

Lead Project Scientist

Storm or Project ALOG/FLORENCE Experiment type MATURE STAGE EXPERIMENT / OCEAN WIND
Flight ID 20180910H1 Mission ID WCOGA

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.

NO ARCHIVED
SOME RADAR DATA
FILE TOO LARGE

Lead Project Scientist Check List

Storm or Project ALOG/FLORENCE Experiment name MATURE STAGE

Flight ID 20180910H1 Mission ID WC06A

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>ZAWISLAK</u>	Flight Director	<u>HOLMES</u>
Radar/Workstation	<u>ZAWISLAK</u>	Pilots	<u>KIBBEI</u> <u>ROSSI/ARIBOL</u>
		Navigator	<u>RICHARDS</u>
Cloud Physics		Systems Engineer	<u>GREENE (MTR) / DORCA (ES)</u>
		Data Technician	<u>MARCARO</u>
Dropwindsonde	<u>HOLBACH</u>	Electronics Technician	
AXBT/AXCP		Other	<u>NRSOIS</u> - <u>PAUL CHANG</u> <u>JOE SAPP</u> <u>ZERANA JELENAK</u>
Photographer/Observer			
s/Guests			

B. Take-off and Landing Times and Locations:

Take-Off: 1322 UTC Location: BERMUDA

Landing: 2242 UTC Location: ST. CROIX

Number of Eye Penetrations: 9

C. Past and Forecast Storm Locations:

SHIPS 12UTC: 127°/4 kt
18UTC: 119°/5 kt

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
5AM MHC	24.9	58.9	969 mb	90 kt
FCST 18Z	25.4	60.5		110 kt
11AM MHC	25.0	60.0	962 mb	100 kt

WNW SKT

W 11 kt

D. Mission Briefing:

INITIAL BUTTERFLY PATTERN → 240/60° AZI., 360/180° AZI., 120°/300° AZI.
FIRST PASS WAS SUPPOSED TO AUCH W/ CIGMA, BUT DELAYED TAKEOFF IS LESS THAN 1000M DRAIN AT TURNS/MIDS, CAR, RMW (AS REQUESTED) AYSTS AT RMWS, OR CIRCLES (OR OTHER INTERESTING STOPS). BUTTERFLY WILL BE FOLLOWED BY IWRAN LEGS FOR MISSOIS, WHICH ARE SIMILAR TO OUR CONVECTIVE BURSTS.
POSSIBLE CIRCLES AFTER IN THICK WINDS FOR NCSOU AND SFHR.

Storm or Project ALOG/EURENCE Experiment name MATURE STAGE / OCEAN WINDS

Flight ID 2018091041 Mission ID WC 06A

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:

PIP ↓ WILL NEED TO RETURN TO FLIGHT 17 OUT

↳ PIP WAS ACTUALLY UP! YESTERDAY TOO.

Lead Project Scientist Event Log

Date 9/10/18 Flight ID 20180910H1 LPS ZAWISLAK

Time	Event	Position	Comments
1323	TAKEOFF BEENOA		
1333	INBOUND TO IP		OK, SO EVRENCE IS BEGNN TO SHOW 0 MIE WIND BLOWING P.W.C. SYMMETRIC ON AIR RIDGE THERE IS STILL A HUMP UP ON DR JUST TO THE SOUTH/SOUTHWEST. BUT NOT GETTING FAR INTO THE WIND COR. HOWEVER IT IS CAUSING SOME SOME MORE INTENSE CONVECTIVE BANDING OUTER ON THE SOUTH AND EAST SIDES.
1428	INBOUND TO IP	27° 33' N / 61° 48' W	CULD GET SOME SAMPLES OF THE OUTER BOW COMING OUT FROM THE DIURNAL CYCLE
1450		25° 39' / 61° 52'	NOW 115Mph STEADY.
1512	IP	24° 9' / 61° 27'	NOW INBOUND ON 2000' / 060° TRACK. WILL BE APPROX 18Mph CLOUD
			JASON'S BOW LOOKS STRANFR PREC. MATR CONVECTE TO OUR
1518Z	HAT BAND OUT	24° 21' / 61° 31'	NOW SOME CONVECTION TO OUR NORTH → N40 TOU DSE DOES LOOK LIKE ANOTHER BANG AHEAD. INSIDE INTENSE CONVECTION
1526Z	APPROX MP INBOUND	24° 39' / 60° 38'	A LOT OF STRANFRAM AHEAD OF US
1530Z	A LOT OF BANDING	24° 48' / 60° 24'	ANOTHER CONVECTIVE BOW BEHIND U
1533Z	RMW		MAR WIND SOUND
1535Z	945 ESTABLISHED CIR #1 947ms	24° 59' / 60° 7'	CTR.
1537Z	RMW 1 OUT 060		RMW OUTBOUND 060° #1
1538Z	RMW 2 OUT 060	25° 6' / 59° 57'	RMW OUTBOUND 060° #2
	MIDPOINT	25° 20' / 59° 29'	MIDPOINT OUTBOUND BUT 110° TO GET THROUGH IT
1557Z	Endpoint	25° 31' / 59° 47'	DEFINELY FOUND JASON'S BOW OUT ON THE EAST SIDE. RECENT CONVECTIVE BAND HAD TO FIND A GOOD ENTRANCE TO IT
1559Z	Endpoint Soud	25° 38' / 59° 51'	Endpoint Soud
			WE HAD TO MANUEVR AROUND THAT DUNGEON RIDG. BUT NOT PREFERENCIAL IN 17. MICH 070° → 45°

SURFACE ABOUT 1200'S
 170 KTS FC ON THE WAY OUT.
 NEARLY SYMMETRI- ON SE NW SIDE IF WINDS
 WST 6000 BT

DROP 1 H
 DROP 2 H
 DROP 3 W
 BT COME 1
 DROP 4 H
 DROP 5 H
 BT WIND 2
 DROP 6 M
 DROP 7 H
 DROP 8 H
 DROP 9 H

Lead Project Scientist Event Log

Date 9/10/68 Flight ID 20180910H1 LPS ZAWISLAK

ALL OPERATIONS
OF RMW's
COMBO BT /
SOURCE AT
240° 060°
135° 315°
OUTBOUND 125K
SPR
BND CTR
SOURCE
143K 5K
IN OUTBOUND
RMW ELEVATION
76MS IN WL150
0/14 ON
BTS.

Time	Event	Position	Comments
1609 Z	HEADING TOWARDS MEASURED POINT	26° 14' / 59° 39'	6.0ms RIGID AT THE MIDS OUTSIDE THIS RANGE WE WENT THROUGH. TOR POINTS WELL ON BOTH SIDES,
1617 Z	INBOUND 180° TRACK 360° AZI	26° 24' / 60° 14'	NEW WIND, TO CTR 2
1620 Z	INBOUND SOURCE	26° 14' / 60° 14'	INBOUND SOURCE
1628 Z	MIDPOINT SOURCE 360°	25° 41' / 60° 14'	MIDPOINT SOURCE OUT OF BAND TO SOUTH OF IT. AGAIN, A LOT OF BANDING SOURCE TRACK INBOUND
1643 Z	RMW	25° 10' / 60° 13'	RMW INBOUND 360° NO BT COMBO
1642 Z	944 SST CTR 2 942 EXTEN.	25° 31' / 60° 19'	CTR
1644 Z	RMW OUTBOUND SOURCE		RMW OUTBOUND SOURCE
1653 Z	MIDPOINT OUTBOUND 180°	24° 20' / 60° 18'	MIDPOINT + AT THE 0 THROUGH A RAIN AREA
1659	OUTBOUND TO SOURCE POINT	24° 21' / 60° 19'	REACHING SOURCE CENTER CONTAINS BALM
1702 Z	ENDPOINT SOURCE SOUTH	23° 46' / 60° 19'	ENDPOINT TO SOURCE DOWNWIND POINTS THE BALM SOURCE TO THE SOUTH OF THE STORM
1716 Z	TRK INBOUND TO 315°	24° 14' / 59° 24'	INBOUND 315° THE TRACK BND INFLUENT RIGHT AT OUR NEW POINT.
1721 Z		24° 31' / 59° 40'	LESS CONSISTENT PRECIP ON THIS INBOUND TO THE NW ON 135° AZI.
1727 Z	MIDPOINT SOURCE 135° AZI	24° 49' / 59° 50'	MIDPOINT INBOUND. PROBABLY CIRCU STRENGTHEN OUTSIDE
1733 Z	RMW ON 135° AZI	25° 51' / 60° 21'	
1736 Z	CTR 3	25° 08' / 60° 31'	CTR 7
1739 Z	RMW OUT ON 315°	25° 14' / 60° 37'	RMW OUT OF COMBO
1748 Z	MIDPOINT OUT ON 315° AZI	25° 35' / 61° 11'	MIDPOINT
1754	ENDPOINT ON 315 AZI	25° 58' / 61° 44'	ENDPOINT
			END OF BUTTERFLY

DROP 9
HRD
DROP 10
HRD
DROP 11
NE50
DROP 12
WEST
DROP 13
WEST
DROP 14
HRD
DROP 15
HRD
DROP 16
HRD
DROP 17
WEST
COMBO BT
DROP 18
WEST
DROP 20
WEST
COMB
DROP 21
HRD
DROP 22
HRD

NOW WILL TRK 135° AND GO INBOUND AGAIN

HR

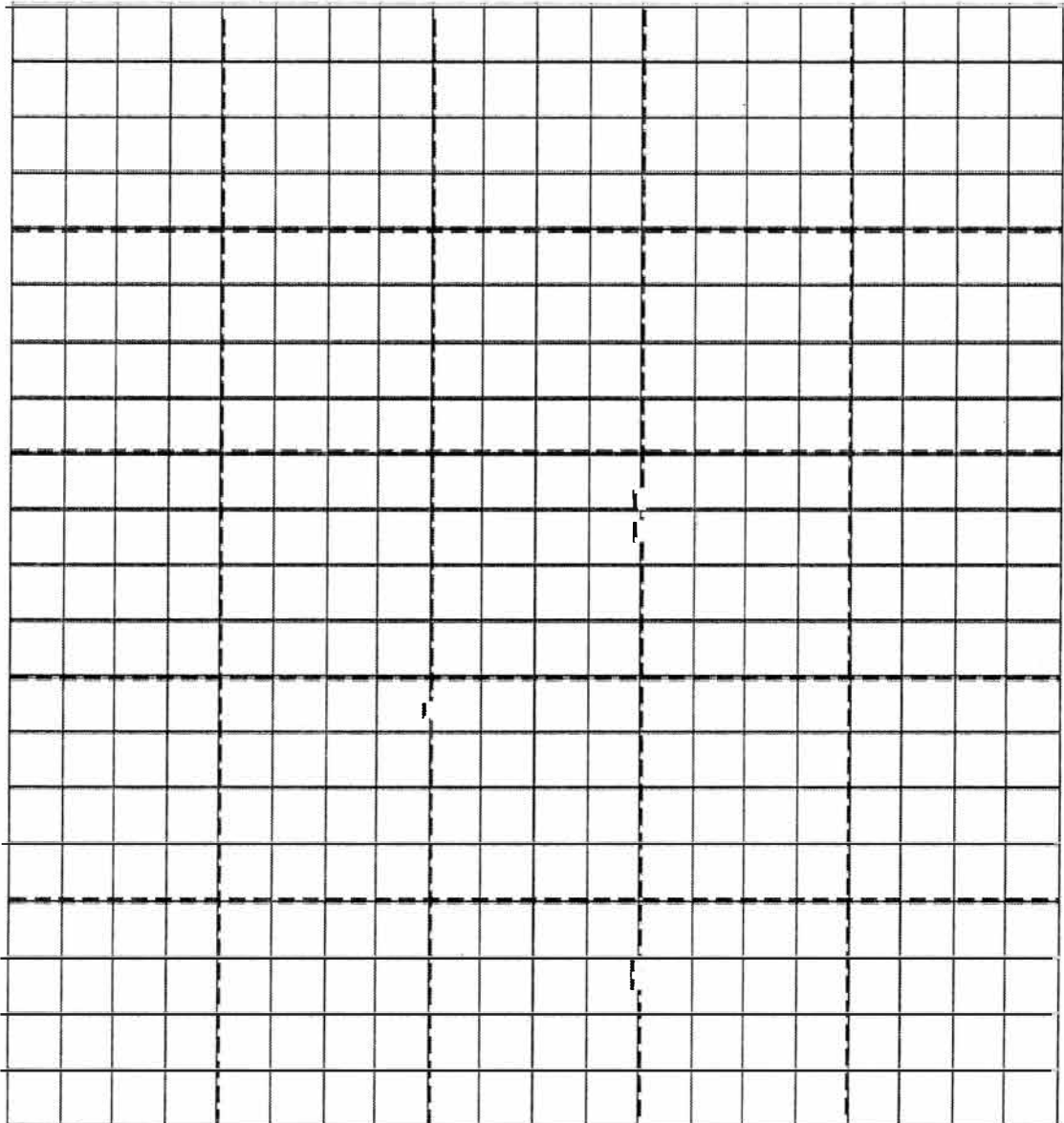
H20 12 Sander
7 Nm

Observer's Flight Track Worksheet

43 22 N23015

Date 9/10/18 Flight 2018091041 Observer Zawisuck

Latitude (°)



Longitude (°)

Mission Summary

Storm name

YYMMDDA# Aircraft 42 RF

20180910H1

Scientific Crew (4 RF)

Lead Project Scientist ZAWISLAK

Radar Scientist ZAWISLAK

Cloud Physics Scientist _____

Dropwindsonde Scientist HOLDACH

Boundary-Layer Scientist _____

Workstation Scientist _____

Observers (affiliation) _____

MESOS: CHANG
JELONAK
SAPP

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

INITIAL BUTTERFLY 240°/060°, 360°/180°, 120°/300° 90mm LEGS. TURNED FOR CLOUDS OVERCASTS DROPS AT ENDPOINTS, MIDPOINTS, CENTER, RMWS. SKIN RAIN. AFTER THAT WERE PROCEED INTO WIND LEGS (CONVECTIVE BURST MODES) AND POSSIBLE SFMR CIRCLES. WERE BE COMING IN ST. CRUISE. TAPPING INTO WIND RELIEF AND HIGH RAIN FOR MESOS.

Mission Synopsis: (include plot of actual flight track)

SO WE COMPLETED THE BUTTERFLY AS DRAWN UP. ABOUT 240/060°, 360°/180°, AND HAD TO DO 135°/315° OUT. ON THE FINAL PASS FOR THE TOR PATTERN. DID ENDPOINTS, MIDPOINTS, CR ON EACH PASS BUT WINDS/OUTBOUND. DID RMWS IN THREE AND WE GOT 4 AXBTs AT EACH QUADRANT RMWS, BUT NONE WORKED. WE THEN WENT INTO MESOS OCEAN WINDS AND DID A NUMBER OF LEGS FROM S/SW TO N/NE THROUGH APPARENTLY THE HIGHEST WINDS.

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

OVERALL, WE GOT GREAT COVERAGE FROM THE RAIN DESPITE THE 90mm LEGS. GOT GREAT SOUND COVERAGE IN THE BUTTERFLY. WE WERE HERE FOR THE END OF RI AND PERHAPS HERE FOR THE BEGINNING OR AN STEEP SLOPE WITHIN THE RELEVANT AND THE WFL WINDS OF THE HIGHEST SIDE.

Problems: (list all problems)

3 SUNDOS WERE BAD,

POTENTIAL PACE FALL.

NUMBER OF AXBTs WANTED
PIR WAIN'T UP

INTERIM RAIN LEVELS OUT, THOUGH. ~940mb
WE ALSO CROSSED, PERHAPS THROUGH A DIURNAL
RISE OR OR 1" INBOUND FROM THE SW

AND THEN A MUCH STRONGER, INTENSE
PART OF PERHAPS THE SAME BAND
ON THE OUTBOUND. CROSSED IN THERE
MORE E-W.

Expendables used in mission.

GPS sondes . 43 (12 HRP, 7 NWS, 24 MESOS)

AXBTs 4 / BUT NONE WERE GOOD

MESOS OCEAN WINDS
GET THEIR WORK IN

Sonobuoys: —