

|                   |                      |                       |
|-------------------|----------------------|-----------------------|
| FLT ID: 990209N   | FM: PANDL            | TO: PANDL             |
| FLT NO: 99-022    | BLK IN: 0358         | ATA: 0355             |
| ETD: 99-22        | BLK OUT: 1954        | ATD: 2005             |
| ETE: 7.5          | BLK TIME: 8:04 (8.1) | FLT TIME: 7:50 (7.8)  |
| SPONSOR ORG: NCEP | PROGRAM: WSA-99      | PURPOSE: Research #41 |

ORO PERSONNEL

|                 |                        |
|-----------------|------------------------|
| AC Finke        | SYS ENG Radas-Bogues ✓ |
| CP Mason/McCann | DATA SYS Smith ✓       |
| NAV White ✓     | RADAR Carpenter ✓      |
| FE Kitson       | BT/ODW Hornbroke ✓     |
| RADIO           | CLD PHYS               |
| FD Parrish ✓    | DOPPLER                |

PARTICIPATING SCIENTIST/VISITORS/ORO

| LAST, FIRST NAME | ACTIVITY ON A/C | AFFILIATION |
|------------------|-----------------|-------------|
| Shapiro, M. ✓    | P.I.            | ETL/NOAA    |
| Goldenberg, S. ✓ | HABs            | HAB/NOAA    |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |

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

Flg S, E quadrants of developing winter low.

0040Z - Discovered Mel had used up all of his available sondes

17 NCEP (1 failed) - 16 NCEP migs

24 ETL (3 partial fail) \* NCEP drop at Pt. II too cold - used previous ETL Drop.

1 AOC.

42 Total Drops.

990209N WSA-99 Research #11

| Time   | LAT   | LONG   | TK    | WD  | WS   | CA    | PA    | TA    | TD    |           | PT     | USA  | CH | WR              |
|--------|-------|--------|-------|-----|------|-------|-------|-------|-------|-----------|--------|------|----|-----------------|
| 1954   | 1300K | 007    |       |     |      |       |       |       |       |           |        |      |    |                 |
| 2005   | T-0   |        |       |     |      |       |       |       |       |           |        |      |    |                 |
| 200645 | 21 15 | 157 53 | ~     | 45  | 10   | 1510  | 1417  | 10.9  | 6.6   | ↑         |        |      |    |                 |
| 2012   | 21 09 | 157 26 | ~     | 100 | 8.7  | 4300  | 4149  | 1.2   | -29   | ↑         | 500 mi |      |    |                 |
| 202445 | 22 16 | 156 49 | 348   | 341 | 24.6 | 9975  | 9567  | -38   | -51   | ↑         | 281 mi |      |    |                 |
| 203630 | 23 27 | 157 00 | 348   | 345 | 40   | 12946 | 12543 | -55.7 | -45.1 | ↑         | 176 mi |      |    |                 |
| 205415 | 25 16 | 157 25 | 353   | 340 | 41   | 13031 | 12552 | -55.7 | -62.5 |           |        |      |    |                 |
| 211730 | 27.40 | 157 43 | 353   | 337 | 46   | 12933 | 12549 | -56.3 | -68.2 |           |        |      |    |                 |
| 212550 | 28 30 | 157 50 | 354   | 334 | 47   | 13049 | 12546 | -56.3 | -68.5 |           |        |      |    |                 |
| 214704 | 30 35 | 158 05 | 354   | 318 | 58.8 | 12862 | 12543 | -52.6 | -69.4 |           | 1      | NCEP | 1  | BRD SC          |
| 215752 | 31 38 | 158 12 | 354   | 314 | 61   | 12933 | 12546 | -56.8 | -66.7 |           | 2      | NCEP | 5  | BRD SC          |
| 220824 | 32 40 | 158 20 | 356   | 311 | 60.6 | 12827 | 12546 | -56.4 | -68.3 |           | 51     | ETL  | 1  | AS Thin, BRN SC |
| 221840 | 33 42 | 158 24 | 356   | 304 | 59   | 12851 | 12543 | -55.7 | -68.2 | BRN COND  | 3      | NCEP | 5  | BRN AS, BRN SC  |
| 222339 | 34 12 | 158 27 | 356   | 305 | 60.3 | 12813 |       | -54.7 | -67.7 |           | 53     | ETL  | 1  | OVL AS, SC      |
| 222853 | 34 45 | 158 30 | 359   | 303 | 67   | 12760 | 12537 | -54.2 | -67.0 |           | 54     | ETL  | 6  | Thin AS, BRN SC |
| 223410 | 35 15 | 158 36 |       | 301 | 65   |       |       | -54.3 | -67   |           | 4      | NCEP | 2  | OR AS, SC       |
| 223923 | 35 47 | 158 42 |       | 295 | 65   |       |       | -53.9 | -67.3 |           | 55     | ETL  | 5  | OVL AS          |
| 224435 | 36 18 | 158 48 |       | 296 | 66   |       |       | -52.8 | -67.7 |           | 56     | ETL  | 6  | OVL AC          |
| 224724 | 36 35 | 158 52 |       | 295 | 66   |       |       | -52.2 | -66.3 |           | 57     | ETL  | 1  |                 |
| 224957 | 36 50 | 158 55 |       | 291 | 66   | 12672 | 12538 | -52   | -66   |           | 57A    | ETL  | 2  | OVL AS          |
| 225500 | 37 22 | 159 01 |       | 286 | 62   |       |       | -51.9 | -65.9 | NO WIND   | 5      | NCEP | 3  | "               |
| 225955 | 37 54 | 159 07 |       | 284 | 62   |       |       | -51.6 | -65.6 |           | 58     | ETL  | 4  | OVL AS, CL      |
| 230509 | 38 27 | 159 14 |       | 282 | 64.7 |       |       | -50.8 | -65.2 |           | 59     | ETL  | 5  | OVL AS, CL      |
| 231014 | 39 06 | 159 20 | 353   | 280 | 66.7 | 12519 | 12538 | -50.2 | -64.8 |           | 60     | ETL  | 1  | OVL CL          |
| 231444 | 39 31 | 159 24 |       | 277 | 68.4 |       |       | -50.2 | -64.6 |           | 6      | NCEP | 6  |                 |
| 231908 | 40 01 | 159 27 |       | 277 | 62   |       |       | -49.6 | -64.4 |           | 61     | ETL  | 2  | OVL SC          |
| 232330 | 40 30 | 159 31 |       |     |      |       |       |       |       |           | 62     | ETL  | 7  | "               |
| 232749 | 41 00 | 159 35 |       | 274 | 54   |       |       | -48.7 | -64.2 |           | 63     | ETL  | 3  |                 |
| 233203 | 41 30 | 159 41 |       | 273 | 51   | 12    |       | -48.6 | -63.7 |           | 7      | NCEP | 5  | CL S SW SW      |
| 233617 | 42 00 | 159 47 |       | 273 | 47.7 |       |       | -47.7 | -63.5 |           | 64     | ETL  | 1  |                 |
| 234032 | 42 30 | 159 54 |       | 272 | 43   |       |       | -47.5 | -63.3 |           | 65     | ETL  | 6  | OVL SC          |
| 234440 | 42 58 | 159 51 | ~     | 272 | 34   |       |       | -47   | -63   |           | 66     | ETL  | 2  | BRN 36 BRN      |
| 234906 | 43 00 | 159 00 |       |     |      |       |       |       |       |           | 8      | NCEP | 3  | OVL AC, AS      |
| 235430 | 43 01 | 157 52 |       | 277 | 38   |       |       | -49.5 | -63.3 |           | 67     | ETL  | 3  | OVL SC          |
| 235933 | 43 00 | 156 50 |       | 258 | 38   |       |       | -51.6 | -64.1 |           | 68     | ETL  | 5  | OVL SC          |
| 000444 | 42 59 | 155 48 | 92    | 260 | 38   | 12356 | 12537 | -53.3 | -65.3 |           | 69     | ETL  | 1  | OVL AS          |
| 001021 | 42 50 | 151 50 |       | 259 | 33   |       |       | -55.9 | -66.7 |           | 9      | NCEP | 6  | OVL SC, AC      |
| 001504 | 42 55 | 153 45 |       | 264 | 40.7 |       |       | -54.8 | -68.5 |           |        | ETL  | 2  | OVL AS          |
| 001953 | 42 53 | 152 49 |       | 277 | 44   |       |       | -54   | -68   |           |        | ETL  | 5  | " CS            |
| 002500 | 42 49 | 151 50 | 94    | 285 | 36   | 13060 | 13122 | -54.7 | -66.8 |           |        | ETL  | 1  | " CS            |
| 004617 | 42 48 | 151 32 | 94    | 286 | 37   | 13071 | 13123 | -53.9 | -66.8 | 10 BRN CL | 10     | NCEP | 6  | "               |
| 005107 | 42 45 | 150 56 |       | 287 | 32   | 13025 |       | -54   | -67   |           | 70     | ETL  | 5  | "               |
| 005414 | 42 41 | 149 40 |       | 294 | 28   |       |       | -53.2 | -66   |           | 71     | ETL  | 3  | "               |
| 005203 | 42 35 | 148 35 |       | 295 | 23   |       |       | -57   | -67   | NO BRN    | 72     | ETL  | 7  | "               |
| 004732 | 42 27 | 147 37 | ~     | 264 | 32   | 12627 | 13124 | -58   | -68   |           |        |      |    |                 |
| 011105 | 39 54 | 149 06 | 204   | 281 | 44   | 13070 | 13120 | -56   | -68   |           | 11     | NCEP | 7  | OVL CS          |
| 012330 | 38 32 | 149 53 | 204   | 288 | 44   | 13247 | 13116 | -55   | -68   |           | 12     | NCEP | 1  | "               |
| 013652 | 37 04 | 150 40 | 202   | 294 | 55   | 13261 | 13116 | -55.6 | -67.8 |           |        |      |    |                 |
| 013800 | "     | "      | "     | "   | "    | "     | "     | "     | "     | SLOW      | 13     | NCEP | 5  | OVL CS          |
| 014830 | 35 45 | 151 20 | 201.7 | 291 | 51.6 | 13269 | 13115 | -56.2 | -68.2 |           | 13A    | AOC  | 6  | "               |
| 020053 | 34 20 | 152 07 | 202   | 300 | 43.5 | 13354 | 13110 | -56.4 | -68.5 |           |        |      |    |                 |
| 022418 | 31 35 | 153 20 | 199   | 311 | 49.5 | 13397 | 13110 | -58.3 | -68.9 |           | 14     | NCEP | 1  | BRN AS, OVL SC  |
| 024648 | 28 44 | 154 26 | 201   | 322 | 44.1 | 13462 | 13112 | -59.9 | -69.6 |           | 15     | NCEP | 5  |                 |
| 034130 | 24 51 | 157 21 | 199   | 336 | 13.7 | 7174  | 6885  | -17.0 | -42.9 | ↓         | 16     | NCEP | 1  | Edge of AS      |
| 0358   | 21 19 | 157 55 |       |     |      |       | -37   | 25.1  | 14.0  |           |        |      |    |                 |

# NOAA/AOC/SED N49RF Flight Performance log

N49RF Project: Winter Storms 99 Project No. 425 Flight No. 12 Flight ID: 990209N  
 SED Crew: SMITH, HORNBERGER, CARPENTER, SERPADO Mission: #11  
 Pre-Flight: 1850 Z Take-Off: 2004 Z Landing: 0355 Z

| SYSTEM      |                                                             |      |         | Pre-Flight Check                                      |  | In-Flight     |                                          | Post-Flight                                            |         |
|-------------|-------------------------------------------------------------|------|---------|-------------------------------------------------------|--|---------------|------------------------------------------|--------------------------------------------------------|---------|
| N<br>A<br>V | IRS #1                                                      |      |         | DWC                                                   |  | DWC           |                                          |                                                        |         |
|             | IRS #2                                                      |      |         |                                                       |  |               |                                          |                                                        |         |
|             | IRS #3                                                      |      |         |                                                       |  |               |                                          |                                                        |         |
|             | GPS Honeywell #1                                            |      |         |                                                       |  |               |                                          |                                                        |         |
|             | GPS Honeywell #2                                            |      |         |                                                       |  |               |                                          |                                                        |         |
|             | GPS Collins                                                 |      |         | DWC                                                   |  |               | Off? <input checked="" type="checkbox"/> |                                                        |         |
|             | Nose Radar - Collins                                        |      |         | DWC                                                   |  |               | Off? <input checked="" type="checkbox"/> |                                                        |         |
|             |                                                             | Time | Temp °C |                                                       |  | 2336Z         | DWC                                      | Time                                                   | Temp °C |
|             | Temp #1                                                     | 1904 | 22.9    | JAS ✓                                                 |  | -20.7         |                                          |                                                        |         |
| T           | Temp #2                                                     |      | 23.2    | ✓                                                     |  | -21.9         |                                          |                                                        |         |
| E           | Temp #3                                                     |      | 23.3    | ✓                                                     |  | -21.5         |                                          |                                                        |         |
| M           | Temp #4                                                     |      | 23.5    | ✓                                                     |  | -20.7         |                                          |                                                        |         |
| P           | DP Left                                                     |      |         | ✓                                                     |  | Cal. Time:    |                                          |                                                        |         |
|             | DP Right                                                    |      | 14.6    | ✓                                                     |  | Cal. Time:    |                                          |                                                        |         |
| P           | Attack Angle (ADCAOA)                                       |      |         | ✓ JAS                                                 |  | DWC           |                                          |                                                        |         |
| R           | Slip Angle (BP/DBP)                                         |      |         | ✓ JAS                                                 |  |               |                                          |                                                        |         |
| E           | Differential (PQ1/PQ2)                                      |      |         | ✓ JAS                                                 |  |               |                                          |                                                        |         |
| S           | Absolute (PS1/PS2)                                          |      |         | 1021.6/1022.3                                         |  |               |                                          |                                                        |         |
| S           | Check Radome Press. Lines <input type="checkbox"/>          |      |         | Date: 990122                                          |  |               |                                          |                                                        |         |
| S           | DOWN PRT-5 ⇒ Open? <input type="checkbox"/>                 |      |         | N.I.                                                  |  | DWC           |                                          | Closed? <input type="checkbox"/>                       |         |
| Y           | MADS (WINDS/DISCWIN)                                        |      |         | ✓ JAS                                                 |  |               |                                          | # DATs: 1                                              |         |
| S           | MADS Printer ⇒ Paper? <input checked="" type="checkbox"/>   |      |         | JAS                                                   |  |               |                                          | Printer Power off? <input checked="" type="checkbox"/> |         |
| T           | MADS Cal. Date: 990204                                      |      |         | QC time: 1909                                         |  |               |                                          | QC time: 0356Z                                         |         |
| E           | WINDS ⇒ NET BCAST <input checked="" type="checkbox"/>       |      |         | JAS                                                   |  |               |                                          |                                                        |         |
| M           | HAPS System / Time set? <input checked="" type="checkbox"/> |      |         | JAS                                                   |  |               |                                          | # Msg.: 16                                             | # Fail: |
| S           | AVAPS System / Time set? <input type="checkbox"/>           |      |         | JAS                                                   |  |               |                                          |                                                        |         |
|             | AVAPS Printer ⇒ Paper? <input type="checkbox"/>             |      |         | N.I.                                                  |  |               |                                          |                                                        |         |
|             | Exterior Walk Around <input checked="" type="checkbox"/>    |      |         | ✓ JAS                                                 |  |               |                                          |                                                        |         |
|             | Inspect DropSonde Chute Bolts                               |      |         | ✓ JAS                                                 |  |               |                                          |                                                        |         |
|             | Satcom (Flight Phone) <input checked="" type="checkbox"/>   |      |         | DC                                                    |  | DWC           |                                          | Off CB? <input checked="" type="checkbox"/>            |         |
|             | Call COMSAT? <input checked="" type="checkbox"/> (*292#)    |      |         | DWC                                                   |  |               |                                          |                                                        |         |
| M           | FCU/UPS/CB                                                  |      |         | CB's Checked? <input checked="" type="checkbox"/> DWC |  |               |                                          | UPS off? <input checked="" type="checkbox"/>           |         |
| I           | AVAPS Sondes                                                |      |         | # On Board: 41                                        |  | # Dropped: 42 |                                          | # Good: 38                                             |         |
| S           | AXBT                                                        |      |         | # On Board: 0                                         |  | # Dropped: 0  |                                          | # Good: 0                                              |         |
| C           | APN-232                                                     |      |         |                                                       |  | DWC           |                                          |                                                        |         |
|             | Modem Power On? <input checked="" type="checkbox"/>         |      |         | JAS                                                   |  |               |                                          |                                                        |         |

|           |             |          |            |            |
|-----------|-------------|----------|------------|------------|
| 1         | DAT Tape #1 | On: 1905 | Type:      | Off:       |
| 2         | DAT Tape #2 | On: 1908 | Type: 1-60 | Off: 0358Z |
| Comments: |             |          |            |            |
|           |             |          |            |            |
|           |             |          |            |            |
|           |             |          |            |            |
|           |             |          |            |            |

# N49RF Winter Storms 99 / AVAPS DropSonde Log

42 total  
4 Bad

N49RF Project: WINTER Storms 99

Flight ID: 990209N

Mission: # 11

Flight #: 12

System Status: CH #8 INOP

| Drop # | Sonde Serial Number | Chn. # | Time (Zulu) | Press. offset | Winds time | Operator Initials | Comments / Drop Status/ Failure Reason | GOOD <input checked="" type="checkbox"/> |
|--------|---------------------|--------|-------------|---------------|------------|-------------------|----------------------------------------|------------------------------------------|
| 1      | 983310 188          | 1      | 2125        | 0             | 40         | JCPB              | INT WINDS                              | ✓                                        |
| 2      | 983410 095          | 5      | 2146        | 0             | 24         | JAS               |                                        | ✓                                        |
| 3      | 983310 204          | 1      | 2158        | .3            | 38         | JCPB              |                                        | ✓                                        |
| 4      | 983410 115          | 5      | 2208        | .4            | 31         | JAS               |                                        | ✓                                        |
| 5      | 983310 193          | 1      | 2218        | .3            | 35         | JCPB              |                                        | ✓                                        |
| 6      | 983310 195          | 6      | 2223        | .3            | 30         | JAS               |                                        | ✓                                        |
| 7      | 983310 160          | 2      | 2229        | .3            | 19         | JCPB              |                                        | ✓                                        |
| 8      | 983410 037          | 5      | 2234        | .4            | 35         | JAS               | PTH FAILED AVAPS                       | N                                        |
| 9      | 983410 137          | 6      | 2238        | .4            | 35         | JAS               | FAILED IN Flight Sys Failure           | N                                        |
| 10     | 983310 170          | 1      | 2244        | 0             | 27         | CH                |                                        | ✓                                        |
| 11     |                     |        |             |               |            |                   |                                        |                                          |
| 12     | 984325256           | 2      | 2246        | 0             | ?          | JCPB              |                                        | ✓                                        |
| 13     | 983310 187          | 3      | 2249        | .2            | 37         | JCPB              |                                        | ✓                                        |
| 14     | 983310 166          | 4      | 2255        | .4            |            | JCPB              | NO LAUNCH DETECT                       | N                                        |
| 15     | 983620602           | 5      | 2300        | .2?           | 19         | JAS               |                                        | ✓                                        |
| 16     | 983310 190          | 1      | 2305        | .3            | 25         | JCPB              |                                        | ✓                                        |
| 17     | 983310 173          | 6      | 2310        | .2            | 135        | JAS               | LATE WINDS - Poor WINDS                | N                                        |
| 18     | 983310 161          | 2      | 2314        | .4            | 28         | JCPB              |                                        | ✓                                        |
| 19     | 983340 071          | 7      | 2319        | .3            | 25         | JAS               |                                        | ✓                                        |
| 20     | 983310 169          | 3      | 2322        | .3            | 12         | JCPB              |                                        | ✓                                        |
| 21     | 983410 043          | 5      | 2327        | .2            | ✓          | JAS               |                                        | ✓                                        |
| 22     | 983340 114          | 1      | 2332        | .2            | 20         | JCPB              |                                        | ✓                                        |
| 23     | 983340 051          | 6      | 2336        | .6            | ✓          | JAS               |                                        | ✓                                        |
| 24     | 983410 121          | 2      | 2340        | φ             | 20         | JCPB              |                                        | ✓                                        |
| 25     | 983410 042          | 7      | 2344        | 0             | 35         | JAS               |                                        | ✓                                        |
| 26     | 983310 185          | 3      | 2349        | φ             | 26         | JCPB              |                                        | ✓                                        |
| 27     | 983410 122          | 5      | 2354        | ?             | 25         | JAS               |                                        | ✓                                        |
| 28     | 983310 203          | 1      | 2359        | .3            | 40         | JCPB              |                                        | ✓                                        |
| 29     | 983620 756          | 6      | 0004        | .3            | 25         | JAS               |                                        | ✓                                        |
| 30     | 983620 580          | 2      | 0010        | .2            | 37         | JCPB              |                                        | ✓                                        |
| 31     | 983620 603          | 5      | 0015        | 0             | 28         | JAS               |                                        | ✓                                        |
| 32     | 983620 739          | 1      | 0020        | .3            | 45         | JCPB              |                                        | ✓                                        |
| 33     | 983410 019          | 6      | 0024        | .2            | —          | JAS               | NO WINDS                               | N                                        |

\* GPS FM4

| Drop # | Sonde Serial Number | Chn # | Time (Z) | Press. offset | Winds time | Operator Init. | Comments Drop Status | GOOD <input checked="" type="checkbox"/> |
|--------|---------------------|-------|----------|---------------|------------|----------------|----------------------|------------------------------------------|
| 34     | 983720816           | 2     | 0026     | .5            | 26         | JCPB           |                      | ✓                                        |
| 35     | 983620645           | 5     | 0031     | .4            | ✓          | JAS            |                      | ✓                                        |
| 36     | 983340081           | 3     | 0036     | .4            | 26         | JCPB           |                      | ✓                                        |
| 37     | 983620644           | 7     | 0047     | .3            | 32         | JAS            |                      | ✓                                        |
| 38     | 983720798           | 1     | 0111     | .3            | 38         | JCPB           |                      | ✓                                        |
| 39     | 983310089           | 5     | 0137     | .4            | 15         | JAS            |                      | ✓                                        |
| 40     | 983310196           | 6     | 0137     | .4            | 30         | JAS            | SLOW-BIGCHUTE ARC    | ✓                                        |
| 41     | 983310201           | 1     | 0201     | .3            | 18         | JCPB           |                      | ✓                                        |
| 42     | 981820037           | 5     | 0224     | .4            | 27         | JAS            |                      | ✓                                        |
| 43     | 983310163           | 1     | 0246     | .3            | 21         | JCPB           |                      |                                          |
| 44     |                     |       |          |               |            |                |                      |                                          |
| 45     |                     |       |          |               |            |                |                      |                                          |
| 46     |                     |       |          |               |            |                |                      |                                          |
| 47     |                     |       |          |               |            |                |                      |                                          |
| 48     |                     |       |          |               |            |                |                      |                                          |
| 49     |                     |       |          |               |            |                |                      |                                          |
| 50     |                     |       |          |               |            |                |                      |                                          |
| 51     |                     |       |          |               |            |                |                      |                                          |
| 52     |                     |       |          |               |            |                |                      |                                          |
| 53     |                     |       |          |               |            |                |                      |                                          |
| 54     |                     |       |          |               |            |                |                      |                                          |
| 55     |                     |       |          |               |            |                |                      |                                          |
| 56     |                     |       |          |               |            |                |                      |                                          |
| 57     |                     |       |          |               |            |                |                      |                                          |
| 58     |                     |       |          |               |            |                |                      |                                          |
| 59     |                     |       |          |               |            |                |                      |                                          |
| 60     |                     |       |          |               |            |                |                      |                                          |

06/16/98

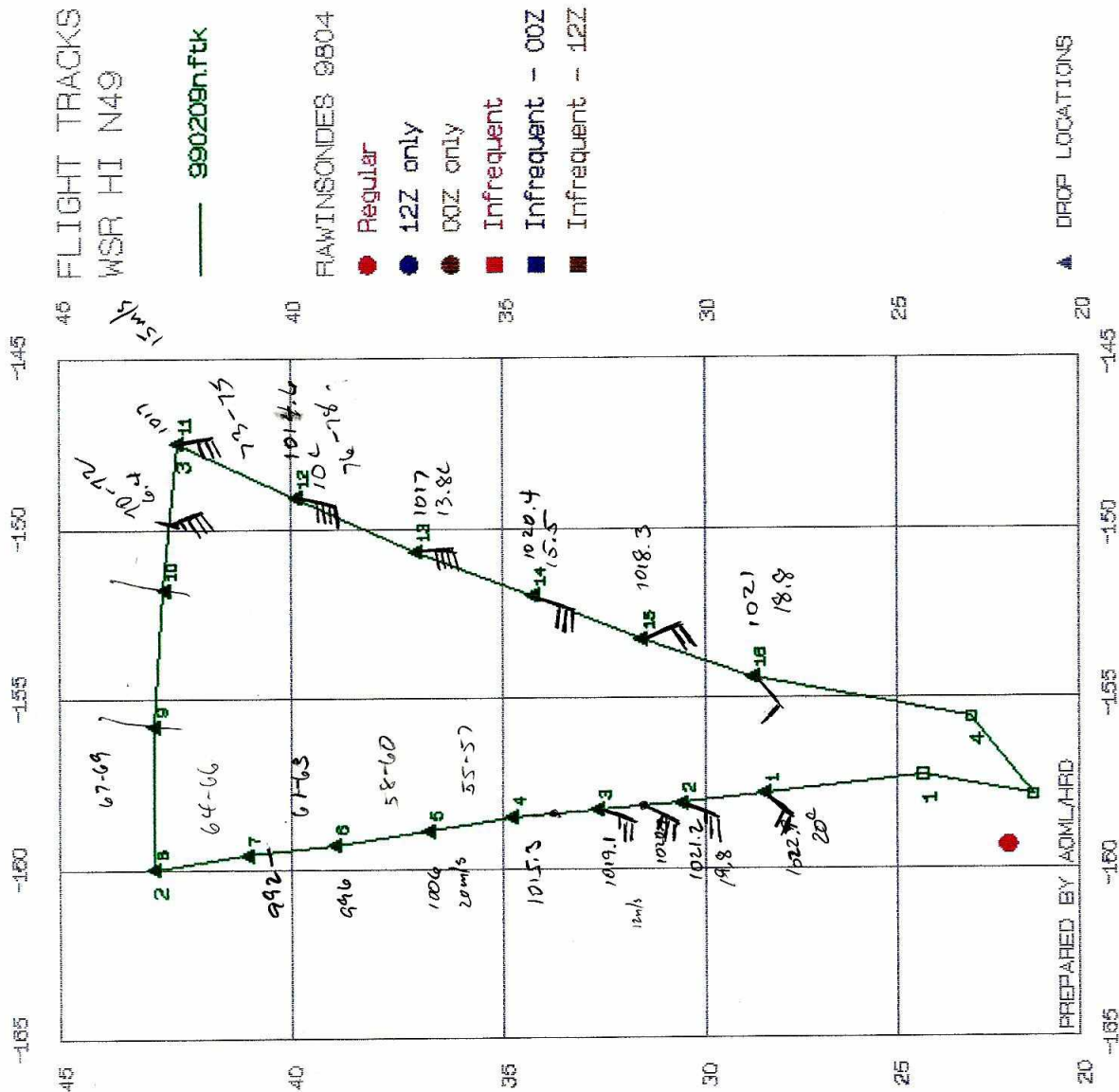
#### AVAPS PRE-FLIGHT CHECK:

- (1) Apply power to computer, VAPS fan and VAPS chassis
- (2) Verify no **ER** status lights on the four MWG cards
- (3) Set the computer time to GPS time
- (4) Start AVAPS and run the hardware checks via the **Utility** function
- (5) Start **Soundings** and set the **Project Name** and **Flight ID** (6) Perform a prelaunch check using all four channels simultaneously reading one sonde, look for reasonable data and no CRC error status lights, winds data is not expected. All AVAPS chassis status lights should be green.

#### NORMAL LAUNCH NOTES:

- ☐ When selecting a sonde frequency, select a frequency other than the default (if there is a default), and away from other sondes in use.
- ☐ Do not pull the Power Enable Pin during pre-launch setup until after the Umbilical is attached.
- ☐ If pre-launch is complete, and more than 5 minutes remain prior to launch, replace the power Enable pin until 5 minutes prior to launch.
- ☐ Don't put the sonde in the launch tube until you have removed the ribbon retaining tape.
- ☐ Don't put the sonde in the tube until you have selected **Begin Data Collection**, and verified good data (good winds data is not expected).

The Power Enable Pin must be removed for at least two minutes prior to launch to allow for the Sonde GPS Oscillator to warm up.



Winter Storm Reconnaissance (Mission 11)  
990209N N49RF 9 Feb 1999 Honolulu - Honolulu

| <u>DATA TYPE</u>              | <u>SENSOR or OPTION</u> |
|-------------------------------|-------------------------|
| INE                           | VEW_PITR, VNS_PITR      |
| Accelerometer                 | ACINS_PITR              |
| Temperature Probe             | AT1                     |
| Altitude (for vertical winds) | PALT                    |
| Static Pressure               | PS1M                    |
| Dynamic Pressure              | QC1M                    |
| Dewpoint Probe                | DPRC                    |

Notes:

42 dropsondes launched.

Numerous APN-232 radar altimeter spikes were noted from 211615z-211910z, 215515z-215900z, and 234520z-234945z.

|                          | Take Off | Land   |
|--------------------------|----------|--------|
| Corrected Tower Pressure | 1022.0   | 1018.6 |
| Aircraft Static Pressure | 1021.6   | 1017.6 |

Flight Director: Jack Parrish, (813) 828-3310, Ex 3077

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: WSR HI N49

Prepared by the Hurricane Research Division at 08:09:08 PM on 02/09/99.  
File: 990209n.ftk

Aircraft: N49RF Altitude: FL410-450 Proposed takeoff: 09/2003Z

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TRACK DISTANCE TABLE

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| # | LAT<br>(d m) | LON<br>(d/m) | RAD/AZM<br>(nm/dg) | LEG<br>(nm) | TOTAL<br>(nm) | TIME<br>(h:mm) |
|---|--------------|--------------|--------------------|-------------|---------------|----------------|
| 0 | 21 18        | 157 54       |                    | 0.          | 0.            | 0:00           |
| 1 | 24 18        | 157 18       |                    | 183.        | 183.          | 0:35           |
| 2 | 43 00        | 160 00       |                    | ****        | 1315.         | 3:09           |
| 3 | 42 30        | 147 30       |                    | 552.        | 1867.         | 4:24           |
| 4 | 23 00        | 155 36       |                    | ****        | 3107.         | 7:12           |
| 5 | 21 18        | 157 54       |                    | 164.        | 3271.         | 7:44           |

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: WSR HI N49

Prepared by the Hurricane Research Division at 08:09:08 PM on 02/09/99.  
File: 990209n.ftk

Aircraft: N49RF Altitude: FL410-450 Proposed takeoff: 09/2003Z

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DROP LOCATIONS

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| #  | LAT<br>(d m) | LON<br>(d m) | RAD/AZM<br>(nm/dg) | TIME<br>(h:mm) |
|----|--------------|--------------|--------------------|----------------|
| 1  | 28 30        | 157 48       |                    | 1:09           |
| 2  | 30 36        | 158 06       |                    | 1:27           |
| 3  | 32 42        | 158 18       |                    | 1:44           |
| 4  | 34 48        | 158 30       |                    | 2:01           |
| 5  | 36 48        | 158 54       |                    | 2:18           |
| 6  | 39 00        | 159 18       |                    | 2:36           |
| 7  | 41 00        | 159 36       |                    | 2:52           |
| 8  | 43 00        | 160 00       |                    | 3:09           |
| 9  | 43 00        | 155 48       |                    | 3:34           |
| 10 | 42 48        | 151 48       |                    | 3:58           |
| 11 | 42 30        | 147 30       |                    | 4:24           |
| 12 | 39 54        | 149 06       |                    | 4:47           |
| 13 | 37 06        | 150 42       |                    | 5:12           |
| 14 | 34 18        | 152 00       |                    | 5:36           |
| 15 | 31 36        | 153 18       |                    | 6:00           |
| 16 | 28 48        | 154 24       |                    | 6:24           |

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NOAA G-IV POC: Sean White - 813.833.3275

DEPARTURE

CALL SIGN NOAA49

DATE 09 FEB 99

TAIL NUMBER N49RF

TIME 2000Z

ALTITUDE FL410-450

AIRSPEED Mach 0.77 (450KTAS)

NCEP DROP LOCATIONS indicated by a drop number.

| # | LAT(N)/LONG(W)<br>(degrees and minutes) | DIST(NM) | ETE | ETA<br>Date/Zulu Time |
|---|-----------------------------------------|----------|-----|-----------------------|
|---|-----------------------------------------|----------|-----|-----------------------|

|  |                      |      |      |                      |
|--|----------------------|------|------|----------------------|
|  | Honolulu (PHNL)      | ---- | ---- | 09/2000 Takeoff time |
|  | ZIGIE (24 19/157 18) | 183  | 0+35 | 09/2035              |

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 1 | 28 30/157 50 | 250 | 0+40 | 09/2115 |
| 2 | 30 35/158 05 | 125 | 0+20 | 09/2135 |

3 additional dropsondes possible

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 3 | 32 40/158 20 | 125 | 0+20 | 09/2155 |
|---|--------------|-----|------|---------|

3 additional dropsondes possible

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 4 | 34 45/158 30 | 125 | 0+20 | 09/2215 |
|---|--------------|-----|------|---------|

3 additional dropsondes possible

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 5 | 36 50/158 55 | 125 | 0+20 | 09/2235 |
|---|--------------|-----|------|---------|

3 additional dropsondes possible

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 6 | 39 00/159 20 | 125 | 0+20 | 09/2255 |
|---|--------------|-----|------|---------|

3 additional dropsondes possible

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 7 | 41 00/159 35 | 125 | 0+20 | 09/2315 |
|---|--------------|-----|------|---------|

3 additional dropsondes possible

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 8 | 43 00/160 00 | 125 | 0+20 | 09/2335 |
|---|--------------|-----|------|---------|

3 additional dropsondes possible

|   |              |     |      |         |
|---|--------------|-----|------|---------|
| 9 | 43 00/155 50 | 184 | 0+20 | 09/2355 |
|---|--------------|-----|------|---------|

3 additional dropsondes possible

|    |              |     |      |         |
|----|--------------|-----|------|---------|
| 10 | 42 50/151 50 | 184 | 0+20 | 10/0015 |
|----|--------------|-----|------|---------|

3 additional dropsondes possible

|    |              |     |      |         |
|----|--------------|-----|------|---------|
| 11 | 42 30/147 30 | 184 | 0+20 | 10/0035 |
|----|--------------|-----|------|---------|

3 additional dropsondes possible

|    |              |     |      |         |
|----|--------------|-----|------|---------|
| 12 | 39 55/149 05 | 177 | 0+20 | 10/0055 |
|----|--------------|-----|------|---------|

3 additional dropsondes possible

|    |              |     |      |         |
|----|--------------|-----|------|---------|
| 13 | 37 05/150 40 | 177 | 0+20 | 10/0115 |
|----|--------------|-----|------|---------|

3 additional dropsondes possible

|    |              |     |      |         |
|----|--------------|-----|------|---------|
| 14 | 34 20/152 00 | 177 | 0+20 | 10/0135 |
|----|--------------|-----|------|---------|

3 additional dropsondes possible

|    |              |     |      |         |
|----|--------------|-----|------|---------|
| 15 | 31 35/153 20 | 177 | 0+20 | 10/0155 |
|----|--------------|-----|------|---------|

16 28 45/154 25

42 45.9 150 45  
42 41.3 199 40  
42 35.9 148 35  
41 52 147 54.1  
41 13 148 18.2  
40 34 148 41.9  
39 12 149 29.8  
38 29 149 54.1  
37 47 150 17.3  
36 23 151 00.9  
35 42 151 21.0  
35 01 151 40.7  
33 38 152 20.9  
32 57 152 40.9  
32 16 153 00.6

NO ETE  
↓ Drops beyond  
42 this  
4170 pt.  
16  
70

41  
4165