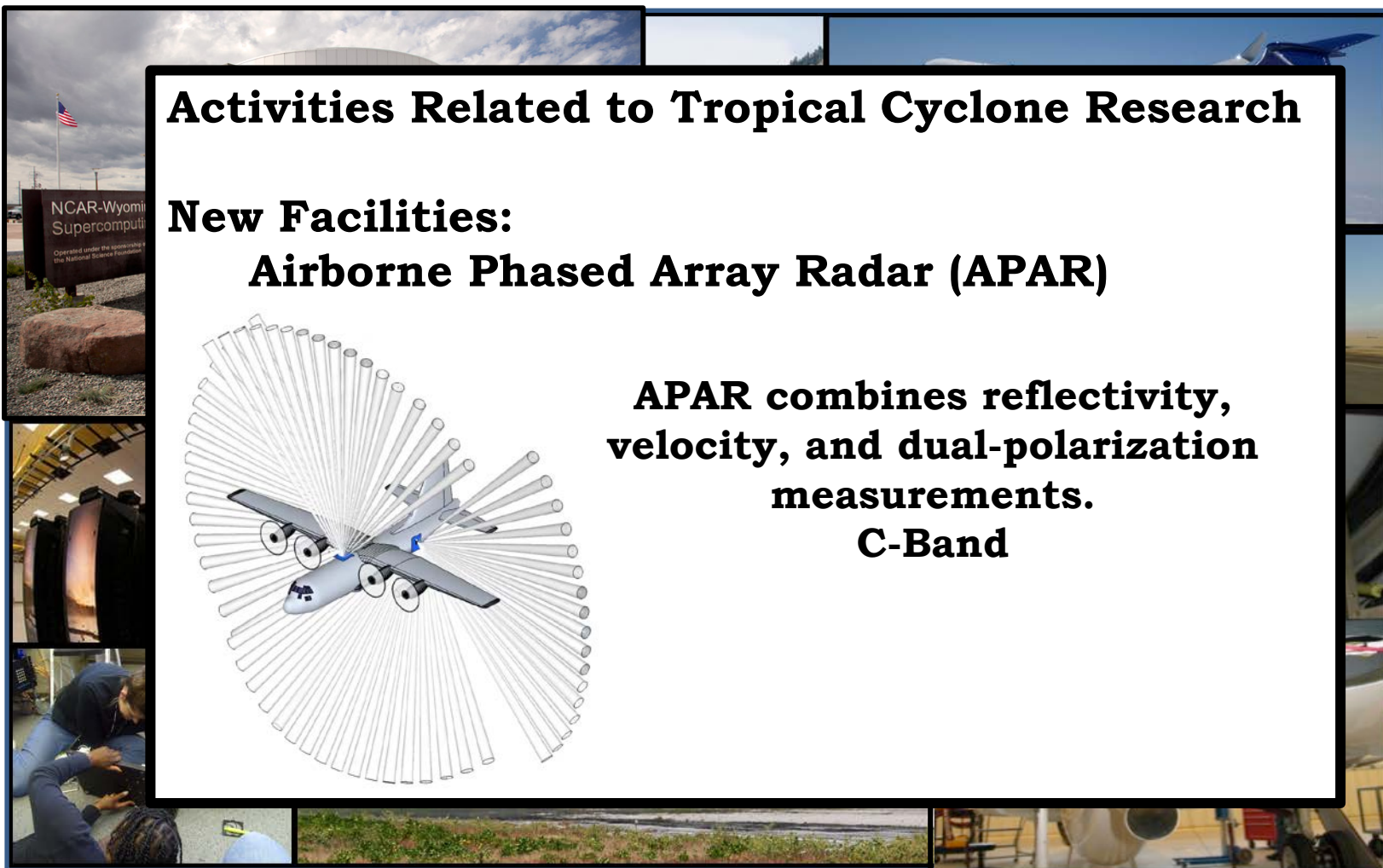
#### New Facilities:

#### Airborne Phased Array Radar (APAR)



**APAR combines reflectivity,  
velocity, and dual-polarization  
measurements.**

**C-Band**





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## Atmospheric Sciences and TC-related R2O

### Activities Related to Tropical Cyclone Research

#### New Programs:

#### Prediction and Resilience to Extreme Events (PREEVENTS)



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NSF 15-117

#### Dear Colleague Letter: Prediction of and Resilience against Extreme EVENTS (PREEVENTS)

September 9, 2015



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**Executive Order:  
Creating a National Strategic Computing Initiative  
(NSCI)**



**Lead agencies: DoD, DoE, NSF  
Deployment Agencies: NASA, NOAA, DHS, FBI, NIH**

**Strategic Objectives:**

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





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## National Strategic Computing Initiative

