

N49RF ERROR SUMMARY
Hurricane Laura

Flight ID: 20200825N1

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/20200825N1

Local Met Data	Takeoff KLAL (0535Z)	Landing KLAL (1242Z)
Dynamic Corrections		Yes
AttackAngleIntercept		3.97801
AttackAngleSlope		3.86172
SlipAngleIntercept		1.258
SlipAngleSlope		6.69941
AttackAngleIntercept2		5.05753
AttackAngleSlope2		5.52397
SlipAngleIntercept2		0.931
SlipAngleSlope2		6.57562

Notes:

There were no edits made in the measured parameters used to calculate meteorological and navigational parameters.
AltRA.1 has multiple significant dropouts and should not be used as absolute altitude.
PQBeta.1 and PQBeta.2 are unrepresentative with unusual drop outs.
When examined at high resolution, data from the three inertials (IRUs) shows "stairstepping" for all parameters w intervals generally less than 15 seconds
TDM.1 & TDM.2 were unrepresentative for the cruise portion of the mission above 41K and also for intervals at low altitudes.
Consider all relative humidity values to be considered suspect.
TTM.3 has a small amplitude (magnitude 0.2 - 0.3 deg C) unnatural oscillation with a period of roughly 30 seconds.
TTM.1 was used for calculation of Ambient Temperature (TA) and other derived parameters.
Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	32	32	32
Test sondes	0	0	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 = 7.3

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION					
FLT ID:	20200825N1	FLT #:		AC:	Waddington	Scientists:	Pressure		Dropsondes			
From:	KLAL	ETD:	0530z	CP(s):	Norman		A/C Takeoff		Good	Bad	Sent	
To:	KLAL	ETA:	1330z		Varwig				32	0	32	
Block Time		Flight Time		NAV:		ASOS Takeoff		BTs				
In:	1247	Land:	1242	FE(s):				Good	Bad	Sent		
Out:	0524	T/O:	0535	FD(s):	Henning	A/C Land						
Total:	7.4	Total:	7.1		SSA:						Miller	ASOS Land
Sponsoring Org:	NHC			SEB:		Storm Number ID:		AL132020				
Program:	PHS						(ie: AL072012)					
Purpose:	Hurricane LAURA			MX:		TCPOD/WSPOD Mission		NOAA9 1513A LAURA				
						(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

Overall Assessment	Minor instrument issue(s) - minimal mission impact.
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Flight ID:	20200825N1
Flight Director(s):	Henning / Kalen
Mission:	Tasked/Operational
UWZ.d mean:	0.22

Pressure Comparison		
	T/O	Land
Aircraft	1011.5	1011.3
Tower	1010.9	1011.3

	Raw 1Hz Mean File Parameters				C File Parameters	
<input 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"/> AccZI.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"/> AccZI.2		
	<input checked="" type="checkbox"/> AccAXI.3	<input checked="" type="checkbox"/> AccAYI.3	<input checked="" type="checkbox"/> AccAZI.3	<input checked="" type="checkbox"/> AccZI.3		
<input 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"/> ALTref	
	<input checked="" type="checkbox"/> AltGPS.2	<input checked="" type="checkbox"/> AltI.2	<input checked="" type="checkbox"/> AltPaADDU.2	<input checked="" type="checkbox"/> AltBCADDU.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 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"/> 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 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"/> 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"/> LatI.3	<input checked="" type="checkbox"/> LonGPS.3	<input checked="" type="checkbox"/> LonI.3		
<input 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"/> PDALPHAref	<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 type="checkbox"/> Air Speed	<input checked="" type="checkbox"/> CasADDU.1	<input checked="" type="checkbox"/> CasADDU.2	<input checked="" type="checkbox"/> TasADDU.1	<input checked="" type="checkbox"/> TasADDU.2	<input checked="" type="checkbox"/> IAS.d	<input checked="" type="checkbox"/> TAS.d
<input type="checkbox"/> Pitch / Roll	<input checked="" type="checkbox"/> PitchI.1	<input checked="" type="checkbox"/> PitchRatel.1	<input checked="" type="checkbox"/> RollI.1	<input checked="" type="checkbox"/> RollRatel.1	<input checked="" type="checkbox"/> PITCHref	
	<input checked="" type="checkbox"/> PitchI.2	<input checked="" type="checkbox"/> PitchRatel.2	<input checked="" type="checkbox"/> RollI.2	<input checked="" type="checkbox"/> RollRatel.2	<input checked="" type="checkbox"/> ROLLref	
	<input checked="" type="checkbox"/> PitchI.3	<input checked="" type="checkbox"/> PitchRatel.3	<input checked="" type="checkbox"/> RollI.3	<input checked="" type="checkbox"/> RollRatel.3		
<input 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 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:
<p>AltRA.1 has multiple significant dropouts and should not be used as absolute altitude.</p> <p>PQBeta.1 and PQBeta.2 are unrepresentative with unusual drop outs.</p> <p>When examined at high resolution, data from the three inertials (IRUs) shows "stairstepping" for all parameters intervals (generally less than 15 seconds).</p> <p>TDM.1 & TDM.2 were unrepresentative for the cruise portion of the mission above 41K and also for intervals at low altitudes. Consider all relative humidity values to be considered suspect.</p> <p>TTM.3 has a small amplitude (magnitude 0.2 - 0.3 deg C) unnatural oscillation with a period of roughly 30 seconds.</p> <p>TTM.1 was used for calculation of Ambient Temperature (TA) and other derived parameters.</p> <p>There were no edits made in the measured parameters used to calculate meteorological and navigational parameters.</p> <p>Takeoff/Landing data: Data during landing and takeoff are potentially suspect</p> <p>It is recommended that ground data not be used for scientific analysis.</p>

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20200828N1

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

Mission ID: NOAA9 1513A

Storm Name/Track: TS Laura

PG of

Sonde #	Ob #	Launch Time HMMSS (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	1	060316	21113	1	26.03	-84.16		1010.0	11030 / Ignore FLW	0630	N
2	2	061235	30692	2	26.63	-85.21		1011.2	12026	0635	N
3	3	063200	30440	3	28.92	-84.19		1013.6	11025	0653	N
4	4	064504	30407	4	28.99	-86.01		1013.0	10519 / Ignore FLW	0709	N
5	5	065913	30833	1	28.99	-88.03		1011.5	11517 / Ignore FLW	0720	N
6	6	071322	21112	2	28.94	-90.02		1009.5	14020 / Ignore FLW	0738	N
7	7	072755	21134	3	28.78	-91.94		1010.4	01517	0749	N
8	8	074331	31130	4	26.98	-92.00		1008.2	02513	0803	N
9	9	075945	20777	1	25.09	-91.88		1008.7	04508	0826	N
10	10	081342	30488	2	25.01	-90.09		1008.3	03011 / Ignore FLW	0834	N
11	11	082858	30496	3	26.92	-89.86		1008.7	16008 / Ignore FLW	0854	N
12	12	084334	20881	4	26.99	-87.77		1008.4	11515	0907	N
13	13	085303	21211	1	26.49	-86.90		1009.1	10037	0918	N
14	14	090216	21106	2	25.92	-87.87		1008.6	10015	0936	N
15	15	091318	30404	3	24.88	-88.69		1006.5	06015 / Ignore FLW	0936	N
16	16	092530	31161	4	23.47	-88.97		1006.6	34512 / Ignore FLW	0948	N
17	17	093558	30391	1	22.29	-88.65		1006.6	34509	0959	N
18	18	094336	30489	2	21.79	-87.85		1005.4	24513 / Ignore FLW	1004	N
19	19	095710	30406	3	21.10	-86.81		1004.9	21030	1017	N
20	20	100554	30494	4	20.83	-85.24		1006.6	17030	1025	N
21	21	101628	40034	1	21.30	-84.19		1008.2	18020 / Ignore FLW	1037	N
22	22	102600	21217	2	22.22	-84.82		1005.4	17050 / Ignore FLW	1047	N
23	23	103544	21114	3	21.02	-86.06		1008.7	22048 / Ignore FLW	1058	N
24	24	104426	30497	4	22.57	-87.05		1002.1	01028	1106	N
25	25	105341	60707	1	23.62	-87.47		1003.6	01521 / Ignore FLW	1117	N
26	26	110303	30495	2	24.66	-87.02		1005.1	05524 / Ignore FLW	1121	N
27	27	111210	20748	3	25.05	-85.92		1005.6	10537	1131	N
28	28	112040	60732	4	24.63	-84.94		1006.3	12033 / Ignore FLW	1141	N
29	29	113000	21206	1	23.65	-84.43		1006.5	14540 / Ignore FLW	1155	N
30	30	114029	60721	2	23.70	-83.13		1009.5	13528 / Ignore FLW	1201	N
31	31	115049	60520	3	24.92	-83.26		1010.3	13530 / Ignore FLW	1209	N
32	32	120220	51146	4	26.12	-82.56		1012.5	12025 / FLOAT / FLW / LAST REP	1221	Y
33											
34											
35											
36											
37											
38											

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

2020-08-25, 04:54:36-12:47:53

