

N49RF ERROR SUMMARY
AR-2023 08WSC IOP09

Flight ID: 20230108N1

Sensor or System	Number or Name
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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/2023/MET/20230108N1

Local Met Data	Takeoff PHNL (2018Z)	Landing PHNL (0336Z)
Dynamic Corrections		Yes
AttackAngleIntercept		6.4652
AttackAngleSlope		7.59375
SlipAngleIntercept	0.925	
SlipAngleSlope		6.56381
AttackAngleIntercept2		5.01255
AttackAngleSlope2	5.40932	
SlipAngleIntercept2		0.72
SlipAngleSlope2		7.0494

Notes:

There were two long gaps in multiple measured and calculated parameters: 0135z to 0205z and 0239z to the end of the mission.

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.

Neither dew point sensor (TDM.1 or TDM.2) performed reliably during the mission, therefore all flight level humidity data should be considered suspect.

Expendable Type	# deployed	# good	# transmitted
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Dropsondes	31	30	30
Test sondes	0	0	0
AXBTS	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Henning
Phone #: (863) 500-3982

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:	20230108N1	FLT #:		AC:	NARD 1	Scientists:	Pressure		Dropsondes		
From:	PHNL	ETD:	2015 Z	CP(s):	de TRIQUET		A/C Takeoff		Good	Bad	Sent
To:	PHNL	ETA:	0415 Z						30	1	30
Block Time		Flight Time		NAV:			ASOS Takeoff		BTs		
In:	0340	Land:	0336	FE(s):			A/C Land		Good	Bad	Sent
Out:	2003	T/O:	2018	FD(s):	HENNING de SOLO		ASOS Land				
Total:	7.6	Total:	7.3	SSA:	DEFE O	Visitors:	Storm Number ID:				
Sponsoring Org:	CW3E			AVAPS:	HARTBERGER		(ie: AL072012)				
Program:	PAR			SEB:	SANTON 1		TCP00/WSP00 Mission		08WSC 10P09		
Purpose:	Atmospheric Rivers						(ie: NOAA2 2418A SANDY)				
				MX:			OBSERVATIONS				
AS REQUIRED BY ORM			Y	N	REMARKS		Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH							1				
SCIENCE MISSION WITHIN BDRY LAYER							2				
LACK OF PRECIPITATION							3				
RELATIVE HUMIDITY ≥ 80%							4				
LARGE AIR-SEA TEMP GRADIENT											
HIGH SURFACE WINDS											
LONG FETCH / DURATION OF SFC WND											
SEA SALT ACCRETION FORECAST											
SEA SALT ACCRETION OBSERVED							Pennies:				

*Highlighted items must be completed before departure.

Remarks:

G-IV QC Checklist

Flight ID:	20230108N1
Flight Director(s)	Henning / de Solo
UWZ.d mean:	0.15

Pressure Comparison		
	T/O	Land
Aircraft	1021.0	N/A
Tower	1020.9	1018.8

	Raw 1Hz Mean File Parameters					C File Parameters	
✓ Accelerometer	✓ AccAXI.1	✓ AccAYI.1	✓ AccAZI.1			✓ AccZref	
	✓ AccAXI.2	✓ AccAYI.2	✓ AccAZI.2				
	✓ AccAXI.3	✓ AccAYI.3	✓ AccAZI.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	✓ GsGPS.3		✓ GSZref	
	✓ GsXGPS.1	✓ GsYGPS.1	✓ GsZGPS.1				
	✓ GsXGPS.2	✓ GsYGPS.2	✓ GsZGPS.2				
	✓ GsXGPS.3	✓ GsYGPS.3	✓ GsZGPS.3				
✓ Lat / Lon	✓ LatGPS.1	✓ LatI.1	✓ LonGPS.1	✓ LonI.1		✓ LATref	
	✓ LatGPS.2	✓ LatI.2	✓ LonGPS.2	✓ LonI.2		✓ LONref	
	✓ LatGPS.3		✓ LonGPS.3				
✓ Pressure	✓ PDALPHA.1	✓ PQALPHA.1	✓ PQM.1	✓ PSM.1		✓ PDLAPHaref	✓ PQMref
	✓ PDALPHA.2	✓ PQALPHA.2	✓ PQM.2	✓ PSM.2		✓ PDBETAref	✓ PQ.c
	✓ PDBETA.1	✓ PQBETA.1				✓ PQALPHAref	✓ PSMref
	✓ PDBETA.2	✓ PQBETA.2				✓ PQBETAref	✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1				✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1	✓ PitchRateI.1	✓ RolI.1	RollRateI.1		✓ PITCHref	
	✓ PitchI.2	✓ PitchRateI.2	✓ RolI.2	✓ RollRateI.2		✓ ROLLref	
	✓ PitchI.3	✓ PitchRateI.3	✓ RolI.3	✓ RollRateI.3			
x Temp / Dewpt	✓ TTM.1	✓ TTM.4	x TDM.1			x TD.c	✓ TTMref
	✓ TTM.2		x TDM.2			x TDMref	✓ TA.d
	✓ TTM.3						
x Misc. (Must check)						UWZ.d	✓ WS.d
						DPJ_WSZ	✓ WD.d
						x HUM	

FLID_Mission_Documents.pdf:	
✓	Error Summary
✓	Crew Manifest
✓	QC Checklist
✓	Dropwindsonde Log(s) - AVAPS and FD if completed
✓	Flight Track
☐	Miscellaneous FD Notes

QC Key	
Not checked	☐
Valid	✓
Errors (note)	x

NOTES:
Numerous Radar Altitude dropouts on climb to operational alt but stabilized during science mission Both dew point sensors unreliable. Consider all FL humidity data suspect Two long gaps in many measured and calculated parameters: from 0135z to 0205z and 0239z to end of mission

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20230108W1ASPEN Operator/Flight Director(s): Henning / dc soloMission ID: 08WSC IOP09Storm Name/Track: AR IOP09PG 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 <u>SURFACE WIND</u>	KWBC #	Sonde Issues?
1	1	205702	10419	1	24.5	-158.0	SCT	1020.7	270° @ 09 kts	2122	✓✓
2	2	210702	10117	2	25.6	-158.0	SCT	1020.1	330° @ 14 kts	2131	✓✓
3	3	211706	50698	3	26.8	-157.9	SCT	1019.2	310° @ 17 kts	2142	✓✓
4	4	212712	20060	4	27.9	-157.9	SCT	1019.6	330° @ 17 kts	2153	✓✓
5	5	213751	30186	1	29.1	-157.8	SCT	1018.6	305° @ 21 kts	2203	✓✓
6	6	214820	30021	2	30.2	-157.8	SCT	1017.6	300° @ 21 kts	2217	✓✓
7	7	215808	50701	3	31.3	-157.8	SCT	1017.4	300° @ 24 kts	2225	✓✓
8	8	220830	50219	4	32.4	-157.3	SCT	1014.8	300° @ 30 kts	2237	✓✓
9	9	221835	10116	1	33.5	-157.7	SCT	1012.0	275° @ 27 kts	2248	✓✓
10	10	222857	40538	2	34.7	-157.6	SCT	1009.1	275° @ 36 kts	2262	✓✓
11	11	223818	30009	3	35.8	-157.6	SCT	1008.8	275° @ 39 kts	2259	✓✓
12	12	224818	30229	4	36.7	-157.5	SCT	1004.6	280° @ 29 kts	2306	✓✓
13	13	225706	10118	1	37.9	-157.4	SCT	1002.2	280° @ 35 kts	2316	✓✓
14	14	230443	40487	2	37.6	-156.0	SCT	1002.9	295° @ 37 kts	2324	✓✓
15	15	231256	30011	3	37.1	-154.6	SCT	1002.6	285° @ 43 kts	2335	✓✓
16	16	232120	40540	4	36.6	-153.2	SCT	1002.9	310° @ 38 kts	2343	✓✓
17	17	232944	40537	1	36.2	-151.2	SCT	1003.4	275° @ 48 kts	2349	✓✓
18		2338		2					NO PTU		
19	18	233856	40606	3	35.6	-150.2	SCT	1003.6	250° @ 33 kts	2357	✓✓
20	19	234612	30231	4	35.1	-149.0	SCT	1003.7	255° @ 32 kts	0010	✓✓
21	20	235418	50229	1	34.6	-147.7	SCT	1006.6	265° @ 18 kts	0015	✓✓
22	21	000230	40517	2	34.1	-146.1	SCT	1006.0	275° @ 24 kts	0024	✓✓
23	22	001123	20075	3	33.3	-145.0	SCT	1008.0	270° @ 21 kts	0037	✓✓
24	23	002029	50186	4	32.3	-145.0	SCT	1007.5	270° @ 21 kts	0048	✓✓
25	24	003117	50686	1	31.0	-145.0	SCT	1009.6	295° @ 17 kts	0059	✓✓
26	25	004204	30232	2	29.7	-145.0	SCT	1010.2	305° @ 18 kts	0104	✓✓
27	26	005341	50228	3	28.4	-145.0	SCT	1011.8	285° @ 20 kts	0114	✓✓
28	27	010320	50233	4	27.2	-145.0	SCT	1013.8	315° @ 27 kts	0122	✓✓
29	28	011338	20382	1	26.0	-145.0	SCT	1014.3	245° @ 27 kts	0144	✓✓
30	29	012401	50726	2	24.7	-145.0	SCT	1017.7	270° @ 16 kts	0146	✓✓
31	30	013401	10204	3	23.6	-145.1	SCT	1019.0	270° @ 16 kts	0155	✓✓
32											
33											
34											
35											
36											
37											
38											

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

COMMENTS:

Obs
Xmitted

30/30

Obs
Missed

○

of sondes
launched

31

of bad
sondes

1

AVAPS Drop Log

Project: ARR 2023

Mission: _____

Flight ID: 20230108 N1

Take Off: _____

Landing: _____

Flt Dir: Henning

Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	221030229	1	Ø	2057	ASR	AR		
2	220610117	2	Ø	2107	ASR			
3	220450698	3	Ø	2117	ASR			
4	214620060	4	Ø	2127	ASR			
5	220430186	1	Ø	2137	ASR			
6	221030021	2	Ø	2148	ASR			
7	220450701	3	Ø	2158	ASR			
8	220450219	4	Ø	2208	ASR			
9	220610116	1	Ø	2218	ASR			
10	220440538	2	Ø	2228	ASR			
11	221030009	3	Ø	2238	JZA			
12	221030229	4	Ø	2248				
13	220610118	1	Ø	2257				
14	220440487	2	Ø	2304				
15	221030011	3	Ø	2312				
16	220440540	4	Ø	2321				
17	220440537	1	Ø	2329				
18	220440536	2	Ø	2338			No PTU	
19	220440606	3	Ø	2338			backup	
20	221030231	4	Ø	2346				
21	220450229	1	Ø	2354				
22	220440517	2	Ø	0002	CPD			
23	2202620075	3	Ø	0011				
24	220450186	4	.1	0020				
25	220450686	1	Ø	0031				
26	221030232	2	-7	0042				
27	220450228	3	0	0053				
28	220450233	4	0	0103				
29	221220382	1	0	0113				
30	221150726	2	-8	0124				
31	220910204	3	0	0134				

01/08/2023, 19:27:25-27:40:19

LatGPS.3 (deg)

