N43RF ERROR SUMMARY
20241009I1_ES

Flight ID: 20241009I1

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.1
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/2024/MET/20241009I1

Local Met Data	Takeoff KMOB (0755Z)	Landing KMOB (1637Z)
Dynamic Corrections		Yes
AttackAngleIntercept		0.179211
AttackAngleSlope		5.88163
SlipAngleIntercept		0.15
SlipAngleSlope		6.89472

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.

Pitch and Roll I.3, TTM.3, TDM.3, and TRadU.1 not operational.
AltGPS.3 & GPS.4 drop out at 0828z and remain inoperative for the remainder of the flight.
PQM.1 runs approximately 5-20mb higher than fuselage pressure throughout entirety of the flight.
TA.d unavailable between 1141-1143z. This coincides with a significant spike in all dewpoint measurements.
TDM.1 spikes above 40 deg C at 1023z & 1141z.
TDM.2 & TD.c also spike at 1141z leading to a dropout in flight level WS.d, WD.d, HUM, & PSURF. All data is regained at 1143z and remains for duration of flight.

Expendable Type	# deployed	# good	# transmitted
Dropsondes	21	20	20
Test sondes	0	0	0
AXBTs	9	9	9
AXCPs	0	0	0

AXCTDs	0	0	0
UAS	1	1	0

Flight Director: Englert/Carpenter
Phone #: 8636066847

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION			
FLT ID:	20241009I1	FLT #:	
From:	KMOB	ETD:	0300L / 0800Z
To:	KMOB	ETA:	1100L / 1600Z
Block Time		Flight Time	
Out:	07:50	T/O:	07:55
In:	16:43	Land:	16:37
Total:	8.9	Total:	8.7
Sponsoring Org:	NHC		
Program:	PRX		
Purpose:	TDR Mission + sUAS + CHAOS		

CREW MANIFEST		
AC:	Rannanberg	Other Crew:
CP(s):	Palmer	Zhang, Jun (HRD)
	Taraboletti	Wadler (HRD)
NAV(s):	Utama / Saunders	Fromm (Blackswift)
FE(s):	Ripp	
	Dittoe	
FD(s):	Englert	
	Carpenter	
SSA:	Richards	
IFT(s):	Underwood	
	Brannigan	
MX:		

MISSION INFORMATION				
sUAS		Dropsondes		
Type	Released	Good	Bad	Sent
S0	1	20	1	20
Other Expendables		Dropsonde Charge Codes		
Type	Released	21 NWS		
		AXBTs		
		Good	Bad	Sent
		9	0	9
Pennies		1x CAT5, 3x CAT4		
Storm ID: (i.e., AL072012)		AL142024		
Mission ID: (i.e., NOAA2 2418A SANDY)		NOAA3 1914A MILTON		

AS REQUIRED BY ORM	Y	N
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		

REMARKS

OBSERVATIONS			
Fix Number	Obs Number	Fix Time	SLP
1	5	1023z	917 mb
2	11	1141z	extrap 923 mb
3	21	1438z	932 mb
4			

*Highlighted items must be completed before departure.

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.

Flight ID:	20241009I1
Flight Director(s):	Englert/Carpenter
Mission:	Tasked/Operational
UWZ.d mean:	0.05

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1002.8	-
Airfield	1003.6	-

This form uses:
_A.nc

SFMR Serial Unit	1

Parameters	Raw				Derived, Corrected & Reference	
✓ Acceleration	✓ AccAXI.1	✓ AccAYI.1	✓ AccAZI.1	✓ AccZfilter-GPS.1	✓ AccZref	
	✓ AccAXI.2	✓ AccAYI.2	✓ AccAZI.2	✓ AccZfilter-GPS.2		
	✓ AccAXI-GPS.1	✓ AccAYI-GPS.1	✓ AccAZI-GPS.1			
	✓ AccAXI-GPS.2	✓ AccAYI-GPS.2	✓ AccAZI-GPS.2			
✓ Altitude	✓ AltGPS.1	✓ AltI-GPS.1	✓ AltPaADDU.1	✓ AltRA.1	✓ ALTref	✓ AltRA1.c
	✓ AltGPS.2	✓ AltI-GPS.2	✓ AltBCADDU.1	✓ AltRA.2	✓ ALTPA.d	✓ AltRA2.c
	X AltGPS.3				✓ ALTGA.d	
	X AltGPS.4					
✓ Ground Speed	✓ GsXI-GPS.1	✓ GsYI-GPS.1	✓ GsZI-GPS.1		✓ GSXref	
	✓ GsXI-GPS.2	✓ GsYI-GPS.2	✓ GsZI-GPS.2		✓ GSYref	
					✓ GSZref	
✓ Location	✓ LatGPS.1	✓ LatI-GPS.1	✓ LonGPS.1	✓ LonI-GPS.1	✓ LATref	
	✓ LatGPS.2	✓ LatI-GPS.2	✓ LonGPS.2	✓ LonI-GPS.2	✓ LONref	
	X LatGPS.3		X LonGPS.3			
	X LatGPS.4		X LonGPS.4			
✓ Pressure Sensors	✓ PDALPHA.1	✓ PQALPHA.1	X PQM.1	✓ PSM.1	✓ PQMref	
	✓ PDALPHA.2	✓ PQBETA.1	✓ PQM.2	✓ PSM.2	✓ PQ.c	
	✓ PDBETA.1		✓ PQM.3	✓ PTM.1	✓ PSMref	
	✓ PDBETA.2		✓ PQM.4		✓ PS.c	
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.1		✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1	✓ PitchRateI.1	✓ RollI.1	✓ RollRateI.1	✓ PITCHref	
	✓ PitchI.2	✓ PitchRateI.2	✓ RollI.2	✓ RollRateI.2	✓ ROLLref	
	inop PitchI.3	inop PitchRateI.3	inop RollI.3	inop RollRateI.3		
✓ Temperature, Dewpoint, Radiometers	✓ TTM.1	X TDM.1	✓ TRadD.1		X TD.c	✓ TTMref
	✓ TTM.2	X TDM.2	✓ TRadS.1		X TDMref	X TA.d
	inop TTM.3	inop TDM.3	inop TRadU.1		X HUM	
✓ Wind and Pressure		X CH 1 TB	X CH 4 TB		✓ UWZ.d	X WS.d
X SFMR	SFMR	X CH 2 TB	X CH 5 TB		X PSURF	X WD.d
		X CH 3 TB	X CH 6 TB		X WS SFMR	X RAIN RATE SFMR

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

QC Key:	
Valid	✓
Errors (see NOTES)	X
Sensor Inoperative	inop

NOTES:

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Dropwindsonde Scientist Log

Storm:	Milton	**Flight ID:**	20241009I1	**Mission ID:**	1914A	**Takeoff:**		**Landing:**	

Dropsonde Scientist(s):	Kaplan	**AVAPS Operator:**	

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.

Storm: <<Milton>> **Flight ID: <<241009I1>>** **Mission ID: << 1914A**

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	233950593	0923	24.47	87.63	999.9	340/29	10			1
Set End of drop at 197.5										
2	233950663	1004	25.59	86.40	993.3	04/44	10			2
3	233950592	1023	24.70	85.00	917.5	175/41	10		Center	3
End of drop at 168.5										
4	233950659	1036	24.69	84.15	989.5	144/50	10			4
End of drop at 197.25										
5	233950664	1049	24.69	83.21	997.3	156/35	10			6
6	X	1120								X
No Launch detect. Not processed/sent.										
7	233950675	1121	26.22	84.80	994.8	38/31	10			7
Back up sonde. Set end of drop at 195.75.										
8	233814600	1131	25.58	84.77	987.5	74/33	10	28.2		8
9	233950670	1143	24.92	84.77	930.6	211/103	10		Eyewall SE	9
This was supposed to be a center drop but storm was tilted so it ended up being near or in the eyewall and was coded/sent as such.										
10	233950700	1157	24.10	84.76	992.5	235/40	10			10
11	233814636	1212	23.16	84.76	998.9	243/36	10			12

12	233950671	1235	23.95	83.36	999.2	203/45	10			13
13	233814526	1246	24.44	83.98	993.5	191/45	10			14
14	233950649	1302	25.23	84.67	946	237/90	10		Close to center	15
This was also supposed to be a center drop but due to tilt of vortex that did not happen. No designation as to its location was made in WMO message.										
15	233814545	1316	25.77	85.39	990.2	360/58	10			16
16	233950702	1328	26.29	86.03	998.4	27/39	10			17
Set end of drop at 195.0. RH below 950 mb suspicious but left values in anyway.										
17	233950668	1414	24.43	85.60	997.9	323/33	10			18
18	233950674	1424	24.94	85.07	991	314/40	10			19
19	233814635	1438	25.74	84.43	932.4	204/7	10	26.3	center	20
20	233950656	1455	25.70	85.55	994.6	349/51	10	28.4		22
21	233950590	1506	25.69	86.31	999.0	11/29	10		Last report	23

AVAPS Drop Log

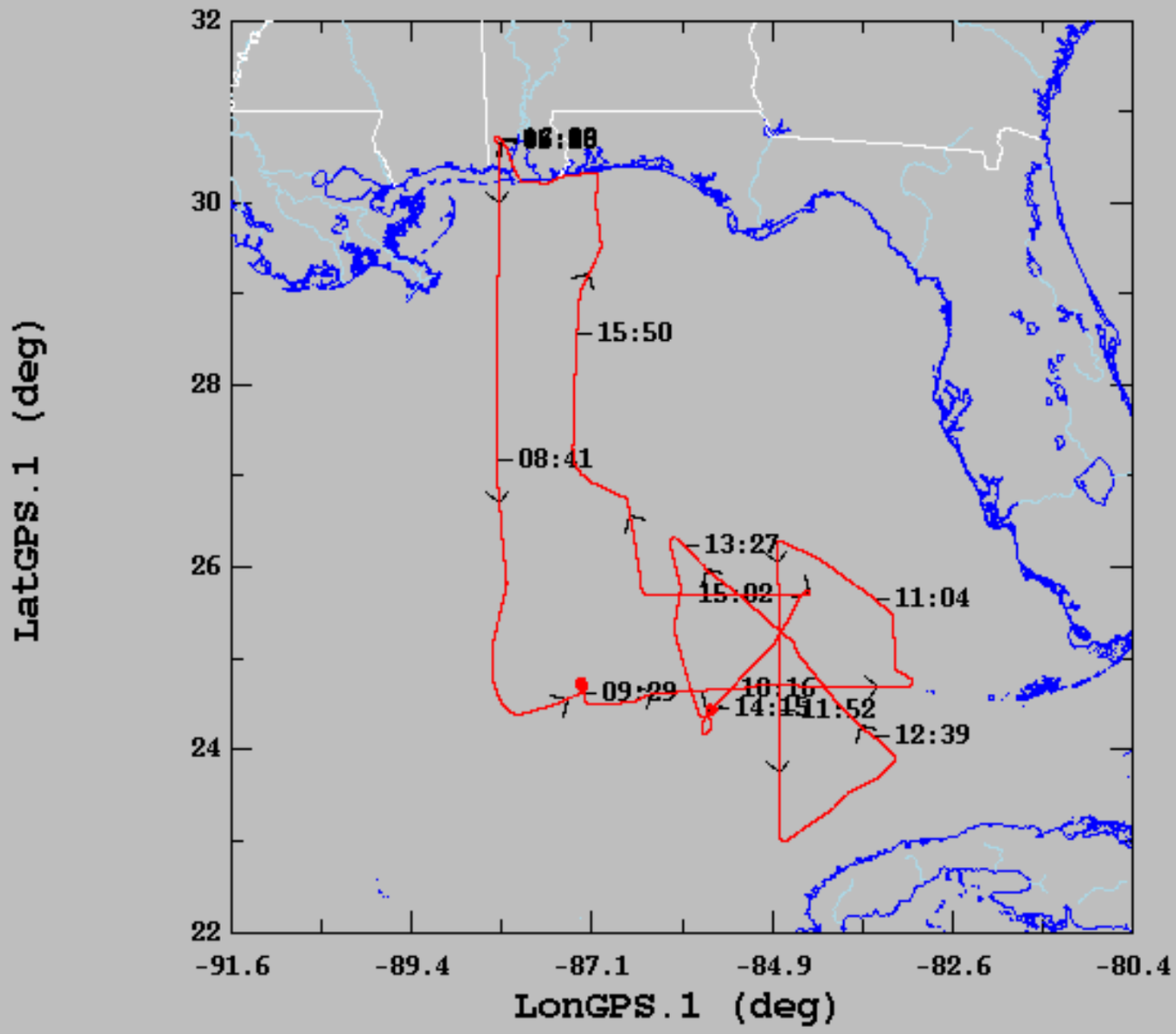
Project: HX2024 Mission: MILTON Flight ID: 20241009I1

Take Off: 0200 Landing: _____ Flt Dir: _____ Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	2339505 93	1	-0.5	0923	THB	NWS	IP1	✓
2	23395066 3	2	-0.2	1004	THB	NWS	MP combo	✓
3	2339505 92	3	-0.3	1023	THB	NWS	CP combo S & S Ø	✓
4	2339506 59	4	-1.0	1036	THB	NWS	MP combo	✓
5	2339506 66	5	-0.5	1049	THB	NWS	EP1	✓
6	2339506 91	6	0	1120Z	NGU		IP2, no launch detect	✗
7	233950675	7	-0.6	1121Z			IP2 backup	✓
8	233814600	8	-0.6	1131Z			MP combo	✓
9	233950670	1	-0.2	1143Z			Center combo	✓
10	233950700	2	-0.9	1157Z			MP combo	✓
11	233814636	3	-0.7	1212Z			EP2	✓
12	233950671	4	-0.5	1235	THB	NWS	IP3	✓
13	233814526	5	-0.6	1246	THB	NWS	MP combo B+	✓
14	233950649	6	-0.6	1302	THB	NWS	CP3	✓
15	233814545	7	-0.6	1316	THB	NWS	MP combo B+	✓
16	233950702	8	-0.6	1328	THB	NWS	EP3	✓
17	233950668	1	-0.3	1414Z	NGU	NWS	IP4	✓
18	233950674	2	-0.4	1424Z			MP	✓
19	233814635	3	-0.4	1438Z			Center, combo	✓
20	233950656	4	-0.4	1455Z			MP, combo	✓
21	233950590	5	-0.5	1506Z			EP4	✓
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

21

10/09/2024, 05:30:51-16:38:04



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	26.97	2.59	22.99	30.73
LonGPS.1 (deg), 1 s/sec	-86.50	1.65	-88.36	-83.12