Lead Project Scientist

Storm or Project T.S. Danny **Experiment name** Tail Doppler Winds
Flight ID 090828I1 **Mission ID** WX054 Danny 4

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. NONE
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. NA
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. No
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 TS. Danny **Experiment name** TDW

Flight ID 090828I1 **Mission ID** WX05A DANNY 4

A. Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	Paul Leighton	Flight Director	I. Sears / B. Damiano
Radar/Workstation		Pilots	B. Chay / C. Newman / A. Cairnie
	P. Leighton	Navigator	Sloan Kidder
Cloud Physics	N/A	Systems Engineer	Floyd / Darby
Photographer/Observer /Guests	Joe Sapp / UMASS	Data Technician	B. Peek / J. Smith
Dropwindsonde	Jun Zhang	Electronics Technician	W. Olney
AXBT/AXCP		Other	

B. Take-off and Landing Times and Locations:

Take-Off: 075215 UTC Location: MacDill

Landing: 124155 UTC Location: MacDill

Number of Eye Penetrations: 0

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

Storm or Project TS, Danny **Experiment name** TDW

Flight ID 090828I1 **Mission ID** WX05A Danny 4

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	↑	↑	↑	1
Doppler Radar/TA	↑	↑ 1	↑	
Cloud Physics	~~↑~~ N/A	~~↑~~ N/A		
Data System	↑	↑	↑	
GPS sondes	↑	↑	↑	1
AXBT/AXCP	↑	↑	↑	
Ozone instrument	N/A	N/A		
Workstation	↑	↑	↑	
Cameras	↑	↑	↑	

REMARKS:

Lead Project Scientist Event Log

Date 090828 **Flight ID** 090828I1 **LPS** P. Leighton

Time	Event	Position	Comments
075215	Takeoff	27.85 82.52	MacDill
075300	Rudder Valve shutoff problem		
081000	Radar started		
081500	WS up		
091555	BT#1	26.41 76.66	28.5°
092345	BT#2	26.31 75.96	28.3°
093456	BT#3	26.16 75.00	28.5°
094900	BT#4	25.93 73.14	28.7°
095950	BT#5	25.98 72.18	28.4°
100954	BT#6 combo	26.05 72.23	DOd turn to 265°
101600	BT#7	26.01 72.72	28.2° turn to N
102000	BT#8	26.09 73.00	28.3°
103130			turn to W
103219	BT#9 Combo	26.94 73.14	28.3°
103800	BT#10	26.92 73.59	28.3°
104343	BT#11	26.92 74.05	28.3°
104915	BT#12	26.94 74.53	28.3°
105215	BT#13	26.97 74.78	28.3°
105623	BT#14	27.02 75.12	28.1°
110000	BT#15	27.07 75.42	28.2°
110720	BT#16/#17	27.15 76.05	missed 1BT sounding
111030	BT#18	27.18 76.31	28.2° N probe 110330
121000	Radar turned off	27.72 81.45	
124155	landed	27.85 8252	MacDill

18 BTs 15 good

2 Sonde's

Mission Summary

Storm name

YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)

Lead Project Scientist P. Leighton

Radar Scientist P. Leighton

Cloud Physics Scientist N/A

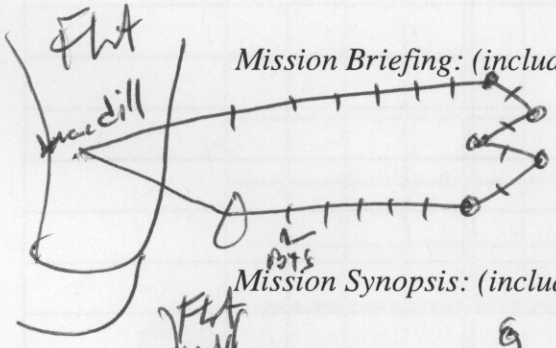
Dropwindsonde Scientist J. Zhang

Boundary-Layer Scientist N/A

Workstation Scientist P. Leighton

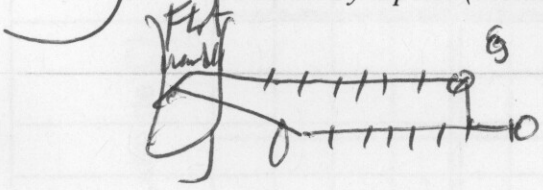
Observers T. Sapp / UMASS

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



sondes at endpoints and midpoints
20 BTs planned
4 Doppler analysis planned

Mission Synopsis: (include plot of actual flight track)



Evaluation: (did the experiment meet the proposed objectives?) No

Problems:(list all problems)

Tail Rudder boost shutoff valve problem @ takeoff
remaining flight to burn fuel and drop BTs

Expendables used in mission:

GPS sondes : 2

AXBTs : 18

Sonobuoys: _____

TS Danny
Doppler winds
[illegible]

090828

Lead Project Scientist Event Log

Date 090828I1 **Flight ID** 090828I1 **LPS** - P. Leighton w/ [illegible]

WXOSA Danny 4/ [illegible]

Time	Event	Position		Comments
075215	Takeoff	2785	8252	MacDill
	Rudder Valve stuck		may abort @ IP	
081000	Radar started			tail Rudder [illegible] shutoff
081500	NOS up			
091555	BT #1	26.41	76.66	28.5
092345	BT #2	2631	75.96	28.3
093456	BT #3	2616	75.00	28.5
094900	BT #4	25.93	73.74	28.7
095950	BT #5	25.88	72.78	28.4
100954	Combo BT 6	26.05	72.23	Dud — turn to 265°
101630	BT# 7	26.01	72 72	28.2 — turn to N
102000	~~2605 73~~ BT#8	2605	7300	28.3
103130				turn to W[illegible]
103219	Combo BT #9	26.94	73.14	28.3
103800	BT #10	26.92	73.59	28.3
104343	BT #11	2692	74.09	28.3
104915	BT #12	2694	74.53	28.3
105215	BT #13	26.97	74.78	28.3
105623	BT # 14	27.02	75.12	28.1
11:00:00	BT # 15	2707	7542	28.2
110720	BT 16/17	2715	7605	missed — 1 BT [illegible]
111030	BT #	278	7631	28.2
121000	Radar turned off	2772	8145	
121155	Landed	2785	8252	MacDill

1000
265
0
1010
1020
1030
26.73

On takeoff Hydraulic Rudder Actuator [illegible] function

18 BTs 15 good
2 sondes

Barry Damiano
Jan Sears
M. Grimsdell
Bong Chu
Carl Newman
Penny Floyd
Paul Darby
Chris Sloan
Ryan Kidder
Paul Lighton
Tian Zhang
Bobby Peele
Jeff Smith
Bill Cheney
Joe Sapp

Mission Summary

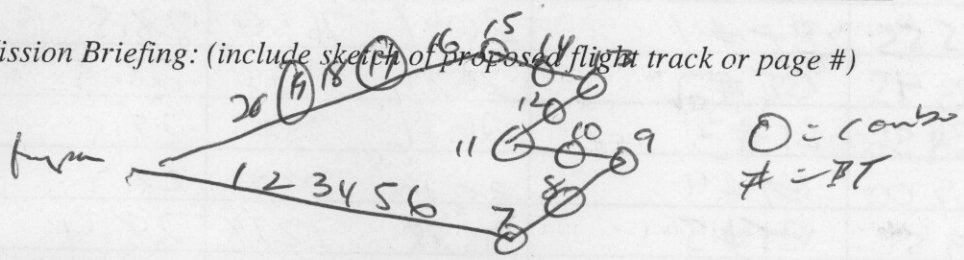
Storm name

YYMMDDA# Aircraft 4__RF

Scientific Crew (4 RF)

Lead Project Scientist Hagen
Radar Scientist ~~Zhang~~ Lighton
Cloud Physics Scientist
Dropwindsonde Scientist Zhang
Boundary-Layer Scientist
Workstation Scientist Zhang
Observers

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: _____