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

FLT ID: 20140214N1	From: KSUU	To: KSUU
FLT #:	Blk In: 2239 z	Lnd Time: 2234 z
ETD: 1900 z	Blk Out: 1832 z	T/O Time: 1838 z
ETE: 5+00	Total Blk: 4.1	Total Flt: 3.9
Sponsoring Org: ESRL	Program: PAR	Purpose: INT

AOC Flight Crew

Aircraft Commander: MOYERS	SSA: DEFEO
Co-Pilot: MANSOUR MacINTYRE	AVAPS: SMITH / RICHARDS
Navigator: /	Scientists: ALLEN WHITE
Flight Eng: /	Scientists
Flt Director: HENNING	Scientists
SEB: GOLDSTEIN	Scientists:

Crew Chief: Visitors: STA 1019.2 / STA 1016.4

TAF
~~ROT~~
WV/IR
RADAR
200mb
BL
Soundings
PPT

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	#2 1018.4	1823 30.14 1858 30.15 ←	1016.0	2228 30.07 ↓

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	4	Good: 4	Bad: ~~0~~	Sent: 4	
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: WXWXE ATMOSRIVERF (ie: NOAA2 2418A SANDY)			

Remarks:

drops 38 ~~22K~~ 22K dry 12K
Cast 20K 40 18K 50% 10K wet
4130 18K 70% 9K wet
4300 18K SAT 6K wet

KSMF

91 IS N WX BAND

SF→180 TURB up to 22 ICG

N49RF ERROR SUMMARY

Atmos Rivers #6

KSUU > KSUU 14 Feb 2014

Flight ID: 20140214N1

Sensor or system	Number or Name
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/2014/20140214N1

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 the entire segment at 38K. Both dew pointers performed very well during the segment at 22K. At 5K TDM.2 performed very well but TDM.1 was erratic and unreliable. 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 at high altitude. The magnitude of the TTM.3 oscillation becomes much larger at lower altitudes and warmer conditions. TTM.4 was selected for Total Temperature in post processing. TTM.4 displays a much smaller oscillation (less than 0.1 deg C) with a much shorter period (about 10 to 20 seconds). The TTM.4 oscillation is only seen at high altitude (38K) and was not observed during either the 5K or 22K segments. TTM.1 is about a degree colder than the other total temps at both high altitude and the lower segments.

Vertical Winds (UWZ.d and DPJ_WSZ (Jorgensen solution)) should show a mean value of near zero for any prolonged period. During the 38K segment, mean values for UWZ.d and DPJ_WSZ were -0.05 and -0.13 m/s respectively. At 22K there was an unacceptably large negative bias of -0.54 and -0.57. At 5K the values were -0.29 and -0.28. Previous wind calibration flights have not included these lower altitudes resulting in these large biases.

	Takeoff (1838Z)	**Landing (2234Z)**
Aircraft Static Pressure	1018.4 mb	1016.0 mb
Corrected Tower Pressure	1019.2 mb	1016.4 mb

4 Dropsondes deployed. All 4 were good and transmitted.

Flight Director: Richard Henning
Phone #: (813) 828-3310 ext. 3086

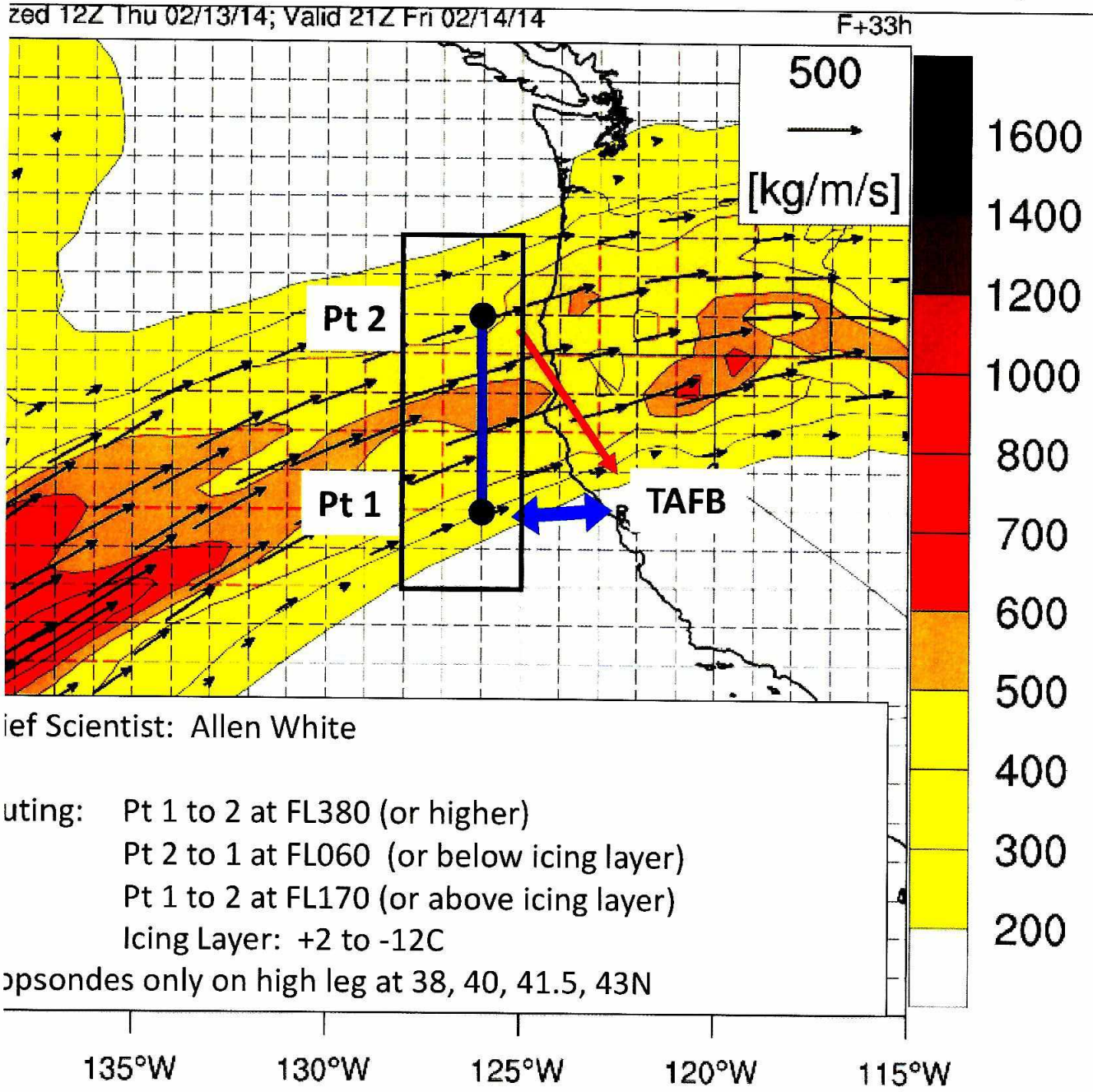
AOC GPS Dropwindsonde Log

Flight ID: 20140214N1 Flight Director: HENNING

Mission ID: WXWXE ATMOSRIVERF Storm/Track: _____ Pg ___ of ___

Ch. #	Drop #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°W)	Wx Cond.	SFC Prs (mb)	Ob #	L5/R5	Last Winds R5 (ht, ws, wd)	Last Winds L5 (ht, ws, wd)	Sent Time/KWBC (UTC)
1	1	5195	1911+									
2	2	5027	1928									
3	3	5036	1939+									
4	4	5010	1951									

tacked TDR Flight: TO 930 AM, Fri 14 Feb; 4 drops



ief Scientist: Allen White

uting: Pt 1 to 2 at FL380 (or higher)
Pt 2 to 1 at FL060 (or below icing layer)
Pt 1 to 2 at FL170 (or above icing layer)
Icing Layer: +2 to -12C

opsondes only on high leg at 38, 40, 41.5, 43N

NOTAM Pt	Lat	Lo
NW	45.0	12
NE	45.0	12
SE	36.0	12
SW	36.0	12

TDR Track	Flight Level	Lat
Pt 1	380	38.0
Pt 2	380	43.0
Pt 2	060*	43.0
Pt 1	060*	38.0
Pt 1	170*	38.0
Pt 2	170*	43.0

*Flight level on mid and low legs determine dropsondes from high leg. Decision on fligh lower leg is decided based on Drops 3 and 4 during descent at Pt 2

NOAA • AOC • SED

N49RF AVAPS DROP LOG Lead Tech: Gabe Defeo

Project : Atmospheric Rivers 2014 Mission : AR-6 Flight ID : 20140214N1

Take Off : 1838 Landing : _____ Flt Dir : Henning Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	112825 195	1	0	1911	TMR	PAR		
2	114 325 027	2	0	1928				
3	114 325 036	3	0	1940				
4	114 425 010	4	0	1951				
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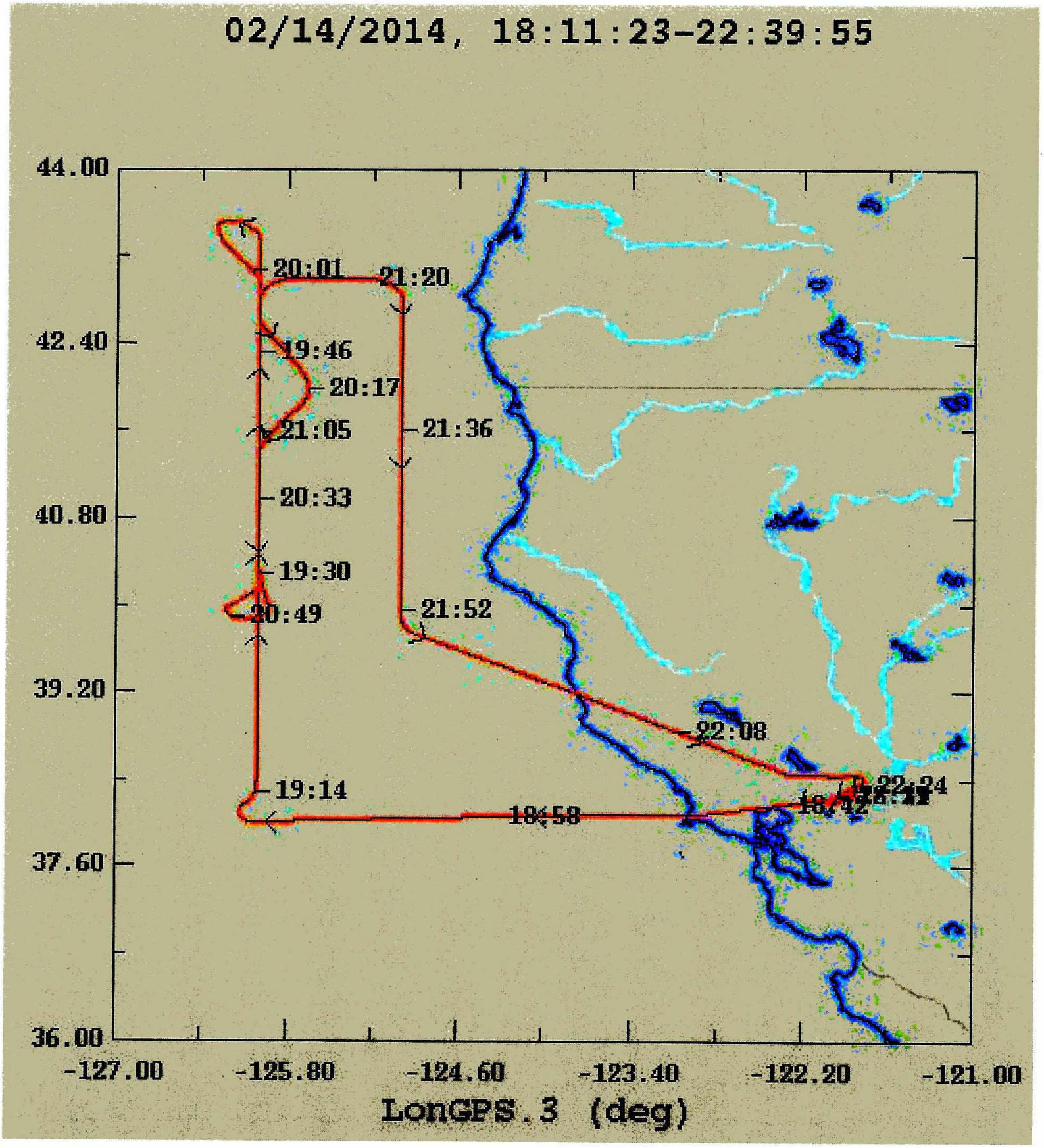
02/14/2014, 18:11:23-22:39:55
44.00
42.40
40.80
39.20
37.60
36.00
-127.00
-125.80
-124.60
-123.40
-122.20
-121.00
LonGPS.3 (deg)
20:01
21:20
19:46
20:17
21:05
21:36
20:33
19:30
20:49
21:52
22:08
19:14
18:58