N42RF ERROR SUMMARY
20210828H1

Flight ID: 20210828H1

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/2021/MET/20210828H1

Local Met Data	Takeoff KLAL (1955Z)	Landing KLAL (0000Z)
Dynamic Corrections		Yes
AttackAngleIntercept		2.307
AttackAngleSlope		6.07515
SlipAngleIntercept		0.237
SlipAngleSlope		7.04607
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	30	28	24	
Test sondes	0	0	0	
AXBTs	16	13	0	
AXCPs	0	0	0	
AXCTDs	0	0	0	
UAS	0	0	0	

Flight Director: Hathaway
Phone #: 863-500-3911

ACAT-4 Version = 7.4

P-3 QC Checklist

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

Flight ID:	20210828H1
Flight Director(s):	Hathaway / Lundry
Mission:	Tasked/Operational
UWZ.d mean:	0.14

Pressure Comparison		
	T/O	Land
Aircraft	1012.1	N/A
Tower	KLAL - 1012.0	KLAL - 1014.0

	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	X PQM.1	☑ PSM.1	☑ PDALPHAref	☑ PQMref
	☑ PDALPHA.2	☑ PQBETA.1	☑ PQM.2	☑ PSM.2	☑ PDBETAref	☑ PQ.c
	☑ PDBETA.1		☑ PQM.3	☑ PTM.1	☑ PQALPHAref	☑ PSMref
	X PDBETA.2		X PQM.4		☑ 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	
	☐ PitchI.3	☐ PitchRateI.3	☐ RollI.3	☐ RollRateI.3		
☑ Temp / Dewpt	☑ TTM.1	☑ TDM.1	☑ TRadD.1		☑ TD.c	☑ TTMref
	X TTM.2	☑ TDM.2	☑ TRadS.1		☑ TDMref	☑ TA.d
	X TTM.3	☑ TDM.3	☐ TRadU.1			
☑ 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)	X

NOTES:

- PDBeta.2 has a large spike around hour 5 of flight.
- PQM.1 and PQM.4 have a large unusual drop out around hour 5 in flight.
- TTM.2 has slight deviation from TTM.1 around hour 5 of flight.
- TDM.1 has a large spike around hour 5 of flight.

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

FLIGHT INFORMATION

FLT ID:	20210828H1	**FLT #:**	2
From:	KLAL	**ETD:**	1600 L
To:	KLAL	**ETA:**	2300 L

Block Time		**Flight Time**	
In:	**2:03**	Land:	**1:56**
Out:	**19:45**	T/O:	**19:55**
Total:	**6.3**	Total:	**6.0**

Sponsoring Org:	NWS/EMC/TDR
Program:	PRX
Purpose:	TD / Gravity Wave / Spiral

CREW MANIFEST

AC:	Rossi	**Scientists:**
CP(s):	Shaw	Rogers
	Keith	Zhang
NAV:	Utama	
FE(s):	Sanchez	
	Stokes	
FD(s):	Hathaway	
	Lundry	
SSA:	Richards T.	**Visitors:**
AVAPS	McAlister	
SEB:		
MX:		

MISSION INFORMATION

Pressure		**Dropsondes**		
		Good	Bad	Sent
A/C Takeoff		**28**	**2**	**24**
ASOS Takeoff		**BTs**		
		Good	Bad	Sent
A/C Land		**13**	**3**	**0**
ASOS Land				

Storm Number ID: (ie: AL072012)	**AL092021**
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	**1009A IDA**

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

REMARK

OBSERVATIONS

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

*Highlighted items must be completed before departure.

Remarks:

AVAPS Drop Log

Project: 2021 Season Mission: Hurricane Ida Flight ID: 20210828H1

Take Off: 2000Z Landing: _____ Flt Dir: Hathaway Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	204840485	1	-0.5	2044	MAC	EMC	IP1 NE Combo	
2	204260901	2	-0.7	2057		EMC	1st MID IN NE Combo	
3	204330607	3	-0.9	2104		ONR	1st RMW.1	
4	203250885	4	-0.4	2106		ONR	1st RMW.2 Combo	
5	204260653	5	-0.6	2108		ONR	1st RMW.3	
6	205050314	6	-0.4	2113		EMC	1st CTR	
7	204540667	7	-0.5	2117		ONR	1st OUT RMW.1 SW	
8	205050307	8	-0.4	2118		ONR	1st OUT RMW.2 Combo	
9	204031023	1	-0.5	2119		ONR	1st OUT RMW.3	
10	204270001	2	-0.5	2127		EMC	1st MID OUT Combo	
11	204540646	3	-0.4	2139		EMC	1st END PT SW	
12	204530740	4	-0.2	2209		EMC	2nd IP South	
13	204650345	5	-0.2	2219		EMC	2nd MID IN, S, Combo	
14	204640093	6	-0.4	2228		ONR	2nd RMW IN, S, Combo	
15	204650372	7	-0.1	2232		EMC	2nd CTR	
16	204260610	8	-0.8	2235		ONR	2nd RMW OUT, N, Combo	
17	204650343	1	-0.3	2246		EMC	2nd MID OUT, N, Combo	
18	204640121	2	-0.4	2259		EMC	2nd END PT, N, Combo	
BAD * 19	204610667	3	-0.8	NO LAUNCH		ONR	Microphys Spiral	BAD *
20	204640094	4	-0.7	2328		ONR	Microphys Spiral	
21	204031035	5	-0.4	2353		EMC	Leg 2-3 repo mid, Combo	
22	203310045	6	-0.4	0006		EMC	IP3, Combo	
23	204260632	7	-0.2	0017		EMC	3rd MID IN, Combo	
24	203310499	8	-0.2	0028		EMC	3rd IN RMW, Combo	
25	203250878	1	-0.2	0033		NWS	3rd IN RMW Again	
26	204621172	2	-0.8	0034		EMC	3rd CTR	
27	204530197	3	-0.9	0040		EMC	3rd RMW out	
BAD * 28	204031038	4	-0.9	0049		EMC	3rd MID OUT, NO LAUNCH *	
29	204640097	5	-0.7	0049		EMC	3rd MID out, Combo	
30	204260633	6	-1.0	0101	MAC	EMC	3rd END PT, Combo	
~~31~~	~~204530503~~	~~7~~	~~-0.7~~					

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, 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

NOAA P-3 GPS Dropwindsonde Scientist Log (revised March 2019)

Storm Ida | Flight ID 20210828H1 | Dropsonde Scientist J Zhang | AVAPS Operator Mac | Page# 1

Mission ID 10094 (exp. 0213A) | Dropsonde Scientist | AVAPS Operator

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to Dir/Spd (deg/kt)	Wind closest to Hgt (m)	SST (°C)	Eye/Eyewall, Rainband, etc,	Ob #
✓ 1	— 0485	2044	27.52	85.78	1009.8	100/44	20	29.8		
Comments	Combo IP									
✓ 2	— 0401	2057	26.85	86.32	102.2	110/57		29.5		
Comments	comb drop2 NE Mid P									
✓ 3	30607	2104	26.45	86.64	993.1	110/71				
Comments	Rmw 1									
✓ 4	50885	2106	26.37	86.70	991.5	110/79				
Comments	Rmw 2 Combo									
5	60653	2108	26.279	86.77	985.6	115/74				
Comments	Rmw 3									
✓ 6	50314	2113	26.13	87.08	974	275/60		29.5		
Comments	Center									
7	40667	2117	25.9	87.28	984.8	275/61				
Comments	Rmw 1 out									
✓ 8	50307	2118	25.85	87.32	989.5	270/62				
Comments	Rmw 2 Combo									
9	11940	2119	25.74	87.367	992.5	275/38				
Comments	Rmw 3									
✓ 10	70057	2127	25.39	87.689	100.1.4	275/42		29.3		
Comments	1st MID out SW Combo									

NOAA P-3 GPS Dropwindsonde Scientist Log (revised March 2019)

Storm Ida | Flight ID 20210828H1 | Dropsonde Scientist J Zhang | AVAPS Operator
Mission ID | (exp. 0213A) | Dropsonde Scientist | AVAPS Operator

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to: Dir/Spd (deg/kt)	Wind closest to: Hgt (m)	SST (°C)	Eye/Eyewall, Rainband, etc,	Ob #
✓11	40646	2139	24.736	88.285	1008.1	275/17	40			
Comments	1st Eyewall PT SW									
✓12	35740	2209	25.138	86.154	1007.1	205/34	40			
Comments	IP S									
✓13	50345	2219	25.90	86.58	1003.7	190/52		29.6		
Comments	2nd MID S Combo									
✓14	40093	2228	26.25	87.58	981	180/55		29.8		
Comments	2nd RMW in S. Combo									
✓15	50372	2232	26.42	87.32	970.8	145/74				
Comments	2nd CTR									
✓16	60610	2235	26.61	87.43	981.3	020/75		29.9		
Comments	2nd RMW out N Combo									
✓17	50343	2246	27.30	87.73	1000.9	050/37		29.9		
Comments	2nd MID out N Combo									
18	40124	2259	28.21	87.82	1008.1	065/32		30.3		
Comments	2nd Eyewall PT Comb. N									
19		2327								
Comments	dead – not working									
20	40094	2348	27.48	88.64	1004.1	030/36				
Comments	spiral B/n Modules.							(29.9)		

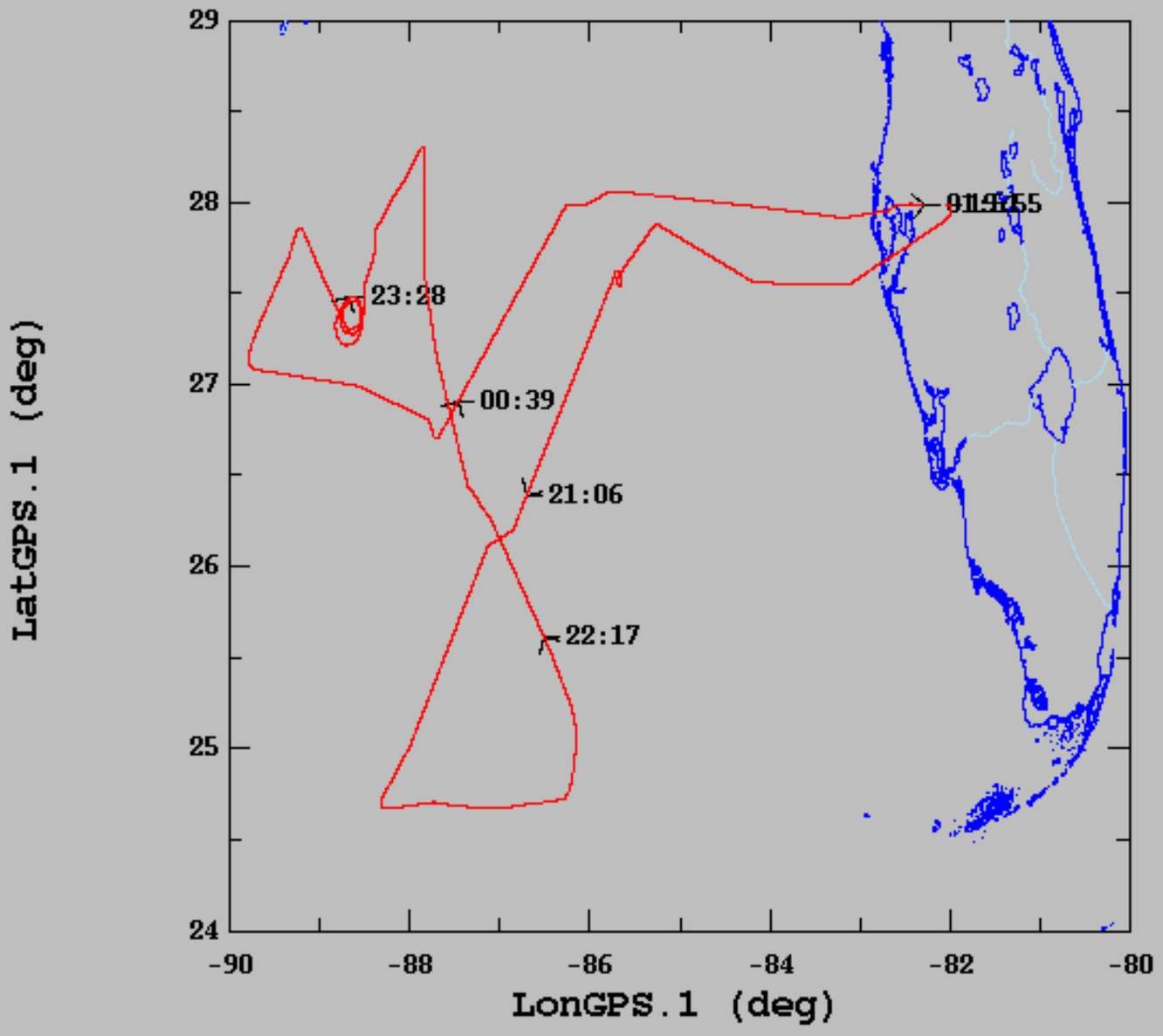
19 - Gulf
10 - over
1 - NWS

NOAA P-3 GPS Dropwindsonde Scientist Log (revised March 2019)

Storm Ida
Mission ID
Flight ID 20210828H1 (exp. 0213A)
Dropsonde Scientist J Zhang
Dropsonde Scientist
AVAPS Operator
AVAPS Operator
Page# 3

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to Dir/Spd (deg/kt)	Wind closest to Hgt (m)	SST (°C)	Eye/Eyewall, Rainband,etc,	Ob #
21	35316	2353	27.83	89.16	1054.8	035/26	10		29.9	
Comments	Leg 2-3 repo mid PT combo									
22	10045	0006	27.08	89.70	1058.4	040/26	10		29.6	
Comments	3rd IP W combo									
23	60632	0017	27.017	88.88	1004.1	38/44	10			
Comments	3rd MID IN combo									
24	10499	0028	26.884	88.133	991.9	350/47	10			
Comments	RMW #1									
25	50828	0033	26.82	87.82	969.1	035/48				
Comments	RMW #2									
26	21172	0034	26.73	87.73	967.2	130/10	10			
Comments	center									
27	30197	0040	21.93	87.42	983.5	095/60				
Comments	3rd eyewall out									
28		~~0044~~								
Comments	no launch detected									
29	40047	0049	27.38	86.92	999.7	115/59				
Comments	Replaced for previous one, MID out combo									
30	60633	0101			1011.1	130/38				
Comments	3rd BND pass Combo Low report									

2021-08-28, 19:55:00-25:51:08



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	26.98	1.03	24.67	28.30
LonGPS.1 (deg), 1 s/sec	-86.69	1.94	-89.78	-81.98