N43RF ERROR SUMMARY
20230910I2

Flight ID: 20230910I2

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	AccZfilterI-GPS.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/20230910I2

Local Met Data	Takeoff TISX (2028Z)	Landing TISX (0409Z)
Dynamic Corrections		Yes
AttackAngleIntercept		0.050058
AttackAngleSlope		5.32015
SlipAngleIntercept		0.165
SlipAngleSlope		6.66754

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.

I.3 for Pitch and Roll is not operational
TTM.3 is not operational
TRadU.1 has erroneous data throughout the flight and should not be used
TDM.1 (and TDMref since it's set to TDM.1) reported erroneous data from takeoff until ~2221 UTC (sensor had not been turned on); subsequently TD.c, HUM also reports these erroneous values
Several spikes observed in TDM.1 and TDM.2 after 2221 UTC; TDM.2 is the most consistent sensor and should be used in place of TDM.1
TDM.3 has erroneous data throughout the flight and should not be used
TA.d, TAS.d, TD.c, WS.d and WD.d had a couple of ~1 min gaps in data around 2307, 0122 UTC (on inbound eyewall crossings)
PDALPHAref, PDBETAref, PQALPHAref, PQBETAref, and DPJ_WSZ are not provided since _AC file is not produced; all other 'C' file parameters checked are from the _A file

Expendable Type	# deployed	# good	# transmitted
Dropsondes	37	36	24

Test sondes	0	0	0
AXBTs	3	3	3
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Zawislak / Parrish
Phone #: 305-707-4359

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION

FLT ID:	2023091012	**FLT #:**	FY23-
From:	TISX	**ETD:**	1630L / 2030Z
To:	TISX	**ETA:**	0030L / 0430Z
Block Time		**Flight Time**	
Out:	20:19	T/O:	20:28
In:	4:13	Land:	4:09
Total:	7.9	Total:	7.7
Sponsoring Org:	HX - NHC/EMC		
Program:	PRX		
Purpose:	TDR Mission + HRD/NESDIS Modules		

CREW MANIFEST

AC:	Doremus	**Scientists:**
CP(s):	Rannenberg	Hazelton (HRD)
	Palmer	Sellwood (HRD)
NAV:	Hough	Jelenak (NESDIS)
FE(s):	Stokes	
	Gee	
FD(s):	Parrish	
	Zawislak	
SSA:	McAlister	**Visitors:**
AVAPS:	Waggoner	
SEB:	Santoni (IFT)	
MX:		

MISSION INFORMATION

Pressure		Dropsondes		
		Good	Bad	Sent
A/C Takeoff	1009.6	36	1	24
ASOS Takeoff	1009.3	**BTs**		
		Good	Bad	Sent
A/C Land		3	0	3
ASOS Land	1010.3			
Storm Number ID: (ie: AL072012)		AL132023		
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)		NOAA3 1413A LEE		

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

OBSERVATIONS

Fix Number	Obs Number	Fix Time	SLP
1	OB06 22.20N, 61.73W	21:56:00	953 mb Drop: 010 / 13 kt
2	OB16 22.30N, 61.80W	23:08:23	952 mb Drop: 055 / 02 kt
3	OB24 22.36N, 61.91W	0:18:24	950 mb Drop: 115 / 04 kt
4			
Pennies:	7 x CAT 3		

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.

Flight ID:	20230910I2
Flight Director(s):	Zawislak / Parrish
Mission:	Tasked/Operational
UWZ.d mean:	-0.1

Pressure Comparison		
	T/O	Land
Aircraft	1009.6	No good measurement
Tower	1009.3	1010.3

	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ AccAXI.1	✓ AccAYI.1	✓ AccAZI.1	✓ AccZfilter-GPS.1	✓ AccZref	
	✓ AccAXI.2	✓ AccAYI.2	✓ AccAZI.2	✓ AccZfilter-GPS.2		
	✓ AccAXI-GPS.1	✓ AccAYI-GPS.1	✓ AccAZI-GPS.1			
	✓ AccAXI-GPS.2	✓ AccAYI-GPS.2	✓ AccAZI-GPS.2			
✓ Altitude	✓ AltGPS.1	✓ AltI-GPS.1	✓ AltPaADDU.1	✓ AltRA.1	✓ ALTref	✓ AltRA1.c
	✓ AltGPS.2	✓ AltI-GPS.2	✓ AltBCADDU.1	✓ AltRA.2	✓ ALTPA.d	✓ AltRA2.c
	✓ AltGPS.3				✓ ALTGA.d	
	✓ AltGPS.4					
✓ Ground Speed	✓ GsXI-GPS.1	✓ GsYI-GPS.1	✓ GsZI-GPS.1		✓ GSXref	
	✓ GsXI-GPS.2	✓ GsYI-GPS.2	✓ GsZI-GPS.2		✓ GSYref	
					✓ GSZref	
✓ Lat / Lon	✓ LatGPS.1	✓ LatI-GPS.1	✓ LonGPS.1	✓ LonI-GPS.1	✓ LATref	
	✓ LatGPS.2	✓ LatI-GPS.2	✓ LonGPS.2	✓ LonI-GPS.2	✓ LONref	
	✓ LatGPS.3		✓ LonGPS.3			
	✓ LatGPS.4		✓ LonGPS.4			
✓ Pressure	✓ PDALPHA.1	✓ PQALPHA.1	✓ PQM.1	✓ PSM.1	X PDLAPHAref	✓ PQMref
	✓ PDALPHA.2	✓ PQBETA.1	✓ PQM.2	✓ PSM.2	X PDBETAref	✓ PQ.c
	✓ PDBETA.1		✓ PQM.3	✓ PTM.1	X PQALPHAref	✓ PSMref
	✓ PDBETA.2		✓ PQM.4		X PQBETAref	✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.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	
	X PitchI.3	X PitchRateI.3	X RollI.3	X RollRateI.3		
✓ Temp / Dewpt	✓ TTM.1	X TDM.1	✓ TRadD.1		X TD.c	✓ TTMref
	✓ TTM.2	✓ TDM.2	✓ TRadS.1		X TDMref	✓ TA.d
	X TTM.3	X TDM.3	X TRadU.1			
✓ Misc. (Must check)					✓ UWZ.d	✓ WS.d
					X DPJ_WSZ	✓ WD.d
					X 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:
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AVAPS Drop Log

Project: HURRICANE LEE Mission: _____ Flight ID: 20230910I2

Take Off: 2028 Landing: _____ Flt Dir: JZ Launcher S/N: 209

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	22122 0349	1	0	2128	LW	NWS	IP 1	✓
2	2209103337	2	-0.9	2141	LW	NWS	MP	✓
3	221220374	3	+1.5	2152	LW	NWS	RMW 1	✓
4	221240693	4	-0.7	2153	LW	ONR	RMW 2	✓
5	221220351	5	-0.4	2153	LW	ONR	RMW 3	✓
6	2146220038	6	-0.5	2156	LW	NWS	CTR 1	✓
7	221310239	7	-0.5	2200	LW	NWS	RMW	✓
8	221410433	8	-0.7	2201	LW	ONR	RMW	✓
9	221220217	1	-0.7	2201	LW	ONR	RMW	✓
10	221240128	2	-0.3	2211	LW	NWS	MP	✓
11	220920153	3	-0.5	2217	LW	NWS	EP 1	✓
12	221630783	4	-0.4	2242	LW	NWS	IP2	✓
13	221310233	5	-0.6	2255	LW	NWS	MP	✓
14	221310244	6	-0.5	2304	LW	NWS	RMW	✓
15	221310238	7	-0.6	2305	LW	ONR	RMW	✓
16	221230520	8	-0.8	2305	LW	ONR	RMW	✓
17	221230705	1	-1.0	2308	LW	NWS	CTR 2	✓
18	220620182	2	-0.5	2311	LW	NWS	RMW	✓
19	22 16313 23	3	-0.6	2312	LW	ONR	RMW	✓
20	220910105	4	-0.7	2313	LW	ONR	RMW	✓
21	22 0430190	5	0	0	LW	NWS	MP NO LAUNCH DETECT	
22	220620251	6	-0.5	2322	LW	NWS	B/U MP	✓
23	221250025	7	-0.7	2333	LW	NWS	EP 2	✓
24	221250028	8	-0.7	2353	LW	NWS	IP3	✓
25	220620263	1	-0.6	0005	LW	NWS	MP COMBO	✓
26	221060112	2	-0.1	0012	LW	NWS	RMW	✓
27	221250001	3	-0.6	0013	LW	ONR	RMW	✓
28	221340052	4	-0.6	0013	LW	ONR	RMW	✓
29	221210166	5	-0.4	0018	LW	NWS	CTR 3	✓
30	221210042	6	-0.4	0020	LW	NWS	RMW	✓
31	220610446	7	-0.8	0021	LW	ONR	RMW	✓

3rd PASS
MP EXT
CTR INT
MP EXT

TIME, LOCATION, C+I, GD/BAD. 27.4,

22 - NWS
12 - ONR
3 - HRD

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
32	2213307261	8	-0.5	0022	LW	ONR	RMW	✓
33	2212306527	1	-0.8	0032	LW	NWS	MP COMBO	✓
34	2210104462	2	-0.5	0046	LW	NWS	EP3	✓
35	2211507 19	3	-0.4	0138	LW	HRD	RMW	✓
36	2211630749	4	-0.2	0228	LW	HRD	RMW	✓
37	2209103466	5	-1.1	0229	LW	HRD	RMW	✓
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)

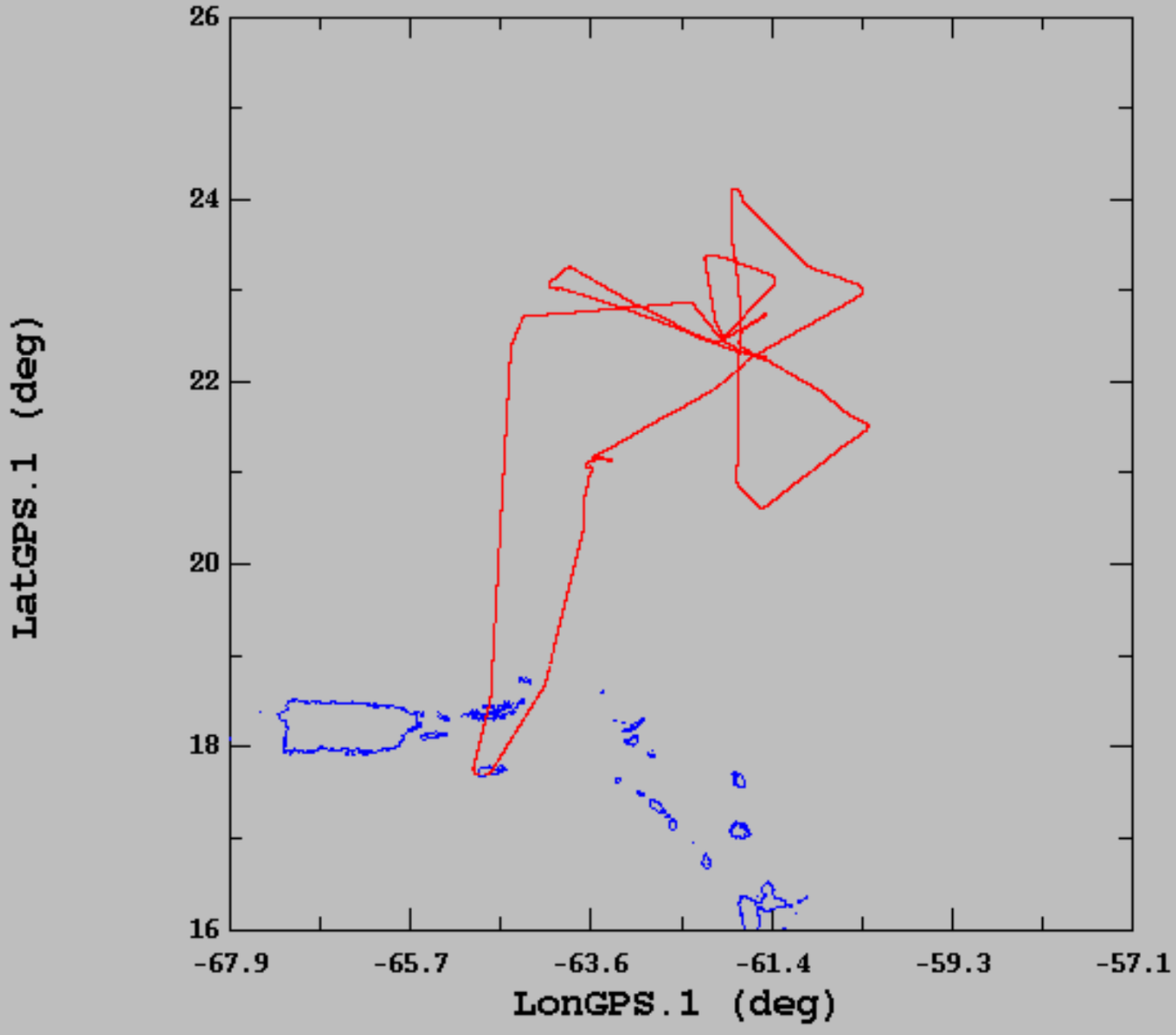
AVAPS Pre-Flight Check:

- 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

09/10/2023, 18:51:48-28:07:37



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	21.11	2.05	17.69	24.11
LonGPS.1 (deg), 1 s/sec	-62.99	1.43	-64.96	-60.27