

FLT ID: 99012IN	FM: PDHL	TO: KLG13
FLT NO: 99-012	BLK IN: 0426	ATA: 0419
ETD: 20Z	BLK OUT: 1952	ATD: 2004
ETE: 8.5	BLK TIME: 8:34 (8.6)	FLT TIME: 8:15 (8.3)
SPONSOR ORG:	PROGRAM: WSA-99	PURPOSE: Research #4

DAO PERSONNEL

AC Maxson ✓	SYS ENG Radas-Beynes ✓
CP Melann Funder ✓	DATA SYS Capen ✓
NAV	ROBER Smith ✓
FE K. tson	BT/ODW Hornbrook ✓
RADIO	CLB PHYS White ✓
FD Parrish ✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/DAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
Shapiro, M. ✓	P.T.	ETL/NOAA
Black, M. ✓	WAB	WAB/NOAA

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

Fly large scale pattern, 39 drops, end up in Long Beach.

Flew mostly as planned, but dropped points 30-36. ADDED AT 30A.

20 NCEP XMTD 20 MSGS TO CASCAH;

12 ETL 32 Good drops out of 32.

32 TOTAL

1853Z
 4015
 040/7
 24/17
 30.06
 1017.3
 30/9
 LGBCH
 0250Z
 30.08
 280/10
 17/12
 101617
 1510

00080

990121N WSA-99 #4

2025-0335

Time	LA	LOW	TK	WQ	WS	PA	GA	TA	TD		PT	USER	CHAD	WXR
1952	BLOCK OUT													
2004	OFF													
200530	21 16	15754	263	46	8	1268	1275	12.5	9.0					
2025	21 34	16064	283	228	37	10969	10650	-47.9	-56.0	235				
20430	23 28	16357	324	272	39	12823	12572	-52.7	-65.4	175.4				
21775	25 01	164	351	278	30.5	12781	12572	-54.1	-65.8					
214059	28 00	16370	353	268	22	12687	12568	-54	-66		1	NCEP	5	BWD SC
2152	29 20	16349	348	293	19	12661	12566	-51.9	-66.0	175.6	2	NCEP	1	BWD SC
220158	30 30	16405	352	308	25	12631	12563	-56	-66		3	NCEP	2	BWD SC 3L3
222342	33 00	16430	348	328	27	12611	12566	-53.8	-67.7		4	NCEP	3	SCT SC
224228	34 59	16458	15	328	38	12570	12569	-56.9	-68.8		5	NCEP	4	SCT SC
230315	37 00	16520	36	325	40	12509	12567	-56.3	-68.4		6	NCEP	1	SCT SC
232407	39 00	16125	37	326	25	12455	12565	-58.4	-69.4		7	NCEP	5	SCT SC
234248	40 50	15935	38.6	305	25	12393	12563	-52	-67		8	NCEP	6	OVC SC
000136	42 40	15734	37	303	16	12339	12563	-51.6	-65		9	NCEP	7	OVC SC
001615	44 08	15558	38	281	21.5	12303	12563	-50.25	-65.4					
002428	44 58	15458	84	270	15			-48	-64		10	NCEP		OVC SC
003349	44 29	15318	84	261	22	12276	12559	-47.8	-62.9		11	ETL	5	BWD SC
004420	43 55	15128	112	264	21.5			-47.6	-62.3		12	NCEP	6	BWD SC
004908	43 40	15039	114	266	20.1	12301	12559	-48.2	-62.1		13	ETL	7	BWD SC
005758	43 10	14910	114	254	22	12316	12560	-47	-62		14	ETL	8	
010414	42 45	14800	111.8	246	29.8	12332	12554	-47	-61		16	NCEP	5	SCT SC
010904	42 30	14718	114	256	32.8	12347	12558	-47.2	-61.5		17	ETL	6	SCT SC
011449	42 10	14620		254	27			-46	-61		18	ETL	7	
011921	41 51	14532									19	ETL		
012115	41 45	14514		246	13			-48	-62		19A	ETL		
012300	41 39	14458	119	243	31			-48	-62		20	NCEP	5	
012914	41 15	14359	123	245	34			-49	-63		21	ETL	2	SCT CL
013349	40 55	14318	123	232	44			-52	-62		22	ETL	6	
013935	40 30	14228		236	41			-53	-64		23	ETL	7	OVC SC
014408	40 15	14144	119	235	36.7	13133	13141	-53.9	-64.7		24	NCEP	8	OVC SC / ACUTE
015430	39 33	14010		246	48	13179	13135	-56	-66		26	ETL	5	BWD SC / AC
020410	38 50	13844	120	246	48	13232	13140	-58	-67		27	NCEP	1	OVC SC
02602	38 00	13654	122	254	55	13291	13144	-57.8	-67.9		28	ETL	6	OVC SC
022851	37 00	13459	108	262	54	13329	13137	-59.44	-68.5		29	NCEP	5	OVC SC
024234	36 32	13250	104	271	52	13953	13679	-62.4	-70.0		30A	NCEP	7	OVC SC
025633	36 00	13000	103	280	48	13980	13707	-62.6	-71.2		37	NCEP	6	DARK
031131	35 30	12720	107	292	47.8	13981	13707	-61.9	-72.1		38	NCEP	5	
032738	34 45	12434	113	302	45.9	13985	13711	-61.6	-70.1		39	NCEP	7	
034645	33 56	12122	101.4	306	38.7	9647	9400	-42	-61	↓				
0404	33 27	11841	83	332	28	8505	3421	1.1	-10	↓				
041845	33 38	11804	39	345	8	606	573	14	-4	↓				

0419 END
0420 BLOCK IN

192803-042749
0338

42600+1 records in
332+1 records out

ls -la

232 202145-2250, 204513-16,

204922-4930, 210610-19, 0809-15,

211301-1510, 212455-2503, 2649-2655,

212920-24, 3018-3022, 215945-52,

220020-25, 2422-25, 223608-12,

225958-23001,

230216-0221, 230300-0304, 005010-19, 010010-010014,

010436-40, 014856-4900, 5349-5353, 5744-47,

024937-41, 625757-0258, 030504-0317,

031041-45, 034726-36

NOAA/AOC/SED N49RF Flight Performance log

N49RF Project: Winter Storms 99 Project No. 425 Flight No. 5 Flight ID: 990121N
 SED Crew: Pradas, Smith, Hornbrook, Carpenter Mission: #4
 Pre-Flight: 1830 Z Take-Off: 2004 Z Landing: 0449 Z

SYSTEM				Pre-Flight Check	In-Flight	Post-Flight	
N A V	IRS #1			✓ JCPB			
	IRS #2			✓			
	IRS #3			✓			
	GPS Honeywell #1			✓			
	GPS Honeywell #2			✓			
	GPS Collins			DWC		Off? ☒	
	Nose Radar - Collins			DWC		Off? ☒	
	Time	Temp °C				Time	Temp °C
	Temp #1	1909	24.2	JAS		0422	15.9
T	Temp #2	↓	24.5	JAS		↓	16.4
E	Temp #3	↓	24.5	JAS		↓	16.4
M	Temp #4	↓	24.7	JAS		↓	16.8
P	DP Left	↓	17.5	JAS	Cal. Time:	↓	-0.4
	DP Right	↓	16.9	JAS	Cal. Time:	↓	-1.874
P	Attack Angle (ADCAOA)			16.9 ✓ JAS			
R	Slip Angle (BP/DBP)			✓			
E	Differential (PQ1/PQ2)			✓ JAS			
S	Absolute (PS1/PS2)			1018.2/1018.8 ✓ JAS			
S	Check Radome Press. Lines ☒			Date: 990114			
S	DOWN PRT-5 ⇒ Open? ☐			N/I		Closed? ☒	
Y	MADS (WINDS/DISCWIN)			✓ JAS		# DATs: 1	
S	MADS Printer ⇒ Paper? ☒			DWC		Printer Power off? ☒	
T	MADS Cal. Date: 990115			QC time: 1929		QC time: 0420	
E	WINDS ⇒ NET BCAST ☒			JAS			
M	HAPS System / Time set? ☐			CH		# Msg.: 20 # Fail: 0	
S	AVAPS System / Time set? ☒			CH			
	AVAPS Printer ⇒ Paper? ☐			Removed			
	Exterior Walk Around ☒			DWC			
	Inspect DropSonde Chute Bolts			DWC			
	Satcom (Flight Phone) ☒			JCPB		Off CB? ☒	
	Call COMSAT? ☐ (*292#)						
M	FCU/UPS/CB			CB's Checked? ☒ DWC		UPS off? ☒	
I	AVAPS Sondes			# On Board: 106	# Dropped: 32	# Good: 32	
S	AXBT			# On Board: 0	# Dropped: N/A	# Good:	
C	APN-232			JAS ✓			
	Modem Power On? ☒			DWC			

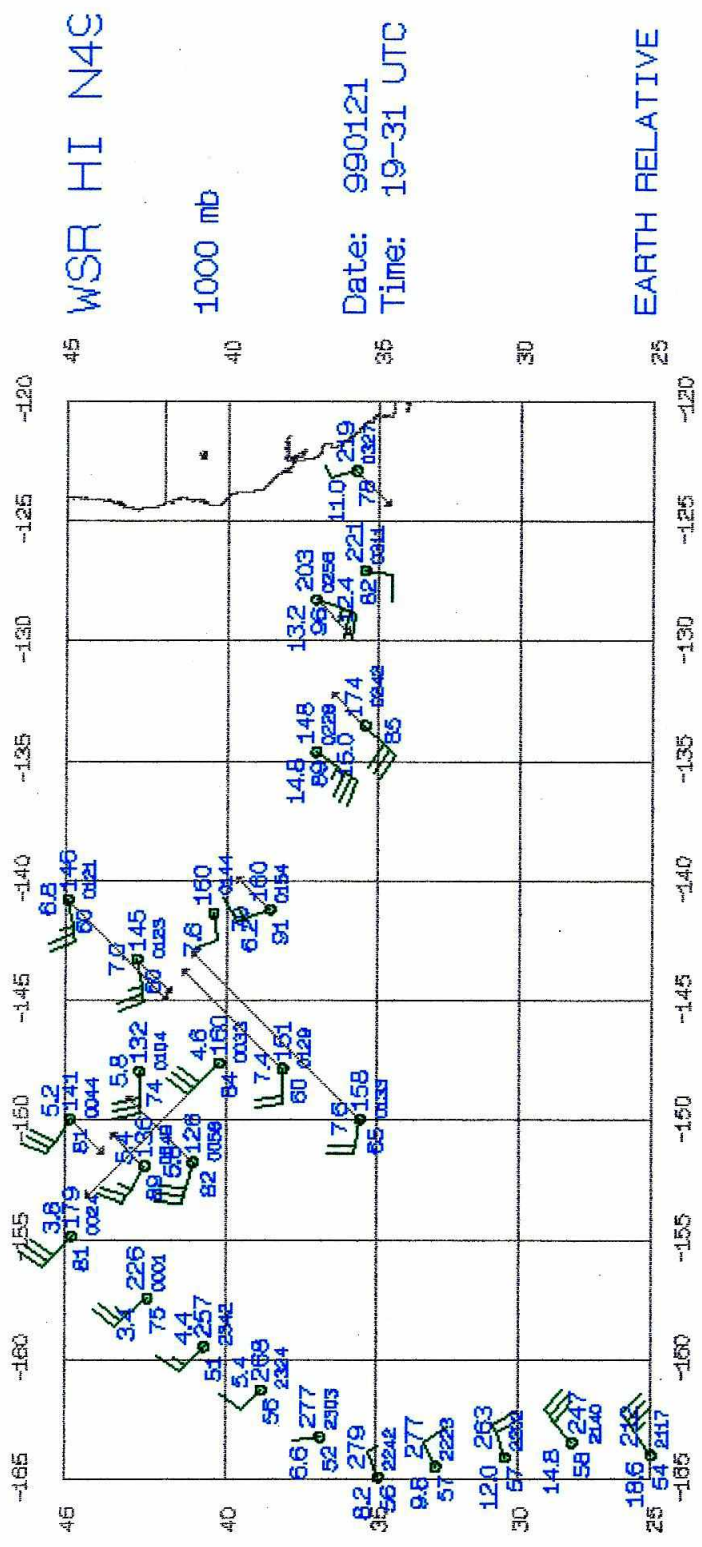
1	DAT Tape #1	On: 1928	Type: V60	Off: 0427
2	DAT Tape #2	On:	Type: V60	Off:
Comments: AVAPS RS PC REPLACED YESTERDAY				

20 N
12 M

N49RF Winter Storms 99 / AVAPS DropSonde Log

N49RF Project: Winter Storms 99 Flight ID: 9901212Mission: 4 Flight #: 5 System Status: OK

	Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status / Failure Reason	GOOD ☒
N	1	984 325 261	5	2117	0	31	Dwc/gh		✓
N	2	984 325 147	1	2141	0	29			✓
N	3	984 325 268	2	2202	0	40		Bleed from other sonde or may have hit ship	✓
N	4	983 340 059	3	2223	0	57			✓
N	5	984 325 152	4	2242	.4	32			✓
N	6	983 310 165	1	2303	.4	43			✓
N	7	983 410 056	5	2324	0	20			✓
N	(8)	984 325 021	6	2342	0	12			✓
N	9	983 720 850	7	0001	.5	27			✓
N	10	983 310 098	8	0024	0	19			✓
	11	983 720 809	5	0033	0	39			✓
N	12	983 410 020	6	0044	0	28			✓
	13	984 325 151	7	0049	.4	38			✓
	14	983 620 636	8	0058	.5	29			✓
N	15	983 620 624	5	0104	0	28			✓
N	16	983 720 849	6	0109	1.2	25			✓
	17	983 310 177	7	0114	.4	26			✓
	18	983 340 089	8	0119	0	26			✓
	19	983 620 585	1	0121	0	17			✓
N	20	983 620 574	5	0123	.5	22			✓
	21	983 840 550	2	0129	.9	22			✓
	22	983 410 139	6	0133	0	54			✓
	23	983 620 646	7	0139	0	21			✓
N	24	983 620 663	8	0144	0	18			✓
	25	983 620 557	5	0154	0	17			✓
N	26	983 620 627	1	0204	0	28		Bad data / Reason	✓
	27	984 325 285	6	0216	.4	31			✓
N	28	983 840 561	5	0228	.7	24			✓
N	29	983 410 033	7	0242	.5	23			✓
N	30	983 620 635	6	0256	0	23			✓
N	31	984 325 024	5	0311	0	30			✓
N	32	983 620 623	7	0327	.5	19			✓
	33								



N49RF CHANNEL ASSIGNMENT SHEET AND CALIBRATION COEFFICIENTS

Updated Calibration: 29 December 1998

Original Calibration: 27 MAY 1998

DSM	CHA	UPDATE	DESCRIPTION	MANUF.	MODEL	SERIAL	RANGE (V)	C1	C2	C3	C4
FWD	00		Left AOA AP (API)	Rosemount	1221F2VL7B1B	2299	+/- 10	0.0163	6.8837		
FWD	01		Left AOA DAPM (DAP1)	Rosemount	1221F2AF8B1B	2312	0 - 10	0.7759	34.4591		
FWD	02		Right AOA AP (AP2)	Rosemount	1221F2VL7B1B	2309	+/- 10	0.0403	6.8923		
FWD	03		Right AOA DAPM (DAP2)	Rosemount	1221F2AF8B1B	2313	0 - 10	-0.1916	34.4639		
FWD	04		Top Slip BP (BP1)	Rosemount	1221F2VL7B1B	2300	+/- 10	0.4697	6.9422		
FWD	05		Top Slip DBPM (DBP1)	Rosemount	1221F2AF8B1B	2319	0 - 10	-0.3529	34.4604		
FWD	06		Bottom Slip BP (BP2)	Rosemount	1221F2VL7B1B	2310	+/- 10	0.0544	6.8914		
FWD	07		Bottom Slip DBPM (DBPM2)	Rosemount	1221F2AF8B1B	2318	0 - 10	-0.4847	34.4703		
FWD	08	Not Updated	Left Dewpoint (DPL)	EdgeTech	137-C3 Ext. Range	1685 / 018269	0 - 5	-100.5766	30.2185		
FWD	09	Not Updated	Right Dewpoint (DPR)	EdgeTech	137-C3 Ext. Range	1686 / 018268	0 - 5	-100.2002	30.1018		
FWD	0a	7/8/98	Total Temp #3 (TT3)	Rosemount	102CL2AZ w/ 510GB41E	A9793 / 0138	+/- 10	-0.0519	7.1327		
FWD	0b	10/28/98	Total Temp #2 (TT2)	Rosemount	102CL2AZ w/ 510GB43E	A20245 / 0199	+/- 10	-0.4316	7.1335		
FWD	0c	11/17/98	Total Temp #4 (TT4)	Rosemount	102CP2AF w/ 510GB41E	A6786 / 0141	+/- 10	0.0168	7.0833		
FWD	0d		Total Temp #1 (TT1)	Rosemount	102CP2AF w/ 510GB41E	A6784 / 0140	+/- 10	0.3461	6.9918		
FWD	0e		Static Pressure #1 (PS1M)	Rosemount	1281AF2B1B	588	0 - 10	-0.4342	108.3890		
FWD	0f		Dynamic Pressure #1 (QC1M)	Rosemount	1281AF2B1B	588	0 - 10	-0.0162	33.8761		
FWD	10		Static Pressure #2 (PS2M)	Rosemount	1281AF2B1B	587	0 - 10	-0.9348	108.4298		
FWD	11		Dynamic Pressure #2 (QC2M)	Rosemount	1281AF2B1B	587	0 - 10	0.1088	33.8776		
FWD	12	6/11/98	Down Radiometer (RD)	Pyrometer	PRT-5	722	0 - 10	37.4405	-19.0626	1.2002	-0.8273
FWD	13										
FWD	14										

RJM/JCPB

for $D_{(Eng. Units)} = C1 + C2 * Volts.$

$$C1_{new} = C2_{new} * offset_{(ADC offset(0,10))} + C1.$$

$$C2_{new} = C2 / G_{(ADC gain(1,2,4,20))}.$$

PHNL 21 19.247
157 54.819

NOAA G-IV

POC: Sean White - 813.833.3275

		<u>DEPARTURE</u>	
CALL SIGN	NOAA49	DATE	21 JAN 99
TAIL NUMBER	N49RF	TIME	2000Z
ALTITUDE	FL410-450		
AIRSPEED	Mach 0.77 (450KTAS)		

DROP LOCATIONS indicated by a drop number.

#	LAT(N)/LONG(W) (degrees and minutes)	DIST(NM)	ETE	ETA Date/Zulu Time
	Honolulu (PHNL) 21 19.2470 157 54.8190			21/2000 Takeoff time
	22 48/162 37(CANON)	270	0+50	21/2050
1*	25 00/163 00 ⁴ Due to clearance	150	0+20	21/2110
2*	28 00/163 30	150	0+20	21/2130
3*	30 30/164 05	150	0+20	21/2150
4*	33 00/164 30	150	0+20	21/2210
5*	35 00/165 00	120	0+15	21/2225
6*	37 00/163 20	150	0+20	21/2245
7*	39 00/161 25	150	0+20	21/2305
8*	40 50/159 35	150	0+20	21/2325
9*	42 40/157 35	150	0+20	21/2345
10*	45 00/155 00	150	0+20	22/0005
11	44 30/153 20	80	0+10	22/0015
12*	43 55/151 30	80	0+10	22/0025
13	43 40/150 40	41	0+05	22/0030
14	43 20/149 40	42	0+05	22/0035
15	43 00/148 40	41	0+05	22/0040
16*	42 45/148 10	41	0+05	22/0045
17	42 30/147 20	41	0+05	22/0050
18	42 10/146 20	42	0+05	22/0055
19	41 50/145 30	41	0+05	22/0100
20*	41 40/145 00	42	0+05	22/0105
21	41 15/144 00	41	0+05	22/0110
22	40 55/143 20	42	0+05	22/0115
23	40 30/142 30	41	0+05	22/0120
24*	40 15/141 45	41	0+05	22/0125
25	39 50/140 50	41	0+05	22/0130
26	39 35/140 15	41	0+05	22/0135
27*	38 50/138 45	82	0+10	22/0145
28	38 00/136 55	102	0+13	22/0158
29*	37 00/135 00	103	0+12	22/0210
30	38 05/134 15	70	0+08	22/0218
31*	39 00/133 30	70	0+08	22/0226

PHNL
23 30 →
164 00 →
25 →
164

29 →
37

36 31.8 (30)
132 30

Om 1

30A 36 31.8 / 132 30

122.95 UNF Million Air

32	40 10/132 45	70	0+08	22/0234
33*	41 00/132 00	70	0+08	22/0242
34	39 40/131 25	77	0+10	22/0252
35*	38 30/131 00	77	0+10	22/0302
36	37 10/130 25	77	0+10	22/0312
37*	36 00/130 00	77	0+10	22/0322
38*	35 30/127 20	140	0+20	22/0342
39*	34 45/124 35	140	0+20	22/0402

DMIT

34 13/123 04(GATES)	100	0+13	22/0415
Long Beach (KLGB)	236	0+40	22/0455
Cumulative	3969	8+55	

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: WSR HI N49

Prepared by the Hurricane Research Division at 08:35:33 PM on 01/21/99.
File: /home/hrd/flight_tracks/990122n_hidens.ftk

Aircraft: N49RF Altitude: FL410-450 Proposed takeoff: 22/1950Z

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DROP LOCATIONS

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#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1	34 12	123 06		0:43
2	34 35	123 47		0:49
3	34 57	124 27		0:54
4	35 20	125 08		1:00
5	35 43	125 49		1:05
6	36 06	126 30		1:11
7	36 28	127 10		1:16
8	36 51	127 51		1:22
9	37 14	128 32		1:27
10	37 37	129 13		1:32
11	37 59	129 53		1:38
12	38 22	130 34		1:43
13	38 45	131 15		1:48
14	39 08	131 56		1:54
15	39 30	132 36		1:59
16	39 53	133 17		2:04
17	40 16	133 58		2:09
18	40 39	134 39		2:15
19	41 01	135 19		2:20
20	41 24	136 00		2:25
21	42 00	137 05		2:33
22	42 36	138 10		2:41
23	43 12	139 15		2:50
24	43 48	140 20		2:58
25	44 24	141 25		3:06
26	45 00	142 30		3:14
27	44 12	143 30		3:22
28	43 24	144 30		3:31
29	42 36	145 30		3:40
30	41 48	146 30		3:49
31	41 00	147 30		3:58
32	39 00	150 00		4:20

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33	37 00	152 30	4:43
34	35 00	155 00	5:07
35	32 52	155 28	5:24
36	30 43	155 55	5:42
37	28 35	156 23	6:00
38	26 26	156 50	6:18
