Lead Project Scientist

Storm or Project Cristobal **Experiment name** TDR
Flight ID 20140825H1 **Mission ID** _____

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 Cristobal **Experiment name** TDR

Flight ID 20140825H1 **Mission ID** _____

A. Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	Jun Zhang	Flight Director	Rich Henning
Radar/Workstation	Rob Rogers.	Pilots	Harris Halverson
		Navigator	~~Chris~~ Gallagher
Cloud Physics	—	Systems Engineer	Terry Lynch
		Data Technician	Richards
Dropwindsonde	Frank Marks	Electronics Technician	Roles
AXBT/AXCP	—	Other	
Photographer/Observers/Guests	— Johnson, Vigh, Hui Liu		

B. Take-off and Landing Times and Locations:

Take-Off: 0555 UTC Location: MCDill

Landing: _____UTC Location: _____

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing: TDR mission, basically same as last H42 mission. — Northerly or northwesterly shear ~~middevel~~ vortex tilted to South from previous flight NHC forecasted weak tropical storm intensity 40kt, no way to intensify — due to shear and upper level outflow not organized due to anticyclone flow.

Lead Project Scientist Event Log

Date 8/25/14 **Flight ID** 20140825H1 **LPS** Jun Zhang

Time	Event	Position	Comments
0555	take off 1	McDill	
0800	IP 2	2419 7508	drop 1 – Tail Doppler radar fixed
0818	mid point	2420 7341	drop 2
0832	Center	2425 7240	drop 3 – Center 995 208 25
0845	mid point	2425 7136	drop 4 – max wind 47 kt
0900	turn point 3	2427 7031	drop 5 – Extending the leg
0932	downwind end 4	2608 7133	drop 6 –
0951	mid point	2504 7218	drop 7
1001	center	2431 7240	drop 8 – Center 996 110 21
1017	mid point	2331 7319	drop 9 –
1028	turn point 5	2253 7347	drop 10
1055	downwind leg 6	2203 7137	drop 12
1107	mid point	2339 7202	drop 13
1124	Center	2443 7244	drop 15 –
1138	mid point	2530 7345	drop 16
1153	turn point 7	2621 7348	drop 17
	Leading home –		
0845	maximum wind sonde		drop 4 maximum wind 154
1052	high wind – SFMR – check if it is real – 50kt SFMR – sonde		
0826	trying to do the first Center fix		
1117	sonde not used for finding max wind – sonde 14		
0828	Sonia calling John for information of Radar software		
	Start Raw Copy not working		
0834	Gamache is on x chat – trying to f		
0842	Rob rebooting the Radar computer		working with Sonia and John to fix the prob trying
0858	Sonia Call John still trying to fix Start Raw Copy		

0836 requested about the maximum sonde

Airforce 996 pressure

(24.31 – last fix)
24 11 – vortex message – 72 48 Airforce

Lead Project Scientist Event Log

Date 0825 **Flight ID** 20140825H1 **LPS** Jun Zhang

Time	Event	Position	Comments
0911	first down wind leg bumpy — convective features		
0913	SATA trying to fix radar software — obs 46 kft FL		
	Raw data recording fine		
0922	lost connection — something — radar?		
0932	radar software not working at the end of downwind leg		
0941	estimated drop time of next sonde 7 minutes — obs 25 kft FL		
0943	SATA trying to fix the radar software password problem		
	could not log on RVP8 — password not working —		
0945	Lost connection to server, restarting Send AP		
1003	Rob made folder 20140825H1 manually — mkdir		
1018	John G wants JimR to test command		
10:22	— 5 minute burn		
10:30	Radar data problem fixed — copied the radar files to the H20 folder —		
10:42	running the four radar analysis — submitted job file		
	Sonde creating job files		
11:17	— Sonde — trying to find new wind		Sonde release # 14
11:56	— working on the last analysis		Radar — heading home

Mission Summary

Storm name

YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)

Lead Project Scientist Jun Zhang

Radar Scientist Rob Rogers

Cloud Physics Scientist

Dropwindsonde Scientist Frank Marks

Boundary-Layer Scientist

Workstation Scientist

Observers (affiliation) Johnathan Vigh, Hui Liu (NCAR)

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

- try to do convective burst module - downwind leg 5-6

6-7 last leg - no downwind leg

TDR mission

Mission Synopsis: (include plot of actual flight track)

TDR Mission - butterfly pattern -

center from previous airborne flight moves slightly south so the IP is shifted to ~ 2411

- Data system not working well - fixed at 0759
- radar not working - fixed at 0800 - not the Netmon

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

Yes, Mission succeeded. problem solved during the flights

3 radar analyses, 17 sondes - data sent to EOL

radar dat have sweeps but couldn't do radar analysis

Problems:(list all problems)

data system lagging not working well - circling at the IP for 30 min

TDR not recording - fixed at 0800Z - so did the data system fail not recording radar data till 1040Z

Expendables used in mission:

GPS sondes : 11

AXBTs : 0

Sonobuoys: 0

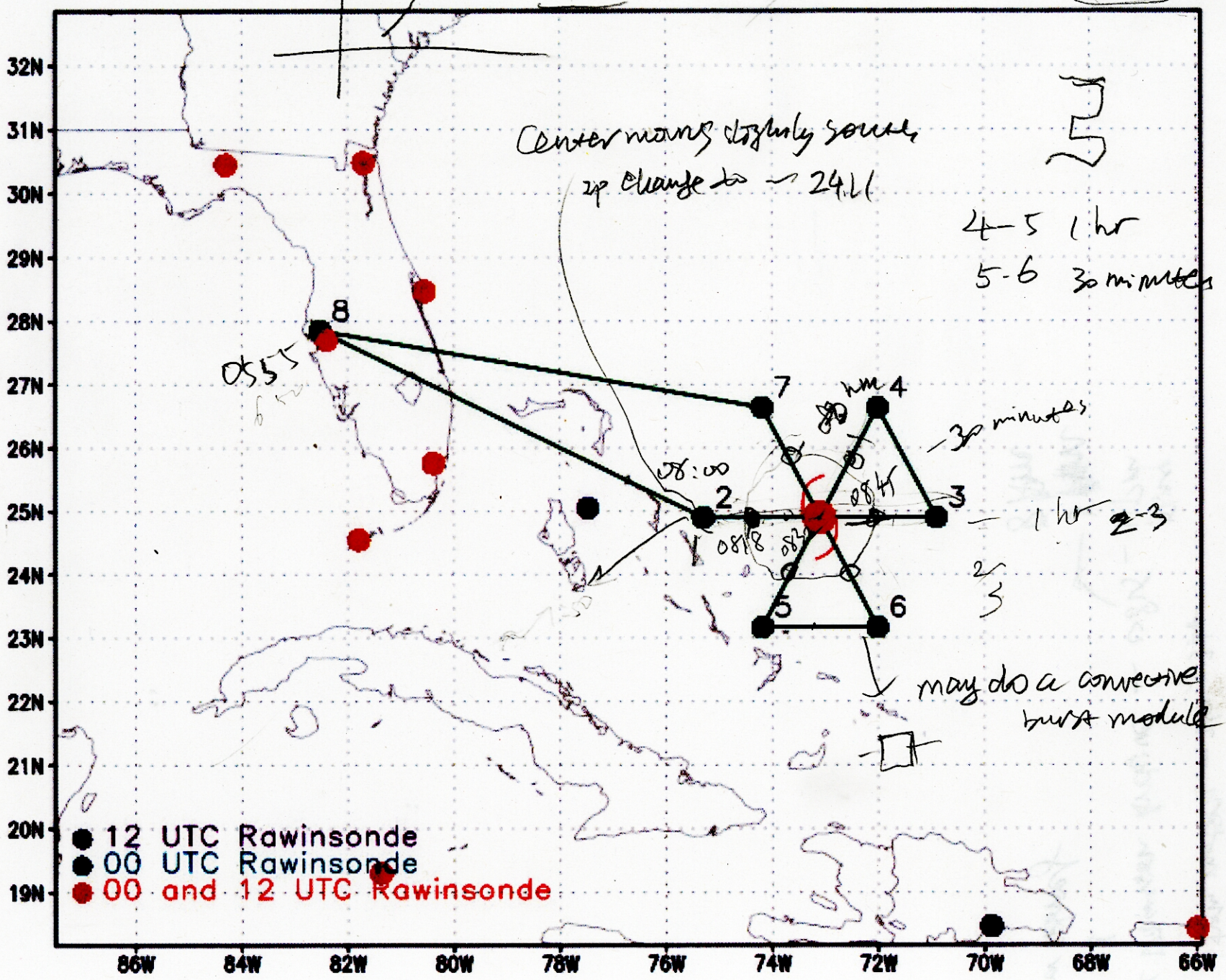
Discussed possible pattern changes with Rob, like BL module - thinking about the storm intensity issue - shorting leg to make it working

stopped descent pattern at the end of the flight

Netmon is down till - (StartRawCopy not working) working with Sonde -

Could not transfer data to the ground (0811) - decided to transfer pressure wind info through xchat to Raytar

Frank started proxy sonde



GrADS: IGES/COLA

2014-08-24-20:24

0955 – about 7 minutes for center drop

Storm motion – 360, 3kt

HHC Discussion Archive – 0825 – 0824 11PM
→ 5 AM
8 AM

↓ For debrief