

N49RF ERROR SUMMARY
20240816N1

Flight ID: 20240816N1

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.2
Differential Sideslip Pressure Probe	PDBETA.2
Dynamic Attack Pressure Probe	PQALPHA.2
Dynamic Sideslip Pressure Probe	PQBETA.2

Flight Directory acdata/2024/MET/20240816N1

Local Met Data	Takeoff KLAL (1237Z)	Landing KLAL (2019Z)
Dynamic Corrections		Yes
AttackAngleIntercept		6.4652
AttackAngleSlope		7.59375
SlipAngleIntercept		0.925
SlipAngleSlope		6.56381
AttackAngleIntercept2		4.97461
AttackAngleSlope2		5.40351
SlipAngleIntercept2		0.71
SlipAngleSlope2		6.22549

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.

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	35	34	34
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Carpenter
Phone #: 8635003901

ACAT-4 Version = 7.4

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N49RF Manifest

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20240816N1	FLT #:	24-	AC:	Varwig	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:	0830L / 1230Z	CP(s):	Mayo		A/C Takeoff	1012.9	Good	Bad	Sent
To:	KLAL	ETA:	1600L / 2000Z								
Block Time		Flight Time		NAV:			ASOS Takeoff	KLAL 1250Z 1011.9 mb	39	5	34
Out:	12:27	T/O:	12:38	FE(s):					BTs		
In:	20:24	Land:	20:19	FD(s):	Carpenter		A/C Land	1012.4	Good	Bad	Sent
Total:	8.0	Total:	7.7	SSA:	Defeo	Visitors:	ASOS Land	KLAL 1950Z 1011.0 mb	0	0	0
				AVAPS:	Andrews	Parrish	Storm Number ID:		AL052024		
Sponsoring Org:	HRD / NASA			SEB:	Brannigan	Licitra	(ie: AL072012)				
Program:	PHX				Paul		TCPD/WSPD Mission				
Purpose:	Ernesto research mission #2				MX:			(ie: NOAA2 2418A SANDY)			
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					X		1				
SCIENCE MISSION WITHIN BDRY LAYER					X						
LACK OF PRECIPITATION					X		2				
RELATIVE HUMIDITY ≥ 80%				X							
LARGE AIR-SEA TEMP GRADIENT					X		3				
HIGH SURFACE WINDS				X							
LONG FETCH / DURATION OF SFC WND					X		4				
SEA SALT ACCRETION FORECAST					X						
SEA SALT ACCRETION OBSERVED					X		Pennies:	N/A			
						*Highlighted items must be completed before departure.					
Remarks:	4 sondes released during transit to storm for AOC testing purposes, notated as "TEST" on dropsonde log. These are counted as "Bad" on this manifest.										

G-IV QC Checklist

Overall Assessment	Major instrument issue(s) - significant mission impact.
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Flight ID:	20240816N1
Flight Director(s):	Carpenter / de Solo
Mission:	Non-tasked Science Collection/Research
UWZ.d mean:	0

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1012.9	1012.4
Airfield	1011.9	1011.0

This form uses:
_Anc

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	X 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	✓ LonGPS.1	✓ LonI.1		✓ LATref	
	✓ LatGPS.2	✓ LatI.2	✓ LonGPS.2	✓ LonI.2		✓ LONref	
	✓ LatGPS.3	✓ LatI.3	✓ LonGPS.3	✓ LonI.3			
✓ Pressure Sensors	✓ PDALPHA.1	✓ PQALPHA.1	✓ PQM.1	✓ PSM.1		✓ PQMref	
	✓ PDALPHA.2	✓ PQALPHA.2	✓ PQM.2	✓ PSM.2		✓ PQ.c	
	✓ PDBETA.1	X PQBETA.1				✓ PSMref	
	✓ PDBETA.2	✓ 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	X TDM.1			X TD.c	✓ TTMref
	inop TTM.2		X TDM.2			X TDMref	✓ TA.d
	✓ TTM.3					X HUM	
X 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:
AltRA.1 not functioning. PQBeta.1 failure in-flight. TTM.2 unavailable. TDM.1 and TDM.2 are biased low and require calibration, but TDM.2 is more representative. All moisture quantities and derivatives should be considered suspect. Wind calibration needed, wind quantities and derivatives should be considered suspect.

AOC GPS Dropwindsonde Log (updated June 2023)

Flight ID: 20240816N1ASPEN Operator/Flight Director(s): TIMMERS(TAG)/DE SOLO/CARPENTERMission ID: NOAA9 WCO5AStorm Name/Track: ALOS 2024 ERNESTOPG 1 of 2

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	/	1342							TEST		
2	/	1345							TEST		
3	/	1347							TEST		
4	/	1350							TEST		
5	1	1406 35	24689	1	31.3	-71.0		1010.1	025/26	1433	✓✓
6	2	1414 24	14538	2	31.1	-69.9		1009.0	020/30	1439	✓✓
7	3	1421 39	24640	3	30.9	-68.8		1007.1	020/32	1457	✓✓
8	4	1428 51	41244	4	30.8	-67.8		1003.7	055/24	1459	✓✓
9	5	1435 45	31729	1	31.5	-67.4		1006.4	055/28	1502	✓✓
10	6	1441 21	14613	2	32.1	-66.9		1008.2	060/27	1507	✓✓
11	7	1447 43	34220	3	31.5	-66.5		1005.9	095/26	1510	✓✓
12	8	1455	51445	4	30.7	-66.0		1004.5	095/41	1528	
13	9	1502	50069	1	30.7	-65.0		1006.2	120/34	1536	
14	10	1505	20909	2	30.5	-64.8		1006.9	145/39	1542	
15	11	1508	24509	3	30.1	-64.8		1005.2	150/42	1547	
16	12	1516	20202	4	29.1	-64.5		1005.1	165/49	1551	
17	13	1522	41112	1	28.4	-64.4		1007.9	185/46	1554	
18	14	1530	40700	2	27.7	-63.8		1011.5	170/35	1606	
19	15	1539	40111	3	27.8	-64.8		1009.1	180/46	1604	
20	X	1548		4					signature lost @ 20K		
21	16	1555	40824	1	27.2	-66.5		1008.3	215/30	1615	
22	17	1602	40821	2	26.6	-67.0		1008.9	215/28	1625	
23	18	1608	21009	3	27.2	-67.4		1008.1	230/27	1638	✓✓
24	19	1616 03	24545	4	27.9	-67.9		1005.8	285/20	1703	✓✓
25	20	1623 37	31972	1	27.8	-68.8		1007.1	275/21	1708	✓✓
26	21	1631 38	40776	2	27.6	-69.8		1008.9	290/13	1712	✓✓
27	22	1637 53	41237	3	27.5	-70.6		1010.3	300/21	1715	✓✓
28	23	1643 36	20822	4	28.0	-70.1		1008.1	325/20	1719	✓✓
29	24	1651 05	21011	1	28.7	-69.4		1006.4	320/18	1723	✓✓
30	25	1658 58	24687	2	29.4	-68.6		1008.3	345/25	1724	✓✓
31	26	1717 01	50110	3	30.6	-66.6		987.7	060/64	1748	✓✓
32	27	1728 18	40793	4	30.7	-65.0		1000.7	120/43	1813	✓✓
33	28	1740 54	10953	1	29.5	-64.1		1005.6	160/49	1904	✓✓
34	29	1757 59	40772	2	28.0	-65.5		1005.7	205/45	1909	✓✓
35	30	1811 09	24692	3	28.1	-67.2		1004.9	260/24	1911	✓✓
36	31	1822 57	10482	4	29.3	-68.1		1003.3	295/28	1917	✓✓
37	32	1833 40	10481	1	29.1	-69.5		1005.3	345/15	1923	✓✓
38	33	1841 23	60357	2	28.9	-70.5		1008.8	340/27	1928	✓✓

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

COMMENTS:

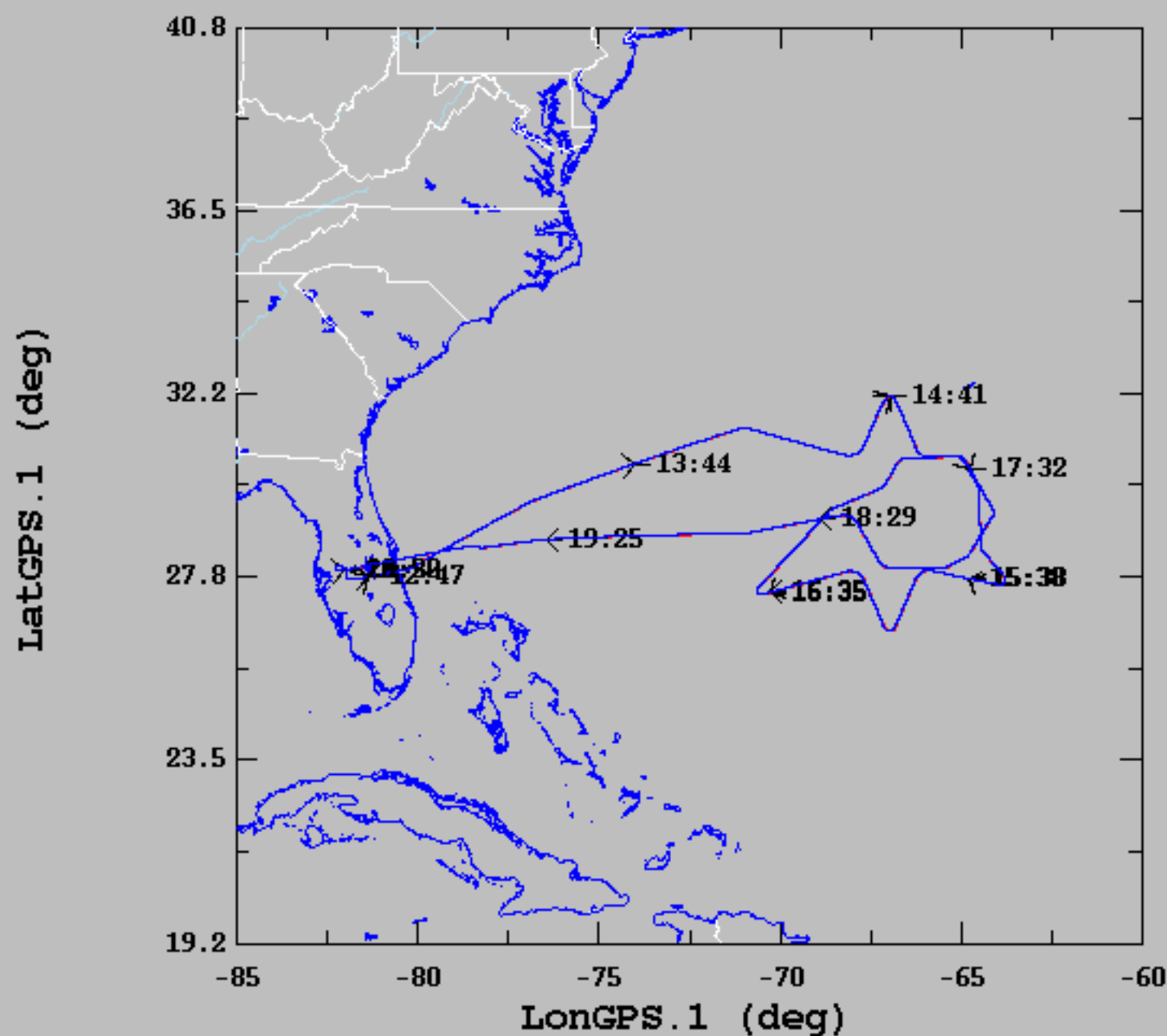
34

Obs
XmittedObs
Missed

39

of sondes
launched# of bad
sondes

08/16/2024, 11:50:46-20:22:49



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	28.98	1.22	26.55	32.10
LongGPS.1 (deg), 1 s/sec	-72.07	6.21	-82.23	-63.75
LatI.1 (deg), 1 s/sec	28.98	1.22	26.55	32.09
LonI.1 (deg), 1 s/sec	-72.06	6.20	-82.23	-63.74