Lead Project Scientist

Storm or Project Earl 2010 **Experiment name** IFEX/RI
Flight ID 100830H1 **Mission ID** WX07A / EARL5

Preflight

✓ 1. Participate in general mission briefing.

✓ 2. Determine specific mission and flight requirements for assigned aircraft.

✓ 3. Determine from AOC flight director/meteorologist whether aircraft has operational fix responsibility and the mission designation.

✓ 4. 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.

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

✓ 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.

✓ 7. Report status of aircraft, systems, necessary on-board supplies and crews to MGOC in Miami.

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

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

✓ 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. Complete Lead Project Scientist Form.

____ 5. Check in 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 10-s flight listing from the AOC flight director. Turn in with completed forms.

____ 4. Obtain a copy of the radar DAT tapes. Turn in with completed forms.

____ 5. Obtain a copy of serial flight data on thumb drive. Turn in with completed forms.

[**Note**: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]

____ 6. Report landing time, aircraft, crew, and mission status along with supplies (tapes, *etc.*) remaining aboard the aircraft to MGOC.

____ 7. Determine next mission status, if any, and brief crews as necessary.

____ 8. Notify MGOC as to where you can be contacted and arrange for any further coordination required.

____ 9. Prepare written mission summary using **Mission Summary** form.

Lead Project Scientist Check List

Storm or Project Earl 2010 **Experiment name** IFEX / RI

Flight ID 100830H1 **Mission ID** WX07A EARL5

A. Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	GAMACHE	Flight Director	DAMIANO / WILLIAMS
Radar/Workstation	R - LORSOLO W - UHLHORN	Pilots	NEWMAN / SWEENEY MARTIN
		Navigator	BRAKOB
Cloud Physics		Systems Engineer	BOSKO LYNCH
Photographer/Observer /Guests		Data Technician	OLNEY
Dropwindsonde	UHLHORN	Electronics Technician	
AXBT/AXCP		Other	KLIPPEL - FLT ENG.

DARBY, RICHARDS
WERNECKE

B. Take-off and Landing Times and Locations:

Take-Off: 093947 UTC Location: BARBADOS

Landing: 1527 UTC Location: BARBADOS

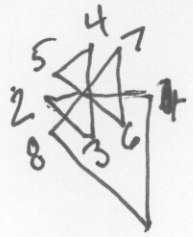
Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

ROTATING FIGURE 4



MONITORING CORE AND IMMEDIATE ENVIROMENT AS EARL APPEARS TO BE INTENSIFYING RAPIDLY

Storm or Project_____ **Experiment name**_____

Flight ID _____ **Mission ID**_____

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:

Problems with hydraulics on 42, apparently in the circuitry somewhere. I asked that if we could continue I would like to go doing a butterfly pattern instead of a rotating figure 4 to keep the mission shorter and still stay in our 4 o'clock takeoff schedule. It is also important to finish in time for 43 to turn around for mission

5.

Lead Project Scientist Event Log

Date 30 AUG 2a0 Flight ID 100830H1 LPS GAMACHE

Time	Event	Position	Comments
093947	T/O	BARBADOS	
10 32	BIG DEVIATION	16°58' 60°~~22~~'	AVOIDING NASTY OUTER BAND CONVECTION
103935	POINT 1 DROP	17°28' 60°40'	178/54 "LOOKS GOOD
1053			FL WIND PEAK @ 73 kts
~1059			FL WIND PEAK at 80 kts
1105	DROP		103 kts FL PEAK
			50 m/s SFMR
1110	6 DROP	18°26' 62°49	965 mb (sonde)
1116	DROP	18°35' 63°12'	~ 35m/s SFMR
1156	DROP	17°36' 64°33'	335/40 kts
1220	SW Eyewall Drop	18°23' 63°13'	
1226	DROP ENE eyewall		Spotty
1228	DROP ENE eyewall	18°40' 62°43'	
1222	6 unfixed	18°30' 63°06'	
	Max wind FL on NE side about 100 kts SFMR ~ 82 kts		
1251	DROP on NE side	1930 61 19	143/70
1313	DROP on N side	20°19' 63°15'	
1335	DROP on N eyewall	18°49' 63°99'	
1339	6 Drop	18°33' 63°20'	
1342	6 (hunted)	18°35' 63°20'	
1345	S Eyewall Drop	18°20' 63°22'	Max FL Winds about 80 kts
1410	S Drop (last)	16°37' 63°21'	230/55

Motion 295 at 13 kts

Max 55 m/s on N side

287, 12

Mission Summary

Storm name

YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)

Lead Project Scientist _____

Radar Scientist_____

Cloud Physics Scientist_____

Dropwindsonde Scientist_____

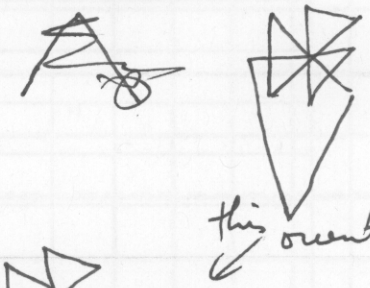
Boundary-Layer Scientist_____

Workstation Scientist_____

Observers_____

Mission Briefing: (include sketch of proposed flight track or page #)

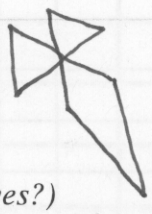
Rotating Fig 4



this orientation

Mission Synopsis: (include plot of actual flight track)

Butterfly Axis =



Evaluation: (did the experiment meet the proposed objectives?)

Yes. Doppler radar worked well. Produced good 3D analyses.

Problems:(list all problems)

One penetration could not be done because of time constraints, resulting from the necessary repair of the hydraulic pump (1 of 3) serving the flight control systems.

Expendables used in mission:

GPS sondes : _____

AXBTs :_____

Sonobuoys: _____