

Flt ID: 020301H	From: KPDX	To: KPDX
Flt No: 02-034	Blk In: 0122	ATA: ON 0116
ETD: 2200Z	Blk Out: 2145	ATD: OFF 2154
ETE: 3+00	Blk Time: 3.6	Flt Time: 3.4
Sponsor Org: NOAA/ETC	Program: PACIFIC OCEAN WINDS	Purpose: IOP11

AC: TEBEEST, R ✓	Sys Eng: SMITH, J ✓
CP: HALVERSON, H / TAGGART, B ✓	Data Sys:
Nav: ADLER, J ✓	Radar:
FE: FLOYD, D ✓	GPS/BT:
FD: SHEPHERD, T ✓	Cld Phys:
Avionics: ROGERS, M ✓	AA MC FADDEN, J ✓

Name (Last, First)	Activity on Aircraft	Affiliation
JORGENSEN, D ✓	PI	NOAA/NSSL
HUEFTLE, B ✓	RADAR	NOAA/NSSL
DAUGHERTY, J ✓	RADAR	NOAA/NSSL
ESTEBAN, D ✓	SFMR	UMASS
SALERNO, J ✓	OBS	NOAA/NWS

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #)

24 ~~76~~
21 54

3.72
24 72
21 45

3.37

U.S. Department of Defense		
Flt ID: 020301H	Time Off: 2154	Time On: 0116
W/S (Left) W/S (Right) W/S (Left) W/S (Right)		
1026.7		30.37
1025.4		30.31
	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	TR5
Radar Tapes	1	John D NSSC
Cloud Physics Tapes	1CD	↓
Video Tapes	4	↓
AXBT	0	
AXCP	↓	
AXCTD		
Dropsondes	↓	

	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					
Remarks					

Pacjet Ocean Winds 2002

Flight #11 020301H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1
Accelerometer	1
Temperature Probe	1
Dew Point Probe	1
Altitude (for vertical wind)	Radar Alt. (APN-159)
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2021.CON

Notes:

Takeoff: 2154Z

Land: 0116Z

There were no data gaps during the flight.

The radar altimeter (APN-159) was replaced by the APN-232 due to spiking during takeoff (215101 - 221230) and landing (010830 - 011900).

There was a spike in static pressure (PSF) that was removed and patched (222300 - 222400).

There was a spike in dew point #1 that was removed and patched (011630 - 011730).

During times when the aircraft was flying through heavy precipitation, the dew point temperature exceeded the ambient temperature resulting in humidities greater than 100%. This could also be due in part to wet bulbing effect on the total temperature sensor. No adjustments were made.

The vertical winds are calculated using the selected altimeter (radar altimeter for this flight). Therefore, the vertical wind speeds are erroneous at the beginning and end of the flight as the aircraft transited over mountainous terrain between the coast and KPDX.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1026.7	1025.4
Corrected tower pressure	1028.4	1026.4

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!!

Locations 80, 81, and 82 of record five on the standard tape contain vertical ground, vertical air, and vertical speeds respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

Flight Director: Tom Shepherd, (813) 828-3310 ext. 3053

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _s	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
220900	4451	12341	221	229	360	43.8	-7.7	-12.2	3223	2634	939.0	681.4	81.4	11000 PA CCR
221900	4423	12435	P1	Spind		↓ to 2000								
222940	4410	12444	228	232	007	23.7	2.8	-1.0	513	615	1027.8	953.0	81.0	2000 RA
223415	4357	12502	190	191	011	23.1	2.5	2.1	507	603	1028.0	954.5	80.0	2000 RA BEGIN LEG
224915	4256	12516			90	270 R	TO TRK	010						END LEG
225245	4252	12516	010	012	010	25.4	2.6	-0.3	503	599	1026.9	954.5	81.9	Begin TRK END AT LAT 4400
221100	4352	12501	010	011	002	223	2.6	1.5	502	604	1027.7	954.3		
231330	4400	12459			R 270	TO TRK 280								END LEG
231650	4358	12500	280	287	011	22.6	2.8	0.2	503	606	1028.0	954.3	81.6	Begin Leg
232825	4405	12600	280	286	008	23.8	2.6	1.8	501	610	1028.9	954.6	73.5	2000 RA BKN E
233150	4407	12617			L 90 R	270 TO TRK	100							END LEG
233525	4407	12620	100	094	353	22.9	2.1	1.1	491	605	1029.5	955.4	77.1	Begin LEG
235140	4357	12500			R Spind	up to 5000	TO TRK 280							END LEG
235450	4352	12507	280	290	018	33.4	1.8	-2.2	1403	1490	1026.1	855.7	65.8	Begin SFMR LEG 5000 RA
000000	4354	12530												END LEG
000420	4351	12534	190	190	010	32.8	1.5	-2.5	1425	1515	1026.7	853.5	64.0	Begin SFMR LEG 5000 RA
000620	4331	12539			R Spind	↑ to 10000	RA TO TRK 100							END LEG
001300	4328	12539	100	091	004	35.3	-4.5	-17.4	2945	3033	1024.0	705.8	58.9	BEGIN SFMR LEG 10000 RA
001800	4324	12513			L	TO TRK 010								END LEG
001910	4327	12511	012	012	006	33.3	-4.8	-22.5	2946	3027	1023.6	705.9	60.9	BEGIN SFMR LEG 10000 RA
002630	4350	12505												END LEG
002735	4353	12505												
003200	4406	12502												
003820	4427	12457												
003940	4432	12456												
004005	4432	12449	120	113	353	39.3	-4.7	-14.2	2949	3026	1022.9	705.9	73.6	10000 RA RTTB

020301H

T.O. 2154 ✓

LAND 0116 ✓

TT# 1 —

DP# 1 —

INE# 1 —

AZI# 1 —

~~2154 OK~~
PSF 0037 OK

222300-222400 ✓✓

DPI Spike

20-26

011630-011730 ✓✓

Sub RA 232 for RA 159

T.O

215101-221230 ✓✓

LAND

010830-011900 ✓✓



1)	215700	0.0	-0.1	45 32.1	122 48.4 ✓
	220800	0.0	0.1	44 54.5	123 36.2 ✓
	224800	-0.3	-0.7	43 1.5	125 14.9 ✓
	232700	-0.3	-0.8	44 4.2	125 52.7 ✓
5)	000800	-0.6	-0.2	43 29.2	125 44.1 ✓
	004900	-0.1	-1.4	44 47.9	124 10.3 ✓
	011100	0.3	-0.1	45 28.1	122 30.3 ✓
8)	011900	0.2	0.4	45 35.3	122 35.1 ✓

P-3 Chief Scientist Event/Radar Log

Flight: 020301H

Project: PACJET-2002

Aircraft: N42RF

Primary Mission: Flux Calibration: Wind "Ls" to calibrate TAS bias, C-scat box, the pitch and sideslip maneuvers to calibrate attack and side pressure transducers. If all goes well, about a 2.5 hr mission. IP is over water near 44.5N, 124.5W. Expect near 30 knot winds at 2000 ft altitude.

Alternative Mission: none

Comments: The final PACJET mission!!!!

Scientists/Visitors

- *Chief Scientist: Dave Jorgensen (NSSL)*
- *Doppler Scientist: John Daugherty (NSSL)*
- *Cloud Physics Scientist: NA*
- *Drop Sondes: NA*
- *Observer 1: Bob Hueftle*
- *Observer 3: D. Esteban (UMASS)*
- *Observer 4: A. Zhang (UMASS)*
- *Other Scientists/Visitors: Salerno (NWS)*

AOC Crew

- *A/C Commander: Tebeest*
- *Pilot: Halverson*
- *Flight Engineer: Floyd*
- *Flight Director: Tom Shepherd*
- *Navigator: Adler*
- *Sys Tech: Rogers*
- *Data Tech: Smith*
- *Radar Tech: Barr*
- *Other AOC: McFadden*

Time (Latitude, Longitude), Track (deg), Static Pressure (mb), Radar Alt (m)	Event & Comments
203744Z (45.58642, - 122.58102) 84.989 deg, 1028.2 mb, -4.0 m	System up and running!

211100Z (45.58636, - 122.58112) 84.989 deg, 1027.7 mb, -9.0 m	Takeoff delayed to 2130 UTC to finish up the NWS "open House" P-3 tour and to get lunch
214159Z (45.58629, - 122.58107) 23.746 deg, 1027.2 mb, -10.0 m	engine start
214450Z (45.58628, - 122.58116) 301.052 deg, 1027.2 mb, -11.0 m	block out
215320Z (45.58453, - 122.56924) 298.747 deg, 1027.0 mb, -11.0 m	Take off. Sky clear
220215Z (45.28117, - 123.20692) 213.972 deg, 681.1 mb, 3228.0 m	Radars up and running, recording on too
220629Z (45.00068, - 123.48914) 220.294 deg, 681.3 mb, 3040.0 m	approaching coast, 12 minutes to IP
221329Z (44.57717, - 124.01839) 222.726 deg, 681.4 mb, 3283.0 m	over the water
221854Z (44.38589, - 124.54027) 245.594 deg, 681.3 mb, 3299.0 m	at pt 1, spiral down to 2000 ft, then track 195
222708Z (44.28528, - 124.57013) 224.250 deg, 951.8 mb, 627.0 m	at 2000 ft, track to 44N 125W to new pt 1 winds 005/22, tracks will be roughly N-S
223231Z (44.04183, - 124.92953) 230.489 deg, 954.3 mb, 605.0 m	middle clouds increasing, now overcast as we move to the SW. Cargo ship seen below
223341Z (43.99235, - 125.01164) 230.010 deg, 954.6 mb, 604.0 m	at pt 1, turning to 190 to start leg 1
223430Z (43.94157, - 125.03639) 189.930 deg, 954.4 mb, 606.0 m	start leg 1
223658Z (43.77610, - 125.07442) 189.873 deg, 955.0 mb, 598.0 m	sfc wind estimate 25-30 knots from north or just east of north
224923Z (42.92927, - 125.27060) 189.098 deg, 954.2 mb, 602.0 m	end of leg, 90 left, 270 right to track back 010 to pt 1
225252Z (42.87410, - 125.26768) 10.256 deg, 954.4	start leg 2 track 010 to pt 1

mb, 599.0 m	
231331Z (44.00332, - 124.98254) 11.176 deg, 954.3 mb, 606.0 m	end of leg, right turn 270 to track 280
231654Z (43.96365, - 125.01619) 279.350 deg, 954.3 mb, 606.0 m	start of leg 3
232522Z (44.05345, - 125.73990) 279.915 deg, 954.3 mb, 612.0 m	some bumps & increase turbulence
233155Z (44.11759, - 126.27399) 279.504 deg, 955.6 mb, 605.0 m	end of leg 3, right 90 left 270 to track 100
233532Z (44.11809, - 126.33891) 99.283 deg, 955.7 mb, 606.0 m	start leg 4 back to pt 1
234102Z (44.05959, - 125.88458) 99.764 deg, 955.7 mb, 600.0 m	winds are slightly more northerly than on previous track 0 degrees rather than 010
235142Z (43.94267, - 124.99557) 99.264 deg, 955.4 mb, 595.0 m	end of leg 3, spiral up to 5000 ft to start scatterometer box. Skies are now clear here
235453Z (43.85777, - 125.09557) 278.980 deg, 856.0 mb, 1486.0 m	start 1st leg of the scat box at 5000 ft
235707Z (43.87968, - 125.27361) 279.800 deg, 853.2 mb, 1515.0 m	TA off to save energy
235955Z (43.90669, - 125.49298) 279.967 deg, 853.3 mb, 1515.0 m	end of leg, turn left to track 190. Flying near the tops of a field of small Cu. Winds up to 30 knots at this level
000124Z (43.84711, - 125.56972) 188.939 deg, 853.3 mb, 1516.0 m	start the 2nd scat leg
000624Z (43.51629, - 125.64410) 189.724 deg, 853.4 mb, 1514.0 m	end of leg, right hand spiral up to 10000 ft, then track 100*
001300Z (43.46134, - 125.67160) 99.565 deg, 705.8 mb, 3033.0 m	start of the 3rd scat leg at 10000 ft
001807Z (43.40800, - 125.23480) 99.479 deg, 706.1 mb, 3025.0 m	end of the leg, turn left to track 010

001918Z (43.45038, - 125.18822) 12.131 deg, 706.0 mb, 3024.0 m	start of last leg, back to pt 1
002637Z (43.82347, - 125.08636) 11.078 deg, 705.9 mb, 3026.0 m	end of the leg, turn to track North
002719Z (43.85979, - 125.08327) 3.626 deg, 705.9 mb, 3025.0 m	sideslip maneuvers, 3 cycles of +5* of sideslip
003128Z (44.06796, - 125.02504) 356.414 deg, 705.8 mb, 3025.0 m	end of sideslip mans.
003158Z (44.09399, - 125.02563) .490 deg, 705.8 mb, 3027.0 m	begin pitch maneuvers
003649Z (44.36226, - 124.96985) 9.868 deg, 733.3 mb, 2719.0 m	end of the pitching
003703Z (44.37645, - 124.96631) 10.188 deg, 724.8 mb, 2817.0 m	begin speed runs
003805Z (44.43230, - 124.95277) 9.476 deg, 705.9 mb, 3026.0 m	begin speed runs, increasing from 210 IAS to 240 IAS, then reduce to 190 IAS
003939Z (44.52499, - 124.93112) 9.684 deg, 706.4 mb, 3017.0 m	end of maneuvers. RTB
004314Z (44.55809, - 124.65393) 53.747 deg, 705.6 mb, 3026.0 m	Turn of LF
005102Z (44.88218, - 124.00320) 55.644 deg, 705.7 mb, 2869.0 m	over the beach

