

N43RF ERROR SUMMARY
20200914I1

Flight ID: 20200914I1

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	AccZfilterI-
GPS.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/2020/MET/20200914I1
Local Met Data	Takeoff KLAL (1414Z) Landing KLAL (2058Z)
Dynamic Corrections	Yes
AttackAngleIntercept	0.122351
AttackAngleSlope	6.0273
SlipAngleIntercept	0.214857
SlipAngleSlope	7.10815

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.

GPS.4 unavailable. Appears as if inertials shutdown early, showing lat/lon 0/0 in GPS.1 and LatI/LonI .1 and .2. PQM.1 brief spike around 1821Z. 5-10 mb difference between PSM.1 and PSM.2, most pronounced at higher altitudes. PitchI.3 and RollI.3 unavailable. TTM.3 inoperative. TDM.1 and TDM.3 inoperative. TRadU.1 inoperative.

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	20	19	19
Test sondes	0	0	0
AXBTS	3	1	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

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

ACAT-4 Version = 7.3

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N43RF Manifest

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	2020091411	FLT #:	20-77	AC:	Rossi	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	1430Z	CP(s):	Legidakes	Dunion, Jason	A/C Takeoff	1010.3	Good	Bad	Sent
To:	KLAL	ETA:	2130Z		Doremus		ASOS Takeoff	KLAL 1350Z 1010.6 mb	19	1	19
Block Time		Flight Time		NAV:	Freeman	Visitors:	A/C Land	1009.6	BTs		
In:	21:05	Land:	20:59	FE(s):	Heystek		ASOS Land	KLAL 2050Z 1009.3 mb	Good	Bad	Sent
Out:	14:07	T/O:	14:15	FD(s):	Sanchez	Storm Number ID: (ie: AL072012)	TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	1	2	0	
Total:	7.0	Total:	6.7	SSA:	Richards/T			AL192020			
Sponsoring Org:		NWS / EMC			SEB:	NOAA3 0719A SALLY					
Program:		PRX			MX:	OBSERVATIONS					
Purpose:		TDR mission #2, Hurricane Sally									
AS REQUIRED BY ORM			Y	N	REMARKS		Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH				X			1				
SCIENCE MISSION WITHIN BDRY LAYER				X			2				
LACK OF PRECIPITATION				X			3				
RELATIVE HUMIDITY ≥ 80%			X				4				
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			Pennies:	4 Hurricane Pennies.			
							*Highlighted items must be completed before departure.				
Remarks:											

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.
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Flight ID:	2020091411
Flight Director(s):	Carpenter / Parrish
Mission:	Tasked/Operational
UWZ.d mean:	0.16

Pressure Comparison		
	T/O	Land
Aircraft	1010.3	1009.6
Tower	KLAL 1350Z 1010.6 mb	KLAL 2050Z 1009.3 mb

	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ AccAXI.1 ✓ AccAXI.2 ✓ AccAXI-GPS.1 ✓ AccAXI-GPS.2	✓ AccAYI.1 ✓ AccAYI.2 ✓ AccAYI-GPS.1 ✓ AccAYI-GPS.2	✓ AccAZI.1 ✓ AccAZI.2 ✓ AccAZI-GPS.1 ✓ AccAZI-GPS.2	✓ AccZfilter-GPS.1 ✓ AccZfilter-GPS.2	✓ AccZref	
✓ Altitude	✓ AltGPS.1 ✓ AltGPS.2 ✓ AltGPS.3 X AltGPS.4	✓ AltI-GPS.1 ✓ AltI-GPS.2	✓ AltPaADDU.1 ✓ AltBCADDU.1	✓ AltRA.1 ✓ AltRA.2	✓ ALTref ✓ ALTPA.d ✓ ALTGA.d	✓ AltRA1.c ✓ AltRA2.c
✓ Ground Speed	✓ GsXI-GPS.1 ✓ GsXI-GPS.2	✓ GsYI-GPS.1 ✓ GsYI-GPS.2	✓ GsZI-GPS.1 ✓ GsZI-GPS.2			
✓ Lat / Lon	X LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3 X LatGPS.4	✓ LatI-GPS.1 ✓ LatI-GPS.2	X LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3 X LonGPS.4	✓ LonI-GPS.1 ✓ LonI-GPS.2	✓ LATref ✓ LONref	
✓ Pressure	✓ PDALPHA.1 ✓ PDALPHA.2 ✓ PDBETA.1 ✓ PDBETA.2	✓ PQALPHA.1 ✓ PQBETA.1	X PQM.1 ✓ PQM.2 ✓ PQM.3 ✓ PQM.4	✓ PSM.1 ✓ PSM.2 ✓ PTM.1	✓ PDLAPHaref ✓ PDBETAref ✓ PQALPHAref ✓ PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.1	✓ IAS.d ✓ TAS.d		
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 X PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 X PitchRateI.3	✓ RollI.1 ✓ RollI.2 X RollI.3	✓ RollRateI.1 ✓ RollRateI.2 X RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✓ TTM.2 X TTM.3	X TDM.1 ✓ TDM.2 X TDM.3	✓ TRadD.1 ✓ TRadS.1 X TRadU.1	✓ 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
X	Miscellaneous FD Notes

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

NOTES:
<p>GPS.4 unavailable.</p> <p>Appears as if early inertial shutdown shows in lat/lon .1 and lat/lonI .1 and .2 with lat/lon reading 0/0.</p> <p>PQM.1 temporary failure ~1821Z.</p> <p>5-10 mb difference between PSM.1 and PSM.2, most pronounced at higher altitudes.</p> <p>PitchI.3 and RollI.3 unavailable.</p> <p>TTM.3 inoperative.</p> <p>TDM.1 and TDM.3 inoperative.</p> <p>TRadU.1 inoperative.</p>

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								

Drop Station Operator Notes

Charge \$\$ To Options: AOC, NWS, HFIP, NESDIS, ONR, HRD, IR/SST or HRD ONLY – Do not use funding codes!!!

AVAPS Pre-Flight Check:

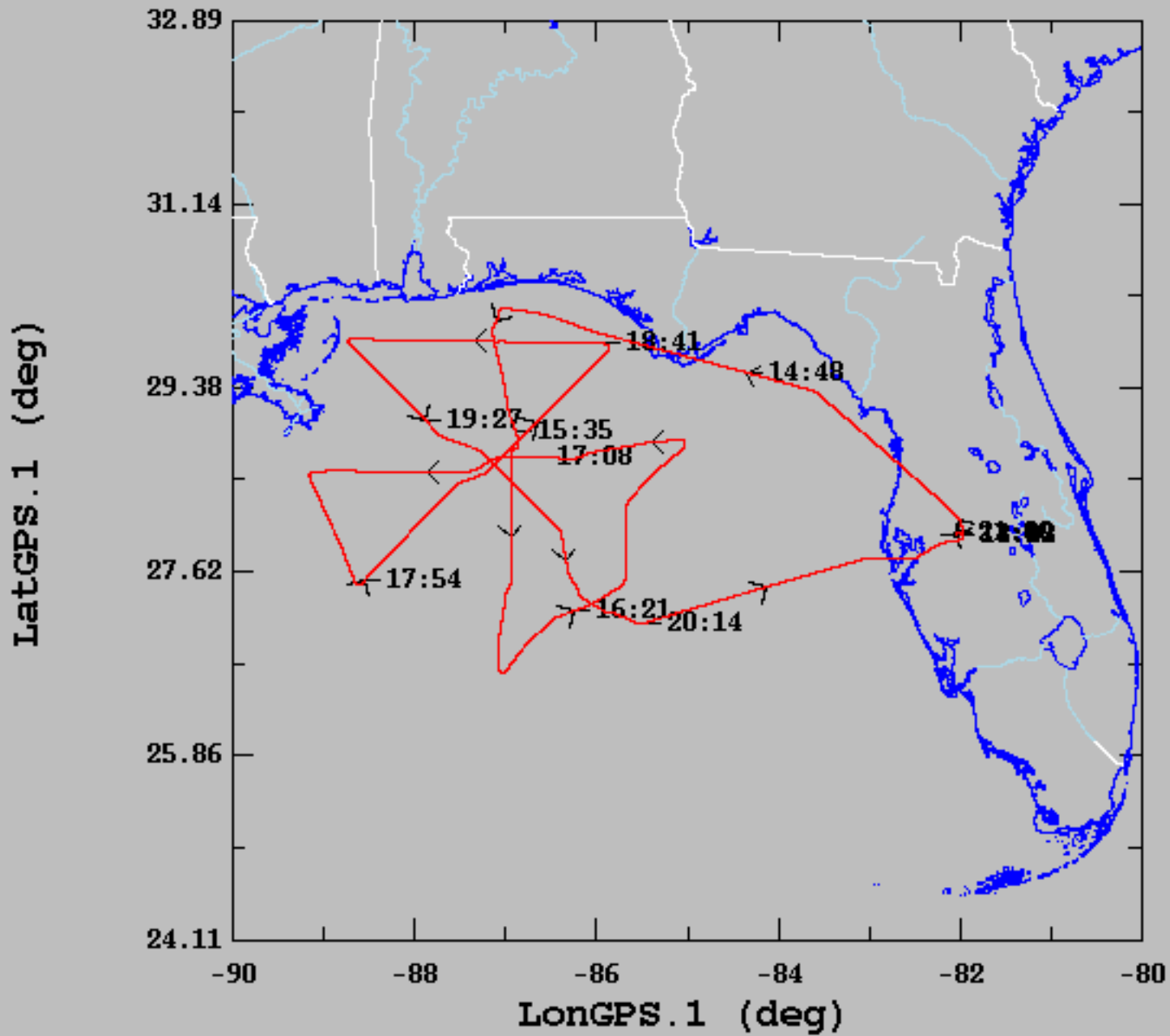
- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and full Flight ID (example 20110823h2).
- Update the Frequency band allocation as required:
Band A - W53rd, Band B - N42RF, Band C - N43RF, Band D - N49RF, Band E - not allocated
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights. Verify data is available on Remote AVAPS at the FD Station, then terminate the sonde by selecting **Abort** to cancel the sonde initialization. Verify the AVAPS Data mission folder has been created.
- **Verify AVAPS PC Time is correct**

NOTE: HRD RESEARCH MAY REQUIRE USING "IR SONDES", WHICH ALSO HAVE SLOW FALL CHUTES. DO NOT SHORTEN THE RIBBON ON THE SLOW FALL CHUTE SONDES.

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 – **only if cabin pressure sensor has been fixed and re-calibrated**
- Select "begin data collection" and verify good data (including Winds) prior to putting sonde in launch tube
- **Cut off about 1/2 of ribbon, Unwind ribbon and flip the screen, Re-wind ribbon, Use orange tape to make a pocket at end of ribbon**
- Loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing starboard
- Verify the sonde is actively tracking GPS data prior to launch and no **Early Launch detect**

09/14/2020, 13:15:53-21:00:45



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	28.48	0.85	26.66	30.15
— LongGPS.1 (deg), 1 s/sec	-85.66	2.17	-89.15	-81.97