

N49RF ERROR SUMMARY
20201027N1

Flight ID: 20201027N1

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/20201027N1

Local Met Data	Takeoff KLAL (0533Z)	Landing KLAL (1224Z)
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.

Expendable Type	# deployed	# good	# transmitted
Dropsondes	28	28	28
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Hathaway / Henning
Phone #: 863-500-3911

ACAT-4 Version = 7.3

G-IV QC Checklist

Overall Assessment

Minor instrument issue(s) - minimal mission impact.

Flight ID:	20201027N1	Pressure Comparison		
Flight Director(s):	Hathaway / Henning	T/O	Land	
Mission:	Non-tasked Science Collection/Research	Aircraft	1013.7	1013.6
UWZ.d mean:	0.14	Tower	1012.9	1014.3

	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	X 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	X PQM.1	<input checked="" type="checkbox"/> PSM.1	<input checked="" type="checkbox"/> PDALPHAref
	<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"/> PQMref
	<input checked="" type="checkbox"/> PDBETA.1	X PQBETA.1			<input checked="" type="checkbox"/> PDBETAref
	<input checked="" type="checkbox"/> PDBETA.2	<input checked="" type="checkbox"/> PQBETA.2			<input checked="" type="checkbox"/> PQ.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"/> PQALPHAref
<input 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"/> PSMref
	<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"/> PQBETAref
	<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"/> PS.c
<input type="checkbox"/> Temp / Dewpt	<input checked="" type="checkbox"/> TTM.1	<input checked="" type="checkbox"/> TTM.4	X TDM.1		<input checked="" type="checkbox"/> IAS.d
	<input checked="" type="checkbox"/> TTM.2		X TDM.2		<input checked="" type="checkbox"/> TAS.d
	<input checked="" type="checkbox"/> TTM.3				
	TDM are separated by 20				
<input type="checkbox"/> Misc. (Must check)					

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)	X

NOTES:
AltRA.1 has multiple significant dropouts and should not be used as absolute altitude.
Occasional spikes in multiple sensors in CDO due to turbulence.
PQBeta.1 is unrepresentative with unusual drop outs and spikes.
PQM.1 becomes unrepresentative around hour three in flight. PQM.2 has been used as reference.
When examined at high resolution, data from the three inertials shows "stairstepping" for all parameters for brief 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.
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.

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION					
FLT ID:	20201027N1	FLT #:		AC:	Waddington Varwig	Scientists:	Pressure		Dropsondes ~33			
From:	KLAL	ETD:	0530Z	CP(s):	Varwig		A/C Takeoff		Good	Bad	Sent	
To:	KLAL	ETA:	1230Z	Nav(s):			ASOS Takeoff		28	0	28	
Block Time		Flight Time		FE(s)			BTs					
In:	1230Z	Land:	1224Z	FD(s):	Mathaway Henning	Visitors:	A/C Land		Good	Bad	Sent	
Out:	0525Z	T/O:	0535Z	SEB:			ASOS Land		0	0	0	
Total:	7.1	Total:	6.9	SSA:	Miller		Storm Number ID: (ie: AL072012)	AL 28 2020				
Sponsoring Org:	NHC			AVAPS:	Underwood		TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	NOAA9 1128A Zeta				
Program:	Hurricane 2020-PHS							OBSERVATIONS				
Purpose:	Surveillance Zeta							Fix Number	Obs Number	Fix Time	SLP	
AS REQUIRED BY ORM				Y	N	REMARKS						
VOLCANIC ASH												
SCIENCE MISSION WITHIN BDRY 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												
Gmax:	Gmin:			*Highlighted items must be completed before departure.								
Remarks:												

(DISCARD FL WIND)	Mission ID:	1128A ZETA	ASPEN Operator/Flight Director(s):	HENNINGS / HAIHAWAHY							
		Storm Name/Track:	Hurricane Zeta Syn Surv	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	1	0553	40729	1	27.9	84.0		1014.9	115/20	0614	✓
2	2	0609	20523	2	28.0	86.0		1014.5	110/16	0632	✓
3	3	0625	11594	3	28.0	88.0		1013.9	090/15	0646	✓
4	4	0641	20305	4	28.0	90.0		1012.9	070/15	0702	✓
5	5	0657	70654	1	28.0	91.9		1013.3	065/21	0730	✓
6	6	0714	20204	2	26.0	91.9		1010.9	070/21	0735	✓
7	7	0727	50210	3	26.0	90.0		1011.4	085/17	0753	✓
8	8	0740	20539	4	25.9	88.3		1011.2	100/13	0801	✓
9	9	0753	20556	1	24.8	89.4		1009.5	085/15	0812	✓
10	10	0804	20201	2	24.2	90.6		1009.1	065/15	0832	✓
11	11	0815	40053	3	23.2	91.4		1008.0	035/12	0836	✓
12	12	0826	11573	4	22.0	91.8		1007.3	055/15	0851	✓
13	13	0838	30731	1	22.7	93.1		1007.5	065/13	0904	✓
14	14	0850	10580	2	21.4	93.2		1007.5	075/13	0910	✓
15	15	0903	10496	3	19.9	93.2		1007.1	330/12	0930	✓
16	16	0914	20573	4	19.1	92.2		1007.1	280/17	0935	✓
17	17	0928	20248	1	20.6	91.4		1005.1	030/14	0949	✓
18	18	0940	20249	2	21.8	90.5		1004.9	030/23	1001	✓
19	19	0951	20596	3	23.1	90.1		1006.4	050/25	1034	✓
20	20	1002	40052	4	23.7	88.8		1008.8	115/26	1037	✓
21	21	1019	20595	1	23.8	86.7		1009.1	110/23	1049	✓
22	22	1026	40386	2	23.4	85.8		1009.1	105/26	1051	✓
23	23	1036	50207	3	22.6	85.0	HEIGHTS MISSING	N/A	1108	✓	
24	24	1058	70542	4	24.3	86.8		1010.0	090/20	1132	✓
25	25	1107	50057	1	24.8	87.8		1009.7	100/23	1143	✓
26	26	1123	20570	2	25.8	86.0		1012.0	120/21	1146	✓
27	27	1136	11570	3	24.6	85.2		1011.5	120/26	1206	✓
28	28	1154	50209	4	26.1	83.3		1014.1	115/19	1216	✓
29											
30											
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37											
38											

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

COMMENTS:

Obs Xmitted

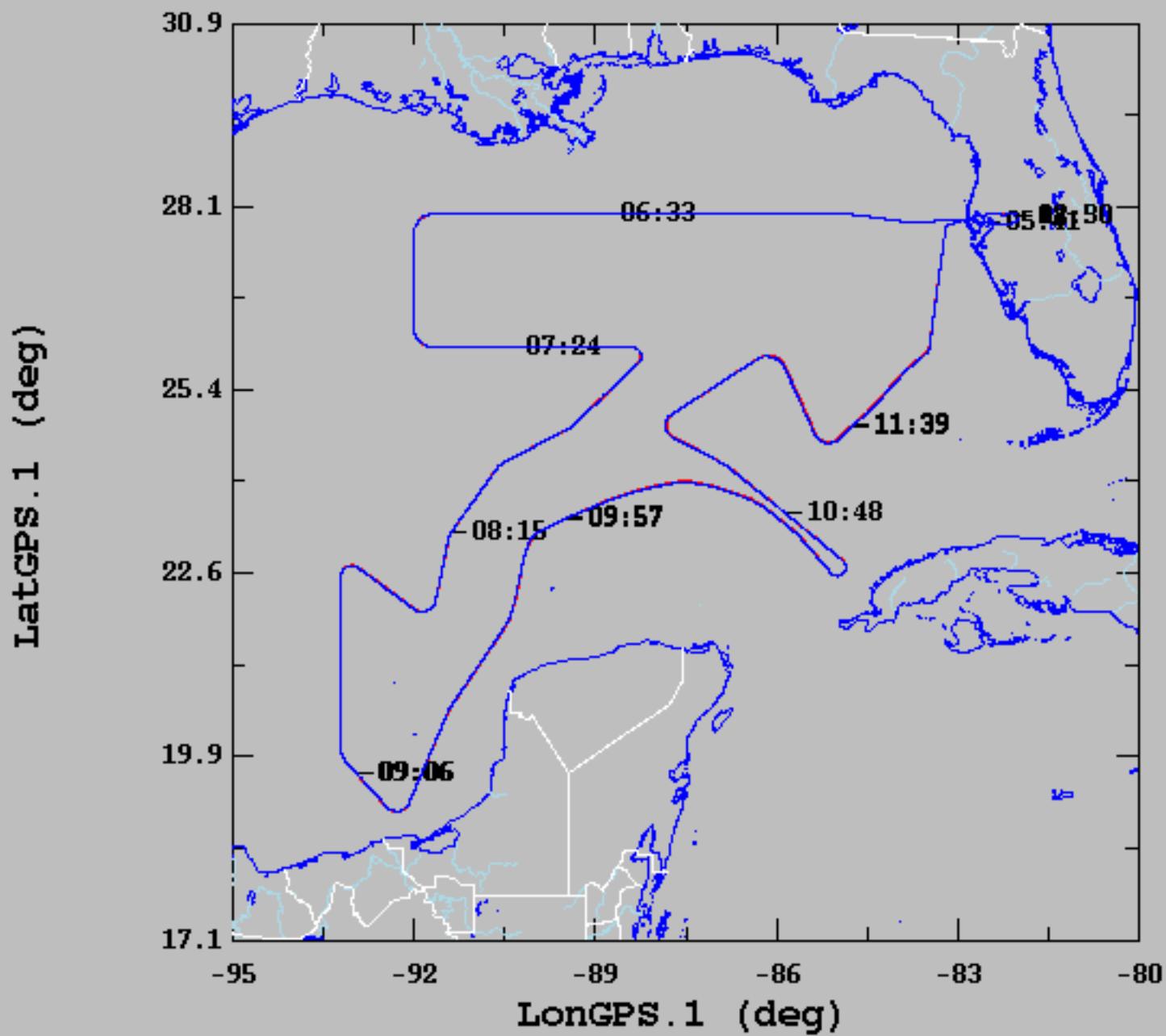
Obs Missed

of sondes launched

of bad sondes

TRX

2020-10-27, 04:50:48-12:30:54



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	25.13	2.61	19.07	28.00
LonGPS.1 (deg), 1 s/sec	-87.66	3.65	-93.20	-81.98
LatI.1 (deg), 1 s/sec	25.13	2.61	19.07	28.01
LonI.1 (deg), 1 s/sec	-87.66	3.65	-93.21	-81.98