

U.S. Dep't. of Commerce / OMAO / NOAA / Aircraft Operations Center

FLT ID: 20140211N1	From: KSUU	To: KSUU
FLT #:	Blk In: 2321 z	Lnd Time: 2315z
ETD: 1730z	Blk Out: 1715 z	T/O Time: 1720 z
ETE: 7+00	Total Blk: 6.1	Total Flt: 5.9
Sponsoring Org: ESRL	Program: PAR	Purpose: Budget Box High

AOC Flight Crew

Aircraft Commander: MOYERS	SSA: DEFE O
Co-Pilot: MANSOUR, MACINTYRE	AVAPS: SMITH, RICHARDS
Navigator: /	Scientists: RYAN SPACKMAN (ESRL)
Flight Eng: /	Scientists:
Flt Director: HENNING	Scientists:
SEB: / /	Scientists:
Crew Chief:	Visitors: STA 1021.5 /

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	#2 1021.7	1658: 30.22 1758: 30.22	1018.7	2258: 30.17 2358: 30.16

AS REQUIRED BY ORM	YES / NO	REMARKS
VOLCANIC ASH		
SCIENCE MISSION WITHIN BOUNDARY LAYER		
LACK OF PRECIPITATION		
RELATIVE HUMIDITY AT OR ABOVE 80%		
LARGE AIR-SEA TEMPERATURE GRADIENT		
HIGH SURFACE WINDS		
LONG FETCH AND/OR DURATION OF SFC WIND		
SEA SALT ACCRETION FORECAST		
SEA SALT ACCRETION OBSERVED		

Dropsondes	38	Good: 37	Bad: 1	Sent: 37
AXBT		Good:	Bad:	Sent:

List other data sources in Remarks section

Remarks (Storm VDM Identifier, Mission ID, Fix Times)	Fix #	VDM Ob Num	Fix Time / SLP
Storm Number Identifier (VDM): (ie: AL072012)			
TCPOD/WSPOD Mission ID: NOAA9 WXWXA ATMOSRIVERC (ie: NOAA2 2418A SANDY)			

Remarks:

KSMF

TAF
SAT
HAZWV
IR
200
500
NEGVA
200
500
CHWT
text
PPT



N49RF ERROR SUMMARY

Atmos Rivers #3

KSUU > KSUU 11 Feb 2014



Flight ID: 20140211N1

<u>Sensor or system</u>	<u>Number or Name</u>
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.4
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
Constants File	49cal102
Flight Directory	acdata/MET/2014/20140211N1

Notes:

TDM.1 and TDM.2 are both not rated for use under -50 deg C and cannot be considered reliable for dew points colder than -50C. TDM.1 exceeded the ambient temperature for nearly the entire mission during cruise above 41,000 feet. TDM.2 is used for post processing.

TTM.3 continues to display an oscillation with a magnitude of about 0.6 to 0.8 degrees C and a period of about 120 seconds. TTM.4 was selected for Total Temperature in post processing. Beginning with this mission, TTM.4 displays a much smaller oscillation (less than 0.1 deg C) with a much smaller period (about 10 to 20 seconds). This oscillation of TTM.4 had not been seen on previous flights and is only seen at high altitude. TTM.1 is about a degree colder than the other total temps at cruise altitude.

	Takeoff (1720Z)	Landing (2315Z)
Aircraft Static Pressure	1021.7 mb	1018.7 mb
Corrected Tower Pressure	1021.5 mb	1019.8 mb

38 dropsondes deployed, 36 were project inventory sondes. All 36 of those were good and transmitted. There were two AOC test sondes deployed with large chutes for slow fall and increased data resolution. The chute deployed at 2052z failed to open. The test chute at 2201z opened properly so a total of 37 WMO TEMPDROP messages were coded and transmitted.

AOC GPS Dropwindsonde Log

Flight ID: 20140211N1

Flight Director: HEMMING

Mission ID: WXUXP ATMOSRIVERC Storm/Track:

Pg of

Ch. #	Drop #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°W)	Wx Cond.	SFC Pres (mb)	Ob #	L5/R5	Last Winds R5 (ht, ws, wd)	Last Winds L5 (ht, ws, wd)	Sent Time/KWBC (UTC)
1	1	5079	1840					1	7			✓
2	2	5029	1848					2	10			✓
3	3	5052	1854					3	11			✓
4	4	5178	1903			FLD?		4	12			✓
5	5	5290	1911			FLD? BAN CHUTE 300mb		5	13			✓
6	6	5187	1918					6	14			✓
7	7	5188	1923					7	15			✓
8	8	5043	1926					8	16			✓
9	9	5094	1929					9	17			✓
10	10	5143	1932					10	18			✓
11	11	5130	1936					11	19			✓
12	12	5183	1940					12	20			✓
13	13	5236	1944					13	21			✓
14	14	5068	1947					14	22			✓
15	15	5127	1951					15	23			✓
16	16	5185	1955					16	24			✓
17	17	5070	1959					17	25			✓
18	18	5223	2005					18	26			✓
19	19	5111	2013					19	27			✓
20	20	5318	2019					20	28			✓
21	21	5137	2025					21	29			✓
22	22	5078	2033					22	30			✓
23	23	5238	2041					23	31			✓
24	24	5043	2048					24	32			✓
25	25	5095	2056					25	33			✓
26	26	5161	2059					26	34			✓
27	27	5224	2103					27	35			✓
28	28	5105	2108					28	36			✓
29	29	5191	2111					29	37			✓
30	30	5098	2115					30	38			✓
31	31	5226	2118					31	39			✓
32	32	5177	2121					32	40			✓
33	33	5172	2125					33	41			✓
34	34	5172	2125					34	42			✓

NW3*5 34

SW3*5 34

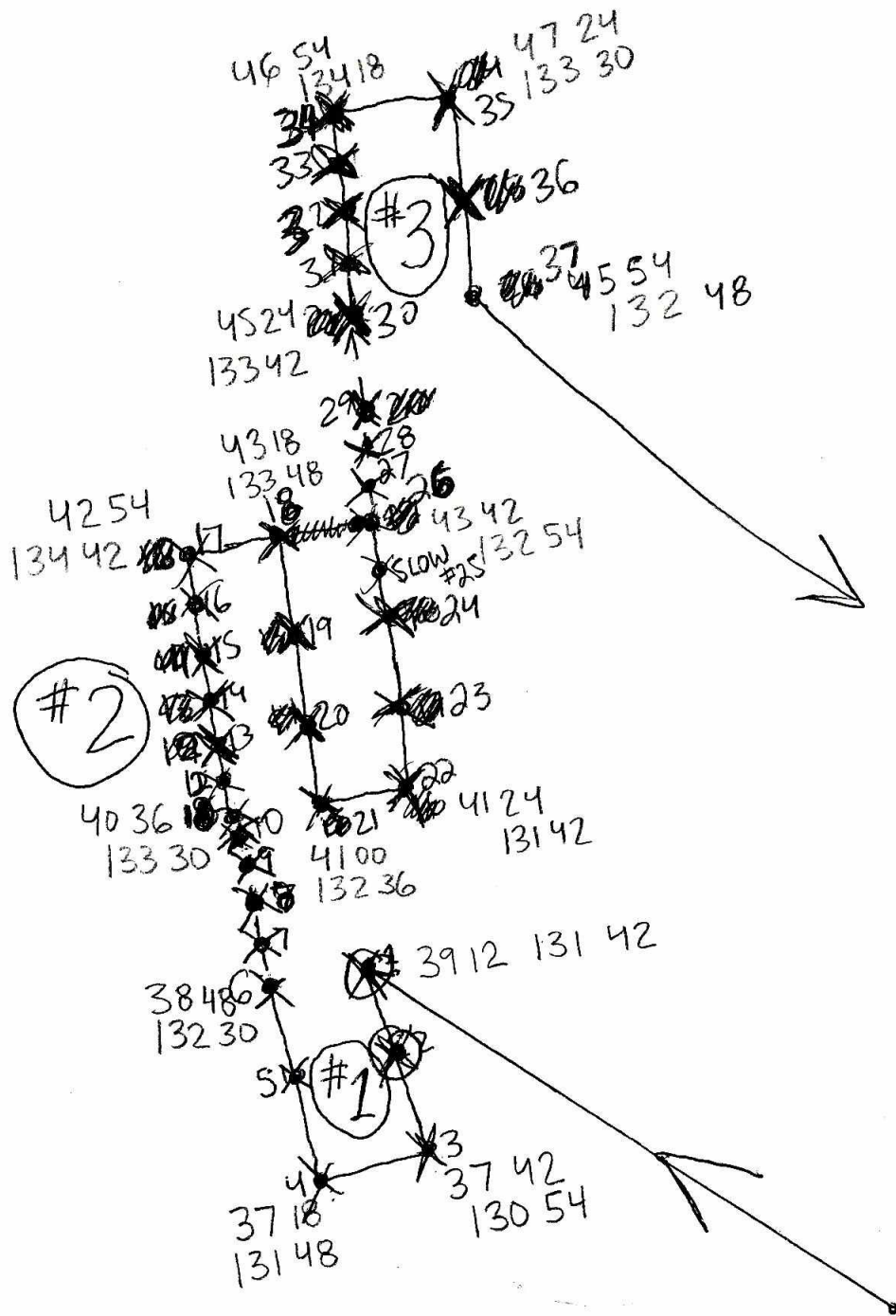
slow
Fall

NW2*5 18

SW2*5 18

HD

33



1525

↑ 34 26
↑ 8 16 24 32 48

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ATTACHMENT 1 (See the Fillable Form)

Hazards encountered during performance of duty		Date:
Employee name(s):		Time of exposure or Flight Times (if applicable):
Recommended by:		Start:
(Name and Title)		End:
1.		Time:
2.		Task Code:
3.		
4.		
5.		
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15.		
16.		
17.		
Altitude chamber subject exposed to greater than 18,000 feet.		
Toxic chemical exposure.		
Explosive or incendiary devices (CAD).		
Initial or transitional pilot proficiency training involving simulated emergency procedures.		
Test flight of newly repaired or modified aircraft.		
Close formation flights.		
Flights at levels below 500 feet/ day		
Flights at levels below 1000 feet/ night		
Extreme Weather Conditions:		
Tropical Cyclones		
Winter storm low altitude convection or wind shear.		
Winter storm within 5000 feet of convective squall line.		
Winter storm within 100 nm of jet stream core entrance.		
Thunderstorms: In close proximity or through cumulonimbus, cumulus congestus clouds, or thunderstorms.		
Atmospheric waves within 5000 feet of mountains with winds greater than 25 knots.		
Atmospheric waves in areas of high boundary layer turbulence.		
Approving Official Signature / Title		Date

NE 3	1	35	5216	2130	34
	2	36	5239	2139	35
	3	37	5018	2145	36
SLOW 4	38		5044	2201	37

44 30
130 30

ATTACHMENT 1 (See the Fillable Form)

Hazards encountered during performance of duty		Date:
Employee name(s):		Time of exposure or Flight Times (if applicable):
Recommended by:		
(Name and Title)		Start:
		End:
		Time:
		Task Code:
17.		Altitude chamber subject exposed to greater than 18,000 feet.
16.		
15.		
14.		
13.		
12.		
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4.		
3.		
2.		
Explosive or incendiary devices (CAD).		
Initial or transitional pilot proficiency training involving simulated emergency procedures.		
Test flight of newly repaired or modified aircraft.		
Close formation flights.		
Flights at levels below 500 feet/ day		
Flights at levels below 1000 feet/ night		
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Atmospheric waves in areas of high boundary layer turbulence.		
Approving Official Signature / Title		Date

Project: Atmospheric Rivers 2014

Mission: AR3Flight ID: 20140211A1Take Off: 1700ZLanding: 2315ZFlt Dir: Hemling

Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	112 615 079	1	-5	1840	TMR	PAR	Good	✓
2	114 315 029	2	0	1848			WMO message	✓
3	112 815 052	3	0	1854			TRT	✓
4	114 325 178	4	0	1903				✓
5	112 455 290	1	0	1911			chute Failed @ 3000ft	✓
6	114 325 187	2	0	1918				✓
7	114 325 188	3	-4	1922				✓
8	112 815 043	4	0	1926				✓
9	112 615 094	6	0	1929	JS			✓
10	114 325 143	7	0	1932				✓
11	114 325 130	8	0	1936				✓
12	114 325 183	5	0	1940				✓
13	114 325 236	1	0	1944	TMR			✓
14	112 615 068	2	0	1947				✓
15	114 325 127	3	-4	1957				✓
16	112 815 185	4	0	1955				✓
17	112 615 070	5	0	1959	G.D.			✓
18	114 325 223	1	0	2005				✓
19	114 325 111	2	0	2013				✓
20	112 455 318	3	0	2019				✓
21	112 815 137	4	0	2025				✓
22	112 615 078	1	0	2033				✓
23	114 325 238	2	0	2041				✓
24	123 315 043	3	0	2048				✓
25	134 255 070	4	0	2052		AOC	Med. size chute / 160	—
26	112 615 095	5	.6	2055	G.D.			✓
27	112 545 161	6	0	2059				✓
28	114 325 224	7	0	2103				✓
29	112 615 105	8	0	2108				✓
30	112 545 191	1	0	2111	TMR			✓
31	112 615 098	2	0	2115				✓
32	114 325 226	3	0	2118				✓
33	112 545 177	4	0	2121				✓
34	112 545 172	5	0	2125	G.D.			

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
35	114325216	1	Ø	2130	TMR	FAR		✓
36	114325239	2	Ø	2138	↓	↓		✓
37	134325018	3	Ø	2145	↓	↓	A7 rev. w/ SW update	✓
38	134835044	4	Ø	2201	↓	AOC	Franken-Sonde chute	✓
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Drop Station Operator Notes

Charge \$\$ To Options: AOC, NWS, HFIP, NESDIS, ESRL, or HRD ONLY – Do not use accounting codes!!!

AVAPS Pre-Flight Check:

- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and Full Flight ID (example: 20120823N2).
- Verify the Frequency band allocation as required:
Band A - W53rd, Band B - N42RF, Band C - N43RF, Band D - N49RF, Band E - not allocated
- Select the **GPS Reference** tab from the **Soundings Displays** page and verify good GPS data
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights. Verify data is available on Remote AVAPS at R1 and L1, then terminate the sonde by selecting **Abort** to cancel the sonde initialization. Verify the AVAPS Data mission folder has been created

AVAPS Launch:

- Select a sonde frequency in the Green band and away from other sondes
- Enter sonde pressure error offset if 0.4mB or greater using NEW cabin pressure sensor (not installed)
- Select "begin data collection" and verify good data with winds prior to putting sonde in launch tube
- Use orange tape to make a pocket at end of ribbon – Do not shorten the ribbon
- Loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing starboard
- Verify the sonde is actively tracking GPS data prior to launch and no early launch detect

02/11/2014, 16:46:16-23:23:58

