

N49RF ERROR SUMMARY  
20200823N1

Flight ID: 20200823N1

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.2
Differential Sideslip Pressure Probe	PDBETA.2
Dynamic Attack Pressure Probe	PQALPHA.2
Dynamic Sideslip Pressure Probe	PQBETA.2

Flight Directory acdata/2020/MET/20200823N1

Local Met Data	Takeoff KLAL (0527Z)	Landing KLAL (1122Z)
Dynamic Corrections		Yes
AttackAngleIntercept		6.4652
AttackAngleSlope		7.59375
SlipAngleIntercept		0.925
SlipAngleSlope		6.56381
AttackAngleIntercept2		5.05753
AttackAngleSlope2	5.52397	
SlipAngleIntercept2		0.931
SlipAngleSlope2		6.57562

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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.

WS.d has two spikes between 07:03:38 to 07:03:50 and 09:28:28 to 09:28:42  
PQBETA.1 showing opposite trend than PQBETA.2 at 06:27 to 06:59  
TTM.3 constant oscillations of 1 to 2 deg C for duration of flight and unrepresentative  
TTM.4 large spike at 08:31  
TDM.1 unrepresentative for duration of flight  
TDM.2 appears to become frozen around 08:30 mark and recovers on descent; also impacting TD.c and Humidities

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	0	0	0
Test sondes	0	0	0
AXBTS	0	0	0

AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Henning / Kalen  
Phone #: 863-500-3962

ACAT-4 Version = 7.3

**U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N49RF Manifest**

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20200823N1	FLT #:		AC:	Waddington	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	0530z	CP(s):	Norman		A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:	1330z		Varwig				<b>29</b>	<b>2</b>	<b>29</b>
Block Time		Flight Time		NAV:		ASOS Takeoff		BTs			
In:	<b>1127</b>	Land:	<b>1122</b>	FE(s):				Good	Bad	Sent	
Out:	<b>0520</b>	T/O:	<b>0527</b>	FD(s):	Henning	A/C Land					
Total:	<b>6.1</b>	Total:	<b>5.9</b>		SSA:						Miller
Sponsoring Org:	NHC			SEB:		Storm Number ID:		AL142020			
Program:	PHS					(ie: AL072012)					
Purpose:	TS MARCO			MX:		TCPOD/WSPOD Mission		NOAA9 0714 MARCO			
						(ie: NOAA2 2418A SANDY)					
AS REQUIRED BY ORM				Y	N	REMARKS		Fix Number	Obs Number	Fix Time	SLP
VOLCANIC ASH					x						
SCIENCE MISSION WITHIN BDY LAYER											
LACK OF PRECIPITATION											
RELATIVE HUMIDITY ≥ 80%											
LARGE AIR-SEA TEMP GRADIENT											
HIGH SURFACE WINDS											
LONG FETCH / DURATION OF SFC WND											
SEA SALT ACCRETION FORECAST											
SEA SALT ACCRETION OBSERVED											
								Pennies:			

\*Highlighted items must be completed before departure.

Remarks:


## G-IV QC Checklist

<b>Flight ID:</b>	<b>20200823N1</b>
<b>Flight Director(s)</b>	<b>Henning / Kalen</b>

<b>UWZ.d mean:</b>	<b>0.16</b>
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Pressure Comparison		
	T/O	Land
<b>Aircraft</b>	<b>1011.6</b>	<b>1011.3</b>
<b>Tower</b>	<b>1011.9</b>	<b>1010.9</b>

	Raw 1Hz Mean File Parameters					C File Parameters	
<input checked="" type="checkbox"/> Accelerometer	<input checked="" type="checkbox"/> AccAXI.1	<input checked="" type="checkbox"/> AccAYI.1	<input checked="" type="checkbox"/> AccAZI.1			<input checked="" type="checkbox"/> AccZref	
	<input checked="" type="checkbox"/> AccAXI.2	<input checked="" type="checkbox"/> AccAYI.2	<input checked="" type="checkbox"/> AccAZI.2				
	<input checked="" type="checkbox"/> AccAXI.3	<input checked="" type="checkbox"/> AccAYI.3	<input checked="" type="checkbox"/> AccAZI.3				
<input checked="" type="checkbox"/> Altitude	<input checked="" type="checkbox"/> AltGPS.1	<input checked="" type="checkbox"/> AltI.1	<input checked="" type="checkbox"/> AltPaADDU.1	<input checked="" type="checkbox"/> AltBCADDU.1	<input checked="" type="checkbox"/> AltBCADDU.2	<input checked="" type="checkbox"/> ALTref	
	<input checked="" type="checkbox"/> AltGPS.2	<input checked="" type="checkbox"/> AltI.2	<input checked="" type="checkbox"/> AltPaADDU.2			<input checked="" type="checkbox"/> ALTPA.d	
	<input checked="" type="checkbox"/> AltGPS.3	<input checked="" type="checkbox"/> AltI.3	<input checked="" type="checkbox"/> AltRA.1			<input checked="" type="checkbox"/> ALTGA.d	
<input checked="" type="checkbox"/> Ground Speed	<input checked="" type="checkbox"/> GsXI.1	<input checked="" type="checkbox"/> GsYI.1	<input checked="" type="checkbox"/> GsZI.1	<input checked="" type="checkbox"/> GsGPS.1	<input checked="" type="checkbox"/> GsGPS.2	<input checked="" type="checkbox"/> GSXref	
	<input checked="" type="checkbox"/> GsXI.2	<input checked="" type="checkbox"/> GsYI.2	<input checked="" type="checkbox"/> GsZI.2	<input checked="" type="checkbox"/> GsGPS.2		<input checked="" type="checkbox"/> GSYref	
	<input checked="" type="checkbox"/> GsXI.3	<input checked="" type="checkbox"/> GsYI.3	<input checked="" type="checkbox"/> GsZI.3	<input type="checkbox"/> GsGPS.3		<input checked="" type="checkbox"/> GSZref	
	<input checked="" type="checkbox"/> GsXGPS.1	<input checked="" type="checkbox"/> GsYGPS.1	<input checked="" type="checkbox"/> GsZGPS.1				
	<input checked="" type="checkbox"/> GsXGPS.2	<input checked="" type="checkbox"/> GsYGPS.2	<input checked="" type="checkbox"/> GsZGPS.2				
	<input type="checkbox"/> GsXGPS.3	<input type="checkbox"/> GsYGPS.3	<input type="checkbox"/> GsZGPS.3				
<input checked="" type="checkbox"/> Lat / Lon	<input checked="" type="checkbox"/> LatGPS.1	<input checked="" type="checkbox"/> LatI.1	<input checked="" type="checkbox"/> LonGPS.1	<input checked="" type="checkbox"/> LonI.1		<input checked="" type="checkbox"/> LATref	
	<input checked="" type="checkbox"/> LatGPS.2	<input checked="" type="checkbox"/> LatI.2	<input checked="" type="checkbox"/> LonGPS.2	<input checked="" type="checkbox"/> LonI.2		<input checked="" type="checkbox"/> LONref	
	<input checked="" type="checkbox"/> LatGPS.3		<input checked="" type="checkbox"/> LonGPS.3				
<input checked="" type="checkbox"/> Pressure	<input checked="" type="checkbox"/> PDALPHA.1	<input checked="" type="checkbox"/> PQALPHA.1	<input checked="" type="checkbox"/> PQM.1	<input checked="" type="checkbox"/> PSM.1		<input checked="" type="checkbox"/> PDLAPHaref	<input checked="" type="checkbox"/> PQMref
	<input checked="" type="checkbox"/> PDALPHA.2	<input checked="" type="checkbox"/> PQALPHA.2	<input checked="" type="checkbox"/> PQM.2	<input checked="" type="checkbox"/> PSM.2		<input checked="" type="checkbox"/> PDBETAref	<input checked="" type="checkbox"/> PQ.c
	<input checked="" type="checkbox"/> PDBETA.1	<input checked="" type="checkbox"/> PQBETA.1				<input checked="" type="checkbox"/> PQALPHaref	<input checked="" type="checkbox"/> PSMref
	<input checked="" type="checkbox"/> PDBETA.2	<input checked="" type="checkbox"/> PQBETA.2				<input checked="" type="checkbox"/> PQBETAref	<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"/> IAS.d	<input checked="" type="checkbox"/> TAS.d
<input checked="" type="checkbox"/> Pitch / Roll	<input checked="" type="checkbox"/> PitchI.1	<input checked="" type="checkbox"/> PitchRateI.1	<input checked="" type="checkbox"/> RollI.1	<input checked="" type="checkbox"/> RollRateI.1		<input checked="" type="checkbox"/> PITCHref	
	<input checked="" type="checkbox"/> PitchI.2	<input checked="" type="checkbox"/> PitchRateI.2	<input checked="" type="checkbox"/> RollI.2	<input checked="" type="checkbox"/> RollRateI.2		<input checked="" type="checkbox"/> ROLLref	
	<input checked="" type="checkbox"/> PitchI.3	<input checked="" type="checkbox"/> PitchRateI.3	<input checked="" type="checkbox"/> RollI.3	<input checked="" type="checkbox"/> RollRateI.3			
<input checked="" type="checkbox"/> Temp / Dewpt	<input checked="" type="checkbox"/> TTM.1	<input checked="" type="checkbox"/> TTM.4	<input checked="" type="checkbox"/> TDM.1			<input checked="" type="checkbox"/> TD.c	<input checked="" type="checkbox"/> TTMref
	<input type="checkbox"/> TTM.2		<input checked="" type="checkbox"/> TDM.2			<input checked="" type="checkbox"/> TDMref	<input checked="" type="checkbox"/> TA.d
	<input checked="" type="checkbox"/> TTM.3						
<input checked="" type="checkbox"/> Misc. (Must check)						<input checked="" type="checkbox"/> UWZ.d	<input checked="" type="checkbox"/> WS.d
						<input checked="" type="checkbox"/> DPJ_WSZ	<input checked="" type="checkbox"/> WD.d
						<input checked="" type="checkbox"/> HUM	

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 checked="" type="checkbox"/>	Miscellaneous FD Notes

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

NOTES:
WS.d has two spikes between 07:03:38 to 07:03:50 and 09:28:28 to 09:28:42
PQBETA.1 showing opposite trend than PQBETA.2 at 06:27 to 06:59
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AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20200823N1

ASPEN Operator/Flight Director(s): Kalen / Heuning

Mission ID: NOAA9 0714A

Storm Name/Track: Marco

PG     of    

Sonde #	Ob #	Launch Time HHMMSS (Z)	Sonde ID (min last 5)	Ch # used	Lat (°N)	Lon (°E)	Prominent Wx Cond.	SFC Prs (mb)	Comments / Issues / QC / ASPEN Edits	KWBC #	Sonde Issues?
1	-	054621	361099	1	-	-	-	-	Fast Fall	-	Y
2	1	054740	10576	2	28.65	-83.85		1014.3	11522	230617	N
3	2	055839	51116	3	27.78	-84.71		1013.7	11529	230620	N
4	3	061354	51111	4	26.29	-85.42		1011.7	09020	230634	N
5	4	062324	10550	1	26.71	-86.56		1012.0	10518	230647	N
6	5	063340	20772	2	26.77	-87.86		1011.5	10016	230657	N
7	6	064515	51135	3	27.83	-88.89		1011.4	11023	230706	N
8	7	065626	10040	4	26.93	-89.73		1009.6	12016	230720	N
9	8	070439	51125	1	26.13	-89.17		1010.0	11514	230726	N
10	9	071556	20829	2	25.08	-89.89		1009.6	09518 / Ignored Winds	230737	N
11	10	072803	10569	3	23.75	-90.19		1009.0	09515	230746	N
12	11	073851	10259	4	22.60	-89.80		1008.5	06514 / Ignore FLW	230758	N
13	12	075026	10547	1	22.86	-88.58		1005.7	06010 / Ignore FLW	230807	N
14	13	075811	20745	2	23.81	-88.67		1007.7	07513	230819	N
15	14	080652	20330	3	24.85	-88.22		1008.6	06317	230827	N
16	15	081503	20771	4	25.26	-87.18		1007.1	09523	230835	N
17	16	082357	10571	1	24.82	-86.13		1009.6	09026	230843	N
18	17	083359	40569	2	23.84	-85.47		1008.9	09025 / Ignore FLW	230859	N
19	18	084449	20326	3	22.73	-86.16		1008.0	19016	230908	N
20	19	085308	21190	4	22.20	-87.03		1008.1	20520 / Ignore FLW	230918	N
21	20	090403	21213	1	21.13	-86.27		1007.9	19517 / Ignore FLW	230925	N
22	-	091328	20877	2	-	-		-	FAST FALL	-	Y
23	21	091443	21216	3	19.89	-86.73		1007.9	18523 / Ignore FLW	230934	N
24	22	092700	10574	4	18.41	-86.73		1008.7	16015 / Ignore FLW	230947	N
25	23	093525	10568	1	18.40	-85.76		1009.3	14526	230955	N
26	24	094943	10599	2	20.02	-85.46		1008.7	16018	231009	N
27	25	100207	21201	3	21.47	-85.45		1008.7	12018	231021	N
28	26	101208	231167	4	22.51	-84.92		1009.6	14518 / Ignore FLW	231035	N
29	27	102409	10548	1	23.82	-84.22		1010.5	13002 / Ignore FLW	231046	N
30	28	103520	10566	2	25.15	-84.43		1010.6	13027	231056	N
31	29	104926	20761	3	26.54	-83.21		1013.0	LAST REPORT / 10523	231108	N
32											
33											
34											
35											
36											
37											
38											

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v

ASPEN Operator will ensure this form is delivered to the AOC Flight Director to be archived

COMMENTS:

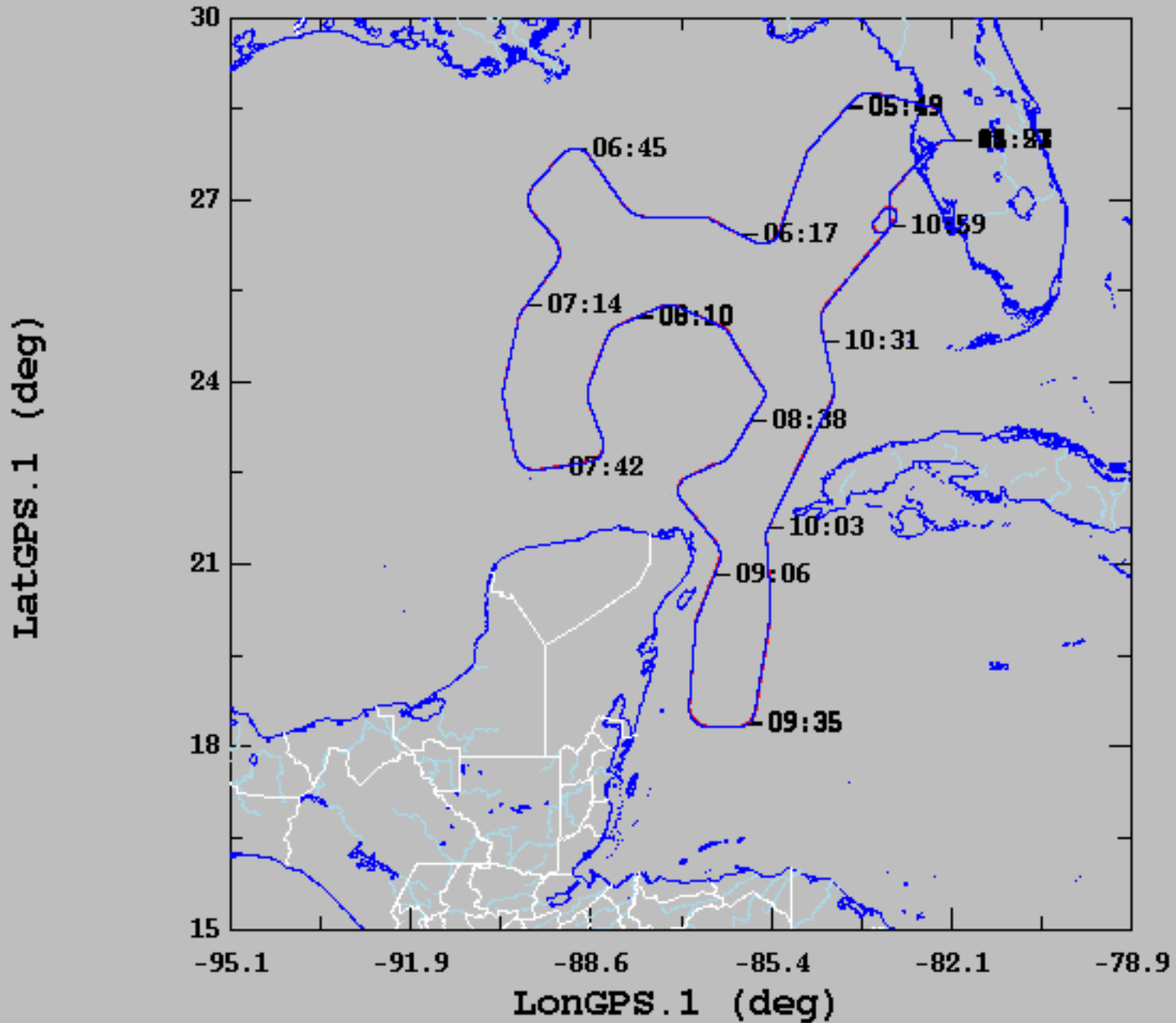
Obs  
Xmitted

Obs  
Missed

# of sondes  
launched

# of bad  
sondes

2020-08-23, 04:53:10-11:27:45



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	24.79	2.93	18.31	28.76
— LongGPS.1 (deg), 1 s/sec	-85.80	2.48	-90.19	-82.01
— LatI.1 (deg), 1 s/sec	24.80	2.92	18.33	28.76
— LonI.1 (deg), 1 s/sec	-85.79	2.48	-90.20	-82.01