N42RF ERROR SUMMARY
20240813H1

Flight ID: 20240813H1

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/20240813H1

Local Met Data	Takeoff TBPB (1953Z)	Landing TBPB (1704Z)
Dynamic Corrections		Yes
AttackAngleIntercept		2.32804
AttackAngleSlope		6.09319
SlipAngleIntercept		0.25
SlipAngleSlope		6.641
AttackAngleIntercept2		2.06219
AttackAngleSlope2		5.99068
SlipAngleIntercept2		0.125
SlipAngleSlope2		6.9873

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.

I.3 for Pitch and Roll, TTM.3, and TDM.3 not operational.
TRadU.1 has erroneous data throughout the flight and should not be used.
PDALPHAref, PDBETAref, PQALPHAref, PQBETAref, and DPJ_WSZ are not provided since _AC file is not produced; all other "C" file parameters checked are from the _A file.
PQM.4 has large negative spikes during transit legs. Data representative in storm
PTM.1 inop
TDM.1 has two large spikes during descent/ascent out of storm environment. Data representative in storm
SFMR TB, WS SFMR, and RAIN RATE SFMR data should be used with caution as additional assessment occurs

Expendable Type	# deployed	# good	# transmitted
Dropsondes	17	17	17
Test sondes	0	0	0
AXBTs	5	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: KALEN
Phone #: 863-500-3962

ACAT-4 Version = 7.4

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N42RF Manifest

FLIGHT INFORMATION

FLT ID:	20240813H1	FLT #:	
From:	TBPB	ETD:	1615L / 2015Z
To:	TBPB	ETA:	2345L / 0345Z
Block Time		Flight Time	
In:	3:11	Land:	3:07
Out:	19:49	T/O:	19:53
Total:	**7.4**	Total:	**7.2**
Sponsoring Org:	NWS		
Program:	PRX		
Purpose:	TDR ERNESTO		

CREW MANIFEST

AC:	Abitbol	**Scientists:**
CP(s):	Wood	Aberson (HRD)
	Taraboletti	Chang (NESDIS)
NAV:	Utama / Dunford	Jelenak (NESDIS)
FE(s):	Stokes	Sapp (NESDIS)
	Dittoe	
FD(s):	Kalen	
SSA:	McAlister	**Visitors:**
AVAPS:	Keller / Underwood	
SEB:		
MX:		

MISSION INFORMATION

Pressure		Dropsondes		
		Good	Bad	Sent
A/C Takeoff		17	0	17
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)		**NOAA2 0805A 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	5	21:21Z	999 mb
2			
3			
4			
Pennies:			

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - no mission impact.

Flight ID:	20240813H1
Flight Director(s):	Kalen
Mission:	Tasked/Operational
UWZ.d mean:	0.18

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1009.1	-
Airfield	1006.9	1009.9

This form uses:
_A.nc

SFMR Serial Unit	3

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
	✓ AltGPS.3				✓ ALTGA.d	
	✓ 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	
	✓ LatGPS.3		✓ LonGPS.3			
	✓ LatGPS.4		✓ 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	x 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	✓ TDM.1	✓ TRadD.1		✓ TD.c	✓ TTMref
Radiometers	✓ TTM.2	✓ TDM.2	✓ TRadS.1		✓ 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:
I.3 for Pitch and Roll, TTM.3, and TDM.3 not operational.
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AVAPS Drop Log

Project: 24 Hurricanes Mission: TS Ernesto Flight ID: 20240813H1

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

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	23364125S	1	-0.4	2057Z	NGU	NWS	IP1, combo	✓
2	232020908	2	-1.1	2109Z	"	"	MP	✓
3	234220481	3	+0.1	2121Z	"	"	Center, combo	✓
4	233220201	4	-0.5	2134Z	"	"	MP	✓
5	233350129	5	-0.8	2147Z	↓	↓	EP1, combo	✓
6	233824635	6	-0.6	2211	RK	NWS	IP2 / combo	✓
7	240620515	7	-0.6	2220	RK	NWS	MP	✓
8	232050558	8	-1.0	2245	RK	NWS	MP	✓
9	235124005	1	-1.1	2253	RK	NWS	EP2 / combo	✓
10	233824634	2	-0.5	2312Z	NGU		IP3	✓
11	235051112	3	-0.3	2323Z	"		MP	✓
12	234220159	4	-0.8	2353Z	"		MP	✓
13	232051004	5	-0.8	0004Z	"		EP3	✓
14	234220169	6	-1.1	0030	RK		IP4	✓
15	232210062	7	0	0042	RK		MP	✓
16	233460215	8	-0.8	0108	RK		MP	✓
17	232050997	1	-1.6	0120	RK		EP4	✓
18								
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ACS

ACS

ACS

Dropwindsonde Scientist Log

Storm:	ERNESTO	**Flight ID:**	240813H1	**Mission ID:**	0805A	**Takeoff:**	1953z	**Landing:**	Z

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.

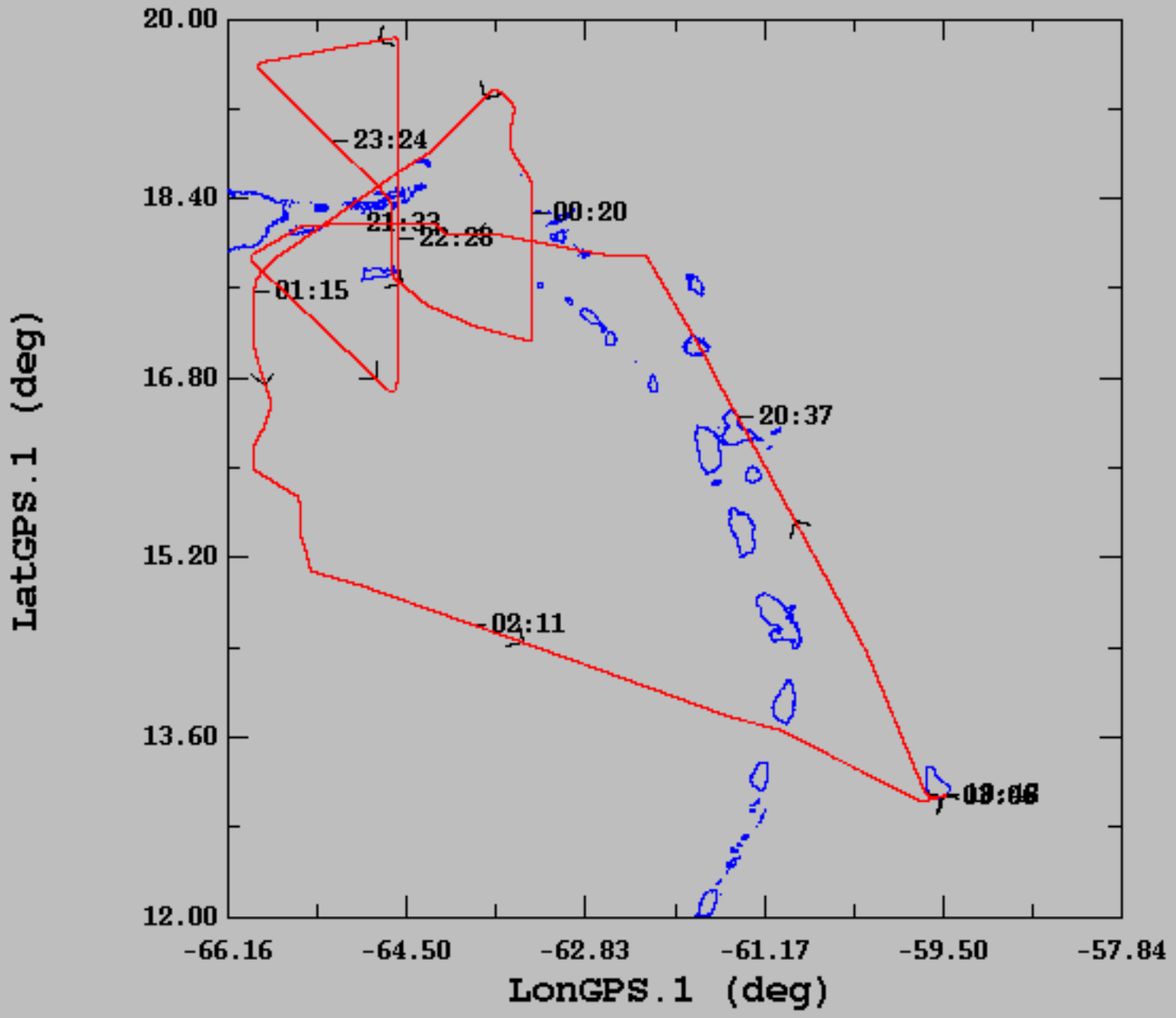
Storm: <<STORM NAME>> **Flight ID: <<YYYYMMDDA#>>** **Mission ID: <<WXWXA>>**

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	233641255	205742	17.89	62.36	1009.8	145/28	10			1
2	232020908	210901	18.00	63.25	1007.1	169/37	10			2
3	234220481	212155	18.16	64.20	999.1	207/13	10		Center sonde	3
	Changed end time <0.5 s sec than ASPEN initial value.									
4	233220201	213416	18.16	65.15	1006.2	09/21	10			4
	Changed end time to 258.0 s									
5	233350129	214729	17.76	65.84	1006.6	07/14	10			6
6	233824635	221142	16.83	64.57	1007.2	160/22	10		Endpoint S.	8
7	240620515	222055	17.48	64.57	1005.3	202/14	10		Midpoint S	9
8	232050558	224549	19.20	64.56	1006.7	99/34	10			10
9	235124005	225328	19.75	64.56	1007.7	97/28	10			11
	Changed end time to 263.0 GPH went negative and initial pressure seemed too high.									
10	233824634	231241	19.46	65.77	1008.9	64/27	10			12
Comments: End time set to 260.0										

Storm: <<STORM NAME>> **Flight ID: <<YYYYMMDDA#>>** **Mission ID: <<WXWXA>>**

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	225051112	232313	18.96	65.24	1006.4	57/25	10			13
12	234220159	235301	17.38	64.15	1008.2	174/45	10			14
Set end time to 240.5 s.										
13	232051004	000442	17.14	63.42	1010.2	196/35	10			15
14	234220169	003626	19.30	63.75	1010.7	118/30	10			16
Set end of drop at 262.75 s.										
15	232210062	004245	19.0	64.07	1008.8	154/40	10			17
Set end of drop at 255.5 s.										
16	233460215	010824	17.95	65.57	1006.1	270/18	10			18
17	232050999	012003	17.23	65.91	1008.0	226/19	10			19
Comments:										

08/13/2024, 18:46:24-27:06:54



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	16.43	2.21	13.03	19.83
LonGPS.1 (deg), 1 s/sec	-63.15	2.23	-65.94	-59.48