

N49RF ERROR SUMMARY
20210819N1

Flight ID: 20210819N1

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/2021/MET/20210819N1

Local Met Data	Takeoff KLAL (1749Z)	Landing KLAL (0218Z)
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

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.

.1 and .2 GPS parameters data "stair steps"

PDBETA.1 & PDBETA.2 unrepresentative due to spare radome

PQBETA.1 & PQBETA.2 unrepresentative due to spare radome

PQM.1 has a large plateau between 22:26 and 23:42; all other data is representative

All flight level wind speed and direction suspected errors due to spare radome

TTM.3 oscillates

TDM.1 unrepresentative

Expendable Type	# deployed	# good	# transmitted
Dropsondes	41	37	37
Test sondes	0	0	0

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

Flight Director: Kalen / Henning
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:	20210819N1	FLT #:		AC:	Waddington	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:		CP(s):	De Triquet		A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:		NAV:					37	4	37
Block Time		Flight Time		FE(s):			ASOS Takeoff		BTs		
In:	0225Z	Land:	0218Z	FD(s):	Henning		A/C Land		Good	Bad	Sent
Out:	1720Z	T/O:	1750Z	SSA:	Miller	Visitors:	ASOS Land				
Total:	9.1	Total:	8.5	AVAPS:	Patel		Storm Number ID:				
Sponsoring Org:	NWS			SEB:			(ie: AL072012)				
Program:				MX:			TCPOD/WSPOD Mission		WA07A GRACE		
Purpose:	Hurricane Research						(ie: NOAA2 2418A SANDY)				
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					x		1				
SCIENCE MISSION WITHIN BDRY LAYER					x						
LACK OF PRECIPITATION					x		2				
RELATIVE HUMIDITY ≥ 80%					x						
LARGE AIR-SEA TEMP GRADIENT					x		3				
HIGH SURFACE WINDS					x						
LONG FETCH / DURATION OF SFC WND					x		4				
SEA SALT ACCRETION FORECAST					x						
SEA SALT ACCRETION OBSERVED					x		Pennies:				

*Highlighted items must be completed before departure.

Remarks:

G-IV QC Checklist

Flight ID:	20210819N1
Flight Director(s)	Kalen / Henning

UWZ.d mean:	-0.01
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Pressure Comparison		
	T/O	Land
Aircraft	1015.8	1013.3
Tower	1016.5	1011.8

	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"/> 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 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"/> 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"/> 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:

.1 and .2 GPS parameters data "stair steps"
PDBETA.1 & PDBETA.2 unrepresentative due to spare radome
PQBETA.1 & PQBETA.2 unrepresentative due to spare radome
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TDM.1 unrepresentative

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20210819N1

ASPEN Operator/Flight Director(s): KALEN / HENNING

Mission ID: 0208A

Storm Name/Track: HENRI

PG 1 of 2

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	1	185614	30209	1	28.3	74.4	BKN	1014.3	<u>SFC WIND</u> 325/15	1917	✓✓
2	2	190714	30182	2	27.2	73.5	BKN	1015.1	285/7	1929	✓✓
3				3			NO LAUNCH DETECT				
4	3	191853	31266	4	26.7	72.2	UCST	1015.1	245/13	1938	✓✓
5	4	192829	31775	1	26.7	71.0	CDO	1015.6	215/24	1950	✓✓
6	5	193828	31159	2	27.3	69.8	CDO	1015.6	195/13	2007	✓✓
7	6	194949	31202	3	28.3	69.0	BKN	1015.6	185/25	2011	✓✓
8				4			FAST FALL				
9	7	200709	30184	1	28.6	66.7	SCT	1017.7	165/14	2028	✓✓
10	8	201606	31261	2	28.7	65.5	SCT	1018.9	140/9	2040	✓✓
11	9	202924	40116	3	30.1	65.7	FEW	1018.6	165/15	2054	✓✓
12	10	203807	20788	4	30.1	66.9	FEW	1018.1	115/11	2059	✓✓
13	11	205054	31203	1	29.7	68.6	FEW	1014.9	160/25	2112	✓✓
14				2			SET FAST FALL				
15	12	210336	31079	3	31.0	68.7	SCT	1016.3	140/19	2122	✓✓
16	13	211740	30207	4	31.8	67.1	FEW	1017.7	145/18	2141	✓✓
17	14	213017	31070	1	32.5	65.7	FEW	1018.6	140/9	2151	✓✓
18	15	214232	31816	2	33.8	66.3	FEW	1018.7	145/15	2202	✓✓
19	16	215325	40451	3	34.9	65.7	FEW	1018.6	190/13	2226	✓✓
20				4			NO LAUNCH DETECT				
21	17	220607	21014	1	34.9	67.6	FEW	1018.8	170/14	2228	✓✓
22	18	221754	40013	2	33.5	68.4	FEW	1018.0	165/16	2254	✓✓
23	19	223258	30668	3	32.1	69.9	FEW	1015.4	125/25	2256	✓✓
24	20	224204	40398	4	32.6	71.0	FEW	1015.6	115/20	2304	✓✓
25	21	225815	31822	1	34.4	70.9	FEW	1016.6	125/18	2319	✓✓
26	22	230636	31648	2	34.4	72.0	FEW	1015.0	130/11	2325	✓✓
27	23	232208	31139	3	32.6	72.5	SCT	1014.6	085/17	2342	✓✓
28	24	233004	31647	4	32.4	73.5	SCT	1014.6	095/14	2353	✓✓
29	25	234253	21012	1	31.0	74.0	SCT	1012.3	040/19	0002	✓✓
30	26	235215	20016	2	30.7	72.8	SCT	1009.4	040/27	0012	✓✓
31	27	000045	31050	3	31.1	71.7	SCT	1011.8	095/38	0020	✓✓
32	28	000904	20018	4	30.6	70.6	CDO	1012.7	140/27	0029	✓✓
33	29	001812	30052	1	29.6	70.2	CDO	1013.4	140/31	0041	✓✓
34	30	002728	30050	2	28.6	70.7	CDO	BAD TERMINATION NO HEIGHTS		0049	✓
35	31	003836	40402	3	27.9	70.7	CDO	1014.2	195/24	0059	✓✓
36	32	004859	30063	4	28.3	73.1	CDO	1011.2	275/25	0109	✓✓
37	33	010011	31072	1	29.5	73.4	—	1007.6	330/27	0120	✓✓
38	34	010955	30055	2	29.6	74.7	—	1012.9	345/21	0130	✓✓

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

COMMENTS:

Obs Xmitted 37 Obs Missed 0 # of sondes launched 41 # of bad sondes 4

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20210819N1

ASPEN Operator/Flight Director(s): KALEN / HENNING

Mission ID: 0208A

Storm Name/Track: HENRI

PG 2 of 2

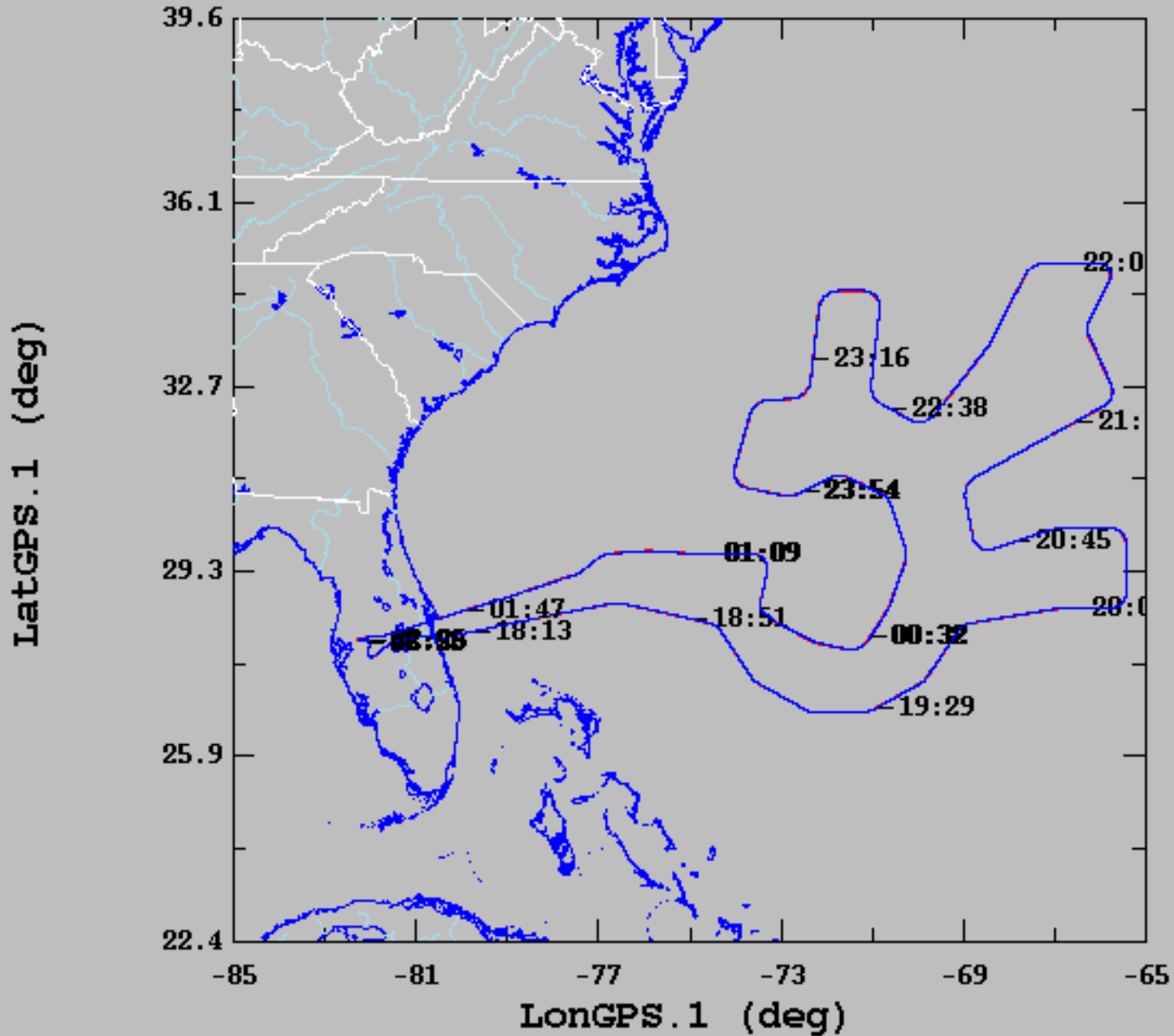
Sonde #	Ob #	Launch Time HHMMSS (Z)	Sonde ID (min last 5)	Ch # used	Lat (°N)	Lon (°E)	Prominent Wx Cond.	SFC Prs (mb)	Comments / Issues / QC / ASPEN Edits	KWBC #	Sonde Issues?
1	35	011824	31138	3	29.7	75.9	—	1014.0	<u>SURFACE WIND</u> 345/15	0138	✓
2	36	013000	21028	4	29.3	77.4	—	1016.2	005/24	0149	✓
3	37	014120	40461	1	28.8	80.0	—	1016.2	350/4	0201	✓
4											
5											
6											
7											
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COMMENTS:

Obs Xmitted 37 Obs Missed Ø # of sondes launched 41 # of bad sondes 4

2021-08-19, 16:58:13-26:25:31



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	29.92	2.28	26.68	35.00
— LongGPS.1 (deg), 1 s/sec	-73.23	5.37	-82.24	-65.40
— LatI.1 (deg), 1 s/sec	29.92	2.27	26.68	35.00
— LonI.1 (deg), 1 s/sec	-73.23	5.37	-82.24	-65.41