N43RF ERROR SUMMARY
20240814I1

Flight ID: 20240814I1

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/20240814I1

Local Met Data	Takeoff TBPB (0804Z)	Landing TBPB (1538Z)
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.

PDALPHA.1, PDALPHA.2, PDBETA.1, PDBETA.2 a bit suspicious between ~1405 and ~1429 UTC on transit back to Barbados after completion of the Stratiform Spiral Module

PQM.4 often erroneous at transit altitudes and during the Stratiform Spiral Module between ~1330 and ~1353 UTC; PTM.1 also affected by the module

TDM.1 (TDMref) spikes around 0929 to 0934 UTC and around 1351 to 1357 UTC (TDM.2 also spikes in this period)

These spikes/dropouts in TDM.1 (TDMref) also led to dropouts in TD.c, TDMref, TA.d, HUM, TAS.d, UWZ.d, WS.d, WD.d, and PSURF

SFMR TB, WS SFMR, and RAIN RATE SFMR data should be used with caution as additional assessment occurs

Expendable Type	# deployed	# good	# transmitted

Dropsondes	16	16	16
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Englert/Zawislak
Phone #: 305-707-4359

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION

FLT ID:	20240814I1	**FLT #:**	FY24-
From:	TBPB	**ETD:**	0400L / 0800Z
To:	TBPB	**ETA:**	1215L / 1515Z
Block Time		**Flight Time**	
In:	15:43	Land:	15:38
Out:	07:51	T/O:	08:04
Total:	7.9	Total:	7.6
Sponsoring Org:	NWS		
Program:	PRX		
Purpose:	TDR Mission		

CREW MANIFEST

AC:	Doremus	**Scientists:**
CP(s):	Palmer	Marks (HRD)
	Reeves	Sippel (HRD)
NAV:	Miller / Meier	
FE(s):	Tyson / Wysinger	
	Ripp	
FD(s):	Zawislak	
	Englert	
SSA:	Richards, T	**Visitors:**
AVAPS:	Paul, S / Hollis	
SEB:		
MX:		

MISSION INFORMATION

Pressure		Dropsondes		
		Good	Bad	Sent
A/C Takeoff	1007.9	16	0	16
ASOS Takeoff	1007.9	**BTs**		
		Good	Bad	Sent
A/C Land	-	0	0	0
ASOS Land	1009.8			
Storm Number ID: (ie: AL072012)		AL052024		
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)		NOAA3 1005A ERNESTO		

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		X

REMARKS

OBSERVATIONS

Fix Number	Obs Number	Fix Time	SLP
1			
2			
3			
4			
Pennies:	3 x HU (Cat1)		

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

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

Flight ID:	20240814I1
Flight Director(s):	Englert / Zawislak
Mission:	Tasked/Operational
UWZ.d mean:	0.07

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1007.9	Not reported
Airfield	1007.9	1009.8

This form uses:
_A.nc

SFMR Serial Unit	2

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
	inop AltGPS.3				✓ ALTGA.d	
	inop 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	
	inop LatGPS.3		inop LonGPS.3			
	inop LatGPS.4		inop LonGPS.4			
✓ Pressure Sensors	X PDALPHA.1	✓ PQALPHA.1	✓ PQM.1	✓ PSM.1	✓ PQMref	
	X PDALPHA.2	✓ PQBETA.1	✓ PQM.2	✓ PSM.2	✓ PQ.c	
	X PDBETA.1		✓ PQM.3	✓ PTM.1	✓ PSMref	
	X PDBETA.2		X PQM.4		✓ PS.c	
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.1		✓ IAS.d	X 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 ✓ SFMR	SFMR	X CH 1 TB	X CH 4 TB		X UWZ.d	X WS.d
		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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AVAPS Drop Log

Project: HX24 Mission: TS ERNESTO Flight ID: 20240814I1

Take Off: _____ Landing: _____ Flt Dir: ENGLERT/JZ Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	23741335	1	-0.2	93713	DSH	NWS	IP1	✓
2	232320079	2	-0.5	100315	DSH	NWS	MP1	✓
3	232320051	3	-0.5	102333	DSH	NWS	CP1	✓
4	230931825	4	-0.4	103554	DSH	NWS	MP2	✓
5	232051002	1	-0.6	104631	DSH	NWS	EP1	✓
6	232030153	2	-0.7	110917	DSH	NWS	IP2	✓
7	233640779	3	-0.3	112205	DSH	NWS	MP3	✓
8	240610546	4	-0.1	113536	DSH	NWS	CP2	✓
9	233640798	1	-0.2	115414	DSH	NWS	MP4	✓
10	233560361	2	-0.3	120113	DSH	NWS	EP2	✓
11	230351608	3	-0.3	122653	DSH	NWS	IP3	✓
12	235124008	4	-0.2	124105	DSH	NWS	MP5	✓
13	234150035	1	-0.5	125610	DSH	NWS	CP3	✓
14	233640819	2	-0.4	131518	DSH	NWS	MP6	✓
15	240454202	3	-0.2	132420	DSH	NWS	EP3	✓
16	232050894	4	-0.6	134324	DSH	~~NWS~~	HRD, SPIRAL	✓
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

Dropwindsonde Scientist Log

Storm:	ERNESTO	**Flight ID:**	20240814I1	**Mission ID:**	1005A	**Takeoff:**	0804	**Landing:**	1538Z

Dropsonde Scientist(s):	Sellwood	**AVAPS Operator:**	Paul

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.

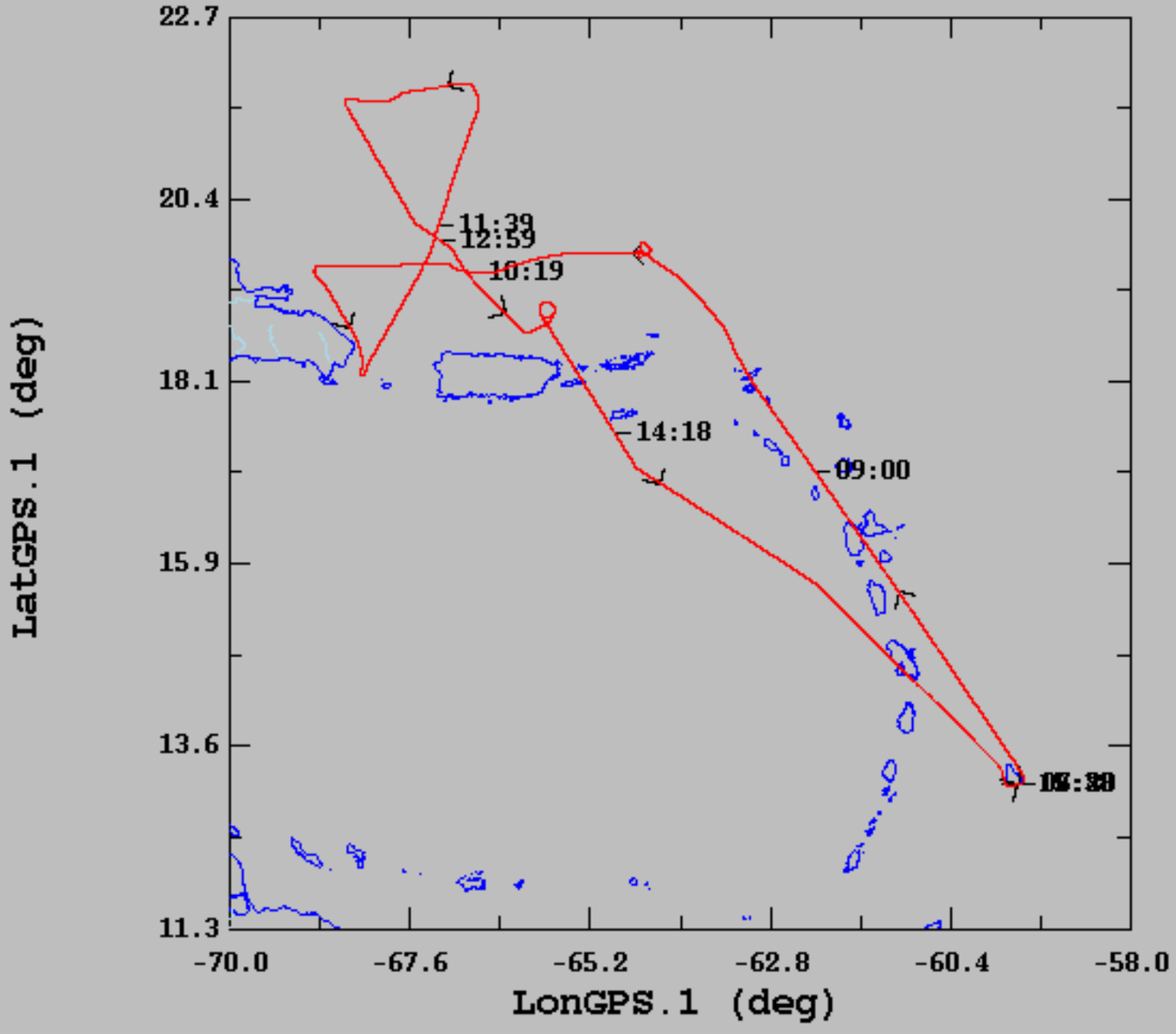
Once "science is complete"...

✓ 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	231741335	0937	19.75	-64.47	1011	155/27	10		IP E	1
Comments: no manual QC										
2	232320079	1003	19.72	-65.65	1007	155/49	10		MID E	2
Comments: moved midpoint to target saildrone set end time 1 frame up										
3	232320051	1023	19.61	-67.06	992	185/17	10		CENTER	3
Comments: removed an extra 4 seconds (10 total) of T and RH at top for slow equilibration										
4	230931825	1035	19.61	-67.98	1003	355/31	10		MID W	4
Comments: set end 1 frame up removed up to 10s T and RH dry air at 750mb										
5	232051002	1046	19.60	-68.78	1006	015/16	10		EP W	5
Comments: no manual QC										
6	232030153	1109	18.27	-68.18	1007	265/17	10		IP SW	7
Comments: removed first 10s T and RH set end 1 frame up										
7	233640779	1122	19.05	-67.74	1003	285/19	10		MID SW	8
Comments:										
8	240621546	1135	19.87	-67.28	994	015/39	10		CENTER	9
Comments: set end 1 frame up starting to look like an eye strong subsidence/warming CPA to avoid high reflectivity deep cloud tops (eyewall forming?)										
9	233640798	1154	21.08	-66.87	1007	095/40	10		MID NE	10
Comments: set end 2 frames up low-level dry air entrainment										
10	233560361	1201	21.55	-66.69	1010	110/35	10		EP NE	11
Comments: no manual QC very dry throughout sounding										

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	230351608	1226	21.63	-68.45	1010	075/24	10		IP NW	12
Comments: no manual QC very dry throughout sounding										
12	235124008	1241	20.85	-67.96	1003	N/A	N/A		MID NW	13
Comments: fast fall removed all winds thermo looked good enough to transmit										
13	234150035	1256	20.04	-67.36	993	230/17	10		CENTER	14
Comments: no manual QC										
14	233640819	1315	19.16	-66.48	1007	195/41	10		MID SE	15
Comments: no manual QC interesting wind shift at 875mb										
15	240454202	1324	18.78	-66.08	1010	170/29	10		EP SE	16
Comments: set end 2 frames up similar 10deg eastward wind shift near surface as previous drop										
16	232050894	1344	19.14	-65.76	1010	160/40	10		spiral	17
Comments: Last drop sent by FD set end 487.75 removed first 10s of T and RH										
Comments:										
Comments:										
Comments:										
Comments:										

08/14/2024, 06:20:48-15:38:25



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	17.30	2.92	13.05	21.88
LonGPS.1 (deg), 1 s/sec	-63.95	3.28	-68.86	-59.40