

N42RF ERROR SUMMARY
20220918H1

Flight ID: 20220918H1

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	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/2022/MET/20220918H1

Local Met Data	Takeoff TNCA (0825Z)	Landing TNCA (1402Z)
Dynamic Corrections		Yes
AttackAngleIntercept		2.28765
AttackAngleSlope		6.08306
SlipAngleIntercept		0.22
SlipAngleSlope		6.59178
AttackAngleIntercept2		2.06219
AttackAngleSlope2		5.99068
SlipAngleIntercept2		0.125
SlipAngleSlope2		6.9873

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	38	38	38
Test sondes	0	0	0
AXBTs	5	5	5
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Kalen/Holmes
Phone #: 8635003962

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N42RF Manifest

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20220918H1	FLT #:		AC:	Abitbol	Scientists:	Pressure		Dropsondes		
From:	TNCA	ETD:	0430Z	CP(s):	Copare	Rogers	A/C Takeoff		Good	Bad	Sent
To:	TNCA	ETA:	1230Z		Wood	Sellwood			38	0	38
Block Time		Flight Time		NAV:	Miller		ASOS Takeoff		BTs		
In:	1549Z	Land:	1546Z	FE(s):	Stokes				A/C Land		Good
Out:	0819Z	T/O:	0825Z	FD(s):	Gee	ASOS Land		5			0
Total:	7.5	Total:	7.4	SSA:	McAlister			Visitors:	Storm Number ID: (ie: AL072012)		
				AVAPS:	Dykeman						
Sponsoring Org:	NWS/EMC			SEB:		TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)					
Program:	PRX										
Purpose:	TDR										
				MX:		OBSERVATIONS					
AS REQUIRED BY ORM			Y	N	REMARKS		Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH				X			1	8	0959Z	992mb	
SCIENCE MISSION WITHIN BDRY LAYER				X			2	21	1112Z	992mb	
LACK OF PRECIPITATION				X			3	30	1222Z	991mb	
RELATIVE HUMIDITY ≥ 80%			X				4	31	1321Z	985mb	
LARGE AIR-SEA TEMP GRADIENT				X			5	38	1419Z	990mb	
HIGH SURFACE WINDS				X			Pennies:	5 - Cat 1			
LONG FETCH / DURATION OF SFC WND				X							
SEA SALT ACCRETION FORECAST				X							
SEA SALT ACCRETION OBSERVED				X							

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.
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Flight ID:	20220918H1
Flight Director(s):	Kalen/Holmes
Mission:	Tasked/Operational
UWZ.d mean:	0.12

Pressure Comparison		
	T/O	Land
Aircraft	1006.2	N/A
Tower	1002.4	1003.4

	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ AccAXI.1 ✓ AccAXI.2 ✓ AccAXI-GPS.1 ✓ AccAXI-GPS.2	✓ AccAYI.1 ✓ AccAYI.2 ✓ AccAYI-GPS.1 ✓ AccAYI-GPS.2	✓ AccAZI.1 ✓ AccAZI.2 ✓ AccAZI-GPS.1 ✓ AccAZI-GPS.2	✓ AccZfilter-GPS.1 ✓ AccZfilter-GPS.2	✓ AccZref	
✓ Altitude	✓ AltGPS.1 ✓ AltGPS.2 ✓ AltGPS.3 ✓ AltGPS.4	✓ AltI-GPS.1 ✓ AltI-GPS.2	✓ AltPaADDU.1 ✓ AltBCADDU.1	✓ AltRA.1 ✓ AltRA.2	✓ ALTref ✓ ALTPA.d ✓ ALTGA.d	✓ AltRA1.c ✓ AltRA2.c
✓ Ground Speed	✓ GsXI-GPS.1 ✓ GsXI-GPS.2	✓ GsYI-GPS.1 ✓ GsYI-GPS.2	✓ GsZI-GPS.1 ✓ GsZI-GPS.2			
✓ Lat / Lon	✓ LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3 ✓ LatGPS.4	✓ LatI-GPS.1 ✓ LatI-GPS.2	✓ LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3 ✓ LonGPS.4	✓ LonI-GPS.1 ✓ LonI-GPS.2	✓ LATref ✓ LONref	
✓ Pressure	✓ PDALPHA.1 ✓ PDALPHA.2 ✓ PDBETA.1 ✓ PDBETA.2	✓ PQALPHA.1 ✓ PQBETA.1	✗ PQM.1 ✓ PQM.2 ✓ PQM.3 ✓ PQM.4	✓ PSM.1 ✓ PSM.2 ✓ PTM.1	✓ PDALPHAref ✓ PDBETAref ✓ PQALPHAref ✓ PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.1	✓ IAS.d ✓ TAS.d		
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 <input type="checkbox"/> PitchI.3	✓ PitchRatel.1 ✓ PitchRatel.2 <input type="checkbox"/> PitchRatel.3	✓ RollI.1 ✓ RollI.2 <input type="checkbox"/> RollI.3	✓ RollRatel.1 ✓ RollRatel.2 <input type="checkbox"/> RollRatel.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✓ TTM.2 <input type="checkbox"/> TTM.3	✓ TDM.1 ✓ TDM.2 <input type="checkbox"/> TDM.3	✓ TRadD.1 ✓ TRadS.1 <input type="checkbox"/> TRadU.1	✓ TD.c ✓ TDMref ✓ TTMref ✓ TA.d		
✓ Misc. (Must check)					✓ UWZ.d ✓ DPJ_WSZ ✓ HUM	✓ WS.d ✓ WD.d

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	<input type="checkbox"/>
Valid	<input checked="" type="checkbox"/>
Errors (note)	✗

NOTES:

The following was noted on the 1 Hz File:

PDALPHA.1 and PDALPHA.2 differ by about 15 mb throughout flight.

PDBETA.1 and PDBETA.2 differ by about 15 mb throughout flight.

PQM.1 differs from other PQM sensors by up to about 20 mb.

TDM.1 noisier than TDM.2, with a large unrepresentative deviation at 938 Z followed by a period of noisy oscillations.

Gaps in relative humidity when supersaturated.

AVAPS Drop Log

Project: Hurricane 2022

Mission: TS Fiona

Flight ID: 20220918H1

Take Off: 1925Z

Landing: _____

Flt Dir: R Kaplan

Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
P1 IP 1	210710260	1	-0.6	0942	BRD	EMC	COMBO	Y
P1 RMW1 2	211046452	1	-1.0	0952	BRD	DNR		Y
P1 RMW12 3	210748997	2	-0.6	0952	BRD	DNR		Y
P1 RMW13 4	210650503	3	-1.7	0953	BRD	DNR		Y
P1 CP 5	211010857	4	-	0959	BRD	EMC	COMBO	Y
P1 RMW01 6	213740476	5	+1.1	1004	BRD	DNR		Y
P1 RMW02 7	211030702	6	-0.9	1004	BRD	DNR		Y
P1 RMW05 8	213740487	7	-0.5	1005	BRD	DNR		Y
P1 M90 9	212730402	8	-1.0	1012	BRD	EMC		Y
P1 EP 10	211030699	1	-1.2	1025	BRD	EMC		Y
P2 IP 11	211030476	2	-1.0	1047	BRD	EMC		Y
P2 MP 12	211440772	3	-1.1	1100	BRD	EMC		Y
P2 RMW1 13	211046456	4	-0.4	1106	BRD	DNR		Y
P2 RMW13 14	211030707	5	-1.3	1107	BRD	DNR		Y
P2 RMW13 15	204631226	6	-1.3	1107	BRD	DNR		Y
P2 CP 16	203240782	7	-1.4	1112	BRD	EMC		Y
P2 RMW01 17	205050110	8	-1.5	1117	BRD	DNR		Y
P2 RMW02 18	203210092	1	-0.6	1117	BRD	DNR		Y
P2 RMW03 19	203240794	2	-0.4	1118	BRD	DNR		Y
P2 M90 20	211450096	3	-0.8	1128	BRD	EMC		Y
P2 EP 21	211450093	4	-0.9	1142	BRD	EMC	COMBO	Y
P3 IP 22	2114040471	5	-0.8	1156	BRD	EMC	COMBO	Y
P3 MP1 23	211440431	6	-0.8	1210	BRD	EMC		Y
P3 RMW1 24	211030697	7	-0.9	1215	BRD	DNR		Y
P3 RMW2 25	211030698	8	-0.5	1215	BRD	DNR		Y
P3 RMW3 26	211030684	1	-0.7	1216	BRD	DNR		Y
P3 CP 27	211030700	2	-0.6	1222	BRD	EMC	COMBO	Y
P4 IP 28	211440771	3	-0.7	1350	BRD	EMC		Y
P4 MP1 29	211440470	4	-0.7	1402	BRD	EMC		Y
P4 MRW1 30	211450094	5	-0.7	1414	BRD	DNR		Y
P4 MRW1 31	211030682	6	-0.8	1415	BRD	DNR		Y

17 DNR

14 EMC

P4 MPW1 3
 P4 CP
 P4 EMW0 1
 P4 EMW0 2
 P4 EMW0 3
 P4 MP0
 P4 EP

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
32	211450095	7	-.7	1415	BRD	ONR		
33	211450092	8	-.7	1419	BRD	EMC		
34	211440770	1	-.5	1425	BRD	ONR		
35	211450036	2	-.8	1426	BRD	ONR		
36	211450090	3	-.5	1426	BRD	ONR		
37	211450035	4	-1.1	1434	BRD	EMC		
38	211040453	5	-1.3	1446	BRD	EMC		
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

Drop Station Operator Notes

21 ONR
 17 EMC

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

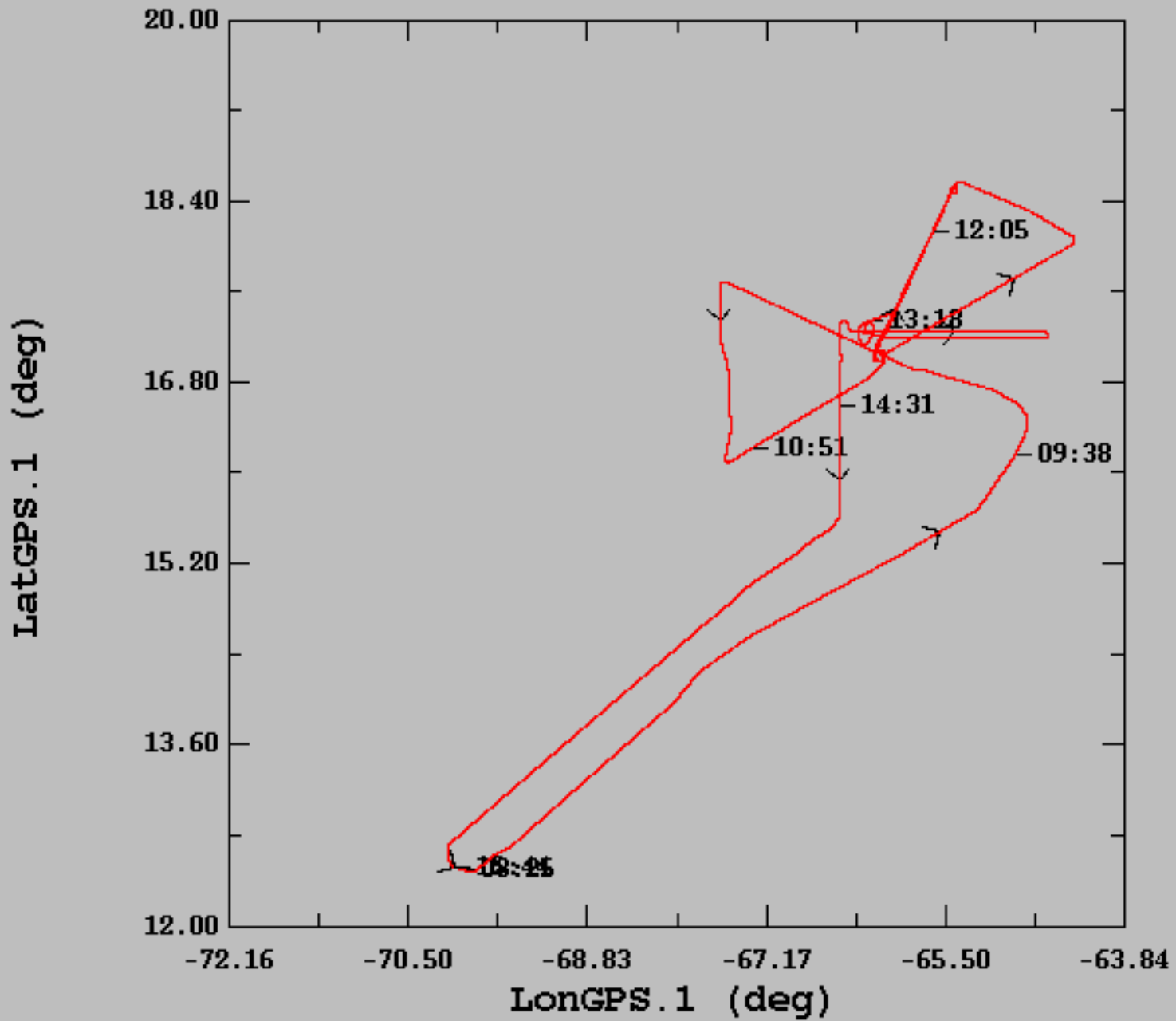
AVAPS Pre-Flight Check:

- 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 1/2 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**

2022-09-18, 08:25:11-15:44:50



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	16.34	1.62	12.47	18.57
— LonGPS.1 (deg), 1 s/sec	-66.53	1.39	-70.12	-64.30