

Lead Project Scientist

Date 9/1/19

Flight ID 20190901H1

Storm or Project ALOS/DORIAN
Mission ID

Experiment name EMC / NESDIS OCEAN WINDS

~~Pre-flight~~

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 Field Program Director
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 Field Program Director
7. Determine next mission status, if any, and brief crews as necessary.
8. Notify Field Program Director 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 ALOS/DURIAN Experiment name ETMC / NESOLS OCEAN WINDS

Flight ID 2905A

~~Mission ID~~ 20190901H1

A. Participants:

Function	Participant	Function	Participant
Lead Project Scientist	ZAWISNAK	Flight Director	SEARS
Radar	DUNION	Pilot	DOIER / MITCHELL
Workstation		Pilot	
Cloud Physics		Navigator	FREEMAN
Dropsonde	DAHL	Systems Engineer	
Dropsonde		Data Technician	
AXBT/AXCP	<u>NESOLS:</u>	Electronics Technicians	
Observer/Guest	<u>CHANG</u>		
Observer/Guest		Flight Engineer	

B. Take-off and Landing Times and Locations:

Take-Off: 1204 UTC Location: LAL

Landing: _____ UTC Location: _____

Number of Eye Penetrations: 3 x CAT 5

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
<u>1 / 0600 Z</u>	<u>26.3N</u>	<u>75.6W</u>	<u>984mb</u>	<u>130k</u>
<u>1 / 1200 Z</u>	<u>26.4N</u>	<u>76.3W</u>	<u>—</u>	<u>135k</u>
/				
/				
/				

FOR 110M
FCST →

THINGS
LIKELY
HIGHER

D. Mission Briefing:

STANDARD BUTTERFLY PATTERN FOR ENC - 300/120, 60/240, 180/360
QUADR LEGS, DO ENDPOINT/MIDPOINT/CENTER (1"-3") RM LIKELY
RMW ON NEARLY EACH LEG

THEN MOVE INTO NESOLS OCEAN WINDS, WE PREFERRED TO DO AN AD HOC
SFMV VALIDATION BY OVERFLING THE SPASH POINT OF SOME RMW DURING
THAT WE DO IMBURNS DURING THE NESOLS MODULE

THE ARE DO 10'KEL PRESSURE FIRST BE BEHIND THE 53", THEN DOWN
TO 8'KEL PRESSURE FOR PART OF PATTERN

Storm or Project ALOS/DORIAN Experiment name EMC / OCEAN WINDS

Flight ID 2905A Mission ID 2019090141

E. — Equipment Status (Up U, Down D, 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:

DMT PROBE STU NOT UP

Lead Project Scientist Event

Date 9/1/19

Flight ID 20190901H1 LPS ZAWISLAW

Time	Event	Position	Comments
1204 Z	T/O		SO WE HAD A 2.5 HR DELAY FOR A MAINTENANCE ISSUE
		NOW ON OUR WAY OUT OF NMC BASES	
		ON THE AIRFIELD CAT 5.	UPCROSS 17 TO 140 KT
		SO WE ARE STILL TRYING TO GET A JOURNAL CYCLE	A FLOWDOWN PRODCOMME OUT
		NOW WE'LL ONLY GET A FILE AT	ISN'T ABLE TO DO A FILE Y CHANGE WORK
		TRY TO FILL GAPS	AS WE CAN WE HIT PLAN
1255 LP			
1255 Z	SONDE # 1	NW 310F IP	INBOUND
			NOW HEADING INBOUND TO CENTER
			BUT NOW DON'T A CIRCLE TO LEFT THAT C-130
1311 Z	SONDE # 2	NW 135"	INBOUND 270° / 77° 9'
			GETTING INTO RWY NOW
1320 Z	SONDE # 3		OUTSIDE RWY
1321 Z	SONDE # 4		RWY
1324 Z	SONDE # 5		CTR
1325 Z	SONDE # 6		RWY #1
1326 Z	SONDE # 7		RWY #2
1347 Z	SONDE # 9		NOW IN VORTIC OF 170 KT SPEC 150 KT IN THE RWY
		↳ MEASURE ENDPOINT OF END OF SE LAC COME TO REPOSITION TO THE	NRE FOR NEXT PASS 920 → EMBARRAS
1355 Z	SONDE # 8		MP OUTBOUND ON 135°
			MIDPAIN OUTBOUND
1420 Z	SONDE # 10		TURN TO WINDWARD 225°
1432 Z	SONDE # 11		MP INBOUND ON 60°
			INBOUND TO CTR MID INBOUND TO CAT 060
1436 Z	SONDE # 12		MP ON PASS TOW FROM ME
1439 Z	SONDE # 13		CHAS RWY #1
			IN 060°
1441 Z	SONDE # 14		RWY
			BAD.
1442 Z	SONDE # 16		RWY
			NO CLOUDS → KICKED OUR SONDE
1443	SONDE # 16		CTR #2
			NO CLOUDS
1445 ~ 4	SONDE # 17		RWY #1
1446 ~ 5	SONDE # 19		RWY #2

PASS #1
919ms 920
EMBARAS
STATE SHOWING
87ms
108kt FL

30.5 SPMR
166W

26.39 76.5 S
26.50 / 76.5 E

25.57
76.66

PASS #2
913ms EMBARRAS

Mission Summary

Scientific Crew (42RF)

- Lead Project Scientist ZAWISLAK
- Radar Scientist DUMON
- Cloud Physics Scientist
- Dropwindsonde Scientist DANK / ZAWISLAK
- Boundary-Layer Scientist
- Workstation Scientist
- Observers (affiliation)

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

DO A BUTTERFLY 90 MIN LEGS AT 8KFT, NW \rightarrow SE, & NW \rightarrow SW, S \rightarrow N
 ACTUALLY HAD TO DO FIG 4 JUST TO TRY TO GET DATA INTO THE 12E CYCLE, WHICH WE DIDN'T MANAGE TO DO

Mission Synopsis: (include plot of actual flight track)

ACTUALLY FLEW A FIGURE-4 W/ 90MIN LEGS IN TOTAL. BECAUSE OF A MAINTENANCE ISSUE, WE GOT POSTED BACK 2 HR TO FIG 4 AND A LATER NIGHT WORK WITH ALL THAT WAS POSSIBLE. EVEN THEN WE COULD ONLY DO ONE MORE PASS OF THE COR 'RAN SW \rightarrow APPROXIMATED THE SW SIDE TO CUT TIME TO TRY AND GET ANOTHER 2 PASSES AND TO GET DATA INTO

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

SO ONLY 1 PASS W/ TOR MADE IT TO EMC ~~DATA~~ AND OUR HOPS FOR SOME VAD DIDN'T GET IN W/ THE TIMING. PWR WAS SLOWER WERE BEST UP IN PMW
 THE EMC C WINDS, WITHIN 1 HR WE DID FOR 1 HR

Problems: (list all problems)

ISSUES W/ TOR SOFTWARE REQUIRED A RESTART OF THE WORKSTATION THAT SEEMED TO SOLVE IT AS IT SOLVED THE PROBLEM IN TIME TO GET DATA OFF THE AIRPLANE AT LEAST BEFORE 1530Z WINDOW ENDED. UNUSUAL TIME AIRPLANE TOOK AND A LOT OF OUR WORKING TIME

Expendables used in mission:

	Deployed	Good	Bad
GPS sondes:		28	65% OF OR \rightarrow TURBULENCE, WHICH KILLS OR SUNDERS ON A LOT OF RAIN DROPS.
AXBTs:		\rightarrow SONDES HAD A TOUGH TIME IN RIME	
Sonobuoys:			
UAVs			

NOT MUCH TO SAY EXCEPT A CAT 5 IS STRENGTHENING NOW.

EVEN BETTER PROBABLY THAN EARLIER

HIGHER THAN FLIGHT LEVEL

ALREADY 185 KTS SURF WINDS IN VIT PASS

STORM IS RAPIDLY INTENSIFYING AGAIN

WE STARTED THE DAY AT 934Z AND IT'S DOWN TO 909 EARLY ON OUR VIT PASS

COULD NOT DO BUTTERFLY SW 017



HARD TO RECEIVE A SIGNAL TO EAST AND OVERLAP SPREAD TO HIGH ALTITUDE

STORM MIGHT STRENGTHEN W/ ALL THE PITCHING WE ARE IN TURBULENCE

TEAL CONTINUES TO FINE LOWER 934 EXCEPT