N49RF ERROR SUMMARY
20210820N1

Flight ID: 20210820N1

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.2
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/2021/MET/20210820N1

Local Met Data	Takeoff KLAL (0526Z)	Landing KLAL (1259Z)
Dynamic Corrections		Yes
AttackAngleIntercept		6.4652
AttackAngleSlope		7.59375
SlipAngleIntercept		0.925
SlipAngleSlope		6.56381
AttackAngleIntercept2		5.05753
AttackAngleSlope2		5.52397
SlipAngleIntercept2		0.931
SlipAngleSlope2		6.57562

Notes: There were no edits made in the measured parameters used to calculate meteorological and navigational parameters.

.1 and .2 GPS parameters data "stair stepps"
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

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	35	32	32
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0

UAS	0	0	0

Flight Director: Holmes / Parrish
Phone #: 863-500-3983

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION

FLT ID:	20210820N1	**FLT #:**	
From:	KLAL	**ETD:**	
To:	KLAL	**ETA:**	
Block Time		**Flight Time**	
In:	0519z	Land:	1259z
Out:	1303z	T/O:	0526z
Total:	7.7	Total:	7.4
Sponsoring Org:	NWS		
Program:	PHS		
Purpose:	Surveillance		

CREW MANIFEST

AC:	Nardi	**Scientists:**
CP(s):	Varwig	
NAV:		
FE(s):		
FD(s):	Holmes	
	Parrish	
SSA:	Lynch	**Visitors:**
AVAPS:	Hartberger	
SEB:		
MX:		

MISSION INFORMATION

Pressure		**Dropsondes**		
		Good	Bad	Sent
A/C Takeoff		32	3	32
ASOS Takeoff		**BTs**		
		Good	Bad	Sent
A/C Land				
ASOS Land				

Storm Number ID: (ie: AL072012)	AL082021
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	0308A HENRI

OBSERVATIONS

Fix Number	Obs Number	Fix Time	SLP
1			
2			
3			
4			
Pennies:			

AS REQUIRED BY ORM	Y	N
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		x

REMARKS

*Highlighted items must be completed before departure.

Remarks:

G-IV QC Checklist

Flight ID:	20210820N1
Flight Director(s)	Holmes / Parrish

UWZ.d mean:	-0.04

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

	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 stepps"

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

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 detect	
pt 5 6	203 830 595	2	Ø	0704			backup for pt 5	✓
pt 6 7	204 521 417	3	Ø	0713				✓
pt 7 8	204 521 238	4	Ø	0724				✓
pt 8 9	204 031 265	1	Ø	0738				✓
pt 9 10	203 631 774	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				NOLD	
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	JSL	NWS		✓
33	204 270 003	1	Ø	1211				✓
34	203 840 010	2	Ø	1224			Late launch detect	
35	204 050 401	3	Ø	1223			backup	✓
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

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)

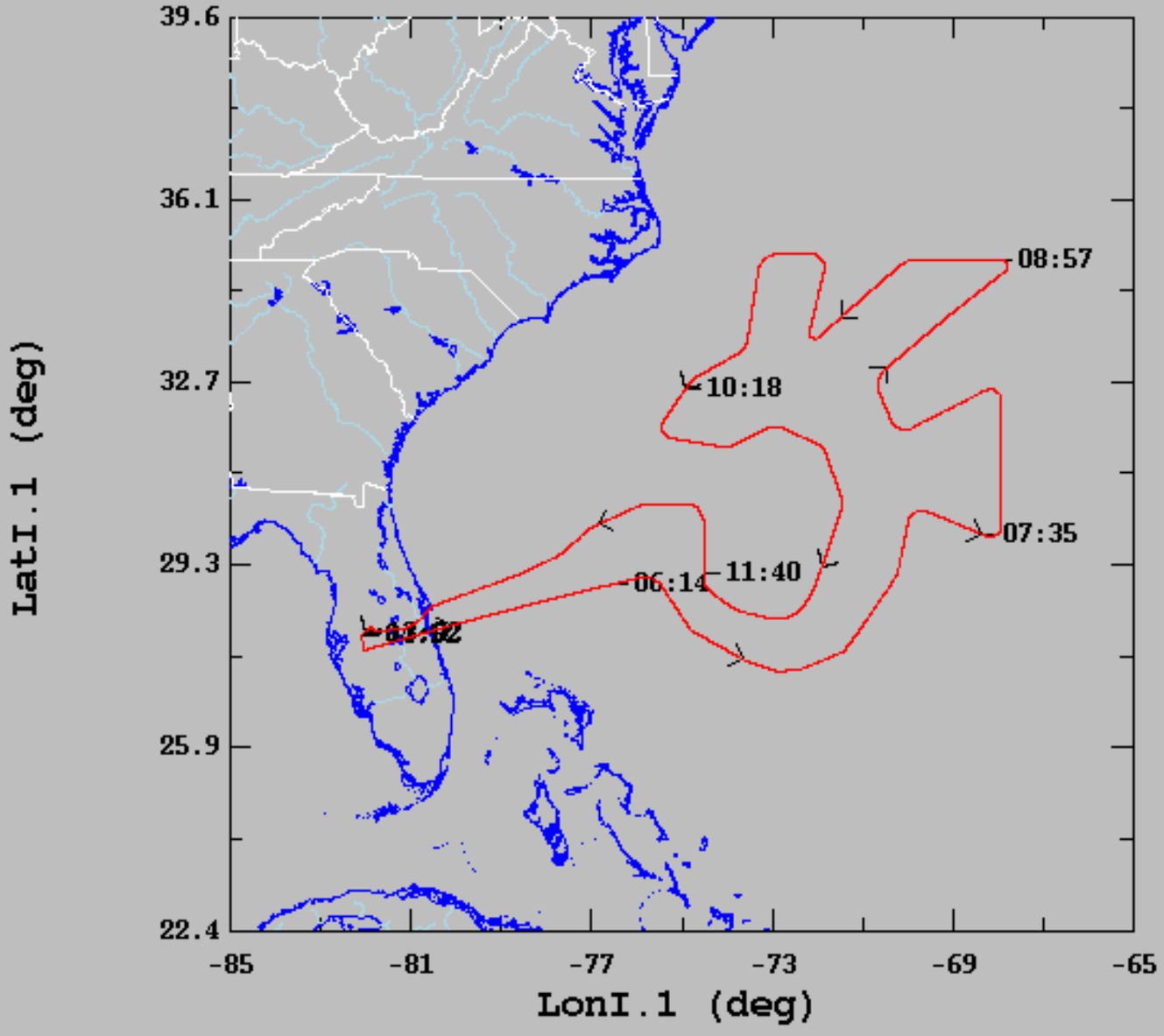
AVAPS Pre-Flight Check:

- 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: 53rd 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