

N49RF ERROR SUMMARY
20210827N1

Flight ID: 20210827N1

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/20210827N1

Local Met Data	Takeoff KLAL (0527Z)	Landing KLAL (0000Z)
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.

Data system shut off before landing - landing pressure not available
.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
TTM.4 large positive spike between 11:13 and 11:24
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 #: 862-500-3938

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20210827N1	FLT #:		AC:	Nardi	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:		CP(s):	Varwig		A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:						32	3	32	
Block Time		Flight Time		NAV:		ASOS Takeoff					BTs
In:	1322z	Land:	1317z	FE(s):			A/C Land		Good	Bad	Sent
Out:	0518z	T/O:	0527z	FD(s):	Holmes Parrish		ASOS Land				
Total:	8.1	Total:	7.9	SSA:	Lynch	Visitors:					
Sponsoring Org:		NWS		AVAPS:	Hartberger		Storm Number ID:		AL092021		
Program:		PHS		SEB:			(ie: AL072012)				
Purpose:		Surveillance		MX:			TCPOD/WSPOD Mission		0209A IDA		
							(ie: NOAA2 2418A SANDY)				
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					x		1				
SCIENCE MISSION WITHIN BDRY LAYER					x						
LACK OF PRECIPITATION					x		2				
RELATIVE HUMIDITY ≥ 80%					x						
LARGE AIR-SEA TEMP GRADIENT					x		3				
HIGH SURFACE WINDS					x						
LONG FETCH / DURATION OF SFC WND					x		4				
SEA SALT ACCRETION FORECAST					x						
SEA SALT ACCRETION OBSERVED					x		Pennies:				

*Highlighted items must be completed before departure.

Remarks:

G-IV QC Checklist

Flight ID:	20210827N1
Flight Director(s)	Holmes / Parrish
UWZ.d mean:	-0.12

Pressure Comparison		
	T/O	Land
Aircraft	1011.9	--
Tower	1012.4	1012.6

	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		☒ PDBETAref	✓ PQ.c
	☒ PDBETA.1	☒ PQBETA.1				✓ PQALPHAref	✓ PSMref
	☒ PDBETA.2	☒ PQBETA.2				☒ PQBETAref	✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1				✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1	✓ PitchRateI.1	✓ RolI.1	✓ RollRateI.1		✓ PITCHref	
	✓ PitchI.2	✓ PitchRateI.2	✓ RolI.2	✓ RollRateI.2		✓ ROLLref	
	✓ PitchI.3	✓ PitchRateI.3	✓ RolI.3	✓ RollRateI.3			
✓ Temp / Dewpt	✓ TTM.1	✓ TTM.4	☒ TDM.1			✓ TD.c	✓ TTMref
	☐ TTM.2		✓ TDM.2			✓ TDMref	✓ TA.d
	✓ TTM.3						
✓ Misc. (Must check)						✓ UWZ.d	☒ WS.d
						✓ DPJ_WSZ	☒ 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)	☒

NOTES:

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AVAPS Drop Log

Project: _____

Mission: Idg

Flight ID: 20210827N1

Take Off: _____

Landing: _____

Flt Dir: Holmes

Launcher S/N: 2

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	204 120 634	1	Ø	—	SH	NWS	No LD	✓
2	204 270 047	2	Ø	0609			backup	✓
3	204 530 461	3	Ø	0619				✓
4	203 850 400	4	Ø	0632				✓
5	205 050 321	1	Ø	0646				✓
6	204 650 401	2	Ø	0705				✓
7	205 050 261	3	Ø	0719			fast fall	✓
8	205 050 380	4	Ø	0721			backup	✓
9	204 840 556	1	Ø	0733			fast fall	✓
10	205 050 286	2	Ø	0735			backUp	✓
11	205 050 382	3	Ø	0754				✓
12	205 050 103	4	Ø	0807				✓
13	204 650 381	1	Ø	0824				✓
14	204 521 394	2	Ø	0834				✓
15	204 450 350	3	Ø	0844				✓
16	204 530 390	4	Ø	0857				✓
17	204 850 437	1	Ø	0912				✓
18	204 530 813	2	Ø	0922				✓
19	204 640 858	3	Ø	0931				✓
20	204 521 395	4	Ø	0945				✓
21	204 520 778	1	Ø	0954				✓
22	204 520 796	2	Ø	1005				✓
23	204 840 568	3	-0.6	1015				✓
24	205 050 313	4	Ø	1025				✓
25	204 521 376	1	Ø	1041				✓
26	205 050 111	2	Ø	1056				✓
27	204 850 435	3	Ø	1104				✓
28	204 850 436	4	Ø	1114				✓
29	204 840 701	1	Ø	1123				✓
30	204 521 393	2	Ø	1131				✓
31	204 521 379	3	Ø	1140				✓

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
32	204 840 699	4	0	1156	JZH	NWS		✓
33	204 850 200	1	0	1211				✓
34	204 820 494	2	0	1223				✓
35	204 840 566	3	0	1232				✓
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)

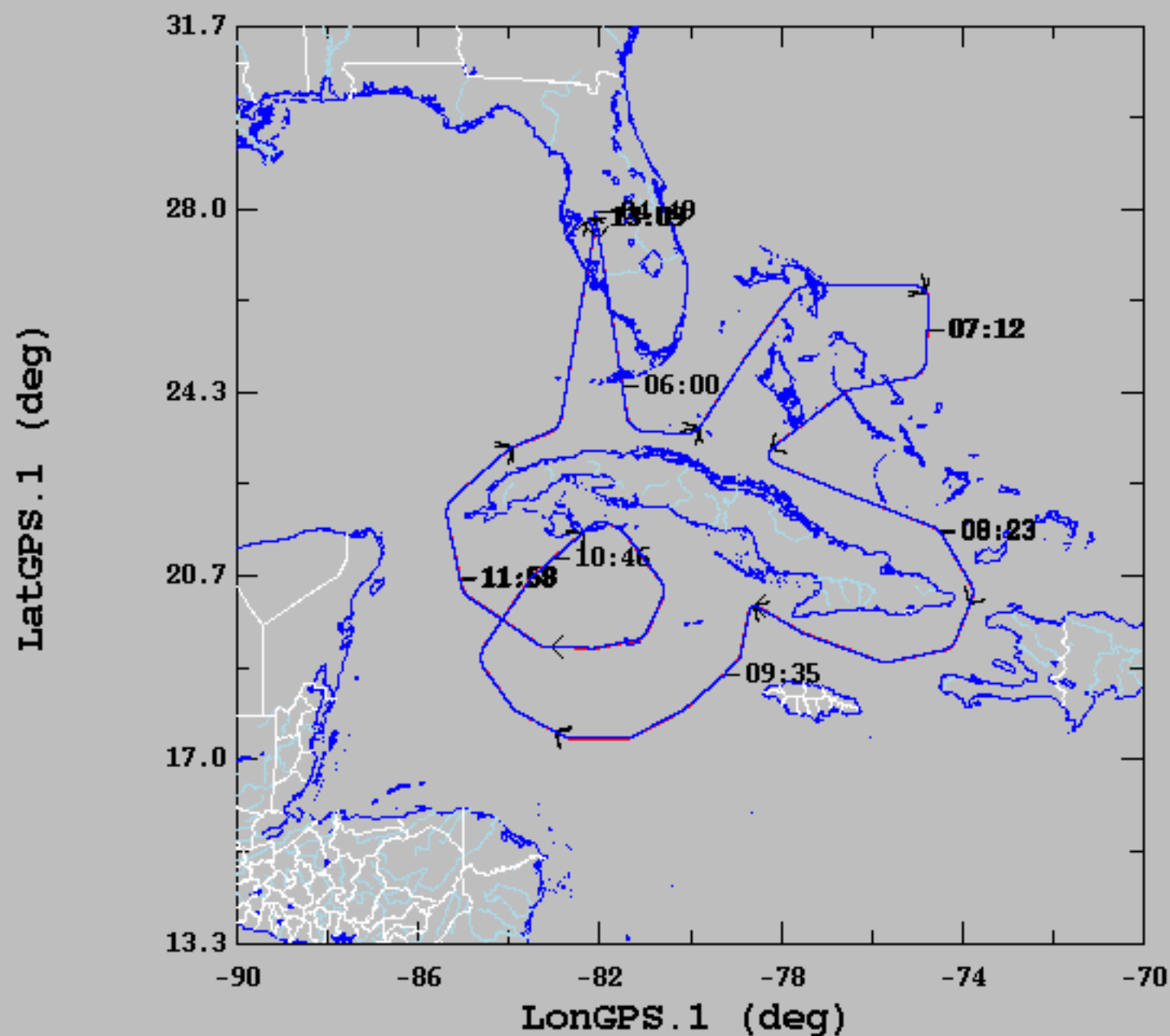
AVAPS Pre-Flight Check:

- 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

2021-08-27, 04:49:25-13:09:47



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	22.62	3.23	17.38	27.99
LonGPS.1 (deg), 1 s/sec	-80.14	3.25	-85.36	-73.75
LatI.1 (deg), 1 s/sec	22.62	3.23	17.37	27.99
LonI.1 (deg), 1 s/sec	-80.14	3.25	-85.35	-73.75