

N49RF ERROR SUMMARY
20240924N1

Flight ID: 20240924N1

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	AccZI.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/20240924N1

Local Met Data	Takeoff KLAL (0530Z)	Landing KLAL (1114Z)
Dynamic Corrections		Yes
AttackAngleIntercept		4.95911
AttackAngleSlope		5.43613
SlipAngleIntercept		1.06
SlipAngleSlope		6.97813
AttackAngleIntercept2		5.05753
AttackAngleSlope2		5.52397
SlipAngleIntercept2		0.931
SlipAngleSlope2		6.57562

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.
GPS.1 & GPS.2 parameters stair step slightly
PDBETA.1, PQBETA.1 and .2 inop
TDM.1 trends warm
Humidity and Wind data suspect

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	23	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 / TIMMERS

Phone #: 863-500-3962

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20240924N1	FLT #:		AC:	Varwig	Other Crew:	sUAS		Dropsondes		
From:	KLAL	ETD:	0530Z	CP(s):	Pawlenko		Type	Released	Good	Bad	Sent
To:	KLAL	ETA:	1330Z				-	-	22	1	22
Block Time		Flight Time		NAV(s):			-	-			
Out:	05:19	T/O:	05:31	FE(s):			Other Expendables		Dropsonde Charge Codes		
							Type	Released	NWS		
In:	11:20	Land:	11:14	FD(s):	Kalen		-	-	AXBTs		
					Timmers		-	-	Good	Bad	Sent
Total:	6.0	Total:	5.7	SSA:	Defeo		-	-	-	-	-
					Patel		-	-			
Sponsoring Org:		NWS		IFT(s):	Hollis		Pennies		-		
Program:		PHS						Storm ID: (i.e., AL072012)		AL092024	
Purpose:		PTC09 Synoptic Surveillance		MX:			Mission ID: (i.e., NOAA2 2418A SANDY)		NOAA9 0309A SURV		
AS REQUIRED BY ORM			Y	N	REMARKS		OBSERVATIONS				
VOLCANIC ASH				x	Drop 20 died half way down (22,000 ft).		Fix Number	Obs Number	Fix Time	SLP	
SCIENCE MISSION WITHIN BDRY LAYER				x	Convection was near sonde, but sonde was not		1				
LACK OF PRECIPITATION				x	in convection.						
RELATIVE HUMIDITY ≥ 80%				x			2				
LARGE AIR-SEA TEMP GRADIENT				x	Ended inner circum nav early due to "hydraulic						
HIGH SURFACE WINDS				x	quantity light" staying illuminated.		3				
LONG FETCH / DURATION OF SFC WND				x							
SEA SALT ACCRETION FORECAST				x			4				
SEA SALT ACCRETION OBSERVED											
*Highlighted items must be completed before departure.											

G-IV QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.
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Flight ID:	20240924N1
Flight Director(s):	Kalen / Timmers
Mission:	Tasked/Operational
UWZ.d mean:	-0.11

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1010.9	1011.0
Airfield	1008.5	1008.8

This form uses:
_A.nc

Parameters	Raw					Derived, Corrected & Reference	
✓ Acceleration	✓ AccAXI.1	✓ AccAYI.1	✓ AccAZI.1	✓ AccZI.1		✓ AccZref	
	✓ AccAXI.2	✓ AccAYI.2	✓ AccAZI.2	✓ AccZI.2			
	✓ AccAXI.3	✓ AccAYI.3	✓ AccAZI.3	✓ AccZI.3			
✓ Altitude	✓ AltGPS.1	✓ AltI.1	✓ AltPaADDU.1	✓ AltBCADDU.1		✓ ALTref	
	✓ AltGPS.2	✓ AltI.2	✓ AltPaADDU.2	✓ AltBCADDU.2		✓ ALTPA.d	
	✓ AltGPS.3	✓ AltI.3	✓ AltRA.1			✓ ALTGA.d	
✓ Ground Speed	✓ GsXI.1	✓ GsYI.1	✓ GsZI.1	✓ GsGPS.1		✓ GSXref	
	✓ GsXI.2	✓ GsYI.2	✓ GsZI.2	✓ GsGPS.2		✓ GSYref	
	✓ GsXI.3	✓ GsYI.3	✓ GsZI.3			✓ GSZref	
	✓ GsXGPS.1	✓ GsYGPS.1	✓ GsZGPS.1				
	✓ GsXGPS.2	✓ GsYGPS.2	✓ GsZGPS.2				
✓ Location	✓ LatGPS.1	✓ LatI.1	✓ LongGPS.1	✓ LonI.1		✓ LATref	
	✓ LatGPS.2	✓ LatI.2	✓ LongGPS.2	✓ LonI.2		✓ LONref	
	✓ LatGPS.3	✓ LatI.3	✓ LongGPS.3	✓ LonI.3			
✓ Pressure Sensors	✓ PDALPHA.1	✓ PQALPHA.1	✓ PQM.1	✓ PSM.1		✓ PQMref	
	✓ PDALPHA.2	✓ PQALPHA.2	✓ PQM.2	✓ PSM.2		✓ PQ.c	
	x PDBETA.1	x PQBETA.1				✓ PSMref	
	✓ PDBETA.2	x PQBETA.2				✓ PS.c	
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1				✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1	✓ PitchRatel.1	✓ RollI.1	✓ RollRatel.1		✓ PITCHref	
	✓ PitchI.2	✓ PitchRatel.2	✓ RollI.2	✓ RollRatel.2		✓ ROLLref	
	✓ PitchI.3	✓ PitchRatel.3	✓ RollI.3	✓ RollRatel.3			
✓ Temperature / Dewpoint	✓ TTM.1	✓ TTM.4	✓ TDM.1			✓ TD.c	✓ TTMref
	inop TTM.2		✓ TDM.2			✓ TDMref	✓ TA.d
	✓ TTM.3					x HUM	
✓ Wind						✓ UWZ.d	x WS.d x WD.d

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.
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.
GPS.1 & GPS.2 parameters stair step slightly
PDBETA.1, PQBETA.1 and .2 inop
TDM.1 trends warm
Humidity and Wind data suspect

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 202A092AN1ASPEN Operator/Flight Director(s): TIMMERS/ KALENMission ID: 0309A SURVStorm Name/Track: A109202APG 1 of 1

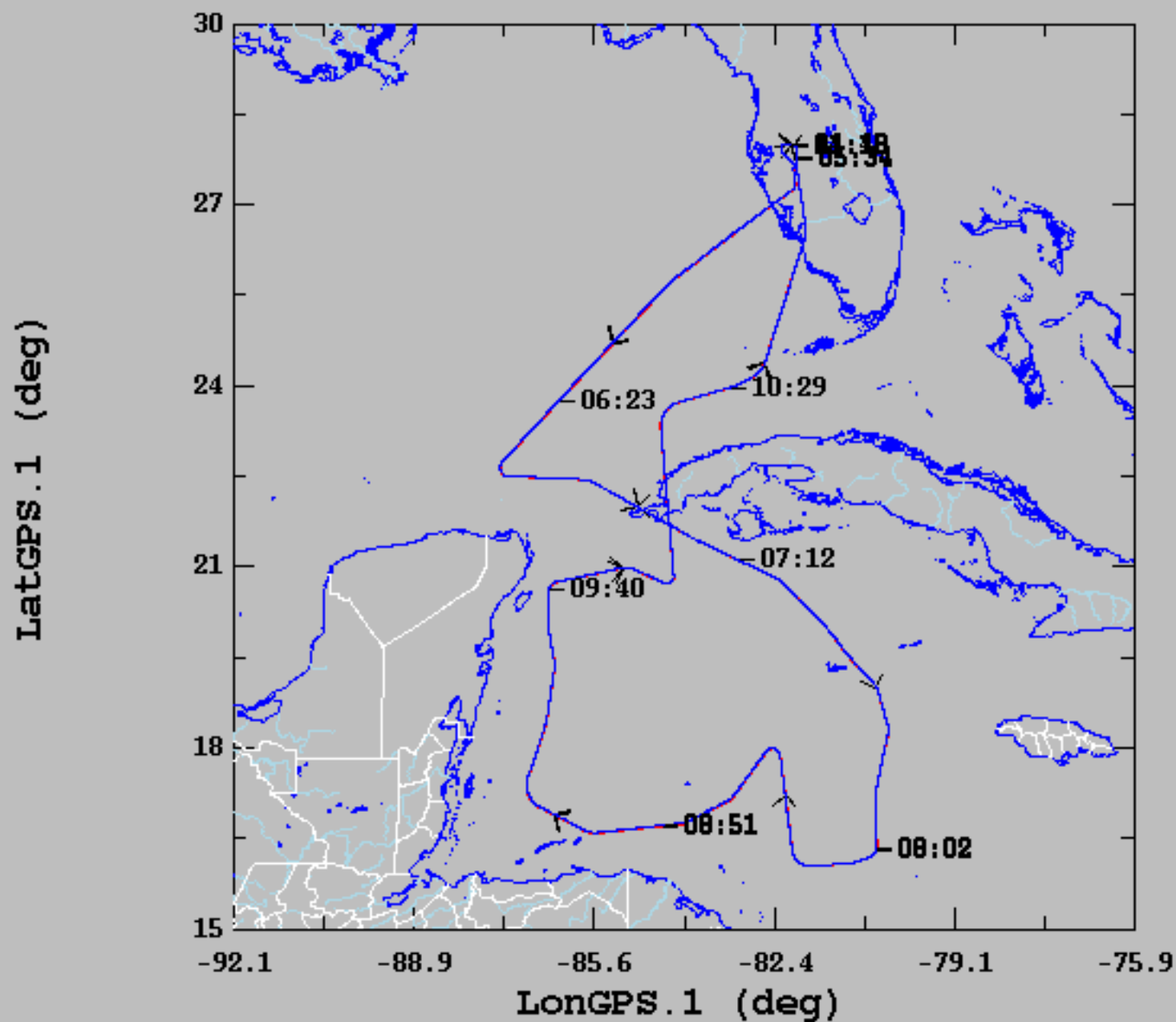
Sonde #	Ob #	Launch Time HHMMSS (Z)	Sonde ID (min last 5)	Ch # used	Lat (°N)	Lon (°E)	Prominent Wx Cond.	SFC Prs (mb)	Comments / Issues / QC / ASPEN Edits	KWBC #	Sonde Issues?
1	1	0601 20	10878	1	25.7	-84.2	—	1010.2	105/13	0625	✓✓
2	2	0614 04	40310	2	24.6	-85.4	—	1009.8	095/15	0631	✓✓
3	3	0626 44	10777	3	23.5	-86.5	—	1008.7	080/15	0646	✓✓
4	4	0636 48	20837	4	22.6	-87.3	—	1009.0	080/14	0708	✓✓
5	5	0649 11	20216	1	22.4	-85.7	—	1007.2	080/16	0711	✓✓
6	6	0706 06	40495	2	21.4	-83.8	—	1005.6	080/27	0725	✓✓
7	7	0719 08	14949	3	20.8	-82.3	—	1006.2	105/36	0743	✓✓
8	8	0734 26	20554	4	19.5	-81.0	—	1006.3	120/29	0756	✓✓
9	9	0744 59	40751	1	18.4	-80.3	—	1006.4	135/29	0808	✓✓
10	10	0753 16	20078	2	17.4	-80.5	—	1005.6	135/22	0825	✓✓
11	11	0803 17	20152	3	16.2	-80.6	—	1005.8	140/22	0824	✓✓
12	12	0814 16	20218	4	16.1	-81.9	—	1004.8	195/29	0847	✓✓
13	13	0830 33	24012	1	18.0	-82.4	—	1002.5	175/16	0849	✓✓
14	14	0840 02	40811	2	17.2	-83.1	—	1004.0	205/17	0909	✓✓
15	15	0850 48	20230	3	16.7	-84.4	—	1003.4	175/13	0912	✓✓
16	16	0901 44	20173	4	16.6	-85.7	—	1004.9	305/16	0932	✓✓
17	17	0911 56	50084	1	17.2	-86.8	—	1005.3	345/13	0935	✓✓
18	18	0931 21	14598	2	19.5	-86.3	—	1005.3	065/19	0954	✓✓
19	19	0941 44	30934	3	20.8	-86.3	—	1004.8	035/22	1001	✓✓
20		0951 —	—	4	—	—	—	—	DIED 22.5K FT	—	—
21	20	0956 52	10563	1	20.7	-84.4	—	1004.5	080/25	1017	✓✓
22	21	1020 14	20484	2	23.6	-84.3	—	1008.4	105/16	1039	✓✓
23	22	1033 58	40869	3	24.3	-82.6	—	1009.3	105/14	1051	✓
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38											

ASPEN Operator will ensure this form is delivered to the AOC Flight Director to be archived

COMMENTS:

22 Obs
Missed4 Obs
Missed23 # of sondes
launched1 # of bad
sondes

09/24/2024, 04:45:43-11:18:17



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	22.22	3.99	16.03	27.99
LonGPS.1 (deg), 1 s/sec	-83.50	1.92	-87.30	-80.30
LatI.1 (deg), 1 s/sec	22.22	4.00	16.03	27.99
LonI.1 (deg), 1 s/sec	-83.50	1.92	-87.30	-80.30