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

FLT ID: 20131027H1	From: PAEI	To: PAEI
FLT #:	Blk In: 0259 Z	Lnd Time: 0253 Z
ETD: 1730 Z	Blk Out: 1732 Z	T/O Time: 1739 Z
ETE: 8+00	Total Blk: 9.5	Total Flt: 9.2
Sponsoring Org: PMEL	Program: PAX (Arctic Flux)	Purpose: Ice Transition Zone

AOC Flight Crew

Aircraft Commander: NELSON	SSA: HILL
Co-Pilot: DIDIER / Jeff MILLER (USN)	AVAPS: RICHARDS
Navigator: GALLAGHER	Scientists: James OVERLAND (PMEL)
Flight Eng: KLIPPEL / Chris RYCZEK (USN)	Scientists: Nick BOND (Univ of Wash)
Flt Director: HENNING	Scientists: Kevin WOOD (Univ of Wash)
SEB: OLNEY / /	Scientists: Nick RAINVILLE (Purdue)
Crew Chief:	Visitors: Melissa Kreller / Chris Cox (NWS)

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	#2 996.9	STA 997.0	Matt DONNINI (SrA USAF)	#2 991.9 STA (991.3)

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

Dropsondes	8	Good: 8	Bad: Ø	Sent: 8
AXBT	2	Good: 2	Bad: Ø	Sent: 2 CTD: 3 out of 5

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: WXWXC ARCTICFLX13C (ie: NOAA2 2418A SANDY)			

Remarks: MARGINAL ICE ZONE pcab 994.4

t/o 1758z 30.02

land 0258z 29.85

PABR
PASC

ALTPA TA gap ~~[illegible]~~ 191538 → 192802

TAF
SIGWX AAW
GOES
POES
MODIS
BL 12 145
[illegible]
[illegible]
SOUNDINGS READY
& SALT
ASH

N43RF ERROR SUMMARY
ARCTIC FLUX #3 PAEI - PAEI

Flight ID: 20131027H1

Sensor or system	Number or Name
INE (for wind derivation)	INE1
Accelerometer	AccZfilterI-GPS.1
Temperature Probe	TTM.1
Dew Point Probe	TDM.2X (Edgetech)
Altitude (for vertical wind)	AltGPS.3 (NOVATEL)
Static Pressure	PSM.2
Dynamic Pressure	PQM.2
Project Directory	/acdata/2013/MET/20131027H1

Notes:

There were two 1 second data gaps at 19:28:02z and 20:05:22z. Additionally, after takeoff, during initial climb out from Eielson AFB, there were gaps in the NOVATEL (AltGPS.3) altitude data but none occurred once the aircraft had leveled off enroute to the overwater portion of the mission.

Dewpoint sensor #2 (TDM.2 Edgetech) performed very well during the low altitude portion of the mission. During the high altitude transit portions to and from Eielson AFB, along with a portion of the science mission at 20K dropping sondes over the Beaufort Sea, TDM.2 was too warm so values for TDM.1 (the Buck) were substituted from 18:34z to 19:57z and then from 01:23z to 02:11z in post processing. The TDL (TDM.3) dewpoint sensor trended with the others but was too cold beginning at around 18:50z for the remainder of the mission.

All other instruments worked optimally during the flight.

Novatel (AltGPS.3) altimeter output was selected for post-flight processing.

	Takeoff (1739Z)	**Landing (0253Z)**
Aircraft Static Pressure	996.9 mb	991.9 mb
Corrected Tower Pressure	997.0 mb	991.3 mb

8 dropsondes, 2 AXBT and 5 CTD deployed. All but two CTDs (2130z and 2224z) were good and transmitted.

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

NOAA • AOC • SED N42RF AVAPS DROP LOG Lead Tech: ~~Joe Busco~~ John H W

Project: Hurricane 2013 Mission: Arctic Flux Flight ID: 20131027H7

Take Off : _____ Landing: _____ Flt Dir : Hennon

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	112615029	1	0	1858	TMR	PAX		
2	111745140	2	0	1904				
3	112065315	3	0	1909				
4	111745224	4	0	1915				
5	111745034	5	0	1920				
6	103125418	6	0	1934				
7	103125163	7	0	1941				
8	111955081	8	0	1952				
9								
10								
11								
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Arctic Flux Flight 3 Profile

Summary

On this flight we will fly from Eielson AFB toward 76N along 150W. We will deploy dropsondes at specific waypoints outbound at 20-22 thousand feet, then oceanographic instruments near waypoints southbound on 150W. At a conditions-determined point in open water we will deploy the last of 5 AXCTDs, and then begin a track-line survey eastward along the MIZ for as long as time and fuel permit (given return to 150W to conclude the survey).

Waypoints and deployments

Part One

IP	70 00N – 150 00W	20-22 thousand feet
A	70 30N – 150 00W	Reserved (Dropsonde)
		Locate ice edge with Rich's gizmo
B	71 00N – 150 00W	Dropsonde
C	71 30N – 150 00W	Dropsonde
D	72 00N – 150 00W	Dropsonde
E	72 30N – 150 00W	Dropsonde
F	73 00N – 150 00W	Dropsonde
J	74 00N – 150 00W	Dropsonde
K	75 00N – 150 00W	Dropsonde
L	76 00N – 150 00W	Dropsonde, descend to below cloud or (~1000-2000 feet)
		Locate a clear lead, descend to 200 feet, maneuver as needed
		Deploy AXCTD (backup with one AXCTD then AXBT if needed)
		Climb to 1000 feet and orbit until signal ends
		Porpoise between waypoints southbound
K		Recon and deploy AXCTD (backup with AXBT only)
J		Recon and deploy AXCTD (backup with AXBT only)
F		Recon and deploy AXCTD (backup with AXBT only)
X	TBD	Deploy AXCTD in open water beyond ice edge

Part two

X	TBD	Begin track following 060T alternating with 120T on call (nominally 15 miles either side of the ice edge), porpoise
Y	TBD	Return to 150W over open water 15 miles S of ice edge (end of 120T leg), porpoise

END

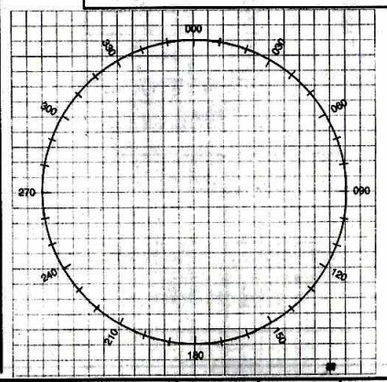
58.1 51.7 64 17 31 / 17 33 / 17 39 MASA 340 480 134.4 112.79 8891 907 269 1915

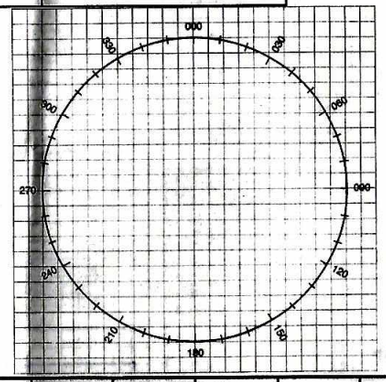
CLEARANCES

FREQ	ALT	HDG	OTHER
		Rwy	
			5050

MISSION LOG

PAGE ___ OF ___





POSITION REPORT

1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

EMERGENCY MESSAGE

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

UHF/VOICE	VHF/VOICE	MF/VOICE	HF/CW	MF/CW
243.0	121.5	2182 KHZ	8364 KHZ	500 KHZ

MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA _____, NOAA _____, NOAA _____

- POSITION _____ N / S _____ E / W AT _____ Z
- HEADING _____ TRUE/MAG
- AT _____ KTS TRUE/INDICATED
- FLIGHT LEVEL OR ALTITUDE _____
- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD
- NATURE OF EMERGENCY
- ASSISTANCE DESIRED
- PILOT INTENTIONS
- WE HAVE _____ ENDURANCE REMAINING

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
17 31 / 17 33	GO/TAKE																				
1745		64-55.6 / 67-44.6	64-55.6 / 67-44.5	-.1	64-55.7 / 67-44.6	-.1	339	20E	359	2R	001	275	201	36	FL200	246	BEGE	50	+12	1757	
1815																					
1915		75-45.6 / 150-00.4	75-45.7 / 149-58.3	+.1	75-45.3 / 148-58.4	+.6 / +2.0	336	22E	358	-	358	351	193	22	FL200	327	W	26	+06	1951	
2015																					
2145		71-59.0 / 150-00.3	71-59.8 / 149-59.8	-.7	71-59.4 / 149-58.8	-.4 / +1.5	152	21E	173	6R	179	203	093	25	200	202	D	24	+07	2152	
2215																					
2345		71-55.1 / 144-46.7	71-54.5 / 144-48.3	+.6 / -1.6	71-59.5 / 144-44.9	+1.8	175	23E	148	2R	150	170	125	35	FL	216	4	70	+25	0012	
0045																					
0145		69-09.7 / 148-08.0	69-09.6 / 148-10.8	+.1 / -2.4	69-09.7 / 148-08.4	+1.0	161	21E	182	7R	189	312	290	45	FL210	330	FIL	280	+54	0239	
0215	LAND																				
0300																					

7213.4 150.00 71-41.7 149-55.9 7126 149-54

MISSION LOG | **PAGE ___ OF ___**

FIX TYPES
(G) - GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
													PAEI → PTK @ FL200					713	2+25		
													PTK → PTF @ 2000					240	1+05		
													PTF → PAEI @ FL210					400	1+15		
																			4+45		
													PTF → ICEZ1A/[illegible]					620	2+45		