

Flight Director: Hathaway
Phone #: 863-500-3911

ACAT-4 Version = 7.4

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N42RF Manifest

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20210925H1	FLT #:	2	AC:	Legidakes	Scientists:	Pressure		Dropsondes		
From:	TISX	ETD:	1900	CP(s):	Keith	Bucci	A/C Takeoff		Good	Bad	Sent
To:	TISX	ETA:	400		Rannenberg	Zhang			31	3	31
Block Time		Flight Time		NAV:	Utama	Hough	ASOS Takeoff		BTs		
In:	3:13	Land:	3:10	FE(s):	Sanchez				A/C Land		Good
Out:	18:40	T/O:	18:49	FD(s):	Hathaway		ASOS Land		8	0	0
Total:	8.6	Total:	8.4	SSA:	Richards, T.	Visitors:					
Sponsoring Org:		HRD		AVAPS:	McAlister		Storm Number ID:		AL182021		
Program:		PHX		SEB:			(ie: AL072012)				
Purpose:		Sam Research Flight #1		MX:			TCPOD/WSPOD Mission		WB18A SAM		
							(ie: NOAA2 2418A SANDY)				
AS REQUIRED BY ORM				Y	N	REMAR	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					X		1				
SCIENCE MISSION WITHIN BDRY LAYER					X		2				
LACK OF PRECIPITATION					X		3				
RELATIVE HUMIDITY ≥ 80%				X			4				
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											
							Pennies:	3			
*Highlighted items must be completed before departure.											
Remarks:											

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.
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Flight ID:	20210925H1
Flight Director(s):	Hathaway
Mission:	Non-tasked Science Collection/Research
UWZ.d mean:	0.08

Pressure Comparison		
	T/O	Land
Aircraft	1011.4 mb	N/A
Tower	TISX - 1011.3 mb	TISX - 1013.3 mb

	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ AccAXI.1 ✓ AccAXI.2 ✓ AccAXI-GPS.1 ✓ AccAXI-GPS.2	✓ AccAYI.1 ✓ AccAYI.2 ✓ AccAYI-GPS.1 ✓ AccAYI-GPS.2	✓ AccAZI.1 ✓ AccAZI.2 ✓ AccAZI-GPS.1 ✓ AccAZI-GPS.2	✓ AccZfilter-GPS.1 ✓ AccZfilter-GPS.2	✓ AccZref	
✓ Altitude	✓ AltGPS.1 ✓ AltGPS.2 ✓ AltGPS.3 ✓ AltGPS.4	✓ Alti-GPS.1 ✓ Alti-GPS.2	✓ AltPaADDU.1 ✓ AltBCADDU.1	✓ AltRA.1 ✓ AltRA.2	✓ ALTref ✓ ALTPA.d ✓ ALTGA.d	✓ AltRA1.c ✓ AltRA2.c
✓ Ground Speed	✓ GsXI-GPS.1 ✓ GsXI-GPS.2	✓ GsYI-GPS.1 ✓ GsYI-GPS.2	✓ GsZI-GPS.1 ✓ GsZI-GPS.2		✓ GSXref ✓ GSYref ✓ GSZref	
✓ Lat / Lon	✓ LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3 ✓ LatGPS.4	✓ LatI-GPS.1 ✓ LatI-GPS.2	✓ LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3 ✓ LonGPS.4	✓ LonI-GPS.1 ✓ LonI-GPS.2	✓ LATref ✓ LONref	
✓ Pressure	✓ PDALPHA.1 ✓ PDALPHA.2 ✓ PDBETA.1 ✓ PDBETA.2	✓ PQALPHA.1 ✓ PQBETA.1	✓ PQM.1 ✓ PQM.2 ✓ PQM.3 ✓ PQM.4	✓ PSM.1 ✓ PSM.2 ✓ PTM.1	✓ PDALPHaref ✓ PDBETAref ✓ PQALPHaref ✓ PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.1		✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 <input type="checkbox"/> PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 <input type="checkbox"/> PitchRateI.3	✓ RollI.1 ✓ RollI.2 <input type="checkbox"/> RollI.3	✓ RollRateI.1 ✓ RollRateI.2 <input type="checkbox"/> RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✓ TTM.2 ✗ TTM.3	✓ TDM.1 ✓ TDM.2 <input type="checkbox"/> TDM.3	✓ TRadD.1 ✓ TRadS.1 <input type="checkbox"/> TRadU.1		✓ TD.c ✓ TDMref	✓ TTMref ✓ TA.d
✓ Misc. (Must check)					✓ UWZ.d ✓ DPJ_WSZ ✓ HUM	✓ WS.d ✓ WD.d

FLID_Mission_Documents.pdf:
<ul style="list-style-type: none"> ✓ Error Summary ✓ Crew Manifest ✓ QC Checklist ✓ Dropwindsonde Log(s) - AVAPS and FD if completed ✓ Flight Track ✓ Miscellaneous FD Notes

QC Key	
Not checked	<input type="checkbox"/>
Valid	<input checked="" type="checkbox"/>
Errors (note)	✗

NOTES:
<ul style="list-style-type: none"> - Occasional dropouts in data around hours 3.5 to 5 in AltGPS.3 and AltGPS.4. AltGPS.3 is also the reference sensor. - TDM.1 appears more sensitive especially during transit to and from the storm environment.

Dropsonde Scientist

Flight ID 20210925HI Storm Sam Mission ID WB18A

Dropsonde Scientists Jim Zhang

AVAPS Operators Max

The Lead Project Scientist (LPS) on the P3 is responsible for determining the distribution patterns for dropwindsonde releases. Predetermined desired data collection patterns are illustrated on the flight patterns. However, these patterns are often altered because of clearance problems, etc. Operational procedures are contained in the operator's manual. On the G-IV the sole HRD person is designated the LPS. The following list contains more general supplementary procedures to be followed. (Check off or initial.)

Preflight

1. Determine the status of the AVAPS and workstation. Report results to the LPS.
2. Confirm the mission and pattern selection with the LPS and assure that enough dropsondes are on board the aircraft.
3. Modify the flight pattern or drop locations if requested by AOC to accommodate changes in storm location or closeness to land.
4. Complete the appropriate preflight set-up and checklists.

In-Flight

1. Operate the system as specified in the operator's manual.
2. Ensure the AOC flight director is aware of upcoming drops.
3. Ensure the AVAPS operator has determined that the dropsonde is (or is not) transmitting a good signal. Recommend if a backup dropsonde should be launched in case of failure.
4. Report the transmission of each drop and fill in the Dropwindsonde Scientist Log.

Post flight

1. Complete Dropwindsonde Scientist Log.
2. Download all raw and processed AVAPS files to thumbdrive
3. Brief the LPS on equipment status and turn in completed forms and thumbdrive.
4. Debrief at the base of operations.
5. Determine the status of future missions and notify Field Program Director as to where you can be contacted.

NOAA P-3 GPS Dropwindsonde Scientist Log (revised March 2019)

Storm **Sam**
Mission ID **WB18A**

Flight ID **20210925A**
(exp. 0213A)

Dropsonde Scientist **Jun Zhang**
Dropsonde Scientist
AVAPS Operator **Man**
AVAPS Operator

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Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to		SST (°C)	Eye/Eyewall, Rainband, etc.	Ob #
						Dir/Spd (deg/kt)	Hgt (m)			
1	-41159	2135	13.5	50.5	1011.9	025/17	10			07
Comments IP Combo - Satellite overpass HRP.										
2	-30658	2149	13.35	49.8	1008.4	345/18	10			02
Comments IP Combo										
3	-40140	2159	13.34	49.19	1008	345/25	10			03
Comments 1st MW										
4	-40223	2204	13.31	48.84	996.2	307/59	10			04
Comments 1st RMW										
5	-30666	2206	13.297	48.665	985.3	260/43	10			05
Comments 2nd RMW										
6	-40375	220705	13.296	48.633	950.2	25/120	10			06
Comments eyewall 3 - W -										
7	50545	220750	13.293	48.578	945	120/09	10			07-08
Comments Center										
8	40395	220929	13.284	48.462	966.5	170/30	10			08
Comments Outbound E 1st RMW 62m/s										
9	31075	220954	13.281	48.431	973.4	086/24	10			09
Comments Eyewall 6. 2nd 63m/s										
10	20757	2215	13.255	48.108	1005.0	130/48	10			10
Comments Mid Point E										

NOAA P-3 GPS Dropwindsonde Scientist Log (revised March 2019)

Storm **SAM**
 Mission ID **WB18A**
 Flight ID **20210925H1**
 (exp. 0213A)

Dropsonde Scientist **Jun Zhang** AVAPS Operator **Mar**
 Dropsonde Scientist **AVAPS Operator**

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to		SST (C)	Eye/Eyewall, Rainband, etc.	Ob #
						Dir/Spd (deg/kt)	Hgt (m)			
11	50519	222314	13.202	47.546	1010.4	120/35	10			11
Comments	8ND Joint E COMB									
12	10046	2242	14.336	48.132	1005.8	108/43	10			12
Comments	NEW IP NB									
13		2238								
Comments	BAD Sunde									
14	50570	225725	14.244	48.57	963.9	011/05	10			13
Comments	Eyewall -									
15	20772	225743	13.427	48.586	957.6	330/44	10			14
Comments										
16	40144	225757	13.413	48.543	950.7	016/04	10			15
Comments	Eyewall 3									
17	30736	2259	13.345	48.051	945	120/16	10			16
Comments	Center 2									
18	50567	230101	13.247	48.704	972.4	206/03	10			17
Comments	RMW 1 SW									
19	20770	23012	13.238	48.711	974.2	205/44	10			18
Comments	RMW 2 SW									
20	30476	230156	13.202	48.737	984	220/45	10			19
Comments	RMW 3 SW									

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to		SST (C)	Eye/Eyewall, Rainband, etc.	Ob #
						Dir/Spd (deg/kt)	Hgt (m)			
21	40479	2308	12.866	48.977	1005.8	260/35	10			20
Comments	MID SW									
22	50547	2322	12.337	49.382	1006.9	295/21	10			21
Comments	END PT. SE. Combo									
23	20799	2340	12.387	49.126	1011.8	170/21	10			22
Comments	3rd IP Combo SE									
24	41006	2349	12.927	48.459	1006.1	210/42	10			23
Comments	MID - SE									
25	30479	2355	13.305	48.685	965	126/57	10			24
Comments	RMMW1 SE 80 m/s									
26	50543	235605	13.348	48.706	955.5	111/62	10			25
Comments	RMMW2 SE 83.4 m/s									
27	50526	235608	13.35	48.709	953.7	09132	10			26
Comments	RMMW3 SE 68 m/s									
28	40775	2357	13.445	48.767	945	09524	10			27
Comments	Clarity									
29	51136	235818	13.52	48.822	965.9	32134	10			28
Comments	RMMW1 NW 69.2 m/s									
30	30702	235854	13.527	48.826			10			29
Comments	RMMW2 NW - No send bad send. End at 600 m									

AVAPS Drop Log

Project: 2021 Hwx Season

Mission: Hurricane Sam

Flight ID: 20210925H1

Take Off: 1900Z

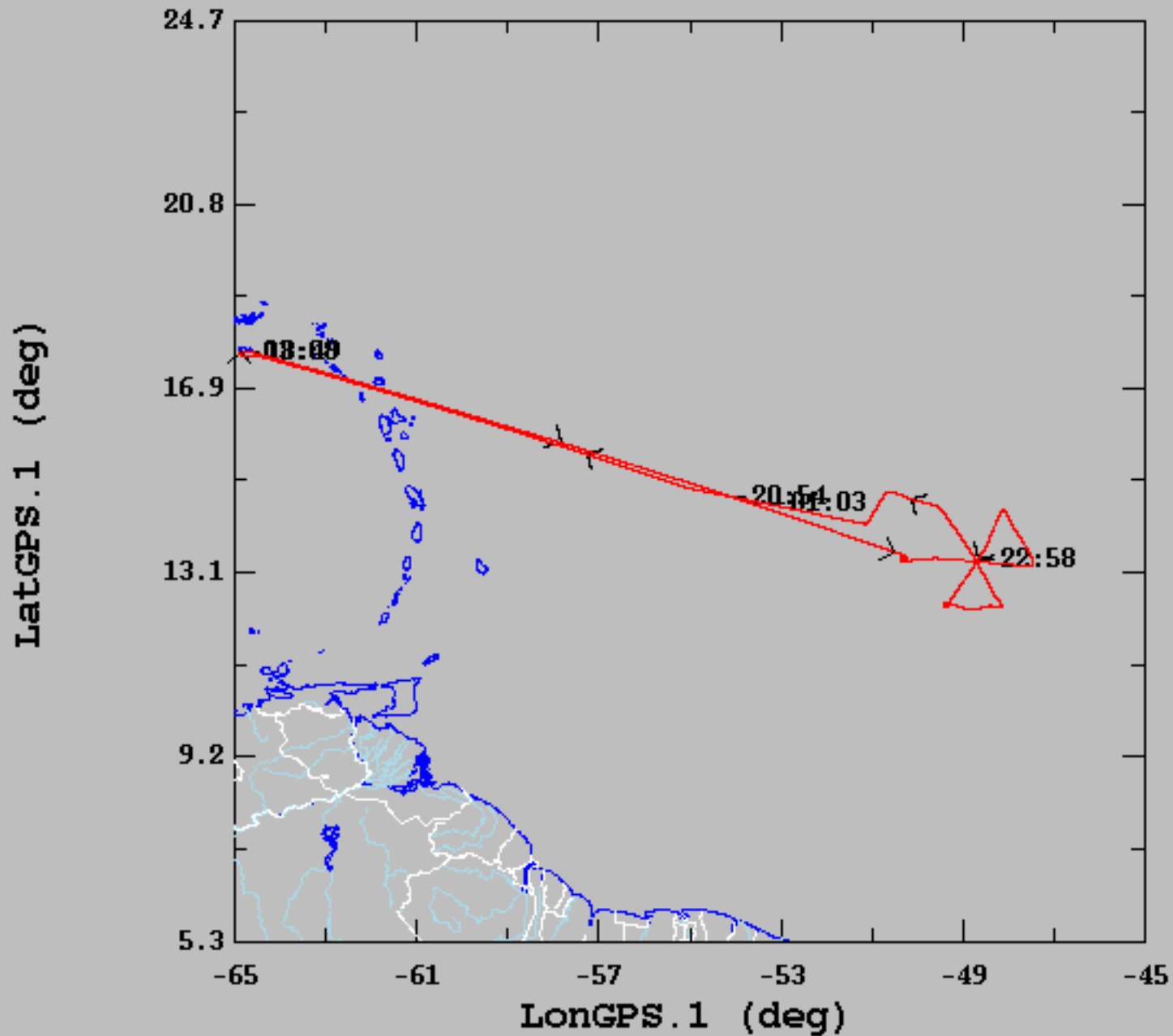
Landing: _____

Flt Dir: Hatheway
Lundry

Launcher S/N: 001

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	210841159	1	+0.2	2135	MAC	HRD	SAT OVERPASS	✓
2	210430658	2	-0.3	2129		NWS	IP2 Combo	✓
3	210440140	3	-0.3	2159		NWS	1st MID P.	✓
4	210440223	4	-0.2	2204		NWS	1st RMW IN-1	✓
5	210630666	5	-0.4	2206		ONR	1st RMW IN-2	✓
6	210440375	6	0	2207		ONR	1st RMW IN-3	✓
7	210850545	7	-0.2	2207		NWS	1st CTR/Combo	✓
8	210440395	8	-0.3	2209		NWS	1st RMW OUT-1	✓
9	210731075	1	0	2209		ONR	1st RMW OUT-2	✓
10	210420757	2	-0.4	2215		NWS	1st MID OUT	✓
11	210850519	3	1	2223		NWS	1st END PT combo	
12	203310046	1	-0.2	2242		NWS	IP2 Combo	
13	210420773	2	-0.3	—		NWS	NO LAUNCH/IP3	
14	210850570	3	-0.3	2257		NWS	2nd IN RMW-1	
15	210420772	4	-0.5	2257		ONR	2nd IN RMW-2	
16	210440144	5	-0.3	2253		ONR	2nd IN RMW-3	
17	210430736	7 6	-0.7	2254		NWS	2nd CTR	
18	210850567	7	-0.3	2301		NWS	2nd OUT RMW-1	
19	210420770	8	-0.6	2301		ONR	2nd OUT RMW-2	
20	210430476	4	0	2301		ONR	2nd OUT RMW-3	
21	210440474	2	0	2308		NWS	2nd MID OUT	
22	210850547	3	0	2322		NWS	Combo 2nd END PT	
23	210420799	9	-0.4	2340		NWS	3rd IP Combo	
24	203241006	5	-0.3	2344		NWS	3rd MID IN	
25	210430479	6	0	2355		NWS	3rd IN RMW-1	
26	210850543	7	-0.2	2356		ONR	3rd IN RMW-2	
27	210850526	8	-0.3	2356		ONR	3rd IN RMW-3	
28	203240775	1	0	2357		NWS	3rd IP CTR	
29	210851136	2	0	2358		NWS	3rd RMW-1	
30	210430702	3	-0.2	2358		ONR	2nd RMW-2	
31	210420801	4	-0.4	2359		ONR	3rd OUT RMW-3	
32	210430735	5	-0.2	0005		NWS	3rd MID OUT	
33	210420760	6	-0.5	0012Z		NWS	3rd IP END COMBO	
34	203250849	7	-0.3	0035Z		ONR	ALAND COMBO	

2021-09-25, 18:49:12-27:08:46



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	14.92	1.54	12.31	17.70
— LongGPS.1 (deg), 1 s/sec	-54.64	5.47	-64.88	-47.42