E.2 Lead Project Scientist (On-Board)

E.2.1 Preflight

_____ 1. Participate in general mission briefing.

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

_____ 3. Determine from CARCAH or field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist and CARCAH unless briefed otherwise by field program director.

_____ 4. Contact HRD members of crew to:

a. Assure availability for mission.
b. Arrange ground transportation schedule when deployed.
c. Determine equipment status.

_____ 5. Meet with AOC flight crew at least 90 minutes before takeoff, 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 or FGOC at remote recovery location).

E.2.2 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 Form E-2.

E.2.3 Postflight

_____ 1. Debrief scientific crew.

_____ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, *etc.*) remaining aboard the aircraft to the appropriate HRD operations center (MGOC or FGOC).

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

_____ 6. Notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted and arrange for any further coordination required.

_____ 7. Prepare written mission summary.

On-Board Lead Project Scientist Check List

Date Oct 2 2010 Aircraft 43 Flight ID 021002I

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	Shay (Clone in LPS Seat)	Flight Director	Dominguez
Cloud Physics	—	Pilots	Teneson
Radar		Navigator	
Workstation	M Black	Systems Engineer	
Photographer/Observer		Data Technician	
~~Omegasonde~~ GPS	MBlack	Electronics Technician	
AXBT/AXCP/Guest	Guehn/Cook	Other	Walsh

Take-Off: 0201Z Location: MacDill

Landing: _____ Location: " Number of Eye Penetrations: 4

B. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

C. Mission Briefing:

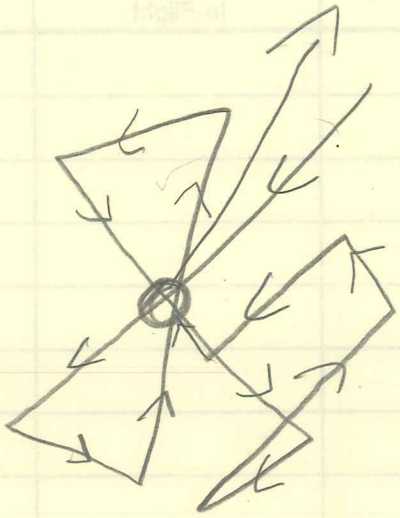
Nick's "In-storm" module for the Hurricane "Air-Sea" expt... Storm (Nicole) is a cat 3 cane for sure @ takeoff... should be interesting... 2Z Takeoff → 8.5h mission 65 expendables (20 BT)... we may be able to

D. Equipment Status (Up, Down, Not Available, Not Used)

Equipment	Pre-Flight	In-Flight	Post-Flight
Aircraft			
Radar/LF			
Radar/TA (Doppler)			
Cloud Physics			
Data System			
Omegasondes			
AXBT/AXCP			
Workstation			
Videography			

REMARKS: all syst go --

E. (I) Proposed Flight Pattern (sketch or designate by number)



E. (II) Actual Flight Pattern

Lead Project Scientist Event Log

Date Oct 2 05 02 Flight 021005I LPS [illegible]

Time	Event	Position	Comments
~~0200Z~~	42 ~~BT~~	McDill	on TIME 10AM local
0227Z	1st after R.D	26N 84W	entering storm from NE
0240Z	IP...	25.9N 84.2W	Drops/expendables core c[illegible]
0259Z	BT drops NE of TC		28.5
NoTE!	Storm Center	is much farther South	than expected (ie in fl plan)
	pattern will	remain but center	will be adjusted
	1st [illegible]		
Note:	US [illegible] AF fixes	$\vec{V}$ = 290/12 kts	
" :	SST N of Storm		60 mi N SST = 28.2
0322 30Z	BT/Sonde Combo	24.13 86.45	40 mi N SST = 27.4 MLS
0329	Concentric outer eyewall	23.65 86.60	wind max 102 Kts
0333	N eyewall	23.46 86.60	BT/GPS V_{MAX} = 117 sfc 100
03:35	Center ~	23.37 86.60	sloped eyewall on 280
NoTe:	( ) "Broken" eyewall. odd...		Mike B. says seen it 54--
	969mb = N eyewall...	105 Kts	~800 ft...
~~0~~0345	CP just ahead of track...	27.8C -	cool! limiting factor...
0352 45	BT ahead of track	bathymetry = 22.95 87.83 [illegible]m water...	SST = 27.6 MLT = [illegible]
Note ahead of track	is shallow	cool water	
4:34	4-5 leg	22.25 86.5	90 M S of leg 27.5 SST
4:41	4-5 leg		50 M S " " 28.1 SST
448	CP just S of leg		25 m S... SST = 26!

NOTE: 65 BT/AXCP/CTD expendables lay [illegible] will be obtained by Nick/Tom/Scott...

Lead Project Scientist Event Log

Date 6/07/11 Flight 43 LPS [signature]

Time	Event	Position	Comments
4:45	Data Syst down	~23.3 86.5	down for ~
5:02	" up	eye 24 87	
NOTE: System	looks worse than penetration 1...(330Z)		
	One eyewall (E - was slanted to vertical)		
	also Hydro Temp much cooler		
50924	N eyewall drop	23.67 86.98	BT+3 GPS
51328	N eyewall	23.93 86.97	BT Backup SST=28.5
5:16:23	Very cold Hydro Warm eyewall.		no S. eyewall
05:47	Air force C. fix	23.6 87.15	MSLP=953 est trop
06:10.00	lecture NE7	25 89	—
NOTE: This leg (G-eye) is directly ahead of track... use for model			
6:28	CTD Drop along track	24.4 88.3	SST=29 (much warmer)
6:33	" " "	24.3 88.1	" =28.5
6:38	" " "	24.05 87.9	" =29.0
6:40:14	" " "	—	DUD
6:44:04	" " "	23.80 87.59	BT - SST = DUD
6:48	CP eye drop	23.68 87.32	CP in eye! SST=28
Max	winds on E-W Run... ~105 kts @ 6k feet...		
6:55	CP 23 mi Conts	23.55 86.93	CP Sonde Bad?
7:10	Nick & I decided to cut E-W leg short saved 1 hr		
NOTE last eye drop		955...(648)	

Margin notes: MIN; Spot on w/ prestorm grid; Important; BT-; BT-; CTD tow; Good eye; 955 MSLP=; SFC=9??; 1 1/2 hr

0547
0633
0709
643

Lead Project Scientist Event Log

Date 10/2/02 Flight 43 LPS Shay

Time	Event	Position	Comments
7:54'	Principal Rainband	23.1 85.3	GPS just inside Princ Rainband
9:09	Nearby Primary Band	24. 85.7	band was sly cellular
9:13:49	NOTE Storm heading	295/14kts	
Barrage in eyewall,	inbound + outbound...	eyewall also	28ST
NOTE! From	fl data —	hurricane force wind	extended ~50nm from center
	E eyewall	= 26.9 (Not good)	or E leg IN 26.8
			(i.e. coming from east)
9:49:39	eyedrop	24.13 87.94	excellent fix LAMS 955
	∩ = 1/2 eyewall		
	Max V_{FL} = 120kts		
	" V_{sfc} = 90kts		
Note.	Storm on 1st	pass = 100kt	@ sfc 26.5 eyewall [illegible]
	" " last	" = 90kt	@ sfc 26.8 eyewall
	— always had	∩ reflectivity	pattern
	— Satcom showed	outflow was	much better by flt
	— "out ahead"	(leg 6 ~29°C)...	
	— saw spot both later	(i.e. 100 mi / 180 km)	= 26.8
	— 2.2°C	ΔSST... = ?	dTCI?
	— also (leg 6)	Core is	fantastic

— for [illegible] model issues.. even got a "[illegible] drop" [illegible]