





**U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N49RF Manifest**

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20210820N1	FLT #:		AC:	Nardi	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:		CP(s):	Varwig		A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:			<b>32</b>				<b>3</b>	<b>32</b>	
Block Time		Flight Time		NAV:		ASOS Takeoff		BTs			
In:	<b>0519z</b>	Land:	<b>1259z</b>	FE(s):				Good	Bad	Sent	
Out:	<b>1303z</b>	T/O:	<b>0526z</b>	FD(s):	Holmes	ASOS Land					
Total:	<b>7.7</b>	Total:	<b>7.4</b>	SSA:	Lynch						Visitors:
				Sponsoring Org:	NWS		AVAPS:	Hartberger	Storm Number ID:		<b>AL082021</b>
Program:	PHS		SEB:		(ie: AL072012)		TCPOD/WSPOD Mission		<b>0308A HENRI</b>		
Purpose:	Surveillance		MX:		(ie: NOAA2 2418A SANDY)		OBSERVATIONS				
AS REQUIRED BY ORM			Y	N	REMARKS		Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH				x			<b>1</b>				
SCIENCE MISSION WITHIN BDRY LAYER				x							
LACK OF PRECIPITATION				x			<b>2</b>				
RELATIVE HUMIDITY ≥ 80%				x							
LARGE AIR-SEA TEMP GRADIENT				x			<b>3</b>				
HIGH SURFACE WINDS				x							
LONG FETCH / DURATION OF SFC WND				x			<b>4</b>				
SEA SALT ACCRETION FORECAST				x							
SEA SALT ACCRETION OBSERVED				x			<b>Pennies:</b>				

\*Highlighted items must be completed before departure.

Remarks:


## G-IV QC Checklist

<b>Flight ID:</b>	<b>20210820N1</b>
<b>Flight Director(s)</b>	<b>Holmes / Parrish</b>
<b>UWZ.d mean:</b>	<b>-0.04</b>

Pressure Comparison		
	T/O	Land
<b>Aircraft</b>	<b>1012.9</b>	<b>1011.6</b>
<b>Tower</b>	<b>1015.8</b>	<b>1015.4</b>

	Raw 1Hz Mean File Parameters					C File Parameters	
✓ Accelerometer	✓ AccAXI.1	✓ AccAYI.1	✓ AccAZI.1			✓ AccZref	
	✓ AccAXI.2	✓ AccAYI.2	✓ AccAZI.2				
	✓ AccAXI.3	✓ AccAYI.3	✓ AccAZI.3				
✓ 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	
✓ Ground Speed	✓ GsXI.1	✓ GsYI.1	✓ GsZI.1	✓ GsGPS.1		✓ GSXref	
	✓ GsXI.2	✓ GsYI.2	✓ GsZI.2	✓ GsGPS.2		✓ GSYref	
	✓ GsXI.3	✓ GsYI.3	✓ GsZI.3	✓ GsGPS.3		✓ GSZref	
	✓ GsXGPS.1	✓ GsYGPS.1	✓ GsZGPS.1				
	✓ GsXGPS.2	✓ GsYGPS.2	✓ GsZGPS.2				
	✓ GsXGPS.3	✓ GsYGPS.3	✓ GsZGPS.3				
✓ Lat / Lon	✓ LatGPS.1	✓ LatI.1	✓ LonGPS.1	✓ LonI.1		✓ LATref	
	✓ LatGPS.2	✓ LatI.2	✓ LonGPS.2	✓ LonI.2		✓ LONref	
	✓ LatGPS.3		✓ LonGPS.3				
✓ Pressure	✓ PDALPHA.1	✓ PQALPHA.1	✓ PQM.1	✓ PSM.1		✓ PDLAPHaref	✓ PQMref
	✓ PDALPHA.2	✓ PQALPHA.2	✓ PQM.2	✓ PSM.2		x PDBETAref	✓ PQ.c
	x PDBETA.1	x PQBETA.1				✓ PQALPHaref	✓ PSMref
	x PDBETA.2	x PQBETA.2				x PQBETAref	✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1				✓ IAS.d	✓ TAS.d
✓ 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			
✓ Temp / Dewpt	✓ TTM.1	✓ TTM.4	x TDM.1			✓ TD.c	✓ TTMref
	☐ TTM.2		✓ TDM.2			✓ TDMref	✓ TA.d
	✓ TTM.3						
✓ Misc. (Must check)						✓ UWZ.d	x WS.d
						✓ DPJ_WSZ	x WD.d
						✓ HUM	

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

QC Key	
Not checked	☐
Valid	✓
Errors (note)	x

### NOTES:

.1 and .2 GPS parameters data "stair steps"  
**PDBETA.1 & PDBETA.2 unrepresentative due to spare radome**  
**PQBETA.1 & PQBETA.2 unrepresentative due to spare radome**  
**All flight level wind speed and direction suspected errors due to spare radome**  
**TTM.3 oscillates**  
**TDM.1 unrepresentative**

# AVAPS Drop Log

Project: \_\_\_\_\_ Mission: Henri Flight ID: 20210820N1  
 Take Off: \_\_\_\_\_ Landing: \_\_\_\_\_ Flt Dir: Holmes Launcher S/N: 2

pt 5  
pt 6  
pt 7  
pt 8  
pt 9

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	204 031 204	1	Ø	0621	JEH	NWS		✓
2	204 270 016	2	Ø	0631				✓
3	204 530 814	3	Ø	0648				✓
4	204 130 029	4	Ø	0652				✓
5	204 120 631	1	Ø	0704			Late launch det	✓
6	203 830 595	2	Ø	0709			backup for pt 5	✓
7	204 521 417	3	Ø	0713				✓
8	204 521 238	4	Ø	0724				✓
9	204 031 265	1	Ø	0738				✓
10	203 631 724	2	Ø	0750				✓
11	204 330 208	3	Ø	0802				✓
12	204 530 741	4	Ø	0818				✓
13	204 450 353	1	Ø	0827				✓
14	203 830 723	2	Ø	0843				✓
15	204 270 006	3	Ø	0856				✓
16	210 820 079	4	Ø	0911				✓
17	203 830 661	1	Ø	0930				✓
18	204 120 596	2	Ø	0943				✓
19	203 631 646	3	Ø	0952				✓
20	204 130 077	4	Ø	1007				✓
21	204 260 612	1	Ø	1017				✓
22	204 450 368	2	Ø	1026				✓
23	204 450 371	3	Ø	1037				✓
24	204 260 631	4	Ø	1045				✓
25	203 830 630	1	Ø				NOLO	
26	204 270 010	2	Ø	1054			backup for 25	✓
27	204 031 225	3	Ø	1102			fast fall-ish	✓
28	204 530 811	4	Ø	1112				✓
29	204 260 590	1	Ø	1126				✓
30	204 521 418	2	Ø	1142				✓
31	204 260 643	3	Ø	1151				✓

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
32	203 840 011	4	Ø	1200	JES	NWS		L
33	204 270 003	1	Ø	1211				L
34	203 840 010	2	Ø	1224			Late launch detect	
35	204 050 401	3	Ø	1223			backup	L
36								
37								
38								
39								
40								
41								
42								
43								
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**Drop Station Operator Notes**

Charge \$\$ To Options (**DO NOT USE FUNDING CODES**):  
AOC, NWS, HRD, NESDIS, IR/SST, AR, STAN (Stanford), SAT (JPSS/NESDIS/HRD)

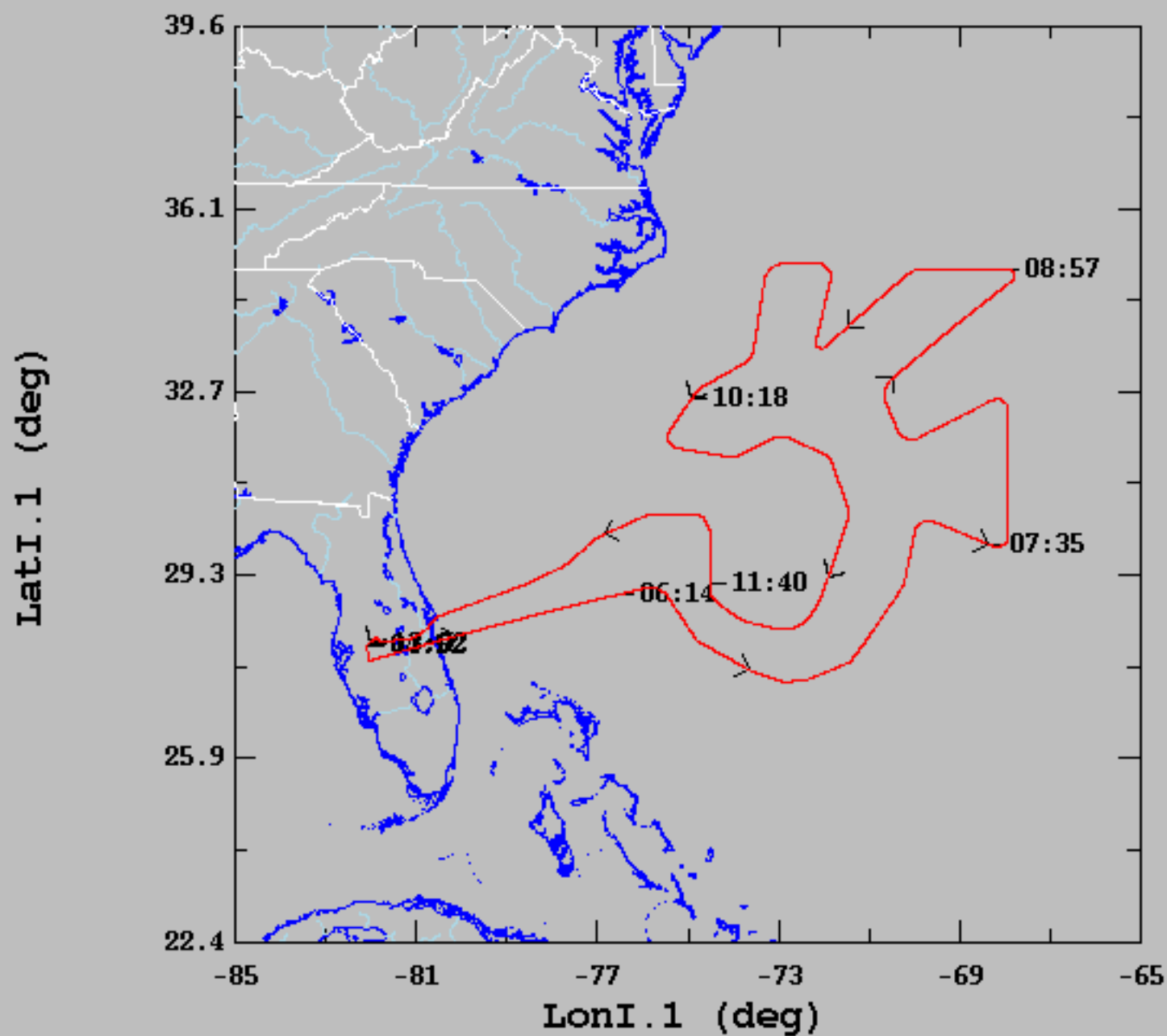
**AVAPS Pre-Flight Check:**

- 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: 53<sup>rd</sup> WRS - Band B: N42RF - Band C: N43RF - Band D: N49RF - Band E: Unallocated
- 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, then terminate the sonde.
- Verify the AVAPS Data mission folder has been created
- **Verify AVAPS PC Time is correct – if time is off by >4sec, no data will display**
- **Early launch detects are caused usually by remanufactured sondes with the chute riser line not properly coiled below the PCB ear. This may also cause fast falls. If this is suspected, repack the riser line as time permits**
- **Perform RH Regeneration on all sondes – Multiple RD41 sondes may be processed at once**

**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**
- **Wait until GPS available (green) on the pre-launch screen before continuing.**
- Select "begin data collection" and verify good data with winds prior to putting sonde in launch tube
- On N42 & N43, remove about ½ of the ribbon. 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 excess orange tape on end of ribbon to form a pocket.
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing right
- Verify the sonde is actively tracking GPS data prior to launch and **no early launch detect**

2021-08-20, 04:52:32-13:02:10



	mean	sigma	min	max
— LatI.1 (deg), 1 s/sec	30.51	2.43	27.28	35.12
— LonI.1 (deg), 1 s/sec	-74.15	4.42	-82.07	-67.76