N42RF ERROR SUMMARY
20210827H1

Flight ID: 20210827H1

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/2021/MET/20210827H1

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	25	25	25	
Test sondes	0	0	0	
AXBTs	6	5	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

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

FLIGHT INFORMATION

FLT ID:	20210827H1	**FLT #:**	1
From:	KLAL	**ETD:**	1600 L
To:	KLAL	**ETA:**	0000 L

Block Time		**Flight Time**	
In:	**4:20**	Land:	**4:13**
Out:	**19:43**	T/O:	**19:55**
Total:	**8.6**	Total:	**8.3**

Sponsoring Org:	HRD
Program:	PHX
Purpose:	Research

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		**25**	**0**	**25**
ASOS Takeoff		**BTs**		
		Good	Bad	Sent
A/C Land		**5**	**1**	**0**
ASOS Land				

Storm Number ID: (ie: AL072012)	**AL092021**
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	**WA09A 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:	4		

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

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

Flight ID:	20210827H1
Flight Director(s):	Hathaway / Lundry
Mission:	Non-tasked Science Collection/Research
UWZ.d mean:	0.2

Pressure Comparison		
	T/O	Land
Aircraft	1099.6	N/A
Tower	KLAL - 1010.6	KLAL - N/A

	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
	X PDALPHA.2	☑ PQBETA.1	☑ PQM.2	☑ PSM.2	☑ PDBETAref	☑ PQ.c
	☑ PDBETA.1		☑ PQM.3	☑ PTM.1	☑ PQALPHAref	☑ PSMref
	☑ 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	X TDM.1	☑ TRadD.1		☑ TD.c	☑ TTMref
	☑ 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:
- PDAlpha.2 has a large spike around hour 4 of flight.
- PQM.1 and PQM.4 have a large unusual drop out around hour 4 in flight.
- TDM.1 has a large spike around hour 4 of flight.

AVAPS Drop Log

Project: 2021 Hurriseason Mission: Hurricane Ida Flight ID: 20210827H1

Take Off: 1600L Landing: _____ Flt Dir: Landry Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	2046 10672	2	Ø	2106Z	Mac	HRD	IPNW/BT Combo	
2	204640102	1	Ø	2114Z			1st MID IN NW	
3	204610666	3	-0.6	2124Z			1st IN RMW NW	
4	204650370	4	-0.3	2145Z			1st OUT MID SE	
5	204840593	5	-0.2	2157Z			1st END PT SE	
6	204610668	6	-0.4	2232Z			MICROPHYS SPIRAL	
7	204031025	7	-0.4	2312Z			2nd IP NE/Combo	
8	204521412	8	-0.4	2321Z			2nd MID IN NE	
9	204650358	1	-0.9	2344Z			2nd OUT 1/4 SW	
10	204260854	2	-0.6	2350Z		HRD	2nd MID OUT SW	
11	204620004	3	-0.5	0004Z		ONR	2nd End PT SW	
12	204610654	4	-0.6	0022Z			3rd IP South	
13	204420094	5	-0.6	0033Z			3rd MID IN SOUTH	
14	204260861	6	-0.6	0051Z			1st CB Module NW	
15	204270045	7	-0.4	0057Z			2nd CB Module NW	
16	204620016	8	-0.6	0127Z			3rd MID out N/Combo	
17	204260873	1	-0.5	0139Z			3rd END PT N/Combo	
18	204640459	2	-0.5	0212Z			4th IP West/Combo	
19	204031021	3	-0.3	0224Z			4th MID IN west	
20	204330611	4	-0.7	0238Z			4th, NB RMW	
21	204610809	5	-0.7	0244Z			4th CTR maybe	
22	204260891	6	-0.7	0252Z			4th RMW out	
23	204840594	7	-0.3	0258Z			4th MID OUT EAST	
24	204530193	8	-0.6	0307Z			4th END PT EAST	
25	204650360	1	-0.4	0308Z	Mac	ONR	B/U END PT / LATENT GPS ON DROP 4	
26								
27								
28								
29								
30								
31								

08:50:30
54:30
20:55:00

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
Mission ID WP0[illegible]
Flight ID 20240827H1 (exp. 0213A)
Dropsonde Scientist
Dropsonde Scientist Jun Zhang
AVAPS Operator
AVAPS Operator Mac McAfee
Page# 1

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 #
01	1	2540[illegible]0692	210623	23.053	84.593	1056.2	070/29	10	29	
Comments	Combo IP NW									
02	2	[illegible]	211425	22.607	84.16	1005.9	055/39	10		
Comments	1st mid IN NW									
03	3	[illegible]06266	21:24	22.16	83.61	1007.3	025/66	10		
Comments	1st IN NW RMW eyewall									
04	4	20[illegible]5370	2145	21.44	82.31	10005.8	175/37	10		
Comments	1st out mid SE									
05	5	20[illegible]0593	2157	20.96	81.69	1009.4	160/29	10		
Comments	1st END SE									
06	6	20[illegible]10662	2232	21.85	82.12	1007.2	170/34	10		
Comments	MTmaybyas spiral higher pass									
07	7	20[illegible]3105	2312	23.62	82.11	1010.2	040/33	10	29.4	
Comments	Combo. 2nd IP NE									
08	8	20[illegible]52412	2321	23.196	82.66	1007.4	018/49	10		
Comments	2nd MID IN NE									
09	9	20[illegible]A5D358	2344	22.09	83.69	1002.9	245/29	10		
Comments	2nd out QP 1/4 Point SW									
10	2542[illegible]0854	2350	21.816	83.984	1006.4	280/19	10			
Comments	2nd MID PT out SW									

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

Storm IDA | Flight ID 20210827H1 | Dropsonde Scientist J. Zhang | AVAPS Operator Mac
Mission ID WADGA (exp. 0213A) | Dropsonde Scientist | AVAPS Operator | Page# 2

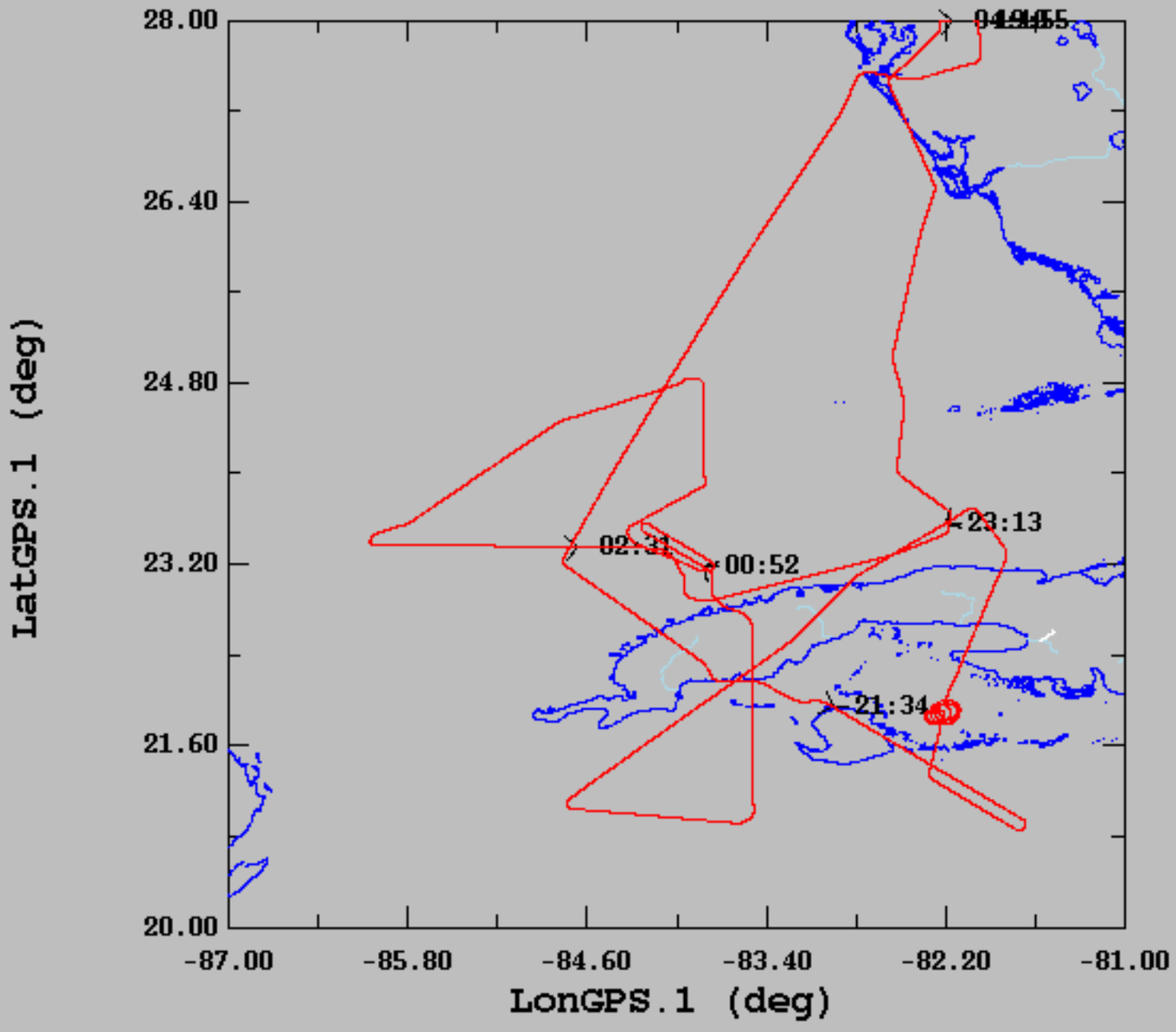
Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to Dir/Spd (deg/kt)	Wind closest to Hgt (m)	SST (°C)	Eye/Eyewall, Rainband, etc.	Ob #
11	20[illegible]0	0004	21.144	84.694	1007.4	350/19	10			
Comments	2nd EWD PT SW									
12	20[illegible]4	0054	21.04	83.47	1004.3	220/12	10			
Comments	3rd Band IP South.									
13	20[illegible]4	0033	21.88	83.48	1006	215/18	10			
Comments	3rd MID IN South.									
14	20[illegible]1	0051	23.12	83.76	999.6	030/52	10			
Comments	115 CONV burst drop									
15	20[illegible]5	0057	23.43	84.14	1005.9	040/50	10			
Comments	2nd CONV burst module NW									
16	20[illegible]6	0127	23.89	83.857	1004.4	059/44	10			
Comments	3rd MID OUT North, BT combo									
17	20[illegible]3	0136	24.756	83.819	1011.4	045/27	10			
Comments	3rd. Band PT North BT combo									
18	20[illegible]5	0212	23.37	81.00	1007.3	055/22	10			
Comments	4th IP WEST									
19	20[illegible]4	0224	23.36	85.14	1004.8	030/39	10			
Comments	4th. MID IN West									
20	20[illegible]1	0238	23.34	84.18	999.8	045/65	10			
Comments	4th INBD RMW									

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

Storm IDA Flight ID 20210871H1 Dropsonde Scientist Jun Zhang AVAPS Operator
Mission ID WA09A (exp. 0213A) Dropsonde Scientist AVAPS Operator Mark 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	20[illegible]0869	0244	23.07	83.94	998	135/27	10			
Comments	High level center - surface wind high - reformation of the									
22	[illegible]0891	0252	22.99	83.42	1002.0	130/52	10			
Comments	24th blow out Tower									
23	[illegible]	0258	23.15	82.946	1004.8	115/24	10			
Comments	24th MW out East									
24	[illegible]	0307	23.40	82.301	1006.8	105/39	10			
Comments	24th INNER EYE PT - Lose GPS									
25	[illegible]	0308	23.43	82.15	1008.7	095/43	10			
Comments	1st land point. Second drop									
26										
Comments										
27										
Comments										
28										
Comments										
29										
Comments										
30										
Comments										

2021-08-27, 19:55:04-28:10:28



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	23.49	1.82	20.86	27.99
LonGPS.1 (deg), 1 s/sec	-83.34	1.04	-86.05	-81.66