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

AOCWF1

Flt ID: 010219I	From: KMRY	To:
Flt No.: 01-20	Blk In: 0949	ATA: 0941Z
ETD: 0130	Blk Out: 0119Z	ATD: 0135Z
ETE: 0930	Blk Time: 8.5 8:30	Flt Time: 8.1 806
Sponsor Org: NOAA/ETL	Program: PACJET	Purpose: IOP12

AOC Personnel

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

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
PERSSON, O ✓	PI	ETL (CIRES)
JORGENSEN, D ✓	RADAR	NSSL
MILLER, D ✓	DATA SYN	NPS
ROSSI, SHAWN ✓	OBS	NWS

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

JW off until -changing pilot light

15 0345

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

AOCWF2

Flt ID:	Time Off:	Time On:
0102197	0135Z	0941Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	1008.2	30.02	1003.8	29.90

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes		
Radar Tapes		
Cloud Physics Tapes		
Video Tapes	4	
AXBT	4	all good
AXCP		
AXCTD		
Dropsondes	3	1 good - lost winds on 2. about 1 min before splash

Video

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

Remarks

Pacjet
IOP 12

Flight #12 010219I

Sensor or system	Number or Name
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	2
Altitude (for vertical wind)	APN-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO3012.CON

Notes:

Takeoff: 0135Z
Land: 0941Z

The radar altimeter (APN-159) was replaced by the APN-232 due to spiking during take off and landing (013201-014230 take off; 093500-094200 landing). No offset was applied.

Dew pointer #2 had an overshooting spike that was removed at 040045-040245.

There were times as the aircraft flew through saturated conditions that the dew point temperature exceeded the ambient temperature. These problems, due to water build-up on the hygrometer mirror and/or a wet bulb effect on the total temperature probe, were not corrected.

Spikes ere removed from the pitch angle #2 (013745-013815, 014130-014230, 014245-014315, 014500-014600).

Spikes were removed from the roll angle #2 (013745-013815, 014130-014230, 014500-014600).

	Takeoff	Landing
Aircraft static pressure	1008.2 mb	1003.8 mb
Corrected tower pressure	1016.6 mb	1012.6 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

Flight ID: 010219I

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

Form 413-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
022625	3424	12426	222	224	227	57.1	-21.5	-39.7	5503	5509	1015.6	504.9	88.0	FL180 SCT BLO
023430	3400	12451	216	220	229	66.8	-20.7	-29.7	5502	5506	1013.5	505.1	84.4	D1
024915	3317	12531	222	224	230	60.8	-19.5	-26.8	5499	5505	1010.6	505.1	78.6	FL180
025540	3258	12549	PTI spiral down to 1500'											
035450	3322	12344	East end of 1000' flux leg – spiral ascent to 8000 then to 500											
040100	3321	12344	8000' begin descent to 500'											
040920	3323	12345	280	273	170	33.2	13.0	10.2	148	155	1014.1	995.6	80.4	Begin 500' leg of flux
041658	3328	12418	280	273	170	34.5	12.8	10.5	148	140	1012.2	995.2	76.2	BT1
0424	3337	12447	West end of 500' flux leg - spiral up to 5000'											
042740	3336	12445	Top of 5000' spiral – now back down to 3800'											
043455	3331	12441	Begin 3800' leg TR 100											
043745	3329	12428	100	112	203	41.3	7.1	3.4	1159	1151	1012.0	881.5	78.2	3800' flux leg hdg east
044720	3322	12345	END East bound 3800' leg L90 R270 to TR 280											
045300	3322	12345	280	271	201	44.0	9.5	6.3	748	760	1014.4	926.6	72.8	2500'
051115	3334	12458	Approaching CONV line (12 mi) begin spiral ascent to 5000'											
051330	3339	12452	Top of 5000' spiral back to 500 then up to 1000											
052125														
053800	3458		Execute porpoise 500-5000-1000											
054940	3546	12441	336	337	158	145								
055345	3603	12440	END RADAR LEG – spiral up to 7500' to cross line											
062640	3528	12430	271	258	193	66.5	-19.8	-21.7	5394	5334	1005.2	512.4	72.6	D2 FL175
														LOST winds ~900
063529	3528	12515	270	258	199	74.3	-20.0	-21.8	5393	5307	1001.5	512.3	74.6	D3 LOST winds
~0648	3528	12610	Begin spiral descent to 500 back to 1000 Then back to line for radar											in lost ma
070940	3537	12530	091	101	197	283	8.6	6.7	356	301	1007.2	971.0	69.7	BT2
073538	3543	12344	004	002	222	19.6	8.6	5.4	326	295	1009.8	974.8	72.4	BT3
082650	3435	12307	193	190	173	42.6	12.0	11.4	325	296	—		—	
082755	3432	12308	porpoise 500-5000-1000											
084600	3342	12318	End south bound leg L90 R270											
090455	3442	12245	012	013	194	48.9	9.1	8.8	756	750	1012.4	926.1	63.0	BT4 1000'
091045	3507	12238	012	012	198	47.7	porpoise 5000-500-1000							

26 KTS

0135 T.O.
0941 LND

IOP 12 010219 I

AZI 2
INE 2
TT 1
DP 2
ALT APN15

BPF 013500, 031330-031430, 031800-033400
041400-044600, 0424, 0443-0444, 0519-0520
0522-0524, 0557-0559, 0703-0705, 0740-0744
0810-0812, 0831, 0855-0857, 0908

OK

DP2 - remove overshooting spikes 040045-040245

pitch 2
013745-013815, 014130-014230, 014245-014315, 014500-014600

roll 2
013745-013815, 014130-014230, 014500-014600

~~TT~~ ~~0636-0646~~, ~~0656~~, ~~0657~~ (TT2)

APN 159 replaced by APN 232 for T.O. & landing
013201-014230
093500-094200 landing

RENAV (OVER)

1)	023000	+0.1	−0.2	34 13.6	−124 37.1	✓
	033000	0.0	−0.8	33 38.2	−125 26.7	✓
	043000	0.0	−1.4	33 37.3	−124 51.0	✓
	053000	+0.1	−1.5	34 21.6	−124 35.8	✓
5)	063000	+0.1	−1.6	35 28.3	−124 47.6	✓
	073000	−0.7	−2.3	35 34.4	−124 0.1	✓
	083000	−0.4	−3.0	34 26.2	−123 8.7	✓
	093000	−0.5	−3.6	36 25.4	−122 18.5	✓
9)	094200	−0.5	−3.6	36 35.2	−121 50.6	✓

P-3 CHIEF SCIENTIST EVENT/RADAR LOG

Flight Number: 010219I

PACJET IOP #12

Date: Feb. 18, 2001 *Aircraft ID*: N43RF

Chief Scientist: Ralph

Doppler Scientist: Jorgensen (NSSL) *Radar Tech: Rogers*

Cloud Physics Sci: ?? *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: Frontal surviellance of cyclone

Scientific Crew: Ola Persson (PI), Dave Jorgensen (Radar), Doug Miller (Comms), Halvorson (observer, NWS)

AOC Crew: Taggart (P), Tebeest (P), Wade (FE), Shepherd, (FD) Newman (N), Rogers (tech), Lynch (data), McNamara (tech), Delgado (dropsonde)

Event Log

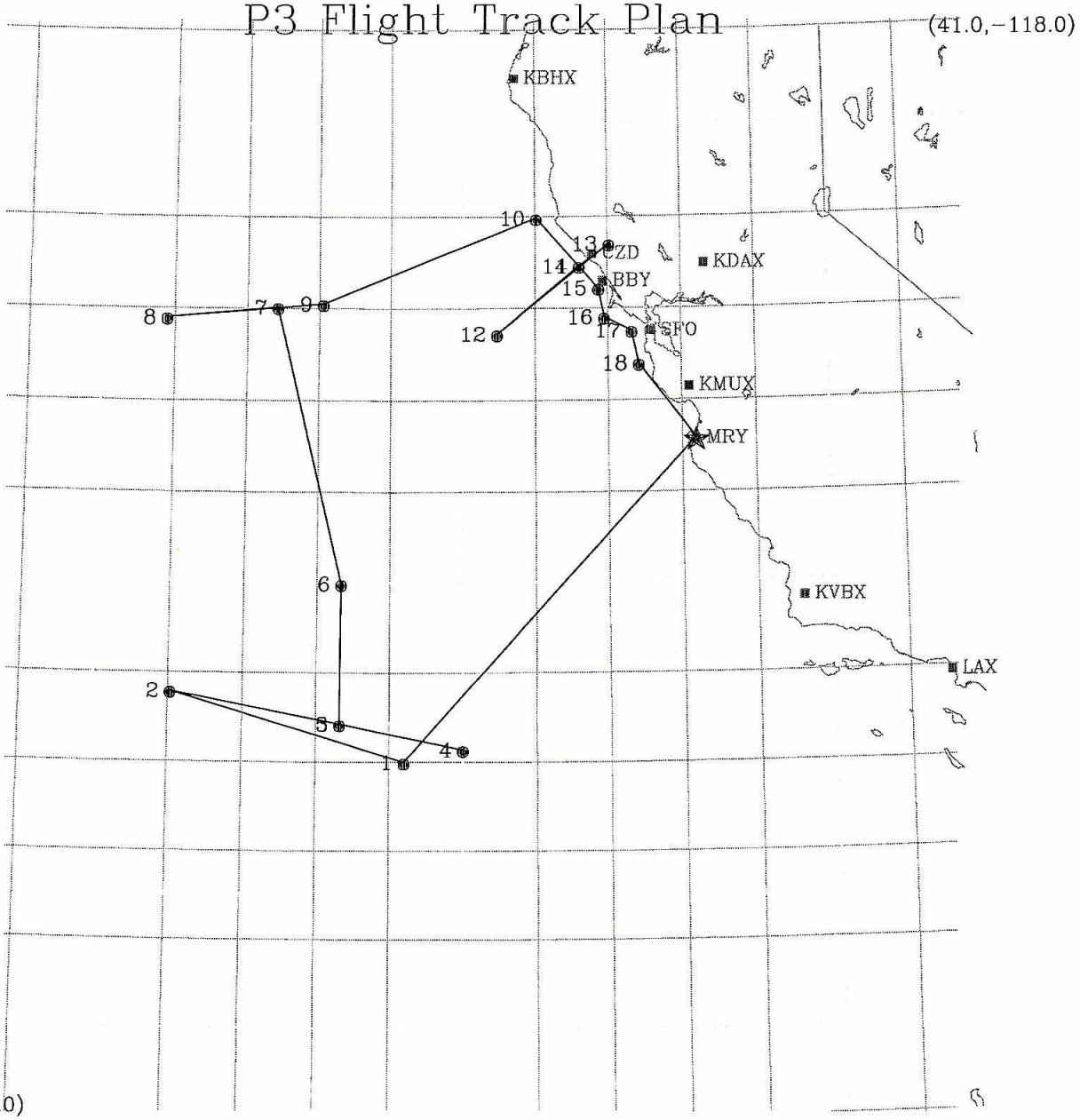
Time (Lat, Lon), Trk (deg), Prs (mb), Alt (m)	*Event & Comments*
011325 Z (36.58889, -121.85681) 24.838°, 1010.1 mb, 1501.0 m	Engine Start
012227 Z (36.58728, -121.84769) 113.299°, 1008.9 mb, 1501.0 m	Block Out
013423 Z (36.58325, -121.83334) 290.350°, 1007.0 mb, 1506.0 m	Takeoff
013604 Z (36.61455, -121.89427) 335.635°, 972.0 mb, 367.0 m	broken overcast skies at takeoff. Sea calm, wind on climbout at 930 mb 154/20 knots
013951 Z (36.77298, -122.05249) 227.029°, 820.1 mb, 1763.0 m	radars up and running. No weather echoes on LF or TA. TA shows the usual 2nd trip ground clutter and altitude ring.

014615 Z (36.46043, -122.35660) 220.031°, 628.1 mb, 3873.0 m	Switched to single PRF on the TA, and the 2nd trip is still there on beams pointing toward the beach. Playing around with the reflectivity thresholds and PRF to see their effects on the 2nd trip intensity
020233 Z (35.68809, -123.17538) 217.567°, 504.4 mb, 5521.0 m	I can eliminate the 2nd trip using SQI thresholding, but if there is strong convection in the NCFR, then we risk thresholding out the turbulent region in the cells. Not sure whether to use SQI for thresholding or not.
022035 Z (34.71952, -124.14270) 214.973°, 504.7 mb, 5516.0 m	possible NCFR showing up on LF at 250 km range to our west. It is now just to the east of our Pt. 6
023434 Z (34.00134, -124.84937) 216.133°, 505.0 mb, 5512.0 m	**Dropsonde #1 away**. Looks good
024755 Z (33.34785, -125.44658) 221.051°, 505.3 mb, 5512.0 m	Computed line motion over the last half hour is 26 knots to the east
025118 Z (33.19021, -125.60660) 218.276°, 505.1 mb, 5513.0 m	looks like the line is broken at 33 15N. Higher reflectivites to the north, perhaps up to 45 dbz in the convective cores
025531 Z (32.98334, -125.79181) 217.733°, 505.2 mb, 5514.0 m	At pt. 1. Spiral descent down to 1500 ft about 40 n.mi to the east of the line. Line orientation is about NNE to SSW but it bends to the SW south of 33N. The orientation north of about 34N is about N-S.
031116 Z (33.07121, -125.74132) 284.363°, 959.1 mb, 436.0 m	Rolling out on course for the line at 1500 ft
031136 Z (33.07684, -125.76398) 286.566°, 959.2 mb, 432.0 m	Radars down, rebooting. System froze.
031443 Z (33.24022, -125.87859) 353.311°, 959.0 mb, 429.0 m	Radars back up again
031523 Z (33.29118, -125.88557) 353.306°, 959.0 mb, 427.0 m	Line has spots of 55 dbz in it. We're heading for the break in the line at 33 15 to get on the other side
031830 Z (33.51572, -125.95572) 336.594°, 958.8 mb, 421.0 m	The hole is beginning to close as we approach it. Now 40 dbz in the hole
032037 Z (33.65835, -126.03282) 346.982°, 959.2 mb, 416.0 m	Can't get through the line, so setting up a flux stack about 100 km ahead of the line, turning to track eastward
032317 Z (33.71001, -125.89369) 101.754°, 958.9 mb, 422.0 m	descending to 1000 ft Start leg 1 at 1000 feet. End of first leg will be at 123° 45'
033541 Z (33.58797, -123.76165) 100.042°, 973.9 mb, 308.0 m	End of first leg. start spiral to 8k ft, then return to 500 ft for westbound run
040100 Z (33.38149, -123.73466) 10.968°, 799.2 mb, 1968.0 m	at the top of the mini sounding, now in the descent to 500 ft
040856 Z (33.37404, -123.68735) 256.630°, 995.9 mb, 156.0 m	Begin 500 ft leg to the east, leg length is about 54 miles (15 minutes of flight time)
041659 Z (33.45874, -124.28726) 279.603°, 995.8 mb, 145.0 m	AXBT drop.
042346 Z (33.53453, -124.78900) 280.671°, 993.4 mb, 147.0 m	End of the 500 ft leg, spiral climb to 5k ft, then spiral down to 3800 ft for run back to the east. NCFR is still 60 km to our west
042732 Z (33.61358, -124.72794) 200.250°, 843.1 mb, 1514.0 m	at 5k ft, descending
043453 Z (33.51300, -124.69826) 92.424°, 881.4 mb, 1147.0 m	Begin the 2nd leg of the flux stack at 3800 ft to the east.
044013 Z (33.45152, -124.28569) 100.292°, 881.4 mb, 1158.0 m	The NCFR shows another kink at about 33.9N. The original kink that was seen near 33.25N has virtually closed up
044846 Z (33.43130, -123.64987) 52.204°, 918.2 mb, 836.0 m	end of leg, descend to 2500 ft for return leg
045302 Z (33.37267, -123.73758) 280.493°, 926.7 mb, 760.0 m	start of leg to the west at 2500 ft

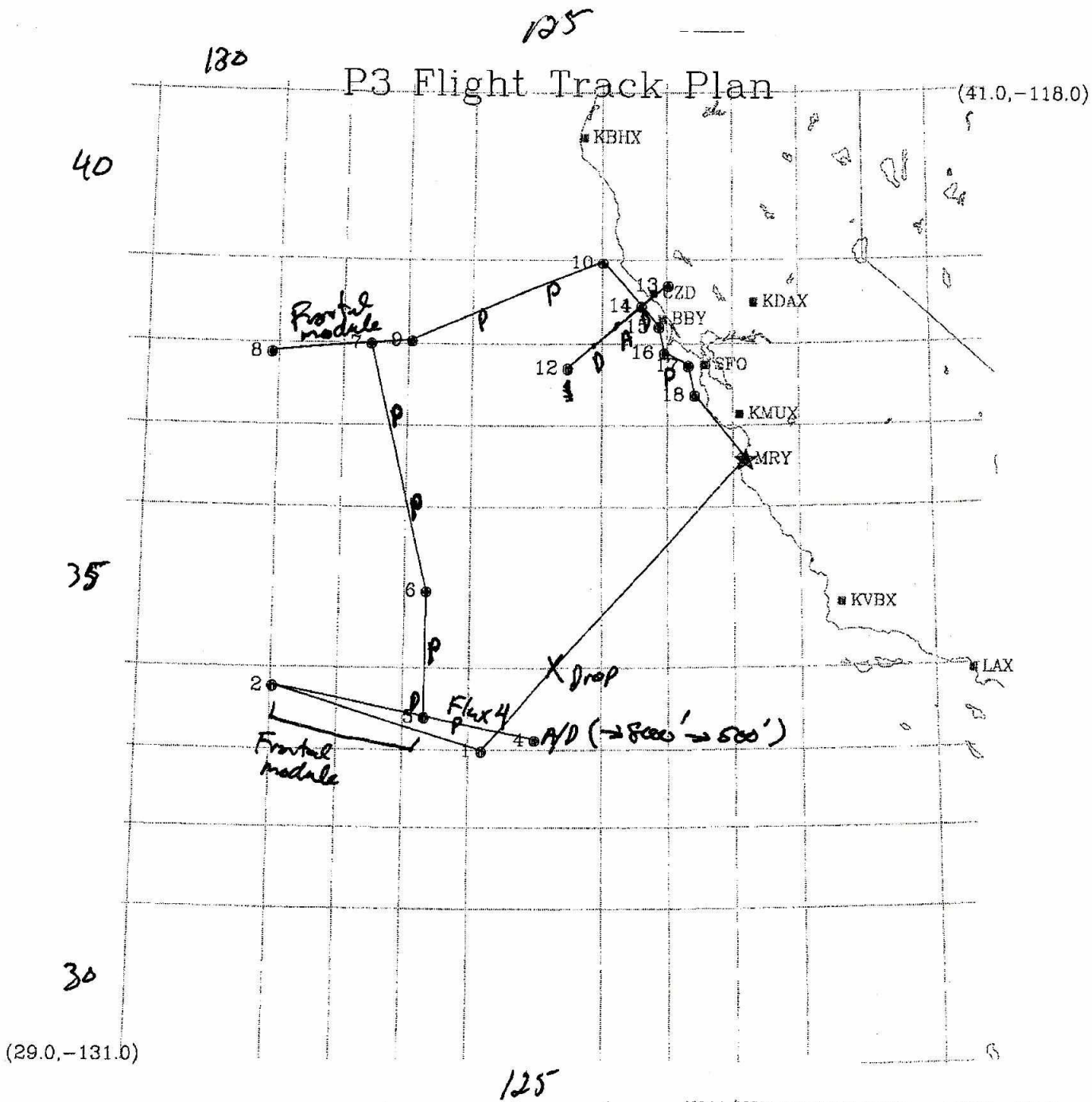
051102 Z (33.56124, -124.94530) 279.908°, 926.8 mb, 731.0 m	end of leg about 12 miles from the line. Spiral ascent to 5k ft then we'll roll out on a radar leg parallel to the line
051759 Z (33.67670, -124.85085) 191.214°, 989.7 mb, 173.0 m	at 500 ft, rolling out to parallel the band
052015 Z (33.73538, -124.94153) 6.760°, 975.9 mb, 291.0 m	going to sector scan on the TA
052339 Z (33.95544, -124.81177) 31.266°, 976.4 mb, 285.0 m	TA shows supercell like character to the NCFR. Reducting the gate spacing on the LF to 500 m to increase the resolution of the band.
052812 Z (34.23274, -124.62340) 20.328°, 976.5 mb, 277.0 m	making small course changes to the left to follow the kink in the line
053359 Z (34.64427, -124.55659) 6.057°, 975.6 mb, 284.0 m	passing the kink in the line to our right
053802 Z (34.93767, -124.54753) 5.547°, 975.9 mb, 281.0 m	starting porpoise man. Down to 500 then up to 5k ft in a mini sounding
054225 Z (35.26290, -124.49997) 7.883°, 837.2 mb, 1541.0 m	at top, descending, adjusting the track to the left to parallel the line again
054848 Z (35.72039, -124.65247) 335.885°, 972.9 mb, 294.0 m	line still very strong. Leading stratiform with bright band to 49 dbz. Passing by another kink
055348 Z (36.05593, -124.67868) 28.982°, 972.0 mb, 304.0 m	end of the line. Spiral up to 18k ft and look for a soft spot to cross. Will try to go back south to the vicinity of the kink in the line near 35.5N and try to cross
061152 Z (36.12669, -124.37354) 181.610°, 512.3 mb, 5341.0 m	radars froze, rebooting
061223 Z (36.09489, -124.37508) 182.216°, 512.4 mb, 5342.0 m	radars back
061355 Z (36.00008, -124.37865) 181.601°, 512.5 mb, 5340.0 m	at 18k ft tracking south
062124 Z (35.58942, -124.29948) 150.550°, 512.5 mb, 5351.0 m	band has lost its character on the LF, still visible on the TA. We are just at echo top here at 18k ft
062234 Z (35.52489, -124.25394) 149.696°, 512.5 mb, 5350.0 m	turning west to cross line. Convective cores only reach about 15k ft
062557 Z (35.46957, -124.44685) 270.613°, 512.5 mb, 5342.0 m	very strong bright band to 45 dbz
062749 Z (35.47132, -124.60345) 270.860°, 512.4 mb, 5341.0 m	**dropsonde #2 away**. Good drop
063253 Z (35.47330, -125.04068) 270.237°, 512.5 mb, 5326.0 m	lost winds on sonde about a minute from splash. Will launch another in 2 minutes
063531 Z (35.47385, -125.25667) 270.451°, 512.4 mb, 5319.0 m	**dropsonde #3 away**. Good drop
064123 Z (35.47808, -125.71548) 270.464°, 512.7 mb, 5281.0 m	lost winds again on the sonde about 1 minute from splash. Will spiral down to 500 ft for an AC sounding near 35.5 N 26W
064513 Z (35.47463, -125.99887) 269.414°, 512.6 mb, 5268.0 m	cold air convective cells on the TA
064742 Z (35.47508, -126.17818) 270.433°, 512.5 mb, 5266.0 m	at farthest west point. Spiraling down to 500 ft Winds just to the west of the line was 200/100 knots
070201 Z (35.61320, -126.07303) 87.488°, 987.4 mb, 156.0 m	at 500 ft. Tracking to the east. Line about 150 km away. In a field of small convective cells
070938 Z (35.61024, -125.50206) 90.273°, 970.7 mb, 305.0 m	AXBT away
072250 Z (35.60901, -124.51646) 91.577°, 971.2 mb, 308.0 m	entering stratiform precip again. NCFR well marked on the LF

072809 Z (35.58293, -124.13548) 96.161°, 971.3 mb, 314.0 m	hieght of bright band 2-2.5 km
073248 Z (35.55660, -123.79303) 96.812°, 971.2 mb, 326.0 m	turn to the north about 6 na mi behind the line. Start of the leg
073538 Z (35.70017, -123.72873) 4.124°, 974.7 mb, 298.0 m	AXBT away
074156 Z (36.10603, -123.68967) 4.791°, 974.2 mb, 295.0 m	line becomes broken north of 36 15, we're going through a gap in the line at 1000 ft. To get on the east side
074336 Z (36.22357, -123.66110) 15.492°, 970.4 mb, 323.0 m	going through the line, some bumps
074505 Z (36.26627, -123.58310) 113.351°, 975.9 mb, 281.0 m	End of leg, turning right to reverse course
074744 Z (36.18170, -123.47292) 148.379°, 971.7 mb, 319.0 m	start of southbound leg. Echo tops much lower here. Convective cores only to 4 km.. Much more stratiform echo to the east of the convective line than at the last pass
075852 Z (35.70869, -123.30478) 174.982°, 972.0 mb, 322.0 m	another gap in the line 20 km ahead. Will go more east to avoid going to the back side of the line
080120 Z (35.59737, -123.29276) 174.690°, 971.9 mb, 325.0 m	left turn to get out ahead of the line segment that extends south
080502 Z (35.55942, -123.07956) 94.794°, 972.0 mb, 327.0 m	Turning to track south on the east side of the line. Convective cores a little more intense in this piece of the line. Echo tops to 5 km and max dbz to 55
081143 Z (35.26711, -123.04155) 181.966°, 971.8 mb, 336.0 m	RADARS FROZE
081347 Z (35.17168, -123.04424) 180.452°, 972.6 mb, 331.0 m	Radars are back with us
082742 Z (34.54144, -123.12325) 192.625°, 975.4 mb, 307.0 m	starating mini sounding, down to 500 ft, up to 5000, then return to 1000
082922 Z (34.46854, -123.14363) 187.137°, 994.3 mb, 149.0 m	at 500 ft, climbing to 5k ft
083225 Z (34.32085, -123.13086) 178.612°, 860.9 mb, 1347.0 m	on the way down. LLJ 55 knots
084550 Z (33.71134, -123.28493) 171.020°, 976.3 mb, 305.0 m	End of leg. Reversing course and climbing to 2500 ft
091023 Z (35.08436, -122.65062) 29.926°, 926.0 mb, 747.0 m	Starting mini sounding, up to 5k ft, down to 500, then return to 2500 ft
091153 Z (35.19152, -122.61589) 12.120°, 844.6 mb, 1502.0 m	at 5k ft, descending
091755 Z (35.62370, -122.51341) 6.420°, 994.4 mb, 146.0 m	at 500 ft, ascending
092251 Z (35.95599, -122.42815) 11.953°, 977.0 mb, 289.0 m	leaving the line behind as we move N to MRY
093141 Z (36.52033, -122.25870) 29.504°, 976.6 mb, 289.0 m	End of Radar Operations, will just beat the NCFR into MRY. Now only about 50 km off shore
094137 Z (36.59017, -121.85381) 111.587°, 1006.9 mb, 2809.0 m	Land MRY
094938 Z (36.58882, -121.85677) 339.854°, 1005.5 mb, 6918.0 m	Block In

P3 Flight Track Plan



NOAA/NSSL Lambert Conformal (36.5,−125.6)



P = porpoise (500'-5000' unless otherwise specified)
A = ascent (spiral)
D = descent (spiral)
Flux 4 = 4-level flux stack

P3 Flight Track Plan

Location of Airport: 36.59 -121.81 Take off time: 0130 UTC

Way Point # 1 Lat: 33 .0 Lon: -125 48.0
Wind Dir: 220.0 Wind Spd: 30.0 kts TAS: 240.0 kts Alt: 19000 ft
Dist to Way point: 291.6 nm Leg duration: 83.3 mins Arrival Time: 0253 UTC
Ground Speed: 210.0 kts Track: 223.5 degrees

Way Point # 2 Lat: 33 47.2 Lon: -128 58.1
Wind Dir: 200.0 Wind Spd: 45.0 kts TAS: 240.0 kts Alt: 1500 ft
Dist to Way point: 165.6 nm Leg duration: 42.5 mins Arrival Time: 0335 UTC
Ground Speed: 233.7 kts Track: 287.4 degrees

Way Point # 3 Lat: 33 25.6 Lon: -126 40.7
Wind Dir: 230.0 Wind Spd: 70.0 kts TAS: 240.0 kts Alt: 12000 ft
Dist to Way point: 116.5 nm Leg duration: 25.1 mins Arrival Time: 0400 UTC
Ground Speed: 278.9 kts Track: 100.0 degrees

Way Point # 4 Lat: 33 8.4 Lon: -125 .1
Wind Dir: 190.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 1200 ft
Dist to Way point: 85.8 nm Leg duration: 22.0 mins Arrival Time: 0422 UTC
Ground Speed: 233.8 kts Track: 101.1 degrees

Way Point # 5 Lat: 33 25.6 Lon: -126 40.7
Wind Dir: 200.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 2000 ft
Dist to Way point: 85.8 nm Leg duration: 22.6 mins Arrival Time: 0445 UTC
Ground Speed: 227.9 kts Track: 282.0 degrees

Way Point # 6 Lat: 34 59.1 Lon: -126 40.1
Wind Dir: 190.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 1500 ft
Dist to Way point: 93.5 nm Leg duration: 19.4 mins Arrival Time: 0504 UTC
Ground Speed: 289.1 kts Track: .0 degrees

Way Point # 7 Lat: 38 1.0 Lon: -127 34.6
Wind Dir: 180.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 1500 ft
Dist to Way point: 187.1 nm Leg duration: 38.9 mins Arrival Time: 0543 UTC
Ground Speed: 288.4 kts Track: 346.7 degrees

Way Point # 8 Lat: 37 53.9 Lon: -129 6.7
Wind Dir: 170.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 1500 ft
Dist to Way point: 73.0 nm Leg duration: 18.3 mins Arrival Time: 0602 UTC
Ground Speed: 239.1 kts Track: 265.0 degrees

Way Point # 9 Lat: 38 3.1 Lon: -126 56.8
Wind Dir: 220.0 Wind Spd: 80.0 kts TAS: 240.0 kts Alt: 12000 ft
Dist to Way point: 102.8 nm Leg duration: 21.2 mins Arrival Time: 0623 UTC
Ground Speed: 290.7 kts Track: 84.2 degrees

Way Point #10 Lat: 38 59.0 Lon: -123 59.0
Wind Dir: 170.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 1500 ft
Dist to Way point: 149.9 nm Leg duration: 36.5 mins Arrival Time: 0659 UTC
Ground Speed: 246.1 kts Track: 67.2 degrees

Way Point #11 Lat: 38 27.5 Lon: -123 23.6
Wind Dir: 140.0 Wind Spd: 40.0 kts TAS: 240.0 kts Alt: 750 ft
Dist to Way point: 41.9 nm Leg duration: 12.6 mins Arrival Time: 0712 UTC
Ground Speed: 200.0 kts Track: 138.5 degrees

Way Point #12 Lat: 37 43.4 Lon: -124 31.9

Wind Dir: 150.0 Wind Spd: 40.0 kts TAS: 240.0 kts Alt: 750 ft
Dist to Way point: 69.5 nm Leg duration: 18.1 mins Arrival Time: 0730 UTC
Ground Speed: 230.5 kts Track: 231.0 degrees

Way Point #13 Lat: 38 41.9 Lon: -122 58.8
Wind Dir: 180.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 8000 ft
Dist to Way point: 93.6 nm Leg duration: 20.9 mins Arrival Time: 0751 UTC
Ground Speed: 268.4 kts Track: 50.9 degrees

Way Point #14 Lat: 38 27.5 Lon: -123 23.6
Wind Dir: 180.0 Wind Spd: 50.0 kts TAS: 240.0 kts Alt: 12000 ft
Dist to Way point: 24.2 nm Leg duration: 7.0 mins Arrival Time: 0758 UTC
Ground Speed: 206.9 kts Track: 233.5 degrees

Way Point #15 Lat: 38 13.1 Lon: -123 7.7
Wind Dir: 130.0 Wind Spd: 40.0 kts TAS: 240.0 kts Alt: 750 ft
Dist to Way point: 19.0 nm Leg duration: 5.7 mins Arrival Time: 0804 UTC
Ground Speed: 200.4 kts Track: 139.1 degrees

Way Point #16 Lat: 37 54.2 Lon: -123 3.0
Wind Dir: 130.0 Wind Spd: 40.0 kts TAS: 240.0 kts Alt: 750 ft
Dist to Way point: 19.2 nm Leg duration: 5.6 mins Arrival Time: 0809 UTC
Ground Speed: 207.5 kts Track: 168.7 degrees

Way Point #17 Lat: 37 45.2 Lon: -122 40.5
Wind Dir: 160.0 Wind Spd: 40.0 kts TAS: 240.0 kts Alt: 1000 ft
Dist to Way point: 19.9 nm Leg duration: 5.7 mins Arrival Time: 0815 UTC
Ground Speed: 209.3 kts Track: 116.8 degrees

Way Point #18 Lat: 37 23.6 Lon: -122 34.8
Wind Dir: 160.0 Wind Spd: 40.0 kts TAS: 240.0 kts Alt: 1000 ft
Dist to Way point: 22.1 nm Leg duration: 6.6 mins Arrival Time: 0822 UTC
Ground Speed: 200.3 kts Track: 168.0 degrees

Dist to base: 60.7 nm Leg duration: 18.1 mins Landing time:0840 UTC
Wind Dir: 160.0 Wind Spd: 40.0 kts TAS: 240.0 kts Alt: 1000 ft
Ground Speed: 201.6 kts Track: 142.3 degrees

Total mission duration: 7.2 hrs

Point P 1	33.000-125.800
Point P 2	33.786-128.969
Point P 3	33.426-126.678
Point P 4	33.140-125.002
Point P 5	33.426-126.678
Point P 6	34.985-126.669
Point P 7	38.016-127.577
Point P 8	37.899-129.112
Point P 9	38.051-126.947
Point P10	38.983-123.984
Point P11	38.458-123.393
Point P12	37.724-124.532
Point P13	38.698-122.980
Point P14	38.458-123.393
Point P15	38.218-123.128
Point P16	37.904-123.050
Point P17	37.754-122.675
Point P18	37.394-122.580

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N43RF AVAPS DROP LOG

Project : PacJet '01 Mission : #12 Flight ID : 010219I

Take Off : _____ Landing : _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Comments
1	001 037 008	1		23440	36	JEY	Good
2	990 745 001	1		62640	60	JEY	Good
3	990 745 002	2		63532	33	JEY	Good

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N43RF DROP STATION LOG

Project : PacJet '01 Mission : #12 Flight ID : 010219I

Operators : Delgado

Take Off : Landing :

Drop #	Drop Time	Channel	Lot	Status
1	0417	16	028	Good
2	0709	12	013	Good
3	0735	16	030	Good
4	0905	12	015	Good

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N43RF DATA STATION LOG

Project : PacJet '01 Mission : PacJet #12 Flight ID : 010219I

Operators : Lynch

Take Off : 01:35 Landing : 09:41

RAMS DAT 1 On [8/9]: 01:16	RAMS DAT 1 Off : 9:50	Data : (Slow) Fast (AVAPS)
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 : 01:15	Printer Off : 09:50	Disk Recording : (Enabled) / Disabled
MARS DAT 1 On (8) 9] : 01:39	MARS DAT 1 Off : 09:32	CPU Selected : A (B)
MARS DAT 2 On [8 / 9] :	MARS DAT 2 Off :	VCR's Used : (N) (L) (R) (D)
MARS DAT 3 On [8 / 9] :	MARS DAT 3 Off :	VCR Mode : VHS / (S-VHS) 2 / (12)
PMS DAT 1 On : 01:26	PMS DAT 1 Off : 09:36	
PMS DAT 2 On :	PMS DAT 2 Off :	Tapes Given To
PMS DAT 3 On :	PMS DAT 3 Off :	RAMS : Tom S.
VCR Tape 1 On : 01:15	VCR Tape 1 Off : 09:51	MARS : John D
VCR Tape 2 On :	VCR Tape 2 Off :	PMS :
VCR Tape 3 On:	VCR Tape 3 Off :	VCR : ↓

CARCAH Tasking

Mission Number : WXOXE

Storm Name : Train

ASDL Setup

Flight Level (Minobs) Sample Frequency : 30s

Flight Level (Minobs) Block Time : 10m

Data Station Operator Notes

Disk Records : 3081

L48 Errors : 3 30811 | 30805 | 71

L49 Errors : 0

03:45 - Ran Setup

20:53 21:39

21:11:55 00:11

NOAA • AOC• SED Flight Performance Log

Aircraft : N43RF Project : PacJet '01 Mission : PacJet #12

SED Crew: Delgado, Lynch, McNamara, Rogers Flight ID : 0102.19I

Pre-Flight: 23:00 Take-Off: 01:35 Landing: 09:41

	System			Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1	Aligned to : Ø		✓ TL		+2.0	-2.5	1
	INE #2	Aligned to : Ø		✓ TL		-.6	-3.0	1
	GPS			✓ TL		Lat	Long	GS
	Diff GPS			RJM				
RADAR	Nose			RJM				
	L/F	R/T SN : 103		✓ TL		Mod Switch Off ? ✓ RJM		
	Tail	R&T SN : 102202		✓ TL		Mod Switch Off ? ✓ RJM		
	MARS Data System			(Clean DAT?) ✓ TL		# DATs : 1		
PMS	2DG-C	Ch 1/64: /		✓ MR				
	2D-P Mono	Ch 1/32: .9 / .5		✓ MR				
	FSSP	Ref VDC: 8.4		✓ MR				
	SEA Data System			(Clean DAT?) ✓ TL		# DATs : 1		
		Cal High	Cal Low			Cal High	Cal Low	
TEMP	Temp #1	+30.9	-30.5	RJM				
	Temp #2			RJM				
	Temp #3	(Starboard)		RJM				
	Dewpoint #1	(General Eastern)		RJM				
	Dewpoint #2	(Edge Tech 137)		RJM				
	Dewpoint #3	(Buck 1011C)		RJM				
PRESS	Attack Angle	(AP/DAP)		RJM				
	Slip Angle	(BP/DBP)		RJM				
	Differential	(PQ1/PQ2/PQ3/PQ4)		RJM				
	Absolute	(PS1/PS2)		RJM				
	Radome Transducers			Plugs (?) RJM				
	Cabin Transducer	(Station 5)		RJM				
FLT LVL	Apn-159	SN: 71-02		✓ TL		(Off ?) : ✓ MR		
	Apn-232	SN: 1761		✓ TL		(Off ?) : ✓ MR		
	King Liquid Water			✓ TL				
	J&W Liquid Water							
	Lyman Alpha Hygrometer			Plugs ? ✓ RJM		Plugs?:		
	Down PRT-5	(SST)		RJM				
	Side PRT-5	(CO^2)		RJM				
	Up PRT-5			Open ? ✓ TL		(Closed?) ✓ MR		
	RAMS Data System			(Clean DAT?) ✓ TL		# DATs : 2		
	F/D Laptop			RJM		(Off?) ✓ MR		
	C.I. Printer			✓ MR		✓ MR		
MISC	ASDL			✓ MR	①	Off ? : ✓ RJM		
	Exterior Walk Around			✓ RJM				
	Video	(N) (L) (R) (D)		✓ TL		(Lens Covers ?) ✓ MR		
	AXBT Receivers			✓ MR				
	AXBT Sonobouys			#On Board : 15	# Dropped : 4	# Good : 4		
	AVAPS			✓ JD				
	GPS Dropsondes			#On Board : 20	# Dropped : 3	# Good : 3		
	FCU	_B_C_D_		✓ TL		UPS Off : ?		
USER	SatComm			✓ MR	✓ MR	Accelerometers		
	NASA GORE			✓ JD	✓ MR	#1 (2 G) : 8194		
						#2 (2.5 G) : 06860		
						#3 (3 G) : 5967		
						#4 (3.5 G) : 2892		

Please Note any Discrepencies

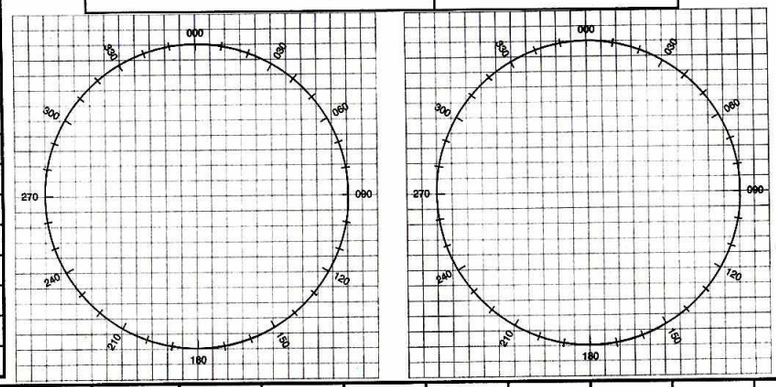
Item #	Zulu Time	Problem Description	Initials	Status
		On PreFlight - Bleed out nose radome + AB/BP		
		- Clean + Align ZDP		
		- swapped DiffGPS ACIA card for spare (#014 Advice → spare)		
(1)		ASDL phase error @ start of #2 - move TCG #1 to UPS ?	TL	OK
(2)		NEON BULB IN PYRO/PURGE POWER INDICATOR NEEDS REPLACEMENT		
3		Both Cld + Precip probes had almost constant clear air upshifting	TL	

CLEARANCES

FREQ	ALT	HDG	OTHER
			140/5 5664

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
0119																					ACT 300.2 TAXI FUEL 57.3
0135																					TOFF 28L
0141	△	36 43.6 122 06.4	36 43.5 122 06.5	+.1 −.1	36 43.4 122 06.5	+.2 −.1	203	14E	217	1R	218	219	183	25	↗	242	1	285	+76	0250	
0254	△	33 03.5 125 43.5	33 04.0 125 43.8	−.5 −.3	33 03.7 125 43.9	−.3 −.4	208	15E	223	6L	217	222	234	70	↘ 18K	288					
0342	△	33 30.8 124 38.8	33 30.8 124 39.3	0 −.5	33 30.7 124 39.4	+.1 −.6	096	16E	112	11L	101	216	177	38	1000	230					
0446	△	33 22.9 123 48.9	33 22.9 123 49.5	0 −.6	33 22.9 123 50.3	0 −1.4			111	11L	100	234	209	41	3500	223					
0546	△	35 33.8 124 34.7	35 33.7 124 35.5		35 31 124 36.4				342	2L	340	262	159	50	1000	213					
0652	△	35 30.8 126 11.0	35 30.2 126 11.8	+.6 −.8	35 30.4 126 12.6	+.4 −.4						286	237	35	↘	268					
0800	△	35 34.4 123 16.9	35 32.9 123 18.2		35 37.3 123 18.4		092	17E	109	14L	095	287	165	50	1000	208					
0542																					LAND
0549																					CHOCK

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
												8L	G/S	32Ø							
	OPS	NORM	33 23N 123 52W		Ø411												35 / 127				
	OPS	NORM	33 30N 125 00W		Ø511												30,000 feet				
	OPS	NORM	35 50N 124 27W		Ø616	Ø9[illegible]	IFR														
	OPS	NORM	35 30N 125 15W		Ø713																Ø630
	OPS	NORM	35 17N 12302		0811																
														MOD / Heavy							IFR
		P	T	A	P	T	P														
		36 06.4 122 43	Ø154	18Ø	33 N 125 48W (1)	Ø25Ø	3347 N 12858 (2)														
		33N 12548 (1)	Ø255	BLACK 060/180	3347N 12858 (2)	~~Ø354~~ 0407	3326N 12641W (3)														
												35.2		36.3							
									6500			121.1		122.1							5574
																					5843
							OTC												131.95		
									29.9Ø			3Ø 2Ø									
									118.4										11282 PRIMARY		
					10	1328			120.7				1400						13288		134.15

132.15