NOAA Aircraft Operations Center - NOAA 49 Flight Manifest

FLIGHT INFORMATION

FLT ID:	20180807H	FLT #:	
From:	PHNL	ETD:	
To:	PHNL	ETA:	

Block Time		Flight Time	
In:	0156	In:	0151
Out:	1752	Out:	1804
Total:		Total:	

Sponsoring Org:	
Program:	
Purpose:	

CREW MANIFEST

AC:	Twining	Scientists:
CP(s):	Waddington	
	Fritzler	
Nav(s):		
FE(s)		
FD(s):	Sears	
	Flaherty	Visitors:
SEB:	McAlister	
	Underwood	
SSA:	Defeo	
AVAPS:	Lynch, C	

MISSION INFORMATION

Pressure		Dropsondes		
		Good	Bad	Sent
A/C Takeoff		30	6	30
Wx Station Takeoff		BTs		
		Good	Bad	Sent
A/C Land				
Wx Station Land				

Storm Number ID:	
(ie: AL072012)	
TCPOD/WSPOD Mission	
(ie: NOAA2 2418A SANDY)	

AS REQUIRED BY ORM	Y	N	REMARKS
VOLCANIC ASH		X	
SCIENCE MISSION WITHIN BDRY LAYER		X	
LACK OF PRECIPITATION		X	
RELATIVE HUMIDITY ≥ 80%		X	
LARGE AIR-SEA TEMP GRADIENT		X	
HIGH SURFACE WINDS		X	
LONG FETCH / DURATION OF SFC WND		X	
SEA SALT ACCRETION FORECAST		X	
SEA SALT ACCRETION OBSERVED			

OBSERVATIONS

Fix Number	Obs Number	Fix Time	SLP

Additional Remarks:

*Highlighted items must be completed before departure.

Cockpit Gmax: Gmin:

36 total Sonds
5 backed up
1 pt skipped

APPENDIX 2 – GIV QC Checklist

Flight ID:	20180807N1
Flight Director(s):	Sears

Pressure Comparison		
	T/O	**Land**
Aircraft	1014.1	1012.7
Tower	1014.1	1013.1

UWZ.d mean: -0.02

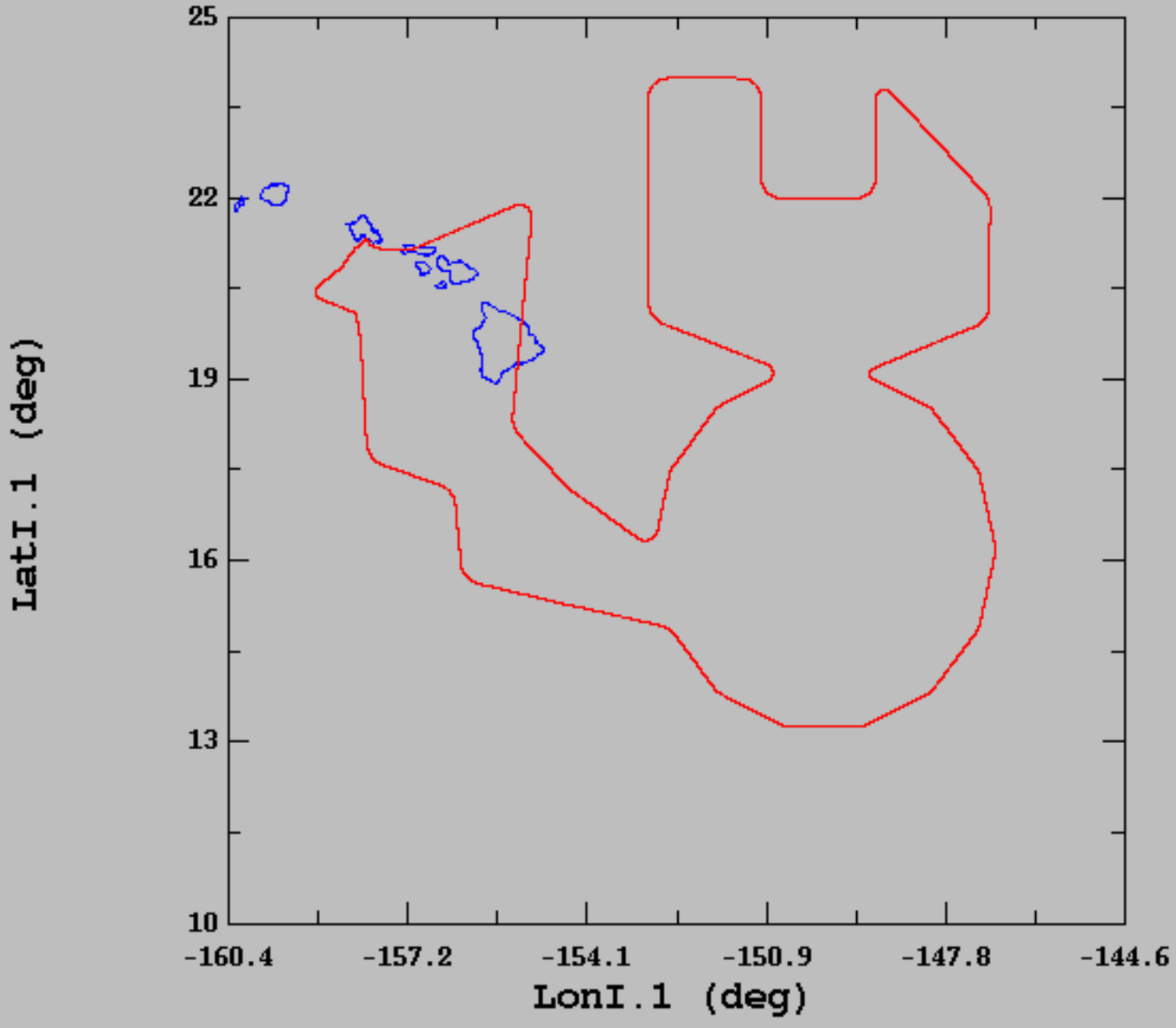
	Raw 1Hz Mean File Parameters				C File Parameters	
x Accelerometer	AccAXI.1	AccAYI.1	AccAZI.1		AccZref	
	AccAXI.2	AccAYI.2	AccAZI.2			
	AccAXI.3	AccAYI.3	AccAZI.3			
x Altitude	AltGPS.1	AltI.1	AltPaADDU.1	AltBCADDU.1	ALTref	
	AltGPS.2	AltI.2	AltPaADDU.2	AltBCADDU.2	ALTPA.d	
	AltGPS.3	AltI.3	AltRA.1		ALTGA.d	
x Ground Speed	GsXI-GPS.1	GsXI.1	GsGPS.1	GsXGPS.1	GSXref	
	GsXI-GPS.2	GsXI.2	GsGPS.2	GsXGPS.2	GSYref	
	GsYI-GPS.1	GsXI.3		GsYGPS.1	GSZref	
	GsYI-GPS.2	GsYI.1	GsZI.1	GsYGPS.2		
	GsZI-GPS.1	GsYI.2	GsZI.2	GsZGPS.1		
	GsZI-GPS.2	GsYI.3	GsZI.3	GsZGPS.2		
x Lat/Lon	LatGPS.1	LatI.1	LonGPS.1	LonI.1	LATref	
	LatGPS.2	LatI.2	LonGPS.2	LonI.2	LONref	
	LatGPS.3		LonGPS.3			
x Pressure	PDALPHA.1	PQALPHA.1	PQM.1	PSM.1	PDALPHAref	PQMref
	PDALPHA.2	PQALPHA.2	PQM.2	PSM.2	PDBETAref	PQ.c
	PDBETA.1	PQBETA.1	PQM.11	PSM.11	PQALPHAref	PSMref
	PDBETA.2	PQBETA.2			PQBETAref	PS.c
x Air Speed	CasADDU.1	TasADDU.1	IasADDU.1		IAS.d	TAS.d
x Pitch/Roll	PitchI.1	PitchRateI.1	RollI.1	RollRateI.1	PITCHref	
	PitchI.2	PitchRateI.2	RollI.2	RollRateI.2	ROLLref	
	PitchI.3	PitchRateI.3	RollI.3	RollRateI.3		
x Temp/Dewpt	TTM.1	TTM.11	TDM.1		TD.c	TTMref
	TTM.2	TTM.13	TDM.2		TDMref	TA.d
	TTM.3	TTM.4	TDM.11			
x Miscellaneous (must check)					UWZ.d	WS.d
					DPJ_WSZ	WD.d
					HUM	

Mission Documents:

X	Error Summary
X	Crew Manifest
X	QC checklist
X	Dropwindsonde Log(s) – AVAPS and FD if completed
X	Miscellaneous FD notes

NOTES:

2018-08-07, 17:43:00-25:56:20



	mean	sigma	min	max
LatI.1 (deg), 1 s/sec	19.13	3.00	13.25	23.98
LonI.1 (deg), 1 s/sec	-152.58	3.69	-158.82	-146.89

NOAA • AOC • SED

N49RF AVAPS DROP LOG

Lead Tech: Gabe Defeo

Project : Hurricane 2018 Mission : Hector Flight ID : 20180807N1

Take Off : 18007 Landing : _____ Flt Dir : Sears Launcher S/N: 2

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	162825002	1	-0.6	1834	NGU	NWS	Point 1	✓
2	163535029	2	+0.4	1914	↓	↓	Point 3	✓
3	163845133	3	-0.3	1904			Point 2	✓
4	163815102	4	0.0	1929			Point 4 - Fast Fall	X
5	163815101	1	+0.3	1930			Point 4 - Backup	✓
6	163025048	2	+1.2	1938			Point 5	✓
7	162745030	3	0.0	1948			Point 6	✓
8	163815050	4	-0.1	1958			Point 7 - Fast fall	X
9	163313022	1	-0.2	1959			Point 7 - Backup	✓
10	163525049	2	-0.2	2017			Point 8	✓
11	163935007	3	+0.2	2031			Point 9	✓
12	163935006	4	+0.1	2048			Point 10	✓
13	163025039	1	-0.2	2102			Point 11	✓
14	163325048	2	0.0	2118			Point 12	✓
15	163025052	3	-0.1	2132			Point 13	✓
16	163815114	4	-0.4	2146			Point 14 - No GPS	X
17	163615062	1	-0.6	2147			Point 14 - Backup	✓
18	163325056	2	-0.1	2206			Point 16	✓
19	163815109	3	+0.1	2223			Point 17 - No GPS	X
20	163025015	4	+0.2	2224			Point 17 - Backup	✓
21	163815104	1	-0.1	2238			Point 18	✓
22	163025031	2	-0.6	2250			Point 19	✓
23	163935019	3	+0.2	2301			Point 20 - GPS Loss	✓X
24	163025051	4	-0.4	2312			Point 21	✓
25	163615093	1	+0.7	2323			Point 22	✓
26	162825124	2	-0.2	2334			Point 23	✓
27	163025063	3	+0.7	2344			Point 24	✓
28	162825127	4	-0.1	2354			Point 25 - Lost GPS	X
29	163525050	1	-0.3	0005			Point 26 - Lost at 5500	✓
30	162815297	2	-0.3	0016			Point 27 - Fast fall	X
31	163535044	3	-0.2	0017			Point 27 - Backup	✓
32	163025001	4	-0.4	0031			Point 28	✓
33	163535016	1	0.0	0047			Point 29	✓
34	162815299	2	-0.6	0059			Point 30	✓

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Go?
35	164015033	3	+0.6	0110	NGU	NWS	Point 31	✓
36	163335261	4	+0.3	0124	↓	↓	Point 32	✓
37					↓	↓		
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								

Drop Station Operator Notes

Charge $$ To Options: AOC, NWS, HFIP, HRD, IR/SST, SAT (Special NESDIS/HRD sondes) or HRD ONLY– Do not use funding codes!

AVAPS Pre-Flight Check:

- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and Full Flight ID (example: 20120823N2).
- Verify the Frequency band allocation as required:
- Band A - W53rd, Band B - Research, Band C - N43RF, Band D - N49RF, Band E – Global Hawk
- Select the **GPS Reference** tab from the **Soundings Displays** page and verify good GPS data
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights. Verify data is available on Remote AVAPS at R1 and L1, then terminate the sonde by selecting **Abort** to cancel the sonde initialization. Verify the AVAPS Data mission folder has been created
- Verify AVAPS PC Time is correct
- Early launch detects are caused usually by remanufactured sondes with the chute riser line not properly coiled between the PCB ears. This may also cause fast falls. If this is suspected, repack the riser line as time permits
- Eyewall drop performance is improved when using sondes manufactured after 7/2016
- Perform RH Regeneration on all sondes – this must be done prior to sonde initialization

AVAPS Launch:

- Select a sonde frequency in the Green band and away from other sondes
- Enter sonde pressure error offset if 0.4mB or greater using cabin pressure sensor – warning, this can not be used during a climb
- If the Cal lab pressure standard and the cabin pressure standard match, apply pressure offset +/- 0.1 mB
- Select "begin data collection" and verify good data with winds prior to putting sonde in launch tube
- Do not shorten the ribbon on N49
- Loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing starboard
- Verify the sonde is actively tracking GPS data prior to launch and no early launch detect

N49RF AOC G[illegible]ropwindsonde Log

Flight ID: 20180807N1 Flight Director: FLAHERTY / SEARS

Mission ID: 0610E HECTOR Storm/Track: HURRICANE HECTOR SURV.

30/36

Drop #	Ob #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°E)	Wx Cond.	L5/R5?	SFC Prs (mb)	Last Wind Alt (m)	Comments	Ch #	SatComm failures	KWBC #
1	1	25002	1834	21.6	-155.0	SCT BLW	R5	1015.8			1		1848
2	2	45113	1904	18.0	-155.2	"	"	1012.7		ELD	3		1925
3	/	15102	1929			"	"			FAST FALL	4		
4	3	15101	1930	16.7	-152.8	"	"	1011.8			1		2040
5	4	25048	1938	17.6	-152.5	"	"	1011.8			2		2043
6	5	45030	1948	18.6	-151.6	"	"	1011.7			3		2047
7	6	13022	1959	19.3	-151.0	"	"	1012.7	NO	SFC WINDS	1	HSLIGHTS ??	2050
8	7	25049	2017 (1958)	20.3	-153.0	"	"	1014.1			2		2102
9	/									FAST FALL			
10	8	35007	2031	22.0	-153.0	"	"	1015.7			3		2109
11	9	35006	2048	24.0	-152.6	"	"	1017.0			4		2128
12	10	25039	2102	23.6	-151.0	"	"	1016.2			1		2132
13	11	25048	2118	22.0	-150.6	"	"	1014.3			2		2158
14	12	25052	2132	22.3	-149.0	"	"	1014.5			3		2200
15											4	NO GPS	
16	13	15062	2147	23.5	-148.5	"	"	1015.8			1	BACK-UP	2215
17	14	25056	2206	21.8	-147.0	"	"	1013.9		FIXED SFC WINDS	2		2236
18	[illegible]	[illegible]	[illegible]								3	NO GPS	
19	15	25015	2224	19.8	-147.4	BRK BLW	"	1012.3			4	BACK UP	2316
20	16	15104	2238	19.2	-149.0	OVC BLW	"	1011.1			1		2319
21	17	25031	2250	18.4	-147.9	OVC	"	1010.1			2		2320
22	18	35019	2301	17.4	-147.2	BKN BLW	"	1009.1		RMVD WINDS ↕	3		2322
23	19	25051	2312	16.1	-147.0	SCT BLW	"	1008.1		RMVD FL WINDS	4		2338
24	20	15093	2323	14.8	-147.3	SCT BLW	"	1008.2			1		0005
25	21	25124	2334	13.8	-148.1	FEW BLW	"	1007.7		RMVD FL WINDS	2		0007
26	22	25063	2344	13.3	-149.3	"	"	1007.8		RMVD FL WINDS	3		0015
27	[illegible]	25127	2354							BAD WINDS/GPS	4		
28	23	25050	0005	14.0	-151.8	"	"	1007.5			1		0035
29	/	15097	0016							FAST FALL	2		
30	24	35029	1914	17.1	-154.3	"	"			DID NOT XMIT	[illegible]	RETRANSMITTED	0030
31	25	35004	0017	14.9	-152.8	"	"				3		0038
32	26	25001	0031	15.3	-154.5	"	"	1009.2			4		0052
33	27	35016	0047			"	4	1010.5			1		0108

2301 WINDS

BAD WINDS

N49RF AOC G[illegible]ropwindsonde Log

Flight ID: 20180807H1

Flight Director: FLAHERTY / SEARS

Mission ID:

Storm/Track: HURRICANE HECTOR

Drop #	Ob #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°E)	Wx Cond.	L5/R5?	SFC Prs (mb)	Last Wind Alt (m)	Comments	Ch #	SatComm failures	KWBC #
34	28	15299	0059	17.3	-156.6	FEWCU	R5	1010.9			2		0120
35	29	15033	0110	17.8	-157.8	"	R5	1011.0			3		0132
36	30	35261	0124	19.4	-158.0	"	"	1012.0		LAST RDT	4		0143
4													
5													
6													
7													
8													
9													
10													
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28													
29													
30													

N49RF ERROR SUMMARY
Hurricane Hector

Flight ID: 20180807N1

Sensor or System	Number or Name
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.1
Dewpoint Temp. Probe	TDM.1
Vertical Accelerometer	AccZI.1
Altimeter	AltGPS.3
INE Selection	1
Differential Attack Pressure Probe	PDALPHA.2
Differential Sideslip Pressure Probe	PDBETA.2
Dynamic Attack Pressure Probe	PQALPHA.2
Dynamic Sideslip Pressure Probe	PQBETA.2

Flight Directory acdata/2018/MET/20180807N1

Local Met Data	Takeoff PHNL (1803Z)	Landing PHNL (0151Z)
Dynamic Corrections		Yes
AttackAngleIntercept		3.97801
AttackAngleSlope		3.86172
SlipAngleIntercept		1.258
SlipAngleSlope		6.69941
AttackAngleIntercept2		5.04641
AttackAngleSlope2		5.41847
SlipAngleIntercept2		0.905
SlipAngleSlope2		6.78464

Notes:
There were no edits made in the measured parameters used to calculate meteorological and navigational parameters.
Wind and humidity data are suspect.
Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

Expendable Type	# deployed	# good	# transmitted
Dropsondes	36	30	30
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: SEARS

Phone #: 863.500.3986

ACAT-4 Version = 7.1