

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.
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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 ✓ 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 <input type="checkbox"/> 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 <input checked="" type="checkbox"/> PDBETA.2	✓ PQALPHA.1 ✓ PQBETA.1	<input checked="" type="checkbox"/> PQM.1 ✓ PQM.2 ✓ PQM.3 <input checked="" type="checkbox"/> PQM.4	✓ PSM.1 ✓ PSM.2 ✓ PTM.1	✓ PDALPHaref ✓ PDBETAref ✓ PQALPHaref ✓ PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ lasADDU.1			
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 <input type="checkbox"/> PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 <input type="checkbox"/> PitchRateI.3	✓ RollI.1 ✓ RollI.2 <input type="checkbox"/> RollI.3	✓ RollRateI.1 ✓ RollRateI.2 <input type="checkbox"/> RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 <input checked="" type="checkbox"/> TTM.2 <input checked="" type="checkbox"/> TTM.3	✓ TDM.1 ✓ TDM.2 ✓ 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:
<ul style="list-style-type: none"> ✓ 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)	<input checked="" type="checkbox"/>

NOTES:
<ul style="list-style-type: none"> - 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				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20210828H1	FLT #:	2	AC:	Rossi	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	1600 L	CP(s):	Shaw	Rogers	A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:	2300 L		Keith	Zhang			28	2	24
Block Time		Flight Time		NAV:	Utama		ASOS Takeoff		BTs		
In:	2:03	Land:	1:56	FE(s):	Sanchez				A/C Land		Good
Out:	19:45	T/O:	19:55	FD(s):	Hathaway		ASOS Land		13	3	0
Total:	6.3	Total:	6.0	SSA:	Richards T.	Visitors:					
Sponsoring Org:		NWS/EMC/TDR		AVAPS:	McAlister		Storm Number ID:		AL092021		
Program:		PRX		SEB:			(ie: AL072012)				
Purpose:		TD / Gravity Wave / Spiral		MX:			TCPOD/WSPOD Mission		1009A IDA		
							(ie: NOAA2 2418A SANDY)				
AS REQUIRED BY ORM				REMARK			OBSERVATIONS				
		Y	N				Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					X		1				
SCIENCE MISSION WITHIN BDRY LAYER					X		2				
LACK OF PRECIPITATION					X		3				
RELATIVE HUMIDITY ≥ 80%				X			4				
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		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	MAE	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	
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 reposition, 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	
28	204031038	4	-0.9	0049		EMC	3rd MID OUT, NO LAUNCH	BAD *
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**

Storm **Ida**

Flight ID **20210828H1**

Dropsonde Scientist **J Zhang**

AVAPS Operator **Max**

Mission ID **1009A**

(exp. 0213A)

Dropsonde Scientist

AVAPS Operator

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to		SST (°C)	Eye/EyeWall, Rainband, etc.	Ob #
						Dir/Spd (deg/kt)	Hgt (m)			
✓ 1	0485	2444	27.52	85.78	1009.8	100/44	10	29.8		
Comments Combo IP										
✓ 2	— 0401	2057	26.85	86.32	1002.2	110/57		29.5		
Comments comb. drops N/E MTD P										
✓ 3	30607	2104	26.45	86.64	993.1	110/71				
Comments Rmw 1										
✓ 4	50885	2106	26.33	86.30	991.5	110/74				
Comments Rmw 2 Combo										
✓ 5	60653	2108	26.279	86.77	985.6	115/72				
Comments Rmw 3										
✓ 6	80314	2113	26.13	87.08	974	225/10		29.5		
Comments Combo										
7	40667	2117	25.9	87.28	984.8	225/61				
Comments Rmw 1 out										
✓ 8	50357	2118	25.85	87.32	984.5	220/52				
Comments Rmw 2 Combo										
9	11440	2119	25.74	87.357	992.5	229/38				
Comments Rmw 3										
✓ 10	7057	2127	25.39	87.689	1001.4	275/42		29.3		
Comments 1st MTD out SW Combo										

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

Storm *Iola*

Flight ID *20210828H1*

Dropsonde Scientist *J Zhang*

AVAPS Operator *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		SST (C)	Eye/Ewall, Rainband, etc.	Ob #
						Dir/Spd (deg/kt)	Hgt (m)			
✓ 11	40646	2139	24.736	81.285	1008.1	275/17	10			
Comments	1st End Pt SW									
✓ 12	35740	2209	25.138	86.154	1007.1	205/34	10			
Comments	1P S									
✓ 13	50345	2219	25.70	86.58	1003.7	180/52		28.6		
Comments	2nd MWD S Combo									
✓ 14	45093	2228	26.25	87.58	981	180/55		29.8		
Comments	2nd RAW in S. Combo									
✓ 15	50372	2232	26.42	87.32	970.8	147/14				
Comments	2nd CTR									
✓ 16	60610	2235	26.61	87.43	981.3	020/15		29.2		
Comments	2nd Runw out N Combo									
✓ 17	50343	2246	27.30	87.73	1000.9	150/37		29.9		
Comments	2nd M/P out N Combo									
18	40121	2259	28.21	87.82	1008.1	065/32		30.3		
Comments	2nd End PT Comb. N									
19		2327								
Comments	dead - not working									
20	40094	2328	27.48	88.64	1007.1	030/36				
Comments	spread R/n mode.									

29.9

Mission ID
Storm

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

Storm **Ida**
Mission ID

Flight ID **20210828H1**
(exp. 0213A)

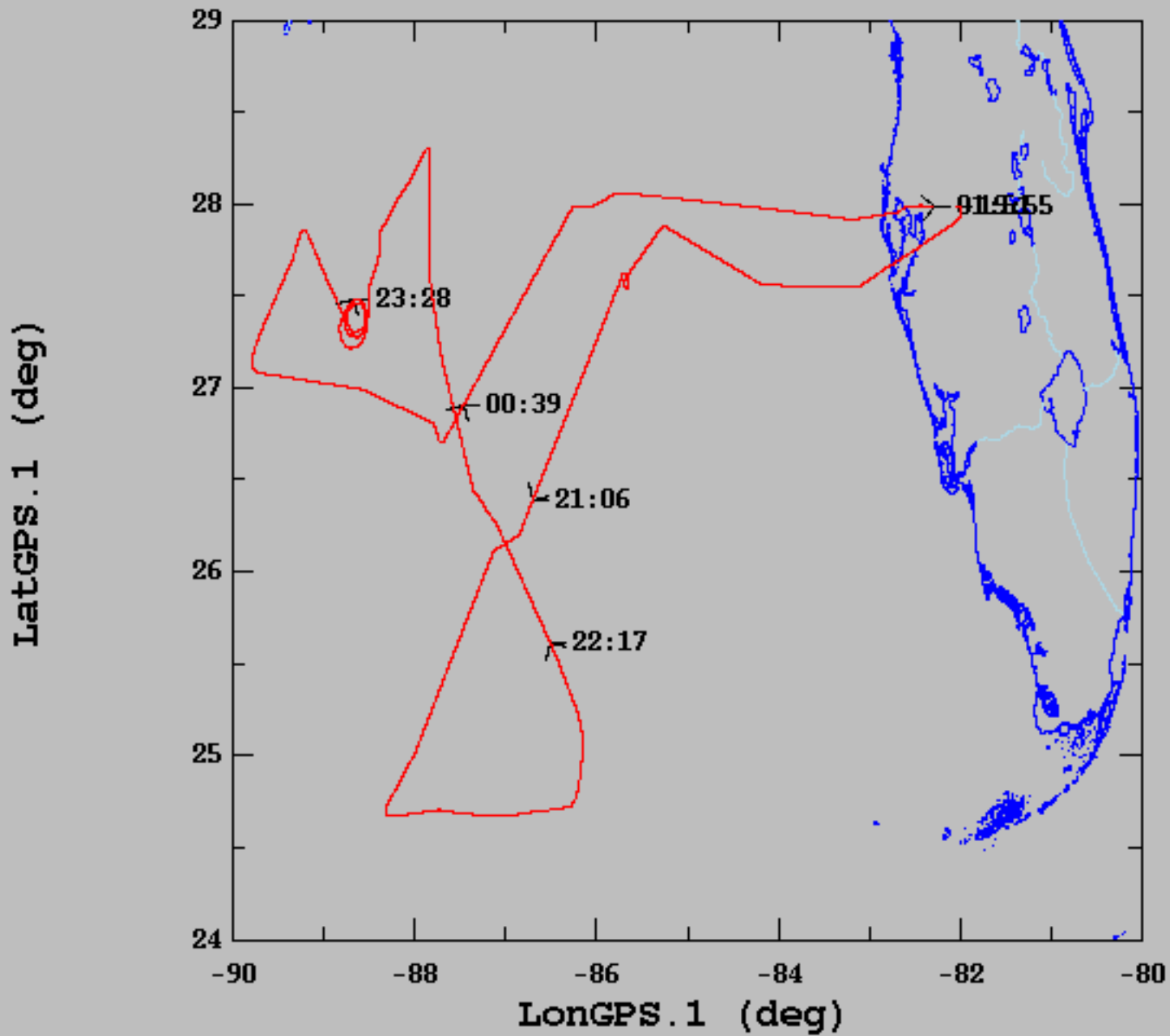
Dropsonde Scientist **J Zhang**
Dropsonde Scientist

AVAPS Operator **AVAPS Operator**

19 - **Sam**
10 - **Sam**
Page# **3**
1 - **NWS**

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Long (°E/W)	Sfc Pressure (mb)	Wind closest to		SST (°C)	Eye/Wall, Rainband, etc.	Ob #
						Dir/Spd (deg/kt)	Hgt (m)			
21	35316	2353	27.93	81.16	1051.8	035/26	10		29.9	
Comments: LDG 2-3 veep mid PT sondeo										
22	10045	0006	27.08	89.70	1058.4	040/26	10		29.6	
Comments: 3rd TP w/ sondeo										
23	60632	0017	27.017	82.88	1001.1	304/44	10			
Comments: 2nd MID IN sondeo										
24	10449	0028	26.884	88.133	991.9	350/47	10			
Comments: Rmw # 1										
25	50818	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	26.93	87.62	983.5	095/60				
Comments: 2nd eye wall out										
28										
Comments: no lunch detected										
29	40047	0044	27.38	86.92	999.7	115/59				
Comments: Deployed for previous one, MID out sondeo										
30	60633	0101			1011.1	130/38				
Comments: 3rd RMW pass sondeo 1st 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