



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.
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Flight ID:	20201026N1
Flight Director(s):	Hathaway / Henning
Mission:	Non-tasked Science Collection/Research
UWZ.d mean:	0.13

Pressure Comparison		
	T/O	Land
Aircraft	1009.1	1011.9
Tower	N/A	1011.9

	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"/> 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 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:

**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 appears representative for most of the flight until the end when the data contains unusual spikes and drops out. 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

32-transmitted

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20201026N1	FLT #:		AC:	Waddington	Scientists:	Pressure		Dropsondes ~33		
From:	KLAL	ETD:	0530z	CP(s):	Varwig		A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:	1330z	Nav(s):					32	8	32
Block Time		Flight Time		FE(s):			ASOS Takeoff		BTs		
In:	1355z	Land:	1350z	FD(s):	Mathaway		A/C Land		Good	Bad	Sent
Out:	0521z	T/O:	0531z	SEB:	Henning	Visitors:	ASOS Land		0	0	0
Total:	8.6	Total:	8.3	SSA:	Miller		Storm Number ID: (ie: AL072012)		AL 28 2020		
Sponsoring Org:	NHC			AVAPS:	Underwood		TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)		NOAA9 0618A Zeta		
Program:	Hurricane 2020-PHS										
Purpose:	Surveillance Zeta										
AS REQUIRED BY ORM				Y	N	REMARKS		Fix Number	Obs Number	Fix Time	SLP
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:											



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	<del>1</del>	0549	30001	1	BAD SONDE				BAD PTH		
2	<del>2</del>	0605		2	FAST FALL						
3	1	0607	50553	3	28.0	86.2		1013.0	040/11	0628	✓ FLBW
4	2	0622	11606	4	28.0	88.0		1013.5	070/11	0645	✓ (FRD)
5	3	0637	11588	1	28.0	90.0		1013.0	075/12	0700	✓
6	4	0653	40657	2	26.0	90.0		1011.7	050/18	0714	✓
7	5	0710	11499	3	24.1	89.9		1010.3	Bad Winds very noisy	0730	✓
8	6	0722	11603	4	24.1	88.1		1008.6	045/16	0742	✓
9	7	0737	11550	1	25.9	87.9		1011.6	045/15	0759	✓
10	8	0750	40243	2	25.9	86.1		1010.6	080/17	0822	✓ (FRD)
11	9	0806	30526	3	24.0	86.0		1008.8	095/17	0831	✓
12	10	0821	30528	4	22.2	85.5		1006.5	085/25	0845	✓
13	11	0830	30016	1	21.5	86.4		1007.2	080/20	0856	✓ FLBW
14	<del>12</del>	0851	30049	2	19.2	86.7		1004.7	360/15 Added Point	0912	✓ FLBW
15	13	0904	30523	3	17.8	87.3		1006.3	325/20	0933	✓
16	14	0914	30515	4	17.2	86.5		1005.1	330/6	0944	✓ (FRD)
17		0927		1	NO LAUNCH DETECT						
18	15	0928	30050	2	16.6	85.0		1006.2	235/27	1000	✓ FLBW
19		0936		3	FAST FALL						
20	16	0938	21726	4	16.1	83.6		1007.1	230/11	1010	✓ FLBW
21		0948		1	NO WINDS						
22	17	0950	30519	2	15.5	82.7		1007.5	095/12	1019	✓ FLBW
23		1000		3	FAST FALL						
24	<del>18</del>	1001		4	NOT SENT Partial WMO - DIED at 400mb / WINDS GOOD TO SFC						
25	18	1014	40020	1	15.9	81.1		1007.7	195/6	1043	✓ (FRD)
26	19	1030	20259	2	17.2	79.8		1009.6	155/18	1101	✓
27	20	1037	20249	3	17.8	80.4		1010.2	175/19	1106	✓
28	21	1054	21727	4	19.1	81.8		1009.9	155/16	1114	✓ FLBW
29	22	1107	40022	1	20.4	82.5		1008.2	135/22	1129	✓ FLBW
30	23	1115	40359	2	20.2	83.5		1005.2	125/31	1148	✓ FLBW
31	24	1125	30531	3	19.2	83.2		1007.5	150/36	1150	✓ FLBW
32	25	1133	40296	4	18.1	83.2		1007.7	190/31	1201	✓ (FRD)
33	26	1148	30518	1	<del>17.0N 84.4W</del>			1007.5	17.0N 84.4W 235/21	1222	✓
34	<del>27</del>	1203		2	VERY LATE LAUNCH DETECT						
35	27	1204	40939	3	18.2	85.8		1003.3	280/25	1230	✓ FLBW
36	28	1213	20258	4	19.2	86.2		1002.8	360/23	1243	✓
37	29	1223	30151	1	20.4	85.9		1005.5	060/22	1250	✓
38	30	1231	30169	2	20.7	85.0		1007.1	100/35	1257	✓

FLBW

PT12 →

PT → 13

Backup

COMMENTS: ASPEN Operator will ensure this form is delivered to the JOC Flight Director to be archived

Obs X Missed # of sondes launched # of bad sondes

31 1235 30015 3 23.2 84.2

32 1317 40259 4 26.0 84.0

1010.9

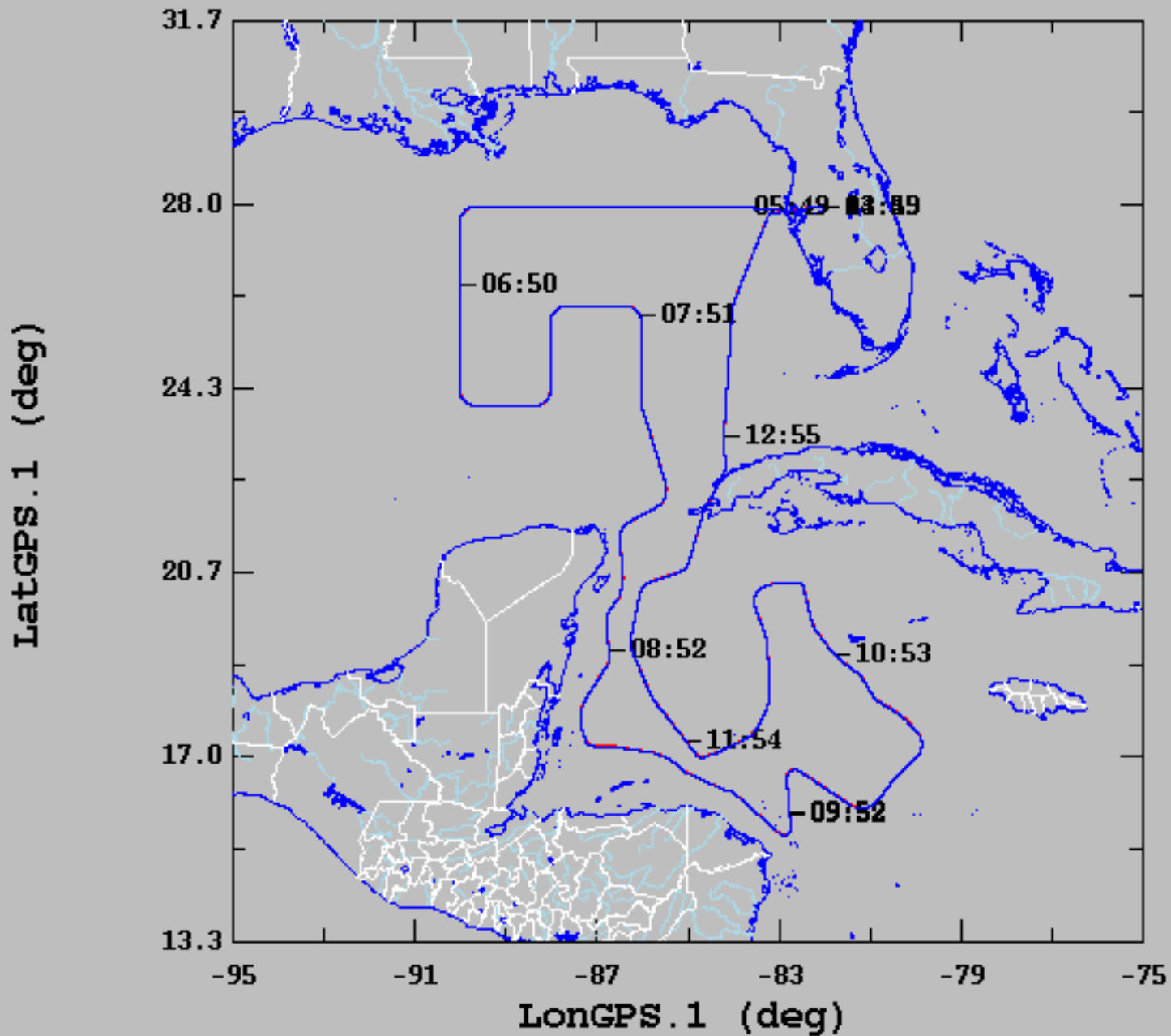
1012.5

080/11

1337



2020-10-26, 04:49:00-13:55:53



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	22.49	4.37	15.38	28.00
— LonGPS.1 (deg), 1 s/sec	-84.81	2.57	-90.00	-79.84
— LatI.1 (deg), 1 s/sec	22.49	4.37	15.39	28.00
— LonI.1 (deg), 1 s/sec	-84.81	2.57	-90.00	-79.84