

Flight Director: Carpenter / Henning
Phone #: 863-500-3901

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:	20190918N1	FLT #:	19-115	AC:	Mansour	Scientists:	Pressure		Dropsondes		
From:	TBPB	ETD:	13:00Z	CP(s):	Waddington	Kaplan, John	A/C Takeoff	1006.6	Good	Bad	Sent
To:	TBPB	ETA:	21:00Z		Nardi		ASOS Takeoff	TBPB 15:00Z 1005.8 mb	36	1	36
Block Time		Flight Time		Nav(s):					BTs		
In:	20:21	Land:	20:17	FE(s):			A/C Land	1003.1	Good	Bad	Sent
Out:	12:34	T/O:	12:46	FD(s):	Carpenter	Visitors:	ASOS Land	TBPB 20:00Z 1001.9 mb	0	0	0
Total:	7.78	Total:	7.52		Henning						
Sponsoring Org:	HRD			SEB:	Lynch/C		Storm Number ID:		AL102019		
Program:	PHX				Paul		(ie: AL072012)				
Purpose:	Genesis/Sat. overpass mission TS Jerry			SSA:	Miller		TCPOD/WSPOD Mission		NOAA9 WB10A JERRY		
							(ie: NOAA2 2418A SANDY)				
				AVAPS:	Underwood		OBSERVATIONS				
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					X						
SCIENCE MISSION WITHIN BDRY LAYER					X						
LACK OF PRECIPITATION				X							
RELATIVE HUMIDITY ≥ 80%				X							
LARGE AIR-SEA TEMP GRADIENT					X						
HIGH SURFACE WINDS					X						
LONG FETCH / DURATION OF SFC WND					X						
SEA SALT ACCRETION FORECAST					X						
SEA SALT ACCRETION OBSERVED					X						
Gmax:				Gmin:			*Highlighted items must be completed before departure.				
Remarks:											

G-IV QC Checklist

Flight ID:	20190918N1
Flight Director(s):	Carpenter / Henning

Pressure Comparison		
	T/O	Land
Aircraft	1006.6	1003.1
Tower	TBPB 13:00Z 1005.8 mb	TBPB 20:00Z 1001.9 mb

UWZ.d mean:	0.10 post-processing
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	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ AccAXI.1 ✓ AccAXI.2 ✓ AccAXI.3	✓ AccAYI.1 ✓ AccAYI.2 ✓ AccAYI.3	✓ AccAZI.1 ✓ AccAZI.2 ✓ AccAZI.3		✓ AccZref	
✓ Altitude	✓ AltGPS.1 ✓ AltGPS.2 ✓ AltGPS.3	✓ AltI.1 ✓ AltI.2 ✓ AltI.3	✓ AltPaADDU.1 ✓ AltPaADDU.2 ✓ AltRA.1	✓ AltBCADDU.1 ✓ AltBCADDU.2	✓ ALTref ✓ ALTPA.d ✓ ALTGA.d	
✓ Ground Speed	✓ GsXI.1 ✓ GsXI.2 ✓ GsXI.3 ✓ GsXGPS.1 ✓ GsXGPS.2 ✗ GsXGPS.3	✓ GsYI.1 ✓ GsYI.2 ✓ GsYI.3 ✓ GsYGPS.1 ✓ GsYGPS.2 ✗ GsYGPS.3	✓ GsZI.1 ✓ GsZI.2 ✓ GsZI.3 ✓ GsZGPS.1 ✓ GsZGPS.2 ✗ GsZGPS.3	✓ GsGPS.1 ✓ GsGPS.2 ✗ GsGPS.3	✓ GSXref ✓ GSYref ✓ GSZref	
✓ Lat / Lon	✓ LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3	✓ LatI.1 ✓ LatI.2	✓ LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3	✓ LonI.1 ✓ LonI.2	✓ LATref ✓ LONref	
✓ Pressure	✓ PDALPHA.1 ✓ PDALPHA.2 ✓ PDBETA.1 ✓ PDBETA.2	✓ PQALPHA.1 ✓ PQALPHA.2 ✓ PQBETA.1 ✓ PQBETA.2	✓ PQM.1 ✓ PQM.2	✓ PSM.1 ✓ PSM.2	✓ PDLAPHAref ✓ PDBETAref ✓ PQALPHAref ✓ PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1			✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 ✓ PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 ✓ PitchRateI.3	✓ RollI.1 ✓ RollI.2 ✓ RollI.3	✓ RollRateI.1 ✓ RollRateI.2 ✓ RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✗ TTM.2 ✓ TTM.3	✓ TTM.4	✓ TDM.1 ✓ TDM.2		✓ TD.c ✓ TDMref	✓ TTMref ✓ TA.d
✓ Misc. (Must check)					✓ UWZ.d ✓ DPJ_WSZ ✓ HUM	✓ WS.d ✓ WD.d

FLID_Mission_Documents.pdf:	
✓	Error Summary
✓	Crew Manifest
✓	QC Checklist
✓	Dropwindsonde Log(s) - AVAPS and FD if completed
✓	Flight Track
✗	Miscellaneous FD Notes

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

NOTES:

GsGPS.3 unavailable.
 TTM.2 unavailable.
 TDM.1 unrealistic spikes during descent.
 TDM.2 generally tracks with TDM.1 but unrealistic values persist at lower levels.
 Unrealistic supersaturation during descent/landing.

AVAPS Drop Log

Project: Hurricane Research

Mission: ITS Jerry

Flight ID: 20190918/11

Take Off: 1245Z

Landing: 2015Z

Flt Dir: Carpenter

Launcher S/N: 002

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	191941356 ^{soft ware}	318	-0.2	1356Z	NGU	SAT	Point #1	✓
2	192040941	216	0.0	1405Z			Point #2	✓
3	192040927	116	0.0	1415Z			Point #3	✓
4	191050229	418	0.0	1425Z			Point #4	✓
5	185130862	317	-0.4	1435Z			Point #5	✓
6	191941237	216	-0.3	1446Z			Point #6	✓
7	192040919	115	0.0	1455Z			Point #7	✓
8	192040944	418	0.0	1503Z			Point #8	✓
9	192040920	317	+0.1	1511Z			Point #9	✓
10	192040938	216	-0.4	1518Z			Point #10	✓
11	185130114	115	0.0	1527Z			Point #11	✓
12	191950421	418	0.6	1535Z			Point #12	✓
13	192040916	317	0.0	1543Z			Point #13	✓
14	191010458	216	-0.4	1551Z			Point #14	✓
15	191040498	115	-0.4	1559Z			Point #15	✓
16	192040932 ^{soft ware}	418	0.0	1607Z			Point #16	✓
17	192040567	317	0.0	1612Z			Point #17	✓
18	191010405	216	0.0	1618Z			Point #18, late GPS	✓
19	191050398	115	0.6	1623Z			Point #19	✓
20	192031214	418	0.0	1628Z			Point #20	✓
21	192041039	317	0.0	1634Z			Point #21	✓
22	185120825	216	0.0	1640Z			Point #22	✓
23	185120846	115	0.0	1650Z			Point #23	✓
24	185140076	418	0.0	1659Z			Point #24	✓
25	191010448	317	0.0	1706Z			Point #25	✓
26	190930051	216	0.0	1722Z		✓	Point #26	✓
27	191010404	115	0.0	1737Z		HRD	Point #27	✓
28	191020495	418	0.0	1745Z			Point #28	✓
29	191010460	317	0.0	1752Z			Point #29	✓
30	185120832	216	0.0	1801Z			Point #30	✓
31	191020496	115	0.0	1809Z			Point #31	✓

sticker mismatch
191940530

sticker
192040929

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
32	185130606	4/19	0.0	01816Z	NGU	HRD	Point #32	✓
33	191020516	3/17	0.0	1825Z			Point #33	✓
34	185120840	2/16	0.0	1841Z			Point #34	✓
35	185130826	1/15	0.0	1858Z			Point #35	✓
36	191010459	4/8	0.0	1907Z			Point #36, Fast Fall	✗
37	191050233	2/17	±0.6	1907Z	↓	↓	Point #36	✓
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

Drop Station Operator Notes

Charge \$\$ To Options (**DO NOT USE FUNDING CODES**):

AOC, NWS, HRD, NESDIS, IR/SST, AR, STAN (Stanford), SAT (JPSS/NESDIS/HRD)

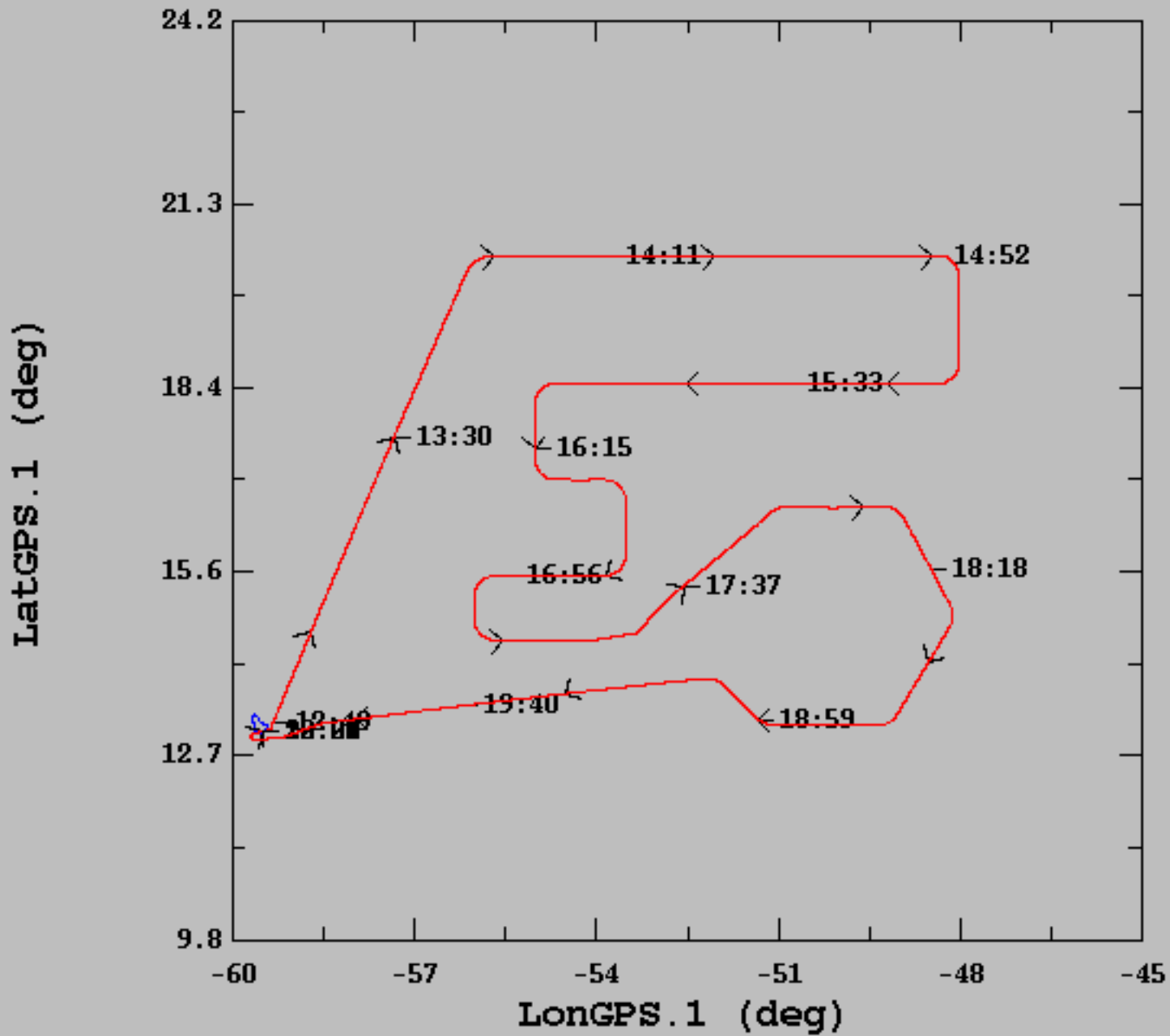
AVAPS Pre-Flight Check:

- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and Full Flight ID (example: 20120823N2).
- Verify the Frequency band allocation as required:
Band A: 53rd WRS - Band B: N42RF - Band C: N43RF - Band D: N49RF - Band E: Unallocated
- Select the **GPS Reference** tab from the **Soundings Displays** page and verify good GPS data
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights.
- Verify data is available on Remote AVAPS, then terminate the sonde.
- Verify the AVAPS Data mission folder has been created
- **Verify AVAPS PC Time is correct – if time is off by >4sec, no data will display**
- **Early launch detects are caused usually by remanufactured sondes with the chute riser line not properly coiled below the PCB ear. This may also cause fast falls. If this is suspected, repack the riser line as time permits**
- **Perform RH Regeneration on all sondes – Multiple RD41 sondes may be processed at once**

AVAPS Launch:

- Select a sonde frequency in the Green band and away from other sondes
- Enter sonde pressure error offset if 0.4mB or greater using cabin pressure sensor – warning, this can not be used during a climb
- **If the Cal lab pressure standard and the cabin pressure standard match, apply pressure offset +/- 0.1 mB**
- **Wait until GPS available (green) on the pre-launch screen before continuing.**
- Select "begin data collection" and verify good data with winds prior to putting sonde in launch tube
- On N42 & N43, remove about 1/2 of the ribbon. Do not shorten the ribbon on N49. Loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde. Place excess orange tape on end of ribbon to form a pocket.
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing right
- Verify the sonde is actively tracking GPS data prior to launch and **no early launch detect**

09/18/2019, 12:08:43-20:21:21



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	16.27	2.57	12.93	20.50
— LongGPS.1 (deg), 1 s/sec	-53.78	3.54	-59.68	-48.00