N43RF ERROR SUMMARY
20240701I1

Flight ID: 20240701I1

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/2024/MET/20240701I1

Local Met Data	Takeoff TISX (0758Z)	Landing TISX (2021Z)
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.

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.1 trending ~10 mb high
PDALPHA.1 and PQALPHA.1 large spike data during climb and descent during stratiform spiral module
PQM.4 shows large negative spike on descent during the stratiform spiral module
TTM.2 unrepresentative during higher altitudes during stratiform spiral module
TDM.2 large spike during second eye wall pass - this effects TD.c
TDM.1 & TDM.2 large spike during third eye wall pass - this effects TD.c
All derived variables (except IAS.d) share the same drop out in data when TDM.2 flat lines at ~38 deg C
SFMR data inop between 11:33 - 11:39 due to flying over land

Expendable Type	# deployed	# good	# transmitted
Dropsondes	22	22	22
Test sondes	0	0	0
AXBTs	0	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 - N43RF Manifest

FLIGHT INFORMATION

FLT ID:	20240701I1	FLT #:	
From:	TISX	ETD:	0800Z
To:	TISX	ETA:	1600Z

Block Time		Flight Time	
In:	14:58	Land:	14:55
Out:	7:52	T/O:	7:59
Total:	7.1	Total:	6.9

Sponsoring Org:	NWS
Program:	PRX
Purpose:	HURRICANE BERYL TDR

CREW MANIFEST

AC:	DOREMUS	Scientists:
CP(s):	WOOD	ZHANG, J.
	TARABOLETTI	SELLWOOD
NAV:	SCHAEFER / MEIER	
FE(s):	TYSON	
	WYSINGER / RIPP	
FD(s):	KALEN	
SSA:	RICHARDS, T.	Visitors:
AVAPS:	PATEL / SANTONI	GRIMES (OBS)
		MORENO (OBS)
SEB:		
MX:		

MISSION INFORMATION

Pressure		Dropsondes		
		Good	Bad	Sent
A/C Takeoff		22 (1 SKYFORA)	0	22
ASOS Takeoff		BTs		
		Good	Bad	Sent
A/C Land		-	-	-
ASOS Land				

Storm Number ID: (ie: AL072012)	AL022024
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)	NOAA3 0502A BERYL

OBSERVATIONS

Fix Number	Obs Number	Fix Time	SLP
1	14	1104Z	960 MB
2			
3			
4			
Pennies:	3, CAT 4		

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

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Major instrument issue(s) - significant mission impact.

Flight ID:	20240701I1
Flight Director(s):	Kalen
Mission:	Tasked/Operational
UWZ.d mean:	0.09

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1012.7	1014.2
Airfield	1011.6	1012.0

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	✓ PTM.1	✓ PSMref	
	✓ PDBETA.2		✓ 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,	✓ TTM.1	✓ TDM.1	✓ TRadD.1		x TD.c	✓ TTMref
Radiometers	✓ TTM.2	x TDM.2	✓ TRadS.1		x TDMref	x TA.d
	inop TTM.3	inop TDM.3	inop TRadU.1		✓ HUM	
✓ Wind and Pressure		✓ CH 1 TB	✓ CH 4 TB		✓ UWZ.d	x WS.d
✓ SFMR	SFMR	✓ CH 2 TB	✓ CH 5 TB		x PSURF	x WD.d
		✓ CH 3 TB	✓ CH 6 TB		✓ WS SFMR	✓ 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:
PQM.1 trending ~10 mb high
PDALPHA.1 and PQALPHA.1 large spike data during climb and descent during stratiform spiral module
PQM.4 shows large negative spike on descent during the stratiform spiral module
TTM.2 unrepresentative during higher altitudes during stratiform spiral module
TDM.2 large spike during second eye wall pass - this effects TD.c
TDM.1 & TDM.2 large spike during third eye wall pass - this effects TD.c
All derived variables (except IAS.d) share the same drop out in data when TDM.2 flat lines at ~38 deg C
SFMR data inop between 11:33 - 11:39 due to flying over land

AVAPS Drop Log

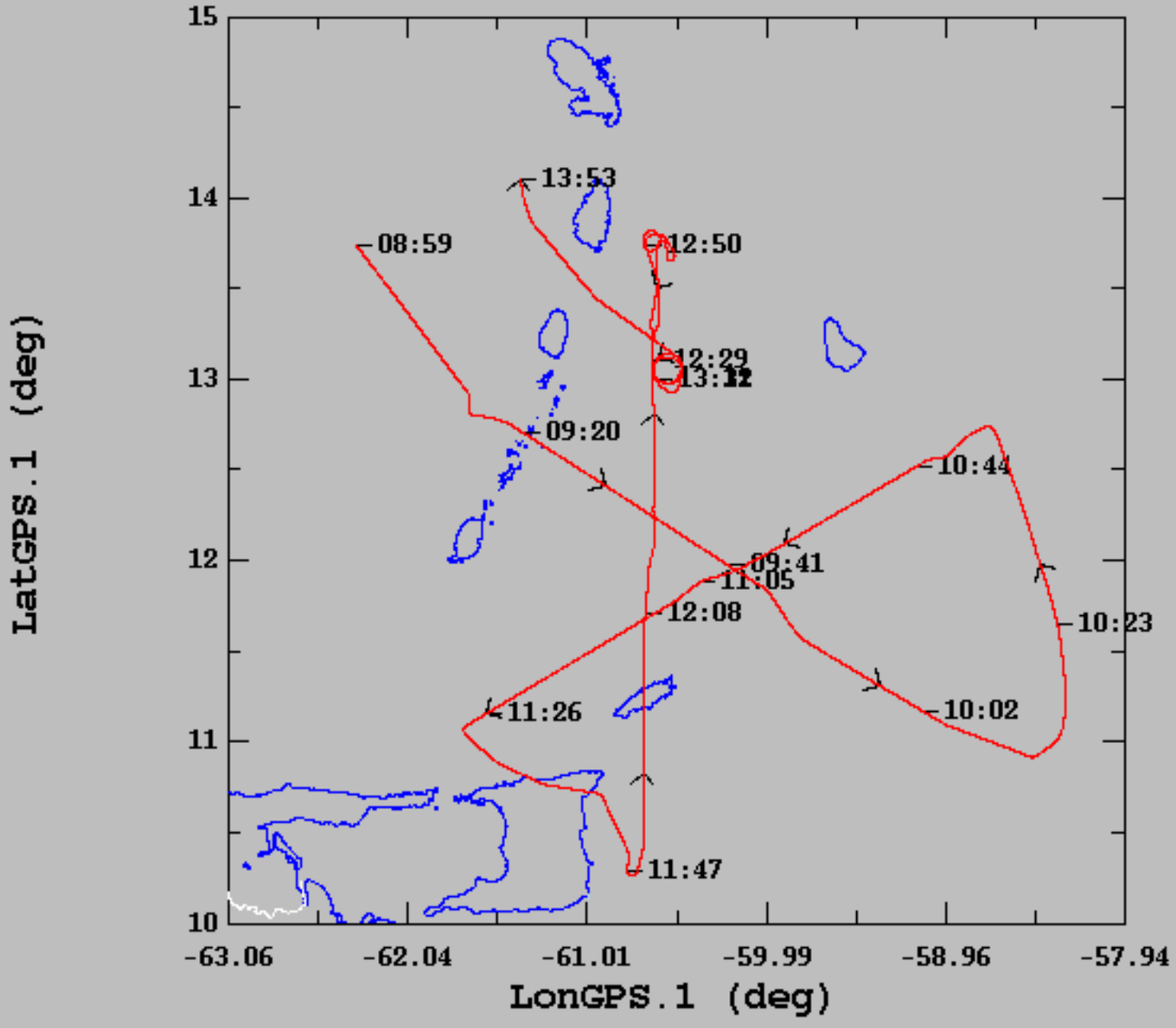
Project: Hurricane Mission: Hurr. Beryl Flight ID: 20240701I1

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

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	2217502221	1	-1.2	0914	ASR	NWS	IP1	
2	2225220308	2	-0.1	0932	ASR			
3	222070568	3	-0.5	0942	AJP		RMW	
4	2225 20373	4	-0.5	0945	AJP		Center	
5	221711294	5	-0.5	0948	AJP		RMW	
6	2217 50323	6	-0.7	1000	AJP			
7	2217 30487	7	-0.6	1012	AJP		Exit Point 1	
8	222350054	8	-0.3	1038	AJP			
9	221730319	1	-0.4	1056	AJP			
10	222350120	2	-1.1	1100	AJP			
11	222020993	3	-0.4	1104	AJP			
12	221410029	4	-1.2	1106	AJP			
13	221730330	5	-0.4	1119	AJP			
14	222020520	6	-0.6	1124	AJP			
15	221350573	7	-0.7	1150	AJP			
16	221430468	8	-0.9	1157	AJP			
17	221711270	1	-0.2	1211	AJP			
18	221420513	2	-1.2	1213	AJP			
19	221640554	3	-0.9	1226	AJP			
20	221750194	4	-1.1	1216	AJP			
21	222350118	5	-0.6	1236	AJP			
22	222020989	6	-0.5	1321	AJP	HRD		
23								
24								
25								
26								
27								
28								
29								
30								
31								

— StreamSonde 1(x)

07/01/2024, 08:59:00-13:53:06



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	12.26	0.96	10.26	14.11
LonGPS.1 (deg), 1 s/sec	-60.39	0.93	-62.32	-58.28