Lead Project Scientist

Preflight

- ✓ 1. Participate in general mission briefing.
- ✓ 2. Determine specific mission and flight requirements for assigned aircraft.
- ✓ 3. Determine from field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist unless briefed otherwise by field program director.
- ✓ 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.
- ✓ 5. 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.
- ✓ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGOC in Miami).
- ✓ 7. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- ✓ 7. Make sure each HRD flight crew members have life vests
- ✓ 7. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.
- ✓ 8. Collect "mess" fee ($2.00) from all on-board HRD flight crew members.

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. Report landing time, aircraft, crew, and mission status along with supplies (tapes, *etc.*) remaining aboard the aircraft to MGOC.
- ✓ 3. Gather completed forms for mission and turn in at the appropriate operations center. [Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- ____ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- ✓ 5. Obtain a copy of the radar DAT tapes. Turn in with completed forms.
- ____ 6. Obtain a copy of the all VHS videos form aircraft cameras (3-4 approx.). Turn in with completed forms.
- ____ 7. Obtain a copy of CD with all flight data. Turn in with completed forms.
- ✓ 8. Determine next mission status, if any, and brief crews as necessary.
- ✓ 9. Notify MGOC as to where you can be contacted and arrange for any further coordination required.
- ____ 10. Prepare written mission summary using **Mission Summary** form (due to Field Program Director a week after the flight).

Lead Project Scientist Check List

Storm or Project Helene **Experiment name** SALEX
Date 9-18-06 **Aircraft** N42 **Flight ID** 060918H1

A. Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	Jason Dunion	Flight Director	Marty Mayeux
Radar	Paul Leighton	Pilots	Strong / Ciramontb
Workstation	Paul Leighton	Navigator	Bishop
Cloud Physics		Systems Engineer	McMillan
Photographer/Observer /Guests		Data Technician	Rascoplney
Dropwindsonde	Rob Rogers	Electronics Technician	
AXBT/AXCP		Other	

B. Take-off and Landing Times and Locations:

Take-Off: 1320 UTC Location: Barbados

Landing: 2213 UTC Location: Barbados

Number of Eye Penetrations: 3

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

E. —Equipment Status (Up ↑, Down ↓, Not Available —, 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				
Videography				

REMARKS:

AVAPS lost GPS during drops 2-3

Lead Project Scientist Event Log

Date 9-18-06 **Flight** _____ **LPS** Jason Dunion

Time	Event	Position	Comments
1623	Center (#1)	23.43' 50.27'	Sharp SW vs NE eyewall grad
	965.9mb	SW to NE eyewall	SW 28 m/s SFMR / 33 m/s FL — aligned
			NE 47 m/s SFMR / 36.5 m/s FL — SFMR just inside FL max
1640	Strong band?		Strong updraft/down/up see SFMR spiked +/- 8 m/s
	WP 4		broke into clear sky
2363"N 505'W	Center (#2)	NW-SE inbound	Photos w/ panoramic
~1755Z		NW - SE eyewall	NW 40 m/s SFMR / 40 m/s FL — aligned
			SE 33 m/s SFMR / 41 m/s FL — tilted
	* center passes	1 and 2 indicate	Shear impinging from west
	(ie. vert. aligned eyewall on W, sloped		on E semicircle)
			E
		E-W inbound	eyewall 40 m/s SFMR / 44 m/s FL — tilted
			Wavewall
1914Z	Center (#3)	23 45' 50.43'	
	multiple SAL intrusions		
	on SW outbound	caught multi banded SAL bands G-IV	
	sampled out dry	slot, 42 sampled both	
2148Z	SAL w/ sunset Photos	14.2N 58.92W	

19 T 24.7 54.0
20 T 26.0 57.0

Mission Summary

Storm name

YYMMDDA# Aircraft 42RF

Scientific Crew (4 RF)

Lead Project Scientist JASON DUNION
Radar Scientist Paul Leighton
Cloud Physics Scientist -
Dropwindsonde Scientist Rob Rogers
Boundary-Layer Scientist
Workstation Scientist Paul Leighton
Observers NESDIS

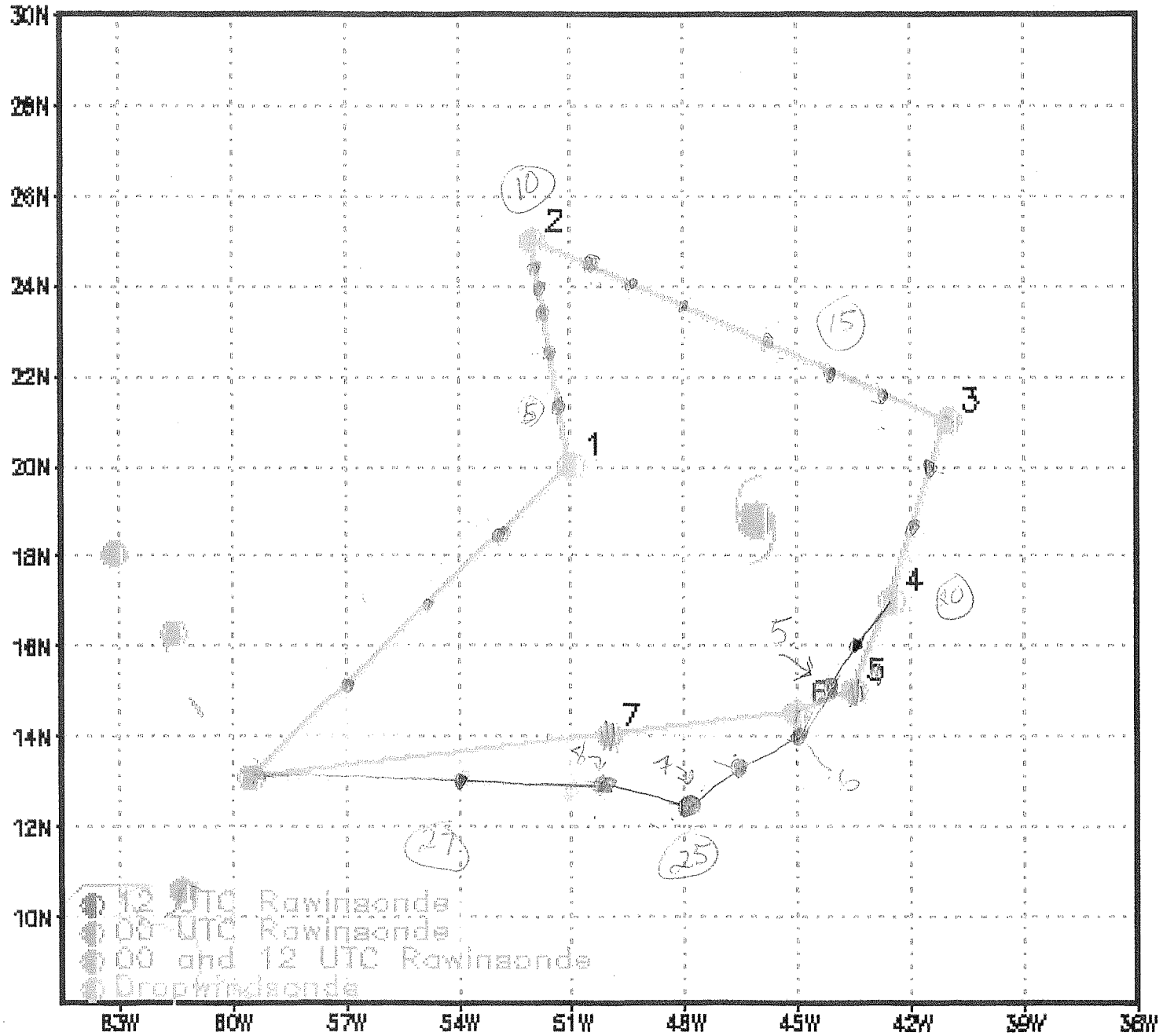
Mission Briefing: (include sketch of proposed flight track or page #)

Mission Synopsis: (include plot of actual flight track)

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

Problems:(list all problems)

Expendables used in mission:
GPS sondes : _____
AXBTs :_____
Sonobuoys: _____



GrADS: COLA/IGES

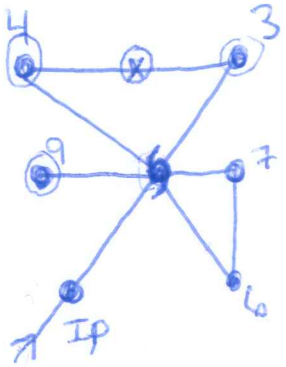
2006-09-18-0

Helene 5am

09Z = 22.3 49.6
18Z = 23.1 50.4
] 0.8 deg N/W per 9hr

- initial motion 340/6
- pt 2 = 23.0 50.3 (~1645)
  pt 5 = 23.1 50.4 (~1845)
  pt 8 = 23.1 50.4 (~1945)
  23.38' 50.31'
  [23.63 50.51]

.63
60 | 38.00
360
200
51
60 | 31.0
300
100
60



53.2 to center

(220nm) IP = 20.5 [illegible] (~220nm) W

2→3 = NE 130nm

3→4 = due W 250nm

(187nm) 4→Center =

Ctr→6 = 130nm

6→7 = due N to storm latitude (~23.1)

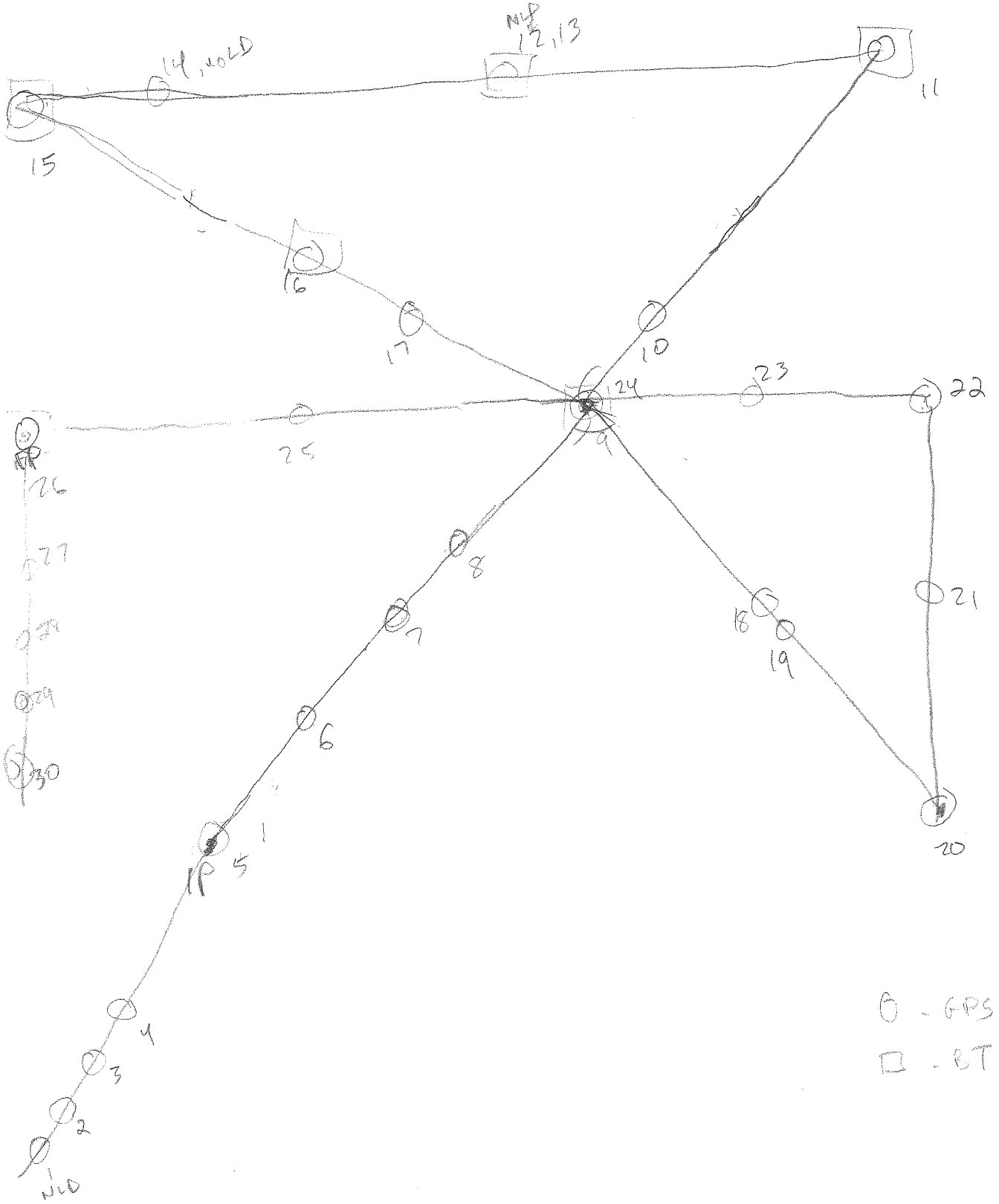
7→Ctr

Ctr→9 = 140nm (~23.1N 52.5W)

BTs
2 (1st ctr)
pt 3
pt 3-4 midpoint
4
8 (3rd ctr)
9

Sep 18	18Z	23.5	50.3	5:49h
Sep 19	18Z	24.7	54.0	→ 5:37h
Sep 20	18Z	26.0	57.0	5:47h

A-WS: SFMR Ch11
RH Ch10
BTs ch 12
Nav ch 5
SFMR ch 13
LF ch 15


MLP
12, 13
14, HOLD
15
16
17
11
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29
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5
18
19
21
20
4
3
2
HOLD
○ - GPS
□ - BT

Hi, Jason,

Writing to you from the ground on Monday morning, don't know if you have any way to pick up email on the P-3 today.

The Accra Beach is full up for Wednesday night, no room at the inn. They have us wait-listed in case of cancellations, but the reservations people were not optimistic. We're good through Tuesday evening.

A couple of options. (1) I look around for other places that might be available for Wednesday night in Barbados, (2) we fly SALEX Tuesday and head for McF on Wednesday, (3) we fly SALEX Wednesday, but end up in St. Croix, or (4) we fly SALEX Wednesday, but end up at MacDill. Do me a favor and consider these options. (3) or (4) have only one seat for you on the jet (unless I return commercially).

Hope this helps with your planning, please let me know your thoughts as soon as you can...Jack