Global Hawk GRIP Summary

GRIP Science Meeting
LA, June 8, 2011

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GRIP Science Payloads

LIP – Lightning Instrument Package
HAMSR – High Altitude MMIC Sounding Radiometer
HIWRAP – High Altitude Imaging Wind and Rain Profiler
DropSonde – NOAA Drop Sonde System (90 sondes)
Additional Sensor Enhancements

2 Cameras  – HDVis and Low Light for Pilot Situational Awareness
Storm Scope  – Lightning Detection Display in the GHOC
Accelerometers  – Real-time Turbulence Time-history Display in the GHOC
Tropical Depression
Frank – Aug 28
AVAPS Flight Status

Status: Certified and Demonstrated

“WISPAR” Flight Summary
- 3 Science Flights
- 69.6 Flt. Hours
- 24,000. nmi
- 190 sondes deployed
First Use of “Deep” Radome
GRIP Mission Planning

The GH Mission Plan –
“Black line” Paths in the GRIP Mission Plan
Payload Op’s – Hurricane Earl
GRIP Flights
Actual Mission Routes flown during GRIP
GH – Hurricane Karl

~16 hours, 20 passes over the eye
Op’s Lessons Learned

“Integration process needs improvement. Need to establish a more defined process with associated schedule and milestones.”
  ◦ Comment: Our process was compromised due to the impact of the late GloPac Mission that pushed the GRIP Integration to a too-tight schedule with no slip. Our process is working fine with HS3 and ATTREX.

“The payload scientists were often given too little “hands–on” time to work–on, prep, and post–flight their instruments on the GH.”
  ◦ Comment: For GRIP we expanded to a 2–shift maintenance team schedule, and on request, we broke our own post–flight inspection rules to give PI’s quick access to their data cards after the aircraft came back in the hangar. HS3 & ATTREX have been funded for a 3–shift maintenance team schedule.

“Global Hawk project really needs to come up with an updated, accurate and useful ‘Investigator's Handbook’.”
  ◦ Comment: This is in work. However, there was no known impact on GRIP due to this issue. With our three other documents that we provide PI’s, and the on–site lab visits we perform, we are unaware of any confusion or delays that resulted from the lack of this single document.
Looking Forward...
Completed CDR
Shipment to L-3Com in June
Delivery to DFRC in September ‘11
PayMOF (Payload Ops) Trailer

CDR at Vendor in June
Delivery to DFRC in August ‘11
New Nadir Payload Location

New Fairing

HIRAD
Current NASA GH Fleet

Two Operational Aircraft
TN871, TN872

Three “new” Aircraft
TN873, TN874, TN876