

Flt ID: 020208H	From: KPDx	To: KPDx
Flt No: 02-026	Blk In: 0631	ATA: 0625
ETD: 2200Z	Blk Out: 2150Z	ATD: 2207Z
ETE: 9+15	Blk Time: 8.7	Flt Time: 8.3
Sponsor Org: NOAA/ETL	Program: PACJET - OCEAN WINDS	Purpose: IOP3

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

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P ✓	PI	NOAA/NESDIS
JORGENSEN, D ✓	RADAR	NOAA/NSSL
ZHANG, A ✓	SFMR	UMASS
ESTEBAN, D ✓	SFMR	U. MASS
PERSSON, O ✓	PI	NOAA/ETL/CIRES
SCHNEIDER, B ✓	SAT. COMMS	NOAA/NWS
PATTEE, MARK ✓	OBS	NOAA/NWS

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

RADARS ON @ 2304
 LF ↓ 0132
 TCG #2 00:00 ENTIRE FLT.

2991

2150

841

US Fleet Weather Service				
Flt ID: 020208H		Time Off: 2207Z		Time On: 0625
1030.8		30.46		1035.8
30.61				
	Number	Data Disposition / Date / Quality		
Flt Lvl Tapes	2	TRS		
Radar Tapes	1	D. Person		
Cloud Physics Tapes	1 CD	D. P.		
Video Tapes	4	D. P.		
AXBT				
AXCP				
AXCTD				
Dropsondes	8	1-ETL 7-NESDIS		
	Forward	Left Side	Right Side	Down
Time On				
Time Off				
Rate				
Remarks				

Pacjet Ocean Winds 2002

Flight #3 020208H

<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: 2207Z

Land: 0625Z

There were no data gaps during the flight.

The radar altimeter (APN-159) was replaced by the APN-232 due to spiking during takeoff (220401 - 221930) and landing (061400 - 062800).

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	1030.8	1035.8
Corrected tower pressure	1031.5	1036.6

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 _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
222230	4538	12349	260	276	310	53.4	-18.5	-48.0	4725	4543	996.9	560.4	84.4	16K BKN BCO
224940	4531	12626	266	271	292	45.6	-16.2	-18.0	4723	4194	1022.3	560.6	86.9	16K ^{SCR BCO} CL ABV
232950	4547	13004	276	278	282	47.1	-15.3	-16.4	4719	4801	1021.9	560.8	80.4	16K HAZE
235710	4554	13231	275	269	245	65.7	-14.7	-16.9	4719	4786	1018.1	560.7	81.9	16K CLDS
003640	4559	13558	270	258	216	73.4	-14.2	-17.5	4717	4734	1011.3	560.9	76.3	16K CLDS
005920	4600	13800	277	266	214	63.2	-12.1	-12.6	4531	4456	1000.4	580.5	59.2	D1-ETL Begin JV TO 10K RA
0105	4602	13831			unc	Rearing spd			to ~ 230	IAS				
010800	4602	13845	266	258	196	45.2	-2.4	-4.6	3112	3029	998.3	691.3	86.6	
012422	4602	14017	271	258	186	63.3	-2.6	-6.2	3140	3014	993.4	688.8	87.3	D2-NESDIS
013230	4605	14104												Turning to P3 and descend to 5000 RA
013650	4621	14044	046	056	196	73.0	6.3	5.7	1683	1517	991.1	826.6	76.9	SK RA
015955	4737	13842	050	061	194	75.4	4.8	4.4	1641	1531	999.3	831.1	79.5	D3-NESDIS No Good
														Came back @ 5000
020800	4803	13759	-	-	192	78.0	3.8	4.2	1623	1525	1001.3	832.9	74.0	Turn to P4
022651	4856	13851	325	317	173	80.2	1.5	2.0	1625	1494	997.9	832.7	79.4	D4-NESDIS
022945	4933	13932	326	321	164	80.8	-0.9	-0.2	1625	1481	999.2	832.6	80.5	D5-NESDIS
023448	5003	14000	-	-	154	78.6	-2.8	-3.0	1624	1468	999.1	833.1	78.0	
024930	4942	13923	134	145	166	77.7	-0.8	-0.3	1662	1516	998.9	829.0	75.8	D6-NESDIS
031215	4946	13940	302	290	165	82.0	0.4	1.4	1661	1499	996.1	829.1	80.8	
032130	4949	13939	111	127	163	78.3	-1.0	0.5	1666	1507	997.6	828.5	89.1	D7-NESDIS
034450	4917	13802	135	151	187	74.3	3.3	3.7	1662	1545	999.1	828.8	75.7	
040140	4841	1305	97	117	192	70.6	3.6	2.9	1638	1550	1002.5	831.2	75.7	Turn to KPDX
041700	4829	13542	101	120	195	69.5	4.1	4.9	1587	1527	1006.0	836.4	68.3	D8-NESDIS
044250	4809	13327												Climb to 10K RA
045020	4802	13243	119	132	218	52.5	-3.5	-3.2	3037	3061	1013.8	697.8	74.5	10K RA
050850	4726	13106												Climb to FL175
053750	4604	12756	122	126	275	39.1	-17.4	-19.8	5342	5474	1022.0	515.9	97.6	FL175
055650	4532	12537	87	84	306	36.2	-16.7	-19.1	5020	5152	1026.4	538.8	113.4	FL170

51 H

45 140.
972/50

Temp 0608 Fw 45 SCT 60

Fw 0800 10004 P65m SCT 50 BKN 150

13008 105m SCT 48 BKN 60 7/5

A 3060

P-3 Chief Scientist Event/Radar Log

Flight: 020208H

Project: PACJET-2002

Aircraft: N42RF

Primary Mission: Investigation of a strong low near 45 N, 145 W. System has hurricane force sfc winds and high precip in the warm front/occluded zone east of the low center near the triple point at the sfc

Alternative Mission: a possible module in the LLJ if it exists

Comments: Long ferry both ways (>3 hours each way) to the triple point. Mostly at 10 kft but possible modules down lower.

Scientists/Visitors

- *Chief Scientist:* Ola Persson
- *Doppler Scientist:* Dave Jorgensen
- *Observer 1:* Paul Chang
- *Observer 2:* Schneider (NWS)
- *Observer 3:* Esteran (UMASS)
- *Observer 4:* Zhang (Umass)

AOC Crew

- *A/C Commander:* Halversen
 - *Pilot:* TeBeest
 - *Flight Engineer:* Wade
 - *Flight Director:* Thomas Shepherd
 - *Navigator:* Adler
 - *Sys Tech:* Rogers
 - *Data Tech:* Smith
 - *Radar Tech:* Barr
 - *Other AOC:* McFadden
-

560.9 mb, 4801.0 m	192.168.3.21.
234036Z (45.81770, - 131.05612) 273.509 deg, 560.9 mb, 4796.0 m	banded reflectivity max on LF at 230 km range to our SW, max dbz about 40. Warm sector bands?
235354Z (45.87709, - 132.22760) 273.591 deg, 560.9 mb, 4788.0 m	another band on LF parallel to the first one at 230 km range to the SW
235847Z (45.90056, - 132.65482) 274.400 deg, 560.8 mb, 4784.0 m	trouble maintaining satcom connection, maybe on the limb of the sat coverage this far off the coast. Received IR image at 2330 Z, but nothing since
001121Z (45.93464, - 133.75528) 269.878 deg, 560.9 mb, 4772.0 m	going into the clear again. Cirrus deck about us on TA. Layered clouds below visually. Still about 45 minutes from Pt. 1.
002324Z (45.97821, - 134.84995) 273.724 deg, 560.9 mb, 4757.0 m	N49 is out here too. Dropped near the low center. 972 mb sfc pressure and 50 knots was reported, Drop location reported to be 45N 149W
002440Z (45.97994, - 134.95877) 271.018 deg, 561.0 mb, 4755.0 m	TA precip to the sfc to our right. Hint of bright band to about 30 dbz
002726Z (45.98388, - 135.18567) 272.047 deg, 561.2 mb, 4749.0 m	flight level winds continuing to back and strengthen, now 223/68 knots.
003059Z (45.98549, - 135.47217) 268.540 deg, 561.0 mb, 4744.0 m	band on LF oriented N-S 300 km ahead. Cold front?
004651Z (45.99469, - 136.88333) 272.142 deg, 561.2 mb, 4713.0 m	At point 1 will descend to 10 kft. Will deploy sonde just before Pt 1
005103Z (46.00587, - 137.28342) 270.150 deg, 561.0 mb, 4700.0 m	TA echo very light below us. Lots of 2nd trip ground echo on each side of AC
005237Z (46.00465, - 137.43011) 268.506 deg, 561.0 mb, 4695.0 m	At 100 nm ahead the sea return diminishes in a N-S orientation. Probably a sfc wind shift changing the character of the echo. Cold front? There is apparently little precip echo with that feature
005922Z (45.99281, - 138.01657) 276.735 deg,	sonde away.

020743Z (48.02992, - 137.99966) 36.451 deg, 832.7 mb, 1526.0 m	at Pt. 3, turning to new pt 4 (50N 140W) at 5 kft
021057Z (48.25122, - 138.15311) 326.263 deg, 832.8 mb, 1516.0 m	LF back on for a few minutes to see what it looks like. Will turn it off again for the scat.
021413Z (48.46977, - 138.37872) 325.084 deg, 832.6 mb, 1512.0 m	LF off. More extensive stratiform precip on TA as we move NW. Weak bright band just above us.
022632Z (49.31300, - 139.26221) 325.023 deg, 832.8 mb, 1482.0 m	entering a band of 40 dbz stratiform on the TA. Echo tops to 7 km or so.
022949Z (49.54087, - 139.50613) 325.999 deg, 832.6 mb, 1481.0 m	dropsonde #4 away.
023616Z (49.99613, - 139.99524) 325.127 deg, 832.6 mb, 1471.0 m	at pt 4, turn to track to pt 5 48N 137W, which is slightly north and east of our previous pt 3 to allow for NE drift of the echo mass
024713Z (49.76942, - 139.49234) 134.801 deg, 828.8 mb, 1516.0 m	entering strongest precip band again.
024957Z (49.68305, - 139.36252) 134.171 deg, 828.9 mb, 1516.0 m	sonde #5 away, good winds
030231Z (49.28161, - 138.74240) 168.221 deg, 828.3 mb, 1533.0 m	shortening the leg to return to the greatest precip, heading to 49.8N 140W
031604Z (49.84482, - 140.04288) 354.569 deg, 828.4 mb, 1501.0 m	end of leg, turn to track to Pt. 7 (49.3N 138W)
032135Z (49.82086, - 139.64984) 110.810 deg, 828.6 mb, 1506.0 m	sonde #6 away. winds OK
034041Z (49.41902, - 138.25189) 133.489 deg, 829.1 mb, 1532.0 m	turning to 133 to find heaviest present
035144Z (49.03185, -	

542.5 mb, 5094.0 m	
062511Z (45.59123, - 122.58656) 120.911 deg, 1036.0 mb, -11.0 m	touch down
063126Z (45.58604, - 122.58076) 174.596 deg; 1036.2 mb, 7076.0 m	block in

N42RF AVAPS DropSonde Log

N42RF Project: PACJET 3

Flight ID 020208H

Mission: _____

Flight #: 3

System Status: _____

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status / Failure Reason	GOOD ☒
1	994 325 079	1	0059	-	24	MER	ETL	✓
2	003 135 139	1	0124	-	60	MER	NESDES	✓
3	984 715 249	1	-	-	-		BAD (No Drop)	
4	994 325 199	1	0202	-	-		NESDES 1/2 Drop BAD	✓
5	993 915 004	1	0220	-	9		NESDES	✓
6	994 335 202	1	0229	-	12		NESDES	✓
7	994 338 026	1	0249	-	24		NESDES	✓
8	994 335 239	1	0321	-	16		NESDES	✓
9	994 325 100	1	0417		42		NESDES	✓
10	993 925 253							
11								
12								
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Feb 8

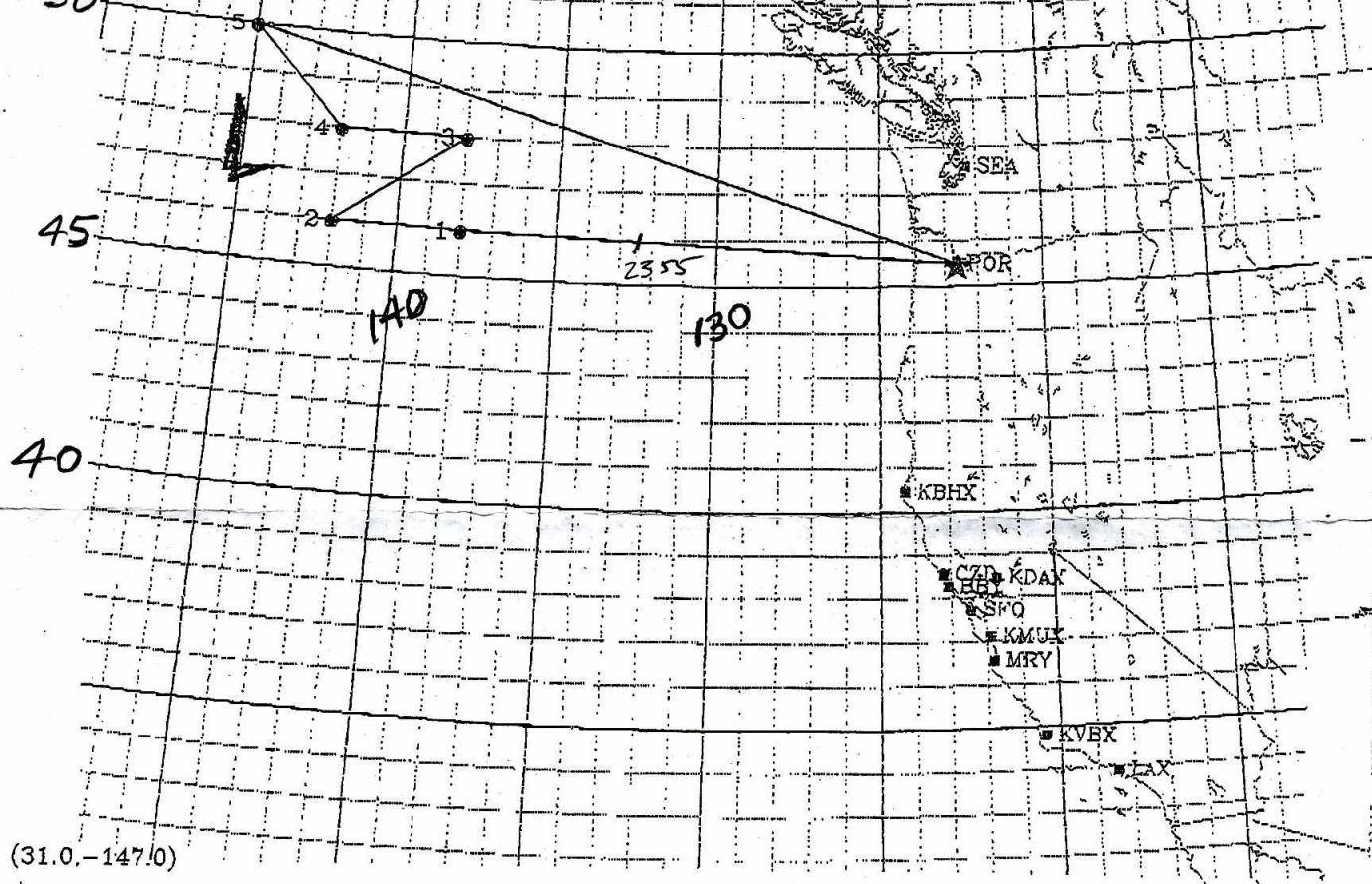
227 take-offs

1/2

P3 Flight Track Plan

(57.0, -109.0)

325
180
145
50



(31.0, -147.0)

140

130

NOAA/NSSL Lambert Conformal (44.0, -130.0)

