

N42RF ERROR SUMMARY
20190903H1

Flight ID: 20190903H1

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/20190903H1

Local Met Data	Takeoff KLAL (0740Z)	Landing KLAL (1459Z)
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

None of these instrument failures affected the realtime dataset or the post processed dataset.

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	29	27	27
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:	20190903H1
Flight Director(s):	Holmes
UWZ.d mean:	0.12 m/s

Pressure Comparison		
	T/O	Land
Aircraft	1002.2	--
Tower	1002.9	

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

FLID_Mission_Documents.pdf:	
<input checked="" type="checkbox"/>	Error Summary
<input checked="" type="checkbox"/>	Crew Manifest
<input checked="" type="checkbox"/>	QC Checklist
<input checked="" type="checkbox"/>	Dropwindsonde Log(s) - AVAPS and FD if completed
<input checked="" type="checkbox"/>	Flight Track
<input type="checkbox"/>	Miscellaneous FD Notes

QC Key	
Not checked	<input type="checkbox"/>
Valid	<input checked="" type="checkbox"/>
Errors (note)	<input checked="" type="checkbox"/>


NOTES:

PDLpha.2 INOP for entire mission

PDBeta.2 INOP for entire mission

None of these instrument failures affected the realtime dataset or the post processed dataset.

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

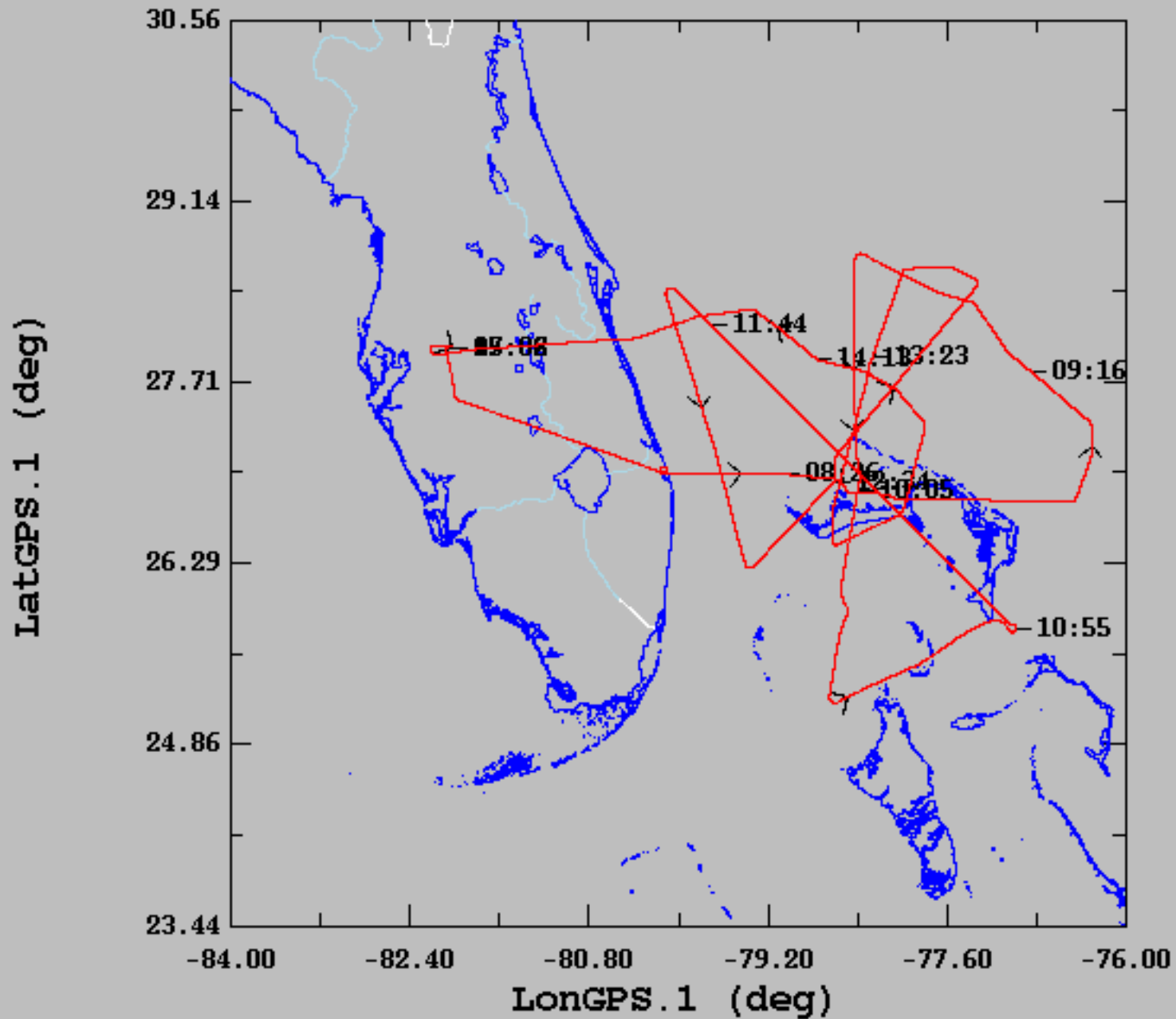
FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20190903H1	FLT #:		AC:	Didier	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	0800Z	CP(s):	Mitchell	Rob Rogers	A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:	1600Z		Doremus	Jason Dunion			27	2	27
Block Time		Flight Time		Nav(s):	Freeman	Brittany Dahl	ASOS Takeoff		BTs		
In:	1504	Land:	1459	FE(s):	Lalonde Sanchez				A/C Land	Good	Bad
Out:	0733	T/O:	0740	FD(s):	Heystek		ASOS Land				
Total:	1400 7.5	Total:	0.00 7.3	SEB:	Holmes						
Sponsoring Org:	EMC			SSA:	Lundry	Visitors:	Storm Number ID:		AL052019		
Program:	PRX			AVAPS:	Lynch T	Wayn Pullen (AOC)	(ie: AL142018)				
Purpose:	TDR				Naher	Jim Brewer (AOC)	TCPOD/WSPOD Mission		NOAA2 3905A DORIAN		
					Greene	Alex Hudson (Nat Geo)	(ie: NOAA2 0614A MICHAEL)				
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		<i>5x Hurricane Dennis</i>					
LARGE AIR-SEA TEMP GRADIENT					X						
HIGH SURFACE WINDS				X		<i>CAT IV</i>					
LONG FETCH / DURATION OF SFC WND				X							
SEA SALT ACCRETION FORECAST					X						
SEA SALT ACCRETION OBSERVED											

*Highlighted items must be completed before departure.

Remarks:

20190903H1 Flight Track

2019-09-03, 07:36:58-15:02:43



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	27.29	0.82	25.19	28.72
— LongGPS.1 (deg), 1 s/sec	-78.81	1.37	-82.20	-76.30

NOAA • AOC • SED N42RF AVAPS DROP LOG

Lead Tech: Mike Mascaro

Project: Hurricane 2019

Mission: DORIAN

Flight ID: 20190903 HZ

Take Off: _____

Landing: _____

Flt Dir: Holmes

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	185130150	1	0		JG	NWS		✓
2	185120649	2	-0.7	0826				✓
3	191020562	3	-0.7	0835				✓
4	185130650	4	-0.5	0849				✓
5	191010446	5	-0.6	0859				✓
6	185130871	6	-0.4	0937				✓
7	191020565	7	-0.7	0952		NWS		✓
8	191050401	8	-0.6	0958	JG	NWS	RMW	✓
9	191040507	9	-0.5	1018		NWS	MID point	✓
10	185120849	2	-0.3	1032			NO DEW No Humidity	NO PTW (X)
11	1910930032	3	-0.6	1033				✓
12	185120857	4	-0.4	1056				✓
13	185120874	5	0	1110				✓
14	190950627	6	0	1130				✓
15	185120847	7	0	1149				✓
16	185120863	8	-0.4	1221				✓
17	191050479	1	-0.4	1230				✓
18	1910040458	2	-0.2	1237				✓
19	1910050232	3	-0.4	1249				✓
20	191040457	4	-0.3	1303			NO GPS	(X) (X)
21	185120860	5	0	1304		NWS		✓
22	19110079	6	-0.4	1327		NESDIS		✓
23	185120854	7	-0.5	1336		NESDIS	ended @ 695 meters early	✓
24	19110506	8	-0.5	1347		NWS	no at drop.	✓
25	191040462	1	-0.3	1354		NWS		✓
26	19111008	2	-0.4	1358				✓
27	191040511	3	-0.3	1403				✓
28	191050063	4	-0.4	1408				✓
29	191040482	5	-0.6	1412		NWS		✓
30	185120859	6	-0.4					
31								
32								
33								
34					JG			

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 2015011811).
- 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 1/2 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**