

N43RF ERROR SUMMARY
20221102I1

Flight ID: 20221102I1

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/2022/MET/20221102I1
Local Met Data	Takeoff TISX (0745Z) Landing TISX (0000Z)
Dynamic Corrections	Yes
AttackAngleIntercept	0.126754
AttackAngleSlope	5.36078
SlipAngleIntercept	0.2
SlipAngleSlope	6.67768

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. PQM.1 fails late in flight, possibly due to icing. 15-20 mb differential between PSM.1 and PSM.2. PSM.2 more representative. Significant electrical oscillations noted in TTM.2. TTM.3 inoperative. Periods of electrical oscillation noted in TDM.1. TDM.3 inoperative. TRadU.1 inoperative.

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	24	20	20
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

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

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	2022110211	FLT #:	23-	AC:	Doremus	Scientists:	Pressure		Dropsondes		
From:	TISX	ETD:	0800Z	CP(s):	Wood	J. Zawislak	A/C Takeoff	1013.4	Good	Bad	Sent
To:	TISX	ETA:	1730Z		Keith	J. Zhang	ASOS Takeoff	TISX 0753Z 1012.6 mb	20	4	20
Block Time		Flight Time		NAV:	Miller	P. Chang			A/C Land	N/A	BTs
In:	17:36	Land:	17:33	FE(s):	Stokes	A. Wilson	ASOS Land	TISX 1753Z 1012.3 mb			Good
Out:	7:39	T/O:	7:46	FD(s):	Tyson		ASOS Land	TISX 1753Z 1012.3 mb	0	0	0
Total:	10.0	Total:	9.8	SSA:	Richards	Visitors:			Storm Number ID:		AL152022
Sponsoring Org:		NWS / EMC			AVAPS:	Warnecke	(ie: AL072012)		NOAA3 1415A LISA		
Program:		PRX			SEB:		TCPOD/WSPOD Mission				
Purpose:		TDR #3 Hurricane LISA			MX:		(ie: NOAA2 2418A SANDY)				
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:	3 (Hurricane)			

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Major instrument issue(s) - significant mission impact.
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Flight ID:	2022110211
Flight Director(s):	Carpenter
Mission:	Tasked/Operational
UWZ.d mean:	0.06

Pressure Comparison		
	T/O	Land
Aircraft	10134	N/A
Tower	TISX 0753Z 1012.6 mb	TISX 1753Z 1012.3 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		✓ GSXref ✓ GSYref ✓ GSZref	
✓ Lat / Lon	✓ LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3 X LatGPS.4	✓ LatI-GPS.1 ✓ LatI-GPS.2	✓ 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	✓ 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)	<input checked="" type="checkbox"/>

NOTES:
<p>GPS.4 unavailable.</p> <p>PQM.1 fails late in flight, appears due to icing.</p> <p>15-20 mb differential between PSM.1 and PSM.2. PSM.2 appears more representative.</p> <p>Significant electrical oscillation noted in TTM.2. TTM.3 inoperative.</p> <p>Periods of electrical oscillation in TDM.1. TDM.3 inoperative.</p> <p>TRadU.1 inoperative.</p>

AVAPS Drop Log

Project: Horr 22

Mission: TS USA

Flight ID: 202210211

Take Off: 0745Z

Landing: _____

Flt Dir: Carputer

Launcher S/N: 209

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	211450099	1	-1.0	1126	JAN	NWS	IPNE	✓
2	211450097	2	0	1137		NWS	MP	✓
3	211450604	3	-0.3	1148		ONR	Rmw (No PTH)	✗
4	213740252	4	0	1150		ONR	Rmw	✓
5	204830094	5	-0.9	1154		NWS	CTR#1	✓
6	211440425	6	0	1202		ONR	Rmw (No PTH)	✗
7	213740795	7	0	1207		NWS	MP	✓
8	204950789	8	-0.4	1212		NWS	EPNW	✓
9	211450602	1	-0.3	1222		NWS	IPSE	✓
10	213740555	2	0	1228		NWS	MP	✓
11	214110676	3	0	1235		ONR	Rmw	✓
12	210430064	4	-0.9	-		NWS	No LD	✗
13	210820304	5	-0.3	1237		ONR	Rmw	✓
14	210810064	6	-0.4	1244		NWS	MP	✓
15	210240295	7	0	1253		NWS	EPNW	✓
16	213550958	8	0	1316		NWS	IP3W	✓
17	210240294	1	-0.3	1322		NWS	No Dew / Humid ^{MP}	✗
18	210511033	2	-0.9	1323		NWS	W/D	✓
19	210520211	3	-0.8	1324		NWS	W/D	✓
20	213740178	4	0	1328		ONR	Rmw	✓
21	213810947	5	0	1330		NWS	CTR#3	✓
22	213740251	6	0	1333		ONR	Rmw	✓
23	213740570	7	.4	1342		NWS	MD AT	✓
24	210240940	8	.3	1355		NWS	EP3W	✓
25								
26								
27								
28								
29								
30								
31								

1st Pass

2nd Pass

3rd Pass

1100

17.2N

87.4W

275 @ 12 kts

Dropwindsonde Scientist Log

Storm:	AL15 / LISA	Flight ID:	2022110211	Mission ID:	1415A	Takeoff:	0745Z	Landing:	1733Z
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Dropsonde Scientist(s):	J. Zhang	AVAPS Operator:	Warnecke
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Pre-flight

- ✓ Discuss the pattern with the Lead Project Scientist (LPS) and ensure that enough dropsondes are onboard.
- ✓ Complete the appropriate pre-flight set-up of your workstation and ASPEN (see [Dropsonde Processing Guide](#)).

In-flight

- ✓ Ensure the Flight Director is aware of upcoming drops and whether a backup is requested in case of failure.
- ✓ Ensure the AVAPS operator has determined that the dropsonde is (or is not) transmitting a good signal.
- ✓ Prioritize processing of center drops and report MSLP and surface wind speed and direction to the Flight Director.
- ✓ Fill in the Dropwindsonde Scientist log as drops are released and processed.
- ✓ Copy completed ASPEN files (e.g., FRD, netCDF, Skew-t, WMO txt, BUFR) into the “FRD” folder on the workstation desktop for automated transmission to the ground for archival.

Once “science is complete”...

- ✓ Make synoptic map plots in ASPEN and copy them to the “FRD” folder on the workstation desktop for automated transmission to the ground for archival.
- ✓ Ensure ASPEN files have been sent to the ground by locating and verifying all files in the “FLIGHTID” folder within the “FRD” folder on the workstation desktop.
- ✓ Archive ASPEN_DATA and RAW_DATA into a folder named with the FLIGHTID within the “Season Dropsonde Archive” folder on the workstation desktop, and upload the same directories into StormName/FLIGHTID/Dropsonde/ folder on Drive.
- ✓ Download this Dropwindsonde Scientist Log as “PDF” and upload completed PDF and Google Doc to the StormName/FLIGHTID/Dropsonde/ folder within the “Mission Reports” directory in the HFP Google Drive.

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Lon (°E/W)	Sfc Pressure (mb)	Lowest Wind Direction/Speed (deg/kt)	Lowest Wind Height (m)	AXBT SST (°C)	Eye, Eyewall, Rainband, etc.	Ob #
1	211450099	112617	18.53	-85.51	1013	110-25	10		IP NE	01
Comments: NE-SW pass, inbound on 105 nmi radial										
2	211450097	113714	17.85	-85.93	1011	105-27	10		MP-NE	02
Comments:										
3	NA	114813	NA	NA	NA	NA	NA		RMW1-NE	NA
Comments: No TH, good otherwise										
4	213740252	115042	17.11	-86.46	998	125-71	10		RMW2-NE	03
Comments:										
5	204830094	115438	17.10	-86.71	992	325-07	10		CENTER	04
Comments: 227.25 enddrop										
6	NA	120217	NA	NA	NA	NA	NA		RMW-SW	NA
Comments: No TH, good otherwise										
7	213740795	120713	16.59	-86.84	1009	290-15	10		MP-SW	06
Comments: 276.25 enddrop										
8	204950789	121201	16.29	-87.01	1011	225-29	10		EP-SW	07
Comments:										
9	221450602	122213	16.26	-86.39	1011	230-28	10		IP-SE	08
Comments:										
10	213740555	122839	16.73	-86.52	1008	200-30	10		MP-SE	09
Comments:										

Storm: AL15 / LISA

Flight ID: 2022110211

Mission ID: 1415A

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Drop #	Sonde ID	Time UTC	Lat (°N/S)	Lon (°E/W)	Sfc Pressure (mb)	Lowest Wind Direction/Speed (deg/kt)	Lowest Wind Height (m)	AXBT SST (°C)	Eye, Eyewall, Rainband, etc.	Ob #
11	214110676	123512	17.16	-86.77	993	130-36	10		RMW-SE	10
Comments:										
12	NA	1236	NA	NA	NA	NA	NA		CENTER 2ND	NA
Comments: No data										
13	210820304	123750	17.34	-86.88	998	010-61	10		RMW-NW	11
Comments:										
14	210810064	124452	17.78	-87.14	1011	060-35	10		MD-NW	12
Comments:										
15	210240295	125337	18.32	-87.47	1013	035-22	10		ED-NW	13
Comments:										
16	213550958	131600	17.11	-87.94	1012	310-24	10		IP-W	14
Comments: Starting W-E pass										
17	210240294	132250	17.13	-87.48	1010	005-30	10		MP-W bad	NA
Comments: No RH - not sent										
18	210511033	132328	17.13	-87.43	1008	350-29	10		MP-W backup1	15
Comments:										
19	210520211	132404	17.12	-87.39	1009	345-30	10		MP-W backup2	16
Comments:										
20	213740178	132836	17.13	-87.06	994	315-32	10		RMW-W	17
Comments: 276.75 endrop										

Storm: AL15 / LISA

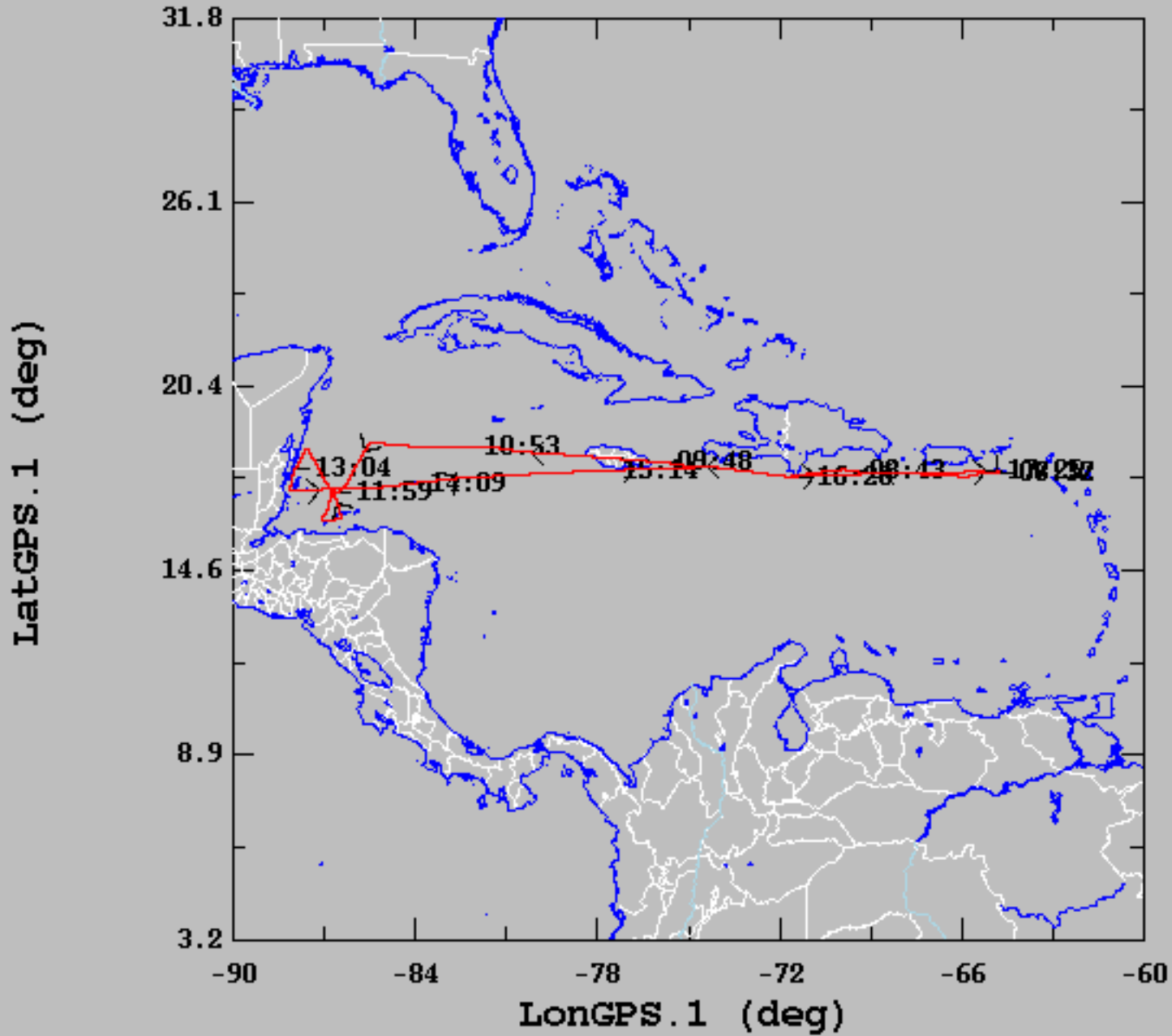
Flight ID: 20221102I1

Mission ID: 1415A

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Drop #	Sonde ID	Time UTC	Lat (°N/S)	Lon (°E/W)	Sfc Pressure (mb)	Lowest Wind Direction/Speed (deg/kt)	Lowest Wind Height (m)	AXBT SST (°C)	Eye, Eyewall, Rainband, etc.	Ob #
21	213810947	133012	17.20	-86.98	993	095-29	10		Center3	18
Comments:										
22	213740251	133358	17.21	-86.72	1003	135-57	10		RMW-E	19
Comments:										
23	213740570	134221	17.20	-86.16	1012	160-26	10		MP-E	20
Comments:										
24	21024940	135540	17.20	-85.27	1013	125-16	10		EP-E	21
Comments: LAST REPORT, but then corrected to remove LAST for VDM										
Comments:										
Comments:										
Comments:										
Comments:										
Comments:										

2022-11-02, 06:32:41-17:25:30



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	17.68	0.44	16.20	18.61
— LongGPS.1 (deg), 1 s/sec	-76.62	8.08	-88.13	-64.72