

N42RF ERROR SUMMARY
20190829H1

Flight ID: 20190829H1

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/2019/MET/20190829H1

Local Met Data	Takeoff KLAL (0950Z)	Landing KLAL (1836Z)
Dynamic Corrections		Yes
AttackAngleIntercept		2.27641
AttackAngleSlope		6.01899
SlipAngleIntercept		0.232
SlipAngleSlope		7.17429
AttackAngleIntercept2		2.06387
AttackAngleSlope2	6.01177	
SlipAngleIntercept2		0.195
SlipAngleSlope2		6.67434

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.

PDAlpha.2 INOP for entire mission

PDBeta.2 INOP for entire mission

PQM.1 and PQM.4 failed during transit back to KLAL.

TDM.1 data was unrepresentative during first 1/3rd of mission (transit to IP)

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	26	24	20
Test sondes	0	0	0
AXBTS	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Holmes
Phone #: 863-500-3983

ACAT-4 Version = 7.3

P-3 QC Checklist

Flight ID:	20190829H1
Flight Director(s):	Holmes
UWZ.d mean:	-0.02 m/s

Pressure Comparison		
	T/O	Land
Aircraft	1007.0	--
Tower		

	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		☒ GSXref ☒ GSYref ☒ GSZref	
☒ 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	☒ PDLAPHAref ☒ 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 ☒ PitchI.3	☒ PitchRateI.1 ☒ PitchRateI.2 ☒ PitchRateI.3	☒ RollI.1 ☒ RollI.2 ☒ RollI.3	☒ RollRateI.1 ☒ RollRateI.2 ☒ RollRateI.3	☒ PITCHref ☒ ROLLref	
☒ Temp / Dewpt	☒ TTM.1 ☒ TTM.2 ☐ TTM.3	☒ TDM.1 ☒ TDM.2 ☒ TDM.3	☒ TRadD.1 ☒ TRadS.1 ☐ 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	☐
Valid	☒
Errors (note)	☒

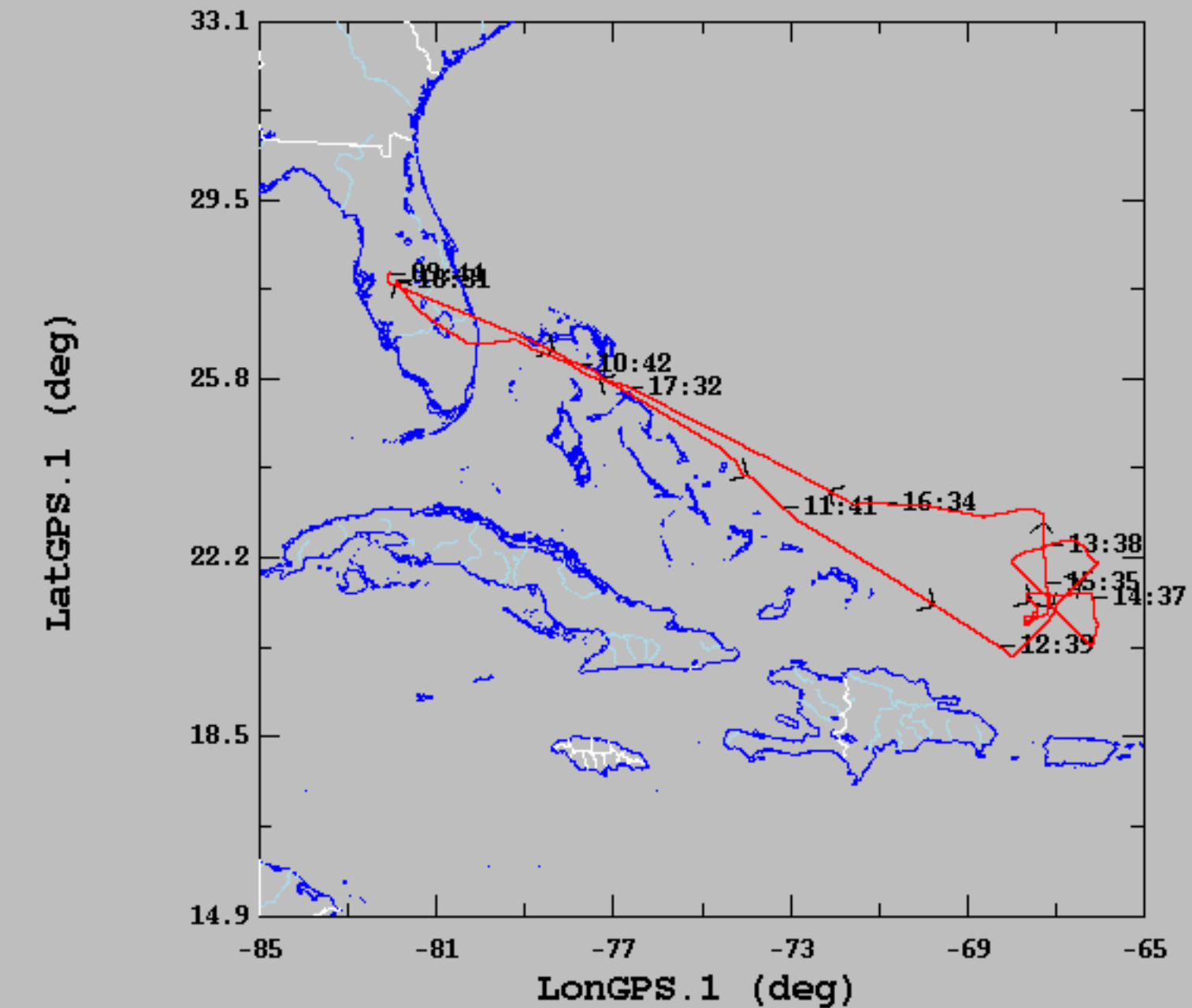
NOTES:

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20190829H1	FLT #:		AC:	Didier	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	0930Z	CP(s):	Mitchell	Gus Alaka	A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:	1800Z		Doremus	Jason Sippel			24	2	20
Block Time		Flight Time		Nav(s):	Freeman	Brittany Dahl	ASOS Takeoff		BTs		
In:	1843	Land:	1836						Good	Bad	Sent
Out:	0942	T/O:	0950	FE(s):	Lalonde		A/C Land				
					Heystek						
Total:	0:00 9.0	Total:	0:00 8.7	FD(s):	Holmes		ASOS Land		↖		
						Visitors:					
Sponsoring Org:		EMC		SEB:		Alex Hudson (Nat Geo)	Storm Number ID:		AL052019		
Program:		PRX					(ie: AL142018)				
Purpose:		TDR		SSA:	Naher	Josh Rannenberg	TCP0D/WSP0D Mission		NOAA2 1405A DORIAN		
						Alex Amezcua	(ie: NOAA2 0614A MICHAEL)				
				AVAPS:	Greene		OBSERVATIONS				
AS REQUIRED BY ORM			Y	N	REMARKS		Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH				X							
SCIENCE MISSION WITHIN BDRY LAYER				X							
LACK OF PRECIPITATION				X							
RELATIVE HUMIDITY ≥ 80%			X		4X Hurricane Dennis						
LARGE AIR-SEA TEMP GRADIENT				X	CAT I						
HIGH SURFACE WINDS			X								
LONG FETCH / DURATION OF SFC WND			X								
SEA SALT ACCRETION FORECAST				X							
SEA SALT ACCRETION OBSERVED											
*Highlighted items must be completed before departure.											
Remarks:											

20190829H1 Flight Track

2019-08-29, 09:44:10-18:31:23



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	23.50	2.29	20.16	27.99
LonGPS.1 (deg), 1 s/sec	-72.14	5.19	-82.08	-66.03

NOAA • AOC • SED N42RF AVAPS DROP LOG

Lead Tech: Mike Mascaro

Project: Hurricane 2019

Mission: H. DORIANFlight ID: 20190829H1Take Off: 0949Z

Landing:

Flt Dir: HOLMES

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	182840487	1	0.3	1248	JG	NWS		✓
2	182610002	2	0	1255	JG		FAST FALL	OK
3	182730823	3	0	1255				OK
4	182840441	4	0	1303				OK
5	182830423	5	-0.5	1305				OK
6	182230200	6	0	1312				OK
7	182730826	7	0	1320				OK
8	182610113	8	0	1350				OK
9	182730824	9	-0.3	1357				OK
10	182740660	10	-0.3	1401				OK
11	182730827	11	-0	1403			RMW	OK
12	182940385	12	-0.6	1405			center	OK
13	182940417	13	0	1407				OK
14	182830425	14	0.5	1413			182740662	OK
15	182830425	15	0	1423			END POINT	OK
16	182740637	16	0	1439			NO launch det.	X
17	182840442	17	-0.5	1431				OK
18	182740611	18	-0.6	1444				OK
19	182740537	19	0	1448				OK
20	182230660	20	0	1457			#21	
21	182740650	21	-0.4	1526			#22	
22	182840450	22	-1.0	1535			23	
23	182740536	23	-0.7	1536			24	
24	182740779	24	-0.4	1541			25	
25	182740775	25	0				26	
26	182940542	26	0					
27	182230204	27	0	1451		NW	center drop	20
28								
29								
30								
31								
32								
33								
34								

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								

Drop Station Operator Notes

Charge \$\$ To Options: AOC, NWS, **NESDIS**, SAT (Special NESDIS/HRD), IR/SST or HRD **ONLY – Do not use funding codes!!!**

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 20150118I1).
- Update the Frequency band allocation as required:
Band A - W53rd, Band B - N42RF, Band C - N43RF, Band D - N49RF, Band E - not allocated
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights. Verify data is available on Remote AVAPS at the FD Station, then terminate the sonde by selecting **Abort** to cancel the sonde initialization. Verify the AVAPS Data mission folder has been created.
- **Verify AVAPS PC Time is correct**
- **Early launch detects are caused usually by remanufactured sondes with the chute riser line not properly coiled between the PCB ears. This may also cause fast falls. If this is suspected, repack the riser line as time permits**
- **Eyewall drop performance is improved when using sondes manufactured after 7/2016**
- **Perform RH Regeneration on all sondes – this must be done prior to sonde initialization -**

AVAPS Launch:

- Select a sonde frequency in the Green band and away from other sondes
- Enter sonde pressure error offset. The latest AVAPS inserts a default offset value. Adjust if pressure offset is 0.4 mB or greater
- **If the Cal lab pressure standard and the cabin pressure standard match, apply pressure offset +/- 0.1 mB**
- Select "begin data collection" and verify good data (including Winds) prior to putting sonde in launch tube
- Failure to keep good lock on GPS is likely due to the GPS antenna connector on the sonde PCB needing to be rotated away from surface mount components – do this if needed.
- **Cut off about ½ of ribbon**, loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing starboard
- Verify the sonde is actively tracking GPS data prior to launch and no **Early Launch detect**