



# CONvective TRansport of Active Species in the Tropics

Project Debrief

15 January – 28 February 2014

Guam

# CONTRAST project debrief

- Logistics, ops center support overview
- - Location, FBO operations, flight hours, schedule overview
- - Aircraft performance and instrumentation performance overview
- - PI comments
- - Lessons learned
- - Open discussion

# CONTRAST Science Team



Laura Pan  
NCAR



Ross Salawitch  
University of Maryland



Elliot Atlas  
University of Miami

The central graphic features the word "CONTRAST" in large, blue, serif capital letters at the top. Below it is a large oval containing a photograph of a research aircraft flying over a tropical island with a prominent mountain peak and turquoise water. Surrounding this central image are several logos of the participating institutions: NSF (National Science Foundation) with a sunburst icon; University of Miami with its orange and green "U" logo; Texas A&M University Corpus Christi with a blue bird logo; NCAR (National Center for Air Research) with its blue and white logo; University of Maryland with its red and white crest; University of Colorado Boulder with its gold "CU" logo; Georgia Institute of Technology with its red and white logo; The City College of New York with its purple logo; and Goddard Space Flight Center with its black logo.

**CONvective TRansport of Active Species in the Tropics**  
**Guam, Jan–Feb 2014**

# CONTRAST Institutions

- National Science Foundation
- National Center for Atmospheric Research
- University of Miami
- University of Maryland
- Texas A&M
- University of Colorado
- University of California at Irvine
- University of Hawaii
- Georgia Institute of Technology
- NASA – Goddard Space Flight Center
- The City College of New York

# Coordination with other projects



CAST

UK FAAM



ATTREX

NASA



CONTRAST

NSF-NCAR



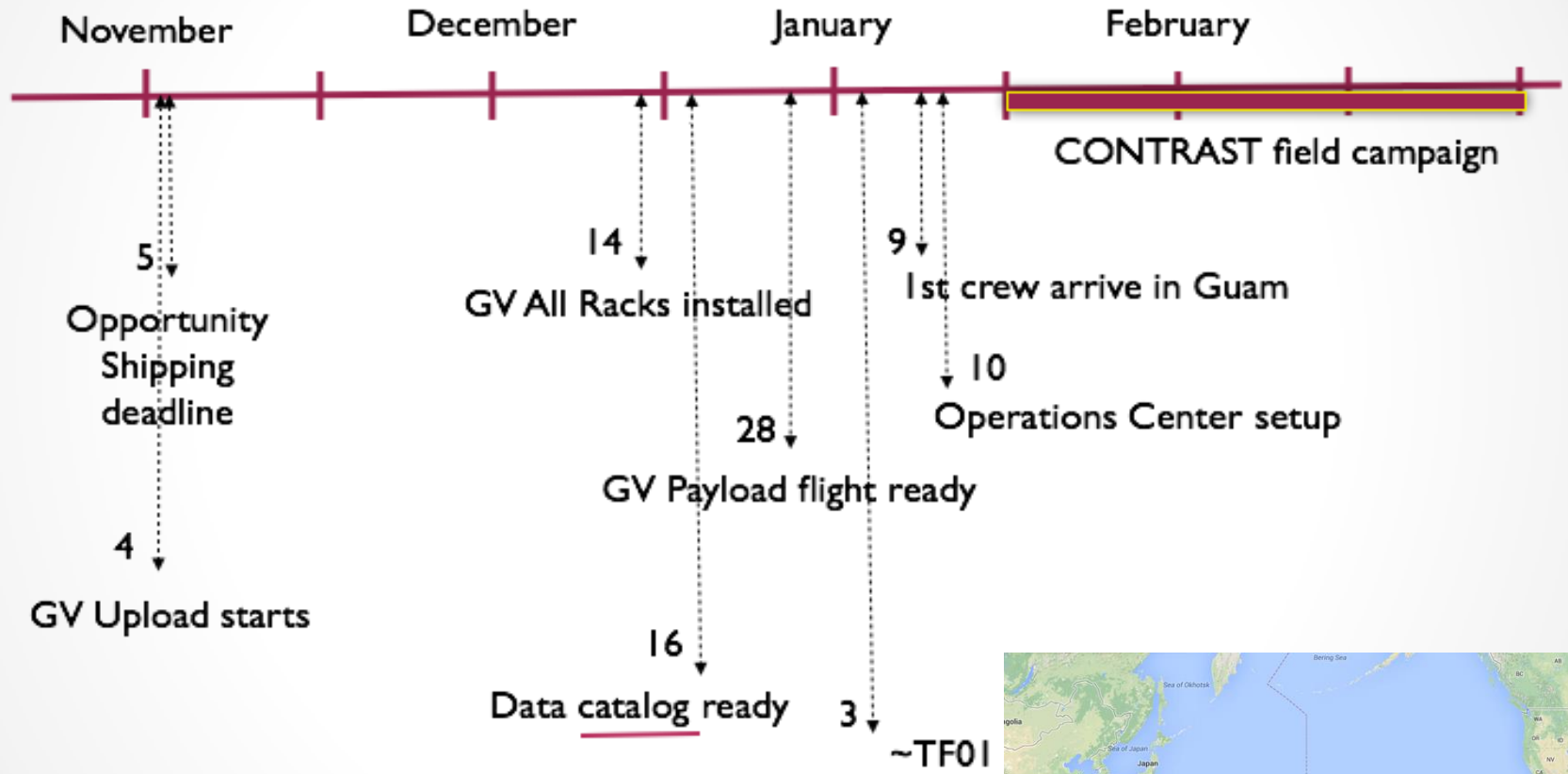
# CONTRAST Science Objectives

## Main Objectives

- Characterize the chemical composition and ozone photochemical budget at the level of convective outflow over the western Pacific during the deep convective season
- Evaluate the budget of organic and inorganic bromine and iodine in the TTL
- Investigate transport pathways from the oceanic surface to the tropopause using the NSF NCAR GV coordinated flights with the BAe-146 and NASA Global Hawk.



# CONTRAST Timeline



November December Planning groups



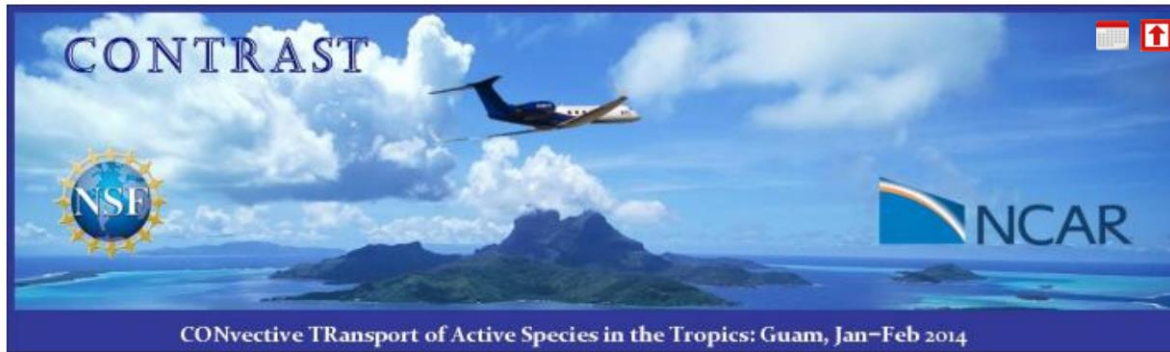
# Logistics

- Overall Project Planning and implementation
- Planning and coordination with collaborating agencies (NASA, FAAM)
  - Logistics with base of operations (Aviation Concepts, GUAM)
- Operations Center (Hilton Guam Hotel)
  - Full support for all project participants
- GV Base of operations: Aviation Concepts





View Edit Revisions



January 15, 2014 to February 28, 2014 Project Location: Guam, Western Pacific

Project Phase: Accepted

Funding Type: NSF Funded

### Project Description:

#### Principal Investigators

- [Elliot Atlas](#) - RSMAS, University of Miami
- [Ross Salawitch](#) - University of Maryland
- [Laura Pan](#) - Atmospheric Chemistry Division/NCAR

The most extensive deep clouds in Earth's climate system develop in the Tropical Western Pacific (TWP) during Northern Hemisphere winter. These clouds pack sufficient energy that, on occasion, they punch through the boundary that separates the lowest atmospheric layer (the troposphere) from the overlying stratosphere. As Earth warms, the intensity of tropical convection will increase. The TWP is the nexus between global warming and large-scale changes in atmospheric composition.

### RELATED PROJECTS

#### NASA - ATTREX



#### FAAM UK - CAST



### GENERAL LOGISTICS

- CONTRAST calendar
- CONTRAST General Logistics
- Operations Center Roster
- Guam Site Survey
- Project Photos!
- Welcome to Guam!

Hilton Hotel

GUAM

FBO

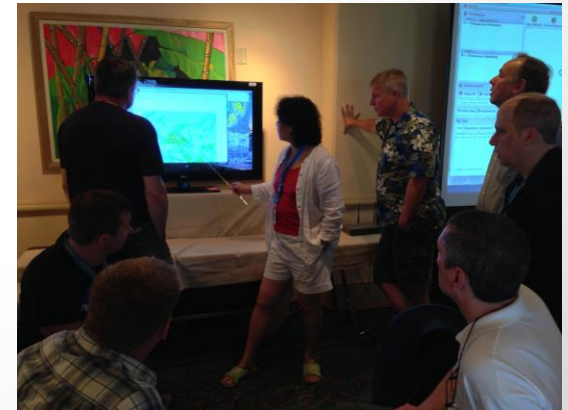
NOAA Weather Center



Google earth

# Operations Center

- ~ 40 CONTRAST participants
  - ~30 CAST team members
  - NASA team members
- 
- Lesson learned
  - EOL Supported with Wifi, Printing, data sharing, etc
  - Sharing of resources between NASA, UK and NCAR
  - Crowded at times
  - Infrastructure worked well for everyone
  - Hilton hotel was excellent on their support





# FBO

- Aircraft support for both NSF/NCAR GV and UK FAAM Bae-146

## Lessons learned

- Excellent support and coordination
- Good working area for instrument PIs
- Operations at the airport were closely monitored by airport authorities because of the large group
- Limited number of badges
- Co-location with the UK Bae aircraft provided for busy operations
- Overall it was handled very well by AC

Mission Coordinator

Reports

Catalog Earth

IRC Chat

Mission Summaries

Communications

Access to Wx and Chem products

