



Flight Director: Carpenter / Parrish  
Phone #: 863-500-3901

ACAT-4 Version = 7.3

**U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N43RF Manifest**

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	2020091711	FLT #:	20-80	AC:	Rossi	Scientists:	Pressure		Dropsondes		
From:	TISX	ETD:	2100Z	CP(s):	Doremus	Dunion, Jason	A/C Takeoff	1008.4	Good	Bad	Sent
To:	TISX	ETA:	0400Z		ASOS Takeoff		TISX 2025Z 1007.2 mb	35	1	31	
Block Time		Flight Time		NAV:	Freeman	Visitors:	A/C Land	1009.5	BTs		
In:	3:59	Land:	3:52	FE(s):	Heystek		ASOS Land	TISX 0350Z 1008.9 mb	2	8	0
Out:	20:19	T/O:	20:25	FD(s):	Carpenter	Storm Number ID: (ie: AL072012)	AL202020				
Total:	7.7	Total:	7.5	SSA:	Richards/T		TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	NOAA3 WD20A TEDDY			
Sponsoring Org:		HRD			AVAPS:	McAlister	OBSERVATIONS				
Program:		PHX			SEB:		Fix Number	Obs Number	Fix Time	SLP	
Purpose:		Hurricane Teddy research mission 1			MX:		1				
AS REQUIRED BY ORM				Y	N	REMARKS	2				
VOLCANIC ASH					X		3				
SCIENCE MISSION WITHIN BDRY LAYER					X		4				
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					X		Pennies:	3 Hurricane Pennies			

\*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:	2020091711
Flight Director(s):	Carpenter / Parrish
Mission:	Non-tasked Science Collection/Research
UWZ.d mean:	-0.03

Pressure Comparison		
	T/O	Land
Aircraft	1008.4	1009.5
Tower	TISX 2025Z 1007.2 mb	TISX 0350Z 1008.9 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 X AltGPS.3 X 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 X LatGPS.4	✓ LatI-GPS.1 ✓ LatI-GPS.2	✓ LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3 X 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 X PQM.4	✓ PSM.1 ✓ PSM.2 ✓ PTM.1	✓ PDLAPHaref ✓ PDBETAref ✓ PQALPHaref ✓ PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ lasADDU.1		✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 X PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 X PitchRateI.3	✓ RollI.1 ✓ RollI.2 X RollI.3	✓ RollRateI.1 ✓ RollRateI.2 X RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✓ TTM.2 X TTM.3	X TDM.1 ✓ TDM.2 X TDM.3	✓ TRadD.1 ✓ TRadS.1 X TRadU.1		✓ TD.c ✓ TDMref	✓ TTMref ✓ TA.d
✓ Misc. (Must check)					✓ UWZ.d ✓ DPJ_WSZ ✓ HUM	✓ WS.d ✓ WD.d

FLID_Mission_Documents.pdf:	
✓	Error Summary
✓	Crew Manifest
✓	QC Checklist
✓	Dropwindsonde Log(s) - AVAPS and FD if completed
✓	Flight Track
X	Miscellaneous FD Notes

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

NOTES:
<p>GPS.4 unavailable. GPS.3 data gaps near 2200 and 0330Z.</p> <p>PQM.4 affected by icing 2345-0000Z during spiral ascent maneuver.</p> <p>PitchI.3 and RollI.3 unavailable.</p> <p>TTM.3 inoperative.</p> <p>TDM.1 and TDM.3 inoperative.</p> <p>TDM.2 less responsive at altitude.</p> <p>TRadU.1 inoperative.</p>

## NOAA • AOC • SED N43RF AVAPS DROP LOG

Lead Tech:

Project: Hurricane 2020

Mission: Hurricane Teddy

Flight ID: 20200917I1

Take Off: \_\_\_\_\_

Landing: \_\_\_\_\_

Flt Dir: Carpenter/Parrish

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	201730225	1	Ø	2141	MAC	ONR	Clear Air 20K FT	✓
2	201620205	1	-0.2	2219			IP1	✓
3	201450518	2	Ø	2233			1st MID IN / COMBO	✓
4	201740067	3	Ø	2243			1st IN RMW 1	✓
5	201610632	4	-0.3	2243			1st IN RMW 2	✓
6	201721209	6	-Ø	2243			1st IN RMW 3	✓
7	201721042	7	-Ø3	2245			1st CTR / <del>COMBO</del>	✓
8	201620327	8	-0.4	2250			1st out RMW 1	✓
9	201620249	1	Ø	2250			1st out RMW 2	✓
10	201620307	2	-0.5	2250			1st out RMW 3	✓
11	201620328	3	-0.5	2301			1st MID out / COMBO	✓
12	201620185	4	-0.2	2313			1st End Point	✓
13	201630207	6	-0.3	2353			Spiral 20K SE/IP2	✓
14	201450442	7	Ø	0019			2nd MID IN / COMBO	
15	201620329	8	Ø	0028			2nd IN RMW 1	
16	201730203	1	-0.3	0028			2nd IN RMW 2	
17	201630226	2	-0.3	0028			2nd IN RMW 3	
18	201721207	3	-0.3	0034			2nd Center / COMBO	
19	201620337	4	-0.2	0039			2nd out RMW 1	
20	201450515	6	Ø	0039			2nd out RMW 2	
21	201630231	7	-0.2	0039			2nd out RMW 3	
22	201620166	8	-0.4	0048			2nd MID out / COMBO	
23	201630250	1	-0.2	0058			2nd End Point	
24	201630208	2	-0.4	0119			IP3	
25	201630244	3	-0.5	0132			3rd MID IN / COMBO	
26	201630296	4	-0.4	0138			3rd MID IN RMW 1	
27	201620122	6	-0.4	0138			3rd MID IN RMW 2	
28	201350895	7	-0.2	0138			3rd MID IN RMW 3	
29	201450443	8	-0.5	0145			3rd Center	
30	201620311	1	-0.4	0148			3rd MID out RMW 1	
31	201520926	2	-0.1	0148			3rd MID out RMW 2	
32	201350965	3	Ø	0148			3rd MID out RMW 3	
33	201730201	4	-0.3	0156			3rd MID out / COMBO	
34	201350963	6	-0.3	0210			3rd END PT	
35	201450400	7	-0.3	0254	MAC	ONR	Clear Air 20K FT	FAST FALL
36	201620155	1	Ø	0254	MAC	ONR	Blu Clear Air 20K FT	

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
35								
36								
37								
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Drop Station Operator Notes

Charge \$\$ To Options: AOC, NWS, HFIP, NESDIS, ONR, HRD, IR/SST or HRD ONLY – Do not use funding codes!!!

AVAPS Pre-Flight Check:

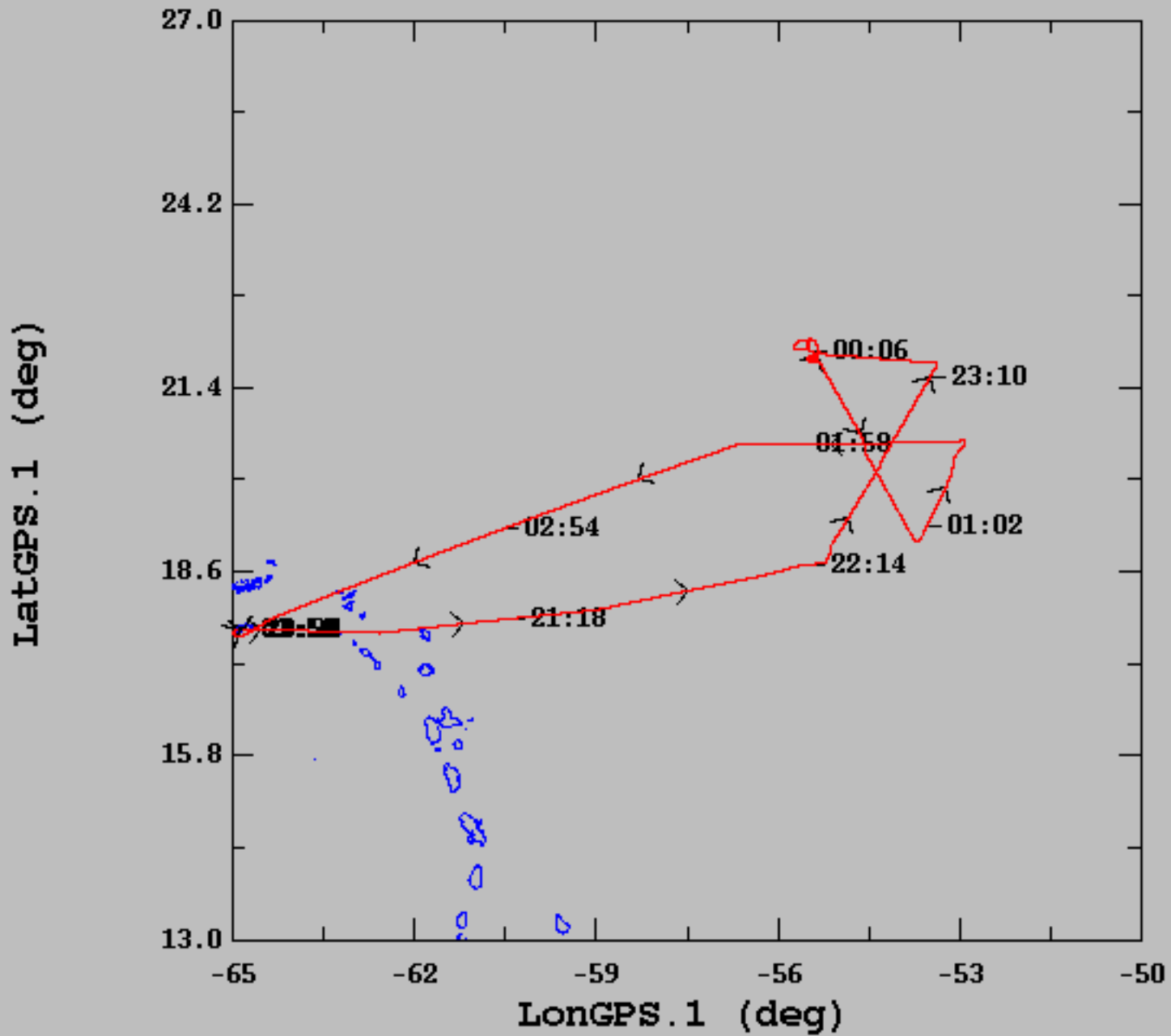
- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and full Flight ID (example 20110823h2).
- Update the Frequency band allocation as required:  
Band A - W53rd, Band B - N42RF, Band C - N43RF, Band D - N49RF, Band E - not allocated
- 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 the FD Station, 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**

**NOTE: HRD RESEARCH MAY REQUIRE USING "IR SONDES", WHICH ALSO HAVE SLOW FALL CHUTES. DO NOT SHORTEN THE RIBBON ON THE SLOW FALL CHUTE SONDES.**

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 – **only if cabin pressure sensor has been fixed and re-calibrated**
- Select "begin data collection" and verify good data (including Winds) prior to putting sonde in launch tube
- **Cut off about ½ of ribbon, Unwind ribbon and flip the screen, Re-wind ribbon, Use orange tape to make a pocket at end of ribbon**
- 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**

09/17/2020, 18:30:14-27:50:15



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	19.26	1.49	17.61	22.15
— LongGPS.1 (deg), 1 s/sec	-58.91	4.40	-64.97	-52.89