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

FLIGHT INFORMATION				CREW MANIFEST				MISSION INFORMATION						
FLT ID:	20230915 N1	FLT #:		AC:	MAUSOOD R	Scientists:		Pressure		Dropsondes				
From:	KLAL	ETD:	0530	CP(s):	BHATNAGAR			A/C Takeoff		Good	Bad	Sent		
To:	KLAL	ETA:	1300	NAV:	COZART			ASOS Takeoff		35	2	35		
Block Time				Flight Time				ASOS Land						
In:	1304	Land:	1256	FE(s):	HENNING			A/C Land		BTs				
Out:	0519	T/O:	0529	FD(s):	TIMMERS			ASOS Land		Good	Bad	Sent		
Total:	7.8	Total:	7.5	SSA:	DYKEMAN	Visitors:		Storm Number ID:						
Sponsoring Org:	NHC	AL132023												
Program:	PHS	TCPDOD/WSPDOD Mission (ie: AL072012)												
Purpose:	SYNOPTIC SURV HURRICANE LEE	SEB:		NO0449 3413A LEE										
AS REQUIRED BY ORM				MX:		OBSERVATIONS								
VOLCANIC ASH				Y	N	Fix Number								
SCIENCE MISSION WITHIN BDRY LAYER						Obs Number								
LACK OF PRECIPITATION						Fix Time								
RELATIVE HUMIDITY ≥ 80%						SLP								
LARGE AIR-SEA TEMP GRADIENT						1								
HIGH SURFACE WINDS						2								
LONG FETCH / DURATION OF SFC WND						3								
SEA SALT ACCRETION FORECAST						4								
SEA SALT ACCRETION OBSERVED						Pennies:								
*Highlighted items must be completed before departure.														
Remarks: 226 Z 3248N 6740W														

G-IV QC Checklist

Flight ID:	20230915N1
Flight Director(s)	Henning/Timmers
UWZ.d mean:	0.01

Pressure Comparison		
	T/O	Land
Aircraft	1008 mb	1008 mb
Tower	1013 mb	1014 mb

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

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	☐
Valid	☒
Errors (note)	☒

NOTES:
AltRA.1 is at 0.0 for the duration of the flight, please use ALTref for altitude data.
TDM.2 is not valid for the duration of the flight. Please reference TDM.1 for dewpoint temperature.
PDALPHAref, PDBETAref, PQALPHAref, and PQBETAref are not generated in this file; please reference 1Hz sensors for all flight

AVAPS Drop Log

Project: Hurricane

Mission: Hurricane Lee

Flight ID: 20230915N1

Take Off: _____

Landing: _____

Flt Dir: Sam / Rich

Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	222330573	1	-1.2	0602	AJP	NWS		✓
2	222220350	2	-1.0	0612				✓
3	222120884	3	-0.6	0621				✓
4	222070649	4	-0.4	0632				✓
5	222070654	1	Ø	0643			NO PTL	X
6	222230491	2	-0.4	0643				✓
7	222220349	3	-0.6	0653				
8	222120887	4	Ø	0704				
9	222220222	1	-0.5	0713				
10	222220352	2	-0.7	0722				
11	222520384	3	-0.4	0731				
12	222350116	4	Ø	0740				
13	222330584	1	-0.7	0750				
14	222520309	2	-0.4	0801				
15	222350113	3	Ø	0811				
16	222070647	4	Ø	0820				
17	222120876	1	-0.4	0829				
18	222230473	2	-0.5	0839				
19	222350110	3	-0.4	0849				
20	222520374	4	Ø	0900				
21	221730490	1	Ø	0911				
22	222520354	2	Ø	0919				
23	222330572	3	-0.7	0927				
24	222220351	4	-0.8	0934				
25	222220341	1	-0.8	0942				
26	222350119	2	Ø	0952				
27	222120811	3	-0.8	1001				
28	222220220	4	?	1010				
29	222010562	1	Ø	1018				
30	222120089	2	Ø	1041				
31	222350051	3	Ø	1052	✓	✓		✓

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
32	222120873	4	-0.8	1106				✓
33	222120882	1	-0.7	1119				✓
34	222120087	2	-0.7	1133				✓
35	222520388	3	Ø	1144			No PTV	X
36	222220217	4	-0.7	1146				✓
37	222520380	1	Ø	1159				✓
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, GOMO, NASA, ONR, SAT (JPSS/NESDIS/HRD), MS (old NRD94 sondes)

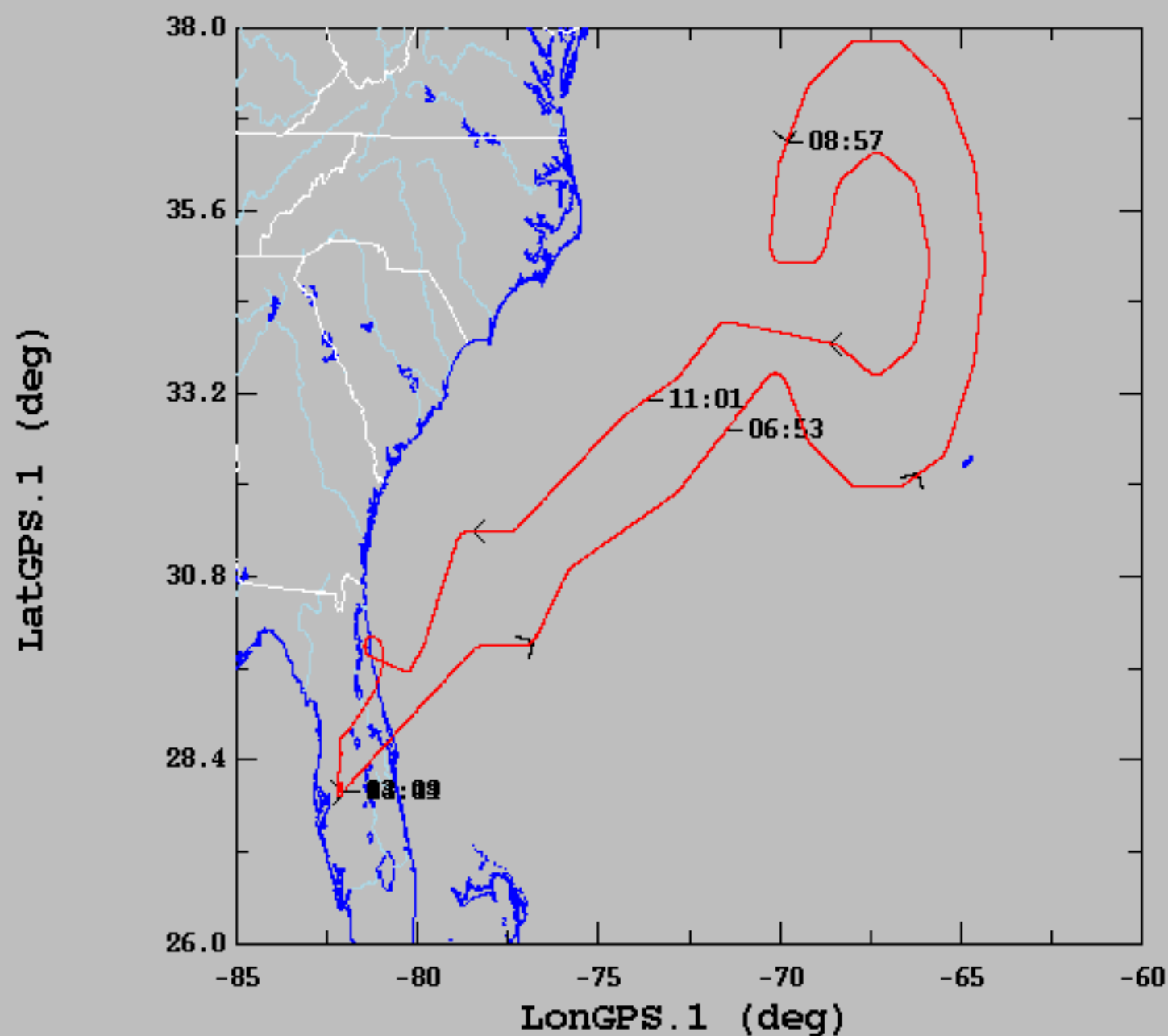
AVAPS Pre-Flight Check:

- 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
- RD41 ONLY: On N42 & N43, remove about ½ 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.
- RD41: Place the sonde in the launch tube, sensor arm up, with the power pin socket facing right
- NRD41: Place the sonde in the launch tube, sensor arm down
- Verify the sonde is actively tracking GPS data prior to launch and no early launch detect

09/15/2023, 04:49:48-13:04:45



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	32.36	2.91	27.93	37.82
LongGPS.1 (deg), 1 s/sec	-73.33	6.09	-82.21	-64.31

N49RF ERROR SUMMARY
20230915N1

Flight ID: 20230915N1

Sensor or System	Number or Name
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Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.1
Dewpoint Temp. Probe	TDM.1
Vertical Accelerometer	AccZI.1
Altimeter	AltGPS.3
INE Selection	1
Differential Attack Pressure Probe	PDALPHA.1
Differential Sideslip Pressure Probe	PDBETA.1
Dynamic Attack Pressure Probe	PQALPHA.1
Dynamic Sideslip Pressure Probe	PQBETA.1

Flight Directory acdata/2023/MET/20230915N1

Local Met Data	Takeoff KLAL (0529Z)	Landing KLAL (1255Z)
Dynamic Corrections		Yes
AttackAngleIntercept		4.95911
AttackAngleSlope		5.43613
SlipAngleIntercept		1.06
SlipAngleSlope		6.97813
AttackAngleIntercept2		5.01255
AttackAngleSlope2		5.40932
SlipAngleIntercept2		0.72
SlipAngleSlope2		7.0494

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
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Dropsondes	37	35	35
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 #: 8635003964

ACAT-4 Version = 7.4