

Lead Project Scientist

Storm or Project TS Earl Experiment name TDR/Ocean Wind
Flight ID 100428II Mission ID WX07A Earl

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 _____ Experiment name _____

Flight ID _____ Mission ID _____

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	Clare	Flight Director	Iain Sears
Radar/Workstation	Muriello/Byton	Pilots	Mark Nelson
		Navigator	Chris Solan
Cloud Physics		Systems Engineer	
Photographer/Observer /Guests		Data Technician	
Dropwindsonde		Electronics Technician	
AXBT/AXCP		Other	

B. Take-off and Landing Times and Locations:

Take-Off: 1948 UTC Location: Barbados

Landing: _____ UTC Location: _____

Number of Eye Penetrations: 4

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

Storm or Project TS Earl Experiment name TDR/Oceanus

Flight ID 100828I Mission ID W.X07A Earl

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:

Pre-flight: All systems go...

~~Instrum~~: Big Blow up @ IP... deviated around 50 first leg (2→3) will be shorter than 105NM ~ 85NM... instead.

- ~~solid~~ solid bed ~ 45 DBZ line ~ 25 NM long
- Peak SE wind N of center ~ 45 kts
- extrip SFC pressure 985
- extra drag on leg 3-4 (dry air)

• ~~IR~~ IR again (all Bill) strong
 • ~~the~~ cold TOPS, lots of convection!
 • NO → very little (some to S+SE) of any
 no features... look @ Mission...

• Convection on S+SE side... several "bad" drops... bedel up most but not all

500
 140
 100
 --- T.O.
 740
 140

 880. 15.5
 1140

 1020

Lead Project Scientist Event Log

Date 12/15/95 Flight ID 1201 LPS C100

Time	Event	Position	Comments
1948	Takeoff	Barbados 13.09 59.44	
20:55	Deviation around TP	14.7N 54.6W	Nash Cincinhu Burst re-IP
21:10	TP drop/re-IP	15.07N 54.30W	PT 1 PT 1
21:15-45	PT 2	15.46 54.42	Mid PT 2
21:20	"Mark" surface	15.7 54.2	20 knots in eye ^{Drift 3}
21:30	Center X	16°28' 54°5'	Visual center!
21:40	No scatter	North of center	Shout 80
21:38	Eye mid point North	16.55N, W 54°46'	Bit early but exactly!
22:15	Mid PT 3-4 (X)	16.?	X in distance and drops
22:21	" " PT Day	16.97 55.63W	Back up for Mid PT
22:29	Turn to 34 + drop	16.8 55.85	Turn + Drop Near center
22:51	Eye (alt 2)	~16°29' 54°9'	990 Sides
22:57	"east eye wall"	~16.6 53.7	27 m/s ray
23:21	eye pt (3-4)	16.72 52.67	"PT 4"
as of 2349	13 drops		
2352	Mid PT NE-SW	17.14 53.99	65 knots @ FL 475 ft
2015	precip falling in	thigh with	storm
00:00	SW "eye wall"	15.77N 55.51W	dropped on the edge of ^{sharp} _{line of} _{prob eye?}
00:00	8k ft	(since pt 4)	4 → 5
00:00	Turn to 6-7	15.44 55.56	Drop
00:30	Shout from North	resulting in	shout (banded)
	Convection found	on S + SE side	
00:30	Shouted by	5-6 ed pt by	Wm. since top pt
	7 will now be	further east	due to storm speed
	slowing down	Somewhat	13 knots vs 17 knots?

Bad? →

13

Mission Summary

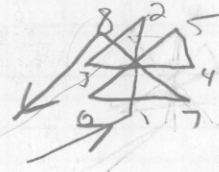
Storm name

YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)

Lead Project Scientist Cove
Radar Scientist Shirley
Cloud Physics Scientist _____
Dropwindsonde Scientist Leighton
Boundary-Layer Scientist _____
Workstation Scientist Leighton
Observers _____

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



Mission Synopsis: (include plot of actual flight track)

105NMi legs
GPS drops end + mid pt, (15)
2 eye drops, (leg 1-2); leg 7-8
Backup as necessary
No AXBT

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

↓ cond...
1st Figure 4 = 12,000ft
2nd " " = 2,000ft
FAST mode 1st
"wedge"

Problems: (list all problems)

- "heat"
- 2 GPS failures

Expendables used in mission:

GPS sondes: 3
AXBTs: _____
Sonobuoys: 0

→ Drop plan:
end points
failures (??)

