

F. Marble

Lead Project Scientist

Storm or Project Matthew Experiment type TDR
Flight ID 20161008J1 Mission ID 3714A1

Preflight

- 1. Participate in general mission briefing.
- 2. Determine specific mission and flight requirements for assigned aircraft from the Field Program Director.
- 3. 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.
- 4. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.
- 5. Determine from AOC flight director the mission designation and whether aircraft has operational fix responsibility.
- 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 Field Program Director.
- 8. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drops.
- 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. Request AOC flight director to leave radar in non-sector mode for initial Figure 4.
- 5. Once at IP, request AOC flight director adjust radar tilt to minimize sea clutter.
- 6. Complete Lead Project Scientist Form.
- 7. Check in occasionally 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 Dropsonde raw and processed files from the AVAPS operator on thumb drive.
- 4. Obtain a copy of the radar LF files from the radar technician on thumb drive.
- 5. Obtain a copy of the tar'ed radar TA files from the radar scientist on thumb drive.
- 6. Obtain a copy of serial flight data and raw NetCDF file on thumb drive from the data technician.
- 7. Obtain a copy of SFMR data on thumb drive from the data technician.
- 8. Obtain a copy of DMT data on thumb drive from the data technician.
- 9. Report landing time, aircraft, crew, and mission status to the Field Program Director.
- 10. Determine next mission status, if any, and brief crews as necessary.
- 11. Prepare written mission summary using **Mission Summary** form.

F. Manly

Lead Project Scientist Check List

Storm or Project Matthew Experiment name TDR

Flight ID 20161008I1 Mission ID 3714A

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Manly</u>	Flight Director	<u>Sears</u>
Radar/Workstation	<u>Christophersen</u>	Pilots	<u>Price, Didier</u>
		Navigator	<u>Seigel</u>
Cloud Physics	<u>—</u>	Systems Engineer	<u>Darby</u>
		Data Technician	<u>Mascaro</u>
Dropwindsonde	<u>Alaka</u>	Electronics Technician	<u>T. Lynch</u>
AXBT/AXCP	<u>—</u>	Other	
Photographer/Observer s/Guests	<u>3</u>		

B. Take-off and Landing Times and Locations:

Take-Off: 0535 UTC Location: KMCF

Landing: _____ UTC Location: _____

Number of Eye Penetrations: 0

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

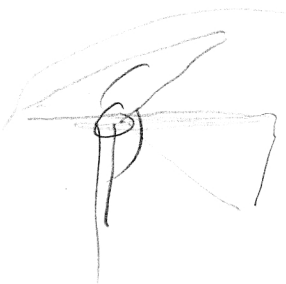


Fig. 4, coastal survey,
IWRAP legs, Fig 4

Markers

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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	✓	✓	✓	4 analyses #
Cloud Physics	✓	✓	✓	
Data System	✓	✓	✓	
GPS sondes	✓	✓	✓	1 @ sondes / 1 launch
AXBT/AXCP	—	—	—	
Ozone instrument	—	—	—	
Workstation	✓	✓	✓	
Cameras	NA	✓	✓	

early launch detected

REMARKS: — no major problems —
 — completed TDR mapping of storm (primarily S and E of center) even though center close or on land.
 — completed 2 IWRAP legs and while doing so did a poor mans convective burst module of convective burst in N eyewall as in more landfall
 — Extended Fig 4 to ^{120km} east of center to pick up convective bands crossing coastline between Myrtle Beach SC and Wilmington, NC as a landfall convection ^{drop} module ^{to}
 — completed final Fig. 4 with pass through center S of Charleston with drop side in center

1/3

Lead Project Scientist Event Log

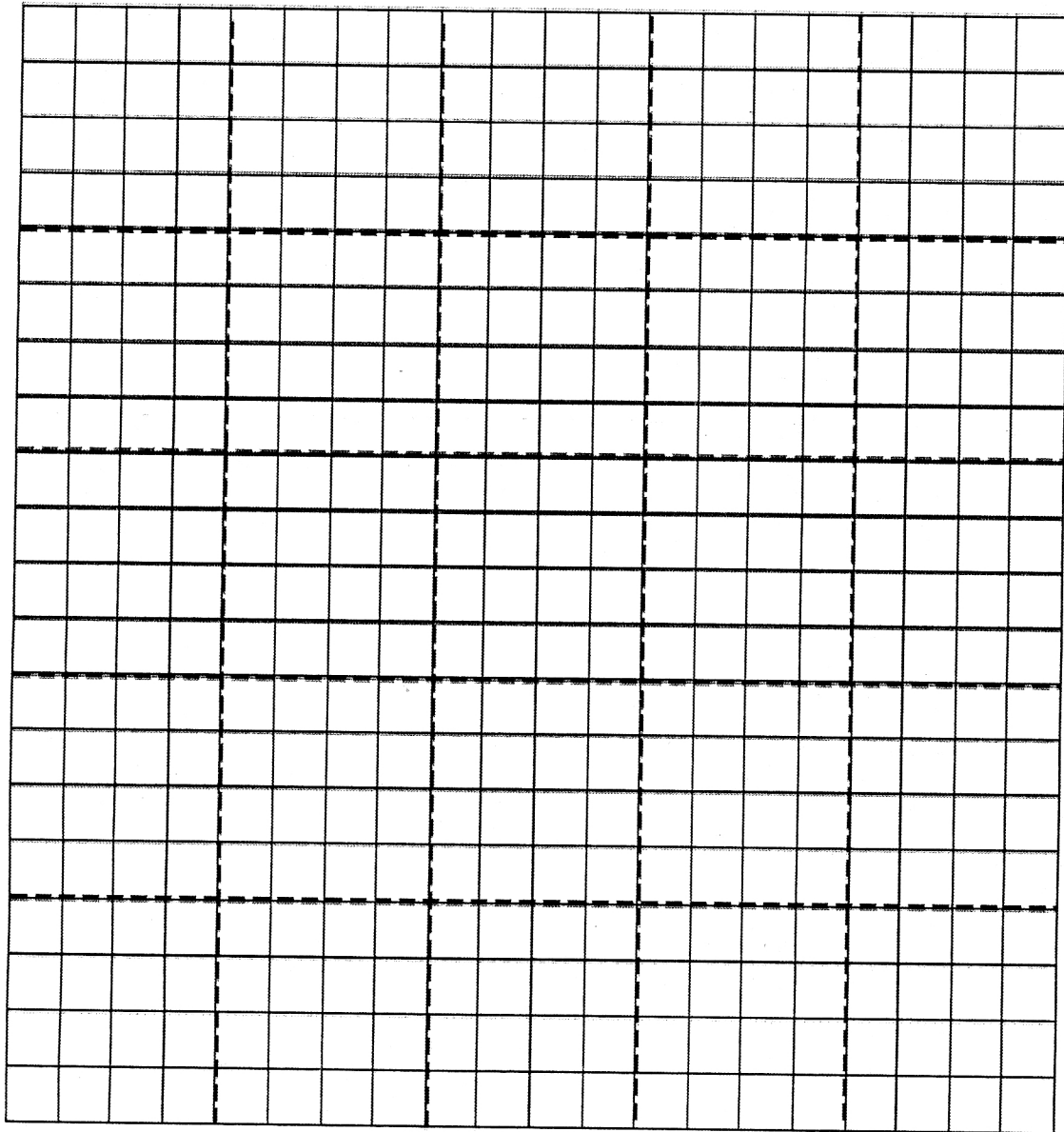
Date 10/8/2016 Flight ID 20161008I1 LPS Marks

Time	Event	Position	Comments
055451	TO	MacDill	
0633	(1P)	30°41" 80°36"	drop #1 descend to 76 center closer to hub than expected
0659	6	31°48" 80°37"	no drop TK 060 955M at trap alter plan again pt 5 → 6 to 7 to pt 4 to 6
0725	pt (5)		receipt of TK 225
0744	drop #2		drop #2 max wind
0750	6	32.0 80.56	TK 135
0818	(7)		drop #3 switch to sensor mode LT
0837	(4)		drop #4 ^{ear} launch detect.
0901	6	32.12 80.43	start IWAP wedges
	IWRAP legs		drop #5
	#1	we call these as poor man convective burst module	TK 060 do 20° cm
	#2		drop #6? TK 070 drop 7?
1012	6		TK 120
1040	7'	120 min ESE of 6	TK 010 to pick up rainband with org ILM

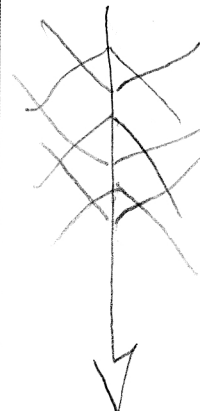
Observer's Flight Track Worksheet

Date 10/08/2016 Flight 20161008J1 Observer Marks

Latitude (°)



Longitude (°)



Mission Summary

Storm name

YYMMDDA# Aircraft 43RF

20161008E1

Scientific Crew (43RF)

Lead Project Scientist Mark

Radar Scientist Christophersen

Cloud Physics Scientist _____

Dropwindsonde Scientist Alaka

Boundary-Layer Scientist _____

Workstation Scientist _____

Observers (affiliation) _____

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

altered drawn tracks due to proximity to \odot



Mission Synopsis: (include plot of actual flight track)

Storm was further onshore than expected requiring modification of flight track.

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

Very Successful mission.

- completed TDR mapping, primarily S, SE of center
- completed 2 IWAP legs
- convective burst module of Negevall making landfall
- Pogman's landfall convective module

Problems: (list all problems)

- 1 dropsonde had launch defect prematurely - did not process of transu
- everything else worked great!

Expendables used in mission:

GPS sondes: 10 + 4 real-time Doppler analyses

AXBTs: _____

Sonobuoys: _____