

N49RF ERROR SUMMARY

20230914N1

Flight ID: 20230914N1

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.1
Vertical Accelerometer	AccZI.1
Altimeter	AltGPS.3
INE Selection	1
Differential Attack Pressure Probe	PDALPHA.1
Differential Sideslip Pressure Probe	PDBETA.1
Dynamic Attack Pressure Probe	PQALPHA.1
Dynamic Sideslip Pressure Probe	PQBETA.1

Flight Directory

acdata/2023/MET/20230914N1

Local Met Data	Takeoff KLAL (0528Z)	Landing KLAL (1229Z)
Dynamic Corrections		Yes
AttackAngleIntercept		4.95911
AttackAngleSlope		5.43613
SlipAngleIntercept		1.06
SlipAngleSlope		6.97813
AttackAngleIntercept2		5.01255
AttackAngleSlope2		5.40932
SlipAngleIntercept2		0.72

 Notes:

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

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	29	29	29
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Henning

Phone #: 8635003964

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:	20230914N1	FLT #:		AC:	MANSOUR	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	0530	CP(s):	BHATNAGAR		A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:	1230		COZART		ASOS Takeoff		29	Ø	29
Block Time		Flight Time		NAV:			BTs				
In:	1237	Land:	1229	FE(s):			A/C Land		Good	Bad	Sent
Out:	0518	T/O:	0529	FD(s):	HENNING TIMMERS		ASOS Land				
Total:	7.3	Total:	7.0	SSA:	DYKEMIAN		Visitors:				
Sponsoring Org:		NHC			AVAPS:	PATEL	Storm Number ID: (ie: AL072012)				
Program:		PHS			SEB:		TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY) NOAA9 2913A LEE				
Purpose:		Synoptic Surv HURRICANE LEE			MX:		OBSERVATIONS				

AS REQUIRED BY ORM	Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP
VOLCANIC ASH		x		1			
SCIENCE MISSION WITHIN BDRY LAYER				2			
LACK OF PRECIPITATION				3			
RELATIVE HUMIDITY ≥ 80%				4			
LARGE AIR-SEA TEMP GRADIENT							
HIGH SURFACE WINDS							
LONG FETCH / DURATION OF SFC WND							
SEA SALT ACCRETION FORECAST							
SEA SALT ACCRETION OBSERVED							
				Pennies:			

*Highlighted items must be completed before departure.

Remarks: 2816 67.84 441Z
2925 6809

AVAPS Drop Log

 Project: Hurricane

 Mission: Hurricane Lee

 Flight ID: 20230914N1

Take Off: _____

Landing: _____

 Flt Dir: Sam/Rich

Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	221830642	1	∅	0559	AJP	NWS		✓
2	222120868	2	-0.4	0610				
3	222120716	3	∅	0620				
4	222231496	4	∅	0630				
5	221810055	1	∅	0641				
6	222520362	2	∅	0653				
7	222010875	3	∅	0703				
8	222070104	4	-0.5	0712				
9	222010872	1	∅	0722				
10	222010609	2	∅	0731				
11	222230449	3	-0.5	0741				
12	222120732	4	∅	0756				
13	222010614	1	∅	0807				
14	222070575	2	∅	0817				
15	222070610	3	∅	0827				
16	222010633	4	∅	0837				
17	221640560	1	-0.4	0847				
18	222120085	2	∅	0857				
19	222120720	3	∅	0907				
20	222010632	4	∅	0917				
21	222230489	1	-0.5	0928				
22	222010858	2	∅	0936				
23	221810073	3	-0.6	0945				
24	222010631	4	∅	0957				
25	222230490	1	-0.5	1010				
26	222070724	2	∅	1025				
27	222010635	3	∅	1039				
28	222010634	4	∅	1047				
29	222230472	1	-0.4	1057				
30								
31								

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
32								
33								
34								
35								
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, GOMO, NASA, ONR, SAT (JPSS/NESDIS/HRD), MS (old NRD94 sondes)

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
- RD41 ONLY: 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.
- RD41: Place the sonde in the launch tube, sensor arm up, with the power pin socket facing right
- NRD41: Place the sonde in the launch tube, sensor arm down
- Verify the sonde is actively tracking GPS data prior to launch and **no early launch detect**

G-IV QC Checklist

Flight ID:	20230914N1
Flight Director(s)	Henning/Timmers

UWZ.d mean:	0.02
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Pressure Comparison		
	T/O	Land
Aircraft	1007 mb	1007.0
Tower	1013 mb	1013 mb

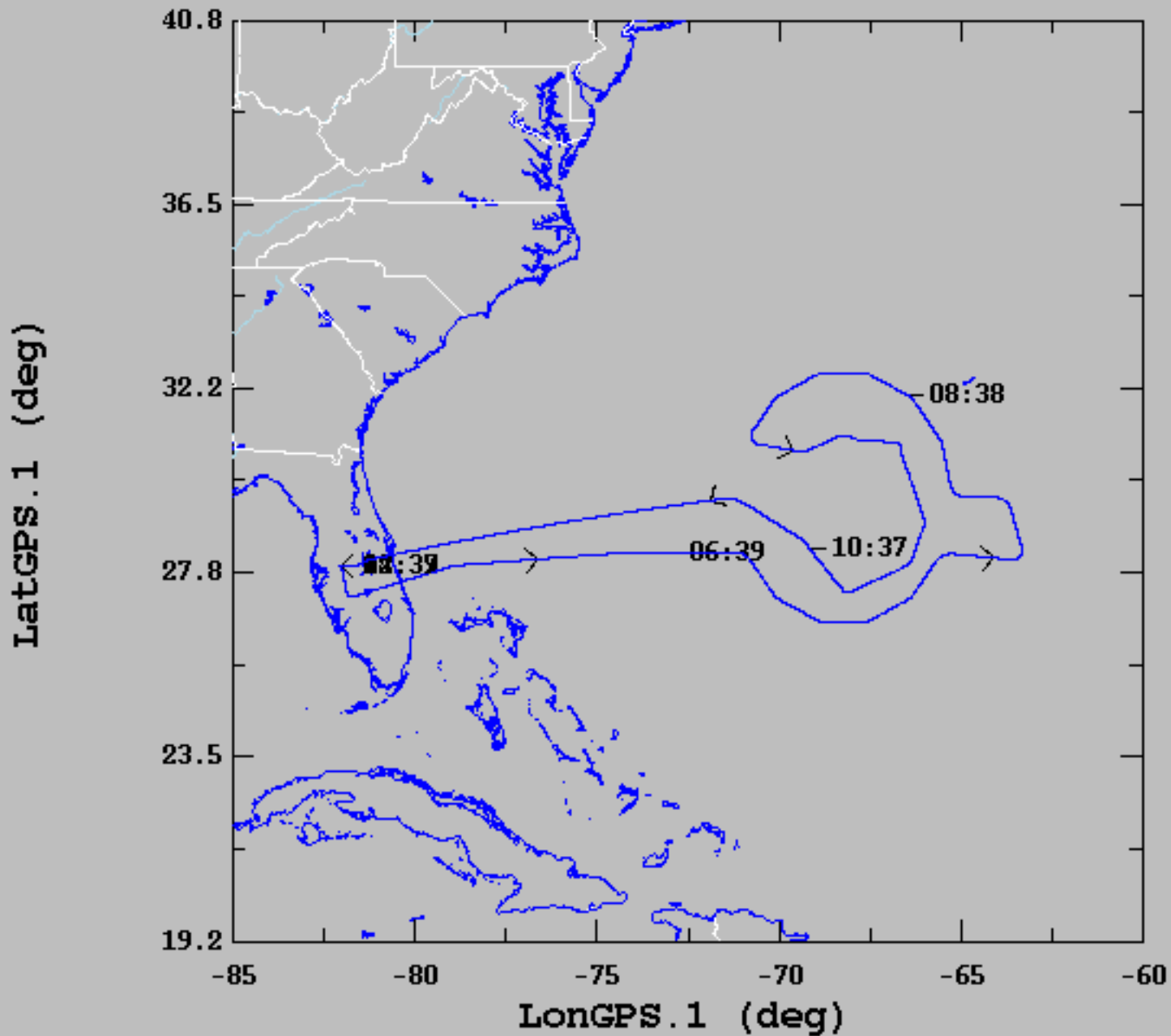
	Raw 1Hz Mean File Parameters					C File Parameters	
<input type="checkbox"/> Accelerometer	<input checked="" type="checkbox"/> AccAXI.1	<input checked="" type="checkbox"/> AccAYI.1	<input checked="" type="checkbox"/> AccAZI.1			<input checked="" type="checkbox"/> AccZref	
	<input checked="" type="checkbox"/>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

FLID_Mission_Documents.pdf:	
<input checked="" type="checkbox"/>	Error Summary
<input checked="" type="checkbox"/>	Crew Manifest
<input checked="" type="checkbox"/>	QC Checklist
<input checked="" type="checkbox"/>	Dropwindsonde Log(s) - AVAPS and FD if completed
<input checked="" type="checkbox"/>	Flight Track
<input type="checkbox"/>	Miscellaneous FD Notes

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

NOTES:
AlTRA.1 is at 0.0 for the duration of the flight, please use ALTref for altitude data.
TDM.2 is not valid for the duration of the flight. Please reference TDM.1 for dewpoint temperature.
PDALPHaref, PDBETAref, PQALPHaref, and PQBETAref are not generated in this file; please reference 1Hz sensors for all flight

09/14/2023, 04:39:47-12:37:13



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	28.89	1.44	26.68	32.52
— LonGPS.1 (deg), 1 s/sec	-72.72	6.14	-82.03	-63.30
— LatGPS.1 (deg), 1 s/sec	28.89	1.44	26.68	32.52
— LonGPS.1 (deg), 1 s/sec	-72.72	6.14	-82.03	-63.30