

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

AOCWF1

Flt ID: 010123I	From: KMRY	To: KMRY
Flt No.: 01-09	Blk In: 0314	ATA: 0307Z
ETD: 2000Z 1900Z	Blk Out: 1957	ATD: 2007Z
ETE: 0400Z	Blk Time: 1953 7:17	Flt Time: 7.0 7:00
Sponsor Org: NOAA/ETL	Program: PACJET	Purpose: IOP2

AOC Personnel

AC: Kroul, P	Sys Eng: Roles, J ✓
CP: Halverson, H / Gennerson, D	Data Sys: Goldstein, A ✓
Nav: Adler, J ✓	Radar: Barr, J ✓
FE: Jarry, R / Floyd, D	GPS/BT:
Avionics: Rogers, M ✓	Cld Phys:
FD: Shepherd T ✓	

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
9 Kingsmill, D ✓	PI	DRI
4 Ralph M ✓	Co-PI	NOAA/ETL
10 Jorgensen, D ✓	Radar	NOAA/NSSL
8 Smell, B ✓	Radar	NOAA/NSSL
11 Miller D ✓	Data Syn.	NPS
7 Nance, L ✓	Data	NOAA/ETL (CIRES)
16 Hodge C ✓	obs	NWS
13 Schneider, W ✓	obs	NWS
19 Walton, T ✓	media	

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

~~Wet Weather~~. ZDC probe not working at beginning of flight

DPT3 & TT3 = T4 (not installed)

A Hack 1 @ 2234 ~ 10 (frozen)

• 2343 ~ 15 (frozen)

King LW off (Roles) ~ 0030

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AOCWF2

Flt ID: 010123 I		Time Off: 2007 Z		Time On: 0307 Z	
	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)	
Pressure	1010.6	30.05	1007.6	30.00	
	Number	Data Disposition/Date/Quality			
Slow/Fast Flt Lvl Tapes	2				
Radar Tapes	1				
Cloud Physics Tapes					
Video Tapes	4				
AXBT					
AXCP					
AXCTD					
Dropsondes	1	1 good			
Video					
	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					
Remarks					

Pacjet IOP 2

Flight #2 010123I

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

Notes:

Takeoff: 2004Z

Land: 0307Z

During the flight, there were several (5) regions of dynamic attack pressure data (DAP) that did not maintain the same trend as the dynamic fuselage pressure (PQF1). This was due to saturated conditions during most of the flight and numerous altitude excursions causing sensors to become contaminated with ice. The DAP was corrected by substituting it with PQF1 with an appropriate offset measured before and after the problem area(s). Time 225944-231303 DAP was replaced by PQF1 with a 0.0 mb offset. Time 231930-232837 DAP was replaced by PQF1 with a -5.4 mb offset. Time 234149-235411 DAP was replaced by PQF1 with a -0.2 offset. Time 010725-021713 DAP was replaced by PQF1 with a -0.4 mb offset. Time 021910-024529 DAP was replaced by PQF1 with a +1.0 mb offset.

The differential attack pressure sensor on the fuselage (PDAF) also had icing problems at times approximately synonymous with the problems encountered by DAP. These problems are uncorrectable. There are no other sensors for comparison and substitution. The time frames were 230100-230600, 233900-235100, 012100-020900, and 022000-024500. It should be noted that both of these parameters can have and impact on both the vertical and horizontal wind calculations.

Due to the afore mentioned saturated conditions during the entire flight, the dewpoint temperature exceeded ambient temperature on many occasions. No attempt was made to correct these excursions.

The RA-159 altimeter was replaced by the RA-232 for take off and landing (200400-201100 take off and 025600-031000 landing).

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1010.6 mb	1007.6 mb
Corrected tower pressure	1017.6 mb	1015.9 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

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Form 413-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _i	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
003400	3855	12356	141	143	283	8.4	4.3	3.8	929	907	1012.1	906.5	85.1	in clb enroute pt 7
004855	3821	12315												@ 500 begin spiral up to 1000' & head for pt. 8
005255	3829	12317												pt 8, spiral (L) up to 3000' and turn to pt 9
010200	3800	12320												at pt 9 spiral (L) to 6000'
010815	3824	12317	003	004	192	6.0	-1.4	-4.9	1833	1803	1012.1	811.5	74.0	in clb
011600	3852	12311												Reverse turn back to pt 11 Then spiral up to 13000
012020	3839	12313												pt 11 spiral R up to 13000
013700	3802	12325												at pt 9, spiral down to 10000
014940	3843	12311	012	015	170	23.5	-10.2	-10.1	3050	2398	955.2	696.2	80.8	in clb and land
015140	3852	12309												pt 10 reverse turn to pt 11
015650	3838	12312												spiral R down to 7000'
015930	3838	12312	191	191	184	15.8	-3.7	-3.2	2164	1612	958.7	781.1	76.6	
020500	3819	12316												PT 7 descend to 6000
021425	3852	12310												at pt 10 reversing track
021920	3839	12312												at pt 11 spiral up (R) to 13000
0225														Lost Generator 2 → Hdg for MRY - aborting - will make drop at pt 7
023058	3820	12316	186	188	198	22.1	-12.4	-19.7	3998	3930	1007.9	616.3	78.7	sonde at pt 7 good
024255	3736	12259												Descent from 9000 to 6000
024355	3733	12255	137	143	213	18.9	-3.8	-3.1	1827	1797	1015.2	812.8	75.9	Enroute to MRY

2004
0310

010123I

INE 2

2

TT 1

DW 2

Altimeter - PA

DAP not trending with PQF1 2253, 2302, 2307-2309, 2312
2320-2332,
✓ 2241-2354
0120-0244

Differential attack out 2306

✓ 2339-2350
0121-0207
0220-0246

Slip mass fuse.

✓ 2021, 2032, 2110, 2114-2116, 2141, 2203, 2213, 2217-2220
2227, 2238-2246, 2307, 2320-2324, 2329, 2331, 2337, 2340-2342
2344-48, 2352, 0016-0018, 0056, 0111-0114, 0128-0130, 0134
0142, 0145, 0209, 0220

Substitute PQF1 for DAP

✓ 225944-231303 (0.0) offset, 231930-232837 (-5.4) ✓
234149-235411 (-0.2) 010725-021713 (-0.4) ✓
021910-024529 (+1.0) ✓ -0.4

Substitute RA159 w/RA232 200400-201100 TAKEOFF ✓
025600-031000 LANDING ✓

PDAF Frozen /

✓ 230100-230600, 233900-235100, 012100-020900
022000-024500, ~~030800~~

RENAV (OVER)

1) 203000	-0.1	-0.2	36 36.7	-123 27.6	✓
2) 211500	-0.5	0.0	38 45.0	-123 46.3	✓
3) 220000	-0.2	-0.5	39 7.8	-123 47.5	✓
4) 224500	-0.9	-0.3	38 3.7	-123 27.0	✓
5) 233000	-1.0	-0.3	38 51.4	-123 12.0	✓
001500	-1.8	-0.4	38 46.3	-123 15.5	✓
010000	-1.7	0.0	38 8.5 8.3	-123 21.5	
014500	-2.6	+0.1	38 22.8	-123 16.8	✓
023000	-2.8	+0.7	38 22.2	123 16.1	✓
10) 031000	-3.4	+0.9	36 35.2	-121 50.7	✓

P-3 CHIEF SCIENTIST EVENT/RADAR LOG**Flight Number:** 010123I**PACJET***Date:* Jan. 23 2001 *Aircraft ID:* N43RF*Chief Scientist:* Ralph*Doppler Scientist:* Jorgensen/Smull (NSSL) *Radar Tech:* Roles*Cloud Physics Sci:* Kingsmill *Data Tech:* Barr*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

Event Log

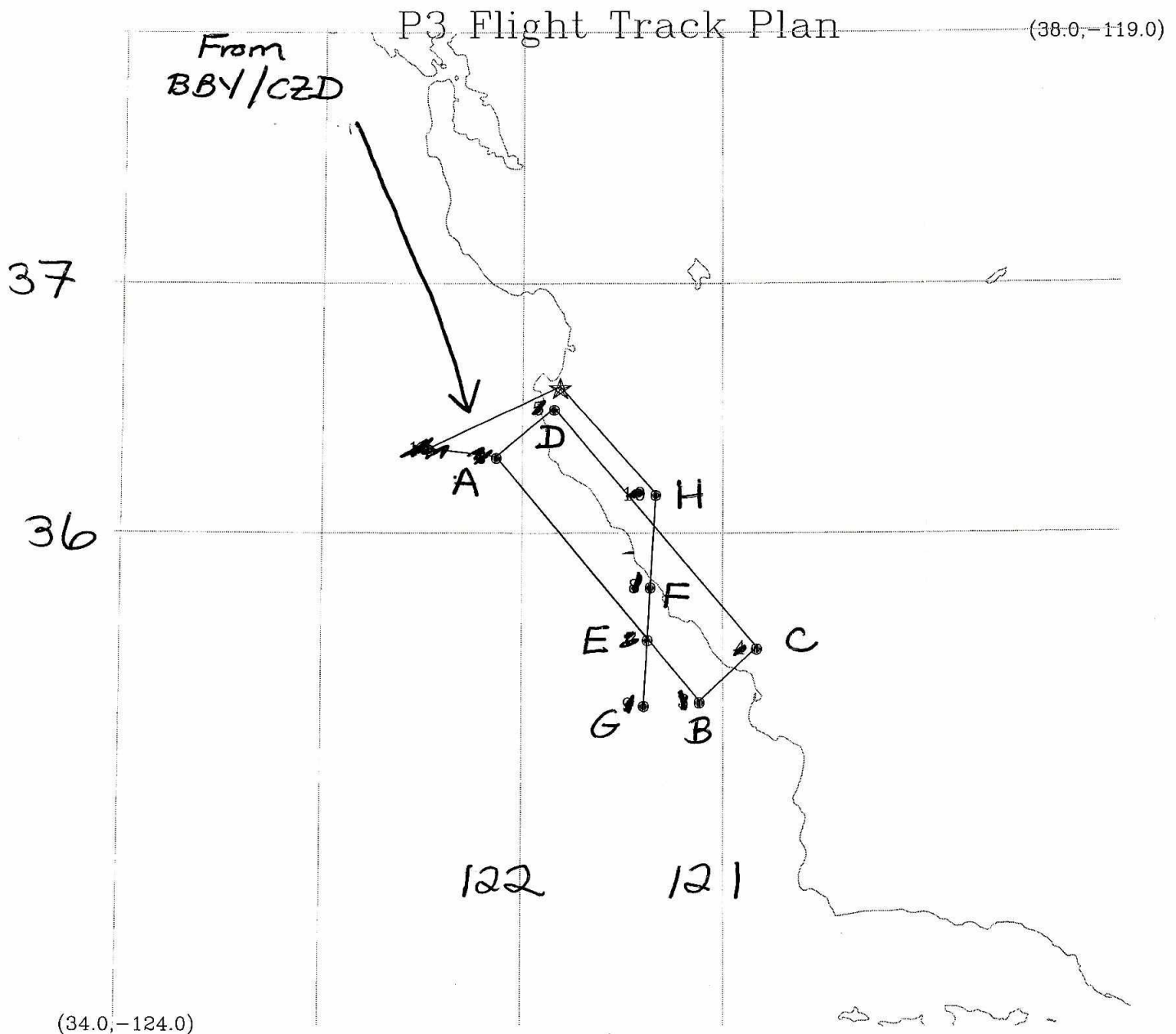
<i>Time (Lat, Lon)</i>	<i>Event & Comments</i>
	Flight Deck Crew: AC Commander: Tennesen; Co-Pilot: Kenul; Backup-Pilot: Halverson; Nav: Adler; Flight Director: Shepherd.
195305 Z (36.58896, -121.85608)	Engine Start; just beginning to lightly rain
195707 Z (36.58898, -121.85606)	Block Out
200634 Z (36.58321, -121.83319)	Takeoff, in moderate rain at MRY
200829 Z (36.62534, -121.90361)	Extensive birght band on TA, some weak cells over the higher terrain of about 40 dBZ, echo tops about 7 km
201134 Z (36.69554, -122.07814)	echo tops coming down as we move over the water - narrow cold frontal rainband to our North about 70 km max dbz over 45
202118 Z (36.65501, -122.80814)	level a 910mb tracking 265 toward pt. 1
202602 Z (36.63004, -123.15628)	main cold front evident as narrow precip band offshore over 45 dBZ, as long NNE-SSW convective band - not linear but ragged short bands about 50-75 km off the shore
202925 Z (36.61483, -123.41512)	precip getting lighter as we move west - sun now out now here about 150 km off shore
203657 Z (36.59592, -123.98625)	at pt 1, descending to 500 feet sky overcast little precip here
203907 Z (36.74298, -123.99501)	at 500 ft, ascending to 5k ft
204359 Z (37.07379, -124.00191)	tail echoes much spottier here, blue sky overhead and immed west, more action toward shore
205042 Z (37.55247, -124.01056)	tracking toward Pt 2 @ 3kft, LF showing orographic echos paralleling coast near Cazadero, zone extending 30-50 km offshore. Starting to pick up spotty convection on tail E of track

205910 Z (38.14198, -124.02451)	LF suggests N-S band out near 50 km W of track, no echoes on tail, must be just beyond. Suggestion of NE-SW bands east of this band N of our location.
210438 Z (38.52689, -124.02534)	LF shows N-S back edge of orographic/frontal echo ~25 km E of our track. Another N-S echo boundary seen on LF 30 km W of track, but no echoes on tail. Appearance of flying N thru echo-free channel. SF echo 5 km deep on tail beyond 20 km E of track
210928 Z (38.86134, -124.03316)	Entering echo region
211008 Z (38.91022, -124.03375)	Just short of Pt 2, turning to track SE to Pt 3, likely at 5kft
211304 Z (38.83268, -123.87090)	Echo tops 3 km W of track, increasing/sloping upward to >5-6 km E of track. Bright-band est. 1.5-2Km MSL our location.
211858 Z (38.57678, -123.57845)	Continued nice orographic signature w/ max tops at/beyond 20 km to E of track.
212256 Z (38.39506, -123.37709)	Ralph reports small graupel on nose within last minute or so
212507 Z (38.29668, -123.26517)	Nice seeder-feeder cells last minute or two
212644 Z (38.22336, -123.18375)	Starting descent to 1kft, tail echoes somewhat weaker this end of leg.
212809 Z (38.15756, -123.18452)	At Pt 3, FL 1kft, spiraling up to 6kft. During climb wind veered from ~170-220 deg. Lost INMARSAT connection during spiral.
213145 Z (38.16982, -123.22319)	At 6kft, temp -0.6degC, track 050 to Pt 4. Decent particles on 2D-P, cloud probe still nonfunctional.
213732 Z (38.45412, -122.87369)	At Pt 4, outside turn, cont at FL 6kft (1.8 km) No obvious 2nd trip contamination.
214140 Z (38.54160, -122.95561)	Large aggregates on 2D-P. Track 317. Some ice on windshield.
214905 Z (38.90473, -123.38306)	Nice enhancement coming off terrain W of track. Very nice echo plume sloping upward toward E above/across our track, originating near coast
215538 Z (39.22471, -123.76924)	At Pt 5, outside turn to track 225. Echo sig weaker/shallower here
220407 Z (38.94378, -124.01717)	At Pt 6, spiral down to 3 kft, proceed to Pt 7. Requesting brief dip to 1 kft at Pt 7
220828 Z (38.86923, -123.89023)	sun out now, tracking 140 deg at 900 mb, no echo on TA
221150 Z (38.71430, -123.71666)	more cloudy now as we proceed to Pt. 8 small echoes on TA to right, 25 dBZ, echo tops to 3 km
221734 Z (38.44984, -123.42502)	more stratiform echo aloft, much weaker than before, no discernable bright band, 1 min to go to Pt. 7
222021 Z (38.32701, -123.28697)	at pt. 7, spiral descent to 500 ft then back up again
222255 Z (38.34090, -123.29860)	at 500 ft, spiral back up to 1000 ft
222616 Z (38.42365, -123.32042)	tracking toward pt. 8 020 deg toward beach at 300 m RA, will spiral up at pt. 8
222729 Z (38.49850, -123.28874)	at pt. 8, spiral up to 3 k ft, light precip on TA
223024 Z (38.45131, -123.37022)	level off at 3k ft, tracking south to pt. 9
223411 Z (38.23653, -123.36494)	TA echo much weaker as we track south. About 30 km off the beach.
223803 Z (38.01299, -123.37291)	at pt. 9 spiral descent to 500 ft, then spiral up to 6k ft, very weak TA echo above us, sun is coming out
224504 Z (38.06614, -123.45020)	at 6k ft, NEXRAD image came in OK from 2158 Z, tracking 010 up the coast
225134 Z (38.51707, -123.33443)	convective cells off to the left 5 km, tops to flight level (6 km), more extensive stratiform precip too. Have seen some evidence of weak 2nd trip atop good 1st trip wx echo on this leg--possibly owing to our higher altitude combined w/ beams extending along terrain axis
225610 Z (38.83738, -123.25140)	At pt. 10 in moderate stratiform precip although not much of a bright band, climbing up to 7500 ft. Tracking 192 to pt. 11
230843 Z (38.35772, -123.29750)	More evidence of 2nd trip.
231143 Z (38.16808, -123.32661)	Shifting to Setup PACJ1 (single-PRF 1600/s)

231358 Z (38.02600, -123.35497)	At Pt 9, climbing to FL 115. Will track to/thru Pt 10, extending a few miles past.
232548 Z (38.53750, -123.26994)	Tail returns intensifying as we near coast. Few gates of 2nd trip last few on RHS aft scans, but nothing extensive. INMARSAT unit unable to find satellite
233015 Z (38.87441, -123.19228)	At Pt "10-extended", tracking back to Pt 11, maintaining FL 115. Returning tail to setup PACJ2.
233301 Z (38.76620, -123.14491)	Sig 2nd trip LHS fore scans.
233449 Z (38.66052, -123.18040)	At Pt 11, spiraling to FL 140. Lots of 2nd trip blasting thru good 1st-trip stratiform echo on this climb.
233806 Z (38.69109, -123.17218)	At 14kft, will track 190 to Pt 7. Picking up some rime ice on wings, spinners
234432 Z (38.32884, -123.28180)	At Pt 7, spiraling down to 3kft. Icing has picked up last few min. Echoes increasingly convective as post-frontal airmass moves in.
234830 Z (38.30840, -123.31757)	Just cut thru top of a nice cell, 40+dBZ core below our FL.
235104 Z (38.36046, -123.30316)	Punch thru cell, JW briefly > .75 g/m**3. Nice nose-camera video.
235334 Z (38.39468, -123.34404)	Level at FL 3kft. Beginning 2nd circuit around Doppler Box. Tracking 138 toward Pt 3. Prepared to cut-short N end of box if echo is too weak
235848 Z (38.15910, -123.09517)	At Pt 3, outside turn, climbing to 6 kft. Still plenty of convective echo W of track, more stratiform over terrain.
000535 Z (38.42299, -122.84842)	At Pt 4. INMARSAT connection is back, but lost in turn. Solid SF echo here, tops to 4-5 km.
000944 Z (38.50613, -122.95152)	Report of 0.25" precip at Three Peaks/Big Sur, but spotty. Decision is to keep working this N area. Fuel good to 0400 UTC.
001233 Z (38.64874, -123.11635)	Evidence of seeder-feeder cells aloft, tops to 5km
001451 Z (38.76389, -123.24858)	relatively strong bright band now, but much closer to the ground than before, about 1 km off the sfc
002346 Z (39.19792, -123.76120)	end of leg, at pt 5, turning WSW at 6k ft to Pt. 6
002959 Z (39.02726, -123.91104)	TA echo decreasing rapidly as we move WSW down the coast. Virtually no echo left. Some 2nd trip evident on both sides of the AC
003128 Z (38.95922, -123.98193)	At pt. 6, descend to 3kft
003354 Z (38.94266, -123.96945)	at 3kft tracking 141 deg at 3k ft. Tracking toward Pt. 7
004020 Z (38.62170, -123.62440)	entering heavier rain as we progress to the SE, small convective cells off the left 29 km, tops to 5 km max dBZ of 50, more extensive stratiform precip above us
004637 Z (38.35022, -123.25285)	at pt. 7, descend to 500 ft in a spiral. Strong convective line to our right off shore by 30 km or so
004823 Z (38.33232, -123.28207)	at 500 ft, ascending to 1000 ft for run to Pt. 8
005058 Z (38.35086, -123.29091)	9 miles out from beach tracking north
005257 Z (38.47939, -123.28175)	at pt. 8, climbing to 3k ft for run to Pt. 9
005428 Z (38.46755, -123.35101)	level at 3k ft, tracking 170 to Pt. 9
005729 Z (38.28398, -123.34328)	passing very near strong convective cell to our right, less than 2-5 km to the cell center
010200 Z (38.02372, -123.34393)	at pt. 9 tracking north
010915 Z (38.41444, -123.27478)	running up the right side of a 50 km long convective line, there's more precip 50 km to the SW of that, near 37.5N 121 W
011523 Z (38.82752, -123.20503)	At Pt 10. Climbing to 5 kft, reversing for run to Pt 11. Beyond N end of well defined squall line, broad SF echo w/ generating cells here.
012025 Z (38.65700, -123.21364)	Spiraling up to 13 kft over Cazadero, echo locally only to 3km but isolated tops (generating cells) up to 7km. Stratiform echo definitely extends above bright band, also embedded cells/intense fallstreaks below bright band.

012323 Z (38.64950, -123.22055)	2nd trip increasing as we climb, but mainly confined to ech-free regions, much less than previous spiral this location, possibly due to attenuating effects of heavier 1st trip precip
012715 Z (38.63264, -123.21356)	Beautiful convective echo just W of track, intensities up to 50 dBZ at 0129. Pilots reporting St. Elmo's fire, discharges making gauges jump.
013629 Z (38.04623, -123.35400)	At Pt 9, descending to FL 100. Lost most 2nd trip during descent.
014813 Z (38.60933, -123.21643)	Anvil tops to 7 km, lots of embedded convection. Suggestion of 2nd band on LF behind (W) of first one, oriented NNW-SSW.
015116 Z (38.83319, -123.16049)	Intense embedded cells generally confined to <3 kmMSL. Echo has lost the crisp leading convective line/trailing stratiform structure seen on initial pass, has embedded convection across entire 20-3km E-W width of band now
015145 Z (38.86943, -123.15387)	At Pt 10, reversing track maintaining FL 100.
015739 Z (38.65697, -123.24939)	At Pt 11 (Cazadero), descending to 070.
020517 Z (38.30480, -123.27467)	At Pt 7, descend to 060. Reverse track to Pt 10-Extended (38 51'). Planning to launch dropsonde at S end of pattern later, may need to extend beyond Pt 7 to ensure sonde avoids land.
021439 Z (38.87605, -123.16182)	At Pt 11, spiraling up to 13 kft.
021903 Z (38.66875, -123.18910)	climb to 13k ft
022027 Z (38.67398, -123.27132)	lots of St. Elmos fire on the nose
022428 Z (38.71898, -123.19023)	lost generator, aborting mission, will do the dropsonde at Pt. 7 then head to MRY, lots of P-static
022428 Z (38.71898, -123.19023)	very intense bright band 45 dBZ
022428 Z (38.71898, -123.19023)	sonde away, radar system down good drop
022428 Z (38.71898, -123.19023)	radar up again
022428 Z (38.71898, -123.19023)	sonde splash, out of precip now on way to MRY
022428 Z (38.71898, -123.19023)	descending to 9k ft
030045 Z (36.74440, -122.14577)	Raadar recording stopped
030714 Z (36.58903, -121.85036)	Land MRY
031419 Z (36.58897, -121.85625)	Block In

Addendum to existing plan for 010123I



NOAA/NSSL Lambert Conformal (36.1, -121.8)

A → B 3000'

B → C → D → A

A → E 3000'

E → F 1000'

F → G 3000'

MVA (8000'?)

G → H MVA (8000'?)

H → G 10,000

G → H 12,000

H → E 14,000

Point P 1	36.343-122.470	
Point P 2	36.311-122.133	A
Point P 3	35.328-121.115	B
Point P 4	35.543-120.832	C
Point P 5	36.504-121.841	D
Point P 6	36.311-122.133	A
Point P 7	35.578-121.374	E
Point P 8	35.789-121.360	F
Point P 9	35.314-121.392	G
Point P10	36.161-121.333	H

NOAA • AOC • SED Flight Performance Log

Aircraft : N43RF

Project : PacJet '01

Mission : PACJET #2SED Crew: GOLDSTEIN, ROLFS, BARR, ROGERSFlight ID : 010123FPre-Flight: 1817ZTake-Off: 2007Landing: 0307

System			Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1	Aligned to :	✓ ASS	✓			
	INE #2	Aligned to :	✓ ASS	✓			
	GPS		✓ ASS	✓	Lat	Long	GS
	Diff GPS		✓ ASS	✓			
RADAR	Nose		gn	✓			
	L/F	R/T SN: 103	JMB	✓	Mod Switch Off ?	JMB	
	Tail	R&T SN: 102/202	JMB	✓	Mod Switch Off ?	JMB	
	MARS Data System		Clean DAT? ✓ JMB	✓	# DATs :	1	
PMS	2DG-C	Ch 1/64: 1	gn	✓			
	2D-P Mono	Ch 1/32: 2 1.2	gn	✓			
	FSSP	Ref VDC: 7.5	gn	✓			
	SEA Data System		Clean DAT? ✓ JAR	✓	# DATs :	2	
TEMP		Cal High Cal Low			Cal High	Cal Low	
	Temp #1	+30.9 -30.7	16.3 ✓ ASS	✓	30.9	-30.4	
	Temp #2		gn	✓			
	Temp #3 (Starboard)		NI	NI			
	Dewpoint #1 (General Eastern)		gn	✓			
	Dewpoint #2 (Edge Tech 137)		gn	✓			
PRES	Dewpoint #3 (Buck 1011C)		NI	NI			
	Attack Angle (AP/DAP)		gn	✓			
	Slip Angle (BP/DBP)		gn	✓			
	Differential (PQ1/PQ2/PQ3/PQ4)		gn	✓			
	Absolute (PS1/PS2)		gn	✓			
	Radome Transducers		Plugs ? ✓ JAR	✓			
FLTLVL	Cabin Transducer (Station 5)		gn	✓			
	Apr-159	SN: 71-02	gn	✓	Off ? :	JMB	
	Apr-232	SN: 1761	✓ ASS	✓	Off ? :	JMB	
	King Liquid Water		gn	✓			
	J&W Liquid Water		gn	✓			
	Lyman Alpha Hygrometer		Plugs ? ✓ ASS	✓	Plugs ? :		
	Down PRT-5 (SST)		✓ ASS	✓			
	Side PRT-5 (CO ²)		✓ ASS	✓			
	Up PRT-5		Open ?	✓	Closed ? ✓ ASS		
	RAMS Data System		Clean DAT? ✓ JAR	✓	# DATs :	2	
MISC	F/D Laptop		✓ ASS	✓	Off ? ✓ ASS		
	C.I. Printer		gn	✓			
	ASDL		gn	✓	Off ? : ✓ ASS		
	Exterior Walk Around		✓ ASS				
	Video	① ② ③ ④	gn	✓	Lens Covers ? : gn		
	AXBT Receivers		na				
	AXBT Sonobouys		#On Board : 0	# Dropped : —	# Good : —		
	AVAPS		JMB				
USER	GPS Dropsondes		#On Board : 14	# Dropped : 1	# Good : 1		
	FCU	A B C	gn		UPS Off ? : ✓ ASS		
	SatComm		MER	✓	Accelerometers		
	NASA GORE		JMB		#1 (2 G) :		
					#2 (2.5 G) :		
				#3 (3 G) :			
				#4 (3.5 G) :			

Please Note any Discrepancies

[illegible]

PAGE OF

The image displays two identical circular protractors, one above the other. Each protractor is marked with a grid of small squares. The outer edge of each circle is graduated with degree markings from 0 to 360. The markings are as follows: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, and 360. The 0-degree mark is at the top of the circle. The 90-degree mark is on the right side. The 180-degree mark is at the bottom. The 270-degree mark is on the left side. The 30-degree, 60-degree, 120-degree, 150-degree, 210-degree, 240-degree, 300-degree, and 330-degree marks are also present, with smaller tick marks indicating intermediate degrees. The protractors are designed for measuring angles in degrees.

POSITION REPORT

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

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:

UHFVOICE	VHFVOICE	MFVOICE	HF/CW	MF/CW
243.0	121.5	2182 KHZ	8364 KHZ	500 KHZ

MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA , NOAA

- POSITION _____ N/S _____
F/W AT _____ 7

[illegible]

- AT _____ KTS TRUE/INDICATED

- FLIGHT LEVEL OR ALTITUDE.

- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD _____

NATURE OF EMERGENCIES

ASSISTANCE DESIRÉE

- PILOT INTENTIONS

ACOSTA, J. A.