

Lead Project Scientist

Date **Aug. 29, 2019**

Flight ID **Z0190829H1**

Storm or Project **DORIAN**

Experiment name **NHC Tasking / RECCO**

Mission ID **1405A DORIAN ALOS2019**

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. **YES**
- 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 **DORIAN**

Experiment name **NHC/RECCO**

Flight ID **20190824HJ**

Mission ID ~~1405A~~

A. Participants:

Function	Participant	Function	Participant
Lead Project Scientist	ALAKA	Flight Director	HOLMES
Radar	SIPPEL	Pilot	DIDIER
Workstation	—	Pilot	MITCHELL, DOREMUS
Cloud Physics	—	Navigator	HEYSTER, LALONDE
Dropsonde	DAHL	Systems Engineer	GREENE
Dropsonde	—	Data Technician	NAHER
AXBT/AXCP	—	Electronics Technicians	FREEMAN
Observer/Guest	AMEZCU		
Observer/Guest		Flight Engineer	

B. Take-off and Landing Times and Locations:

Take-Off: **0950** UTC Location: **KLAL**

Landing: _____ UTC Location: _____

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
29/0900Z	20.5°N	66.6°W		75 kt
29/1800Z	21.9°N	67.6°W		85 kt
/				
/				
/				

D. Mission Briefing:

NHC Recco Mission
 Alpha pattern, 3 center passes
 Fixes: 1130Z (late), 1730Z (early)
 18 drops

Storm or Project DORIAN

Experiment name NHC/RECCO

Flight ID 20190829H1

Mission ID 1405A

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	U			
Doppler Radar/TA	U			
Cloud Physics	— N/A			
Data System	U			
GPS sondes	U			
AXBT/AXCP	— N/A			
Ozone instrument	— N/A			
Workstation	U			
Cameras				

REMARKS:

Lead Project Scientist Event

Date 08/29/2019

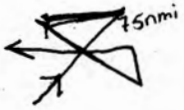
Flight ID 20190829H1

LPS ALAKA

Time	Event	Position	Comments
0845Z	Maintenance	Ground	Fire Detection Line Issue
—	IP drop will target FOML glider	near 20N, 67W	
—	Backup sonde check → they will be rapid		
1100Z	Eye appears again on IR imagery		
	Despite SW shear, inner core becoming more organized		
	Big NW-SE convective feature 200nm from center		
1244Z	Reached IP	20.1°N, 67.9°W	Dorian faster than forecast
✓	DROP 1		splashed, only <4000ft?
x	1254Z DROP 2		fast fall
✓	DROP 2 bkp		
1259Z	Rainband wrapping around W/SW/S regions		
	Ragged eyewall		
1304Z	Marked center	21.1°N, 67.0°W	51kt sfc, 77kt sfc out
✓	DROP 3 CTR		987mb
✓	DROP 4 RMW		
✓	DROP 5 MID		
1312Z	Rainband Traversing	40 DBZ rainband, very choppy	
	TDR echo tops > 10km		
✓	DROP 6 END		
	DROP 7 END		
1358Z	DROP 8 MID		
1402Z	DROP 9 RMW		
1404Z	DROP 10 RMW		
1405Z	Mark Center	21.3°N, 67.1°W	
	DROP 11 CTR		
1407Z	DROP 12 RMW		
1414Z	DROP 13 MID		

Observer's Flight Track Worksheet

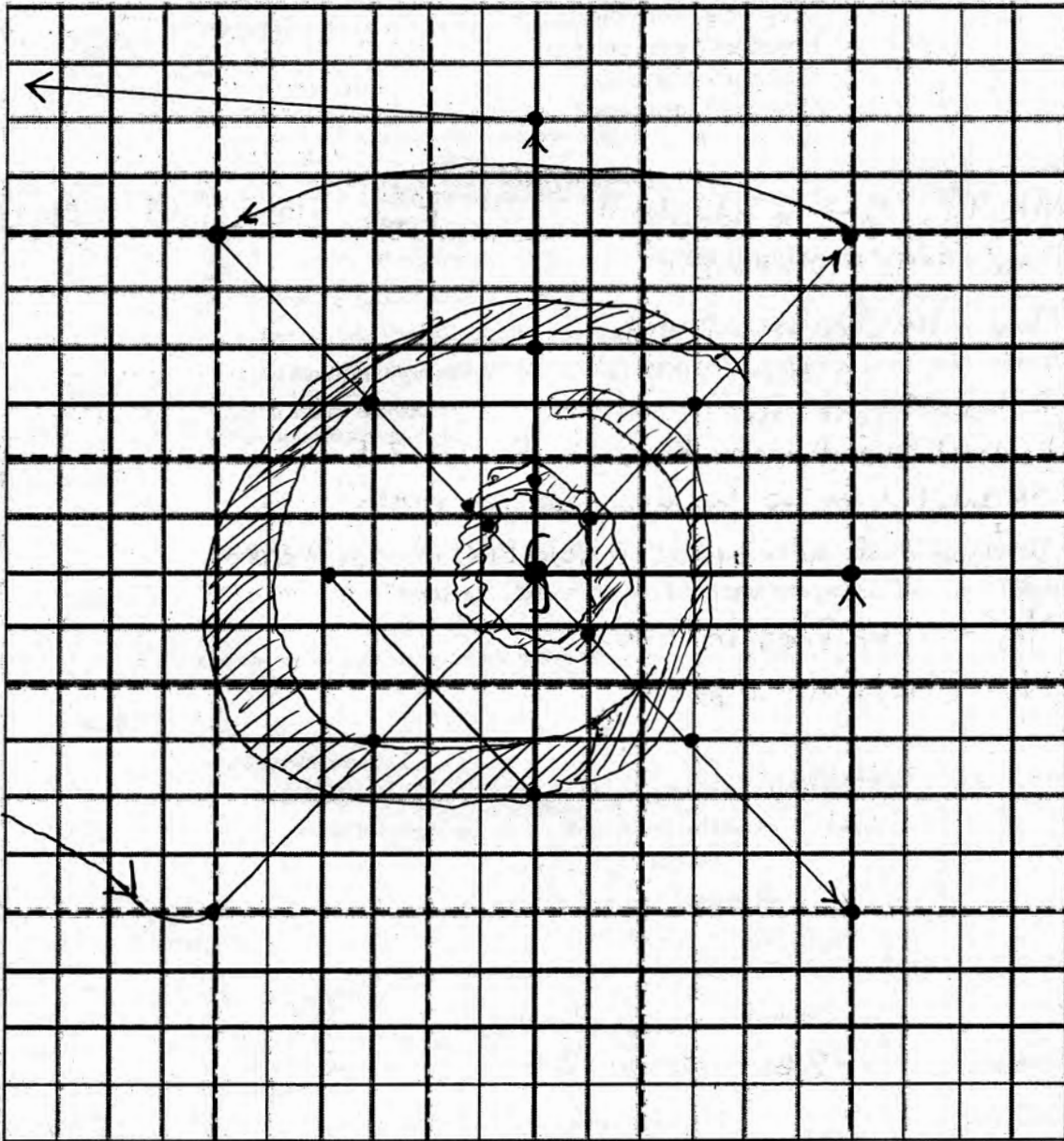
Date 08/29/2019 Flight 20190829H1 Observer ALAKA



Use highlighter to draw freehand on chart

● = Drop

Latitude (°)



Longitude (°)

Mission Summary

Scientific Crew (4 RF)

Lead Project Scientist ALAKA

Radar Scientist SIPPET

Cloud Physics Scientist

Dropwindsonde Scientist DAHL

Boundary-Layer Scientist

Workstation Scientist

Observers (affiliation)

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

NHC RECCO → no adjustments

Fixes: 1130Z (late), 1530Z (early)

Drops: END/MID/RMW/CTR

Slow intensification expected

Mission Synopsis: (include plot of actual flight track)

Added 4th center fix

Loitered SW of center to wait for 1530Z fix

24 total drops → too many for one person?

Development of outer eyewall. Possible ERC. Pressure dropped

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

Yes - center fixes on time

No - CTR/RMW drops late

Problems: (list all problems)

Expendables used in mission:

	Deployed	Good	Bad
GPS sondes:	26	24	2
AXBTs:	—	—	—
Sonobuoys:	—	—	—
UAVs	—	—	—