N43RF ERROR SUMMARY
20240813I1_ES

Flight ID: 20240813I1

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/20240813I1

Local Met Data	Takeoff TBPB (0841Z)	Landing TBPB (1649Z)
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 & AltGPS.4 dropout 1241 - 1251z.
Erroneous spike in TDM.1 at 1020z causing spike in TD.c and TDMref.
SFMR data (all channel TB, WS, RAIN RATE) under assessment and should be used with caution.

Expendable Type	# deployed	# good	# transmitted
Dropsondes	24	24	24
Test sondes	0	0	0
AXBTs	5	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Englert/Zawislak
Phone #: 863-606-6847

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION

FLT ID:	20240813I1	FLT #:	
From:	TBPB	ETD:	0430L / 0830Z
To:	TBPB	ETA:	1100L / 1500Z

Block Time		Flight Time	
In:	16:57	Land:	16:49
Out:	8:33	T/O:	8:42
Total:	8.4	Total:	8.1

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		24	0	24
ASOS Takeoff		BTs		
		Good	Bad	Sent
A/C Land		0	5	0
ASOS Land				

Storm Number ID: (ie: AL072012)	AL052024
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	NOAA3 0505A ERNESTO

AS REQUIRED BY ORM

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	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	15 54 57N / 61 24 42W	0936Z	NA - over land
2	16 15 38N / 62 02 40W	1112Z	1009 mb, 325/9 kts
3	16 21 00N / 62 34 12W	1443Z	1008 mb , 160/24 kts
4	17 06 22N / 62 43 15W	1529Z	VAM - no sonde
Pennies:	6 x TS		

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

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

Flight ID:	20240813I1
Flight Director(s):	Englert/Zawislak
Mission:	Tasked/Operational
UWZ.d mean:	0.09

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1004.8	-
Airfield	1004.9	1007.4

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
	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	✓ 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,	✓ TTM.1	X TDM.1	✓ TRadD.1		X TD.c	✓ TTMref
Radiometers	✓ TTM.2	✓ TDM.2	✓ TRadS.1		X TDMref	✓ TA.d
	inop TTM.3	inop TDM.3	inop TRadU.1		✓ HUM	
✓ Wind and Pressure		X CH 1 TB	X CH 4 TB		✓ UWZ.d	✓ WS.d
✓ SFMR	SFMR	X CH 2 TB	X CH 5 TB		✓ PSURF	✓ 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:
Pitch and Roll I.3, TTM.3, TDM.3, and TRadU.1 not operational.
AltGPS.3 & AltGPS.4 dropout 1241 - 1251z.
Erroneous spike in TDM.1 at 1020z causing spike in TD.c and TDMref.
SFMR data (all channel TB, WS, RAIN RATE) under assessment and should be used with caution.

AVAPS Drop Log

Project: HX24 Mission: TS Ernesto Flight ID: ______

Take Off: ______ Landing: ______ Flt Dir: Engleman/J Launcher S/N: ______

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	233 221 001	1	-0.5	0918	SCP	NWS	~~[illegible]~~ ACS - IP1	✓
2	240 650 242	2	-0.6	0929	SCP	NWS	ACS, MP, d ACS[illegible]	✓
3	240 650 244	3	-0.3	0948	SCP	NWS	ACS, MP	✓
4	233 710 365	4	-0.8	1014	SCP	NWS	~~[illegible]~~ EP1	✓
5	240 454 112	1	-0.3	1044	SCP	NWS	ACS ~~[illegible]~~ IP2	✓
6	234 710 760	2	-1.0	1057	SCP	NWS	ACS, MP	✓
7	240 610 526	3	-0.4	1112	SCP	NWS	ACS, C2	✓
8	240 610 527	4	-0.6	1125	SCP	NWS	ACS, MP	✓
9	240 454 201	1	-0.6	1136	SCP	NWS	ACS, EP2	✓
10	240 650 241	2	-0.5	1145	SCP	ONR	ACS,	✓
11	230 350 130	3	-0.7	1158	SCP	NWS	ACS, IP3	✓
12	240 610 557	4	-0.1	1212	SCP	NWS	ACS, MP	✓
13	240 610 528	1	-0.4	1224	SCP	NWS	ACS, CP3	✓
14	240 650 254	2	-0.1	1236	SCP	NWS	ACS, MP	✓
15	240 610 524	3	-0.5	1249	SCP	NWS	ACS, EP3	✓
16	240 650 257	4	-0.4	1324	SCP	NWS	ACS IP4	✓
17	239 220 161	1	-1.2	1342	SCP	NWS	ACS MP	✓
18	240 610 470	2	Ø	1349	SCP	NWS	ACS CP4	✓
19	233 710 362	3	-0.8	1403	SCP	NWS	ACS MP	✓
20	233 340 984	4	-0.6	1415	SCP	NWS	EP4	✓
21	233 221 005	1	-0.4	1432	SCP	NWS	ACS MP	✓
22	233 410 951	2	-0.7	1445	SCP	NWS	ACS CP5	✓
23	233 550 537	3	-0.8	1453	SCP	NWS	ACS MP	✓
24	240 444 982	4	-0.5	1504	SCP	NWS	ACS EP5	✓
25			-0.3					
26								
27								
28								
29								
30								
31								

+10
9 unable to locate act [illegible]
reset power

Dropwindsonde Scientist Log

Storm:	ERNESTO	**Flight ID:**	202408131	**Mission ID:**	0505A	**Takeoff:**	0442	**Landing:**	HHMMZ

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	233221001	0918	15.08	-60.56	1010	185/21	10		IP SE	1
Comments: set end 1 frame up										
2	240650242	0929	15.65	-61.14	1008	185/15	10		MID SE	2
Comments: no manual QC										
3	240650244	0948	16.56	-62.04	1008	020/18	10		MID NW	3
Comments: no center drop/over land										
4	233710365	1014	16.82	-63.17	1008	025/18	10		EP NW	4
Comments: south of planned endpoint										
5	240454112	1044	14.95	-63.40	1010	025/07	10		IP SW	5
Comments: north of planned IP no manual QC dropped to 8k ft to deconflict with USAF										
6	234710760	1057	15.62	-62.82	1010	085/02	10		MID SW	6
Comments: no manual QC										
7	240610526	1112	16.25	-62.06	1009	325/09	10		CENTER	7
Comments: no manual QC										

8	240610527	1125	16.87	-61.43	1008	120/30	10		MID NE	8
Comments: no manual QC										
9	240454201	1136	17.41	-60.86	1010	140/35	10		EP NE	9
Comments: no manual QC										
10	240650241	1145	17.67	-61.49	1009	100/25	10		MP of DWL	10
Comments: extra drop in sensitive area for ONR midpoint of N DW leg partial fast fall removed 100s of wind										

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	230350130	1158	18.11	-62.33	1010	105/26	10		EP N	11
Comments: returned to 10k ft altitude										
12	240610557	1212	17.15	-62.29	1007	065/15	10		MID N	12
Comments: set end 241.75 looks to be slightly above surface GPS=20m lowest surface pressure yet										
13	240610528	1224	16.28	-62.12	1009	195/18	10		CENTER	13
Comments: set end 246.0 wind jump near surface/tilted										

14	240650254	1236	15.53	-62.11	1011	185/26	10		MID S	14
Comments: no manual QC										
15	240610524	1249	14.57	-62.11	1013	160/24	10		EP S	15
Comments: no manual QC										
16	240650257	1324	16.34	-60.69	1011	175/38	10		IP E	17
Comments: no manual QC										
17	234220161	1342	16.32	-62.03	1009	180/41	10		MID E	18
Comments:										
18	240610470	1349	16.32	-62.50	1008	205/25	10		CENTER	19
Comments: do not mark as center did not get clear wind shift										
19	233710362	1403	16.39	-63.50	1010	010/05	10		MID W	20
Comments:										
20	233340984	1415	16.39	-64.38	1010	025/10	10		EP W	21
Comments: end of TDR pattern										

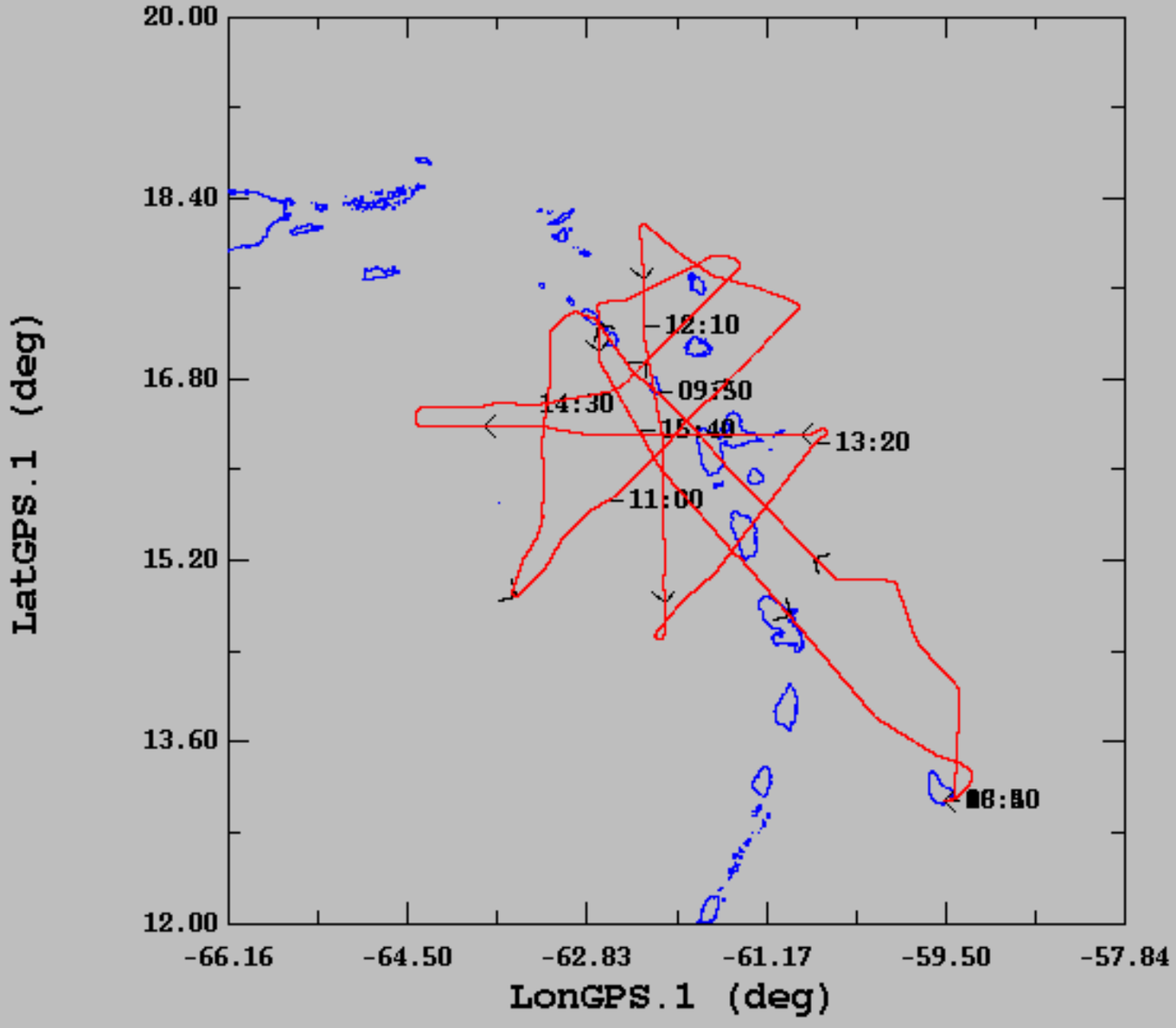
Drop #	Sonde ID	Time UTC	Lat (°N/S)	Lon (°E/W)	Sfc Pressure (mb)	Lowest Wind Direction/Speed (deg/kt)	Lowest Wind Height (m)	AXBT SST (°C)	Eye, Eyewall, Rainband, etc.	Ob #
21	233221005	1432	16.57	-63.34					MID W (inbound)	22
Comments: start of combination VAM and request from Carcah to sample NE quadrant again - E to midpoint NE to center out to NE 90mn DW to N and back to center spotty data + stopped above surface set end to 165 and set heights missing data above looked good enough to transmit										
22	233410951	1445	16.79	-62.45	1008	160/24	10		CENTER	23
Comments:										
23	233550537	1453	17.24	-61.97	1010	155/28	10		MID NE	24
Comments:										
24	240444982	1504	17.76	-61.43	1011	165/43	10		EP NE	25
Comments: Last report marked set end 2 frames up										
Comments:										
Comments:										
Comments:										

Comments:										
Comments:										
Comments:										

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 #**
Comments:										
Comments:										
Comments:										

Comments:										
Comments:										
Comments:										
Comments:										
Comments:										
Comments:										
Comments:										

08/13/2024, 08:40:37-16:50:59



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	15.98	1.21	13.07	18.17
LonGPS.1 (deg), 1 s/sec	-61.85	1.19	-64.42	-59.24