

N49RF ERROR SUMMARY  
NHC Hurricane NATE Surveillance Mission 0216A

Flight ID: 20171005N1

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	AccZI.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/2017/MET/20171005N1

Local Met Data	Takeoff KLAL (1739Z)	Landing KLAL (0148Z)
Dynamic Corrections		Yes
AttackAngleIntercept		5.1083
AttackAngleSlope		5.91956
SlipAngleIntercept		1.05
SlipAngleSlope		6.80484
AttackAngleIntercept2		5.05312
AttackAngleSlope2		5.74156
SlipAngleIntercept2		0.8
SlipAngleSlope2		6.89644

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.

TDM.2 is too dry at low altitude but is closer to TA.d at operational altitudes.  
TDM.1 is more accurate at low altitudes but far too moist at FL 410-450. TDM.2 is the reference.

AltRA.1 displays an oscillation but is not used for calculation of GA

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	33	31	31
Test sondes	9	9	0
AXBTS	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Henning  
Phone #: (863) 500-3982

ACAT-4 Version = 7.1

## U.S. Dep't. of Commerce / OMAO / NOAA / Aircraft Operations Center

FLT ID: 20171005N1	From: KLAL	To: KLAL
FLT #:	Blk In: 0155 z	Lnd Time: 0148 z
ETD: 1730 z	Blk Out: 1729 z	T/O Time: 1739 z
ETE: 8+00	Total Blk: 8.4	Total Flt: 8.2
Sponsoring Org: NHC	Program: PHS	Purpose: NATE SS

## AOC Flight Crew

Aircraft Commander: TWINING	SSA: DEFE0
Co-Pilot: SIMS / WADDINGTON	AVAPS: SMITH / GREENE
Navigator: / Rebecca	Scientists:
Flight Eng: /	Scientists:
Flt Director: HENNING SEARS	Scientists:
SEB: / /	Scientists:

Crew Chief: Visitors: / /

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	#2 1009.7	27C 29.95 STA 1009.2	# 1009.6	24C 29.96 STA 1009.5

AS REQUIRED BY ORM	YES / NO	REMARKS
VOLCANIC ASH		
SCIENCE MISSION WITHIN BOUNDARY LAYER		
LACK OF PRECIPITATION		
RELATIVE HUMIDITY AT OR ABOVE 80%		
LARGE AIR-SEA TEMPERATURE GRADIENT		
HIGH SURFACE WINDS		
LONG FETCH AND/OR DURATION OF SFC WIND		
SEA SALT ACCRETION FORECAST		
SEA SALT ACCRETION OBSERVED		

Dropsondes	33	Good: 31	Bad: 2	Sent: 31 + 9 test sondes
AXBT		Good:	Bad:	Sent:

List other data sources in Remarks section

Remarks (Storm VDM Identifier, Mission ID, Fix Times)

Fix #	VDM Ob Num	Fix Time / SLP
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Storm Number Identifier (VDM):

(ie: AL072012)

TCPOD/WSPOD Mission ID:

(ie: NOAA2 2418A SANDY)

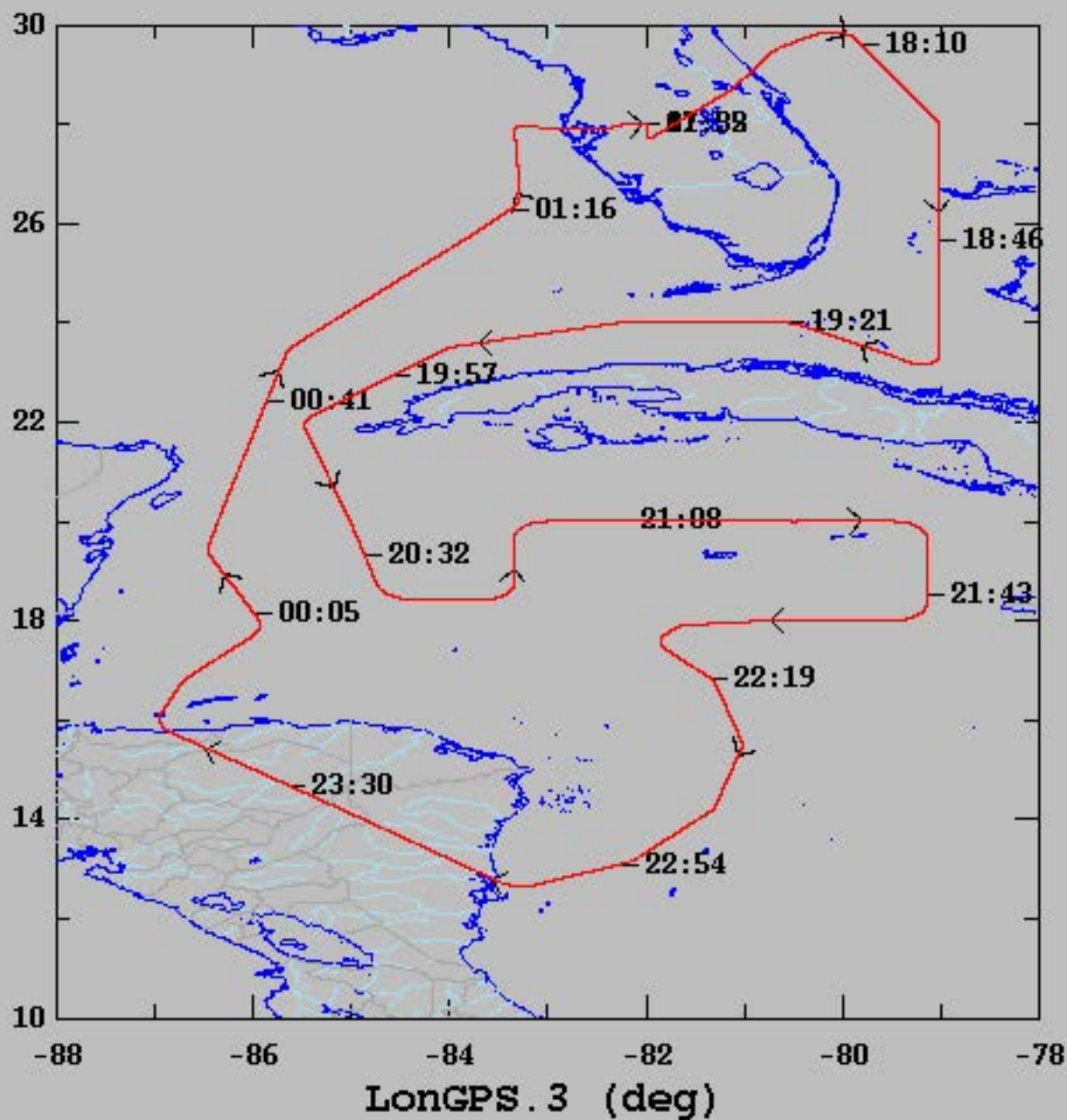
Remarks:

9

1 RB41 test  
2 CH 8  
3 CH 8  
9 CH 8  
13 CH 7  
20 CH 7  
27 CH 8  
29 CH 8  
31 CH 5

17 CH 5

10/05/2017, 17:35:31-25:52:04





MISSION ID

20171005N1 05  
20171005N1 OCT  
0216A NAME

Flight Director

SEARS / HENNING

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Drop #	CH	TIME	Sonde Serial #	OBS #	Lat	Long	SFC Pressure	SFC or Last Wind	500 mb	250 mb	Status	KWBC Time	Comments
1	1	180801	162735123	1	29.83	80.03	1016	045 26 10m	5878	10957	P S F	1833	ALLOWED OLD WINDS THROUGH
2	2	182615	163313042	2	27.99	79.00	1014	06012 8m	5867	10966	P S F	1844	its
* 3	3	183922	163255116	3	26.49	79.00	1012	10016 11.5m	5868	10968	P S F	1900	its RH2 better
4	4	185430	162655001	4	24.73	79.00	1011	10012 10.3m	5864	10970	P S F	1919	its
5	1	190842	163313023	5	23.17	79.15	1010	12013 9.4m	5861	10970	P S F	1941	its
6	2	192139	160225058	6	23.91	-80.5	1009	12018 11.0m	5851	10954	P S F	1946	its
7	3	1	163313031	✓							P S F		no bunch detect
8	4	193653	143855122	7	23.95	82.41	1006	13534	5837	10938	P S F	2012	its
9	1	195039	163313188	8	23.48	84.00	1005	35507 11.0m	5831	10926	P S F	2028	its
10	2	200849	163255099	9	21.97	85.46	1007	00512 11.4	5819	10920	P S F	2038	its
11	3	202700	163313055	10	19.99	-85.00	1006	05011 10.5	5818	10941	P S F	2047	its
12	4	204059	163325041	11	18.46	84.51	1006	07515	5827	10961	P S F	2102	its <del>off det. ELD</del>
13	1	205002	163313041	12	18.55	83.40	1006	08513 13m	5823	10960	P S F	2124	its
14	2	210131	163325131	13	19.94	83.16	1007	13017	5830	10952	P S F	2133	its
15	3	211048	162835008	14	20.00	81.93	1007	11011 10.3m	5832	10958	P S F	2143	its
16	4	212154	163313032	15	20.00	80.49	1008	09013 10.9m	5854	10972	P S F	2147	its
17	1	213200	163255111	16	19.87	79.21	1007	11518 8.6m	5853	10970	P S F	2152	its
18	2	214808	163313045	17	18.07	79.26	1007	12514 9.6m	5851	10968	P S F	2209	its
19	3	220037	163325060	18	18.00	80.76	1006	12517 13.1m	5843	10971	P S F	2221	its
20	4	221033	162735049	19	17.67	81.83	1006	11518 10.8m	5836	10972	P S F	2230	its
21	1	221946	163313043	20	16.78	81.30	1005	16016 11.3m	5836	10971	P S F	2241	its
22	2	223332	163313033	21	15.48	81.00	1006	17022 12.0m	5834	10974	P S F	2250	its
23	3	224246	162715049	22	14.19	-81.31	1006	18016 8.0m	5838	10966	P S F	2318	its
24	4	225348	162655003	23	13.14	82.15	1006	21026 10.7m	5838	10955	P S F	2321	its
25	1	230238	163455020	24	12.68	83.1	1006	22523 9.6m	5829	10954	P S F	2325	its
26	2	235254	163525075	25	16.8	86.68	1005	08517 11.9m	5825	10960	P S F	0018	its
27	3	000342	162735120	26	17.89	85.91	1005	11004 5.5m	5825	10960	P S F	0024	its
28	4	001652	162735035	27	17.4	86.45	1006	05518 7.4m	5821	10941	P S F	0042	its
29	1		163255126	✓							P S F		launch - failed old
30	2	005011	162735050	29	23.57	85.55	—	—	—	—	P S F	0111	NEARLY TERMINATION
* 31	3	010023	163313053	30	24.61	-84.7	1203	04519 7.6m	5844	10942	P S F	0126	low surf pres?
32	4	011117	163325011	4R	25.73	-83.78	1008	10027 0.2m	5852	10941	P S F		
33	1	2345	163255108	28	15.9	86.9	1005	08008 8.4m	5818	10945	P S F	0117	
34											P S F		
35											P S F		
36											P S F		



## NOAA • AOC • SED

N49RF AVAPS DROP LOG

Lead Tech: Gabe Defeo

Project: Hurricane 2017

Mission: TS Note

Flight ID: 20171005N1

1009.5

Take Off: 1739

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

Flt Dir: Hemming

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

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	162735123	1	-1.2	1818	JAS	NWS		✓
2	1633130425	2	-0.7	1818	JAS	—	RD41 TEST	✓
3	172620598	8	-0.9	1826	JG	NWS		✓
4	163255116	3	-0.7	1839	JAS	↓	DPS	✓
5	162655001	4	-1.1	1856	JAS	↓		✓
6	172610284	8	-0.7	1839	JG	—	RD41 RH1 GOT WET @ 600 MBS	✓
7	163313023	1	-0.6	1908	JAS	NWS	(5)	✓
8	162825058	2	-1.0	1921		↓	(6)	✓
9	163313031	3	-1.5	1935		↓	NO L5. NORMAL PTH WWS	B
10	143855122	4	-1.4	1936		↓	7 Backup	✓
11	163313188	1	-1.9	1950			8	✓
12	163255099	2	-1.9	2008				✓
13	163313055	3	-0.6	2027				✓
14	172620587	8	-1.8	2008	GD	—	RD41 #3 DP10	✓
15	163325041	4	-1.8	2027	JAS		(11)	✓
16	163313041	1	-0.8	2050		↓	12	✓
17	163325031	2	-1.6	2101		↓	DP13	✓
18	162835008	3	-1.4	2110				✓
19	172620593	7	-1.8	2101	JG	—	RD41 #4	✓
20	163313032	4	-1.3	2121	JAS			✓
21	163255111	1	-1.7	2132		↓		✓
22	163313045	2	-1.5	2148		↓	(17)	✓
23	163325060	3	-1.8	2200			DROP POINT 18	✓
24	172610279	5	-1.8	2148	JG	—	RD41-RH BURN INOP	✓
25	162735049	4	-1.6	2210	JAS		19	✓
26	163313043	1	-1.7	2219			20	✓
27	163313033	2	-1.6	2231			21	✓
28	172620594	7	-1.6	2219		—	RD41 #6	✓
29	162715049	3	-1.9	2242			DP22	✓
30	162655003	4	-1.0	2253			DP23	✓
31	163455020	1	-1.2	2302			DP24	✓
32	163255108	1	-1.8	2346			DP25	✓
33	163525075	2	-1.9	2352			DP26	✓
34	162735120	3	-1.9	0003			DP27	✓

\* L5 upgraded to 4.0.9  
 5.1.1 & 4.0.5  
 R5

JAS - 230.5 knots

## APPENDIX 2 – GIV QC Checklist

Flight ID:	20171005N1
Flight Director(s):	HENNING/SEARS

UWZ.d mean: +0.19

Pressure Comparison		
	T/O	Land
Aircraft	1009.7	1009.6 #2
Tower	1009.2	1009.5

	Raw 1Hz Mean File Parameters				C File Parameters	
Accelerometer	AccAXI.1	AccAYI.1	AccAZI.1		AccZref	
	AccAXI.2	AccAYI.2	AccAZI.2			
	AccAXI.3	AccAYI.3	AccAZI.3			
Altitude	AltGPS.1	AltI.1	AltPaADDU.1	AltBCADDU.1	ALTref	
	AltGPS.2	AltI.2	AltPaADDU.2	AltBCADDU.2	ALTPA.d	
	AltGPS.3	AltI.3	AltRA.1		ALTGA.d	
Ground Speed	GsXI-GPS.1	GsXI.1	GsGPS.1	GsXGPS.1	GSXref	
	GsXI-GPS.2	GsXI.2	GsGPS.2	GsXGPS.2	GSYref	
	GsYI-GPS.1	GsXI.3		GsYGPS.1	GSZref	
	GsYI-GPS.2	GsYI.1	GsZI.1	GsYGPS.2		
	GsZI-GPS.1	GsYI.2	GsZI.2	GsZGPS.1		
	GsZI-GPS.2	GsYI.3	GsZI.3	GsZGPS.2		
Lat/Lon	LatGPS.1	LatI.1	LonGPS.1	LonI.1	LATref	
	LatGPS.2	LatI.2	LonGPS.2	LonI.2	LONref	
	LatGPS.3		LonGPS.3			
Pressure	PDALPHA.1	PQALPHA.1	PQM.1	PSM.1	PDALPHAref	PQMref
	PDALPHA.2	PQALPHA.2	PQM.2	PSM.2	PDBETAref	PQ.c
	PDBETA.1	PQBETA.1	PQM.11	PSM.11	PQALPHAref	PSMref
	PDBETA.2	PQBETA.2			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	TTM.11	TDM.1		TD.c	TTMref
	TTM.2	TTM.13	TDM.2		TDMref	TA.d
	TTM.3	TTM.4	TDM.11			
Miscellaneous (must check)					UWZ.d	WS.d
					DPJ_WSZ	WD.d
					HUM	

## Mission Documents:

<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"/>	Miscellaneous FD notes

## NOTES:

AltRa.1 oscillation greater than 100 meters  
 TDM.2 too dry near surface but much better at ops alt.