

Lead Project Scientist

Storm or Project HERMINE (AL09) Experiment name RI / LANDFALL / INTENSE RAINBAND
Flight ID 20160901 I2 Mission ID WXWXA CYCLONE MOORE

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 HERMINE (AL09) Experiment name RI / LANDFALL / INTENSE RAINBAND
 Flight ID 20160901 I 2 Mission ID WYNXA CYCLONE MODULE

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>ZAWISLAK</u>	Flight Director	<u>WILLIAMS</u>
Radar/Workstation	<u>ANNANE</u>	Pilots	<u>KERNS/ABTBOL</u>
		Navigator	<u>GALLOGHER</u>
Cloud Physics		Systems Engineer	<u>LYNCH</u>
		Data Technician	<u>MASCARO</u>
Dropwindsonde	<u>ZAWISLAK</u>	Electronics Technician	
AXBT/AXCP		Other	
Photographer/Observer			
s/Guests			

B. Take-off and Landing Times and Locations:

Take-Off: 1902 UTC Location: Mac DILL

Landing: 0222 UTC Location: Mac DILL

Number of Eye Penetrations: 3

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
<u>1 / 1500Z</u>	<u>27.8</u>	<u>85.6</u>	<u>989mb</u>	<u>60 KT</u>

NNE
12KT

D. Mission Briefing:

TODAY WE'LL BE ATTEMPTING TO SAMPLE IN AND AROUND LANDFALLING RAINBANDS ASSOCIATED W/ HERMINE. THE STORM HAS BEEN STEADILY INTENSIFYING AND ITS POSSIBLE THAT WE WILL BE OUT THERE AS A HURRICANE. OUR INITIAL PLAN WILL BE TO FLY IN A RAINBAND TOWARDS THE NORTH, RAINING W/ TA ~ 200ms AWAY FROM THE AXIS - DROP A SONDE AT THE START, MID, AND END. THEN DO NWS, E-W FLY ACROSS THE CENTER, THEN ON THE WAY HOME RETURN EAST ACROSS THE CENTER AND FLY A RAINBAND TO DO A MODULE ~ INTENSE CONVECTIVE RAINBAND MODULE.

Storm or Project HERMINE (AL09) Experiment name R1 / LANDFALL / INTENSE RAINBAND MODULE

Flight ID 2016 0901 J2 Mission ID WXNXA CYCLONE

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				
Cloud Physics				
Data System				
GPS sondes				
AXBT/AXCP				
Ozone instrument				
Workstation				
Cameras				

REMARKS:

Mission Summary

Storm name

YYMMDDA# Aircraft 43RF

Scientific Crew (4 RF)

Lead Project Scientist ZAWISLAK
 Radar Scientist ANNANE
 Cloud Physics Scientist _____
 Dropwindsonde Scientist ZAWISLAK
 Boundary-Layer Scientist _____
 Workstation Scientist _____
 Observers (affiliation) _____

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

WE WILL BE FLYING BEHIND A LANDFALLING RAINBAND IN THE BIG BEND REGION OF FLORIDA. DURING A COUPLE OF SUNDAYS, ONE NEAR BIGGERSTOFF DEPLOYMENT AREA. WELL BE ~10 AM OUTSIDE. THEN DO N → S FLIGHT - Y W/ COAST THEN PROCEED TO AN AREA TO DO AN INTENSE RAINBAND MANUE → BEH A RAINBAND W/ UPWIND/DOWNWIND LEGS

Mission Synopsis: (include plot of actual flight track)

SO WE GOT BEHIND THE LANDFALLING RAINBAND, BUT IT WAS ALREADY OVER LAND SO WE FLEW 10 NM OFF THE COAST → SAW STRATIFRM DROPPED A COUPLE OF SUNDAYS, INCLUDING NEAR BIGGERSTOFF DEPLOYMENT SITE. THEN N PROCEEDED TO NORTH POINT AND MADE A PASS, HITTING MAX WIND AND CENTER - WIND OUTWIND TO SOUTH, THEN DOWNWIND TO E POINT BUT W/ DRIFT SO FOLLOWING PARALLEL A RAINBAND → JUST EAST OF IT THEN DID CROSS, WENT OUT SOUTH AND CAME BACK, FINDING MAX WIND TO SE, AS TO DO

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

STORM MANUEF ABOUT ~ 1130 AM TO EAST NEAR COAST. FLEW MODERATE PLANNED

WE GOT 3 PASSES OF THE CENTER, W/ 3 ORDS IN THE MIDDLE, 2 MAX WIND. WE FLEW ALONG A RAINBAND IN THE MIDDLE OF THE FLIGHT DOWNWIND FROM SOUTH TO E SIDE. INITIALLY THOUGH WE WERE ABLE TO FLY W/ IN S' WIND OF THE COASTLINE AND FOLLOW IT AS THE RAINBAND W/ ON SHORE. TRY TO FLY IN THE SAME AREA AS THE JET TS → ALSO GOT A DRDZ THERE SO WE DID THE INTENSE RAINBAND MANUE NEAR TAMPA ~ ABOUT 60 PM OR SO. GOT A LOT OF CONVECTION ON THAT, BUT ALSO STRATIFRM GOOD MIN. SO VERY SUCCESSFUL MANUEF. STORM INTENSIFIED WHILE WE WERE OUT THERE AT WELL CENTER BECAME CLEAR

Problems: (list all problems)

WE MET PRIOR USED OBJECTIVES

Expendables used in mission:

GPS sondes : 17 (3 CENTER)
 AXBTs : _____

Sonobuoys: _____

Lead Project Scientist Event Log

Date 9/1/16 Flight ID 2016 0901 IZ LPS ZAWISLAK

Time	Event	Position	Comments
1902	T/O		WE'LL BE HEADING SOUTH TO CLIMB AND SET UP OUR IP.
			↓ SET AT 29° 24' / 83° 10'
			GOING TO PARALLEL THE RAINBAND AND COAST FROM THERE. 3 DROPS
			NEAR END POINT IP AND CENTER
1952			TURNING EAST TOWARDS COAST
1954Z	SONDE 1	28° 56' / 83° 10'	
2002Z	SONDE 2	29° 29' / 83° 29'	→ NEAR LEFT
2015Z	'		NOTHING BUT STRATIFORM
2025Z	SONDE 3		TURN SOUTH TOWARDS CENTER
2030Z	SONDE 4		MAX WIND
2038Z	SONDE 5	28.01 / 85.18	CTR
2105Z	SONDE 6	26.74 / 85.14	MAX WIND
2115Z		26° 57' / 82° 46'	NEW PARALLEL BAND TO IF NORTH DIRECTION
			TOWARDS 12km IN BAND
2126			WENT DOWNWARD PARALLEL THE RAIN
2143			UPCOMING DROP ON TURN TO WEST COULD CAPTURE THE PRE-ENVIRONMENT OF THIS RAINBAND
2146	DROP 7 IN/AT BAND		
2145			PARALLEL BOTH BANDS RIGHT NOW WEST AND EAST
2208	DROP 8	29° 45' / 85 8'	ON CENTER
2219	DROP 9		CATCH THE MOST OF DROP
2241	SONDE 10	28° 54' / 84° 53'	DROP AT CENTER.

