Lead Project Scientist

Storm or Project Isaac **Experiment type** NHC-tasked
Flight ID 20180913H1 **Mission ID** 0309A

Preflight

X 1. Participate in general mission briefing.

X 2. Determine specific mission and flight requirements for assigned aircraft from the Field Program Director.

X 3. Contact HRD members of crew to:
   a. Assure availability for mission.
   b. Review field program safety checklist
   c. Arrange ground transportation schedule when deployed.
   d. Determine equipment status.

X 4. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.

X 5. Determine from AOC flight director the mission designation and whether aircraft has operational fix responsibility

X 6. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. Provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.

X 7 Report status of aircraft, systems, necessary on-board supplies and crews to Field Program Director.

X 8. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drops.

X 9. Make sure each HRD flight crew member has a life vest.

X 10. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.

In-Flight

____ 1. Confirm from AOC flight director that satellite data link is operative (information).

____ 2. Confirm camera mode of operation.

____ 3. Confirm data recording rate.

____ 4. Request AOC flight director to leave radar in non-sector mode for initial Figure 4.

____ 5. Once at IP, request AOC flight director adjust radar tilt to minimize sea clutter.

____ 6. Complete Lead Project Scientist Form.

____ 7 Check in occasionaly with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

Post flight

____ 1. Debrief scientific crew.

____ 2. Gather completed forms for mission and turn in to data manager at HRD.

____ 3. Obtain a copy of the Dropsonde raw and processed files from the AVAPS operator on thumb drive.

____ 4. Obtain a copy of the radar LF files from the radar technician on thumb drive.

____ 5. Obtain a copy of the tar'ed radar TA files from the radar scientist on thumb drive.

____ 6. Obtain a copy of serial flight data and raw NetCDF file on thumb drive from the data technician.

____ 7 Obtain a copy of SFMR data on thumb drive from the data technician.

____ 8. Obtain a copy of DMT data on thumb drive from the data technician.

____ 9. Report landing time, aircraft, crew, and mission status to the Field Program Director.

____ 10. Determine next mission status, if any, and brief crews as necessary

____ 11. Prepare written mission summary using **Mission Summary** form.

Lead Project Scientist Check List

Storm or Project Isaac **Experiment name** NHC

Flight ID 20180913H1 **Mission ID** _____

A. Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	Holbach	Flight Director	Holmes
Radar/Workstation	Christophersen.	Pilots	Kibbey, Rossi, Mitchell
		Navigator	Urato
Cloud Physics		Systems Engineer	Darby, Lalonde
		Data Technician	Mascaro
Dropwindsonde	Sellwood	Electronics Technician	Greene
AXBT/AXCP		Other	
Photographer/Observers/Guests		AVAPS	Underwood
		IWRAP	Chang, Jelenak

B. Take-off and Landing Times and Locations:

Take-Off: 1025 UTC Location: STX

Landing: 1837 UTC Location: Lakeland

Number of Eye Penetrations: 0

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
13/0900Z	15.4	59.7	1006	40
13/1800	15.5	61.8		35
14/0600	15.5	64.8		35
14/1800	15.5	67.8		35
15/0600	15.4	70.4		35

D. Mission Briefing: NHC tasked fix mission for 1130Z & 1730Z The plan is to begin w/ a N-S then NE-fix-NW leg. We will then fix as many other times as possible prior to needing to depart to return to Lakeland. Isaac is still battling strong shear & continues to outrun any deep convection that develops near the core. Planned flight level 5000' pressure. May need to go to 6000' b/c of terrain on Dominica. 105 nm legs

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E. —Equipment Status (Up ↑, Down ↓, Not Available **N/A**, Not Used **O**)

Equipment	Pre-Flight	In-Flight	Post-Flight	# DATs / CDs /Expendables/ Printouts
Radar/LF				
Doppler Radar/TA				
Cloud Physics				
Data System				
GPS sondes				
AXBT/AXCP				
Ozone instrument				
Workstation				
Cameras				

REMARKS:

- As "center" moved through islands, topography seems to have reduced convection on lee (west) side

Lead Project Scientist Event Log

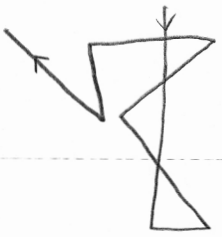
Date 9-13-18 **Flight ID** 20180913H1 **LPS** Holbach

Time	Event	Position	Comments	
1025Z	Takeoff	STX		
1030Z	Vis image center est.	15.42°N 60.54°W		
1049Z	Possible dust	17°21' 63°0'	slightly hazy possibly indicating presence of SAL	
1045Z	Vis image center est	15.34°N 60.58°W		
1100Z	Vis image center est	15.33°N 60.73°W		
1127Z	Sonde	17'3' 60°36'	EP sonde leg 1	NWS #1
1115Z	Vis image note	15.35°N 60.90°W	lowest level centers seem to be decoupling	
1136Z	sonde	16°18' 60°36'	midpoint sonde	HRD #1
1140Z	convection	16°0' 60°40'	small cell of our left wing	
1130Z	vis image center	15.38°N 60.80°W	best estimate very messy	
1149Z	arced band on MMR nose	15°28' 60°44'	MMR depicting eyewall like feature	
1157Z	Center sonde	14°58' 60°45'		NWS #2
1203Z	marked center a second time	14°36' 60°43'	second wind shift. appears it may be	
			an open wave at flight level	
1208Z	NHC center est	15.2°N 60.9°W	forecaster estimate of center based on vis	
1211Z	EP		turning to head to SE EP	
1200Z	vis image center est	15.26°N 60.96°W		
1228Z	EP Sonde		begin SE-NW leg	NWS # 3
1215Z	vis image center est	15.27°N 61.00°W		
1252Z	"center" sonde	15.0°N 61.2°W	CARCAH identified center outbound to NE track 060	NWS #4
1312Z	convection on NE	15°53' 60°24'	passing through some convection in NE quadrant	
1321Z	EP Sonde	16°19' 60°0'	End NE leg turning W	NWS #5
1347Z	EP sonde	16°39' 61°56'	End downwind turn S	NWS #6
1414Z	"center" sonde	14°54' 61°30'	marked fix turning outbound to NW	NWS #7
1442Z	EP sonde	16°9' 62°53'	Science complete	NWS #8

Mission Summary
Storm name
YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)
Lead Project Scientist Holbach
Radar Scientist Christophersen
Cloud Physics Scientist
Dropwindsonde Scientist Sellwood
Boundary-Layer Scientist
Workstation Scientist
Observers (affiliation)

Mission Briefing· (include sketch of proposed flight track or page #)
NHC tasked fix mission



Mission Synopsis. (include plot of actual flight track)
Provided NHC w/ 3 fixes of Isaac 1st fix was based on flight level winds. Last two fixes were locations given to us by NHC. Dropped EP + center sondes for NHC + 1 midpoint sonde on N side.

Evaluation. (did the experiment meet the proposed objectives?)
Yes we were able to provide NHC w/ as many fixes as possible before having to depart to KLAL based on fuel requirements.

Problems:(list all problems)

Expendables used in mission.
GPS sondes . 9
AXBTs 0

Sonobuoys: 0