

Flt ID: 010221I	From: KMRY	To: KMRY
Flt No: 01-21	Blk In: 0009	ATA: 0005Z
ETD: 1500Z	Blk Out: 1510Z	ATD: 1519Z
ETE: 2130	Blk Time: 9.0 8:59	Flt Time: 8.8 8:46
Sponsor Org: NOAA/ETL	Program: PACJET	Purpose: IOP13

AOC Personnel

AC: TAGGART, B ✓	Sys Eng: MENAMARA, R ✓
CP: HALVERSON, H ✓ / TEBEEST, R ✓	Data Sys: LYNCH, T ✓
Nav: NEWMAN, C ✓	Radar:
FE: BAST, G / FLOYD, D	GPS/BT: DELGADO, J ✓
FD: SHEPHERD, T ✓	Cld Phys:
Avionics: ROGERS, M ✓	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
MILLER, D ✓	PI	NPS
KINGSMILL, D ✓	Co-PI / RADAR	DRI
PERSSON, D ✓	Co-PI	ETL - CIRES
DUTTER, M ✓	OBS	NWS

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

No T13 today
1522 Bal DP1 & 2

1530 Bal DP3

King not responding @ beginning of fix hit - T. Lynch working on it

1556 ZERO JW

1944 ZERO JW

2333 Bal DP1 - READING - 44.0 after Bal DP2 29.5 DP3 - 42.4

2365

1519

846

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AGCWF2

Flt ID: 010221I Time Off: 1519Z Time On: 0005Z

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	1013.9 ?	30.21 ?	30.17	1014.3

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	
Radar Tapes	1	
Cloud Physics Tapes	2	
Video Tapes	4	
AXBT	—	
AXCP		
AXCTD		
Dropsondes	1	good

Video

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

Remarks

Pacjet IOP 13

Flight #13 010221I

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1
Altitude (for vertical wind)	Pressure Alt.
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO3012.CON

Notes:

Takeoff: 1519Z

Land: 0005Z

The radar altimeter (APN-159) was replaced by the APN-232 due to spiking during take off and landing (151601-152230 take off; 000000-000600 landing). No offset was applied.

A spike was removed from pitch angle #2 (233101-233130).

Dew pointer #1 was used during most of the flight, but there were times when the sensor began oscillating. During those times, dew pointer #1 was replaced by either dewpointer #2 or dew pointer #3 as noted. On two noted occasions (**), the replacement dew pointer had spikes removed before being used for replacement of dew pointer #1. Unless otherwise noted, no offset was applied to the replacement dewpointer.

DP1 replaced by DP3 151601-152900	DP1 replaced by DP3 191700-191800
DP3 replaced by DP2 152900-153200**	DP1 replaced by DP2 212400-212600
DP1 replaced by DP3 152900-170300	DP1 replaced by DP2 220100-221600 (-0.2° C offset)
DP1 replaced by DP2 172730-172830	DP1 replaced by DP3 233203-233956
DP1 replaced by DP2 174000-174200	DP1 replaced by DP2 234219-000520
DP1 replaced by DP2 181545-185545	DP2 replaced by DP3 000520-000600**
DP1 replaced by DP2 185445-185545	DP1 replaced by DP2 000520-000600

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1013.9 mb	1014.3 mb
Corrected tower pressure	1023.0 mb (??)	1021.7 mb

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

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center

Form 413-60

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks	
154548	3635	12338	—	—	308	8.4	10.1	4.4	216	293	1022.9	987.6	72.8	1000' PT 1 BKN ABV	
155105	3621	12325	142	143	305	9.9	10.8	3.5	215	293	1022.9	987.6	73.6	1000' BKN ABV Hdg to P2	
160430	3542	12248	143	147	265	9.0	11.2	8.7	216	299	1023.5	981.6	70.0		
162755	3532	12134	—	—	Spiral ascent to 6000 at PT3										
163415	3539	12120	Climb to 8000 for MVA - began leg at 6000'												
163820	3549	12104	055	054	257	30.5	0.0	-2.5	2362	2480	982.4	759.7	71.5	OVER LAND ONCE BLO SET ABV	
165330	3626	11957	PT 4 L90 R270 back to PT3 with porpoising 8-15K												
165730	3631	11955	LOITER HERE - waiting on traffic												
170130	3626	11957	Begin ascent to 15000'												
170730	3615	12016	at 15000 - back to 8000												
171510	3558	12048	at 8000' - climb to 15000												
172850	3528	12443	Hdg direct to PT 5' W532 HGT Hunter high 8-10K												
173802	3601	12159	Out PT 5' spiral down to 500, up to 15000, then Porpoise												
174700	3604	12153	at 500' spiral up to 15000												
175850	3604	12157	PT 5' @ 15000 begin porpoise down to 8000'												
180500	3616	12126	8000' - climb to 15000												
180750	3622	12115	056	054	260	32.3	-8.4	-34.3	3728	3554	984.7	631.8	68.9	Climbing	
181050	3630	12101	15000' - descend to 8000'												
181732	3646	12028	8000' - hdy to PT 6' @ 8000												
181910	3651	12022	PT 6' L90 R270												
182610	3650	12024	239	241	242	22.5	-0.1	-11.1	2358	2389	1014.6	760.4	68.6	8000' BKN BLO BKN ABV	
183300	3634	12052	ATC made no climb - now VFR O.T. 10000 - level @ 8500.												
185120	3602	12156	237	238	237	23.9	0.6	-34.1	2380	2549	1024.6	757.3	64.7	Descending	
185245	3600	12159	PT 5' spiral down to 1000' then to PT 8'												
190200	3602	12204	330	330	162	20.0	10.5	9.3	206	298	1024.3	988.5	69.3	1000' wld hdy PT 8'	
190530	3614	12213	PT 8' begin spiral ascent to 7000'												
191115	3620	12207	064	068	218	27.7	2.3	-32.5	2049	2133	1022.8	790.0	81.6	7000' SCT BLO ONCE HD hdy → P9'	
192600			climb to 7500												
193034	3706	12039	PT 9' L90 R270												
193515	3709	12035	Begin porpoise to 14000												
194700	3645	12118	9000' (low as ATC will give) ascending to 14000'												
200130	3616	12217	PT 8' Begin spiral descent 500' up to 1000' then to P11												
2013			Descending then closed												
201530	3621	12219	Touched 500 on tra climb back to 1000 hdy to P11												
201807	3629	12227	P11 Climb to MVA 7000'												

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
202425	3632	12221												Loitering here to try and get lower - NO 7000 is it.
202740	3634	12221	060	063	219	24.8	2.9	-32.9	2049	2126	1021.4	790.2	75.8	7000' SET 810
203240	3645	12157	056	060	203	25.9	2.0	-33.0	2048	2123	1021.7	790.2	80.0	7000' Just coming on shore
204325	3711	12107	056	059	222	26.1	-1.4	-4.2	2049	2083	1018.8	790.0	90.3	Top of clouds in + out
204600	3718	12054		PT	12									
204955	3722	12050	231	234	240	25.9	-0.3	-25.5	2584	2743	1016.9	722.8	71.2	Climbing to 14000
205545														Climb to 14000 VFR O.T.
210650	3647	12154												Touch 7000' work up to 14000'
211430	3634	12226												P 11 Spiral down to 1000'
212538	3634	12231												Climb to get comms back - plans have changed
213130	3633	12221												Spiral work to 1000 then on to P13 then P13 - P14'
222050	3501	12133												Spiral up to 15000'
224110	3558	12159	342	336	245	37.0	-13.9	-39.5	4502	4589	1023.0	577.3	79.1	P5' (D1)
224724	3604	12148												Begin descent to 8000' w/ VFR O.T.
225424	3622	12114												Touch 8000' begin ascent to 15000
230045	3640	12030												15000 now descend to 8000'
231045	3650	12019	239	240	235	21.0	1.3	-33.1	2353	2384	1014.9	760.5	87.9	OVER land P6' hdy → P5'
233740	3559	12055	235	237	238	15.5	2.3	-32.3	2386	2434	1019.0	760.5	67.6	
233900	3556	12160												P5' spiral down to 1000'
235040	3615	12204	354	355	163	20.4	10.2	9.8	232	302	1022.0	985.6	83.2	1000' along coast in old.
235440	3632	12206												Climb to 4000 END science

IOP13 010221 I

AZI 2

INE 2

TT 1

DP 1

ALT - Press

Differential Slip (BPF)

~~1519-1522 (Take off)~~, ~~1613, 1624-1625~~, ~~2013-2014~~
2019, 0000 OK

DP1 Spikes

Replace #1 w/#3 151601-152900 (0.005) ✓

Replace #3 w/#2 152900-153200 ✓

Replace #1 w/#3 152900-170300 ✓

" #1 w/#2 172730-172830 ✓

#1 w/#2 174000-174200 ✓

#1 w/#2 181540-182635 ✓

#1 w/#2 185445-185545 ✓

#1 w/#2 212400-212600 ✓

#1 w/#2 220100-221600 (-.205) ✓

#1 w/#3 233203-233956 ✓

#1 w/#2 234219-000520 ✓

#2 w/#3 000520-000600 ✓

#1 w/#2 000520-000600 ✓

#1 w/#3 191700-191800 ✓

Remove spike Pin #2

233101-233130 ✓

APN 159 replaced by APN 232 @ T.O. and landing due to spiking

151601-152230 T.O. ✓

000000-000600 land ✓

RENAV (OVER)

1) 160000	+0.2	+0.2	35 54.9	-123 0.7 ✓
170000	-0.2	-0.6	36 28.7	-119 50.3 ✓
180000	-1.1	-0.5	36 5.1	-121 53.2 ✓
190000	-1.0	0.0	36 3.0	-121 58.9 ✓
5) 200000	-1.9	-0.2	36 18.3	-122 6.3 ✓
210000	-3.3	-0.3	37 0.6	-121 27.7 ✓
220000	^{-3.7} -2.7	-0.1	35 ^{47.3} 48.3	-122 46.2 ✓
230000	-3.8	+0.4	36 35.6	-120 47.6 ✓
000000	-5.5	+1.4	36 44.2	-121 54.6 ✓
10) 000600	-5.3	+1.2	36 35.4	-121 51.2 ✓

P-3 CHIEF SCIENTIST EVENT/RADAR LOG**Flight Number:** 010221I**PACJET IOP #13***Date:* 21 Feb 2001*Aircraft ID:* N43RF*Chief Scientist:* Miller*Doppler Scientist:* Kingsmill*Radar Tech:* Rogers*Cloud Physics Sci:* Persson*Data Tech:* Lynch*Radar parameters:* PRF1/PRF2 3200/2133, 0.25 microsecond pulse*Setup file =* PACJ2*Pulses/sample =* 32*Threshold on REF**Alternate Setup =* PACJ1: PRF 1600, 0.50 pulse**Mission Description:** Flow modification by coastal orography**Scientific Crew:** Doug Miller, Dave Kingsmill, Ola Persson, Mike Dutter (NWS)**AOC Crew:** Taggart (P), Tebeest (P), Wade (FE), Shepherd, (FD) Newman (N), Rogers (tech), Lynch (data), McNamara (tech), Delgado (dropsonde)**Event Log**

<i>Time (Lat, Lon), Trk (deg), Prs (mb), Alt (m)</i>	<i>Event & Comments</i>
150734 Z (36.58888, -121.85680) 172.785°, 1016.9 mb, 1500.0 m	Engine Start
150951 Z (36.58894, -121.85681) 342.481°, 1017.0 mb, 1500.0 m	Block Out
151907 Z (36.58463, -121.83742) 292.535°, 1014.1 mb, 1500.0 m	Takeoff
152544 Z (36.76964, -122.24211) 261.430°, 987.3 mb, 297.0 m	Start recording radar data
152921 Z (36.73436, -122.49419) 258.703°, 987.1 mb, 299.0 m	LF set to 2.2 deg, heading to pt 1, at 1000 feet
153416 Z (36.68002, -122.82968) 258.249°, 987.3 mb, 296.0 m	LF set to 2.8, 12 minutes to pt 1

154020 Z (36.62492, -123.23688) 260.069°, 987.2 mb, 296.0 m	NE-SW oriented band offshore, 20-25 dBZ. Wind shift from 190 to about 300 degrees. Clearing west of the band
154338 Z (36.59631, -123.46773) 262.354°, 987.2 mb, 295.0 m	King probe wire replaced prior to flight, but it doesn't seem to be working. 2DP doesn't appear to be working well. 2DGC is ok, but there is still are occasional stripes down the middle of the array
154524 Z (36.58295, -123.59299) 262.668°, 987.3 mb, 295.0 m	At pt 1, turning SE for pt 2
155756 Z (36.01481, -123.10031) 143.884°, 987.3 mb, 299.0 m	Wind starting to back a little and increase in speed. Moisture also starting to increase; now 7.5 g/kg, was around 5 g/kg back at pt 1
160820 Z (35.51921, -122.64821) 143.311°, 987.6 mb, 301.0 m	Wind has slacked to less than 10 kts and has still got a considerable westerly component (250 deg)
161145 Z (35.35997, -122.50568) 144.668°, 987.3 mb, 305.0 m	Wind has backed to almost 200 deg and increased in speed to 18-20 kts. Mixing ratio up to 8.5 g/kg. Thetae jumped from 304 to 308.5
161546 Z (35.17486, -122.33914) 143.079°, 987.7 mb, 303.0 m	At pt 2, turning toward the beach
162413 Z (35.41285, -121.81993) 56.654°, 987.5 mb, 310.0 m	Wind has backed to 160-170 degrees, speed as high as 20 kts, moisture down a bit to 7.7 g/kg Getting some shallow, 1-2 km echoes on the Tail radar
162742 Z (35.52814, -121.59329) 62.479°, 987.5 mb, 312.0 m	At pt 3, starting climb up to MVA, which will be 6000 ft. Wind direction veering on ascent.
163333 Z (35.62764, -121.41243) 57.150°, 820.6 mb, 1836.0 m	Adjust LF tilt to 1.0 deg
163420 Z (35.65739, -121.35796) 54.022°, 812.8 mb, 1915.0 m	ATC has moved us up to 8000 ft instead of 6000 ft.
163650 Z (35.75610, -121.18109) 55.671°, 759.5 mb, 2008.0 m	Some 2-3 km echoes on the tail as we cross some terrain.
164147 Z (35.96232, -120.81512) 55.636°, 759.7 mb, 2144.0 m	Echoes diminish in the lee of the Santa Lucias
165126 Z (36.37039, -120.06816) 54.165°, 764.3 mb, 2337.0 m	Some 5-6 km echoes on the tail in the lee of the Diablo range
165346 Z (36.47227, -119.93509) 356.213°, 764.0 mb, 2350.0 m	At pt 4, turn around to the SW, prepare to begin porpoising along recip track.
165647 Z (36.46568, -119.88367) 277.869°, 764.1 mb, 2349.0 m	ATC won't let us get up to 15,000 ft for a few minutes. Will loiter until clearance is provided.
165914 Z (36.51922, -119.82005) 156.422°, 764.3 mb, 2340.0 m	We now have ATC clearance for a 8,000 to 15,000 block
170116 Z (36.43874, -119.91869) 237.646°, 764.1 mb, 2349.0 m	Radar system down and being rebooted, Start porpoising about 1000 ft/min
170544 Z (36.30051, -120.17455) 236.339°, 622.8 mb, 3926.0 m	Tail has been set to single PRF mode to limit second trip
170725 Z (36.24690, -120.27049) 236.823°, 580.6 mb, 4362.0 m	Top of first porpoise, winds 265 deg, 29 kts
171454 Z (35.97352, -120.76981) 235.616°, 756.5 mb, 2112.0 m	Bottom of first porpoise, winds not much different than at the top, starting second porpoise.
172205 Z (35.69816, -121.25468) 237.257°, 597.4 mb, 4182.0 m	Top of second porpoise, heading down
172541 Z (35.56946, -121.48058) 236.140°, 685.4 mb, 3276.0 m	A military waraning area in the south area of our sampling domain has gone hot. Our line 5-6 has been moved a bit NW (5'-6'), as has our line 8-9 (8'-9'). We are heading direct to pt 5'.
173724 Z (35.96921, -121.96783) 335.476°, 762.7 mb, 2422.0 m	At pt 5', spral descend to 501 ft, then spiral ascend up to 15,000 ft

174230 Z (36.02353, -121.95650) 348.169°, 955.8 mb, 575.0 m	On descent, w inds back to 140 deg and increase in speed to almost 30 kts
174327 Z (36.07499, -121.92670) 66.254°, 998.9 mb, 207.0 m	At 501 ft, ascend to 15000 ft. Substantial drying above 750 mb.
175450 Z (36.03201, -121.86115) 233.273°, 580.0 mb, 4562.0 m	At 15000 ft, head to the SW to compensate for drift, then start porpoising to the NE from 15000 to 8000 ft.
175616 Z (35.97881, -121.94855) 232.965°, 580.1 mb, 4559.0 m 180036 Z (36.10075, -121.83395) 70.915°, 629.0 mb, 3942.0 m	Start porpoise down to 8000 ft.
180529 Z (36.27406, -121.43771) 54.450°, 747.7 mb, 2168.0 m	Start climbing to 15000 ft. Winds 32 kts/260 at 11,000 ft. Near static neutral layer 11000-12700 ft.
181024 Z (36.48764, -121.05714) 57.016°, 582.4 mb, 3937.0 m	At 15000 ft. Bck down to 8000 ft. Ground visible through breaks.
181438 Z (36.65686, -120.71873) 59.571°, 678.4 mb, 2865.0 m	Over I-5 at 10000 ft. Near-neutral layer seen again.
181707 Z (36.75399, -120.51736) 58.116°, 749.7 mb, 2491.0 m	At 8000 ft. Will stay here for rst of leg because of traffic and lack of time for another porpoise. Winds 26 kts/260. Flying near top of a cloud layer.
181852 Z (36.82590, -120.38608) 54.881°, 760.3 mb, 2399.0 m	Left 90, R 270 and reverse direction. Wave clouds visible on last leg below plane.
182340 Z (36.90092, -120.24458) 218.184°, 759.9 mb, 2399.0 m	Heading back to SW at 8000 ft. Some echos at eastern end of leg. Track 238.
183139 Z (36.64812, -120.73114) 237.136°, 760.3 mb, 1764.0 m	Climbing to 8500' for traffic. Received satellite image showing wave clouds.
184142 Z (36.33440, -121.33702) 237.782°, 745.2 mb, 2416.0 m	Winds were at 34 kts, then dropped to 26 kts, now back up to 30 kts all within last 5-7 minutes.
184753 Z (36.14606, -121.71562) 237.815°, 744.9 mb, 2610.0 m	On coast.
184931 Z (36.09244, -121.81615) 236.921°, 744.9 mb, 2610.0 m	Passing over a broad echo band on LF. Mostly sea clutter, but tail radar shows some echos, too, esp. To south.
185203 Z (36.00682, -121.97350) 236.320°, 744.9 mb, 2610.0 m	Start spiral down to 1000'. About 15 miles offshore. 15 kts/180 deg at 1800'. Winds < 10 kts just above.
185855 Z (36.06874, -122.03934) 61.000°, 973.8 mb, 425.0 m	winds 26 kts/155 at 1000'
185958 Z (36.05213, -121.98177) 160.747°, 988.6 mb, 298.0 m	turning to go to 8'. Some turbulence.
190145 Z (36.02723, -122.06297) 326.896°, 988.7 mb, 296.0 m	heading to 8' at 1000 ft. Winds 21/167. Ocean occasionally visible.
190514 Z (36.21698, -122.19405) 328.993°, 988.5 mb, 296.0 m	Start right spiral ascent to 7000'.
191049 Z (36.32248, -122.15271) 63.056°, 790.5 mb, 2131.0 m	Track 64 deg at 7000'. Passing just S of Monterey. Winds 27 kts/219.
191314 Z (36.40059, -121.95320) 64.394°, 790.3 mb, 2133.0 m	Passing over Pt. Sur. 27 kts/220 deg
191540 Z (36.48905, -121.75873) 57.457°, 791.2 mb, 1860.0 m	Some turbulence. Winds varying between 15-28 kts from 205-215 deg. Speed variation is generally slow & steady, not turbulent.
192526 Z (36.86563, -121.03470) 52.855°, 786.0 mb, 1462.0 m	Climbing to 7500' due to traffic.

193014 Z (37.08183, -120.68576) 52.109°, 775.8 mb, 2249.0 m	L90, R270 reversing course.
193454 Z (37.16097, -120.53444) 232.040°, 775.8 mb, 2246.0 m	Start porpoise leg: 7500'-14000'-7000'-14000' 35 kts/257 at 12300 ft.
194130 Z (36.95311, -120.92867) 235.646°, 601.9 mb, 4104.0 m	At 14000' descending to 7000'. 35Kts/258deg Shear layer near 10500. Winds 25 kts/255 below it.
194647 Z (36.77489, -121.25699) 236.923°, 731.7 mb, 2410.0 m	Could only get to 9000' because of traffic. Climbing to 14000'. AT 10300', winds 35/259.
195209 Z (36.57853, -121.60794) 235.433°, 613.3 mb, 4028.0 m	Descending to 7000'. 39 kts/260 at 12300 ft. 24 kts/257 at 10000.
195607 Z (36.44752, -121.84909) 234.970°, 729.7 mb, 1857.0 m	At 9000', unable to descend further because of traffic. Ascending to 14000'. Low clouds only at coast. Clearing further west.at 14000' 42 kts/255.
200118 Z (36.25674, -122.18524) 233.274°, 604.2 mb, 4247.0 m	Start R spiral descent to 1000' at point 8'. Near west edge of low clouds about 30 km offshore. Turbulence at 3500'. Winds 18 kts/212 at 3300'. At 1500 ft, 16 kts/177. Still turbulent. At 1000 ft, 20 kts/178. At 500 ft. 15 kts/176.
201524 Z (36.33305, -122.30658) 321.095°, 1004.9 mb, 153.0 m	Climbing to 1000' and heading for point 11.
201848 Z (36.51678, -122.44728) 19.830°, 949.7 mb, 627.0 m	Climbing to 7000'.
202724 Z (36.55258, -122.37189) 59.790°, 790.3 mb, 2125.0 m	Starting track 60 deg to point 12 at 7000'.
203505 Z (36.84217, -121.77609) 57.064°, 790.4 mb, 2072.0 m	Crossing coast inside of MRY bay. Moderately turbulent, enhanced cloud development, even some echoes on the tail radar
204222 Z (37.14786, -121.19841) 56.217°, 790.1 mb, 1836.0 m	Encountering periodic turbulence along this leg, about every 2-3 minutes. Nice visulization of this in the King LWC
205220 Z (37.27708, -120.97664) 234.384°, 706.3 mb, 2995.0 m	Just past pt 12, heading back to pt 11 porpoising from 7000 to 14000 feet.
211603 Z (36.60954, -122.38908) 64.969°, 656.2 mb, 3596.0 m	At pt 11, spiraling down to 1000 ft.
212522 Z (36.53754, -122.54990) 4.644°, 897.7 mb, 1077.0 m	Climbing to get radio comms with OAK to get clearance for an offshore modification to our flight plan. This revised plan will take us out to point 13, then down to 35N/121.5W (pt 14'), both at 1000 ft. At 14', we will spiral up to 15,000, then proceed to pt 5., drop a sonde, then porpoise from 8000 to 15000 feet over to pt 6'.
213412 Z (36.56107, -122.43492) 33.655°, 866.4 mb, 1366.0 m	Have obtained clearance for plan, now descending to 1000 ft at pt 11
213742 Z (36.57417, -122.43896) 32.660°, 972.9 mb, 416.0 m	Since we are going to be offshore and at low levels for a while, changed tail radar back to dual PRF mode
213907 Z (36.56908, -122.35394) 164.097°, 986.1 mb, 304.0 m	Down at 1000 ft, heading to pt 13
214224 Z (36.44641, -122.52133) 234.860°, 985.9 mb, 305.0 m	Changed tilt on LF to 2.7 deg
215251 Z (36.05830, -123.12071) 230.003°, 985.9 mb, 305.0 m	At point 13, turn southeast for point 14', stay at 1000 ft
220635 Z (35.53864, -122.38884) 130.210°, 986.0 mb, 305.0 m	At begining of this leg, mixing ratios were just above 5 g/kg. Now, they are up to 7.3 g/kg. Winds have been relatively week (3-4 kts) on this leg so far.
221500 Z (35.22881, -121.88750) 126.677°, 986.1 mb, 308.0 m	Sea clutter is only on the east side of the aircraft track, perhaps suggesting a wave/wind discontinuity.

221625 Z (35.17812, -121.80305) 126.403°, 985.9 mb, 309.0 m	Just went through a moisture and wind discontinuity. Q's up to 8.2 g/kg, winds up to 11 kts and backing to SSW. Also some King LWC.
222010 Z (35.04604, -121.58145) 128.809°, 986.1 mb, 309.0 m	At pt 14', spiral climbing to 15,000'. Warning area has gone hot again.
222831 Z (35.12308, -121.64508) 340.664°, 695.0 mb, 3165.0 m	Have gone back to single-PRF mode as we ascend. We terminated our spiral at 10,000 ft to get out of the warning area.
223335 Z (35.45532, -121.77313) 342.484°, 704.7 mb, 3055.0 m	Out of warning area, continuing climb to 15,000 ft enroute to point 5'
224048 Z (35.94870, -121.96410) 342.580°, 577.2 mb, 4597.0 m	Drop sonde #1 near pt 5', winds are good
224715 Z (36.04928, -121.82713) 51.426°, 577.3 mb, 4592.0 m	Starting porpoise down to 8,000 ft
225349 Z (36.33516, -121.29044) 56.018°, 744.1 mb, 2527.0 m	Bottom of porpoise, back up to 15,000 ft
230140 Z (36.66466, -120.65488) 57.420°, 601.2 mb, 4098.0 m	Top of porpoise, back down to 8,000 ft quickly as we approach pt 6'.
230427 Z (36.77677, -120.43076) 57.432°, 710.9 mb, 2909.0 m	Reached pt 6' at 8,000 ft, turning back to pt 5' at 8,000'.
233840 Z (35.95014, -121.96272) 235.449°, 760.6 mb, 2434.0 m	At pt 5', spiral down to 1000 ft for ferry back to MRY
234144 Z (35.97571, -121.96101) 171.113°, 868.9 mb, 1343.0 m	Moisture increases and wind backs quite a bit as we go thru 900 mb
234402 Z (35.99807, -122.02589) 58.944°, 969.3 mb, 437.0 m	At 1000 ft, wind 17 kts out of 135 deg, mixing ratio 7.5 to 8.0 g/kg
235427 Z (36.52415, -122.09593) 352.058°, 985.7 mb, 302.0 m	Climb for approach to MRY
000435 Z (36.58247, -121.83125) 293.496°, 1006.6 mb, 43.0 m	Touchdown, runway 28L
001057 Z (36.58904, -121.85587) 38.778°, 1014.7 mb, 5963.0 m	Block in

NOAA • AOC • SED

Mission :

#13

Flight ID : 010221I

Landing : _____

[illegible]

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N43RF DATA STATION LOG

Project : PacJet '01

Mission : PacJet #13

Flight ID : 010221T

Operators : _____

Take Off : 15:19

Landing 00:04

RAMS DAT 1 On [8/9]: <u>15:09</u>	RAMS DAT 1 Off: <u>00:11</u>	Data : <u>Slow</u> <u>Fast</u> <u>AVAPS</u>
RAMS DAT 2 On [8/9]:	RAMS DAT 2 Off:	Data : Slow Fast AVAPS
RAMS DAT 3 On [8/9]:	RAMS DAT 3 Off:	Data : Slow Fast AVAPS
Printer On : <u>15:09</u>	Printer Off:	Disk Recording : <u>Enabled</u> / Disabled
MARS DAT 1 On [8/9]: <u>15:25</u>	MARS DAT 1 Off: <u>00:04</u>	CPU Selected : A <u>B</u>
MARS DAT 2 On [8/9]:	MARS DAT 2 Off:	VCR's Used : <u>00:00</u>
MARS DAT 3 On [8/9]:	MARS DAT 3 Off:	VCR Mode : VHS / <u>S-VHS</u> 2 / <u>12</u>
PMS DAT 1 On : <u>15:21</u>	PMS DAT 1 Off: <u>22:12</u>	
PMS DAT 2 On : <u>22:15</u>	PMS DAT 2 Off: <u>00:02</u>	Tapes Given To
PMS DAT 3 On :	PMS DAT 3 Off:	RAMS :
VCR Tape 1 On : <u>15:10</u>	VCR Tape 1 Off: <u>00:14</u>	MARS :
VCR Tape 2 On :	VCR Tape 2 Off:	PMS :
VCR Tape 3 On:	VCR Tape 3 Off:	VCR :

CARCAH Tasking

ASDL Setup

Mission Number : W242TE

Flight Level (Minobs) Sample Frequency : 30s

Storm Name : Train

Flight Level (Minobs) Block Time : 10m

Data Station Operator Notes

Lu B:

3249/32489/23

Aircraft : N43RF

Project : PacJet '01

Mission : PacJet #13SED Crew: Delgado, Lynch, McNamee, RojasFlight ID : 010221IPre-Flight: 13:30Take-Off: 15:19Landing: 00:04

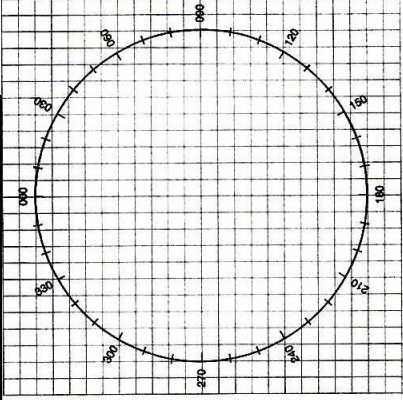
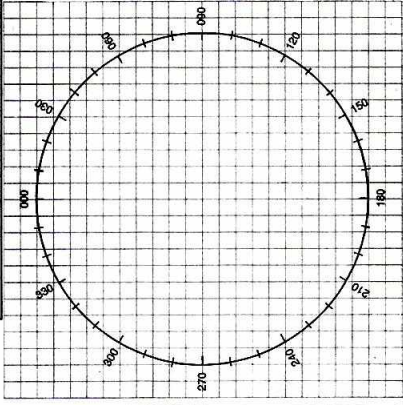
System			Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1	Aligned to: <u>0</u>	<u>✓ TL</u>		<u>-2.2</u>	<u>-1.5</u>	<u>2</u>
	INE #2	Aligned to: <u>0</u>	<u>✓ TL</u>		<u>-5.4</u>	<u>+1.1</u>	<u>1</u>
	GPS		<u>✓ TL</u>		Lat	Long	GS
	Diff GPS		<u>(4)</u>				
RADAR	Nose		<u>✓ TL</u>				
	L/F	R/T SN: <u>103</u>	<u>✓ TL</u>		Mod Switch Off? <u>RJM</u>		
	Tail	R&T SN: <u>102/202</u>	<u>✓ TL</u>		Mod Switch Off? <u>RJM</u>		
	MARS Data System		<u>Clean DAT?</u> <u>✓ TL</u>		# DATs: <u>1</u> <u>✓ MR</u>		
PMS	2DG-C	Ch 1/64: <u>-1-</u>	<u>✓ TL</u>				
	2D-P Mono	Ch 1/32: <u>2.6/1.4</u>	<u>✓ TL</u>	<u>(b)</u>			
	FSSP	Ref VDC: <u>B.56</u>	<u>✓ TL</u>				
	SEA Data System		<u>Clean DAT?</u> <u>✓ TL</u>		# DATs: <u>2</u> <u>✓ MR</u>		
TEMP		Cal High	Cal Low			Cal High	Cal Low
	Temp #1	<u>+30.9</u>	<u>-30.5</u>	<u>RJM</u>			
	Temp #2			<u>RJM</u>			
	Temp #3	(Starboard)		<u>N/A</u>			
	Dewpoint #1	(General Eastern)		<u>RJM</u>			
	Dewpoint #2	(Edge Tech 137)		<u>RJM</u>			
PRES	Attack Angle	(AP/DAP)	<u>(d)</u> <u>RJM</u>				
	Slip Angle	(BP/DBP)	<u>RJM</u>				
	Differential	(PQ1/PQ2/PQ3/PQ4)	<u>(d)</u> <u>RJM</u>				
	Absolute	(PS1/PS2)	<u>RJM</u>				
	Radome Transducers		<u>Plugs?</u> <u>✓ TL</u>		<u>✓ 204</u>		
	Cabin Transducer	(Station 5)	<u>RJM</u>				
FLTLVL	Apn-159	SN: <u>71-02</u>	<u>✓ TL</u>		<u>Off?</u> <u>✓ MR</u>		
	Apn-232	SN: <u>1761</u>	<u>✓ TL</u>		<u>Off?</u> <u>✓ 204</u>		
	King Liquid Water		<u>✓ (3)</u>	<u>(5)</u>			
	J&W Liquid Water		<u>✓ TL</u>				
	Lyman Alpha Hygrometer		<u>Plugs?</u> <u>✓ TL</u>		<u>Plugs?:</u> <u>✓ 204</u>		
	Down PRT-5	(SST)	<u>RJM</u>		<u>✓ MR</u>		
	Side PRT-5	(CO ²)	<u>RJM</u>		<u>✓ MR</u>		
	Up PRT-5		<u>Open?</u> <u>✓ TL</u>		<u>Closed?</u> <u>✓ MR</u>		
	RAMS Data System		<u>Clean DAT?</u> <u>✓ MR</u>		# DATs: <u>2</u> <u>✓ MR</u>		
	F/D Laptop		<u>RJM</u>		<u>Off?</u> <u>✓ MR</u>		
MISC	C.I. Printer		<u>✓ MR</u>		<u>✓ MR</u>		
	ASDL		<u>✓ MR</u>		<u>Off?</u> <u>✓ MR</u>		
	Exterior Walk Around		<u>✓ JED</u>				
	Video	<u>(N) (D) (R) (B)</u>	<u>✓ MR</u>		<u>Lens Covers?</u> <u>✓ MR</u>		
	AXBT Receivers		<u>✓ MR</u>				
	AXBT Sonobouys		# On Board: <u>11</u>	# Dropped: <u>0</u>	# Good: <u>—</u>		
	AVAPS		<u>✓ MR</u>				
	GPS Dropsondes		# On Board: <u>17</u>	# Dropped: <u>1</u>	# Good: <u>1</u>		
	FCU	<u>B C D</u>	<u>✓ TL</u>		<u>UPS Off?</u> <u>✓ MR</u>		
	SatComm		<u>✓ MR</u>	<u>✓ MR</u>			
USER	NASA GORE		<u>✓ JED</u>	<u>✓</u>			
					Accelerometers		
					#1 (2 G): <u>8194</u>		
					#2 (2.5 G): <u>0686</u>		
				#3 (3 G): <u>5967</u>			
				#4 (3.5 G): <u>2892</u>			

Please Note any Discrepancies

Item #	Zulu Time	Problem Description	Initials	Status
①		PRI READING 1mb HIGH	RJM	
②		ATTACK #2 READING HIGH	RJM	
3		Replaced King LWD wire on preflight	TL	OK
4		Diff GPS - not receiving any GPS sat's. I Was getting beacon signal OK.	TL	
5		Precip probe has a lot of clear Air updates	TL	
6		King LWD inop - checked fuses - OK - probe working OK	TL	OK
*		Add ESSP WUPS fuse to PMS kit	TL	

MISSION LOG	PAGE ____ OF ____
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FREQ	ALT	HDG	OTHER
			6000 45 65
			286.0
			1741
			111
			30.24

[illegible]

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

- NATURE OF EMERGENCY
- ASSISTANCE DESIRED

- ASSISTANCE DESIRED
- PILOT INTENTIONS

POSITION REPORT

1. POSITION

2. TIME

3. ALTITUDE

4. NEXT POSITION

5. ETA

6. NEXT POSITION