

N42RF ERROR SUMMARY  
20190831H2

Flight ID: 20190831H2

Sensor or System -----	Number or Name -----
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.2
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/20190831H2

Local Met Data	Takeoff KLAL (2105Z)	Landing KLAL (0000Z)
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 and PDBeta.2 unavailable. PQM.1 temporary in-flight errors. Pitch.3 and Roll.3 unavailable. TTM.3 unavailable. TDM.1 and TDM.2 generally track with TDM.2 but data typically less realistic. TRadU.1 unavailable.

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Drosondes	31	30	16
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0

AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Carpenter / Parrish  
Phone #: 863-500-3901

ACAT-4 Version = 7.3

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20190831H2	FLT #:	19-99	AC:	Kibbey	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	21:00Z	CP(s):	Abitbol	Rogers, Rob	A/C Takeoff	1008.4	Good	Bad	Sent
To:	KLAL	ETA:	05:00Z		Rossi	Sellwood, Kathryn	ASOS Takeoff	KLAL 2050Z 1008.6 mb	30	1	16
Block Time		Flight Time		Nav(s):	Urato	Hazelton, Andy					
In:	3:46	Land:	3:39		FE(s)	Darby	Jelenak, Zorana	ASOS Land	KLAL 0350Z 1010.9 mb	Good	Bad
Out:	20:57	T/O:	21:06	FD(s):	Tuffnel	Sapp, Joe	Visitors:			0	0
Total:	6.82	Total:	6.55	SEB:	Parrish	Garza, Marcus		Storm Number ID:			
Sponsoring Org:	EMC			SSA:	Carpenter		(ie: AL072012)				
Program:	PRX			AVAPS:	McAlister	TCPOD/WSPOD Mission	NOAA2 2705A DORIAN				
Purpose:	TDR Mission Hurricane Dorian				Mascaro						
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							
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						

\*Highlighted items must be completed before departure.

Remarks:

## P-3 QC Checklist

Flight ID:	20190831H2
Flight Director(s):	Parrish / Carpenter
UWZ.d mean:	0.05 post-processing

Pressure Comparison		
	T/O	Land
Aircraft	1008.4	1010.6
Tower	KLAL 2050Z 1008.6 mb	KLAL 0350Z 1010.9 mb

	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 X PDALPHA.2 ✓ PDBETA.1 X PDBETA.2	✓ PQALPHA.1 ✓ PQBETA.1	X 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 X PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 X PitchRateI.3	✓ RollI.1 ✓ RollI.2 X RollI.3	✓ RollRateI.1 ✓ RollRateI.2 X RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✓ TTM.2 X TTM.3	X TDM.1 ✓ TDM.2 X TDM.3	✓ TRadD.1 ✓ TRadS.1 X 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
X Miscellaneous FD Notes

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

NOTES:
<p>PDAIpha.2 and PDBeta.2 unavailable.</p> <p>PQM.1 temporary in-flight failures.</p> <p>Pitch.3 and Roll.3 unavailable.</p> <p>TTM.3 unavailable.</p> <p>TDM.1 and TDM.3 generally track with TDM.2 but data typically less realistic.</p> <p>TRadU.1 unavailable.</p>

# AVAPS Drop Log

Project: Hurricane Reco

Mission: Dorian

Flight ID: 20190831H2

Take Off: 2100

Landing: \_\_\_\_\_

Fit Dir: Jack

Launcher S/N: \_\_\_\_\_

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	183311006	2	∅	2237	Mac	NWS	PT1	✓
2	184750445	1	∅	2249		NWS	MID 1	✓
3	18750326	3	-0.8	2259		NWS	CTR	✓
4	182230737	4	-0.4	2301		NWS	RMW	✓
5	182620657	5	-0.6	2302		NESDIS	Zorana 1st telem	✗
6	183120753	2	-0.4	2303		NESDIS	Zorana good	✓
7	184750467	1	-0.2	2313		NWS	MID OUT	✓
8	183330836	2	-0.6	2325		NWS	PT2 + turn	✓
9	184750442	3	-0.4	2345		NWS	PT3 Turn	✓
10	184750462	1	-0.4	2355		NWS	MID IN	✓
11	183330825	2	-0.5	0002		NESDIS	Zorana RMW 2nd pass in	✓
<del>13</del>	183330838	4	-0.3	0004		NWS	RMW 2nd pass in	✓
<del>14</del>	184750438	5	-0.3	0019		NWS	2nd out mid	✓
<del>12</del>	184750508	3	-0.3	0003		NESDIS	Zorana RMW 2nd pass in	✓
15	184750415	1	-0.7	0030		NWS	PT4 + turn	✓
16	184750440	2	-0.2	0056		NWS	PT5 + turn	✓
17	184750461	3	-0.3	0107		NWS	Mid in. 3rd pass	✓
18	182620120	4	-0.6	0114		NESDIS	Zorana, RMW, 3rd in	✓
19	183320119	5	-0.2	0115		NESDIS	Zorana, RMW, 3rd in	✓
20	182621268	1	-0.6	0119		NWS	3rd out RMW	✓
21	182830055	2	-1.0	0121		NESDIS	Zorana, RMW 3rd out	✓
22	184050023	6	-0.5	0123		NESDIS	Zorana 3rd out	✓
23	184040048	3	-0.6	0128		NWS	Mid out	✓
24	183311037	1	∅	0137		NWS	PT6 end	✓
25	184750713	2	-0.9	0205		NESDIS	Zorana Drop 1st	✓
26	184750405	3	-0.5	0205			Zorana Post pump 2	✓
27	184750711	4	-1.5	0206			Zorana PP 3	✓
28	18311034	5	∅	0212			Zorana PP 4	✓
29	184750412	6	-0.3	0212			Zorana PP 5	✓
30	184750407	7	-0.3	0213			Zorana PP 6	✓
31	184750458	8	-0.4	0213	Mac		Zorana PP 7	✓

~~13~~ 183330838 4 -0.3 0004 NESDIS RMW 2nd pass in ✓  
~~14~~ 184750438 5 -0.3 0019 NWS 2nd out mid ✓  
~~12~~ 184750508 3 -0.3 0003 NESDIS Zorana RMW 2nd pass in ✓

2105 Calceolaria

LD

Propsonde Doppler Wind Lidar Scientist — AVAPS — Todd Richardson

Flight ID 20190831H2 Storm Dorian DWL Scientist Sellwood

	Start Time ID	Stop Time	Pattern or Az/EI		Notes		
	Sonde ID	Time	Lat / Lon	MSLP	Wind	Comment	ORB #
1	183311006	2237	25.34 / 75.80	1008	330/33/10	IP (end 22750)	2
2	184750445	2249	25.76 / 75.11	1003	310/36/10	mid	4
3	184750326	2259	26.18 / 74.57	941	340/2/10	center	3
4	182230737	2301	26.24 / 74.45	950	73/66/27	EW NE	5
5	182620657	2302	26.27 / 74.40	→ died at 774mb		nesdis	X
6	183120753	2303	26.81 / 74.33	982	105/78	nesdis	X
7	184750467	2313	26.61 / 73.74	1047	120/41/10	mid	6
8	183330836	2325	27.02 / 73.11	1011	120/31/10	END (SW→NE)	7
9	184750442	2345	27.62 / 74.76	1011	70/31/10	END (N→S)	9
10	184750462	2355	26.94 / 74.75	1004	70/55/10	mid	10
11	183330825	0002	26.50 / 74.73	985	40/77/10	nesdis	X
12	184750598	0003	26.44 / 74.73	979	45/90/10	nesdis	X
13	183330838	0004	26.56 / 74.73	957	10/66/13	EW N	11
14	184750438	0019	25.44 / 74.73	1004	235/39/10	Mid	12

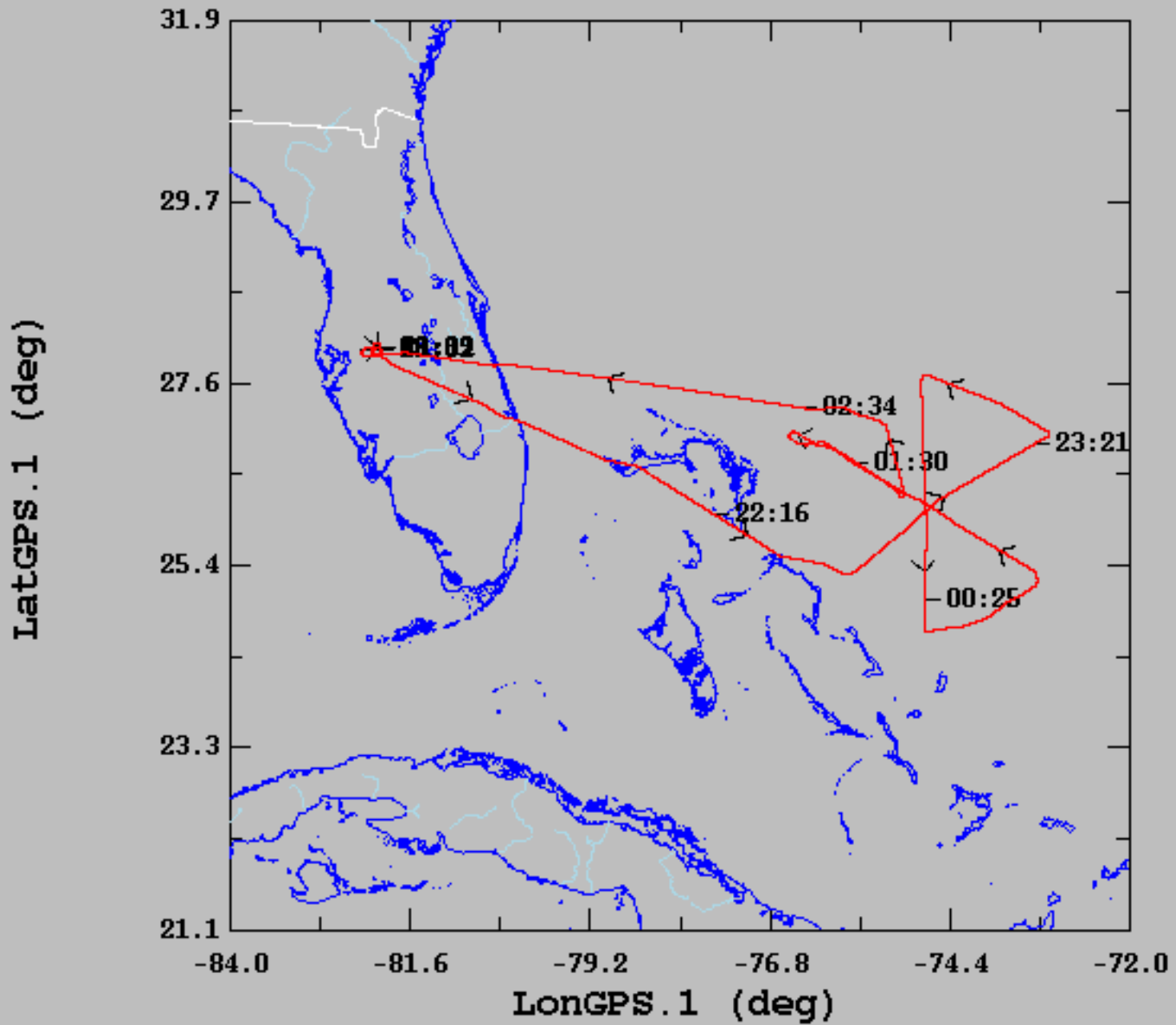


DROPSONDE Scientist

Flight ID \_\_\_\_\_ Storm \_\_\_\_\_ DWL Scientist \_\_\_\_\_

	Start Time	Stop Time	Pattern or Az/EI			Notes	
	Sonde ID	Time	Lat/Long	MSLP	Wind	Comment	ORB #
15	184750415	0030	2670/7473	1009	250/20/10	END (S) 245.25	13
16	184750440	0056	2646/7344	1011	200/23/10	END (SE)	14
17	184750461	0107	2585/7418	1004	185/42/10	mid	15
18	182620120	0114	2613/7465	981	150/88/10	nesdis	X
19	183320119	0115	2616/7471	970	140/10/10	nesdis	X
20	18261268	0119	2630/7502	955	315/55/10	EW/NW	16
21	182830055	0121	2634/7510	975	345/102/10	nesdis	X
22	184050023	0123	2640/7522	991	10/77/10	nesdis	X
23	184640048	0128	2660/7560	1003	25/43/10	mid	17
24	183311037	0139	2695/7634	1010	055/36/10	END (NW)	18
25	184750713	020532	2637/7519	974	355/86/10	nesdis	X
26	184750405	020547	2637/7518	973	X	nesdis (lost wind: 200)	X
27	184750711	020605	2636/7517	968	348/59/20	nesdis	X
28	183311034	021206	2643/7504	965	20/28/10	nesdis	X
29	184750412	021230	2645/7507	973	40/93/10	nesdis	X
30	18455047	021312	2650/7506	982	35/86/10	nesdis	X
31	184750458	021339	2653/7507	987	45/74/10	nesdis	X

08/31/2019, 19:02:51-27:39:10



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	26.98	0.97	24.64	28.05
— LongGPS.1 (deg), 1 s/sec	-77.93	3.31	-82.25	-73.06